Chapter 4

Transportation and Circulation

Introduction

The existing physical and operational conditions for the Yolo County transportation system are described below. This description is organized by transportation system component, beginning with the regional roadway system followed by public transportation, non-motorized transportation, aviation, waterways, and goods movement.

Sources of Information

This report is based on review of local and regional transportation plans and on physical review of the existing transportation system. Existing roadway traffic was determined using traffic counts already performed by Yolo County (County) and the California Department of Transportation (Caltrans), and additional counts performed in fall 2004 for this report.

Key Terms

Level of Service (LOS). LOS is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving as well as speed, travel time, traffic interruptions, and freedom to maneuver. The LOS grades are generally defined as follows:

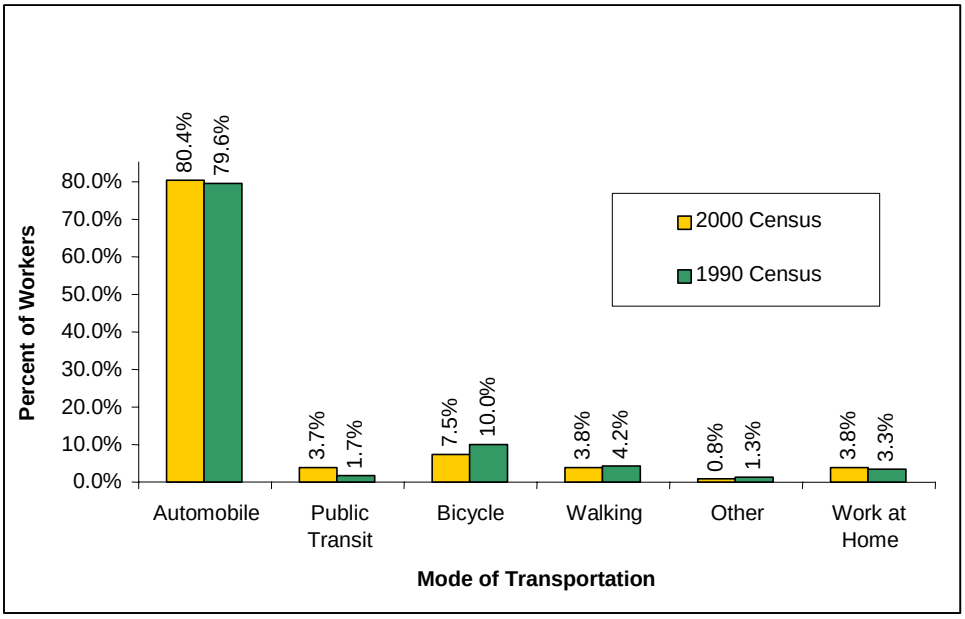
- **LOS A** represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.
- **LOS B** has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
- **LOS C** has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.

- **LOS D** represents high-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.
- **LOS E** represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
- **LOS F** is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

Regional Roadway System

Yolo County's preservation of agricultural land and concentration of growth within incorporated cities have created a unique transportation system compared to the rest of the Sacramento region. Although most travel in the county is by automobile, the relatively short distance between cities and focus on alternatives modes of transportation have promoted the use of facilities and services related to transit, bicycles, and pedestrians. According to the 2000 U.S. Census, about 80% of all working county residents traveled from home to work by automobile, of which 13% traveled in a carpool of 2 or more persons. Bicycling to work accounted for the next highest share (about 8%), while transit and walking each accounted for about 4%. Chart Trans-1 compares 2000 Census data and 1990 Census data.

Chart Trans-1. Methods of Transportation to Work in Yolo County



The roadway network within the unincorporated parts of the county is rural in character, mainly serving small communities and agriculture uses. Urban development is mainly concentrated in the eastern portion of the county within the incorporated cities of Davis, West Sacramento, and Woodland. Interstate (I-) 80, I-5, and I-505 are the primary transportation corridors extending through the county and serve all of the County's major population centers, including Davis, West Sacramento, Winters, and Woodland. Other state highways, county arterials, and a network of local public and private roads constitute the remainder of the roadway system.

The major routes in the regional roadway system are shown according to operational classification in Figure Trans-1, and the number of lanes for each of these roadways is shown in Figure Trans-2. The classifications in Figure Trans-1 indicate the operational hierarchy of the roadway system. The state highway network serves primarily intercity and intercounty regional travel while the County's roadways serve local trips. Notable exceptions are County Roads 31 and 102, and Old River Road that have higher traffic volumes than some of the state highways and also serve intercity and intercounty trips.

