

Solano Comprehensive Transportation Plan

Intercity Transit Element





Acknowledgements

Solano Transportation Authority Board

John Silva, Chair
Jim Sperling, Vice Chair
Pierre Bidou
Mary Ann Courville
Karin MacMillan
Marci Coglianese
Rischa Slade
Dan Donahue

Solano County Board of Supervisors
City of Suisun City
City of Benicia
City of Dixon
City of Fairfield
City of Rio Vista
City of Vacaville
City of Vallejo

Transit Subcommittee Members

Dan Donahue, Subcommittee Chair
Pierre Bidou
Mary Ann Courville
Karin MacMillan
Barbara Kondylis

City of Vallejo
City of Benicia
City of Dixon
City of Fairfield
Solano County

Participants

David Kutrosky
Jim Simon
Kevin Daughton
Pam Belchamber
Alan Nadritch
Trent Fry
Janet Koster

Capitol Corridor JPA
PCC Member
SolanoLinks Transit Consortium
STA TAC
City of Benicia
City of Vacaville
City of Dixon

STA Staff

Daryl Halls
Dan Christians

Elizabeth Richards
Janice Sells
Robert Guerrero
Kim Cassidy

Executive Director
Assistant Executive Director/Director of Planning
STA/SNCI Program Manager
Program Manager/Analyst
Associate Planner
Office Administrator

The background of the page is a faded collage of three images. At the top, a ferry boat is on the water with a city skyline in the background. In the middle, a green bus is shown with its destination sign reading '40 YHONVILLE VIA FAIRFIELD' and the number '642'. At the bottom, a white carpool lane sign with the word 'California' is visible.

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EXECUTIVE SUMMARY - INTERCITY TRANSIT ELEMENT

The Intercity Transit Plan proposes to increase by approximately 50 percent the proportion of transit trips by 2025 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 ferry service to San Francisco, hourly Capitol Corridor passenger rail service with more Solano County stations to improve access and increasing intercity bus services by threefold. New Sunday service is proposed on 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 15,000 by Year 2025.

The Intercity 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 36 percent between 2000 and 2025. This suggests a corresponding increase in the number of intercity commute and other travel. ABAG is projecting an increase of 31,000 additional residents commuting to jobs outside of the county adding pressure on already congested roadways. Accounting for absentees etc., the daily number of commute trips is projected to increased by 50,000 person trips. 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 connects to Davis, three 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. No Sunday service is currently provided on these lines.

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.

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+ TDA and growth	Sales tax and all TDA
4	Unconstrained "vision"	Sales tax, bridge tolls, TDA, etc.

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 \$59.7 million for the Vision service levels over a 20 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 full replacement 1.5 times over a 20 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.

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 Intercity Transit Element is the active support of Capitol Corridor service upgrades along with improved access for Solano County.

The Capitol Corridor Joint Powers Authority (CCJPA) proposes to expand intercity regional service to sixteen trains daily in both directions of travel by 2020 and to add the tenth and eleventh trains by 2003. The 16 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 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:

Immediate Projects

Addition/replacement of a second track for the Yolo Causeway
Upgrade the Bahia Viaduct (Benicia)
Addition of a third track in Dixon

Near-term Period

Addition of a third track in Suisun
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 was implementable quickly. This station is being advanced first towards implementation. The Benicia site near Lake Herman Road also looked promising, but 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 recommended for inclusion 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. Solano County should explore opportunities to add viable passenger rail services to its intercity transit network. Four opportunities include:

- Napa/Calistoga to Vallejo service
- Napa to Suisun City service
- Dixon/Vacaville to Sacramento/Placer County service
- I-80 commuter service to Oakland/Richmond BART

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 three boats, two of which are in daily operation. The third vessel functions 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.

Funding is in place to purchase a fourth vessel, which would operate as a third boat in regular daily service beginning in mid-2004. Vallejo's Short Range Transit Plan and this Intercity Transit Element proposes the purchase of a fifth vessel, placed in service by 2007 or 2008.

Other ferry capital improvement needs include: \$19 million to complete the \$35 million Vallejo Station intermodal facility at the Vallejo Ferry Terminal, including a 1,400-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, upgraded maintenance.

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 we were 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	
Vessels	\$10,000,000
Maintenance Facility Upgrades	\$ 3,000,000
Vallejo Station Intermodal Facility	\$20,000,000
TOTAL	\$33,000,000

INTERCITY 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.

INTERCITY 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 ten 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.

The Intercity Transit Plan proposes 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, one in the I-780 Corridor and two in the Highway 12 Corridor by 2025. Major expansions are proposed for the Vallejo Ferry Terminal and the Curtola park-and-ride lot. Aside from the investment in the Vallejo Terminal project, which has already been identified, approximately \$26 million is estimated to be required 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, six important follow-up studies should be initiated, developed and ultimately adopted by Solano County decision-makers. These studies are:

- I-80/680/780 Transit Corridor Study – The STA should initiate an I-80/680/780 Transit Corridor Study, which would review the intercity bus service levels recommended in this plan and then develop a capital program for a successful intercity express bus system, serving internal Solano County trips and connections to ferries, BART and the Sacramento metropolitan area. The purpose of this plan would be to develop conceptual facilities designs and cost estimates for HOV lanes, on-line stations, park and ride facilities, and maintenance yards.
- Napa-Solano Rail Study – This report documents 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 have joined to fund and manage such a study.

- Colfax/Auburn to Solano 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 would be explored.
- Solano to BART Commuter Rail Study – 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 should be investigated.
- Transit Consolidation and Institutional Feasibility Study – 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 next decade.
- Senior and Disabled (Paratransit) Service Expansion Study - With input from the Paratransit Coordinating Council, transit operators and members of the public, develop a phased short and long-term feasibility study to increase service to the senior and disabled by approximately three fold over the next 20 years.

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 background of the page features a faded image of a public transit system. In the upper right, a bus is visible with the number '642' and a destination sign that reads '40 WILSONVILLE VIA FAIRFIELD'. In the lower right, a green and white ferry is shown. On the left side, a smaller ferry is visible on the water. The overall scene is a collage of transit-related images.

CHAPTER 1 - 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 as SolanoLinks. The focus of the Intercity 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 Intercity 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 then described in Chapters 2, 3, 4 and 5 respectively. Chapter 6 describes the infrastructure elements needed to support the Service Plan.

1.1 - PLAN OVERVIEW

The recommended plan represents a “vision” or “blueprint” for intercity transit services in 2025. 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 funding resource levels 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 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 300 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 seated passengers.

1.2 – 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 - Provide intercity public transit services with convenient access to developed areas of the county
- Objective B - Provide improved and new services to maximize usage and minimize traffic congestion
- Objective C - Provide efficient intercity transit services to maximize ridership and cost effectiveness
- Objective D - Integrate intercity services with local transit and other modes to provide a seamless multi-modal transportation system
- Objective E - Address "Environmental Justice" issues as part of the transit programs

Policy actions for these five objectives are listed in Appendix A.

1.3 - MARKET DEMAND

A brief description of the role intercity transit could play in meeting these 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 300 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.

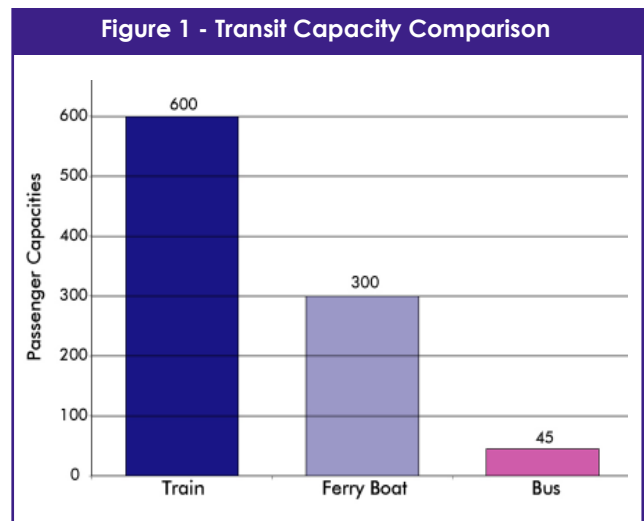
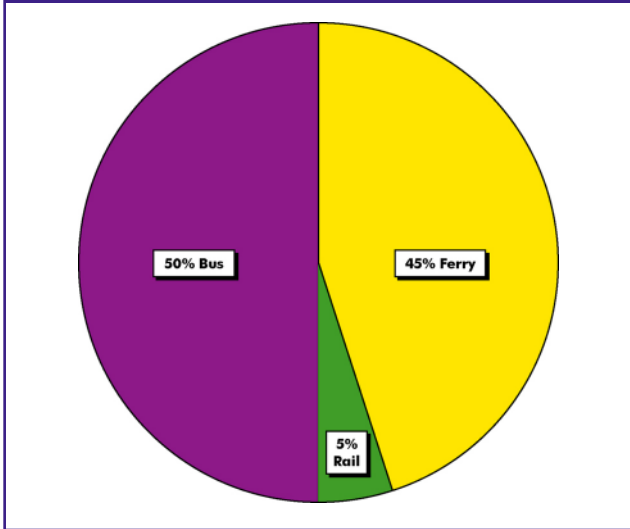


Figure 1 graphically compares the passenger capacities of trains, ferries and standard 40 foot intercity buses. Recognizing that SOVs carry only one passenger per car, Figure 1 also describes the capacities of these transit modes with SOV capacities.

