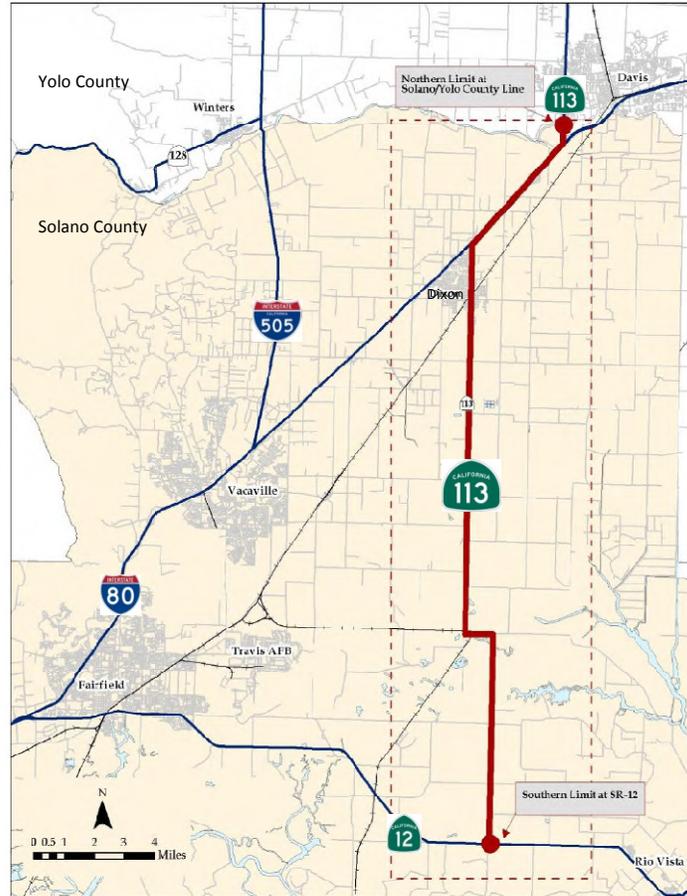




STATE ROUTE 113 TRANSPORTATION CONCEPT REPORT



This Transportation Concept Report (TCR) defines the route concept of a State-owned and operated transportation facility with a 25-year planning horizon. Prepared by Caltrans, this long-range planning document informs the regional transportation planning process and provides information on a route’s characteristics and its interregional role in the State Highway System. Any projects identified in the TCR require environmental and engineering studies before final approval, and are subject to change.

Approvals:

Lee Taubeneck 3/30/12

LEE TAUBENECK
Deputy District Director
Planning and Local Assistance

Date

Bijan Sartipi 4/2/12

BIJAN SARTIPI
District Director

Date

This TCR will be posted on the Caltrans District 4 System Planning website at:
<http://www.dot.ca.gov/dist4/systemplanning/>

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SR 113 looking north from junction with SR 12

