Solano Transportation Authority
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STA BOARD WORKSHOP

10:00 a.m. – 2:00 p.m., Monday, June 27, 2011
Conference Room B
Solano County Events Center

MEETING AGENDA

I. CALL TO ORDER / INTRODUCTIONS — Chair Price

II. APPROVAL OF THE AGENDA

III. OPPORTUNITY FOR PUBLIC COMMENT

IV. WORKSHOP ITEMS

A. The Status of Solano County's Comprehensive Transportation System — Daryl Halls
(10:05 – 10:25 a.m.)
Pg. 1

B. STA Priorities for SR 12 Corridor – (Funding, 2 Lanes versus 4 Lanes, Rio Vista Bridge, and Economic Analysis) — Robert Macaulay
(10:25 – 11:00 a.m.)
Pg. 31

C. Implementation on I-80 Corridor - Express Lanes, Freeway Performance Initiative and Ramp Metering — Janet Adams
(11:00 – 11:30 a.m.)
Pg. 37

D. Opportunities for Public Private Partnerships — Janet Adams
(11:30 – 12 Noon)
Pg. 73

LUNCH BREAK
(12 Noon – 12:20 p.m.)

The complete STA Board Workshop Packet is also available on STA's Website at www.sta.ca.gov

E.	**Solano County Transit Long Range Sustainability** (12:20 – 12:50 p.m.) **Pg. 83**	Elizabeth Richards
F.	**Implementation of Sustainable Communities Strategy – Development of Alternative Fuels Strategy and Infrastructure for Transit** (12:50 – 1:20 p.m.) **Pg. 91**	Robert Macaulay
G.	**Funding of Local Priorities such as Safe Routes to School, Senior and People with Disabilities Mobility and Local Streets and Roads** (1:20 – 1:50 p.m.) **Pg. 101**	Daryl Halls Elizabeth Richards Sam Shelton

V. WRAP-UP / BOARD COMMENTS
(1:50 – 2:00 p.m.)

VI. ADJOURNMENT

DATE: June 16, 2011
TO: STA Board Workshop
FROM: Daryl Halls, Executive Director
RE: The Status of Solano County's Comprehensive Transportation System

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Background/Discussion:
The STA Board last held a workshop in 2006. At that time, there was concern expressed about Solano County's reliance on state funding as the primary source of funding for Solano County's priority projects. The concerns from 2006 have gradually worsened into the current realities of the state fiscal crisis and the equally challenging federal funding crisis.

Over the last ten years, Solano County has remained remarkably vigilant in its planning for a Comprehensive Transportation System to serve all of Solano County and its seven cities. The last five years, Solano County has proactively moved from planning for its transportation future, but waiting for others to make this happen, to acting in a proactive and resolute manner to successfully implement priority projects and programs to establish the foundation and framework for a Comprehensive Transportation System for Solano County.

Years of planning and design work has led to recent and meaningful improvements along the I-80 Corridor. Similar efforts are underway on the SR 12 corridor. A network of transit centers connecting Solano County's cities to each other and to other key destinations within the Bay Area, Sacramento and neighboring counties have begun to emerge. The first eight miles of a new high occupancy vehicle (HOV) lanes system has been opened with plans to extend this system the length of the I-80 corridor. Concurrently, there are a myriad of operational improvements planned and the opportunity to utilize express lanes to help accelerate by decades the implementation of this I-80 HOV lanes system.

Solano County's location at the heart of the Northern California Mega-Region, one of ten identified mega-regions located throughout the United States, provides both challenges and opportunities. For a county of relatively small population and limited resources, Solano's strategic location requires it to take a leadership role to address several large infrastructure challenges. These include the following:

- Improving mobility and operations on the I-80 corridor, one of California's four major trade corridors
- Relocating and reconstructing an inadequate state truck scales facility
- Improving safety and mobility on a secondary trade corridor in SR 12 which is increasingly impacted by an archaic bridge unable to address growing Sacramento River traffic
- Helping to improve access to a major and strategic west coast military installation in Travis Air Force Base.

Over the past 25 years, Solano County's leaders and voters have had the collective wisdom, will and foresight to efficiently plan for and utilize its resources through the passage and extension of the County's Orderly Growth Initiatives, placing a priority on urban development occurring within the boundaries of its seven cities. This land use planning has helped facilitate STA's efforts to work with the cities to strategically plan a system of transit hubs and rail stations along the I-80 corridor. The recent emergence of nine planned or proposed Priority Development Areas (PDAs) will help support these transit centers.

For the past ten years. Solano County has spoken with one voice, through the STA, on a set of transportation priorities in Sacramento and Washington, D.C. This has resulted in $46 million in federal earmarks and over $500 million in statewide funding for Solano County's projects. This approach has served Solano County well, but the ongoing fiscal crisis will require additional opportunities and expanded partnerships in order for Solano County to continue to make meaningful progress towards the implementation of a Comprehensive Transportation System.

PURPOSE AND FORMAT OF WORKSHOP

Staff has outlined seven key topic areas for discussion at the June 27th Board Workshop. Each is an important facet of Solano's transportation future and merit a policy discussion and direction by the Board. Staff will present each item as an information item and has identified one or more policy questions for consideration by the Board Members and Alternates. Discussion and questions are encouraged. Staff will summarize the comments and provide a series of follow up recommendations at the STA Board meeting of July 13, 2011. This will then serve as policy direction to the STA staff to guide activities and efforts in these seven topic areas in the future.

Recommendation:

Informational.

Attachments:

A. STA's Adopted Overall Work Program (Priority Projects) for FY 2011-12 and FY 2012-13
B. Solano County Comprehensive Transportation System Map

SOLANO TRANSPORTATION AUTHORITY
OVERALL WORK PLAN (OWP)
FY 2011-12, & FY 2012-13
Board Adopted May 11, 2011

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Lead - Projects	**1.**	**<u>I-80/680/SR 12 Interchange</u>** A. Interchange EIR/EIS ➢ Alt B and Alt C B. Breakout Logical Components <u>Status</u>: Draft EIR/EIS circulation in August 2010. STA identified Locally Preferred Alternative that was included in Draft EIR/EIS. Phasing of construction packets has been completed. Project awarded Prop 1B CMIA Savings of $24M by CTC in summer 2010. Construction on first construction packet by 2012. <u>Milestones</u>: Draft EIR/EIS circulation - Completed. <u>Estimated Completion Date (ECD):</u> Final Environmental Document Fall 2011	STA	$9M TCRP $50M RM2 $50.7 M AB 1171 $24 M CMIA Current Shortfall in funding $1B	X	X	$9.6 M for EIR/EIS $12 M Prelim Engineering $1 B to 1.2 B (Capital Cost)	Projects Janet Adams
STA Lead - Projects	**2.**	**<u>North Connector</u>** A. East Segment (STA) B. Central Segment (Fairfield) C. West Segment (STA) <u>Status</u>: Construction for the East and Central Segment opened in fall 2010. STA to develop funding plan for West Segment with Fairfield and County. The West Segment will be constructed as part of I-80/I-680/SR 12 Interchange improvements, which include a interchange at SR 12 and the new roadway (West Segment). <u>Milestones</u>: Phase 1 Construction Completed Phase 2 (East Segment) Roadway Opened <u>ECD</u>: East Segment – COMPLETED Central Segment - COMPLETED	STA (East and West Segments) City of Fairfield (Central Segment)	$3M TCRP (environmental) $21.3M RM2/STIP East Section $20M City of Fairfield $1M County of Solano Central Segment Current Shortfall in funding $32M West Section	X	X	$32M West Segment (Capital Cost)	Projects Janet Adams

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STA Lead - Projects	**3.**	**I-80 HOV Projects** A. Red Top to Air Base Parkway –8.7 miles new HOV Lanes. COMPLETED (Fall 2009) Ramp Metering (HOV Lane Component) PA/ED: 4/07 PS&E: 10/09 R/W: None Begin Construction: 2/2011 B. WB I-80 Carquinez Bridge to SR 29 – This project has a completed PSR approved by Caltrans. Project is currently unfunded ($20M). Note: HOV Lanes to be implemented as part of Express Lanes OWP# 4	STA	CMIA $6M	X	X	CMIA $6M	Projects Janet Adams

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STA Lead – Projects	**4.**	**Express Lanes (HOT Lanes)** A. Convert Existing I-80 HOV Lanes to Express Lanes B. I-80 Air Base Pkwy to I-505 C. I-80 SR 29 to SR 4 D. I-80 SR 37 to SR 29 Status: STA approved to complete PSR/PR for Project (Red Top Rd to I-505) by Caltrans, $16.4 M allocated from Bridge Toll funds for the PA/ED of this Project. PA/ED underway with estimated 2 years to complete this phase of the Project. Milestones: $16.4M Allocation from Bridge Tolls. Consultants selected for first 2 priority segments. PA/ED – March 2013	STA PA/ED Design	$16.4 M Bridge Tolls	X	X	$100 to $150M (Red Top to I-505)	Projects Janet Adams
STA Lead – Projects	**5.**	**Redwood Parkway – Fairgrounds Drive Improvement** Project STA, City and County began PA/ED 2010, Scoping Meeting held January 2011. Milestones: The PA/ED for Redwood Pkwy – Fairgrounds Dr Improvement Project began 2010.	STA PA/ED	Federal Earmark	X	X	$65M	

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STA Lead – Projects	**6.**	**<u>Jepson Parkway Project</u>** A. Vanden Rd. B. Leisure Town Rd. C. Walters Rd. Extension <u>Status</u>: FEIR March 2009 Board, FEIS scheduled to be completed by April 2011. STA working with Partners (County/Cities of Fairfield and Vacaville) to advance the Vanden Rd. to (Elmira) Leisure Town Segment. <u>Milestones</u>: $2.4 M for PS&E allocated by CTC in 2010. <u>ECD</u>: PA/ED: 3/09 (EIR), 6/11 (EIS) PS&E: 12/12 R/W: 6/14 Beg Con: FY 2014-15	STA Partners: Vacaville Fairfield County Suisun City	STIP 2006 STIP Aug Fed Demo Local Current Shortfall in funding $59 Regional $98 Local	X	X	$185 M	Projects Janet Adams

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STA Lead – Projects	**7.**	**State Route (SR) 12 East** A. SR 12/Church Road PSR a. PSR completed, Summer 2010 b. Initiate PA/ED for SR 12/ Church Rd. with 2010 SHOPP/STIP B. Rio Vista Bridge Study a. Study completed Summer 2010 C. $46 M in rehabilitation improvements completed December 2010 (Suisun City to SR 113) D. Shoulder widening near Rio Vista segment to begin construction in 2013 pending resolution of right of way acquisition. E. SR 12/113 intersection improvements Priority for future SHOPP funds F. SR 12 Corridor Economic Study Milestones: PSR for Church Road and the Bridge Study Report have been completed. Construction for the Rehabilitation Construction from Suisun City to SR 113 completed. STA Board requested the SR 12/Church Rd. improvements and the SR 12/113 interection improvements be included in the Caltrans SHOPP program. SR 12/Church Road PSR – COMPLETED Rio Vista Bridge Study – COMPLETED $46 M in rehabilitation – COMPLETED EDC: SR 12 near Rio Vista scheduled for construction 2012-13	STA STA CT CT CT	STA PSR Funds Rio Vista – Fed Earmark SHOPP SHOPP SHOPP	X	X	$ 2.5 M – (Capital Cost) $ TBD – Capital Cost $ 35 M – Capital Cost	Projects Janet Adams

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STA Lead Projects	**8.**	**I-80 EB Cordelia Truck Scales** New EB Truck Scales with STA lead in partnership with CHP and Caltrans. Status: The design is completed and R/W activities are on-going, but the project has rights to the properties and can proceed to construction. Construction planned to begin in 2011 pending funding allocation by the CTC. Milestones: PS&E completed. Permits obtained. Right-of-Way Acquisition on-going. ECD: PA/ED COMPLETED PS&E COMPLETED R/W ALL RIGHTS OBTAINED Begin Con 6/11 End Con 12/13	STA • PA/ED • Design Caltrans • R/W • Con	$49.8 M Bridge Tolls $49.8 M TCIF	X	X	$100.6 M	Projects Janet Adams
STA Lead Studies	**9.**	**Private Public Partnerships (P3)** Feasibility Study to consider options for P3 within the County. Study to consider a range of options for this financing/delivery of capital projects. Status: Scoping and partnerships for the Study are being developed. Project Manager retained. STA has submitted competitive grant application to Caltrans for additional resources and expanded scope.	STA	$150k STAF	X	X	$150,000	Projects Janet Adams

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STA Lead – Studies	**10.**	**I-80 Corridor Management Policy(s)** This includes, but is not limited to ITS Ramp Metering Policy and Outreach tools, HOV Definition, and Visual Features (landscaping and aesthetic features). Status The Study has been completed and set a foundation to initiate the discussions for Ramp Metering Implementation and other Operational Improvements implementation along the I-80 corridor. Milestones: I-80 Corridor Management - COMPLETED ECD: Operational Analysis – Fall 2011 Ramp Metering MOU – Jan 2012	STA		X	X	N/A	Projects Janet Adams/ Sam Shelton
STA Lead – Studies	**11.**	**Regional Traffic Impact Fee (RTIF) Nexus Study** • Public Outreach • Technical Study • Options/Scenario Status: The traffic demand model land use and 2010 base year have been updated. The initial county wide project list has been developed by working groups. ECD: December 2011	STA	PPM	X	X	$300,000	Projects Robert Macaulay

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STA Lead – Studies	**12.**	**<u>Comprehensive Transportation Plan (CTP) Update</u>** **ALL:** **Project cost consultant contract RFP released 3/11. Work completion est. 12/11.** **Arterials, Highways and Freeways** <u>Milestones</u>: Adopted Goals, State of the System report, Goal Gap Analysis, updated Routes of Regional Significance, project list. **Alternative Modes** <u>Milestones</u>: Adopted Goals, State of the System report, Goal Gap Analysis, Project List; Bike plan update completed. Develop State of the System report. TLC Plan update consultant contract RFP released 3/11. **Transit** <u>Milestones</u>: Adopted Goals, State of the System report, Goal Gap Analysis, Transit Capital List updated. Senior and Disabled Transit Study update underway. Rail Crossing Inventory adopted 2/11. Safe Routes to Transit Consultant contract RFP released 3/11. Plan completion est. 12/11.	STA	Combination of STIP/STP fund swap and TDA fund swap	X X X X X X X X	X X X X X X X X		Planning Robert Macaulay/ Robert Guerrero/ Sara Woo

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STA Lead – Studies	**13.**	**Countywide Transit Consolidation Study** Implementation of recommended options A. Option 1: Benicia/Vallejo Transit Consolidation JPA and Transition Plan approved; SolTrans Board organized 4c: Interregional express bus route consolidation pending Status: Implementation of Transition Plan underway. STA funding and coordinating transition team. Option 4c FY 2011-12 after transition process completed, evaluation will begin. ECD: July-Dec. 2011 SolTrans agency formed and operating .	STA/ Vallejo/ Benicia	STAF	X	X	$400,000	Transit/SNCI Elizabeth Richards
STA Lead – Studies	**14.**	**Community Based Transportation Plan (CBTP)** A. Vacaville FY 2009-10; B. East Fairfield/TAFB FY 2010-11 Milestones: Vacaville CBTP Completed; E Fairfield RFP to be released by Fall 2011. ECD Vacaville Study **co**mpleted Fall 2010; East Fairfield study to be completed by June 2012	STA/MTC	MTC/CBTP STAF	X	X	$120,000	Transit/SNCI Liz Niedziela

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STA Lead – Programs	**15.**	**Solano Countywide Safe Routes to Schools (SR2S) Program** 1. Education 2. Enforcement 3. Encouragement 4. Engineering 5. Funding of Program 6. Update of Plan Status: Over $2 million in SR2S funding obtained to date. Two-Year Work SR2S Plan approved. STA to continue to seek additional grant funds. SR2S 2011 Plan update initiated along with countywide mapping project. As of March 2011, 15 schools have held 41 events while 11 additional schools have 28 more events scheduled for school year ending June 2011. Staff to plan countywide SR2S event in Fall 2011.	STA	STP Planning Gas Tax ECMAQ TFCA Yolo/Solano BAAQMD	X	X	Total cost $32 M Engineering $1 M/year Encouragement, Education and Enforcement (29 schools out of 100 schools in Plan)	Projects Sam Shelton Transit/SNCI Danelle Carey
STA Lead – Programs	**16.**	**Abandoned Vehicle Abatement Program** Status: Ongoing – 1,195 vehicles abated in of the first 6 months of FY 2010-11.	STA	DMV	X	X	09-10 $254,180 county wide distribution	Projects/ Finance Susan Furtado
STA Lead – Programs	**17.**	**Congestion Management Program (CMP)** Status: Conduct 2011 CMP bi-annual update. Milestones: Draft CMP 6/11; final CMP 9/11.	STA	STP Planning	X			Planning Robert Macaulay

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STA Lead – Programs	**18.**	**<u>Countywide Traffic Model and Geographic Information System</u>** A. Develop 2040 network, land uses and projections B. Maintenance of Model, including formalizing Model TAC and creation of Land use subcommittee C. Develop in-house modeling capacity D. Develop in-house GIS expertise <u>Milestones</u>: New 2030 model created; new Model TAC and Model Land Use Committee created; on-call model consultant selected. <u>Status:</u> New model for 2040, consistent with SCS land uses, to be developed in FY 2011-12. ECD: Model update 6/12.	STA, NCTPA STA STA	Funded by T-PLUS T-Plus	X X	X X	$200,000 $24,000 $25,000	Planning Robert Macaulay/ Robert Guerrero Projects Sam Shelton (GIS)

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STA Lead – Programs	**19.**	**Development of STA's Transportation for Livable Communities (TLC) Program and MTC's Transportation Planning for Land Use Solutions (T-PLUS) Program** A. TLC Corridor Studies 1. Update Jepson Parkway TLC Plan B. County TLC Plan Update – Update and integrate Priority Development Areas implementation plan Status: TLC Planning Grants prepared for award. TLC Plan update consultant contract RFP issued 3/11.	STA	Regional TLC CMAQ STP Planning	 X	 X X		Planning Robert Guerrero
STA Lead – Programs	**20.**	**Implementation of Countywide Bicycle Plan Priority Projects** A. Solano Bikeway Phase 2 McGary Road completed in 2010 B. Jepson Parkway Bikeway (next phase) – Roadway design to include TLC components C. Benicia Bike Route: Rose Drive/I-780 OC – Constructed in 2010 D. Vacaville-Dixon Bike Route Ongoing as funding is available E. Jameson Canyon path/trail study; released; completion set for FY10-11 F. North Connector TLC Elements; Plan adopted, elements incorporated into Suisun Parkway segment. Incorporate elements into future West Segment design.	City of Fairfield Vacaville; Fairfield; County, STA City of Benicia Solano County; STA Solano County; STA; Fairfield	TDA Article 3 TLC STIP CMAQ Regional Bike/Ped Program SR2S TDA Article 3; Bay Area Ridge Trail T-PLUS	 X X X X	 X	$2-3 M $3.2 M $543,000 $55,000	Planning Sara Woo

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		Status: Suisun City gap closure (Central Bikeway Project); McGary Road and Rose Drive completed. Jameson Canyon path study completed. Draft update to Solano Bicycle Master Plan; completed. ECD: Ongoing	STA; NCTPA; Ridge Trail STA; Fairfield STA				$85,000	
STA Lead – Programs	**21.**	**Countywide Pedestrian Plan and Implementation Plan** • Vacaville Creekwalk Extension • SR 12 Jameson Canyon Trail Study • Develop Ped Project Implementation Plan Update of Solano Pedestrian Master Plan; underway. EDC Fall 2010 • West B Street Ped Crossing Status: Vacaville Creekwalk ready for construction (NOTE – may be delayed); Jameson Canyon Trail Study completed. Ped Plan update release pending. Funding plan for West B Street Ped Crossing drafted ECD: Pedestrian Plan update scheduled for July 2011	STA Solano County Vacaville Fairfield Fairfield Dixon STA County County	State TEA Bay Trails TDA-ART3 Regional Bike/Ped Program RM 2 Safe Routes to Transit	X X X		$3-$5M (Capital Cost) $1 million $100,000 Bay and Delta Trail Planning Grants TDA – Art 3	Planning Sara Woo

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STA Lead – Programs	**22.**	**Clean Air Fund Program and 3-Monitoring** A. BAAQMD/TFCA B. YSAQMD Five year funding plan and project monitoring completed for BAAQMD; pending for YSAQMD. 3-part funding priority plan established. Status: Allocated annually	STA YSAQMD	TFCA Clean Air Funds	X	X	$290,000 Annually (TFCA) $260,000 CY2010 (YSAQMD Clean Air)	Planning Robert Guerrero
STA Lead – Programs	**23.**	**STA Marketing/Public Information Program** A. Website B. Events C. STATUS D. Project Fact Sheets and Public Outreach 1. I-80 STATUS E. Annual Awards Program F. Legislative Booklets and Lobby Trips G. Legislative Advocacy H. Annual report Status: New web site design and hosting completed 4/11. Published Annual Report, STATUS, SR 12 STATUS, Rio Vista Bridge flyers. 2010 Annual Awards held in Suisun City.	STA	TFCA Gas Tax Sponsors	X	X		Planning Jayne Bauer

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STA Lead – Programs	**24.**	**Paratransit Coordinating Council and Senior and People with Disabilities Mobility programs** A. Manage PCC Committee B. Follow up to Senior Summits focused on transportation C. Coordinate implementation of new Senior and People with Disabilities Transportation Advisory Committee D. Update Solano Senior and People with Disabilties Transportation Plan Status: PCC Work Plan was updated and includes making recommendations for 5310 funding, TDA claim review, additional outreach, and other items. New Sr/Disabled Transportation brochure distributed. ECD: Senior and People with Disabilities Study Update due to be completed June 2011.	STA	TDA	 X X X X	 X X X	$100,000	Transit/SNCI Liz Niedziela
STA Lead – Programs	**25.**	**Intercity Transit Coordination** A. Multi-year intercity funding agreement B. TDA Fund Coordination C. RM2 Transit Operating Fund Coordination D. Solano Express Intercity Transit Marketing E. Manage Intercity Transit Consortium F. Intercity Ridership Study Update G. Unmet Transit Needs Coordination & Phase-out plan Status: Intercity Transit Funding agreement being updated for FY2011-12. Updated intercity transit funding agreements and cleared Unmet Transit Needs process. Rio Vista and County of Solano acted to remove themselves from the Unmet Transit Needs process and use all TDA	A-F STA G:MTC/ STA	TDA	 X X X X X X X	 X X X X X X		Transit/SNCI Elizabeth Richards/ Liz Niedziela