State and Interstate Highways

State highways in Yolo County are listed below and include freeways, expressways, and conventional highways, which are operated and maintained by Caltrans:

- State Route (SR) 16
- SR 113
- SR 128
- SR 45
- SR 84

Interstate and U.S. numbered routes are also part of the state highway system, which is maintained by Caltrans. Three Interstate routes (I-5, I-80, and I-505) run through the unincorporated portion of Yolo County. U.S. Highway (U.S.) 50, which originates in West Sacramento and extends more than 3,000 miles to Ocean City, Maryland, provides a connection from I-80 to downtown Sacramento.

- **I-80** is a principal east/west route in Yolo County, providing connections to the San Francisco Bay Area and Sacramento County. I-80 is a major commute route between residential areas in the greater Sacramento area and the San Francisco Bay Area employment centers and is a major truck route between the San Francisco Bay Area, Sacramento, and the Tahoe Basin and points east. A direct influence on the high truck volumes is the industrial development that is occurring in the West Sacramento area, consisting of truck distribution centers, truck terminals, and services to the Port of

Sacramento. From the Solano County line to the Sacramento County line, I-80 is a six-lane freeway that connects the City of Davis and the City of West Sacramento.

- **I-5** is an important north/south route that in Yolo County primarily provides for the transportation of goods by trucks. Woodland is the primary trucking center for the agricultural and warehousing industry along I-5 and generates high truck traffic during the harvest seasons. From the Sacramento County line to the Colusa County line, I-5 is a four-lane freeway and provides connections to the communities of Dunnigan, Zamora, and Yolo.
- **I-505** is a south to north freeway serving as a major connection for goods movement and interregional travel between I-80 near the City of Vacaville and I-5 in the northern part of Yolo County. I-505 is a four-lane freeway from the Solano County line to I-5 and provides a connection to the City of Winters.
- **SR 16** serves east-west traffic through the western rural area of Yolo County, including the communities of Rumsey, Guinda, Brooks, Capay, Esparto, and Madison. SR 16 also provides connection to the Cache Creek Resort Casino located near the town of Brooks. North of Rumsey, SR 16 passes though the Cache Creek Regional Park area and is one of the routes used by trucks to access Colusa and Lake Counties. SR 16 extends east as a two-lane conventional highway from the Colusa County line to the Woodland city limits, then north to the connection at I-5.
- **SR 113** serves as an important link for agricultural and commercial traffic to I-5 and I-80. The segment between Davis and Woodland is a four-lane freeway that terminates at I-5. SR 113 continues from I-5 in Woodland as a two-lane conventional highway north to the Sutter County line near the town of Knights Landing.
- **SR 128** serves local traffic in the City of Winters and recreational traffic from the greater Sacramento area traveling to Lake Berryessa and Napa Valley. SR 128 extends as a two-lane conventional highway from the Solano County line to I-505 in Winters.

SR 45 and SR 84 serve mainly local and agricultural traffic within the county. SR 84 is a two-lane conventional highway that extends from the Solano County line to U.S. 50 in West Sacramento and a four-lane arterial between U.S. 50 and I-80. SR 45 is also a two-lane conventional highway that extends from the Colusa County line to Knights Landing.

Scenic Highways

California's Scenic Highway Program was created by the Legislature in 1963. The purpose of the program is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of the lands adjacent to highways.

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The list can be found in Section 263 of the Streets and Highways Code. In order for an eligible state scenic highway to become officially designated, the local jurisdiction must adopt a scenic corridor protection program and apply to the California Department of Transportation (Caltrans) for scenic highway approval, identifying and defining the scenic corridor of the highway. Once approved by Caltrans, the jurisdiction will receive notification that the highway has been designated a Scenic Highway. The jurisdiction must then adopt ordinances to preserve the scenic quality of the corridor or document regulations that already exist in various portions of local codes, creating the scenic corridor protection program (California Department of Transportation 1996). A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view.

In Yolo County, SR 16 between Capay and the Colusa County line to the north is designated as an "eligible state scenic highway." Currently, no roadways within the County are officially designated as scenic highways. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program that is approved by Caltrans.