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 (see Figure 2). 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

Figure 2 - Current Intercity Transit Patronage Distribution by Mode



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.

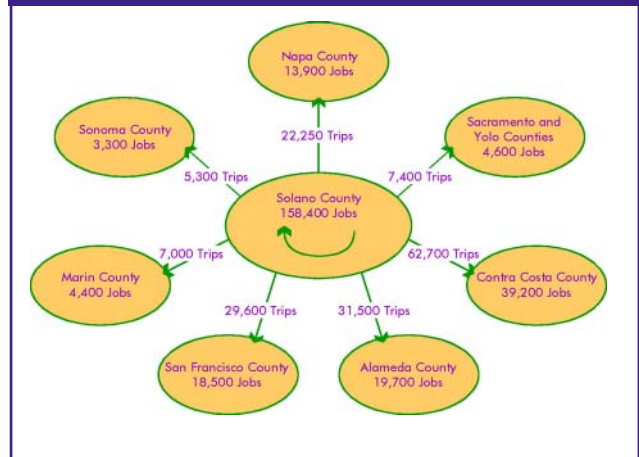
Projected Growth in Travel

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 176,750 residents employed in the workforce. Fifty-four percent worked within the County and 46 percent commuted to other counties for work. Year 2020 forecasts that Solano County will have 271,135 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 2020. This is a net increase of 31,000 additional residents commuting out of the county to work.

Figure 3 describes the Year 2020 distribution of jobs for Solano County residents. The largest commute destination is projected to be Contra Costa County (39,200 jobs). Alameda County

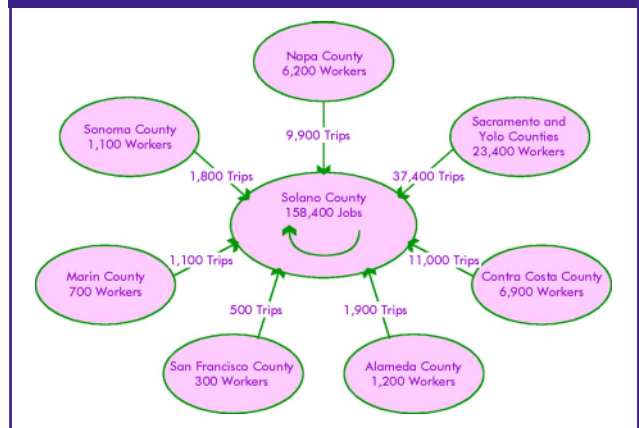
is projected to be the second largest commute destination (19,700 jobs) and San Francisco is the third largest with 18,500 jobs. Napa County is projected to be the jobsite for 13,900 Solano residents. Marin and Sonoma Counties together account for 7,700 jobs. Percentage-wise the Napa commute market appears 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. Figure 3 also provides estimates of the number of daily commute trips associated with these commuters. These estimates assume that only 80 percent of workers commute to their jobsite on a given day and that each commuter makes two trips (to work and from work)

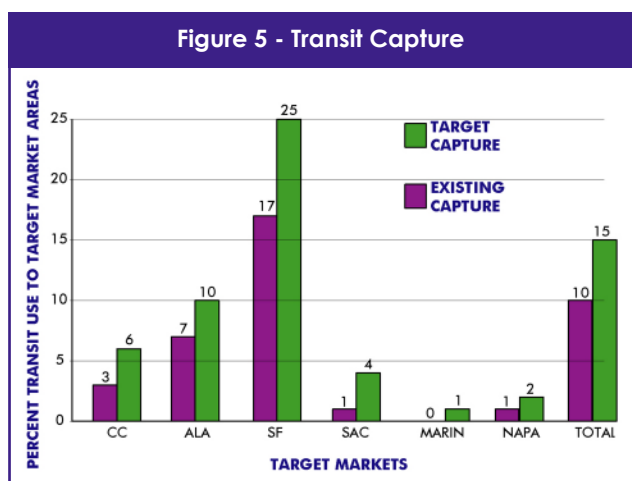
Figure 3 - Projected Employment Distribution for Solano County Residents Year 2020



Workers commuting into Solano County for work in Year 2020 are described in Figure 4. Most Solano County workers are projected to be county residents.

Figure 4 - Projected Residence Distribution for Solano County Employees Year 2020





Target Transit Capture

Absent data from the 2000 Census, the 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. Figure 5 describes the resulting estimate of transit capture for key long distance intercity daily travel markets. 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 destinations. Absence of parking costs and the dispersed development pattern for intercity transit services results in lower usage rates.

1.4 - 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 Redit 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. Similarly, no direct public transit bus services is provided to Sacramento from Solano County.



A few key members of the Solano Transit Consortium

Table 1 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 Redit 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

Table 1 - Agency Responsibility Matrix

	Policy	Funding	Ferry	Rail	Local Bus	Intercity Bus	Paratransit
STA	✓	✓				✓	✓
Vallejo	✓	✓	✓		✓	✓	✓
Fairfield	✓	✓			✓	✓	✓
Benicia	✓	✓			✓	✓	
Vacaville	✓	✓			✓		
Dixon	✓	✓			✓		
Solano Cty	✓	✓					
Rio Vista	✓	✓					
CCJPA	✓	✓		✓		*	
Amtrak	✓	✓		✓		*	
MTC	✓	✓					
Caltrans	✓	✓					
Greyhound						✓	

* Dedicated feeder buses to rail services.

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. San Joaquin County's transit operator (SMART) operates one daily roundtrip between Stockton and Napa, which passes through Solano County without making any passenger stops.

Brief descriptions of the STA and the operators of intercity transit services in Solano County are provided in this section. Descriptions of the services that are provided by these providers are presented in Chapters 2, 3 and 4.

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



Solano Transportation Authority Board meets with Congressmembers Ellen Taucher and George Miller

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
2. Provide safety and operational improvements
3. Preserve the existing transportation system
4. Reduce congestion and maintain mobility
5. Improve commute options to the Bay Area and Sacramento regions
6. Promote transit including intercity bus, rail and ferries
7. Promote alternative modes such as carpooling, vanpooling and bicycling
8. Encourage Transportation for Livable Communities projects

STA coordinated the development of a multimodal comprehensive transportation plan for Solano County. This Intercity 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

The City's Finance Department provides day to day direction and management of the fixed route and paratransit transit services, 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 operates intercity service via Interstate 680 from the Vallejo Ferry Terminal and 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 nine 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.

1.5 - 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. Highlighted plans include:

MTC Bay Area Transportation Blueprint for 21st Century

In 2000, the Metropolitan Transportation Commission adopted its vision for transportation improvements for the first 25 years of the 21st Century. The list of improvement projects identified by MTC in the "Bay Area Transportation Blueprint for the 21st Century" and MTC's updated "Regional Transportation Plan" include the following:

- I-80/I-680/SR12 interchange improvements
- Express bus services from Solano County to East Bay (I-80)
- Capitol Corridor passenger rail upgrades
- BART Extension to Hercules
- Enhanced Vallejo ferry service
- New Vallejo Ferry Intermodal Center
- Light rail on the Carquinez Bridge
- Widen I-680 between Benicia Bridge and I-80
- Express bus service from Solano County to East Bay (I-680)

- Light rail on the Benicia Bridge
- State Route 12 improvements between I-80 and Rio Vista Bridge
- Widen State Route 12 from SR 29 to I-80
- Interchange improvements and possibly HOV on I-80 between Carquinez Bridge and SR 37
- I-80 widening between Dixon and Vacaville
- SR 37 widening between Vallejo and SR 121 with environmental improvements
- MTC Lifeline Transit service program

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 April 30, 2001 – during 2001-02 funding opportunities will be explored, and implementation is scheduled for 2003. A key issue will be how to fund the operating subsidies.



HOV Facilities Plans

Current 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. Caltrans is currently developing a Project Study Report (PSR) for this project segment. HOV lanes are also proposed to be provided on the Carquinez and Benicia Bridges. The westbound link between the Carquinez Bridge to Highway 4 in Contra Costa County is included in current proposed projects for State funding. STA has also proposed HOV lanes on I-80 and/or I-680.