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		funds for transit. Worked with transit operators to update Intercity Transit Funding agreement. Intercity operating plan to be updated FY 2011-12.						
STA Lead – Programs	**26.**	**Lifeline Program Management** A. Call for Projects B. Project Selection C. Monitor Projects Status: Monitor projects selected in first and second call for projects Administer third Call for Projects summer of 2011. State budget constraints slowing implementation of Lifeline projects.	STA/MTC	TDA/STAF	X	X	$15,000	Transit/SNCI Liz Niedziela
STA Lead – Programs	**27.**	**Solano Napa Commuter Information (SNCI) Program** A. Marketing SNCI Program B. Full Incentives Program C. Emergency Ride Home (ERH) Program D. Employer Commute Challenge E. Vanpool Program F. Coordination with Napa G. Campaigns/Events Status: Implement Spring Bike to Work campaign and continue to deliver overall services to Solano and Napa employers and the general public. Fourth Commute Challenge completed with increased employer and employee participation 620; 45 new vans were started to/from Solano/Napa counties and SNCI supported 171 vanpools; Staffed 46events in the first six months of FY11.	STA	MTC/RRP TFCA ECMAQ	 X X X X X X X	 X X X X X X X	$500,000	Transit/SNCI Judy Leaks

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STA Co-Lead	**28.**	**Regional Transportation Plan Update** A. RTP Call for Projects B. Participate in RTP update C. Participate in Regional Housing Needs Allocation Status: MTC has initiated RTP update; ABAG is preparing Sustainable Communities Strategy (SCS). Draft SCS land use plan scheduled Fall 2011. RTP Draft in 2012. Regional Housing Needs Assessment (RHNA) local participation approved 2/11; steering committee established. Status: Developing project cost estimates, prioritized project list and implementing policies. Developing prioritized list of follow-up studies and plans, including: Alt Fuels Strategy Safe Routes to Transit Plan Safe Routes to School Plan Update ECD: Jan. 2012	MTC/STA	STA Planning	X	X X		Planning Robert Macaulay

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Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Co-Lead Projects	**29.**	**Travis Air Force Base Access Improvement Plan (North & South Gates)** A. South Gate Access (priority) B. North Gate Access Status: County lead working with STA, City of Suisun City, and Travis AFB for South Gate implementation. Environmental Studies for South Gate underway. Work on the North Gate has been suspended pending City of Fairfield Train Station Specific Plan and how it may impact planed improvements along Cannon Rd and North Gate Rd. County initiated Environmental Study. EDC (South Gate): PA/ED: 12/12 PS&E: 3/13 R/W: 12/13 Beg Con: 8/14	STA Funding lead County Implementing lead	$3.2M Federal Earmark South Gate Fully Funded North Gate Funding Short Fall $5 M	X	X	South Gate $3M North Gate $7.6 M	Projects Janet Adams
STA Co-Lead Projects	**30.**	**SR 12 West (Jameson Canyon)** Build 4-lane hwy with concrete median barrier from SR 29 to I-80. Project will be built with 2 construction packages. Status: All design work has been completed; all right-of-way rights have been obtained. All utility agreements have been executed. Ready for CTC construction allocation. Project ready for Construction. ECD: Begin Con 2011 Delayed Due to State Budget Crisis	Caltrans STA NCTPA	$7 M TCRP $74 M CMIA $35.5 M RTIP $12 M ITIP $2.5 M STP $6.4 M Fed Earmark			$139 M	Projects Janet Adams NCTPA Caltrans

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Co-Lead Plans	**31.**	**SR 29 MIS** Status: NCTPA seeking Partnership Planning Grant and MTC support. Previous submittals have not received grant funding. Target for FY 2012-13	NCTPA	Unfunded – seeking Partnership Planning Grant and MTC funds		X	$650,000	Planning Robert Macaulay
STA Co-Lead Plans	**32.**	**SR 12 MIS** Develop MIS for SR 12 corridor (I-80 to I-5); create Corridor Advisory Committee to steer MIS and implementation. Coordinate MIS with Rio Vista bridge study. Meetings of Corridor Advisory Committee (STA, Sac County, SJCOG elected officials). Initiate Economic Assessment of SR 12 Corridor in partnership with SolanoEDC. Status: Complete MIS funding package assembled; MTC has contracted with PBS&J; study work is underway, with draft Existing Conditions, Environmental Scan and Safety reports out to technical advisory group; future conditions report reviewed by project development team and CAC. ECD: Complete Economic Assessment of SR 12 in Oct. 2011. Draft MIS complete in 2012.	STA SJCOG, SACOG, MTC, Caltrans	STP PPM, SJCOG and SACOG funds Caltrans HQ funds	X	X	$950,000 (STA $150,000)	Planning Robert Macaulay Daryl Halls

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Co-Lead Plans	**33.**	**Ten-Year Transit Capital Funding Plan** Status: 10-Year Transit Capital Plan and process for Major, Minor and fleet under development. Completing 2011 update and prioritize plan to maximize funding opportunities such as Prop 1b, Federal Economic Stimulus funds, earmarks, etc.	STA	Prop 1B Transit Capital Federal Earmarks Fed ARRA	X	X		Transit/Rideshare Liz Niedziela
STA Co-Lead Programs	**34.**	**Regional Measure 2 (RM 2) Implementation (Capital)** A. Vallejo Station (Phase A under construction) Status: The Transfer Center began construction and scheduled to be open May 2011 B. Solano Intermodal Facilities (Fairfield Transit Center, Vacaville Intermodal Station (Phase 1), Curtola Park & Ride and Benicia Intermodal) Status: 1. Vacaville Transportation Ctr Phase 1 – COMPLETED 2. Curtola - began PA/ED. 3. Benicia Intermodal - completed PA/ED, has initiated PS&E and is expected to begin construction summer 2011. C. Rail Improvements 1. Capitol Corridor Track Improvements 2. Fairfield Vacaville Rail Station Status: 1. Capitol Corridor Track Improvements– Completed 2. Rail Station Phase 1- completed 65% PS&E. Scheduled to begin construction FY 2011-12.	STA Fairfield Vallejo Vacaville Benicia CCJPA MTC	RM 2	X	X	$28 M $20 M $25 M	Projects Janet Adams Jessica McCabe

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Co-Lead Programs	**35.**	**<u>Solano Climate Action Program</u>** A. Conduct county-wide greenhouse gas emission inventory B. Develop STA-specific GHG emission inventory (Fall 2011) C. Develop and implement county-wide and agency-specific GHG reduction programs and projects, with 4Cs guidance <u>Status</u>: AECOM under contract to conduct GHG inventory for county and five cities; 75% complete. STA lead on state grant application for subsequent Climate Action Plan.	STA	YSAQMD BAAQMD TFCA Program Manager Funds	X	X	$60,000 to initiate	Planning Robert Macaulay
STA Co-Lead Programs	**36.**	**<u>SolanoExpress Route Management</u>** A. Rt. 30/78/90 1.Performance &-Monitoring 2. Funding Agreement Update B. Countywide Intercity SolanoExpress Marketing & Capital Replacement C. Development of multi-year funding plan <u>Status</u>: STA will work with FAST on proposed service changes for Rt. 30/90 and Vallejo Transit regarding Rt. 78. Rt. 30/90 agreement extension option approved with FAST.	[ER1]STA	TDA RM2 Lifeline	X	X		Transit/Rideshare Elizabeth Richards Liz Niedziela

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Monitoring Projects	**37.**	**I-80 SHOPP Rehabilitation Projects** A. In Vallejo – Tennessee Street to American Canyon –-COMPLETED B. Near Vallejo – American Canyon to Green Valley Road –- COMPLETED C. Air Base to Leisure Town OC – COMPLETED D. SR 12 East to Air Base – COMPLETED E. Leisure Town OC to SR 113 South Programmed in 2010 SHOPP for FY 2011-12 F. SR 113 South to Yolo County Line – COMPLETED	Caltrans	SHOPP	X	X	$124 M $50 M	Projects Caltrans

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Monitoring Projects	**38.**	**<u>Capitol Corridor Rail Stations/Service</u>** <u>Status</u>: Individual Station Status: A. Fairfield/Vacaville Train Station: Fairfield/Vacaville station fully funded; design underway. Construction anticipated 2013. B. Dixon: station building and first phase parking lot completed; Dixon, CCJPB and UPRR working to resolve rail/street issues. funding plan for downtown crossing improvements C. Solano Rail Crossing Inventory and Improvement Plan adopted 2/11. D. Update Solano Passenger Rail Station Plan; identify ultimate number and locations of rail stations. E. Conduct Napa/Solano Rail Feasibility Study: • Identify right-of-way preservation needs • Implement action plan <u>ECD</u>: Updated Solano Passenger Rail Station Plan in 2012/13. Fairfield/Vacaville Station construction scheduled to begin in 2013.	City of Fairfield City of Dixon STA City of Benicia STA/ NCTPA	RM2 ADPE-STIP ITIP Local RTIP ECMAQ YSAQMD Clean Air Funds STP Planning, Vaca TDA, CCJPA MTC Rail Program	X X	X X X X X	$42 M FF/VV Station (Preliminary estimates for required track access and platform improvements. $66,050	Planning Robert Macaulay

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Monitoring Projects	**39.**	**Baylink Ferry Support and Operational Funds** A. Vallejo Station B. Maintenance Facility C. Ferry Service Transition Plan Status: Monitor project schedule and phasing plan for Vallejo Station. Phases I and II of the Maintenance Facility are funded. STA is supporting Vallejo's efforts on WETA Transition Plan and implementation issues. Support Rt. 200 ferry complementary service and NCTPA VINE's new Ferry Feeder service. Bus Transfer Center under construction; Vallejo Station Phase II has begun	Vallejo	RTIP Fed Demo Fed Boat TCRP Fed RM2 RTIP Funding Plan TBD	X	X	$65M $10.8M $0.5M	Transit/SNCI Elizabeth Richards
STA Monitoring – Programs	**40.**	**Monitor Delivery of Local Projects/Allocation of Funds** A. Monitor and manage local projects. B. Develop Pilot Solano Project Mapper and Management Webtools Status: Monitoring of local projects is an on-going activity; STA developed tracking system for these projects and holds PDWG monthly meetings with local sponsors. The new pilot Mapper project is being developed in partnership with Solano County GIS group. Expect a roll out of the draft project tool summer 2011. ECD: Ongoing activity.	STA	STIP-PPM	X	X	N/A	Projects Jessica McCabe Sam Shelton
STA Monitoring Project	**41.**	**Peabody Road** Work with County to develop a funding strategy for improvements to the roadway in unincorporated County. Project proposed to be added to RTIF.	County	Unfunded				Projects

STA Lead:	Project#	1 - 27
STA Co-Lead:	Project#	28 - 36
STA Monitoring:	Project#	37 - 42

Category	Project #	PRIORITY PROJECTS	LEAD AGENCY	FUND SOURCE	FY 2011-12	FY 2012-13	EST. PROJECT COST	DEPT LEAD STAFF
STA Monitoring Project	**42.**	**Land Use/Operational Study of I-80 Adjacent to City of Vallejo** Status: New Proposal	STA/Vallejo	Unfunded				Daryl Halls

Completed Work FY 2010-11:

- I-80/I-680/SR 12 Draft EIR/EIS - COMPLETED
- North Connector East and Central Segments -- COMPLETED
- Jepson Parkway FEIS – EXPECTED MAY 2011
- I-80 EB Cordelia Truck Scales PS&E and R/W COMPLETED
- Rio Vista Bridge Study – COMPLETED
- SR 12/Church Rd PSR - COMPLETED
- SR 12 Jameson Canyon PS&E and R/W COMPLETED
- I-80 Rehabilitation – SR 113 to Yolo County – COMPLETED
- Vacaville Intermodal – Phase 1 – COMPLETED
- SR 12 East Roadway Reconstruction - COMPLETED
- Solano Rail Crossing Inventory and Improvement Plan COMPLETED.
- SR 12 Jameson Canyon Bicycle and Pedestrian Connection Plan – COMPLETED
- Solano Countywide Bicycle Plan – COMPLETED
- Solano Countywide Pedestrian Plan – COMPLETED

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California's Interstate-80 Regional Travel Corridor

Connecting Northern California's Urban Areas with Express Lanes, Express Bus, and Commuter Rail in Solano County.

I-80 is the second busiest corridor in the region where approximately 150,000 cars per day travel within Solano County.

86% of Solano commuters take I-80 to the Bay Area or Sacramento. In the last 30 years, the percent of Solano County commuter trips traveling to the Bay Area or Sacramento has more than doubled from about 39% to 86%.

I-80 carries the third highest truck volume in the Bay Area, with 10,000 to 12,000 trucks per day, serving primarily as a connector to the transcontinental truck network.

By 2030, I-80 will be 60% gridlocked during peak commute hours in Solano County. Current travel demand models show 26 miles between Vallejo and Vacaville will experience stop-and-go evening commute congestion.

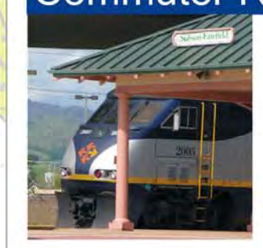
Express Lanes

- Relieves traffic congestion efficiently on the roadway
- Promotes vehicle sharing/public transport
- Toll pricing varies with demand
- Potential revenue pays for transit services/improvements on I-80

Express Bus

- 7 intercity express bus routes on I-80 corridor
- 5 transit center connections along I-80 corridor
- 868,000 annual trips on SolanoExpress bus on I-80 = one freeway lane of reduced congestion
- I-80 express bus service grew by 20% from 2007-2010

Commuter Rail



- 1 existing Capitol Corridor train station (Suisun City) was 7th busiest station out of 16 with more than 30,000 annual trips in 2010
- 2 planned stations (Fairfield/Vacaville and Dixon)
- 32 weekday trains through Solano County
- 97% of trains arrived on time in 2010

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DATE: June 10, 2011
TO: STA Board Workshop
FROM: Robert Macaulay, Director of Planning
RE: STA Priorities for SR 12 Corridor – (Funding, 2 Lanes versus 4 Lanes, Rio Vista Bridge, and Economic Analysis)

Background:

State Route (SR) 12 is an important east-west corridors in Solano County, the other being I-80. SR 12 runs from Rio Vista, where it crosses the Sacramento River, to I-80 in Fairfield. SR 12 picks up again in Cordelia and runs through the Jameson Canyon and into Napa County. SR 12 is a primary means of access for much of Solano County's agricultural industry, for the wind turbines in the Portrero Hills area, provides the main access into and out of Rio Vista, and is the delivery route for almost all cargo being flown out of Travis Air Force Base. Finally, SR 12 is one of the main routes for recreational traffic into the Sacramento San Joaquin River Delta area. Hence, SR 12 is a fast east-west trade corridor vital to the economic vitality of Solano County.

The Jameson Canyon portion of SR 12 is 2 lanes in the middle segment, with an additional west-bound truck climbing lane on the stern (Solano) segment and 2 east-bound lanes in most of the Napa segment. This portion will be improved to a separated 4-lane facility with full shoulders in the next few years.

Average daily traffic on SR 12 ranges from more than 13,000 vehicles in Rio Vista to 9,000 in the rural county, and reaches almost 15,000 in the Fairfield-Suisun City urban area. Trucks make up a large portion of that traffic, including 9% of the traffic in Fairfield-Suisun City and 14% in the rural segments.

SR 12 is currently a 4-lane highway in the Fairfield and Suisun City area, and a 2-lane highway between Suisun City and Rio Vista. For many years, it has had poor pavement quality and many areas with substandard interior and exterior shoulders. The California Highway Patrol has been unable to conduct enforcement in many locations because there was no area in which to pull drivers over.

In response to congestion and safety issues identified on SR 12, the STA Board adopted a 4-pronged approach in 2006. Those four prongs are:

- Enforcement – an immediate increase in enforcement of traffic laws on SR 12 in order to reduce speeds and improve driver behaviors.
- Legislation – seeking legislation to create a double fine zone on SR 12 and to name a portion of the roadway after Rio Vista police officer David Frank Lamoree, who died on SR 12 while driving home from work in Rio Vista.

- Education – improve driver awareness of safety and congestion issues on SR 12 in order to reduce hazardous behavior.
- Engineering – seek to identify, plan, fund and construct improvements to the roadway itself to improve safety and increase capacity.

SR 12 also suffers from substantial traffic back-ups when the draw bridge over the Sacramento River is opened. Depending upon the size of the ship passing under the bridge, the opening can last as long as 25 minutes, and vehicle queues can reach 200 vehicles in the peak direction. To address this issue, STA undertook a study of the operation and possible relocation options for the Rio Vista Bridge. That study was completed in mid 2010.

The importance of SR 12's role in the regional economy was highlighted during Bridge Study discussions and the initiation of the SR 12 corridor study. However, it was clear that the economic impact of SR 12 have not been fully documented. As a result, the STA is coordinating with Solano Economic Development Corporation to conduct an Economic Analysis, which will be completed on the same timeline s the SR 12 corridor study.

Finally, SR 12 has had a larger number of accidents, including fatal accidents, than similar roadways on the state highway system. A series of crashes in early 2007, with three fatalities in 3 days, acted to focus state attention on pending improvements to the roadway. The California Department of Transportation (Caltrans) moved quickly to install temporary median barriers, and to expedite the delivery of curve and shoulder improvements in the Solano County portion of SR 12. CHP and local law enforcement increased traffic enforcement efforts, in part with State Office of Traffic Safety grant funds, and a double fine zone was established through AB 112. As a result, the accident rate has substantially improved.

In 2010, STA, the San Joaquin Council of Governments (SJCOG), the Metropolitan Transportation Commission (MTC) and the 3 Caltrans districts that cover SR 12 from I-80 to I-5 agreed that SR 12 needs a game plan with local and regional buy-in. As a result, they jointly decided to fund and conduct a study on the roadway's needs through 2035. The SR 12 Corridor Study will be completed in 2012.

Discussion:

Caltrans has completed the first of two roadway improvement projects on SR 12, from just east of Suisun City to Currie Road. The second project, from about Currie Road to Liberty Island Road, is scheduled for construction in 2013. Caltrans is studying the SR 12/SR 113 intersection to determine if it meets standards for installation of a traffic light. Even if the intersection does meet these standards, there are no funds allocated for design and installation of the needed improvements. At this time, therefore, there is only one project to improve roadway safety on SR 12 that is planned and funded.

Traffic on SR 12 is projected to increase, due to growth in a number of communities in both Solano and San Joaquin counties. Traffic analysis for the SR 12 Corridor Study shows that traffic volumes will almost triple in some areas. Although the roadway analysis is not complete, it is likely that the improvements to accommodate this additional traffic will need to include new travel lanes. The 2010 Rio Vista Bridge Study also identified the need to replace the existing 2-lane bridge with a 4-lane alternative (bridge or tunnel).

There are currently no fund sources dedicated to improvements on SR 12 or to replacement of the Rio Vista Bridge. The replacement options identified in the Rio Vista Bridge study all had costs in the range of $1 billion or more, and improvements to the roadway to widen it to 4 lanes in Solano County could easily cost almost as much. Without a dedicated funding source, it is unlikely that any of these expensive improvements will compete well for the limited state and federal funds that are available.

Workshop Discussion:

1. What is the economic significance of SR 12 to Solano County and the region?
2. Aside from the Currie Road to Liberty Island Road improvements, there are no other projects on SR 12 that have funding. Are we satisfied with the current number of lanes, shoulder width and median barriers on SR 12?
3. Any options for improving SR 12 are likely to be expensive. Are future improvements important, and if so, how do we fund them?

Attachment:

A. SR 12 STATUS Report (June 27, 2011)

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SR 12 STATUS

"DRIVE TO STAY ALIVE"

STA Board Workshop June 27, 2011

SR 12 Issues & Strategies

THE ISSUES FACED ON SR 12:

- Safety – the number of accidents and fatalities is above the state average for similar roadways.
- Congestion – 2-lane road with a high percentage of trucks and summertime recreational vehicles.
- No Alternative - The closest parallel routes are I-80 and SR 4; using them adds significant time and distance to a trip that would otherwise use SR 12.

The adopted **SR 12 STRATEGY** to address current and anticipated problems:

- Legislation to make the route safer, including a Double Fine Zone
- Enforcement to improve driver behavior
- Education to encourage better driver behavior
- Engineering to make the roadway safer

DRIVE TO STAY ALIVE
HIGHWAY 12 SAFETY CORRIDOR

Actions & Plans

WHAT HAS BEEN DONE ALREADY:

- Concrete median barrier from Scandia Road to Lambie Road
- Channelizers from Lambie Road to Rio Vista
- Improved shoulders, curves and hills and add turn lanes from Scandia Road to Currie Road
- Extra enforcement by CHP and local law enforcement agencies
- Completed the Rio Vista Bridge Realignment Study and started the SR 12 Corridor Study (I-80 to I-5)

Projects and plans that are **IN THE PIPELINE:**

- Additional shoulder improvements and turn lanes from Azevedo Road to Liberty Island Road
- Complete the SR 12 Corridor Study (I-80 to I-5) in December 2011
- Corridor Economic Impact Study, due in late 2011

A FEW QUESTIONS:

- There are no other projects on SR 12 that have funding. Are we satisfied with the current number of lanes, shoulder width and median barriers on SR 12?
- Any options for improving SR 12 are likely to be expensive. How do we balance the costs and benefits of the options available?
- Should we focus local, state and federal resources on SR 12 or on the I-80 corridor?

Solano SR 12 Facts

26.2 Miles from I-80 to the Solano/Sacramento County Line

6.4 miles of 4-lane road from I-80 to Walters Road
19.1 miles of 2-lane road (plus 2 passing lanes) from Walters Road to Rio Vista
0.7 miles of 2 lanes plus a center turn lane in Rio Vista
8 intersections controlled by traffic lights

Average daily traffic on SR 12 (counted in May, 2010):

In Rio Vista, 13,600 vehicles
In rural Solano County, 9,300 vehicles
In Suisun City/Fairfield, 41,700 vehicles

Truck traffic on SR 12:

In Rio Vista, 7%
In rural Solano County, 14%
In Suisun City/Fairfield, 9%

Accidents:

State Route 12		Actual Accident Rates[1] For Project Area			Average Accident Rates[1]		
Location	Post Mile	Fatal	Fatal + Injuries	Total	Fatal	Fatal + Injuries	Total
Solano County – 4 Lane (I-80 to Walters)	1.801 – 8.000	0.004	0.50	1.35	0.014	0.46	1.19
Solano County – 2 Lane (Walters to Rio Vista)	8.000 – 24.820	0.028	0.28	0.60	0.024	0.34	0.76
Solano County – 2 Lane (Rio Vista)	24.820 – 26.240	0.000	0.43	0.80	0.022	0.76	2.04
Sacramento County – 2 Lane	0.000 – 6.200	0.014	0.37	0.80	0.025	0.33	0.77
San Joaquin County – 2 Lane	0.000 – 11.499	0.045	0.35	0.76	0.025	0.33	0.78

1 - Reported accident rates are "accidents per million vehicle miles."
Shaded boxes indicate accident rates higher than the state average.

www.sta.ca.gov

DATE: June 10, 2011
TO: STA Board Workshop
FROM: Janet Adams, Deputy Executive Director/Director of Projects
RE: Implementation on I-80 Corridor – Express Lanes, Freeway Performance Initiative and Ramp Metering

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Background:
The I-80 corridor is the back bone for moving people, goods and services through the San Francisco and Sacramento mega-region. I-80 is one of four California priority trade corridors. The I-80 corridor serves as the only direct freeway connection between these two metropolitan regions. The corridor also links the Bay Area with recreational destinations in the Sierra Nevada Mountains and points north via I-505 to I-5. I-80 functions as a transcontinental Interstate facility that is critical to regional and interregional traffic. As a result, I-80 is one of the most congested freeway facilities in the San Francisco and Sacramento mega-region. Addressing operational needs and improvements on the I-80 corridor is vital to commuting, freight and recreational traffic. This comprehensive approach includes integrating investments in goods movement, transit and throughput efficiency and traffic operations system technology.