About the Transportation Concept Report

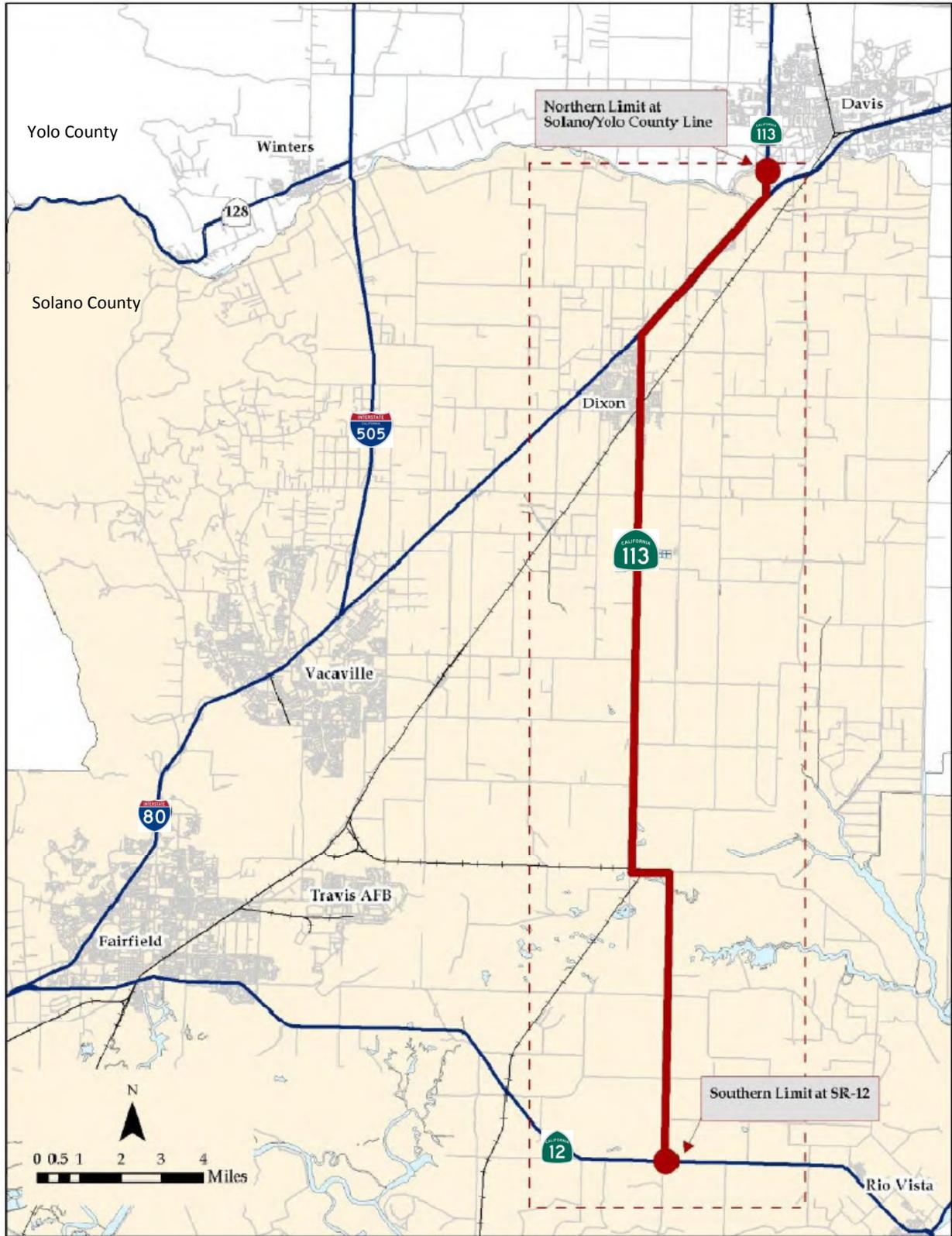
The following provides an overall route description and summary information on each route segment of State Route 113 (SR 113). The TCR contains a segmentation map, segment overviews, and data tables. A list of future projects for each segment is also included. These projects are separated into three categories:

1. **Programmed**—projects included in the State Transportation Improvement Program (STIP), State Highway Operations and Protection Plan (SHOPP), or California Federal Transportation Improvement Program;
2. **Planned**—projects included in an approved Regional Transportation Plan;
3. **Conceptual**—projects not yet included in a planning or programming document, but are recommended to maintain mobility and access along the segment, reduce congestion, and improve continuity.

State and Local Responsibility

Improvements to the State Highway System can be the responsibility of both Caltrans and local agencies: collaboratively planned, developed, and implemented through the regional transportation planning and project development process. Such improvements provide for the safe and effective management and operation of new and existing transportation facilities through operational management strategies and demand reduction. Developments affecting this route and the regional State Highway System may necessitate that local jurisdictions provide nexus-based, proportional fair-share funding for future highway improvements.