Vallejo Transit

The FY 1999/2008 Short Range Transit Plan (S RTP) 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
- Fund a fourth fast ferryboat, allowing three in daily service plus a spare
- 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

Vallejo Baylink Ferry Service

The City of Vallejo's highest priority transit capital project is construction of the proposed \$35 million "Vallejo Station" project adjacent to the Vallejo Ferry Terminal. So far, \$16 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.

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 1,400 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 will

include roadway access improvements, bicycle facilities, and improved pedestrian access between downtown Vallejo, the Ferry Terminal, and the waterfront.

By 2010, the Vallejo S RTP 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 S RTP planning period, expansion of the bus maintenance facility is also envisioned.

The acquisition of a fourth Baylink fast ferryboat is currently funded. This vessel is expected to enter service in mid-2004, when three boats will be in regular daily operation. Additional operating subsidies will be needed to support a three boat operation. In addition, Vallejo has obtained funding from MTC's Rapid Bus Program to support expanded operation of buses to supplement Baylink ferry operations.

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 recently established Bay Area Water Transit Authority has embarked on a regionwide 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.

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. Development 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.



Capitol Corridor Joint Powers Authority

Current plans are to initiate the tenth and eleventh trains in 2003/04. Improvement plans and issues include re-installation of the second track on the Yolo Causeway section (funded and under design), construction of some third track segments between Benicia and Davis to facilitate mixed freight and passenger operations, upgrade the Bahia Viaduct for increased speeds and strategies to minimize delays at the UPRR crossing of the straits. The 2002 STIP includes \$2.3 million in state funding to fund the Bahia Viaduct improvements.

Other Passenger Rail Studies

Several new commuter rail studies began in 2001. 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 and Dixon (Davis is about eight miles east of Dixon). 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.

The STA, the Napa County Transportation Planning Agency (NCTPA) and MTC have funded a passenger rail study for new service between Napa and Vallejo and the Jamieson Canyon

(State Highway 12 corridor) service connecting to Fairfield and Suisun City.

The Metropolitan Transportation Commission serving the San Francisco Bay Area identified the need for additional commuter rail service from Solano to San Jose in a 1994 planning study. These efforts have not advanced further.

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. It is difficult to see how a corridor with these demand levels is not 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

STA is leading a planning study to determine how to upgrade highway facilities in these critical corridors. Integration of bus services into these plans will be important and have been undertaken as a priority by the STA. An HOV study will examine the feasibility of such facilities in the three interstate corridors.

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.

1.6 - TRANSIT NEEDS BY JURISDICTION

In the Fall of 2000, as part of the overall CTP process the STA conducted a "Needs Analysis." The following transit needs were identified by each of the STA member jurisdictions:

Transit Needs By Jurisdiction
<p>Benicia:</p> <ul style="list-style-type: none"> • Benicia multi-modal rail station • Improve bus shelters • Construct transfer facilities • Improve schedules • More joint bus operations • Increased marketing • Increase service and routes • Ferry service <p>Dixon:</p> <ul style="list-style-type: none"> • Dixon multi-modal rail station • Increased operating hours • Additional intercity express bus routes • Transition to fixed route system <p>Fairfield:</p> <ul style="list-style-type: none"> • Fairfield/Vacaville multi-modal rail station • Commuter Information Systems (GPS) • ADA access at bus facilities • Expand local bus service • Expand express bus service • Construct N. Texas bus transfer facility <p>Rio Vista:</p> <ul style="list-style-type: none"> • Construct ferry dock • Fixed intercity routes to BART and rail <p>Solano County:</p> <ul style="list-style-type: none"> • Solano paratransit support • More joint bus operations • Increased marketing • Subsidized paratransit taxi service • Fixed routes in unincorporated areas

Transit Needs By Jurisdiction (continued)

Suisun City:

- Improve bus shelters
- Expanded express bus service to rail station
- Additional bus connections to rail station

Vacaville:

- Vacaville bus terminal and transfer facility
- New transit yard
- More joint bus operations
- Expand local bus service
- Additional transit vehicles

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
- Provide evening and weekend bus service
- Expand Capitol Corridor rail service
- Napa Valley rail service to Ferry Terminal
- Vallejo - Fairfield rail service

1.7 - SUMMARY

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 provide 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?



CHAPTER 2 - INTERCITY BUS SERVICES

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

2.1 - 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.

Vallejo Transit Bus Service

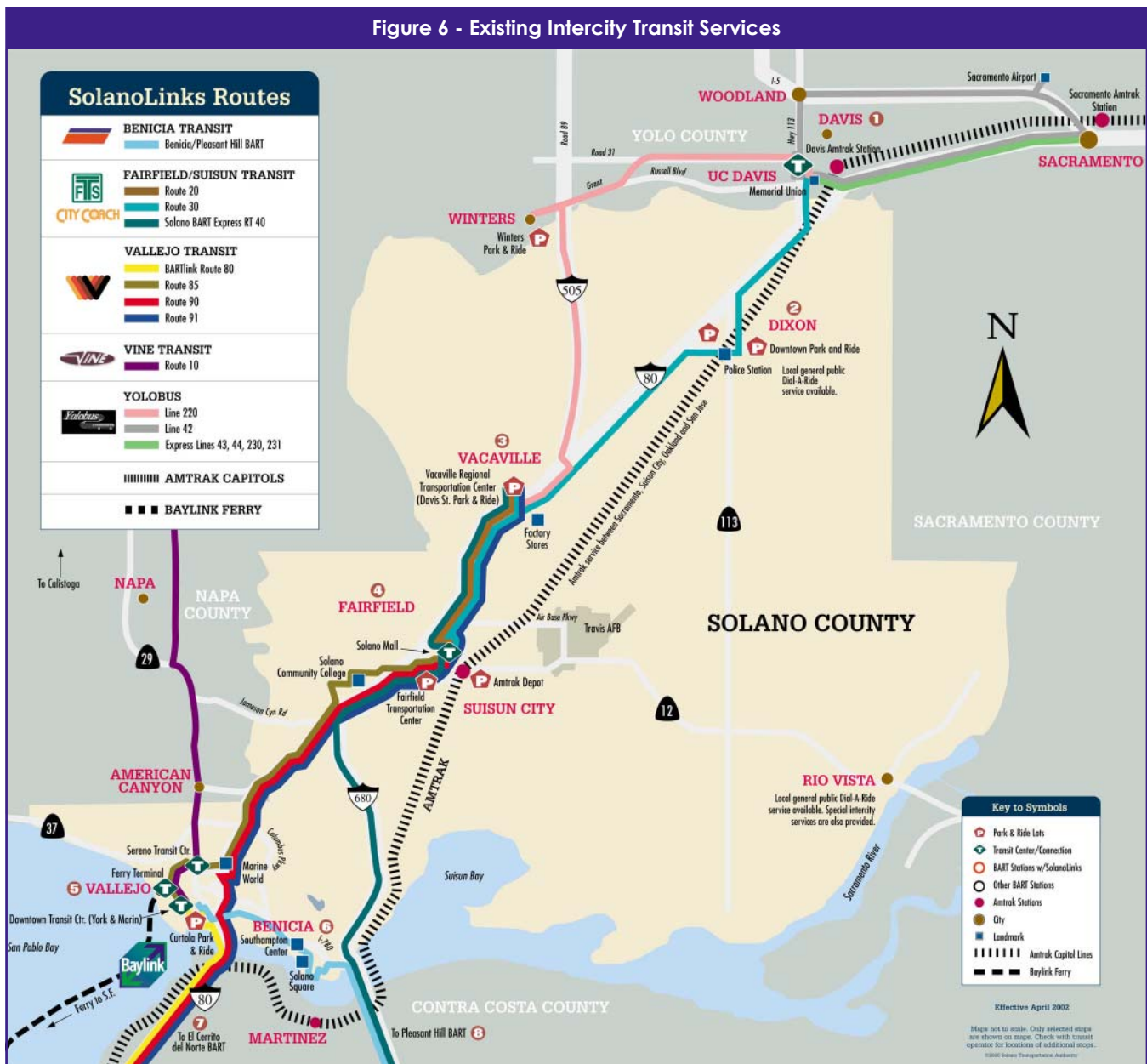
Vallejo Transit operates four regional bus services. Two other bus routes, the 92 and 100 were recently discontinued due in large part to capacity constraints on the Baylink ferry service. The four current regional bus lines operated by Vallejo Transit are:

- 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 4:30 a.m. and the last return trip leaves BART at 11:00 p.m. Service is provided every eight to ten 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

Figure 6 - Existing Intercity Transit Services



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 9:00 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 three morning trips to 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 6:50 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 2,783 passengers. Route 80 from Vallejo to del Norte BART carries the most (1,824) with Route 85 carrying 509 passengers and Routes 90/91 carrying 450 passengers.