STA, in partnership with its member agencies, the California Department of Transportation (Caltrans), and the Metropolitan Transportation Commission (MTC), has taken a multimodal approach to meeting current and future transportation demands on the I-80 corridor by integrating investments in the following:

- Goods Movement/Trade Corridor
- Express Lanes Network
- Traffic Operations System Technology
- Transit System
- Corridor Commute Options

This combination of related investments and coordinated planning is dependent on the success of the planning and implementation of each project and serves as a comprehensive I-80 corridor strategy for I-80 within Solano County. STA is currently implementing improvements to the *Goods Movement/Trade Corridor* through the following investments:

I-80/I-680/State Route (SR) 12 Interchange
The I-80/I-680/SR 12 Interchange project encompasses a four-mile section of freeway and highways containing nine separate interchanges. Traffic volumes are projected to grow by 2% per year to 2035, bringing the total daily volume passing through the corridor to 270,000 vehicles. A preferred alternative identified by the STA Board in 2010 would improve roadway geometrics on the mainline and interchanges. Construction will occur as funding is available, with the first construction package fully funded and expected to begin construction by 2012. In addition, the STA is seeking $40 million through savings from Proposition 1B to fund a second construction package. Funding for construction of subsequent packages is needed to complete the system vision for I-80 in Solano County.

Cordelia Truck Scales Relocation

The Cordelia Truck Scales, located along both eastbound and westbound I-80 at I-680 and State Route 12, were built in 1958 and are currently undersized and unable to accommodate existing demand. The Cordelia Truck Scales provide a facility for the California Highway Patrol (CHP) to screen trucks for safety inspections to ensure goods are moved safely through the state and nation. The scales significantly contribute to the congestion on I-80 due to the large number of trucks exiting and entering I-80 and the close proximity of the scales to both the Suisun Valley Road and I-680 interchanges. In 2008, the California Transportation Commission (CTC) allocated $49.8 million from the Proposition 1B Trade Corridor Improvement Funds to match Regional Measure 2 Bridge Toll funds to fully fund the eastbound truck scales upgrade and relocation, including implementation of traffic operations system technology. The eastbound scales will be relocated and expanded approximately one half-mile east of its present location. The relocation project is currently scheduled to begin construction this year. Relocation and upgrade of the existing westbound scales remains a priority planned future investment, is unfunded.

Another key element in this multimodal approach to meeting current and future transportation demands on the I-80 corridor is to implement an *Express Lanes Network*.

I-80 Express Lanes

An opportunity for innovative financing the buildout of this express lane system is to implement Express Lanes on I-80 to construct the remaining segments of the corridor's High Occupancy Vehicle (HOV) network. Potential revenue from the I-80 Express Lanes will assist in providing transit services and improvements to the corridor to maximize the efficiency in moving vehicles throughout the Bay Area and Sacramento mega-region. Attachment A is an Express Lanes overview.

In February 2009, the STA Board took the first step toward implementing the Express Lanes Network on I-80 by approving the concept of the Regional Network as well as identifying the priority segments for implementation on I-80. The first priority segment is the conversion of the existing HOV lanes to Express Lanes as well as the construction of new lanes from Air Base Parkway to I-505.

The purpose of the project is to provide:

- ✓ An option for travelers using the corridor to reduce travel time through payment;
- ✓ Reduce delays for all travelers in the corridor;
- ✓ Improve transit utilization by improving transit travel times in the corridor; and
- ✓ Provide a higher vehicle and passenger throughput.

In September 2010, the I-680 Express Lanes facility opened along the portion of the I-680 corridor that connects Alameda/Santa Clara counties. This facility is the first of many planned facilities in the Bay Area.

In addition, there are current and planned improvements along I-80 for to the *Traffic Operations System Technology* with the following investments through a Program called the Freeway Performance Initiative.

Freeway Performance Initiative

With opportunities for highway expansion limited due to environmental, financial and other factors, STA is supporting investments on I-80 that will squeeze more capacity out of the interstate. The program targets predictable congestion caused by the high volume of

commuters using the freeway during rush hours as well as non-recurrent congestion resulting from unanticipated incidents. The program will improve system efficiency through the deployment of system operations and management strategies. In Solano County, this Program will close key gaps in the freeway system's physical infrastructure for managing the system.

Operating the entire transportation network as a whole, rather than each system in isolation as is done now, is the next leap forward in achieving efficient use and management of our constrained infrastructure. Motorists will have access to traffic condition information before they start their trip, be presented with comparisons of time and cost between driving and taking transit, and get updated traffic condition information en route. When a major accident happens on the freeway, information on detour routes will be provided to motorists, and signals on city streets will be adjusted in real-time. In addition, streaming video from freeway cameras will allow emergency responders to deploy assistance to the scene more quickly.

Key Elements of the Freeway Performance Initiative:
Traffic Operations System (TOS)
To help detect slowdowns and incidents, MTC and Caltrans are installing closed-circuit television cameras, wireless in-pavement sensors and roadside data-relay stations along area freeways. The information gathered will be fed to the Regional Transportation Management Center in downtown Oakland, which will deploy tow trucks and other resources to quickly clear incidents and thereby reduce delays and prevent the occurrence of secondary accidents. The system will alert motorists to incidents through an expanded network of highway advisory radio channels and changeable message signs, along with MTC's 511 Traveler Information System and in-car devices.

The Traffic Operations System data stream will be enriched with data from the FasTrak® transponders that are becoming commonplace on Bay Area windshields and dashboards. The transponders do double duty, allowing for electronic payment of tolls on area bridges while also serving as mobile sensors that relay rich and current (but anonymous) information about traffic speeds to MTC's 511 Traveler Information System. As the Express Lanes Network is built out and as more bridge toll lanes convert to electronic-only toll collection, increasing numbers of vehicles will be equipped with FasTrak® transponders, facilitating the collection of high-quality traffic data.

Ramp Metering
Ramp metering is effectively implemented in conjunction with other freeway management systems such as High Occupancy Vehicle (HOV) lanes, HOV ramp bypass lanes, surveillance camera and incident detection, and arterial management. Studies have shown ramp management benefits include increased safety by improving the flow and mix of vehicle that enter the freeway, improved mobility and reliability, and environmental benefits from reduced vehicle emissions.

On February 20, 2010, the STA Board approved the Solano Highways Operations Study, which recommended this approach to maximize current infrastructure with operational investments, such as ramp metering and other traffic operations system elements. This Study was developed under the guidance of the Solano Highways Partnership (SoHIP), a partnership involving all cities along I-80 as well as MTC, Caltrans, and STA staff.

Discussion:
The purpose of the staff report is to focus on the Express Lanes and Freeway Performance Initiative, including ramp metering portion of the I-80 corridor strategy. While this portion of the strategy encompasses the entire corridor, these improvements will be required to be phased as funding becomes available.

I-80 Express Lanes
Ultimately the entire length of I-80 corridor through the Bay Area is envisioned to be part of the Regional Express Lanes Network. However, phasing will be necessary due to limited funding opportunities. For I-80, the priority phase is made up of two components; the first is the conversion of the new HOV lanes, an 8.7 mile length along I-80 between Red Top Road and Air Base Parkway and new construction extending these lanes to I-505. This first phase will create 18-miles of Express Lanes. The benefit of this first phase is that it will allow the extension of the HOV lanes to Vacaville. To initiate the first phase, $16.4 million in funding has been secured from Regional Measure 2 (RM 2) to complete the Project Approval/Environmental Document (PA/ED). Attachment B is an overview of this Project.

Freeway Performance Initiative
To construct FPI components along I-80 in Solano County, $48 million in Federal Funds for Ramp Metering and other operations improvements has been secured. This funding is in addition to the funding being currently used to construction ramp metering components along I-80 in Fairfield. This federal funding is from the Safe Accountable, Flexible and Efficient Transportation Equity Act (SAFETEA) for Cycle 1, Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement (CMAQ) Program. Initially, $28 million will be used to construct ramp metering at 42 locations and Traffic Operations System (TOS) elements, such as closed circuit television cameras, changeable message signs, and traffic volume loop detection, along I-80 between State Route 37 in Vallejo to I-505 in Vacaville as part of MTC's Freeway Performance Initiative (FPI). Within Cycle 2 federal funds, an additional $20 million for 19 ramp metering locations and 150 TOS elements along I-80 countywide will be constructed. Attachment C is Fact Sheets for Ramp Metering, Closed Circuit Camera's and Changeable Message Signs.

Fairfield I-80 Ramp Metering Under Construction
As part of the I-80 HOV Lanes project in Fairfield, Caltrans is installing ramp metering equipment between Red Top Road and Air Base Parkway. This includes highway-to-highway connector metering projects on connectors within the I-80/I-680/SR 12 Interchange. Construction is estimated to be complete by early 2012.

Authorization to Build Ramp Metering, But Not to Operate Ramp Metering
Caltrans and MTC are working together to fund and build ramp metering and TOS project elements, but they cannot operate ramp metering lights without approval from local agencies. Santa Clara County and San Mateo County entered into Memorandums of Understanding (MOU) to clarify roles & responsibilities and create a framework for how ramp metering would be studied and how ramp metering would be operated in collaboration with local agencies and Caltrans. These MOUs describe how Caltrans meets quarterly with a Ramp Metering Technical Advisory Committee (RMTAC) to discuss and adjust ramp metering signal timing. The next step for Solano County is to study the impacts of Ramp Metering and to develop a MOU for Ramp Metering Operations. Since December 2010, the STA, MTC, Caltrans staff along with Public Works staff from local agencies along I-80 have held monthly Solano Highways Partnership (SoHIP) meetings discussing highway projects in

development, ramp metering study scopes of work, public engagement proposals, and MOU development. SoHIP members routinely focus on issues related to local congestion due to ramp metering, safety related to highway-to-highway connectors, public education and information about ramp metering, and clear modeling data to understand the regional and local benefits of ramp meters prior to beginning ramp meter operations.

STA staff estimates that the SoHIP will review and approve of a ramp metering study by early 2012 and potentially enter into MOUs with local agencies and Caltrans at the same time. Prior to Caltrans completing the construction of the I-80 Ramp Metering project in Fairfield, the SoHIP will have reviewed public information material to inform the public about ramp metering. A draft public information presentation is presented in Attachment D.

Workshop Discussion:

1. What are your perceptions of Ramp Metering?
2. What is the best process to work with local communities to implement Ramp Metering?
3. What role should you play in the development of the MOU with local agencies located in the I-80 Corridor in partnership with Caltrans with Ramp Metering?
4. Should the I-80 Corridor be better connected with the I-80 facilities?
5. What should be the priorities for funding corridors with regional fund sources?

Attachments:

A. Regional Express Lanes Network Overview
B. I-80 Express Lanes Project (Red Top to I-505)
C. Fact Sheets (Ramp Metering, Closed Circuit Camera's and Changeable Message Signs)
D. Draft Ramp Metering Public Outreach Powerpoint

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Regional Express Lanes Network

An Express Lane is a toll enacted on single-occupant vehicles who wish to use lanes or entire roads that are designated for the use of High-Occupancy Vehicles (HOVs, also known as carpools). Tolls are collected either by automatic number plate recognition, or electronic toll collection systems. In California, the FasTrak® electronic collection system is used as the primary collection method.

Express Lanes require single-occupant vehicles to pay a toll that varies based on demand, called congestion pricing. The tolls change throughout the day according to real-time traffic conditions to manage the numbers of cars in the lanes and keep them free of congestion, even during rush hour.

The concept is an expansion of HOV lanes and an effort to maximize their efficiency in moving vehicles. HOV lanes are designed to promote vehicle sharing and use public transportation by creating area of lower use as an incentive, but they have been criticized because some are underused. The Express Lanes provide a nobility option for single occupant vehicles to provide reliable travel at a variable price.

Express Lanes are often constructed within the existing road space and provide an option for commuters and non-routine drivers. The Express Lanes benefit drivers by providing the ability to pay to get through traffic quickly; e.g., a family seeking to catch a flight or a plumber wanting to get to his customer quickly may come out ahead financially from using the Express Lane. Funds raised from Express Lanes tolls would be used to pay for the maintenance and operations of the lane(s), payment of debt for the initial construction of the lane(s) and to build out the Express Lanes network in the Bay Area. By policy, additional funds can also be used for supporting transit service in the corridors.

Drivers who do not utilize the lane can also benefit from having it fully utilized, thus taking more traffic out of the mixed flow lanes, in contrast to the sometimes underutilized HOV lanes. By linking together disconnected HOV networks, Express Lanes can allow public transportation vehicles (such as buses) and carpools more reliability to get to destinations on time.

The Metropolitan Transportation Commission (MTC) has proposed the regional Express Lanes Network concept which involves converting existing HOV lanes to Express Lanes and using the revenue generated to finance completion of the HOV/Express system as well as other improvements within the Express corridors.

Potential benefits of a Regional Express Network include:

- Reductions in congestion and emissions, including carbon dioxide, by making more efficient use of the freeway system;
- Providing a reliable travel option for express bus and carpools via the HOV network and use of the Express Lanes for those who choose to pay the toll;
- Completing the HOV/Express Network ten to forty years sooner than if relying upon traditional state and local funding mechanisms.

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I-80 EXPRESS LANES

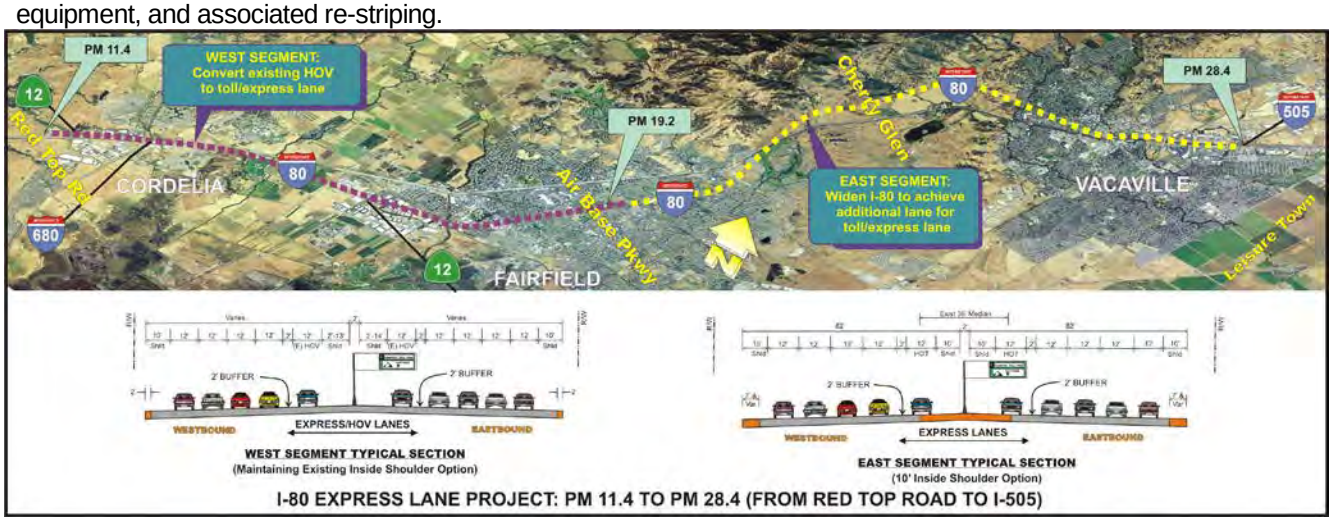
STA Solano Transportation Authority

This segment of I-80 is physically constrained, including right-of-way limitations, sensitive resources, and urban development on either side of the corridor. The purpose of the project is to provide an immediate benefit to traveling individuals by maximizing the use of the existing infrastructure in a limited/constrained right of way to move people and traffic through the corridor efficiently. The project would:

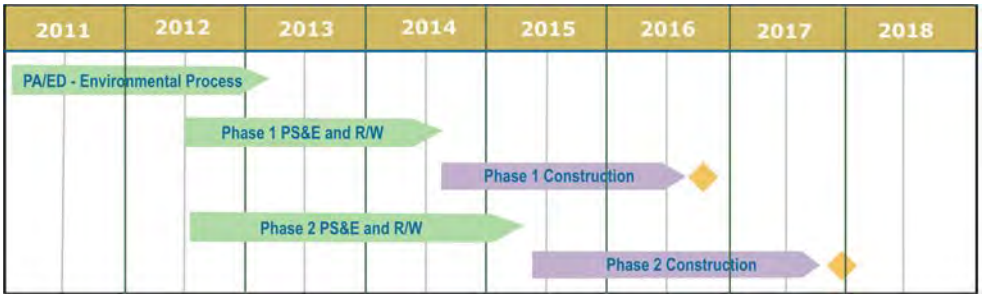
- Provide an option for travelers using the corridor to reduce travel time through payment
- Reduce delays for all travelers in the corridor
- Improve transit utilization by improving transit travel times in the corridor
- Provide a higher vehicle and passenger throughput
    - Optimize capacity with full utilization of HOV lane capacity (Phase 1)
    - Increase capacity to meet existing and future travel demand (Phase 2)
    - Establish a future funding mechanism to defray operational costs and potentially provide revenue for transportation improvement in the corridor
- Reduce greenhouse gas emissions

The I-80 Express Lanes Project begins at Red Top Road in Fairfield and extends to I-505 in Vacaville, an approximate length of 18-miles in Solano County. The project is part of the Bay Area Express Lanes Network that the Metropolitan Transportation Commission (MTC) adopted in their Regional Transportation Plan (RTP), T2035. The I-80 Express Lanes Project intends to utilize the continuous access design approach and is divided into two distinct segments which are described below:

- **West Segment - Red Top Road to Airbase Parkway** – This segment will be a conversion of the High Occupancy Vehicle (HOV) lanes that were opened in late 2009 to Express Lanes. This segment will require the addition of the tolling equipment, and associated re-striping to provide room for the required typical section.
- **East Segment - Airbase Parkway to I-505** – This segment will require the construction of one new lane in each direction that will be used for Express Lanes. This additional lane in each direction will primarily be accomplished with the inside median widening and possibly outside widening to provide room for the required typical section, the addition of the tolling equipment, and associated re-striping.



CURRENT SCHEDULE



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Ramp Metering

ATTACHMENT C

Description

Ramp metering is the use of traffic signals at freeway on-ramps to control the rate of vehicles entering the freeway, temporarily storing it on the ramps. Using this technique for operational improvements helps to optimize freeway flow and minimize congestion.

Ramp metering is best used on freeway segments with high volume traffic to manage portal entries so that the freeway can be regulated during peak periods of congestion, typically AM and PM commuter hours. Ramp metering has been a proven operations strategy for improving overall freeway corridor performance and is not meant to work by itself or just in one location of a corridor.

Specific Locations and Conditions

Caltrans is designing and constructing ramp metering along I-80 between State Route 37 in Vallejo to the Yolo County Line. Exact locations and project designs are still under development.

Cost

The cost of the detectors and ramp meter for each entry ranges from $100 to $250 thousand but does not include communications.

PROS	CONS
• Ramp metering reduces the number of acceleration – deceleration cycles and smoothes traffic flow anywhere from 2-55%. • Main line peak period delay is reduced. • Main line average speed can increase 13 -26%. • Reduction in main line crashes by as much as 50%. • Can improve travel time by 15-60%. • Increases main line. • Emission reduction due to reduced delay.	• Wait times at on-ramps can cause significant back up on to arterials. • Arterial signals are sometimes coordinated with ramp meters to prevent traffic queues. • Potential diversion of trips to local roads is sometimes frustrating to residents if the local roads are not designed to manage the additional vehicles. • On-going communication costs. • Public acceptance needed before implementation.

Solano Transportation Authority

Ramp Metering

FREQUENTLY ASKED QUESTIONS ABOUT RAMP METERING

Why use Ramp Metering?

Ramp metering has a proven record for reducing congestion, travel times and accidents. Without ramp meters, multiple cars try to merge simultaneously. Drivers on the freeway slow down to allow the cars to enter and these slower speeds quickly cause backups. They have been used successfully in the Bay area, additionally, they decrease traffic idling on the freeway resulting in fewer vehicle emissions overall.

How does ramp metering work?

They are essentially traffic signals that reduce disruption to the interstate traffic by controlling the flow of merging traffic and alleviating bottlenecks. Slowing down merging traffic reduces accidents that occur when vehicles merge onto the freeway.

Where has it been used in the Bay area?

- Since 2003 Ramp meters have operated on six EB onramps on Ala-580. Peak travel times were reduced by 60%.
- In Pleasanton from Foothill Rd. (west of I-680) to Greenville Road (west of Altamont Pass) decreased travel times by 33%.
- SM-101 from Route 92 to the Santa Clara County Line experienced a 30% reduction in peak period congestion.

Does ramp metering give any benefit to those who are slowed at freeway entrance ramps?

Accidents often occur when multiple vehicles merge on to the freeway at the same time. Ramp metering reduces accidents by up to 30%. A short wait on the ramp allows drivers to increase their average speed on the freeway and shorten their overall freeway travel times.

What are the challenges in successfully implementing Ramp Metering?

One of the single biggest challenges with ramp metering is the possibility for on-ramp traffic queues to extend and impede traffic on adjacent arterials.

In addition to the use of queue detectors, a written agreement between Caltrans and the local agencies on operating parameters will help outline procedures to mitigate potential negative impact. An existing MOU between Caltrans and San Mateo County should be used as an example of a best practice example and similar documents should be a key component of ramp metering implementation.

STA
Solano Transportation Authority

Closed Circuit Television Cameras

Description

CCTV Cameras are video cameras located along the freeway corridors that send video images to the traffic management center where there are monitors and operators, who view them. The traffic images can be used to verify traffic accidents or congestion and can sometimes even assist in determining appropriate resources for incident clearance (i.e., fire trucks, ambulance, tow trucks, etc.).

CCTV cameras are affordable, effective, and are proven to provide valuable information that can save time. The preferable style includes pan, tilt zoom (PTZ) features so that the operator can zoom in on a specific incident or, pan out for a view of the traffic queue. TMC operators can make a visual check of field conditions at a reported site. The operator can move the nearest camera to focus on the area of interest to verify the incident then check the nature of the incident and severity, make recommendations and finally, observe the progress of incident response and clearance. Cameras are often used to check the message displayed on changeable message signs.

CCTV cameras are most effective for use in traffic incident management if they are deployed along corridors or at intersections where there are high volumes of traffic or frequent incidents.