SR 113 Corridor Limits (District 4)



State Route 113 Summary

State Route 113 (SR 113) is functionally classified as a Minor Arterial for the majority of its length, with a portion from the city of Dixon to I-80 classified as Principal Arterial, and a freeway between I-80 north to the Yolo County Line. The route serves a variety of transportation needs, including local, interregional, commercial, agricultural, and tourist traffic. It is an important north/south link connecting State Route 12 and I-80, and is the Main Street through the Central Business District of the city of Dixon. SR 113 connects the communities of metropolitan Sacramento, the eastern Bay Area, and the Central Valley.

Agriculture is the predominant land use adjacent to the SR 113 corridor between I-80 and SR 12. Mixed land uses along the SR 113 corridor are located in the city of Dixon, with the existence of industrial, commercial, residential, and agricultural (outer parts of Dixon) uses. SR 113 is a key local thoroughfare within the city of Dixon, serving a combination of local and regional traffic. Outside the city limits, corridor traffic is primarily regional and interregional.

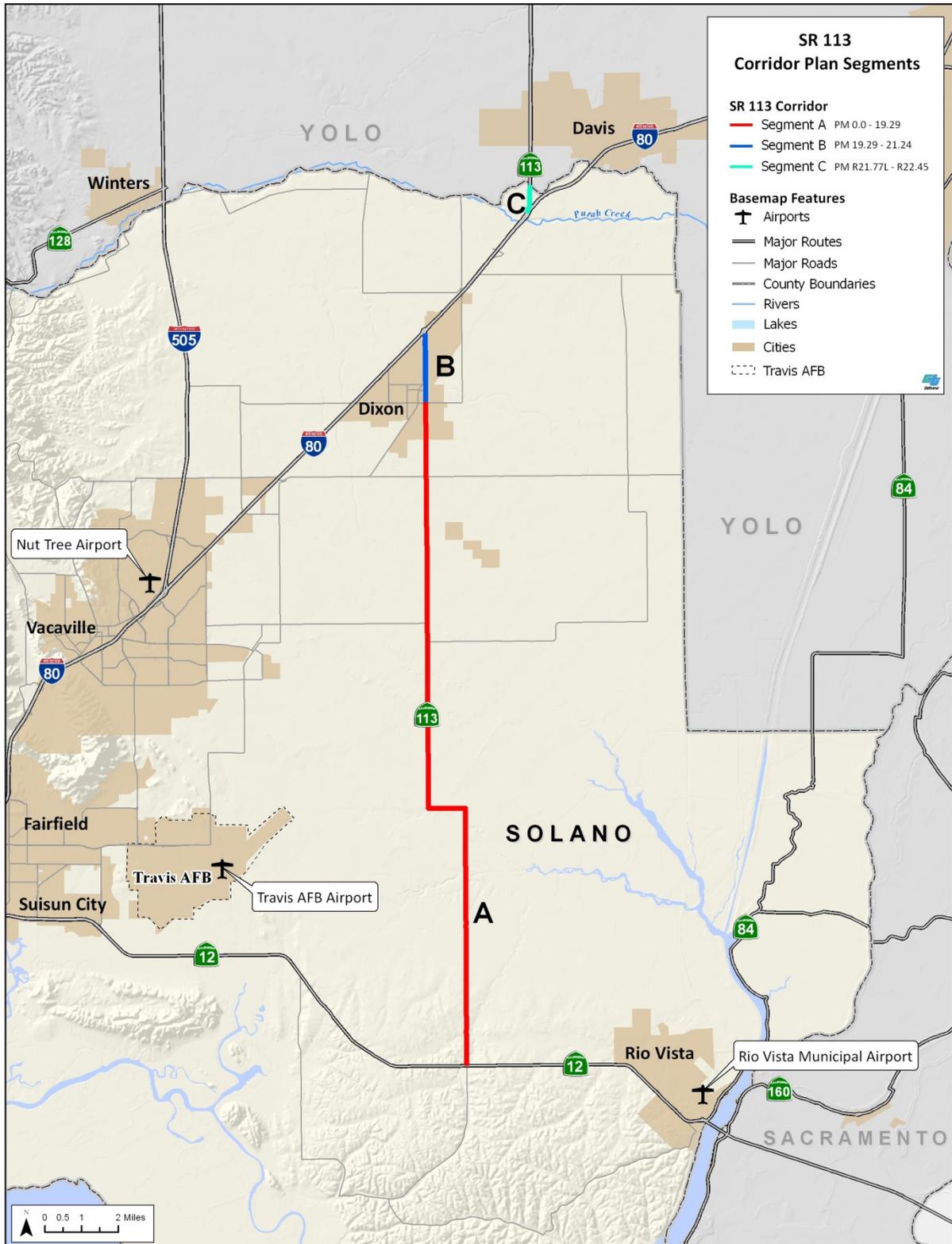
The previous Route Concept Report for SR 113 was completed in May 1985. It anticipated that traffic would increase along SR 113 in conjunction with anticipated developments in Solano and Yolo Counties. In addition, the anticipated land use changes and traffic growth in the Central Valley, Sacramento, and San Francisco Bay Area regions would also impact this corridor to some degree. Nonetheless, as indicated by current (2009) traffic data and traffic projections to the Year 2035, the existing SR 113 facility will continue to provide reasonable mobility and access for the next 25 years. The Concept for SR 113 is summarized in the table below.