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 can accommodate 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. At \$48 per bus hour, each route 85 and 90 bus costs approximately \$30 per day and each route 91 bus about \$40 daily to introduce and remove from service.

Passenger facilities are generally good, with on-going 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 \$35 million "Vallejo Station" project would provide 1,400 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 (S RTP). 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 S RTP 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

Vallejo Transit Routes 80, 85, and 90/91	
Vallejo Transit Route 80	
Daily Hours	67.5
Daily Cost (@\$48/hour)	\$3,240
Daily Passengers (weekdays)	1,824
Daily Revenue (@ \$1.62 per passenger)	\$2,955
Daily Deficit	\$285
Farebox Recovery	88%
Annualized	\$112,000 operating cost net of fares
Vallejo Transit Route 85	
Daily Hours	38.0
Daily Cost (@\$48/hour)	\$1,824
Daily Passengers	509
Daily Revenue (@\$1.52 per passenger)	\$ 774
Daily Deficit	\$ 1,050
Farebox Recovery	48%
Annualized	\$237,000 operating cost net of fares
Vallejo Transit Route 90/91	
Daily Hours	26.0
Daily Cost (@\$48/hour)	\$ 1,248
Daily Passengers	450
Daily Revenue (@1.95 per passenger)	\$ 877
Daily Deficit	\$ 371
Farebox Recovery	69%
Annualized	\$100,200 operating cost net of fares

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

Vallejo Transit Adult Bus Fare Matrix			
Between and >	Vacaville Cash/10 ride	Fairfield Cash/10 ride	BART Cash/10 ride
Vallejo	--	\$3.00/\$23	\$3.00/\$23
Vacaville	--	--	\$4.50/\$35
Fairfield	--	--	\$4.00/\$31

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 \$75 for the Fairfield to BART service and \$79 for the Vacaville to BART trip. The monthly pass for the Route 80 costs \$69, 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) routinely achieve farebox recoveries of 80 to 90 percent.

Operating Costs – The 1999 Vallejo Short-Range Transit Plan (SRTP) estimates operating cost projections for the entire system over a nine-year span. In the last SRTP reported fiscal year, Vallejo expected to spend about \$1.9 million on regional fixed route operations at an average cost of about \$48 per hour. Passenger revenue was reported at about \$1.0 million, resulting in about a 50 percent farebox recovery. It should be noted that in the next partial reporting period, farebox recovery increased to about 55 percent, and farebox recovery on Route 80 and 90 was between 70 and 90 percent.

The total operating cost net of fares for the four Vallejo regional bus services are about \$500,000, or about 22 percent of system operating cost net of fares (this share of the subsidy has been decreasing rapidly). The City of Vacaville

contributed \$295,000 in FY 2001-02 to help subsidize operation of Route 91.

Capital Improvement Costs – Vallejo has an aggressive capital improvement program, and has requested and received funds for additional buses, ferries and ferry facilities, and various miscellaneous items. The total committed capital funding for the next several years is about \$25 million.

Fairfield-Suisun Transit

FST operates three intercity routes: Route 20 links Fairfield and Vacaville, Route 30 links Fairfield, Vacaville, Dixon and UC Davis, 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 last year. 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 Nut Tree. 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 connector. Four trips daily provide service from Fairfield, Vacaville and Dixon to UC Davis. The first trip departs at 6:48 a.m., and the last trip returns at 6:11 p.m. Trip time is about 80 minutes for the 25-mile Fairfield

Fairfield Suisun Routes 20, 30, and 40	
Fairfield Suisun Transit Route 20	
Daily Hours	12.25
Daily Cost (@ \$50/hour)	\$612
Daily Passengers (weekdays)	202
Daily Revenue (@ \$0.63 per passenger)	\$127
Daily Deficit	\$485
Farebox Recovery	20%
Annualized	\$146,000 operating cost net of fares
Fairfield Suisun Transit Route 30	
Daily Hours	11.4
Daily Cost (@ \$50/hour)	\$570
Daily Passengers	36
Daily Revenue (@ \$1.17 per passenger)	\$42
Daily Deficit	\$528
Farebox Recovery	7%
Annualized	\$137,000 operating cost net of fares
Fairfield Suisun Transit Route 40	
Daily Hours	21.0
Daily Cost (@ \$48/hour)	\$ 1,050
Daily Passengers	129
Daily Revenue (@ 1.72 per passenger)	\$ 222
Daily Deficit	\$ 828
Farebox Recovery	22%
Annualized	\$215,000 operating cost net of fares

to Davis journey. 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.

Of the 26 buses, all of which are diesel powered Gillig Phantoms, 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. At \$50 per hour cost, this translates to \$25 per day per bus.

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):

Intercity Service Indicators	
Measure	Target
Passengers per Vehicle-Hour	15.00
Passengers per Vehicle-Mile	0.5
Operating Cost per Passenger (net)	\$3.00
Operating Cost per Hour	\$58.50
Operating Cost per Mile	\$ 1.75
Farebox Recovery Ratio	15 percent

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

FST Adult Bus Fare Matrix				
Between and ➤	Davis Cash/10 ride	Vacaville Cash/10 ride	Fairfield Cash/10 ride	BART Cash/10 ride
Davis	--	--	\$2.50/ \$20	--
Vacaville	\$2.00/\$16	--	\$1.25/ \$10	\$4.25/ \$34
Fairfield	--	--	--	\$4.00/ \$32

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 \$75 for the Fairfield to BART service and \$79 for the Vacaville to BART trip. The monthly pass for the Fairfield to Davis route costs \$59, and the monthly pass between Vacaville and Davis is priced at \$49.

Operating Cost Projections – The FST Short Range Transit Plan estimates operating cost projections for the entire system over a nine-year span. In the current fiscal year, FST expects to spend \$2.4 million on local and intercity fixed route operations at an average cost of about \$50 per hour. Passenger revenue is expected to be about \$650,000, resulting in a 27-28 percent farebox recovery. The City of Vacaville contributed more than \$300,000 in FY 2001-02 towards the cost of operating FST Routes 20, 30 and 40.

Combined totals for the three FST intercity routes are 367 average weekday riders, 8.2 passengers served per bus hour, \$5.01 subsidy cost per passenger and a 17.5 percent farebox recovery ratio.

The total operating cost net of fares for the three Fairfield intercity services is about \$500,000, or about 30 percent of system operating cost net of fares.

Capital Improvement Costs – Fairfield has an aggressive capital improvement program, and has requested and received funds for several park-and-ride facilities, additional buses, and various miscellaneous items. The total committed capital funding for the next three years is almost \$15 million. Much of that funding is directed to the intercity bus program.

Benicia Transit

Benicia Transit operates two intercity bus routes, as shown in Figure 7. Both routes provide connections to the Pleasant Hill BART Station and the main route also 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.

Benicia Transit operates another Pleasant Hill BART commute route from North Hills/Southampton. Two morning trips and three afternoon trips are provided in the commute direction of travel (Solano to Contra Costa). The route originates in Benicia at Columbus Parkway and Rose Drive and passes Rose Drive and Oxford Way, Rose Drive and Hastings, Hastings and Southampton, Turner and Larkin, Larkin and Panorama, Panorama and Chelsea Hills, and Chelsea Hills and Southampton before getting on I-780 to BART. The Rose/Hastings loop requires about 13 minutes to run which together with the Panorama/Chelsea Hills loop ten minute run time and the 25-minute run to BART involves a total one-way trip time of 48 minutes. Buses run empty in the off-peak direction of travel (deadhead) in order to quickly get into position for another peak direction trip.

Patronage Characteristics - Benicia Transit reportedly carries about 500 daily riders with 400 estimated to be intercity trips to 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).

Adult fares for travel on service between Benicia and the Vallejo Baylink ferry terminal or Vallejo Transit Center located at York and Marin Streets (Zone 1) are \$1.00 for a single ride and \$37 for a monthly pass.

Adult fares for travel from Benicia to Contra Costa County (Zone 2) are \$2.00 for a single ride and \$56 for a month pass. Adult fares from Vallejo to Contra Costa County (Zone 3) are \$2.50 for a single ride and \$69 for a monthly pass.