PROS	CONS
• Relatively inexpensive way to verify and monitor traffic congestion. • Assists in traffic incident management by giving the operator visual of an accident. This allows the operator to make decisions regarding deployment of resources (maintenance vehicles, fire, etc.) before valuable resources are dispatched. • PTZ feature allows the operators to zoom in and see detail of incidents or pan out and have an overview of the traffic queue.	• Public opponents of CCTV point out the loss of privacy when CCTV cameras are deployed along corridors that are adjacent to housing, apartments and businesses located nearby. • Fiber communications lines are limited in the area but other forms of communication are used.

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Solano Transportation Authority

Closed Circuit Television Cameras

FREQUENTLY ASKED QUESTIONS ABOUT CLOSED CIRCUIT TELEVISIONS CAMERAS (CCTV)

Specific Locations and Conditions

Although there are currently over 500 CCTV cameras installed on the Bay Area freeway system I-680 is the only freeway segment that has a substantial CCTV coverage in Solano County. I-80 has CCTV coverage from the Carquinez Bridge to SR 37.

Cost

CCTV cameras are cost effective ranging from $5,000 - $15,000 each. The cost for purchase of the camera does not include the mounting of the device (i.e., concrete poles, light poles, etc...) or the communications. Mounting costs are based on whether the mounting option exists at the scene or if it has to be built. Communications costs depend on options available (i.e., microwave, hardwire, etc.).

Are the CCTV cameras monitored 24/7?

Video images from the CCTV cameras are sent to the Oakland TMC where TMC operators and the California Highway Patrol have access to them 24 hours a day.

Do the CCTV cameras record accidents and if so, how is the video used by Traffic Management Centers (TMC's)?

Caltrans does not record or archive video images.

Can CCTV cameras be used for "spying" on public homes or, for recording vehicle speeds with license plates to issue citations to the public for speeding?

CCTV cameras are pointed away from private residences. Speeds cannot be legally documented using CCTV cameras for enforcement purposes unless there are posted signs advising the public that the signal is posted as an "enforcement signal".

What are the challenges in successfully implementing appropriate use of CCTV Cameras in the region?

The use of fiber is the preferred communications medium along freeway segments primarily for the transport of video images from CCTV cameras to the TMC in Oakland because it has the greatest data carrying capacity and longest transmission distance. Communications are a challenge because there is sparse coverage of the freeways in the County with fiber; most of the CCTV cameras are communicated with using either a leased ISDN or ADN line. •

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Changeable Message Signs (CMS)

Description

Changeable Message Signs (CMS) are signs located along the freeway that are connected to the transportation management center (TMC). TMC operators use these signs to distribute timely information to commuters that can assist the traveler in preparing for what is ahead. CMS provide an effective method of broadcasting information about downstream corridor delays, traffic incidents, estimated travel times and tolling information.

CMS are one of the traditional ITS elements deployed for use in Advanced Traffic Management System (ATMS) techniques. The use of changeable message signs is an effective method of providing traveler information immediately to the motorist on the highway system. It is an excellent means to inform motorists of upcoming events like chain control measures, accidents, road closures and amber alerts. CMS are also used for Active Traffic Management strategies including lane management, route management, tolling lane management and traffic incident management.

The Bay area has nicknamed their system MITTENS to display travel times in the Bay Area relying on MTC's 511 system for travel time predictions.

PROS	CONS
• **CMS can help drivers make better route decisions or travel time decisions.** • **CMS help alleviate driver stress by giving them information ahead of time about congestion or assessing traffic.** • **Unlike radio broadcasts, CMS can be placed where they are most useful to drivers and where the most options are located for alternative routing when the freeway is congested.**	• **Public perceptions vary on this ITS element based on perception of people who live in neighborhoods located near the freeway and whether the CMS add to or distract from freeway beautification efforts in the area.** • **Locating CMS where it may make a driver chose to re-route off of the freeway.**

Solano Transportation Authority

Changeable Message Signs (CMS)

FREQUENTLY ASKED QUESTIONS ABOUT CHANGEABLE MESSAGE SIGNS

Specific Locations and Conditions

Caltrans has standards for the CMS sizes and types but a constraint with field deployments is the ability to communicate with the signs using either a leased or non-leased connection. Actual locations for CMS on the Solano corridors will be based on need, roadway structures and distances to strategic decision points in the roadway where motorists need to make travel route decisions.

Cost

CMS signs themselves are not cost prohibitive at $47,000 - $115,000 each for a stationary CMS and, $15,000 to $30,000 for a portable CMS. Caltrans has standards for mounting CMS that could cost another $100,000 for the stationary CMS. These estimates do not consider the cost of operating the CMS or the cost of communications which, depends on availability of hardwire or telephone lines in the desired location. Operating costs (including maintenance) tends to range around $2,000 per year.

Where does the traffic time information come from and how often is it updated?

Data containing information about travel speeds is extracted from vehicle detection system (VDS) devices at or along the state highway system. That information is transmitted to the CMS for travelers. The information is updated at regular intervals.

Why are CMS better than radio broadcasts that I already depend on?

Unlike radio broadcasts, CMS can be placed strategically where they are most useful to drivers for making decisions.

How is it determined where to place the signs?

Locations for signs are chosen based on freeway structure for supporting safe lane transition and options available for travelers to make re-routing decisions. If there are no re-routing options (i.e., roads where travelers can select another route), signs are placed based on when travelers would need specific information that can be displayed on the CMS. •

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ATTACHMENT D

Implementing Ramp Metering in Solano County

I-80 EB at North Texas St. in Fairfield

Study Overview

- Solano Highways Partnership (SoHIP)

- February 2010, STA Board Adopted Solano Highways Operations Study
  - Operations Improvement Analysis & Implementation Plan
  - Landscape and Hardscape Recommendations
  - Public Outreach Toolbox
- Maximize current infrastructure with operations investments, such as ramp metering and other traffic operations system elements

Ramp Metering is One Part

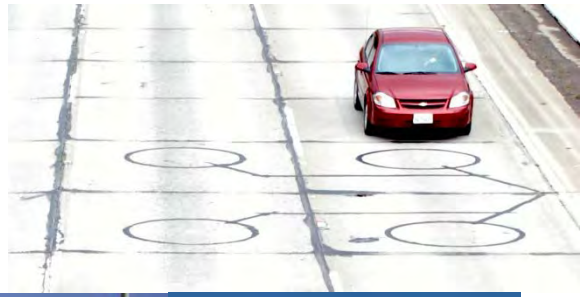
of a Complete Traffic Operations System Strategy

- Ramp Management
- High-Occupancy Vehicle (Carpool) Lanes
- Changeable Message Signs (CMS)
- Closed-Circuit Television Cameras (CCTV)
- Incident Management

Traffic Operations System

- Traffic Monitoring Stations – Used to monitor traffic flow and detect incidents.
- Closed-Circuit Television Cameras (CCTV) – Used to identify/verify incidents & aid in response activities.
- Changeable Message Signs (CMS) – Are used to provide critical real-time traffic advisories to the motorist.

Traffic Monitoring Stations



Freeway Service Patrol

CCTV Cameras

Changeable Message Signs

What is Ramp Metering?

- Ramp meters are traffic signals on freeway onramps that manage ramp flow rate, thus reducing demand for section of freeway mainline downstream and minimizing the possibility of exceeding freeway capacity

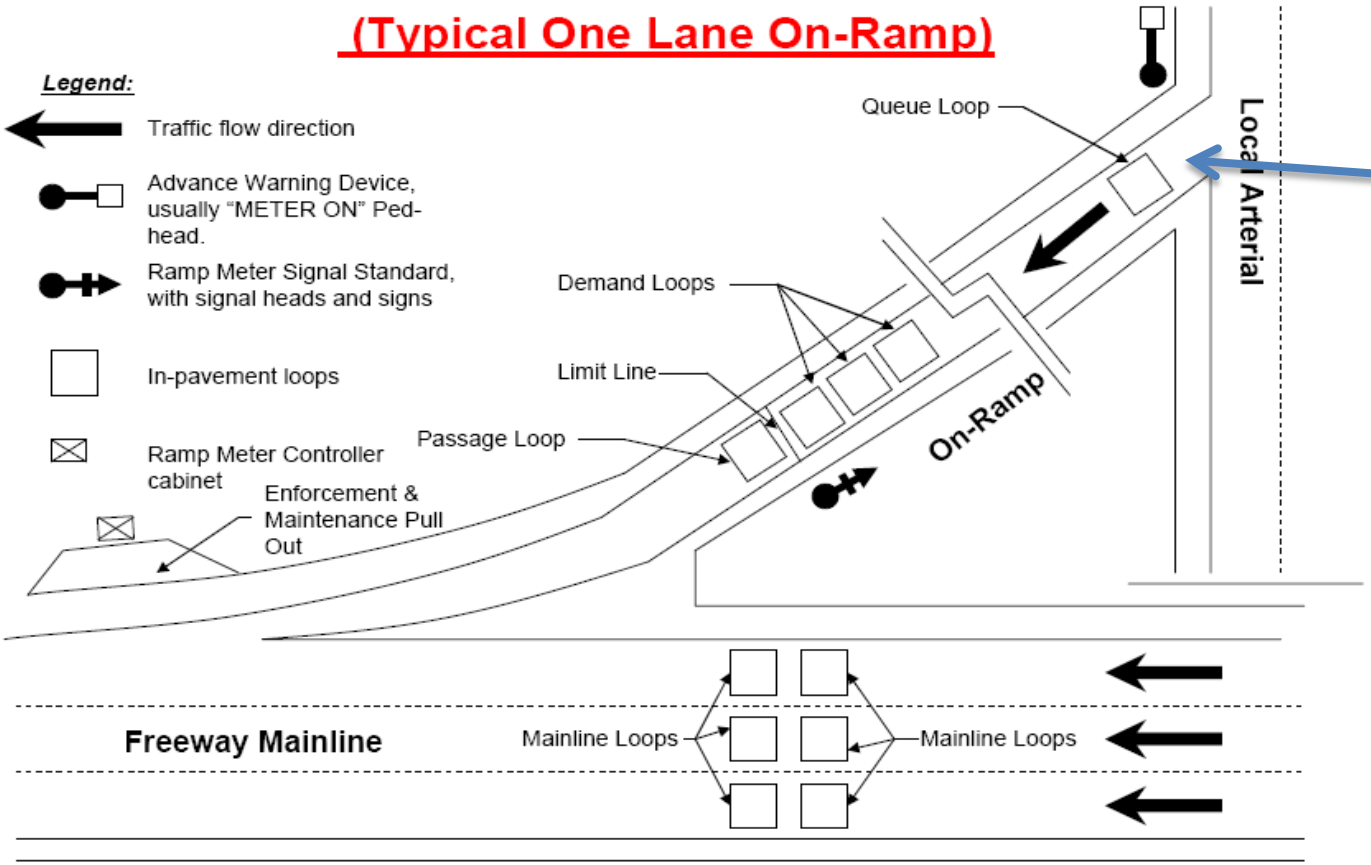
Why Ramp Metering?

- Helps maintain the freeway at maximum performance
- Reduces total travel delay for a driver's entire commute
- Provides consistent travel times for travelers
- Provides Carpool Incentives with Bypass Lanes.
- Breaks up concentrated "Platoons" of cars making merging safer

Typical Ramp Meter Design

Ramp Metering Hardware Example

(Typical One Lane On-Ramp)



End-of-Queue Loop Detector at Entrance of on-ramp

"Spill Back" loops prevent local street congestion by releasing ramp traffic if covered by cars for too long.

Highway-to-Highway Connector Meter Design

- 17 existing connector metering locations in the Bay Area, with most installed during the mid 1990s and as early as 1977.
  - I-880 in Alameda County
  - SR 17, SR 85, SR 87, SR 101, and I-880 in Santa Clara County
- Caltrans installs advanced warning signs based on projected highway congestion (e.g., three signs for NB 85 to NB 101 in San Jose)

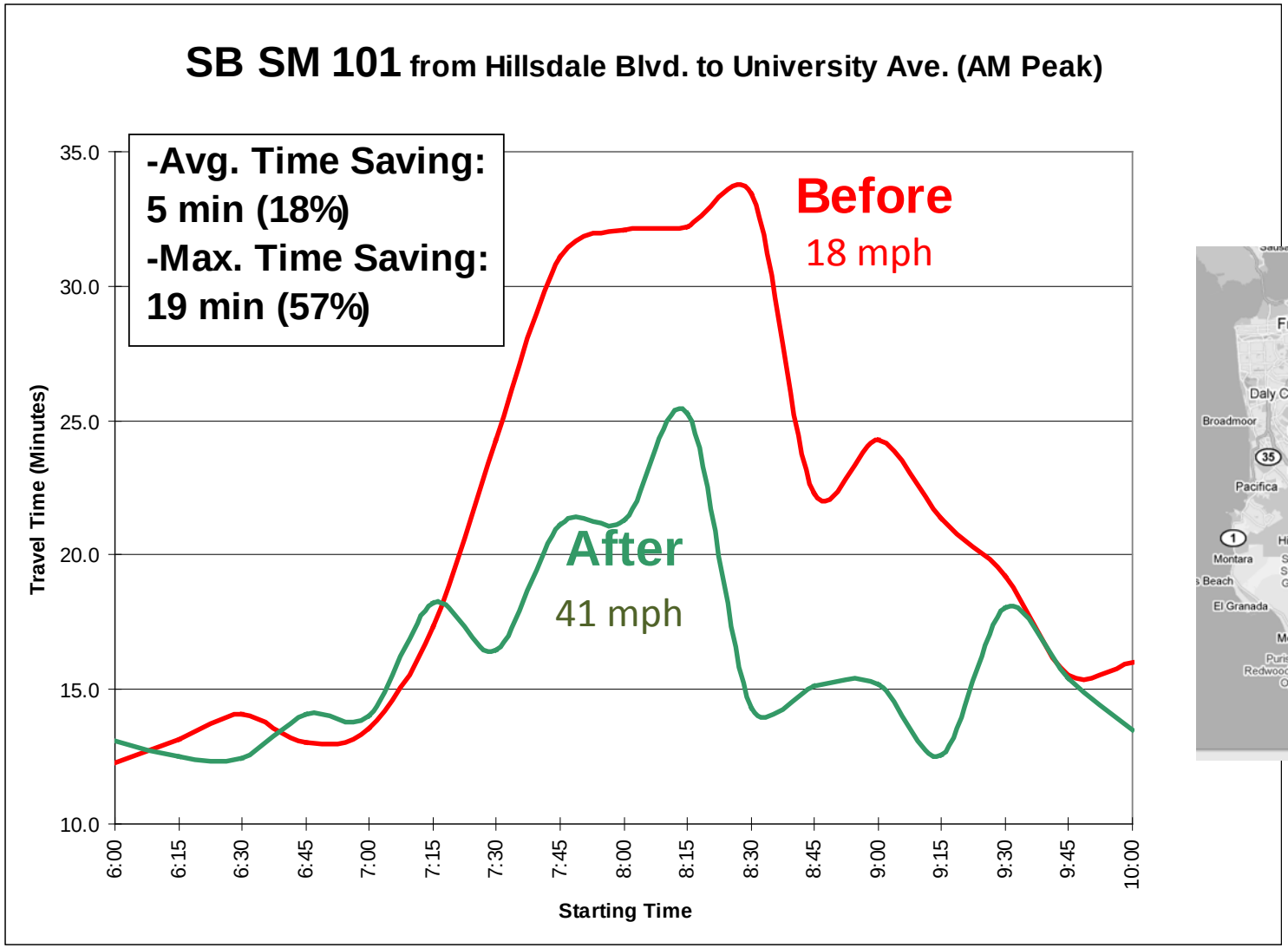
Approach to NB SCL 85 Fwy to Fwy Connector from NB SCL 101, South San Jose

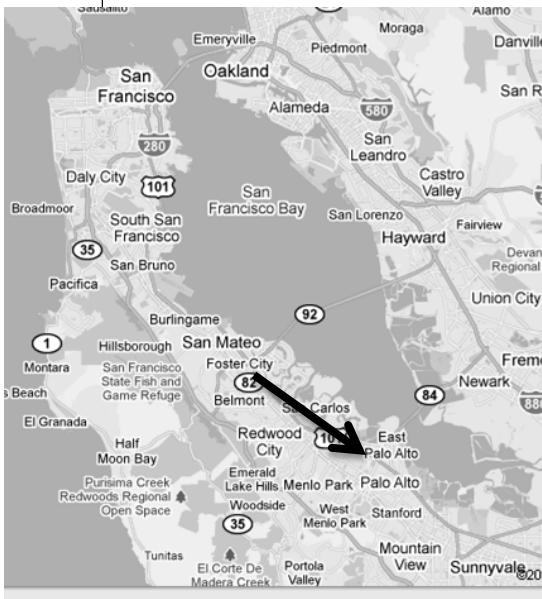
First Advance Warning Sign "Meter On"

Third Advance Warning Sign "Prepare to Stop"

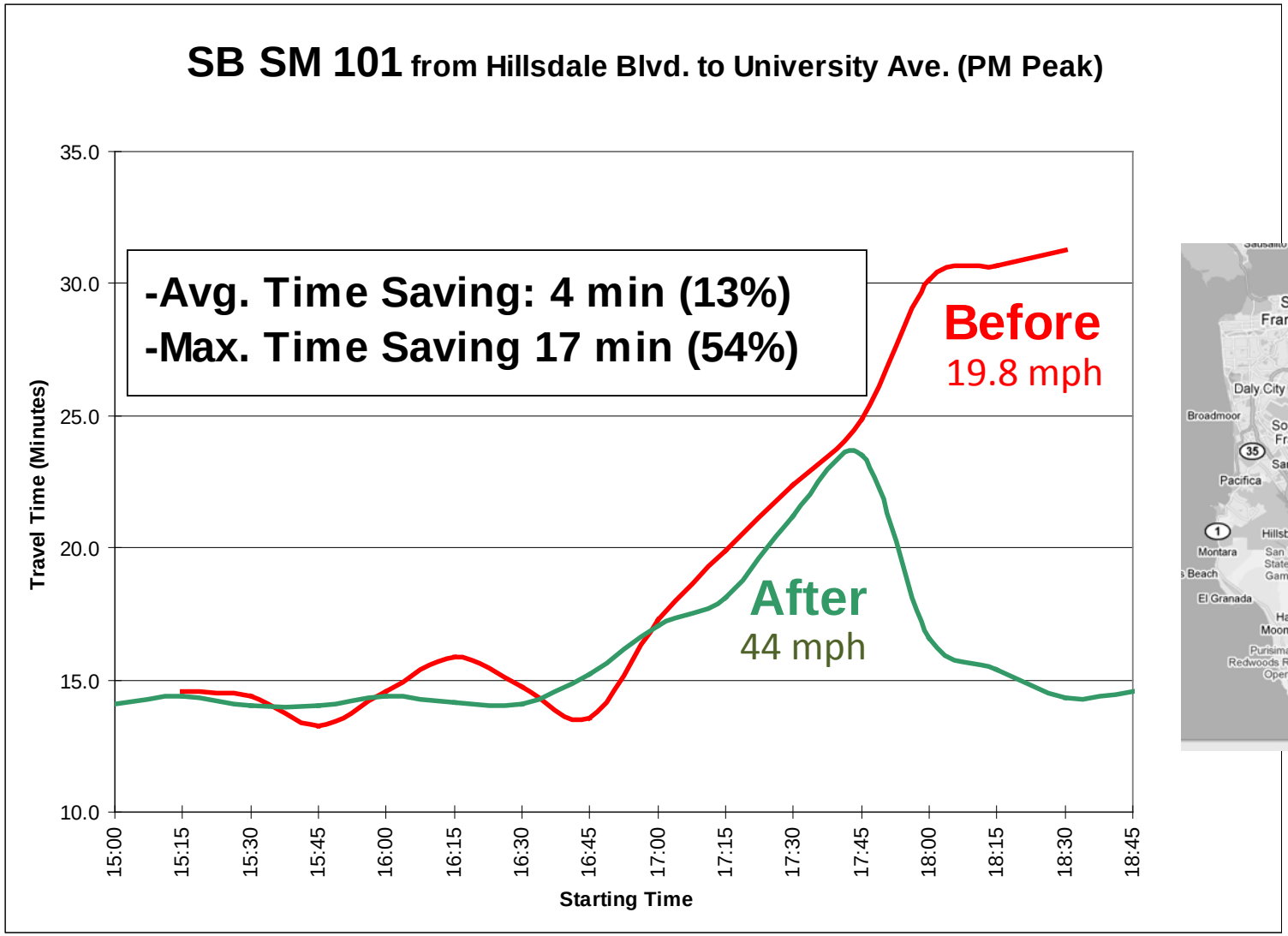
Approaching Metering Signals (Mast Arm)

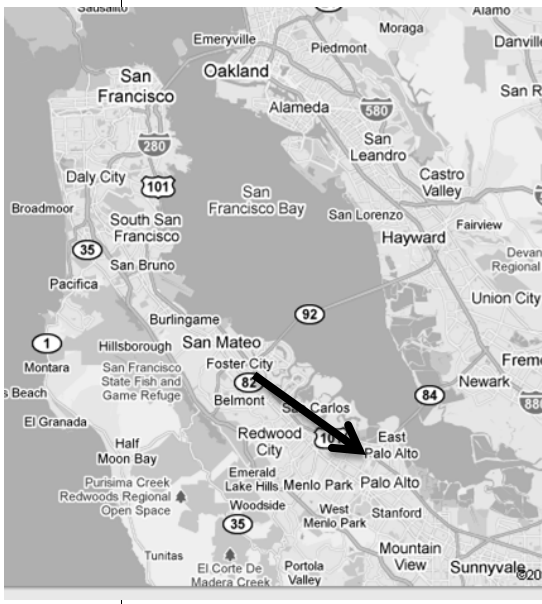
Hwy 101 in San Mateo, Time savings in AM