SR 113 Concept

<u>SEGMENT</u>	<u>COUNTY</u>	<u>SEGMENT DESCRIPTION</u>	<u>EXISTING FACILITY</u>	<u>25-YR CONCEPT</u>
Segment A PM 0.00 – 19.29	SOL	SR 12 to Central Dixon	2-Conventional	2-Conventional
Segment B PM 19.29 – 21.24	SOL	Central Dixon to I-80	4-Conventional	4-Conventional
Segment C PM R21.77 – R22.45	SOL	I-80 to SOL/YOLO County Line	4-Freeway	4-Freeway

PM = Post Mile
= Number of Lanes

State Route 113 Segment Map



State Route 113 Segment A Summary

At the southern limit of the corridor, SR 113 is a two-lane facility with one lane in each direction. The intersection of SR 113/SR 12/Birds Landing Road is currently a two-way stop controlled with a flashing red beacon on SR 113 and a flashing yellow beacon on SR 12. (Segment Map, p. 6)

Six miles north of SR 12, SR 113 makes a 90-degree turn west at Hastings Road. One mile west of the first sharp turn, SR 113 turns back 90 degrees to the north at Cook Road. These two sharp 15 mph turns are marked with warning signs and flashing yellow beacons.

A “Complete Streets” inventory of Segment A shows limited or no shoulders for bicyclists and pedestrians (Solano Countywide Bicycle Plan). There are no transit operations along this rural Segment A.



Segment A— SR 113 between SR 12 and Hastings Rd.



Segment A— Right-angle turn, Southbound SR 113 and Hastings Rd.



Segment A— Approaching right-angle left turn, Southbound SR 113 and Cook Rd.

State Route 113 Segment B Summary

Segment B extends from the urbanized areas of Dixon in the south to the junction with I-80 in the north. Within the city limits, the roadway changes to an urban configuration with numerous driveways and cross streets. At the southern Dixon city limits, the roadway changes name to South First Street and gradually changes from two lanes to a four-lane divided road with bike lanes, curb, gutter, and sidewalk on both sides of the roadway. (Segment Map, p. 6)

A Solano County “recommended” bicycle route between Dixon and Davis to the northeast bypasses much of Segment B by traversing First Street, Vaughn Road, Runge Road, Tremont Road, and Old Davis Road into downtown Davis. Although not on SR 113, a park & ride lot south of I-80 in Dixon at Market Lane connects the city of Dixon with Davis and Sacramento via Fairfield-Suisun Transit (FaST) bus service. The city of Dixon’s “Readi Ride” system operates a general public Dial-a- Ride bus service. The Amtrak Capitol Corridor service between the Bay Area and Sacramento currently passes through Dixon without stopping, however the city of Dixon is working to provide train service with a stop adjacent to SR 113 at West B Street. The city of Dixon also has a Downtown Streetscape Plan to further enhance the pedestrian environment throughout the downtown core.