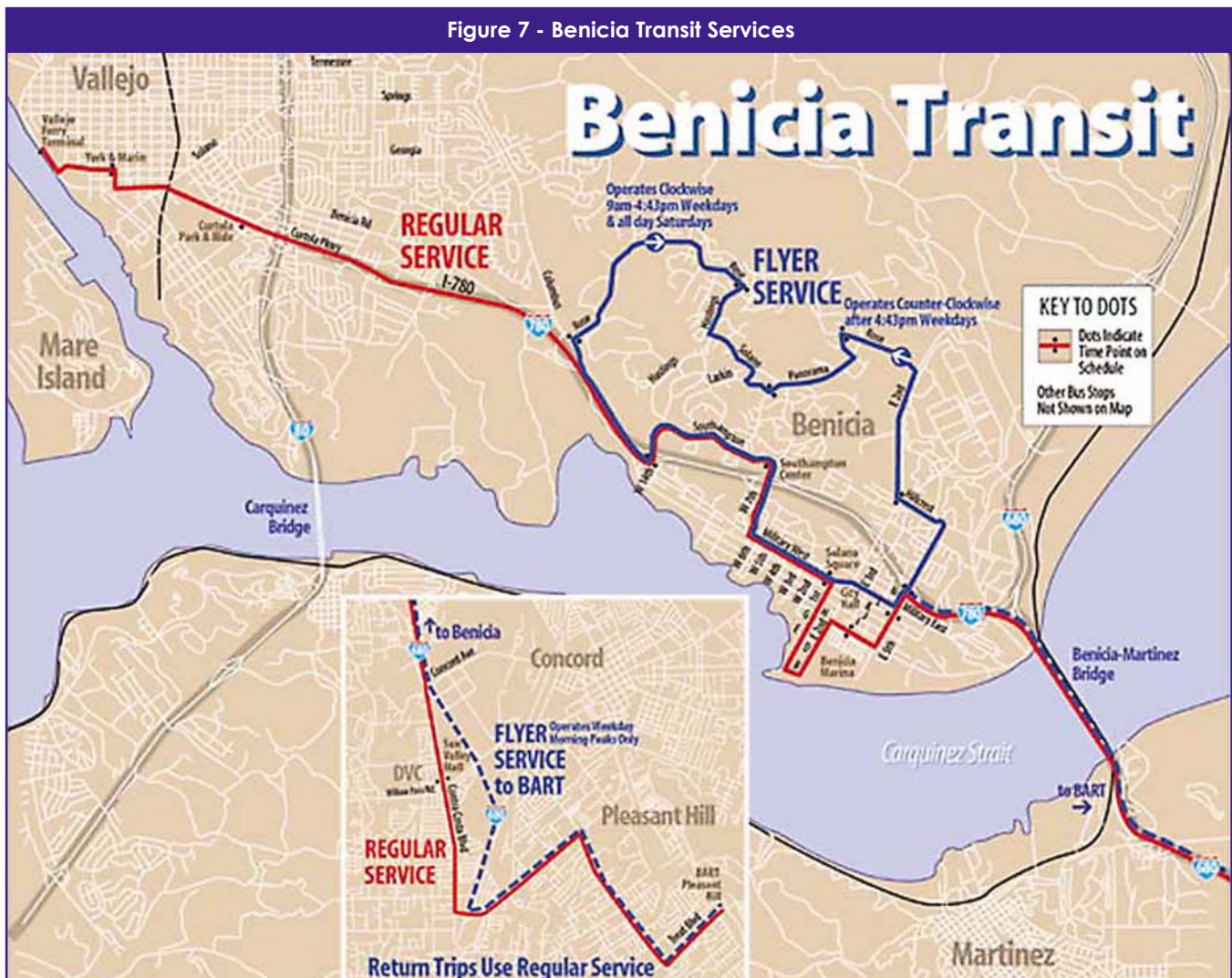
Transfer connections are provided to I-80 corridor service at the Curtola Park-and-Ride lot and to Vallejo Transit and Napa Transit at the York and Marin Transit Center. Direct service to the Baylink ferry terminal is provided. Transfer connections to I-680 bus services are not provided, due to physical 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.

Operating Cost Characteristics - Benicia's cost to operate the fixed route service for 1999/00 was estimated to be \$540,000, which translates to \$43.23 per bus hour. The ratio of fares to operating costs was 28.7 percent. Approximately 130,000 annual boardings are served by Benicia Transit.

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.

Figure 7 - Benicia Transit Services



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, three 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. No direct public intercity transit service is presently provided between Sacramento from Solano County.



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.

2.2 - 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.

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		
Level	New Annual Funding Available	Source
1	\$500,000	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, 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 8 shows the proposed route network and Table 2 on page 25 summarizes the proposed 2025 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, freeway operation to the Fairfield Transportation Center, and then express service via I-80 and 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 Route 180 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.

Estimated Peak Hour Bus Service	
Cordon Line	Hourly Bus Service
Carquinez Bridge	18
Benicia-Martinez Bridge	12
Yolo Causeway	2
Highway 37	2
SR-12 Jamieson Canyon/Highway 29	2

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.

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 Vacaville Park and Ride facility on Davis Street, access via I-80 the Fairfield Transportation Center, and 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: 180

Sacramento to Novato via Solano County

Route 180 would reinstitute 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: 780

Napa-Vallejo to El Cerrito del Norte BART

Route 780 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 station. Several trips could be routed to cover the current Benicia Flyer service 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: 12A

Napa to Fairfield and Suisun

Route 12A 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 180, and with local service to both Fairfield and Suisun. Also in Napa with local VINE service.

Figure 8 - 2025 Vision Intercity Bus Service Plan

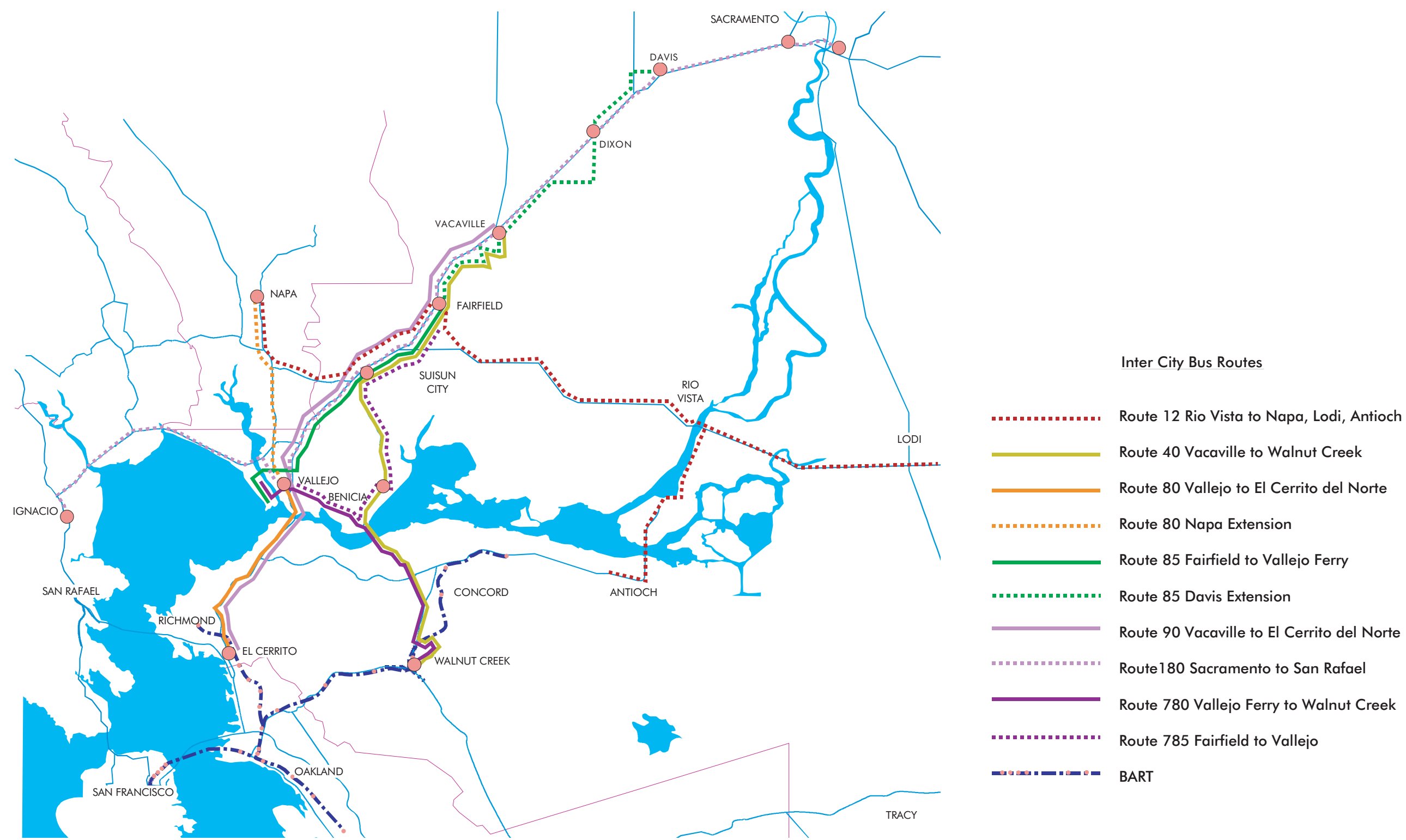


Table 2 - Proposed 2025 Bus Network - Unconstrained System

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
	180	Sacramento	Novato	Davis, Dixon, Vacaville, Fairfield, Vallejo (connects with ferry) and Marin.	30	30
	780	Vallejo	Walnut Cr BART	Benicia, I-780	10	30
Express Routes – Sales Tax Eligible						
	12A	Napa	Suisun Stn	Jamieson Canyon	30	60
	12B	Suisun Stn	Rio Vista	Hwy 12	30	60
	12C	Rio Vista	Antioch	Hwy 160	60	
	12D	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
	785	Vallejo	Fairfield	Via Benicia Industrial Pk	60	no service

Route: 12B

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.