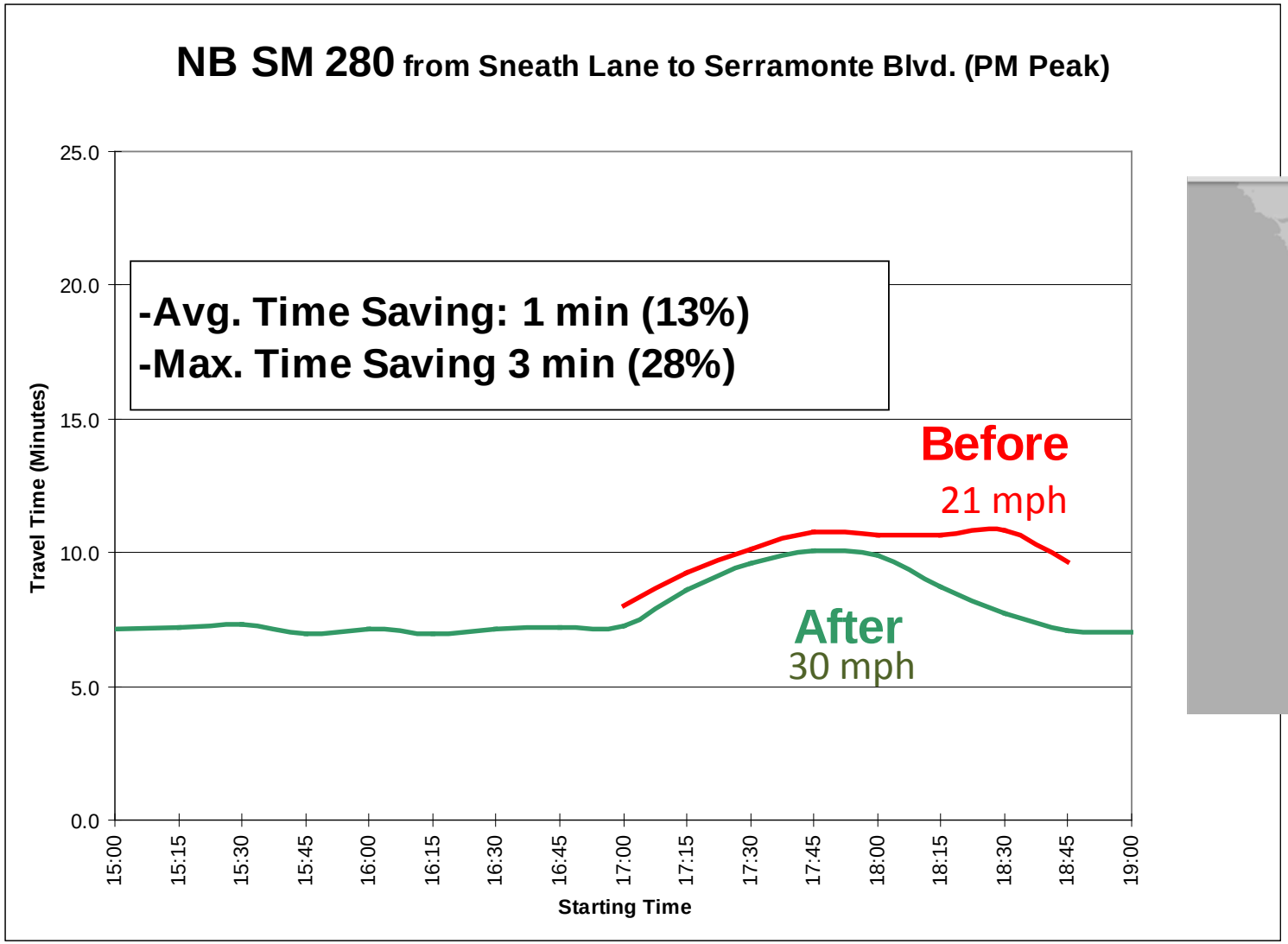


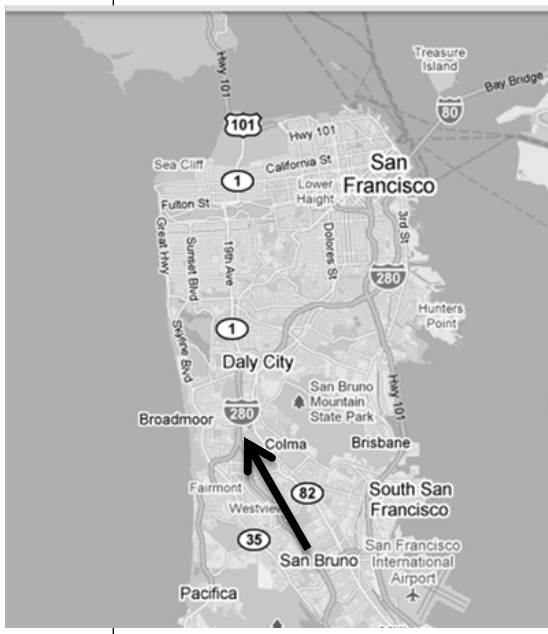
Hwy 101 in San Mateo, Time savings in PM





I-280 in San Bruno,
Benefits for Low Volume Highways

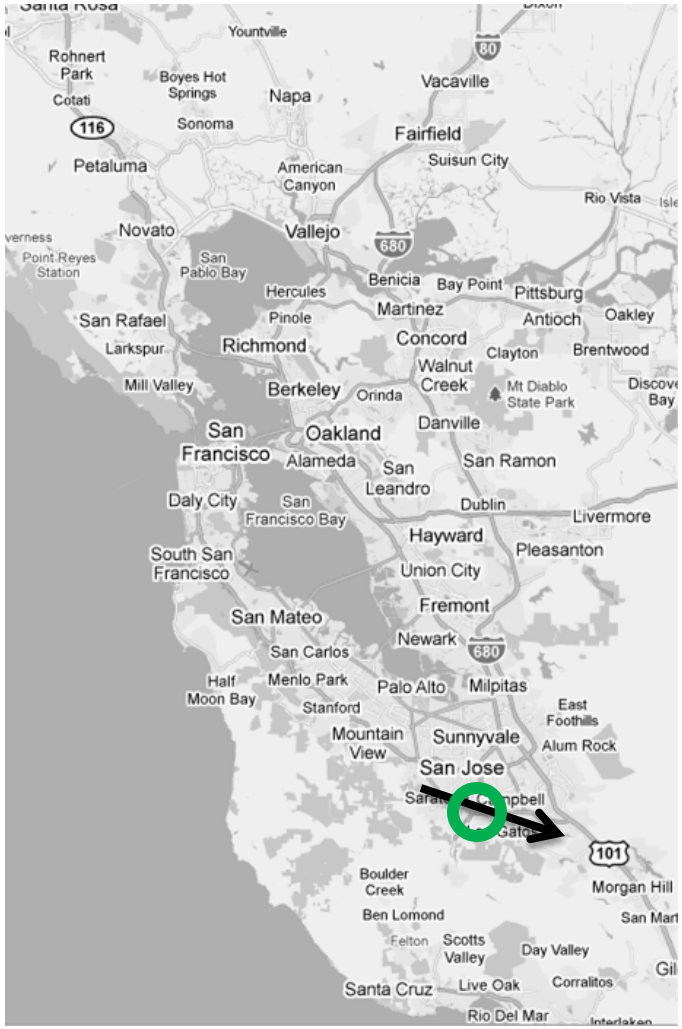




STA Solano Transportation Authority

SR-87 to SR-85 Connector in San Jose, 20 mph faster traffic

Location	Before	After	**Benefit**
Near the connector 5-6pm	30.2	50.6	**+ 20.4 mph**
SR 85 Corridor, 5-6pm	45.0	57.9	**+ 12.9 mph**
SR 85 Corridor, 3-7pm	53.3	61.8	**+ 8.5 mph**



25% Reduction in Accidents

Before & After Studies on I-580 in Alameda

BEFORE OR AFTER	TOTAL ACCIDENTS	FATAL	INJURY	Property Damage Only	% CHANGE IN TOTAL ACCIDENT
Phase I: Hopyard On-ramp to Santa Rita On-ramp					
"BEFORE" (6/1/2002 to 5/30/2003)	248	0	59	189	
"AFTER" (6/1/2003 to 5/30/2004)	205	1	58	146	**-21%**
Phase II: Foothill On-ramp to Greenville On-ramp (Including Phase I)					
"BEFORE" (1/1/2007 to 10/30/2007)	197	0	58	138	
"AFTER" (1/1/2008 to 10/30/2008)	157	0	37	120	**-25%**

*DATA SOURCE: Caltrans – Traffic Accident Surveillance and Analysis Systems (TASAS) ALA 580 EB MAINLINE (FOOTHILL INTERCHANGE TO N. FLYNN) ACCIDENT DATA FOR THE PERIOD OF METERING OPERATION (MON TO FRI, 2:00 PM to 7:00 PM) FOR "BEFORE" & "AFTER" RAMP METERING OPERATION)

Local City Street Benefits

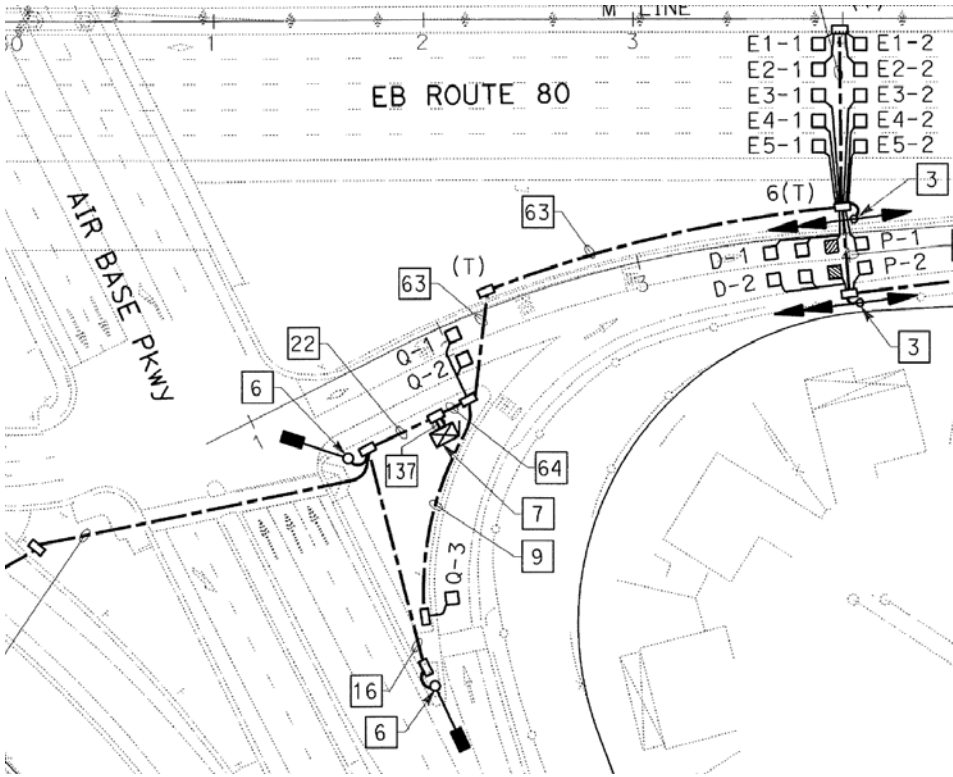
- When ramp metering increases freeway flow and breaks up merging car platoons:
  - Drivers stay on the flowing freeway instead of cutting through on local streets reducing local congestion.
  - On-ramp wait times decrease as less cut-through traffic attempts to reenter the freeway.

Results from EB I-580 in Livermore, Pleasanton and Dublin (2008)

- Ramp metering reduced cut-through traffic on local roads between 6% to 49% and reduced on-ramp volumes between 185 cars to 1375 cars during rush hour.

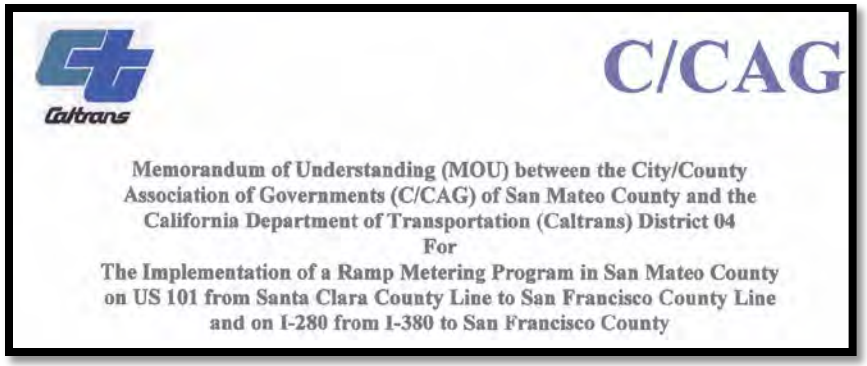
In Design & Under Construction

- North Texas Interchange Ramp Metering
  - Ramp Meters in EB & WB directions (complete)
- $4.9 M, Fairfield I-80 Ramp Metering
  - 14 Ramp meters at ramps between Red Top Road & Air Base Parkway (under construction)
  - Highway-to-Highway connector meters (under construction)
    - EB SR 12 to EB I-80
    - WB SR 12 to WB I-80
    - NB I-680 to EB I-80
- $55 M, Future Ramp Metering projects (in design)
  - 61 ramp meters between SR 37 in Vallejo to Yolo County Line
  - Traffic Operations Systems Countywide



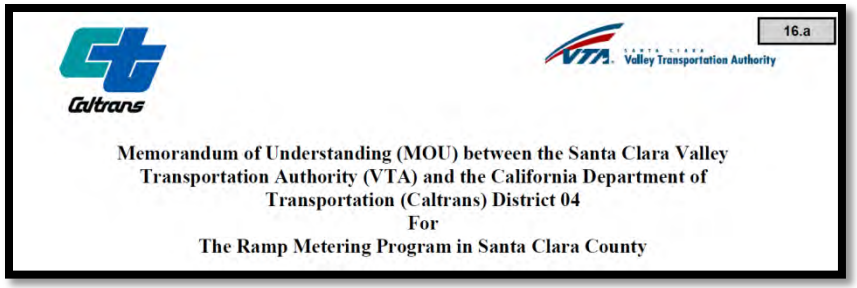
How would meters be turned on?

- Caltrans has Authorization to Build Ramp Metering, <u>But Not</u> to Operate Ramp Metering
- Local cities or counties enter into agreements before Caltrans turns on ramp metering.
- Different examples of operating agreements/memorandums of understanding between Caltrans, local agencies, and transportation authorities:
  - Santa Clara County (Valley Transportation Authority)
  - San Mateo County (City/County Association of Counties)
- Ramp Metering Study
  - modeling data to understand the regional and local benefits of ramp meters prior to beginning ramp meter operations
- Ramp Metering Technical Advisory Committee
  - Public Works staff & Caltrans staff monitor and adjust ramp metering timing quarterly.


Caltrans

C/CAG

Memorandum of Understanding (MOU) between the City/County Association of Governments (C/CAG) of San Mateo County and the California Department of Transportation (Caltrans) District 04
For
The Implementation of a Ramp Metering Program in San Mateo County on US 101 from Santa Clara County Line to San Francisco County Line and on I-280 from I-380 to San Francisco County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Caltrans

VTA Valley Transportation Authority

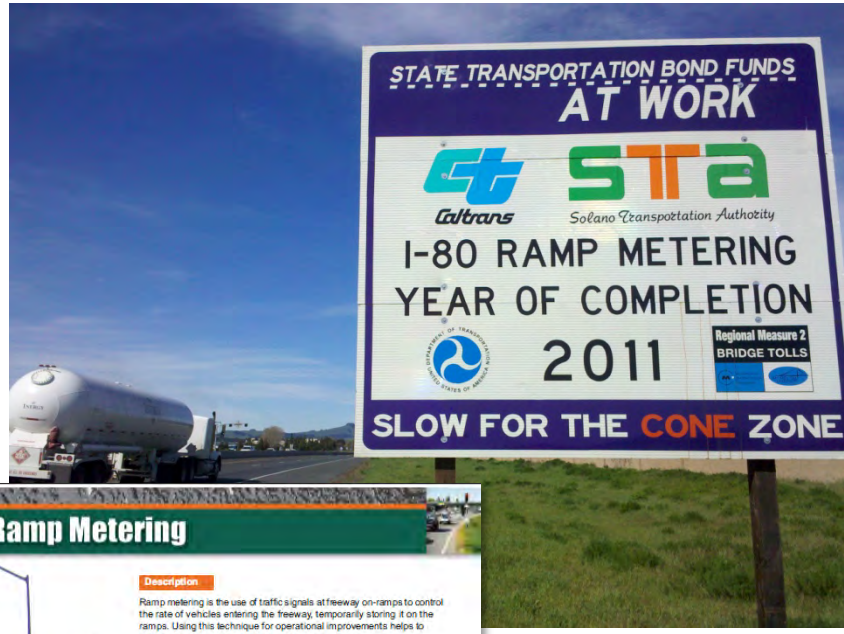
Memorandum of Understanding (MOU) between the Santa Clara Valley Transportation Authority (VTA) and the California Department of Transportation (Caltrans) District 04
For
The Ramp Metering Program in Santa Clara County

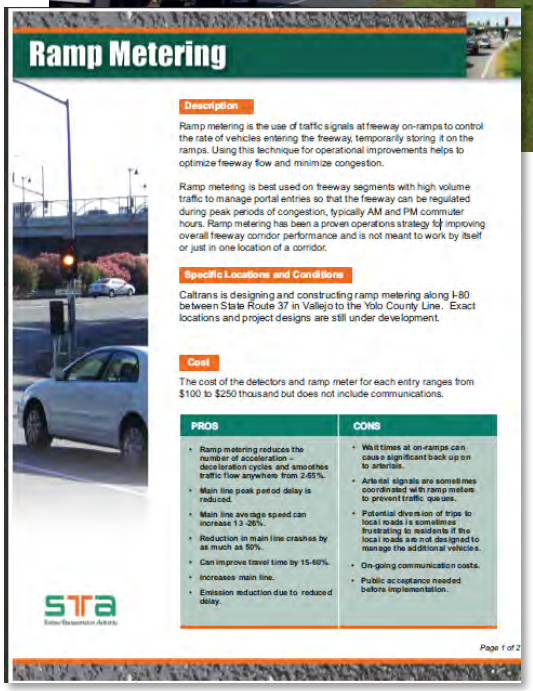
Will Ramp Meters be turned on?

- If local agencies and/or the STA enter into an operating agreement (Memorandum of Understanding, MOU) about how to operate ramp metering, then Caltrans will turn on ramp metering.
- Ramp Metering Development Schedule:
  - Fall 2011, Draft MOU & Preliminary Ramp Metering study results
  - Spring 2012, Fairfield Ramp Metering Project Built
  - Spring 2012, Circulate MOUs and final Ramp Metering Study
  - Summer 2012, potentially begin ramp metering in **Fairfield area** as a first phase
  - Ramp metering in **Dixon, Vacaville, Vallejo, and other areas in Solano County** selected for later dates.

How can the public find out more about ramp metering?

- Presentations for City Councils & Public Groups (e.g., Solano EDC, Service Clubs, Chambers of Commerce, etc.)
- Signs at Ramp Meter locations
- Solano Ramp Metering Webpage, under development by STA in partnership with Caltrans
  - Project Maps
  - Fact Sheets
  - Videos
  - Presentations
- Coordination with Caltrans District 4 Public Affairs staff





Ramp Metering

Description

Ramp metering is the use of traffic signals at freeway on-ramps to control the rate of vehicles entering the freeway, temporarily storing it on the ramps. Using this technique for operational improvements helps to optimize freeway flow and minimize congestion.

Ramp metering is best used on freeway segments with high volume traffic to manage portal entries so that the freeway can be regulated during peak periods of congestion, typically AM and PM commuter hours. Ramp metering has been a proven operations strategy for improving overall freeway corridor performance and is not meant to work by itself or just in one location of a corridor.

Specific Locations and Conditions

Caltrans is designing and constructing ramp metering along I-80 between State Route 37 in Vallejo to the Yolo County Line. Exact locations and project designs are still under development.

Cost

The cost of the detectors and ramp meter for each entry ranges from $100 to $250 thousand but does not include communications.

PROS	CONS
• Ramp metering reduces the number of acceleration – deceleration cycles and smoothes traffic flow anywhere from 2-65%.	• Wait times at on-ramps can cause significant back up on to arterials.
• Main line peak period delay is reduced.	• Arterial signals are sometimes coordinated with ramp meters to prevent traffic queues.
• Main line average speed can increase 13 -26%.	• Potential diversion of trips to local roads is sometimes frustrating to residents if the local roads are not designed to manage the additional vehicles.
• Reduction in main line crashes by as much as 50%.	• On-going communication costs.
• Can improve travel time by 15-60%.	• Public acceptance needed before implementation.
• Increases main line.	
• Emission reduction due to reduced delay.	

STA

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More Information

Download Fact Sheets & Presentations

www.sta.ca.gov

Video Presentation for

San Mateo Ramp Metering Project

http://www.mtc.ca.gov/about_mtc/awards/video/2010/01.htm

"Our board now is in a position that we can't put ramp metering up fast enough … turn it on as fast as you can."
Richard Napier, Executive Director, C/CAG in San Mateo

Janet Adams

STA Director of Projects

(707) 424-6075

Tracy Ruth

Caltrans District 4, Public Affairs

(510) 286-4444

"As a county, we approached [ramp metering] in a very different way … I'm very proud of what we've done here in [San Mateo] County."
Larry Patterson, San Mateo Public Works Director

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DATE: June 10, 2011
TO: STA Board Workshop
FROM: Janet Adams, Deputy Executive Director/ Director of Projects
RE: Opportunities for Public Private Partnerships

Background:
With the decline in reliability for state and federal funds paired with the fact that Solano County does not have a local funding source for transportation, STA has been evaluating various funding options for funding needed transportation infrastructure. One approach is to bring in private funding partners.

A Public-Private Partnership (PPP or P3) is a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility. An example of a traditional P3 would be the Route 91 Toll Facility in Orange County. This facility was designed and constructed by a private company in partnership with Caltrans. The private company then charged tolls to vehicles for use of the facility as the means to recoup the upfront financial cost to construct the roadway.

According to the National Council for Public-Private Partnerships (NCPPP), there are six critical components of any successful Public-Private Partnership (PPP). While there is not a set formula or an absolute foolproof technique in crafting a successful PPP, each of these keys is involved in varying degrees.

1. Statutory and Political Environment:
   A successful partnership can result only if there is commitment from "the top". The most senior public officials must be willing to be actively involved in supporting the concept of PPPs and taking a leadership role in the development of each given partnership. A well-informed political leader can play a critical role in minimizing misperceptions about the value to the public of an effectively developed partnership. Equally important, there should be a statutory foundation for the implementation of each partnership.

2. Public Sector's Organized Structure:
   Once a partnership has been established, the public-sector must remain actively involved in the project or program. On-going monitoring of the performance of the partnership is important in assuring its success. This monitoring should be done on a daily, weekly, monthly or quarterly basis for different aspects of each partnership (the frequency is often defined in the business plan and/or contract).

3. Detailed Business Plan (Contract):
   The participants must know what to expect of the partnership beforehand. A carefully developed plan (often done with the assistance of an outside expert in this field) will substantially increase the probability of success of the partnership. This plan most often will take the form of an extensive, detailed contract, clearly describing the responsibilities of both the public and private partners. In addition to attempting to foresee areas of respective responsibilities, a good plan or contract will include a clearly defined method of dispute resolution (because not all contingencies can be foreseen).

4. Guaranteed Revenue Stream:
   While the private partner may provide the initial funding for capital improvements, there must be a means of repayment of this investment over the long term of the partnership. The income stream can be generated by a variety and combination of sources (fees, tolls, tax increment financing, or a wide range of additional options), but must be assured for the length of the partnership.

5. Stakeholder Support:
   More people will be affected by a partnership than just the public officials and the private-sector partner. Affected employees, the portions of the public receiving the service, the press, appropriate labor unions and relevant interest groups will all have opinions, and frequently significant misconceptions about a partnership and its value to all the public. It is important to communicate openly and candidly with these stakeholders to minimize potential resistance to establishing a partnership.