Segment B --Northbound SR 113 at A Street, Dixon

State Route 113 Segment C Summary

Segment C covers the small portion of SR 113 that is north of I-80 after a break in route. This freeway portion in District 4 is less than a mile long and ends at the Solano/Yolo County line (Segment Map, p. 6). State Route 113 continues for some 35 miles through Yolo and Sutter Counties, providing access to I-5, before terminating at SR 99 near Yuba City in Sutter County.

There are no bicycle or pedestrian facilities along Segment C. The Fairfield-Suisun Transit (FaST) bus service traverses this route without stops.

SR 113 Traffic Data

Between 2009 and 2035, traffic on various segments of SR 113 is projected to increase between 14%-34%. Over this same period, the volume-to-capacity ratio (V/C) for this route shows minimal increases. For 2009 data, median traffic counts are used as a base in the forecasting model. (Source: Caltrans Traffic Modeling & Forecasting, Office of Advance Planning, 2011)

SR 113 - Traffic Data				2009							
				Directional							
				NB	SB	NB	SB	NB		SB	
Segment Description	SEG	Beg-PM	End-PM	AM PK HR	AM PK HR	PM PK HR	PM PK HR	AADT	V/c*	AADT	V/C
SR 113 & SR 12 to E. A Street, Dixon	A	0.00	19.29	220	160	310	300	4,500	.17	3,800	.17
E. A Street, Dixon to Vaughn Rd.	B	19.29	21.24	440	390	470	650	6,800	.26	7,700	.36
SR 113 & E Jct I-80 to Yolo Co. Line	C	R21.77	R22.45	330	570	690	640	9,400	.38	10,100	.36

*V/C = Volume to Capacity, a measure of sufficient capacity of a travel lane. A V/C of "1" would be at capacity.

SR 113 - Traffic Modeling				2035							
				Directional							
				NB	SB	NB	SB	NB		SB	
Segment Description	SEG	Beg-PM	End-PM	AM PK HR	AM PK HR	PM PK HR	PM PK HR	AADT	V/C	AADT	V/C
SR 113 & SR 12 to E. A Street, Dixon	A	0.00	19.29	270	190	380	370	5,600	.21	4,700	.21
E. A Street, Dixon to Vaughn Rd.	B	19.29	21.24	500	450	540	750	7,800	.30	8,800	.42
SR 113 & E Jct I-80 to Yolo Co. Line	C	R21.77	R22.45	440	770	920	860	12,600	.51	13,600	.48

Truck Traffic

Truck traffic on SR 113, as a percentage of total vehicular traffic, ranges from 7.15% at the junction with SR 12 (PM 0.0) to almost 15% near the junction of I-80 north of Dixon (2009).

(Source: Caltrans Division of Transportation System Information, Traffic Data Branch, Dec 2010)

Truck Traffic - SR 113						2009		
							NB	SB
Segment Description	Route	SEG	County	Beg- PM	End-PM	Truck %	Truck Vol	Truck Vol
SR 113 & SR 12 to E. A Street, Dixon	113	A	SOL	0.00	19.29	7.15%	330	270
E. A Street, Dixon to Vaughn Rd	113	B	SOL	19.29	21.24	14.91%	1,010	1,140
SR 113 & E Jct I-80 to Yolo Co. Line	113	C	SOL	R21.77	R22.45	5.68%	530	570

Safety Data

Safety on SR 113 is measured using a Collision Rate Index.* The Collision Rate Index is the Actual Collision rate on that route minus the Statewide Average Collision rate on similar facilities divided by the Statewide Average Collision rate. Caltrans Traffic Accident Surveillance and Analysis System (TASAS) data provides collision data from the most recent 3-year period, April 2007 to March 2010.