Route: 12C

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.

Route: 12D

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.

Route: 785

Vallejo to Benicia Industrial Park to Fairfield

Route 785 would establish a new link connecting the Benicia Industrial Park with both Vallejo and Fairfield. Service would begin at the Vallejo Ferry Terminal, operate via Curtola Parkway to I-780, then via I-680 to the Benicia Industrial Park, then via I-680 and I-80 to the Fairfield Transportation Center. Service would operate hourly during peak periods on weekdays.

Connections: At Fairfield Transportation Center with Routes 85 and 180, and with local service to both Fairfield and Suisun. 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 (2001 dollars)

Fares and transfers would 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.

2.3 - 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 capitolly 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 \$500,000 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 quantities to fully fund the "Bridge Toll Eligible" services, freeing up the TDA and potential sales tax funds for other county-wide services.



Proposed 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		--	\$2.50	\$3.50	\$4.50	\$7.00
Vacaville	--	--	--	\$1.50	\$4.00	\$5.00
Fairfield	--	--	--	--	\$3.00	\$4.00
Vallejo	--	--	--	--	--	\$3.00
Novato	\$9.00	\$7.50	\$6.00	\$5.00	\$4.00	--
Napa	\$5.00	\$4.00	\$3.00	\$2.50	\$2.50	\$5.00

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 3 - Unconstrained Intercity Bus Network Vision for Year 2025

Route	To/From	Headways		Bus Requirement		Sched
		Peak	Base	Peak	Base	Cycle
40	Vacaville to Walnut Creek	10	30	15	5	150
80	Napa to Del Norte	15	30	8	4	120
80A	Vallejo to 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
180	Sacramento to Marin	30	30	9	9	270
780	Val 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
12A	Napa to Suisun Station	30	60	3	2	90
12B	Suisun Sta to Rio Vista	30	60	3	2	90
12C	Rio Vista to Antioch	60	0	1	0	60
12D	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
785	Ferry to Fairfield via Benicia Ind Pk	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 4 - Full Local TDA Potential Intercity Bus Network Years 2005 to 2025

Route	To/From	Headways		Bus Requirement		Sched
		Peak	Base	Peak	Base	Cycle
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
180	Sacramento to Marin	0	0	0	0	270
780	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
12A	Napa to Suisun Station	60	60	1.5	2	90
12B	Suisun Sta to Rio Vista	60	60	1.5	2	90
12C	Rio Vista to Antioch	0	0	0	0	60
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
785	Ferry to Fairfield via Benicia Ind Pk	60	0	2	0	120
Subtotal				12	11	
TOTAL				46	20	

Second Phase System

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

Table 5 - Full TDA Intercity and \$ 1 Million Bus Network Years 2005 to 2025

Route	To/From	Headways		Bus Requirement		Sched
		Peak	Base	Peak	Base	Cycle
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
180	Sacramento to Marin	60	120	4	2	270
780	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
12A	Napa to Suisun Station	60	60	1.5	2	90
12B	Suisun Sta to Rio Vista	60	60	1.5	2	90
12C	Rio Vista to Antioch	0	0	0	0	60
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
785	Ferry to Fairfield via Benicia Ind Pk	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 6 - Full TDA Intercity and \$ 2 Million Bus Network Years 2005 to 2025

Route	To/From	Headways		Bus Requirement		Sched
		Peak	Base	Peak	Base	Cycle
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
180	Sacramento to Marin	60	120	4	2	270
780	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
12A	Napa to Suisun Station	60	60	1.5	2	90
12B	Suisun Sta to Rio Vista	60	60	1.5	2	90
12C	Rio Vista to Antioch	60	0	1	0	60
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
785	Ferry to Fairfield via Benicia Ind Pk	60	0	2	0	120
Subtotal				17	11	
TOTAL				66	31	

Weekend Service

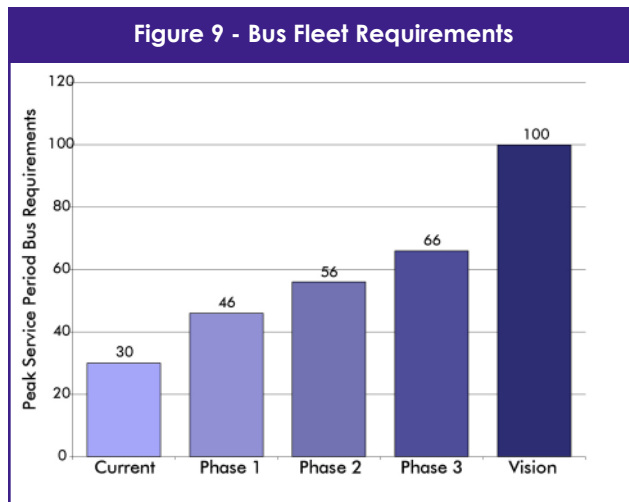
At present only the Capitol Corridor rail service and the Baylink ferry operate on Sundays. Both services presently only have a single stop in Solano County. Operation of Route 85 from Davis to the Vallejo Ferry Terminal is proposed along with Vallejo to del Norte Route 80 service on Sunday to expand access to intercity transit services. To complement these I-80 services, operation of the Route 780 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

Figure 9 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 \$59.7 million for the Vision service levels over a 20 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 20 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.



CHAPTER 3 - 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.

3.1 - 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 nine 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 and 57,880 in 2000. Figure 10 describes the service corridor and current stations.

Capitol Corridor Travel Times (minutes)			
To/From	Davis	Suisun City	Martinez
Sacramento	33	59	78
Davis	0	26	45
Martinez	45	21	0
Richmond	73	49	28
Emeryville	89	65	44
San Francisco	121	97	76
San Jose	176	152	131

Current Capitol Corridor schedules provide service to and from Suisun City approximately every 2-3 hours throughout the day. The increase in service levels to seven daily trains in 2000 and nine trains in 2001 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 7.

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

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

Table 7 - Current Trains Serving Suisun - Fairfield Station April 29, 2002 Schedule

Eastbound Times	Origin/Destination	Westbound Times	Origin/Destination
7:26 AM	Oakland/Sacramento	6:08 AM	Sacramento/San Jose
8:56 AM	San Jose/Sacramento	6:59 AM	Sacramento/San Jose
11:56 AM	Oakland/Sacramento	8:23 AM	Auburn/Oakland
1:56 PM	Oakland/Sacramento	10:24 AM	Sacramento/Oakland
2:56 PM	San Jose/Sacramento	12:59 PM	Sacramento/San Jose
4:40 PM	Oakland/Auburn	3:24 PM	Sacramento/Oakland
5:56 PM	San Jose/Sacramento	4:54 PM	Sacramento/Oakland
6:40 PM	Oakland/Sacramento	6:24 PM	Sacramento/San Jose
7:56 PM	San Jose/Sacramento	8:54 PM	Sacramento/Oakland

Figure 10 - Existing Capitol Corridor Stations



- 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 and Sacramento RT

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 8.

The 57,880 annual boardings for 2000 were served by about 5,000 annual train stops, which translates to an average of approximately 12 boardings and alightings per train.

Suisun City station ridership continues to increase as a result of the expanded Capitol Corridor service. Monthly total ridership (on and off) has grown from 4,300 in March of 2000, the first full month of the seven-train schedule, to over 6,000 in October and November of 2000. Monthly Suisun City ridership is shown in Table 9.