6. Pick Your Partner Carefully:
   The "lowest bid" is not always the best choice for selecting a partner. The "best value" in a partner is critical in a long-term relationship that is central to a successful partnership. A candidate's experience in the specific area of partnerships being considered is an important factor in identifying the right partner.

For Solano County, partnering with private sector has been done in recent years to construct roadway improvements for the North Connector and is planned as part of the Jepson Parkway project. This P3 approach is planned to be studied as a mechanism to construct and maintain transit facilities around the county. Many of the facilities are not fully funded, have remaining phases of construction that are not fully funded, or require operations maintenance plans. The intent is to explore traditional P3s, but also look at more global opportunities around the transit facilities to attract private investments.

Discussion:

P3 Study for Transit Centers

STA is beginning a P3 Feasibility Study for the transit facilities along the I-80 corridor. The objective is to implement incentive strategies for private investment to assist in completing or maintaining existing and planned transit facilities along I-80.

These facilities include Transit Centers of Regional Significance previously identified by the STA Board as priority transit facilities for current and future funding opportunities. The attached map (Attachment A) provides details for private investment opportunities related to transit facility locations (transportation centers and park and ride lots) along the I-80 corridor.

The cities of Vallejo, Fairfield, Vacaville and Dixon have a number of existing and/or planned transit centers and park and ride facilities designed to serve commuters (carpool, bus, train and ferry riders) along the I-80 corridor in Solano County. State and Federal funding from traditional sources are currently more limited now than it has been in the past. As a result, funding is generally prioritized for ongoing operation and maintenance of existing transit facilities rather than on expansion. This includes Caltrans Park and Ride Facilities. In partnership with Caltrans, Metropolitan Transportation Commission (MTC) and Solano County cities located along the I-80 corridor, the STA will develop a feasibility study which identifies P3 options as well as a P3 Implementation Plan for the I-80 corridor. The goal is to develop a P3 strategy for the STA to implement with its partners in addition to being replicated by other agencies, including Caltrans, to implement in similar corridors.

This effort will provide opportunities for a public private partnership to assist in maintaining, managing and allowing for more efficient use of each facility. The feasibility study will demonstrate how this effort could spur the local and regional economy by encouraging private sector job growth as a result of the private sector partnership. Enhancing public safety and security is a priority option for any potential revenue that results from a public private partnership. In terms of community values, the feasibility study will have an extensive public outreach to solicit public input on ideas for creating a nexus with their transit needs and incentive options for the private sector's participation. Lastly, transit facilities and park and ride lots along the I-80 corridor will be more attractive to users as a result of this corridor wide P3 approach, thereby increasing transit users and enhancing the environment by decreasing single occupancy vehicles and CO2 emissions.

Upon adoption by the STA and the partnering agencies, the I-80 Corridor P3 Feasibility Study will provide a toolkit of strategies that can be the framework for public agencies to attract private investment. These strategies will be available to be applied to transit facilities on I-80 in the cities of Dixon, Vacaville, Fairfield, and Vallejo in addition to Caltrans Park and Ride facilities. Opportunities for private investment can potentially include alternative fuels infrastructure, paid parking and/or parking management plan, bicycle e-lockers, retail and/or other business service opportunities. In addition, mixed use development at or directly adjacent to these transit facilities will be considered as part of the Study. Mix use development commitments by the cities, can open opportunities for public investment in infrastructure that facilitates these uses. The P3 Feasibility Study will include at least 3 Priority Development Areas (PDA) which are areas designated to accommodate the region’s growth over the next 30 years as part of the Bay Area SCS. The Feasibility Study will identify options that will enhance transit facilities that are the foundations for PDA's. This will allow PDA's to be more attractive and livable for growth that is anticipated to occur at these locations.

The revenue obtained from these overall opportunities can assist in maintaining, operating and/or expand transit facilities on the I-80 Corridor. The goal is to develop the study in a manner that can be a model for P3's in other counties in the Bay Area as well as the State.

<u>Partnerships with Private Sector to Deliver Local Corridor Improvements</u>
The STA Board adopted a 50/50 policy whereas if a project provides both local and regional benefits, then it regional funds are eligible to fund 50% of the project. A recent example of this policy at work is the North Connector East/Central Segment (Attachment B).

This new local roadway is located in the I-80/I-680/State Route 12 Interchange Complex. Located to the north of I-80 running parallel to it, it provides both regional and local benefit as it provides an alternative for local trips in lieu of traveling on I-80. The STA trough Regional Measure 2 (RM 2) funds provided for 50% of the cost of the new roadway. The remaining 50% funds were provided by the developer who constructed the roadway a portion of the roadway improvements.

A second model of this approach is with the Jepson Parkway Project. The 12-mile Jepson Parkway project is an I-80 Reliever Route that will improve intra-county mobility for Solano County residents. The project upgrades a series of narrow local roads to provide a north-south travel route for residents as an alternative to I-80. The plan proposes a continuous four-lane roadway from the State Route 12 / Walters Road intersection in Suisun City to the I-80 / Leisure Town Road interchange in Vacaville. The project also includes safety improvements, such as the provision for medians, traffic signals, shoulders, and separate bike lanes. The Jepson Parkway project is divided into 10 segments for design and construction purposes. Five (5) construction projects within the Jepson Parkway project have been completed: the extension of Leisure Town Road from Alamo to Vanden; the relocation of the Vanden/Peabody intersection; improvements to Leisure Town Road bridges; the Walters Road Widening (Suisun City); and the I-80/Leisure Town Road Interchange (Vacaville). The Project is being completed in partnership by the STA, the City of Fairfield, the City of Suisun City, the City of Vacaville and Solano County.

In the spring of 2011, the project partners identified the initial construction phases to include portions of the project, Segment 6 through Segment 11 as shown on the overall Jepson Parkway Map (Attachment C). Specifically the Fairfield Project being defined as Segments 6 and 7, from the east side of the Cement Hill Road/ Peabody Road/ Vanden Road Intersection that would be completed as part of the Fairfield Vacaville Train Station Project to south side of the Vanden Road /Leisure Town Intersection. The total cost for design, R/W, construction, and environmental mitigation is estimated at $31.8 million. These Segments include approximately ½ mile of unincorporated Solano County roadway improvements.

The Vacaville Project will construct Segments 8 thru 11, from the south side of the Vanden Road/ Leisure Town Road Intersection (where the Fairfield project ends) to north of the Alamo Drive/ Leisure Town Road Intersection. The total cost for design, R/W, construction and environmental mitigation is estimated at $23.4 million.

These projects will be funded on a 50/50 shared basis between each agency and STA. STA has a total of $36.7 million ($2.4 m for design, $3.8 m for R/W, and $30.5 m for construction) of STIP funding programmed for this project. The STA funding should be able to deliver a total of $73.4 million toward this Corridor based upon the 50/50 sharing of project costs. The combined total cost is estimated at $55.2 million for the segments identified above. It is believed that the costs utilized from the Technical Report may be as much as 20% high due to the current favorable bidding climate. The Cities anticipate much of the R/W being dedicated by proposed development that will contribute a portion of the required local funding. The remaining funds from each agency would be on a 5-year payback plan to the project. A portion of these reimbursements would be needed to fund the second of the identified projects. The remaining funds would be set-a-side for the 3rd project phase, yet to be determined. The remaining 50% of funds or in-kind dedications will be made through private investment from adjacent development along the corridor for the segments specifically identified.

The STA and its partner agencies are in the process of finalizing a Memorandum of Understanding (MOU) for this Project. The MOU defines the roles and responsibilities of the Jepson Parkway Working Group and each agency in the delivery of the Jepson Parkway Corridor. It also establishes the Guiding Principals from which to select and prioritize project phases. The MOU also codifies the commitment that the Cities have for development of the portion of the Parkway that would fall within future City limits after the anticipated annexations occur. In addition, Funding Agreements with the partner agencies have been/are being developed.

Several other local corridors have been identified as project candidates for STA. These include the: Western Segment of the North Connector, Peabody Road, Columbus Parkway and McCormack Road. Identifying funding for Local Roadway projects is a challenge. There is a lack of identified funding sources from traditional sources local, state, regional and federal. A local Regional Transportation Impact Program (RTIP) evaluation is currently underway and provides one option, but the recent concern about level of current fees may make this option more difficult.

Workshop Discussion:

1. How do local priority transportation corridors get funded?
2. Once the P3 Feasibility Study is completed, what should STA's role be in the implementation of the options?

Attachments:

A. P3 Transit Facility Opportunities
B. North Connector Map
C. Jepson Parkway Map
D. Transit Facilities Fact Sheet (To be provided under separate cover.)

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California's Interstate-80 Regional Travel Corridor

Solano County's Transit Centers and Park & Ride Lots Create Opportunities for Public-Private Partnerships

Fairfield Transit Centers & Park & Rides
Fairfield Transportation Center (Candenasso)
Fairfield/Vacaville Train Station (future)
Red Top Road PnR (under construction)

Vacaville Transit Centers & Park & Rides
Vacaville Regional Transportation Center (Allison)
Cliffside @ Peabody & I-80 PnR
Davis St. @ I-80 PnR
Bella Vista @ I-80 PnR
Leisure Town Rd. @ i-80 PnR

Fairfield Transportation Center

Red Top Road PnR

Leisure Town Road PnR

Davis St & Bella Vista PnRs

Vacaville Regional Intermodal Center

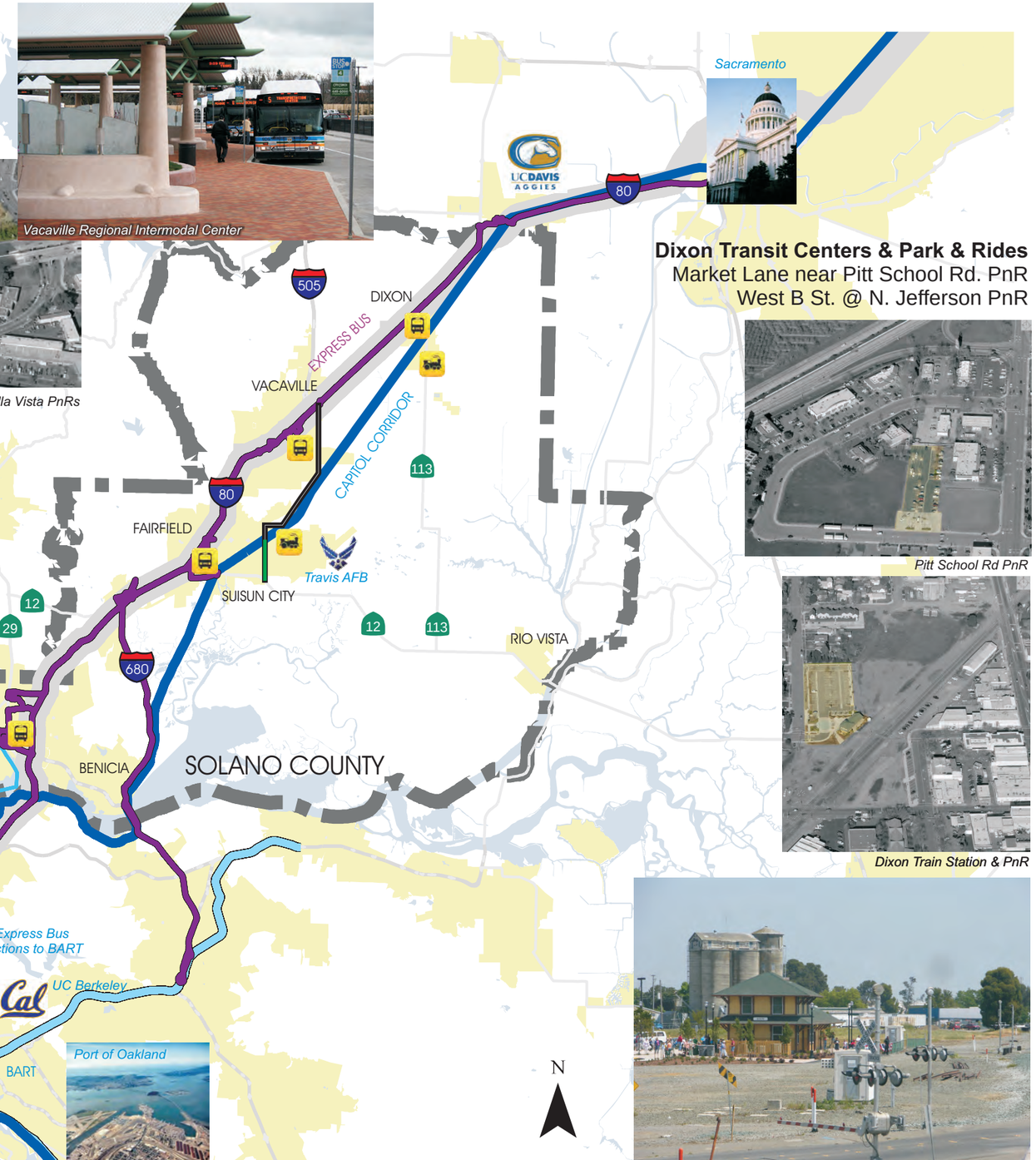
Fairfield Transportation Center

Vallejo Transit Centers & Park & Rides
Vallejo Station (under construction)
Vallejo Ferry Terminal
Sereno Transfer Station
Magazine St. PnR
Lemon St. PnR
Lemon St. SW PnR
Benicia Rd. PnR

Vallejo Station

Lemon St. PnR

Vallejo Ferry Terminal, Vallejo Station Transit Center, and York & Marin Transfer Station



Dixon Transit Centers & Park & Rides
Market Lane near Pitt School Rd. PnR
West B St. @ N. Jefferson PnR

Pitt School Rd PnR

Dixon Train Station & PnR

Dixon Train Station & PnR

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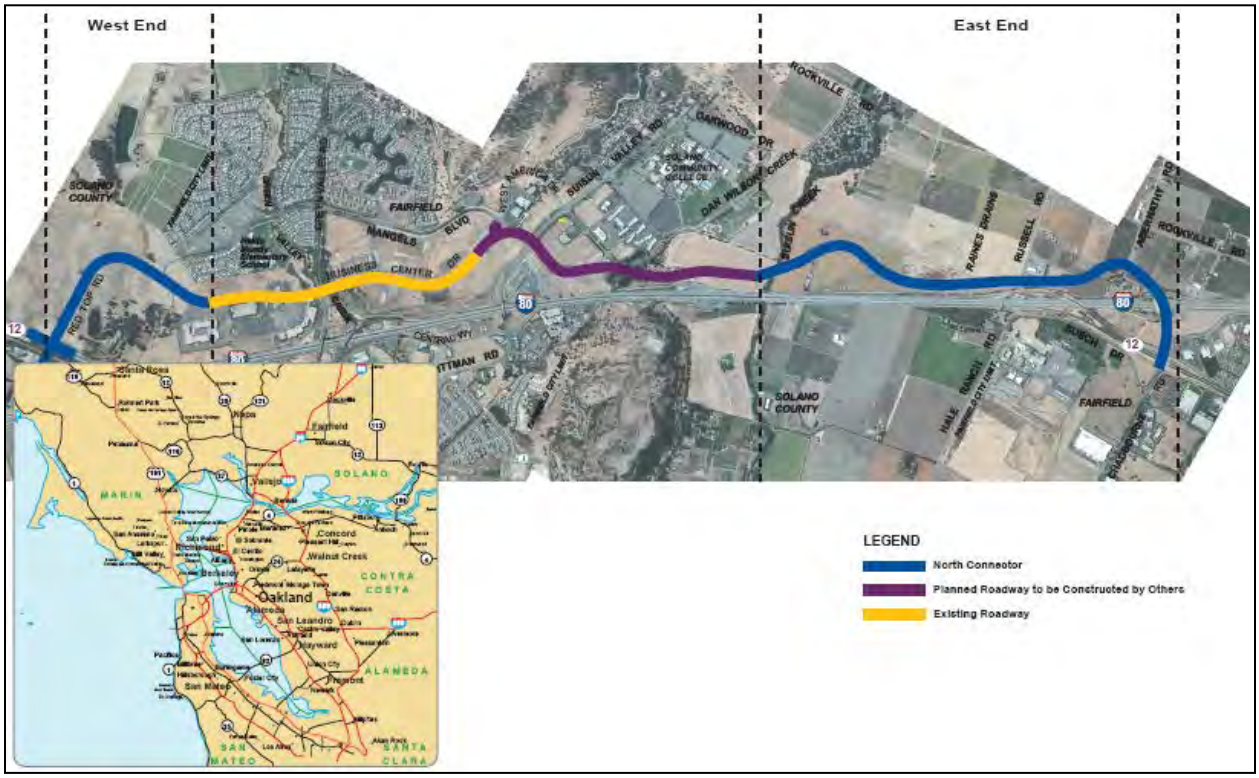
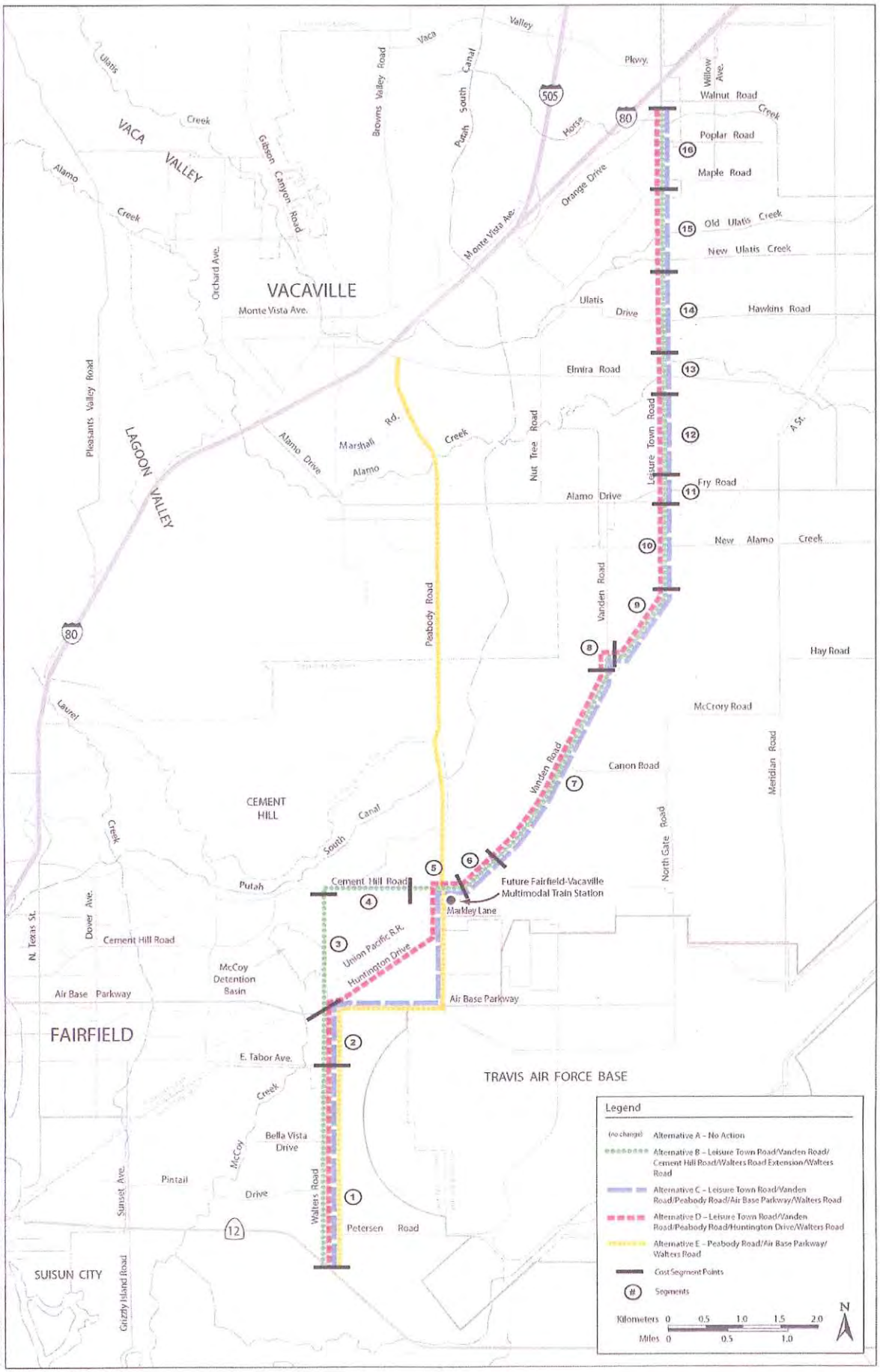
Central Segment





Source: Jones & Stokes, 2006.

Figure
Jepson Parkway Project Location and Cost Segments

DATE: June 21, 2011
TO: STA Board Workshop
FROM: Elizabeth Richards, Director of Transit and Rideshare Services
RE: Solano County Transit Long Range Sustainability

Background:
The long-range financial analysis of the transit operators at status quo service levels has been identified as an issue that will be a challenge (see Attachment A) with current funding sources. These projections were prepared during the financial analysis of the countywide transit consolidation study in early 2009. Since that time transit operating revenue sources has become more constrained. In most cases, transit operators have made adjustments in terms of reducing costs and some have been able to diversify their funding sources. Nevertheless, sustaining transit service in the long-term remains a challenge.

Discussion:

TRANSIT OPERATORS FINANCIAL FUTURES
As Attachment A shows, there was great variation among operators concerning the projected shortfalls and surpluses. For FY 2012-13, Benicia and Vallejo were projected to have shortfalls the soonest (Attachment B). Subsequent to the projections, one-time federal American Recovery and Relief Act (ARRA) funds became available which helped sustain current transit services over a two year period, but this one time funding is now depleted.

With an understanding of the upcoming financial challenges of these adjacent services, these two operators concurred with the STA Board's June 2009 recommendation that these two operators consolidate. Since that STA Board action, the STA, Benicia, and Vallejo have been working diligently on the consolidation of the two cities' transit services. A joint powers agreement has been executed and a Board has been meeting since December 2010. Activities are on target for July 1, 2011 consolidation and SolTrans operation of transit services. The consolidation of service contracts will provide an immediate savings. Vallejo Transit's procurement of 21 diesel/electric hybrid local buses will help mitigate the increasing cost of fuel. An updated long-range financial analysis is in the process of being developed.

Dixon Readi-Ride, a general public dial-a-ride service costs were also projected to quickly exceed revenues (Attachment C). Successfully competing for discretionary funding in the past few years has maintained service for the time being. Long-term, this is still a concern.

Rio Vista Delta Breeze, and Fairfield and Suisun Transit (FAST) were projected to have adequate financial resources through FY2012-13 though the gap between costs and revenues is closing (see Attachment D). Vacaville City Coach has the healthiest financial outlook (Attachment E).