The 1983 Yolo County General Plan designates routes not qualified for State designation as Local Scenic Highways. Officially designated scenic county roads are adopted by Caltrans through the same process required for official designation of state scenic highways. The following roadways are designated under the County's scenic highway program:

- **SR 16:** Colusa County Line to Town of Capay
- **SR 128:** City of Winters to Lake Berryessa (Napa County Line)
- **County Roads 116 and 16:** Town of Knights Landing to Eastern Terminus of County Road 16
- **County Roads 16 and 117, and South River Road:** County Road 107 to City of West Sacramento
- **South River Road:** Barge Canal (Jefferson Boulevard) to Sutter Slough (Sacramento County Line)

Regulations and programs for the County's scenic highway program are detailed in Policies SH 1 through SH 14 in the 1983 Yolo County General Plan.

County Roads

Major county roads are also part of the regional roadway system and typically provide the connections to the highway and freeway system. County Roads 98 and 102 are key county roadways carrying more than 500 p.m. peak hour trips.

These two roadways are heavily used by motorists traveling between Davis and Woodland. The county roads included in this study are listed in Appendices Trans-A and Trans-B along with existing a.m. and p.m. peak hour traffic count volumes.

The County maintains an extensive roadway system that provides a high level of access compared to the relatively low levels of traffic on most roadways. Currently, the County maintains approximately 800 miles of roadways in the unincorporated areas, of which Figure Trans-1 shows only the major routes in the County's regional roadway system. The County's budget for the 2004–2005 fiscal year dedicates approximately $4.51 million toward the maintenance of these roadways. Even with this level of investment, the County cannot meet all of its maintenance needs. Appendix Trans-C lists public roads not shown on Figure Trans-1 that have traffic volumes of less than 50 vehicles per day. These roadways primarily serve as driveways to a small number of properties and are not essential to the regional county transportation system.

Roadway Capacity and Level of Service

The LOS was calculated for each roadway segment in the regional roadway system to evaluate the quality of traffic conditions. Traffic counts used for this analysis represent year 2004 conditions. LOS was determined by comparing traffic volumes for selected roadway segments with peak-hour LOS capacity thresholds. These thresholds are shown in Table Trans-1 and were calculated based on the methodology contained in the Highway Capacity Manual (HCM) (Transportation Research Board 2000). The HCM methodology is the prevailing measurement standard used throughout the United States.

Most county roads operate at LOS A, B, or C, which represents stable operating conditions, during the p.m. peak hour. Roadway segments of County Roads 98 and 102 between Davis and Woodland operate at LOS C (LOS C is at a level which users can be substantially affected by other users on the roadway). On state facilities, I-80 between Davis and West Sacramento can represent LOS E during the peak hours (LOS E conditions force users to reduce speeds and breakdowns in traffic flow can occur due to minor disturbances).

Table Trans-1. Operational Class and Peak Hour Level-of-Service Thresholds

	Peak Hour Level-of-Service Capacity Threshold				
Operational Class	A	B	C	D	E
Minor Two-Lane Highway	90	200	680	1,410	1,740
Major Two-Lane Highway	120	290	790	1,600	2,050
Four-Lane, Multilane Highway	1,070	1,760	2,530	3,280	3,650
Two-Lane Arterial	–	–	970	1,760	1,870
Four-Lane Arterial, Undivided	–	–	1,750	2,740	2,890
Four-Lane Arterial, Divided	–	–	1,920	3,540	3,740
Six-Lane Arterial, Divided	–	–	2,710	5,320	5,600
Eight-Lane Arterial, Divided	–	–	3,720	7,110	7,470
Two Freeway Lanes[a]	1,110	2,010	2,880	3,570	4,010
Two Freeway Lane + Auxiliary Lane[a]	1,410	2,550	3,640	4,490	5,035
Three Freeway Lanes[a]	1,700	3,080	4,400	5,410	6,060
Three Freeway Lanes + Auxiliary Lane[a]	2,010	3,640	5,180	6,350	7,100
Four Freeway Lanes[a]	2,320	4,200	5,950	7,280	8,140

Note: – = LOS is not achievable because of type of facility.

[a] LOS capacity threshold is for one direction.

Source: Fehr & Peers 2004.