Table 8 - Suisun City Rail Service and Patronage

Year	Service (Each Direction)	Annual Passengers
1990	California Zephyr	2,650
1991	California Zephyr; Three Capitols (1)	3,710
1992	California Zephyr; Three Capitols	15,760
1993	California Zephyr; Three Capitols	20,080
1994	California Zephyr; Three Capitols	19,850
1995	California Zephyr; Three Capitols	18,090
1996	California Zephyr; Four Capitols (2)	23,260
1997	California Zephyr; Four Capitols	27,420
1998	California Zephyr (3); Five Capitols (4)	32,000 est.
1999	Six Capitols (5)	38,660
2000	Seven Capitols (6)	57,880
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.		

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

Table 9 - Recent Monthly Ridership for Suisun City Station Since Start of Seven-Train Frequency

Month	Ridership
March	4,320
April	4,626
May	4,885
June	4,879
July	4,202
August	4,788
September	4,612
October	6,871
November	6,179
Source: Capitol Corridor JPB	

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 patronage demands.

Table 10 - Capitol Corridor Travel Volumes to and From Suisun March 2000 through November 2000

Station	Passenger Volume
Auburn*	85
Rocklin*	7
Roseville*	100
Sacramento	9,933
Davis	3,668
Martinez	5,219
Richmond	3,131
Berkeley	2,164
Emeryville (and San Francisco)	10,620
Oakland	5,938
Hayward**	180
Fremont**	738
Great America Santa Clara**	1,356
San Jose**	2,223
TOTALS	45,362
* Served by One Train Per Day ** Served by Four Trains Per Day Source: Capitol Corridor JPB	

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. Efforts are underway to add a third rail track for freight use and to add parking at the present lot. A decision regarding relocating the center platform to a side platform serving the westbound track has not been made. 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. If the station were staffed by non-Greyhound Bus Lines personnel, costs would be higher.

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 earlier pick of seats are other factors that typically influence 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. Representative current fares are shown in Table 11.

Suisun to	Miles	Fare	10 Ride (90 day)	10 Ride (30 day)	Monthly Pass
Sacramento	40	\$ 9.00	\$ 68.00	\$ 54.00	\$ 155.00
Oakland	49	\$ 9.00	\$ 54.00	\$ 68.00	\$ 155.00
San Jose	94	\$ 13.50	\$ 80.00	\$ 100.00	\$ 230.00
Martinez	17	\$ 6.00	\$ 34.00	\$ 43.00	\$ 98.00

In terms of productivity, the Capitol Corridor service has seen its ridership increase dramatically in the past year up 41 percent and its farebox recovery ratio improve from 31.2% to 35.7%. The average cost per boarding passenger is \$23.99 (767,000 annual passengers/ \$18,400,000 operating cost) and cost per passenger-mile 26 cents.

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 99/00 were \$17.3 million for operations, \$1.1 million for marketing and \$35 million for capital improvements. 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.

3.2 – RECOMMENDED RAIL PLAN AND IMPLEMENTATION STRATEGY

Some of the principal passenger rail recommendations for this Intercity 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 sixteen trains daily in both directions of travel by 2020 and to add the tenth and eleventh trains by 2004. The 16 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
- Upgrade the Bahia Viaduct (Benicia)
- Addition of a third track in Dixon

Near-Term Period

- Addition of a third track in Suisun City
- Extend and rehabilitate Tolenas lead track

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.

Bahia Viaduct Upgrade Project – This project would upgrade track facilities to support 60 mph speeds over this 1.5 mile segment.

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 apart.

Suisun Third Track Project – This project is intended to eliminate the disruptions caused by California Northern Railroad freight interchange activities that presently occur on the westbound mainline track. It would add a third track on the north side of the present tracks near the Suisun City Station.

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.

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 warrant more attention.

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. 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 was implementable quickly. 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 have embarked on a feasibility study for establishing passenger rail service from Napa to

Vallejo and from Napa to Suisun City. The findings of this study will identify the potential patronage potential as well as investment requirements needed to implement these services.



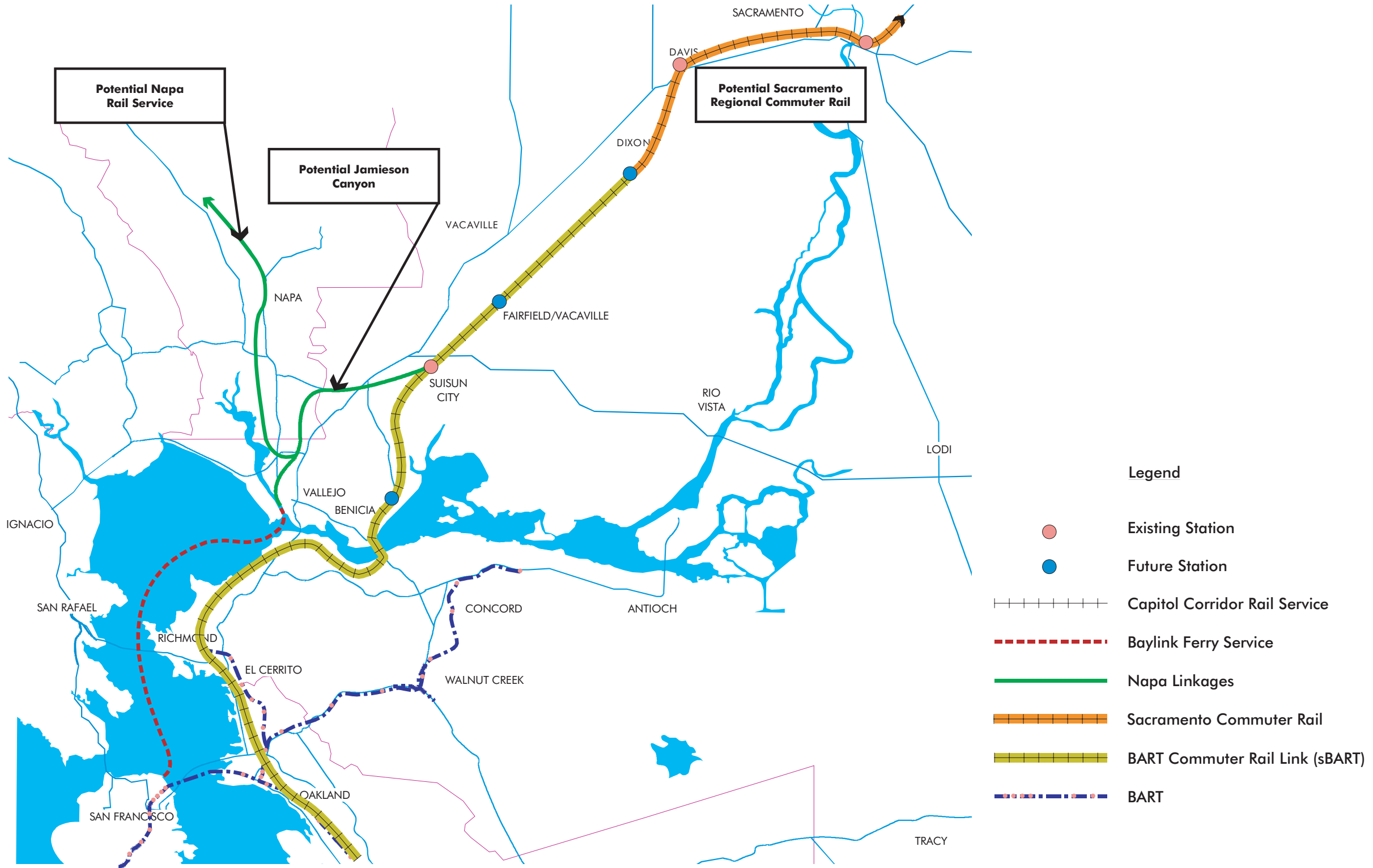
Vacaville/Fairfield Commuter Rail Service - The Metropolitan Transportation Commission has studied transportation problems and potential BART extensions to Solano County on several occasions. Current patronage of Capitol Corridor trains indicates that there might be a commute market for this type of service. What might be the potential for commuter 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 working 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 the Fairfield-Vacaville area might prove successful.

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 – Nine trains in each direction are presently provided in

Figure 11 - Water and Rail Transit Network



Solano County. 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

Should one of more of these potential new passenger rail services prove viable and be implemented, adjustments would likely be needed to the proposed bus service plan.



CHAPTER 4 - FERRY SERVICES PLAN

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.”

4.1 - 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 to 10 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 12 summarizes annual ridership and the annual growth rate through the first few months of 2000/01. As should be noted, it has grown each year, even with the limit on commute capacity.

Table 12 - Vallejo Baylink Ferry Ridership Trends

Year	Ridership	Annual Growth Rate
1996-97	269,700	
1997-98*	546,500	102%
1998-99	613,100	12%
2000-01	767,406	16% (year to date)

*Initiation of two vessel Baylink service.