For the SR 113 corridor as a whole, the Actual Collision rate of .24 compared to a statewide rate of .46 yields a Collision Rate Index of -.47:

$$0.24 - 0.46 / 0.46 = -.47$$

Therefore the SR 113 (all segments) collision rate of .24 is 47% *lower* than the statewide average of 0.46 for similar type facilities.

For Segment A only (the 20 mile rural segment from SR 12 to the city of Dixon) the Actual Collision rate of .93 compared to a statewide rate of .89 yields a Collision Rate Index of +.045:

$$0.93 - 0.89 / 0.89 = .045$$

For Segment A only, the collision rate of .93 is 4.5 % *higher* than the statewide average.

*Collision Rate Index: The percentage by which each segment's reported collisions rate (fatal, injury and property damage only) is above or below the statewide average reported collisions rate on comparable facilities. Source: 3-year Caltrans Traffic Accident Surveillance and Analysis System data. Collision rates are expressed as the number of injuries and fatalities per million miles travelled.

SR 113 Environmental Factors and Constraints

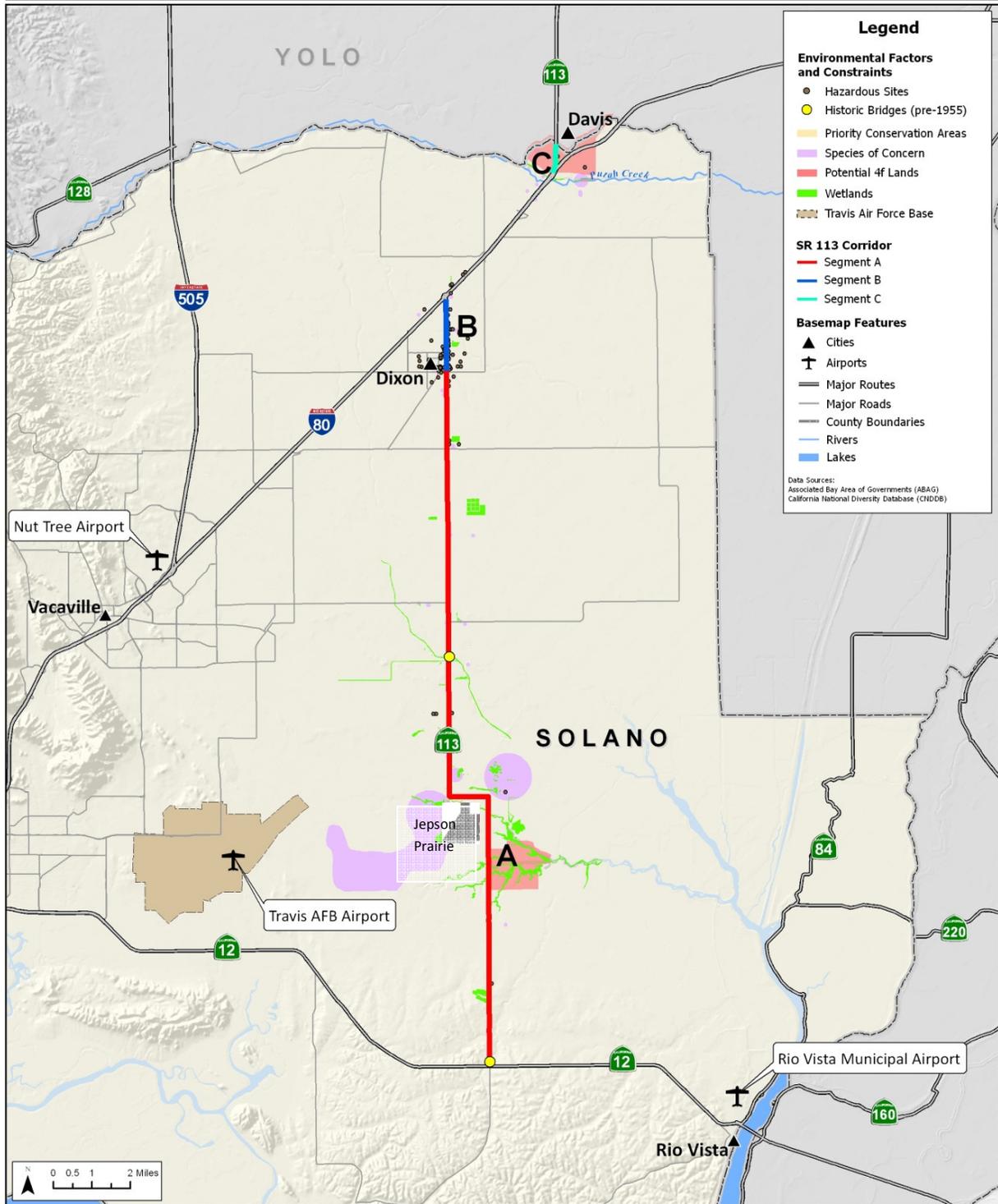
The following map depicts environmental factors and constraints in the vicinity of SR 113. The route has two historic bridges. Outside the developed area of Dixon (Segment B) and Davis (Segment C), much of the route passes through farmland, including some wetland areas. Near its right-angle turns, SR 113 forms the north and east border of the Solano Land Trust's 1556-acre Jepson Prairie, a vernal pool habitat and grassland preserve (see Environmental Factors and Constraints map, p 14). Hazardous material sites are clustered in the Dixon area.