REVENUES

The countywide financial analysis work was completed in FY2008-09. Conditions have not significantly improved and in some cases deteriorated. A major source of transit operating funds, Transportation Development Act (TDA) funds, are based on revenue generated from sales tax. The projection for FY2011-12 is at the level TDA funds were in FY2003-04 – a 15% decrease from the peak in FY2005-06 (see Attachment B). State Transit Assistance funds (STAF) have been a volatile source of transit funds, subject to the State budget process and because of this are only minimally used for transit operating. RM2 (Bridge Toll) funds have significantly supported major intercity transit routes operating over the bridges; there is no escalation to these funds; as costs increase over time, a decreasing proportion of the routes' costs will be covered by RM2 revenues. Federal Transit Administration (FTA) funds may be used for operating by some, but not all, transit operators in Solano County. Changes at the federal level are likely to make this more difficult. There are other transit operating fund sources, but these are generally competitive in nature, are on unpredictable funding cycles and relatively small amounts.

Maintaining, or possibly increasing, ridership is important as passenger fares remain a fairly significant portion of transit operating funds. In general, 20% of fixed route operating costs must be covered by passenger fares to secure TDA funds. General public and ADA paratransit have a 10% farebox requirement. Reducing costs by reducing services must be done strategically to avoid significantly losing ridership and passenger revenue.

EFFORTS TO DATE

Solano transit operators have taken a variety of steps to respond to the financial challenges in the past few years including modifying fares and service, competing for funds, acquiring new vehicles and more. The operators and the STA have worked together to create an Intercity Transit Funding (ITF) agreement which has provided stability for the seven major intercity routes; FY 2011-12 will be the sixth year of the ITF agreement.

An update at the countywide I-80/I-680/I-780/Hwy12 Transit Corridor Study is scheduled to begin in FY 2011-12. The purpose of this long-range plan will be to identify the county's intercity transit operating and capital needs as well as the funding available (or needed) to implement services and projects.

Workshop Discussions:

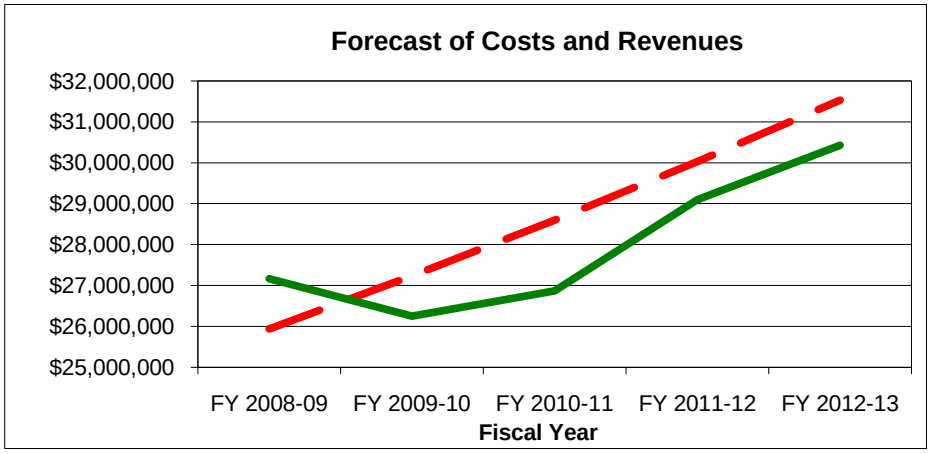
1. What transit services should be prioritized?
2. How should the need of local and intercity transit services be balanced?
3. What should the balance be between operations (service) and capital (vehicle, new/expanded facilities) be?
4. Should the STA update and analyze the long term financial projections for Solano transit operators from a countywide perspective, operating and capital?

Attachment:

A. Countywide transit forecast of transit costs and revenues (Jan. 2009)
B. Benicia Breeze and Vallejo Transit 5-year operating revenue and cost forecasts
C. Dixon Readi-Ride 5-year operating financial forecast
D. Rio Vista Delta Breeze and FAST 5-year operating revenue and cost forecasts
E. Vacaville City coach 5-year operating revenue and cost forecast
F. Historical Trend of Solano's TDA Revenue Generation

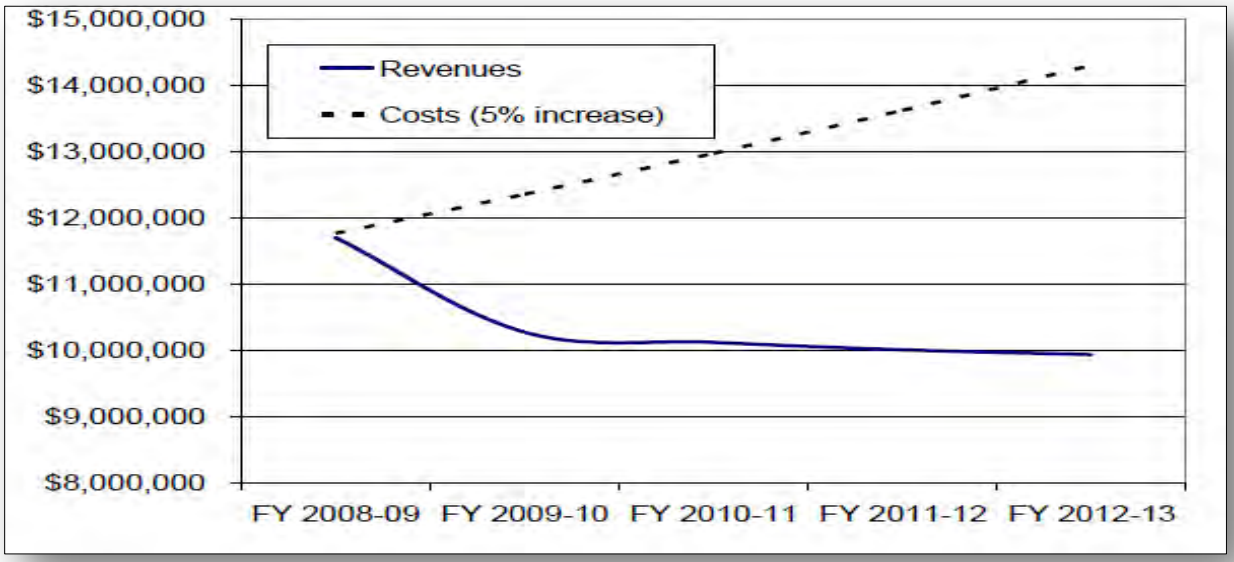
Solano Transit
Forecast of Costs & Revenues

- Detailed review of potential financial projections in January 2009
- Overall, transit operator funding will fall short
- Trends vary by operator

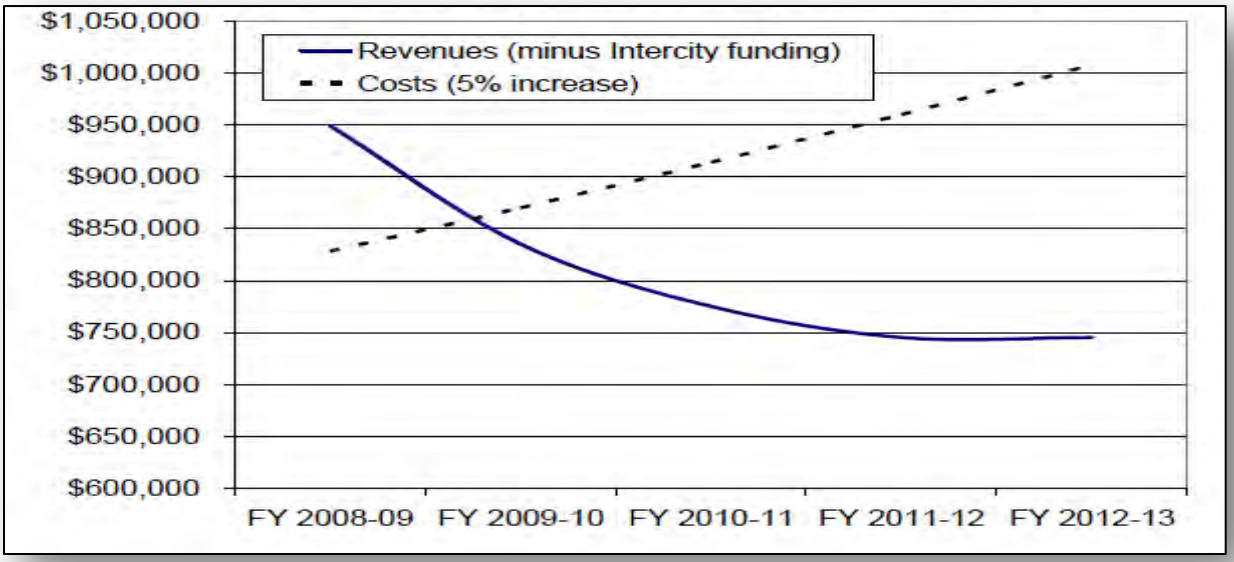


Year 2012/2013 Outlook	Anticipated Shortfall/ Surplus
Benicia	-26%
Dixon	-18%
Fairfield/ Suisun City	1%
Rio Vista	7%
Vacaville	200%
Vallejo	-31%

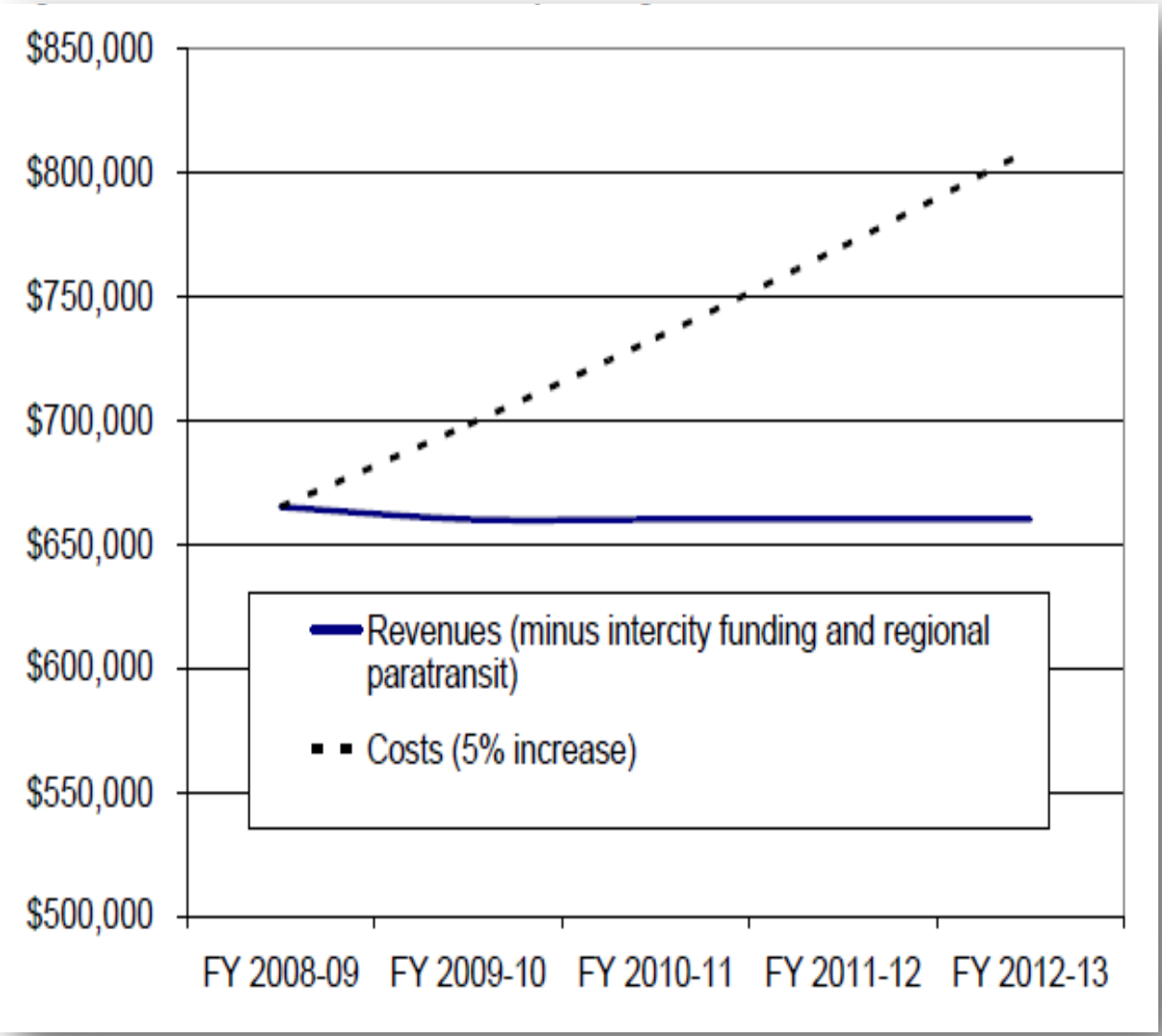
Benicia Breeze 5-Year Operating Revenue and Cost Forecast



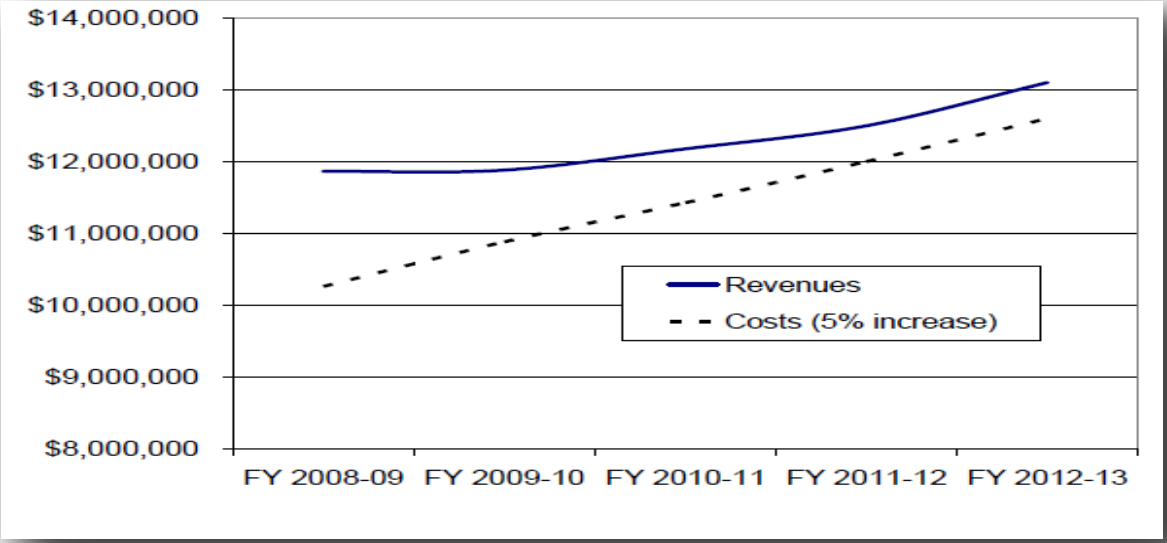
Vallejo Transit 5-Year Operating Revenue and Cost Forecast



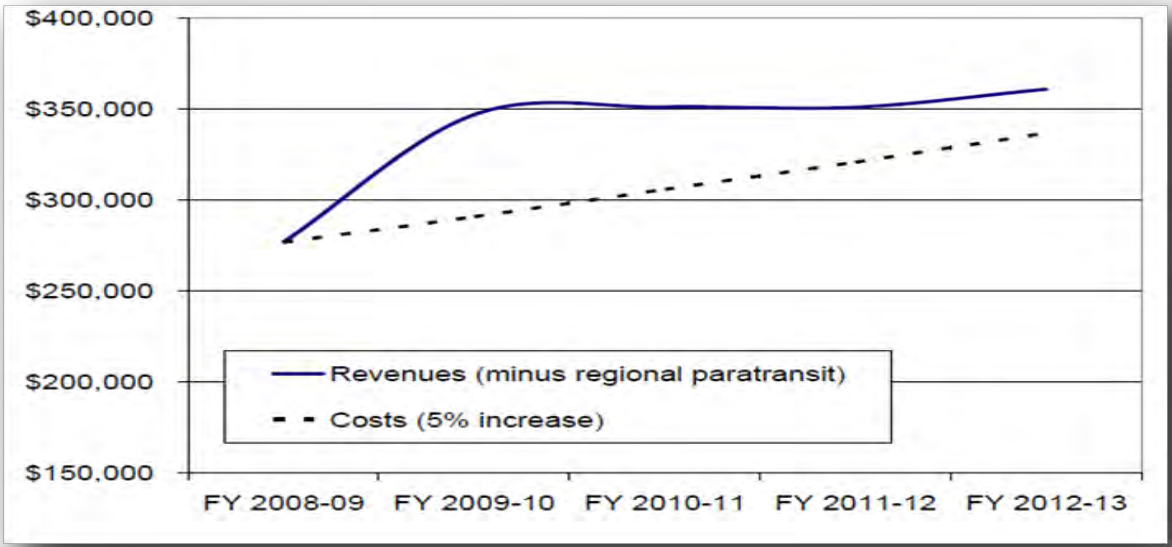
Dixon Readi-Ride 5-year Operating Financial Forecast



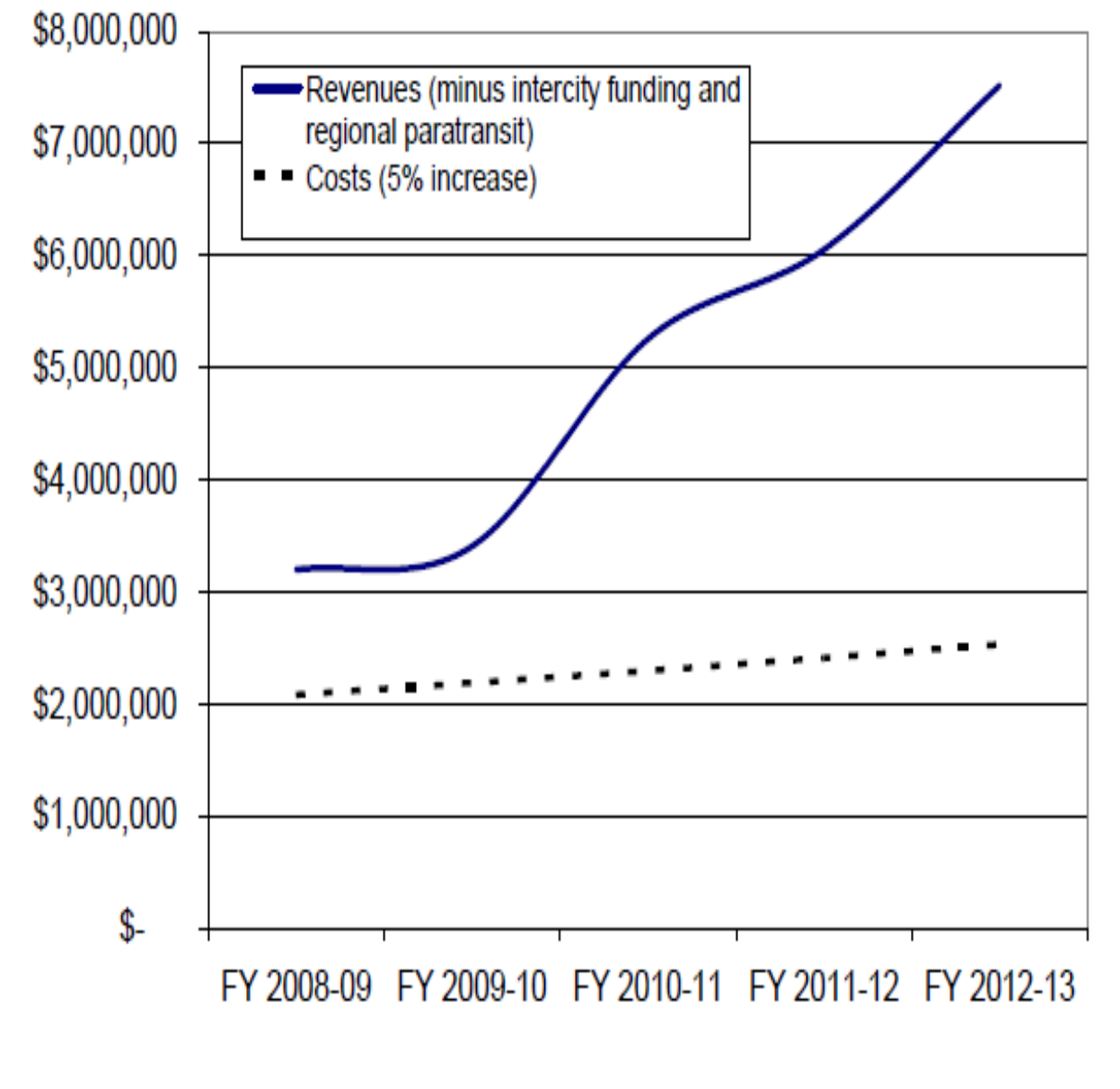
Fairfield and Suisun Transit 5-Year Operating Revenue and Cost Forecast



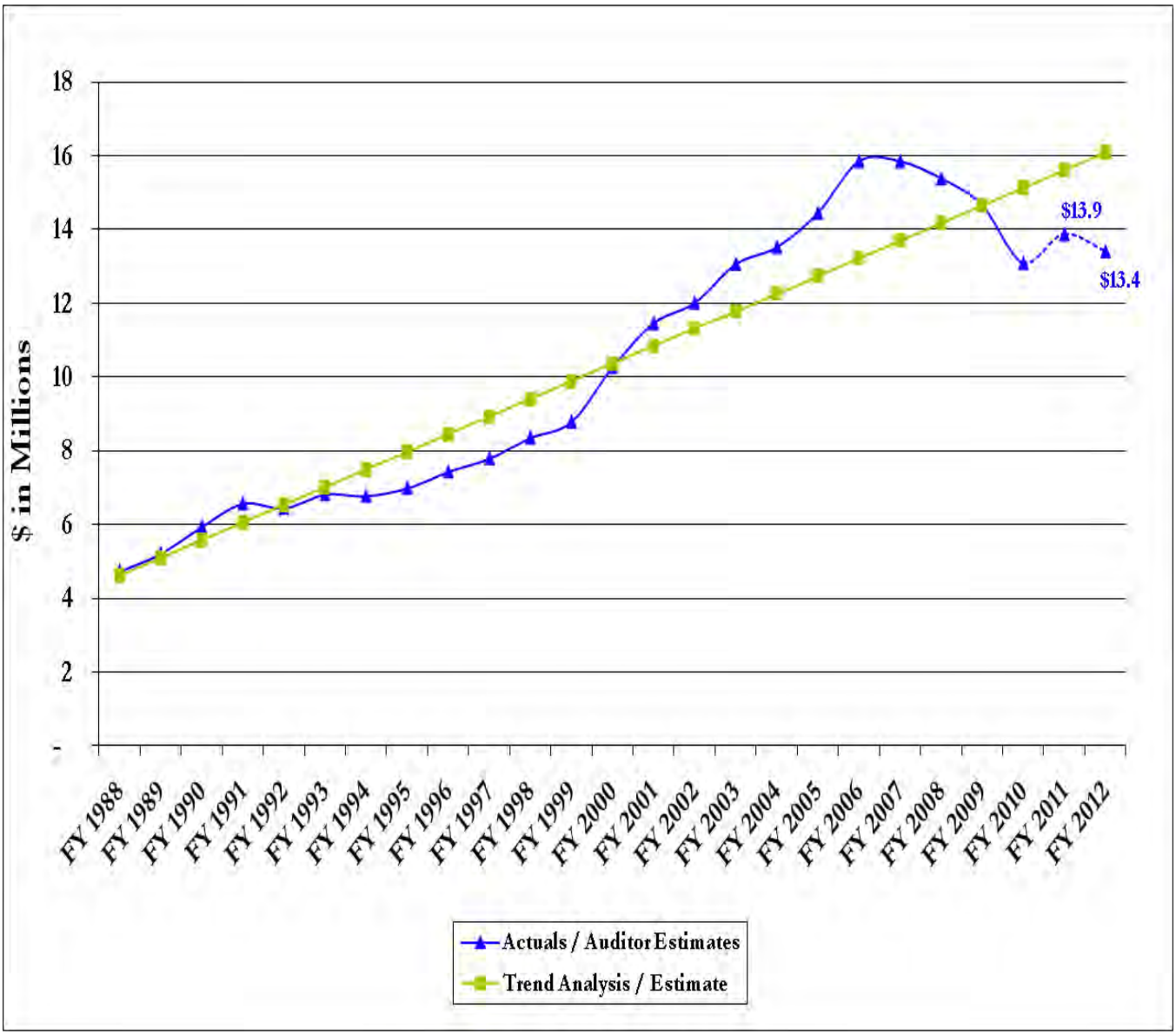
Rio Vista Delta Breeze 5-Year Operating Revenue and Cost Forecast



Vacaville City Coach 5-year Operating Revenue and Cost Forecast



Historical Trend of Solano's TDA Revenue Generation



DATE: June 10, 2011
TO: STA Board Workshop
FROM: Robert Macaulay, Director of Planning
RE: Implementation of Sustainable Communities Strategy – Development of Alternative Fuels Strategy and Infrastructure for Transit

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Background:
In response to state legislation related to climate change (Attachment A) and local concerns expressed about the potential of sea level rise, as well as more traditional air quality concerns related to transportation, STA has initiated programs designed to help reduce emission of Greenhouse Gasses (GHGs) such as carbon dioxide. Many of the steps that reduce transportation-related GHG emissions also help reduce the emission of other air pollutants, including fine particulates, nitrous oxide compounds, and ozone.