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 mid-2004, the current 11 weekday round trips will expand to 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 top 4,000. A fourth 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 riders 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 one-way/\$14 for a round trip (Daypass), or \$200 for a monthly pass. This includes previously approved increases of \$.50, \$1.00, and \$10 respectively that were implemented January 2, 2001, as well as an additional fuel surcharge approved by the City Council in December 2000. Youth, senior, and disabled patrons pay \$4.50 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 estimate for the FY2000-01 year farebox recovery ratio is over 80%.

Capital Costs

The Vallejo SRTP has approximately \$8.1 million in programmed ferry projects, and \$45.5 million in unfunded projects. Major projects in the programmed category include the rehabilitation of the Jet Cat Express and the Pier 43 dock at Fisherman's Wharf. Together, they account for approximately \$5 million of the programmed projects.

Since publication of the SRTP, Vallejo has received \$10 million in funding commitments for the third vessel, and approximately \$16 million of state, federal and local funding for the design and construction of the intermodal facility, which is now estimated at \$35 million rather than the \$15.5 million shown in the 1999 SRTP. Other future projects include dredging, programmed for every three years, maintenance facility improvements, and the fourth vessel.

4.2 - 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 ferry boats 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 1,400 space garage plus intermodal improvements. Total project cost, including extension of Georgia Street, is estimated to be \$35 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 200-400 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 1,400 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 (current 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.





CHAPTER 5 - INTERCITY TRANSIT FOR SENIOR AND DISABLED (PARATRANSIT)

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

5.1 – VALLEJO TRANSIT

Vallejo Transit contracts with a private operator to provide door to door ADA paratransit services in the southern portion of the county. 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.

5.2 – FAIRFIELD SUISUN TRANSIT

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. Cost per rider served is approximately \$25. 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:

1. Service area
2. Response time
3. Fares
4. Service days and hours
5. Meet request for any trip purpose
6. 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.



5.3 - RECOMMENDED PLAN

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 2025 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.



CHAPTER 6 - 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.

6.1 – PARK AND RIDE FACILITIES

Existing Conditions

There are about a dozen formal park-and-ride locations in Solano County and a number of informal locations (Table 13). Vallejo maintains a large park-and-ride lot at the ferry terminal and a medium size lot at the York and Marin Transit Center. Surveys conducted in September 2000 indicated that the Curtola, Suisun City, and Vacaville's Regional Transportation Center were full with some spillover parking on adjacent streets. The Curtola park-and-ride lot in particular seriously lacks capacity. Since this survey the economic downturn appears to have slightly reduced demand, but the Curtola lot continues to be seriously oversubscribed and the Suisun City lot also continues to have overflow demand. 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.

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 locational convenience of the park-and-ride lots for commuters. Several of these key factors will be addressed in the I-80/680/780 Transit Corridor Study proposed by STA. 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.

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 13 - 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 Lane at Pitt School Road	89
Dixon	B St. at Jackson Capitol Corridor Station	114
Fairfield	Magellan near West Texas at I-80	400
Fairfield	K-Mart at North Texas & Air Base Parkway	48
Suisun City	Main St. at Route 12	80
Vacaville	Cliffside at I-80	60
Vacaville	Davis St. at I-80	250
Vallejo	Benicia Rd. at I-80	13
Vallejo	Curtola Parkway and Lemon St. at I-80 (NW)	379
Vallejo	Curtola Parkway and Lemon St. at I-80 (NW)	64
Vallejo	Magazine St. at I-80	21
Vallejo	Intermodal Center at Mare Island Wy. and Georgia St.	650

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 Suisun City (Amtrak) lot, the Vacaville Regional Transportation Center lot, the Fairfield Transportation Center lot and Dixon Downtown lot are also proposed.

Vallejo Baylink Intermodal Center - Planning has been completed for the 1,400 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. Caltrans has suggested construction of a 1,000 space garage on the present site. A more ambitious approach would be to construct a garage between Lemon Street and the freeway for transit users and designate the current lot for rideshare commuters. Locating the garage nearer to the freeway might eliminate the need for buses to exit the freeway in order to pick up and drop off passengers and combined with an extension of the westbound HOV lane to the Curtola Parkway/I-780 interchange could be more attractive to transit riders. The bus transit park-and-ride parking garage might possibly be included as an element of an overall program to upgrade the interchange.

Fairfield Transportation Center - The recently constructed parking garage is successfully operating near its capacity. Phase II of the project would add a surface lot and expand capacity by 200 spaces.

Vacaville Regional Transportation Center Street Lot - This lot presently operates near its capacity. The proposed Bella Vista park-and-ride lot project would expand capacity at this interchange and help support future demands.



Expansion of Suisun City Amtrak Station Lot – Land is available within the Caltrans right-of-way for expansion of the current park-and-ride lot. This expansion is fully funded and should serve the slight overflow demand conditions today as well as support increased 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. 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.



2002 City of Dixon Ribbon Cutting

New Highway and Bus Transit Oriented Park and Ride Lots

New highway oriented park and ride lots are proposed at:

I-80 Corridor

Seven or eight new long-range park-and-ride lots are proposed for the I-80 Corridor to accommodate the projected 2025 transit and ridesharing demands. Two would be located in Dixon, two in Vacaville, three in Fairfield and two in Vallejo.

- Dixon – North First Street/SR-113
- Dixon - West A Street
- Vacaville – Leisure Town Road
- Vacaville – Nut Tree Development
- Fairfield – North Texas Street
- Fairfield – I-80/I-680/SR-12 interchange redesign
- Fairfield - Red Top Road
- Vallejo - State Route 37

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 Leisure Town Road lot is located to serve east oriented commuters from eastern Vacaville.

The Nut Tree site is conveniently located near the junction of I-580 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 from 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 would be simply an upgrade and expansion of the current ad hoc park and ride facility. Establishment of a park and ride facility near the SR 37 junction might be explored in conjunction with the Napa passenger rail study. The rail tracks cross SR 37 at a logical train station stop. 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
- Benicia Intermodal 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 which serves commuters in this corridor, a new park-and-ride lot located at Rose Drive and Columbus Parkway is proposed. Both Rose Drive and Columbus Parkway are important commute routes.

SR-12 Corridor

Two park-and-ride lots are proposed for the Rio Vista segment of State Route 12.

- Rio Vista – State Route 12 and Church Street
- Rio Vista – Downtown near Main Street

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.

6.2 - INTERMODAL BUS TRANSIT ORIENTED CENTERS

The proposed intercity bus service plan described in Chapter 2, 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. Figure 8 in Chapter 2 identifies desired locations for bus station stops. These locations include:

- I-80 and North First Street in Dixon
- I-80 and I-505 in Vacaville
- I-80 and Davis Street in Vacaville
- I-80 and West Texas in Fairfield Transportation Center
- I-80 and I-680 in Cordelia
- I-80 and I-780/Curtola in Vallejo
- I-680 and Lake Herman Road in 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.

6.3 - INTERMODAL FERRY AND RAIL CENTER FACILITIES

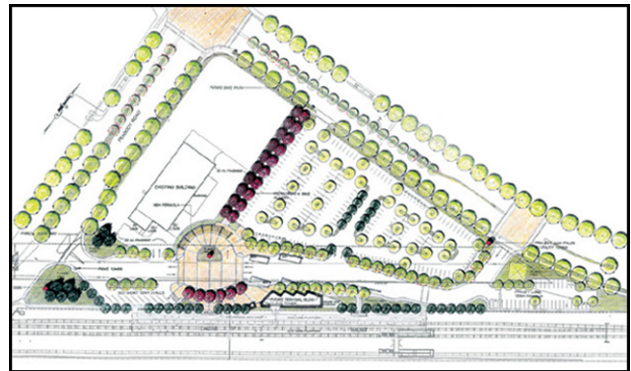
Solano County presently has one passenger rail station and one ferry terminal. The City of Fairfield and City of Vacaville are in the process of planning a second passenger rail station working with the STA. As described in Chapter 4 – Ferry Services, the Baylink ferry terminal in Vallejo is planned 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 increased costs for station development.

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.



Dixon Intermodal Train Station

STA is coordinating with Sacramento area agencies exploration of the feasibility of commuter rail services between Placer County and Solano County. 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.



APPENDIX A - POLICY OBJECTIVES

Objective A - 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
5. Provide linkages to all major travel and commute destinations within and outside Solano County

Objective B - 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 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

Objective C - 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 - 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 - Address Environmental Justice issues as part of the transit programs.

Objective E Policy Actions:

1. When improving and expanding various transit services, the transit operators should address the needs of low and moderate-income persons whenever feasible
2. Support proposals of the SolanoWorks (Welfare-to Work) program whenever feasible