The California Natural Diversity Data Base (CNDDDB) indicates the following sensitive species may be found within the route limits:

- California Tiger Salamander, *Ambystoma californiense*, federally Threatened
- Vernal Fairy Pool Shrimp, *Branchinecta lynchi*, federally Threatened
- Swainson's Hawk, *Buteo swainsoni*, State Threatened
- Burrowing Owl, *Athene cunicularia*, California Dept. of Fish & Game, Species of Concern
- Valley Elderberry Longhorn Beetle, *Desmocerus californicus dimorphus*, federally Threatened
- Delta Green Ground Beetle, *Elaphrus viridis*, federally Threatened
- Vernal Pool Tadpole Shrimp, *Lepidurus packardi*, federally Endangered
- Boggs Lake Hedge-Hyssop, *Gratiola heterosepala*, State Endangered



SR 113 Environmental Factors and Constraints



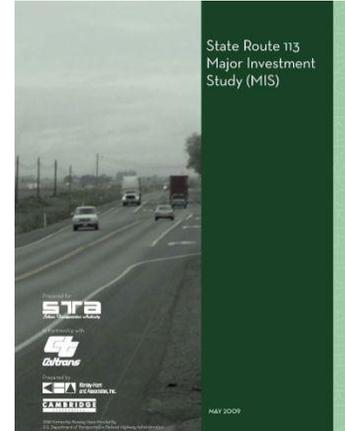
SR 113 Corridor Issues

- SR 113 Major Investment Study

On May 19, 2006, Caltrans approved the award of a \$250,000 grant to the Solano Transportation Authority (STA) to complete a Major Investment and Corridor Study (MIS) for SR 113.

The purposes of the study included:

1. Form a multi-jurisdictional partnership with Caltrans, MTC, the Sacramento Area Council of Governments (SACOG), STA and other agencies.
2. Identify and study SR 113 alignment alternatives.
3. Identify funding options to improve SR 113 (including the investigation of a toll lane option).
4. Implement an extensive public outreach to those potentially affected by operational and safety improvements to SR 113.
5. Deliver results based on an aggressive planning implementation schedule.
6. Create Planning deliverables beneficial to Caltrans and other members of the SR 113 Corridor Partnership.