The four main activities that can be taken locally to address climate change and promote GHG emission reductions are the completion of a GHG emission inventory, the development of a local Climate Action Plan (CAP), the participation in the development and implementation of the Bay Area SCS, and conversion of vehicle fleets to alternative fuels with lower GHG and other air pollutant emissions.

Discussion:
Local GHG Emission Inventories and CAPs.

Benicia completed its GHG emission inventory in 2008, and adopted a CAP 2009.
Solano County completed a GHG inventory in 2009, and has adopted a CAP.
The City of Vallejo is developing a GHG emission inventory and CAP on its own, but is coordinating its work with the other cities and the County to make sure that the emission measures and action plan steps are compatible.
The cities of Dixon, Fairfield, Rio Vista, Suisun City and Vacaville, working with the STA, have just completed a GHG emission inventory. Steps are underway to seek a California Strategic Growth Council grant to fund the development of a single CAP that each of the cities and the STA can adopt.

Regional Sustainable Community Strategy (SCS) Development
One of the prime tools developed by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) for the development of the Bay Area SCS is the Priority Development Area (PDA). PDAs are locally-identified locations with the potential for higher density mixed use development, served by frequent public transit. ABAG has estimated that as much as 70% of the Bay Area's future housing growth can be accommodated in PDAs. MTC and ABAG are proposing to focus regional transportation investments in and around the PDAs.

Since most of the PDAs are located in the core Bay Area, Solano County could see a reduction in transportation funds. In order to make sure Solano county transportation projects get a fair share of funding, STA has pursued a two-part SCS strategy:

> Seek a *suburban PDA investment strategy* to compliment the urban focus proposed by MTC and ABAG. PDAs in suburban counties such as Solano, Napa, Marin and Sonoma counties will be different from those in dense urban areas such as San Francisco, but they can still contribute to a reduction in GHG emissions. A suburban PDA strategy will make sure that both urban and suburban communities' transportation investment needs are addressed.
>
> Develop an *agricultural and open space incentive program*, consistent with SB 375. This will help make sure that transportation needs in non-developed areas are met, and will support the continued economic viability of agricultural areas such as the Suisun Valley.

Assistance to Local Government

One of the biggest challenges faced by local governments is the lack of resources to implement the policies in local CAPs. STA is actively looking for opportunities to help local governments implement the transportation-related measures in their CAPS. STA helps identify fund sources for local programs, including the Bay Area Air Quality Management District TFCA funds and the Yolo Solano Air Quality Management District's Clean Air funds. In addition, STA provided the primary funding and staff coordination for the development of the GHG inventory discussed above.

Alternative Fuels Strategy

STA staff is looking at options for developing a Solano County Alternative Fuels and Infrastructure Plan. Since development of a complete Alternative Fuels Plan will likely take until 2012 to complete, an initial Alternative Fuels Strategy, setting broad policy directions, is being developed at this time. STA will convene an ad hoc committee of transit staff, fleet managers, and public works staff to discuss alternative fuel issues for public fleets. The overall approach is the help public fleets convert to alternative fuels as a way to both identify effective technologies and to help supply the supporting infrastructure, such as fueling stations, that are so critical to broader private acceptance of alternative fuel vehicles. Since approximately 60 intercity transit buses will need to be replaced in the next 5 to 10 years, there will be an opportunity to make a wholesale change to alternative fuels for this vehicle fleet.

Both the Bay Area Air Quality Management District (BAAQMD) and Yolo Solano Air Quality Management District (YSAQMD) have shown an interest in helping fund alternative fuel vehicles and infrastructure. There may also be public-private partnership opportunities for development of fueling infrastructure along the I-80 corridor.

Finally, in February of 2010, STA adopted a Climate Change Strategy covering both on-going and planned activities to reduce GHG emissions. The Strategy was updated in 2011, and the updated Strategy is shown in Attachment B. The strategy include steps that STA and local agencies were already taking while a more comprehensive approach was articulated.

Workshop Discussion:

1. How can STA best support the cities and county as they develop Climate Action Plans?
2. Are there additional ideas that should be incorporated into the development of a suburban PDA strategy and financial incentives for preservation of farmland and resource areas?
3. Should STA continue to pursue a public-fleet-first alternative fuels strategy?

Attachments:

A. Climate Change Legislative Background
B. STA's 2011 Adopted Climate Change Strategy

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Climate Change Legislative Background

California's climate change legislation is based on the premise that 1) the atmosphere and seas are warming, 2) that the warming is primarily or substantially caused by human activities that release carbon dioxide and other Greenhouse Gases (GHG) into the air that trap heat generated by sunlight, 3) that this warming will have negative impacts on California, the nation and the world, and 4) by reducing GHG emissions in California, we can stop or reverse the heating process and reduce or avoid the negative impacts.

The foundation documents for California's efforts to reduce GHG emissions are:

- Governor's Executive Order S-3-05 set initial, non-binding targets for overall GHG reductions.
- AB 32, the California Global Warming Solutions Act of 2006 which aims to substantially reduce the emission of Greenhouse Gases (GHG), primarily carbon dioxide, in all aspects of California life.
- SB 375, approved in 2008, which implements a portion of AB 32 by integrating regional decisions on land use planning and transportation investment by way of the development of regional Sustainable Communities Strategies (SCS).

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ATTACHMENT B

STA's 2011 Adopted Climate Change Strategy

Current Activities:

1. Solano Napa Commuter Information (SNCI) Programs. STA, in partnership with the Napa County Transportation and Planning Agency (NCTPA), provides rideshare and vanpool support services and markets the Solano Express Intercity Transit bus service through the Solano-Napa Commuter Information Program. SNCI has developed a partnership with nearly 500 employers in the two counties, and works with them on rideshare coordination and marketing. Twenty-six new vanpools traveling to, through, or from Solano, Napa, Yolo or Sacramento counties were formed in 2008, with 8 vanpools coming to employers in Solano County. SNCI administers two vanpool incentives including a vanpool seat subsidy for new vans and back-up driver incentives. STA is the local sponsor for Bike to Work Day. Solano County residents and employees are offered an incentive to cover 60% of the cost of a new bicycle, up to $100, for commuting to work. SNCI programs are funded in partnership with the BAAQMD and the YSAQMD.

   STA conducts a yearly employer-based Commute Challenge to encourage employer-based commute alternatives. For 2010, a total of 46 employers participated; 620 employees participated, and 350 met the challenge of using a commute alternative for at least 30 days over a three-month period.

   STATUS – Completed its fourth Commute Challenge with 45 employers and 620 employee participants. 121 vanpool supported on a daily basis.

2. Safe Routes to School Program. STA has developed a comprehensive Safe Routes to School Plan, involving every school district in Solano County. The SR2S Plan addresses the 4Es of Engineering, Encouragement, Education and Enforcement. STA is now working with each district, and 26 individual schools, to implement Phase 1 SR2S programs such as Bike Rodeos and Walk-and-Roll events, as well as projects such as radar feedback signs and street crossing safety improvements.

   STATUS – The expanded SR2S Program has been rolled out, but more schools remain to be covered. An updated SR2S Plan will be completed in 2012. STA has $1.5 million in grant funding for SR2S Program through 2012.

3. Alternative Fuel Fleets. There are several Alternative Fuel programs in Solano County. The City of Vacaville has developed a national reputation for alternative fuels because of its electric and Compressed Natural Gas (CNG) vehicle incentive programs; this program is also open to residents of Dixon, Rio Vista and eastern Solano County. In addition, Vacaville has purchased and runs a fleet of CNG buses for local transit, and operates electric vehicles for many daily City tasks. STA has secured a Congressional earmark for purchase of additional clean fuel buses for Solano Express intercity transit routes.

STATUS – STA is developing a Countywide Alternative Fuels Strategy as a part of the Comprehensive Transportation Plan update. STA staff is meeting with local public works and transit fleet managers to discuss their needs and potential obstacles to converting to an all-alternative fuels fleet. The strategy will look at both vehicle and infrastructure needs, and the possibility of developing an alternative fuels infrastructure corridor along I-80. Funding partnerships with both the BAAQMD and YSAQMD, as well as public-private partnerships, will also be pursued. Development of the Alternative Fuels Strategy is being guided by the Alternative Fuels Committee, made up of STA Board Members and Alternates.

4. STA Solano County T-PLUS Program. In partnership with MTC, STA's T-PLUS program provides technical and financial assistance to STA member agencies to plan and implement transportation and land use strategies that promote smart growth concepts. To date, the STA has provided $125,000 in planning grants and approximately $4.4 million in capital grants under the STA's Transportation for Livable Communities (TLC) Program. Projects include development of a TLC Toolkit and TLC workshops with each city, development of an expanded traffic model to include transit and alternative modes, partners in planning, Development of the award-winning Jepson Parkway TLC Corridor Plan and the North Connector TLC Corridor Concept Plan, and active involvement in creation of the Planning for the Northern California Megaregion - Coordinating Transportation and Land Use in the I-80/Capitol Corridor Plan (also known as the I-80 Smart Growth Corridor plan).

   STATUS – STA has awarded an additional $150,000 in TPLUS Planning Grants to the City of Fairfield for the Fairfield Transportation Center TLC project, has begun to update the Jepson Parkway TLC Plan, and is updating the Solano TLC Plan as part of the Comprehensive Transportation Plan update. STA is also working with City staff to help fund projects in the 9 PDAs, and to support the identification of new PDAs.

5. Benicia Climate Action Plan. The City of Benicia has conducted a Greenhouse Gas Emission Inventory, and adopted a comprehensive Climate Action Plan. While this is not an STA project, it is the first Climate Action Plan in the county, and does address several STA issues such as ridesharing. The STA will seek to assist Benicia in the implementation of their Climate Action Plan.

   STATUS – Benicia is beginning to implement its Climate Action Plan.

Planned Activities:

1. Solano Air Emission Inventory and Action Plan. Building on the success of the Benicia Climate Action Plan, STA and the County of Solano, in coordination with Solano City-County Coordinating Council, funded an inventory of air emissions (primarily GHG) for the cities of Dixon, Fairfield, Rio Vista, Suisun City and Vacaville. Solano County and the City of Vallejo have completed their own inventories, and Solano County has adopted its own Climate Action Plan.

STATUS – The GHG inventories for the cities of Dixon, Fairfield, Rio Vista, Suisun City and Vacaville have been completed, and provided to those cities for local adoption. STA is coordinating the submittal of a grant application to the state Strategic Growth Council for funs to develop a multi-agency Climate Action Plan based upon the GHG inventories.

2. Safe Routes to Transit Plan. STA will develop a countywide Safe Routes to Transit (SR2T) Plan, focused on designated Transit Facilities of Regional Significance. The SR2T Plan will include an inventory of traffic accidents, crimes and other safety and access issues around the selected centers and development of an action plan to reduce hazards and increase the attractiveness of transit as a commute choice. This ties in with the Solano Rail Crossing Inventory and Improvement Plan, which was adopted in late 2010.

   STATUS – STA has hired Fehr & Peers as a consultant to assist with development of the Safe Routes to Transit Plan, with the SR2T Plan to be completed in 2011 as a part of the Comprehensive Transportation Plan update.

3. Safe Routes to School Phase 2. STA has worked with the school districts o expand the number of schools that have complete walking audits and local maps. STA used SR2S funds for three high school interns in 2010 to develop computerized SR2S maps and data for all of Solano County. STA will work with the school districts and cities to implement additional safety programs and construct additional improvements, and will continue to contract for program coordinator position to assist school districts in project delivery. STA will work with MTC and other local agencies to expand SR2S programs and share effective techniques.

   STATUS – STA will hire an additional intern for SR2S mapping, data entry and marketing in 2011, and will seek more stable, long-term funding for SR2S program activities and projects. The SR2S Plan is scheduled to be updated in 2012.

4. Solano Bicycle and Pedestrian Master Plans. STA has completed the update of the Countywide Bicycle Plan and Countywide Pedestrian Plan, with only minor graphics content remaining before adoption. These plans set out a long-term vision for bicycle and pedestrian investments, and identify top priority projects for funding as it becomes available.

   STATUS – The final Plans will be presented to the STA Board in the fall of 2011.

5. Solano County Priority Development Areas Implementation. STA is actively working with the 5 Solano cities that have designated PDAs (1 in Benicia, 1 in Vallejo, 1 in Suisun City, 4 in Fairfield and 2 in Vacaville) to develop appropriate transportation and land use projects in these locations. STA is also working with the cities of Benicia and Vallejo to develop 2 new PDAs. The City of Rio Vista has expressed interest in obtaining a PDA designation, and is working with Association of Bay Area Governments staff on determining if the city can meet the land use and transit requirements for a PDA.

STAUS - STA programmed all of its First Cycle TLC funds to the Vallejo PDA based on the project's readiness. STA has awarded a $150,000 T-PLUS Planning Grant to the City of Fairfield for access improvements to the Fairfield Transportation Center.

6. AB 811 Implementation. AB 811 program allows property owners to opt in to a voluntary property tax assessment program that will use the proceeds to fund energy improvements, such as the installation of solar panels, to the individuals property. The City of Benicia is pursuing implementation of and AB 811 program, with initial funds possibly coming from air quality fines levied by the Bay Area Air Quality Management District. Solano County may also pursue an AB 811 program.

   STATUS – Solano County decided to not implement an AB 811 program. There is no further activity on this project.

DATE: June 15, 2011
TO: STA Board Workshop
FROM: Daryl Halls, Executive Director
Elizabeth Richards, Director of Transit and Rideshare Services
Sam Shelton, Project Manager
RE: Funding of Local Priorities such as Safe Routes to School, Senior and People with Disabilities Mobility, and Local Streets and Roads

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Background:

STA successfully builds top priority projects using funds from outside agencies.
As the Congestion Management Agency (CMA) for Solano County, the STA helps identify countywide priority mobility projects and approves distributions of federal, state, and regional funding. For example, I-80 highway projects such as the recently completed carpool lane in Fairfield, highway pavement rehabilitation between Vallejo and Vacaville, and the North Connector project in Fairfield were funded through combinations of bridge tolls, proposition 1B bonds, and federal stimulus funding as prioritized by the STA. When other federal, state, and regional agencies conduct "calls for projects" making their discretionary funding available, the STA has successfully set competitive priorities and developed shovel-ready projects that obtain these grants. Through this process, 59% of STA top priority highway and transit projects are funded through state funds, 23% through regional funds, 5% federal funds, and 7% local funds. This strategy currently helps advance about $813M of $3,147M in STA top priority highway and transit projects.

Countywide Local priorities remain unfunded or rely on unstable grant funds
When local priorities are not eligible for outside agency grants, or when grants are limited to start-up pilot projects, these local priorities are left unfunded or become unstable once grant funds are expended. Locally, the STA Board has focused on three local mobility priority areas. These are Safe Routes to School (SR2S), Senior and People with Disabilities Mobility, and Local Streets & Roads. Below are brief descriptions of each area's issues, current program status, and program stability.

1) Safe Routes to School (SR2S)
As more students stop walking and bicycling to school, traffic congestion and student obesity rates increase. Between 2007 and 2010, over 58% of Solano County students are being driven to school by their parents while 22% walk and less than 2% bicycle to school. The STA's SR2S program helps encourage more students to walk and bicycle to school by educating students about walking and bicycling safety through school site events, encouraging students with school contests and prizes, enforcing the rules of the road by collaborating with police officers, and funding engineering improvements where routes to school could be safer. During the 2010-11 school year for program staff held 81

events for over 18,000 students at 26 schools. Schools that coordinated and marketed SR2S events closely with program staff experienced nearly 100% student walking and bicycling during week-long contest periods. The STA's SR2S Program is fully funded until the end of FY 2012-13, where the program could be reduced to one-quarter of its scope, covering less than 25% of schools countywide with fewer services.

2) Seniors and People with Disabilities Mobility

Solano's senior population is projected to increase dramatically in the near future, with the number of residents over 65 nearly doubling by 2035. Current funding for mobility services for seniors and persons with disabilities primarily comes from Transportation Development Act (TDA) funding. TDA, which is generated from a portion of countywide sales tax, has declined significantly in the past few years due to the State's struggling economy. It has declined to a level of about five years ago. TDA is also the primary funding source for fixed route service operations and capital match. Solano County transit operators provide an array of services for seniors and people with disabilities including discounted fares on fixed-route service, local buses with low-floors or kneeling buses, Americans for Disabilities (ADA) paratransit services, and local subsidized taxi programs. In 2010, the initial phase of a subsidized ADA intercity taxi service was begun by the transit operators. More in-depth information of public, private and non-profit transportation services for seniors and people with disabilities is included in the draft update of the Solano Transportation Study for Seniors and People with Disabilities. Conducted over the past year, the Study involved extensive public outreach throughout the county. Transportation needs of seniors and people with disabilities were identified and strategies to address them have been prepared. The Study concludes with an Implementation Plan for these short, medium and long-term strategies. Funding is currently not available to implement most of the strategies.

3) Local Streets and Roads

Between 2006 and 2010, about 32% of roadway pavement countywide (about 1,000 lane miles) is considered to be in "at-risk, poor, or failed" condition. These are roadways that experience extensive cracking and potholes that allow water to deteriorate the roadway at faster rates and slow the speed of drivers navigating these hazards. Pavement in this condition can no longer be repaired by relatively cheap means. Deferred street maintenance costs for these roadways can balloon from $35,000 per mile to over $1.8M per mile if neglected for as little as five to seven years.

Percent of Lane Miles Considered "At-Risk, Poor, or Failed" by Jurisdiction
47%, Benicia (88 lane miles, 24% worse since 2006)
19%, Dixon (24 lane miles, 2% worse since 2006)
17%, Fairfield (121 lane miles, 3% worse since 2006)
68%, Rio Vista (31 lane miles, no data)
31%, Suisun City (46 lane miles, 24% better since 2006)
13%, Vacaville (71 lane miles, 5% worse since 2006)
55%, Vallejo (374 lane miles, steady since 2006)
36%, County of Solano (332 lane miles, 5% better since 2006)
32%, Countywide Weighted Average (1,090 lane miles, steady since 2006)
34% of the Bay Area's roads are in similar condition.

As cities keep the total number of deteriorated lane miles steady, the number of roadway miles in Solano County in "fair" condition doubled from 209 to 452. "Worst first" street maintenance strategies focus on roadways in the poorest conditions while allowing good streets to degrade to poorer conditions. These "fair" roads can quickly become the baby-boomer generation of expensive at-risk pavement, potentially increasing the number of Solano's deteriorated lane miles by 40% in less than five years. However, the number of roadway miles in Solano County in "fair" condition doubled from 209 to 452. These roads can quickly become the baby-boomer generation of expensive at-risk pavement, potentially increasing the number of Solano's deteriorated lane miles by 40% in less than five years.

On average, California cities pay about 71% of street rehabilitation project costs with local funding while counties depend on state funds for 56% of street rehabilitation project costs. Federal funds contribute between 6% to 10% of street rehabilitation funding.

A Spring 2010 poll of 804 voters conducted by EMC Research showed that each of these three areas polled as high priorities in all Solano County cities. 75% of those polled believed that there was some need or great need for additional funding for these three areas.

Spring 2010 Poll Results Summary
Percent of polled voters that considered the following areas as a high or very high:

66%, Safe Routes to School for Children
62%, Repairing and Maintaining Streets and Roads
59%, Fixing Potholes
57%, Disabled Persons Transportation Programs
54%, Senior Transportation Programs
53%, Make it easier to bike, walk, and take public transit
53%, Funding for Crossing Guards

Discussion:
Sam Shelton will present more detailed information regarding each local agency's Safe Routes to School Program status (Attachment A) and each local agency's street rehabilitation investments (Attachment B). After reviewing the Metropolitan Transportation Commission's (MTC) recent publication "The Pothole Report: Can the Bay Area Have Better Roads?", STA staff recommends additional research and annual reports that highlight Solano County's deteriorating roadway conditions. Specifically, geographic information system (GIS) data can help map and analyze specific streets with poor conditions to assist in project planning and funding requests.

Elizabeth Richards will discuss some preliminary findings of the draft "Solano Transportation Study for Seniors & People with Disabilities" (Attachment C).

Workshop Discussion:
1. Are these three areas still the countywide focus for local priorities?
2. Are there other local priorities that should be considered by STA for further analysis?
3. What are the options for addressing these local priorities?

Attachments (provided under separate cover):
A. Safe Routes to School Countywide Summary and City Status Fact Sheets
B. Solano County Local Streets and Roads Local Agency Facts Sheets
C. Draft Executive Summary of the Solano Transportation Study for Seniors & People with Disabilities, June 2011

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