The SR 113 Major Investment and Corridor Study recommends short, medium, and long-range safety improvements along the SR 113 corridor and describes four potential alternatives for realigning SR 113 to I-80 by circumventing the Dixon downtown area. As part of the Study, STA staff presented these alternatives at several public input meetings in August and September 2008, including Davis and Dixon City Councils, Solano County Board of Supervisors, and the Yolo County Transportation District.

The STA Board approved the final draft of the SR 113 Major Investment & Corridor Study on May 13, 2009. A copy of the MIS is available from the Solano Transportation Authority at the following website: <http://www.sta.ca.gov/Content/10055/CountywidePlansampStudies.html#sr113mis>

Travel Conditions

The 90-degree turns at Hastings Road and Cook Road, and adjacent railroad crossings break traffic continuity and flow.

Shoulders along the mainline SR 113 corridor range from very narrow to no shoulders at all in some places.

SR 113 crosses two-way stop controlled intersections at McCormack Road, Flannery Road, and Creed/Robinson Road before reaching the sharp turns at Hastings Road and Cook Lane. These intersections are predominantly used for local access and agricultural farm equipment as there are few or no driveways between the intersections.

Improvement Projects

Programmed - projects included in the State Transportation Improvement Program, State Highway Operations and Protection Plan, or California Federal Transportation Improvement Program

- SHOPP (State Highway Operations and Protection Program)
Project 113A – Drainage System Rehabilitation - Summer 2013 to Spring 2014 - \$969K
PM 0.0 to PM 13.0.

Planned - projects included in an approved Regional Transportation Plan

- No projects are in the 25-year Regional Transportation Plan (RTP) “Transportation 2035.”
- The new RTP “Plan Bay Area” currently being developed shows a New Commitment (Project #230561 - \$155 million) to realign SR 113 out of Dixon north of Midway Road at Robben Road.
- 2014/2015 10-YR SHOPP – Install median barrier north of I-80/SR 113 separation \$3.85 M
- 2014/2015 10-YR SHOPP – Intersection improvements various locations Solano Co., \$4.32 M
- 2017/2018 10-YR SHOPP – Shoulder widening various locations Solano Co., \$2.03 M
- 2018/2019 10-YR SHOPP – Curve corrections various locations Solano Co., \$2.84 M

Conceptual - projects not yet included in a planning or programming document, but are recommended to maintain mobility and access along the segment.

- Transportation System Management (TSM), Transportation Demand Management (TDM) and Intelligent Transportation Systems (ITS) enhancements.
- Install Traffic Signal at SR 113/SR 12 intersection to maintain efficient movement, including truck turning movements. This intersection could be widened to accommodate right and left turning lanes.
- Upgrade S-curves along SR 113 to improve travel ease and safety.
- Widen lanes along SR 113 to the standard 12 foot lane width to enhance safety.
- Widen shoulders, construct median, and install signal at Midway along SR 113 to enhance safety.
- Grade separation of SR 113 and Union Pacific Railroad.
- Construct passing lanes where appropriate
- Other realignment alternatives to be evaluated, including realignment of SR 113 out of Dixon.

SR 113 Concept Rationale

The SR 113 corridor in Solano County passes through predominately rural and agricultural areas. Capacity along the corridor is generally sufficient to handle existing traffic volumes, and projected growth does not warrant capacity expansion. Notwithstanding safety improvements that could be implemented in the next several years, it is expected that SR 113 will remain a 2-lane Conventional facility from SR 12 to Dixon, 4-lane Conventional from Dixon to I-80, and 4-lane Freeway from I-80 to the Yolo County Line. The facility concept for SR 113 is noted in the table below.

<u>SEGMENT</u>	<u>COUNTY</u>	<u>SEGMENT DESCRIPTION</u>	<u>EXISTING FACILITY</u>	<u>25-YR CONCEPT</u>
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