The a.m. (freeways only) and p.m. peak hour LOS results are shown graphically for the regional roadway system in Figures Trans-3 and Trans-4, respectively. LOS is calculated using 2004 traffic count data, including counts from the County and City Public Works Departments, and Caltrans (refer to Appendices Trans-A and Trans-B for a complete list of counts).

The transportation analysis is based on the p.m. peak hour because it represents the highest hourly volume during a typical weekday. This volume is used to design future roadways because of its regular weekday occurrence. Using a higher or lower volume hour could lead to inadequate designs or designs that are underused. The one exception to exclusive use of the p.m. peak hour is for the freeway roadway system. These roadways serve a high volume of commuter traffic during both the a.m. and p.m. peak hours. In some cases, the a.m. peak-hour volumes, which also occur on a regular basis, are higher than p.m. peak-hour volumes. Furthermore, the freeway system is divided in such a way that improvements, if needed, can be made to only one direction. Therefore, analyzing the a.m. peak hour was considered necessary to identify potential impacts that may occur only during this time period. The a.m. and p.m. peak-hours were determined countywide based on the highest level of traffic for one hour during the peak morning and afternoon periods.

Policy CIR 7 of the 1983 Yolo County General Plan sets forth the LOS thresholds for the county. This policy reads as follows:

> Yolo County shall require a service level of "C" for all County roads. Service level "C" is "a stable flow of traffic and a relatively satisfactory operating speed."

This policy established that roadways would operate no worse than LOS C within the unincorporated areas of the County. Roadways within incorporated cities were analyzed based on the local jurisdiction roadway LOS thresholds. State highway and freeway facilities were analyzed based on Caltrans LOS thresholds contained in the individual transportation or route concept reports for each facility. In addition to the jurisdiction LOS standard, roadways were analyzed based on the Yolo County Congestion Management Program (CMP) (March 1996), where applicable.

The following location has an unacceptable LOS during the p.m. peak hour based on both the jurisdiction and CMP LOS thresholds.

- **SR 84 (Jefferson Boulevard):** Gregory Avenue to U.S. 50

SR 84 is currently being widened to four-lanes from South Linden Road to U.S. 50. Appendices Trans-A and Trans-B provide a complete list of a.m. (freeway only) and p.m. peak hour roadway LOS. The jurisdiction and CMP LOS thresholds are also listed for each roadway where applicable.

The roadway segment analysis is based on traffic counts collected at a single location or link intended to be representative of the entire segment. A link connects two intersections; a segment is a series of links. Segments used in this analysis were developed based on where a series of links had common physical and traffic conditions; a perfect match, however, was not always possible.

Traffic Safety

Accident data is used to determine locations where the combination of physical geometrics, traffic controls, and driver behavior may contribute to a safety problem. Many city and county agencies use accident data to determine necessary roadway or intersection modifications to improve traffic safety. Currently, Yolo County uses the warrants contained in the *Traffic Manual* (Caltrans 1996) to determine the need for intersection improvements based on accident data. In some cases, accidents are caused by driver behavior and cannot be corrected solely by safety improvements.

The recent accident history for Yolo County roadways was researched to identify locations with high accident rates. The County maintains a database of all accidents that have occurred outside of incorporated cities, and Caltrans maintains an accident database for state facilities. Figure Trans-5 shows the number of accidents on Yolo County roadways by location, including fatalities, for an approximately 3½-year period from February 2001 to June 2004. The highest concentration of accidents occurred along Russell Boulevard and County Road 98 in the southern part of the County, and Old River Road and South River Road in the eastern part of the County. For accidents that occurred within 200 feet of a county intersection, the most frequent types of accidents were broadside and hit-object collisions.

The Caltrans accident data cover the three-year period from July 2000 to June 2003. Table Trans-2 shows a summary of the three-year traffic accident history on state facilities located within Yolo County.

Table Trans-2. State Facilities Accident History—July 1, 2000 to June 30, 2003

Location	Total Accidents	Total Fatalities	Actual Accident Rate[a]	Average Accident Rate[a]
I-5—Colusa County Line to Sacramento County Line	288	8	0.30	0.53
SR 16—Colusa County Line to I-5	341	8	1.57	1.22
SR 45 -State Route 113 to Colusa County Line	18	0	2.29	1.78
I-80—Solano County Line to Sacramento County Line	914	4	0.60	0.94
SR 84—Solano County Line to West Sacramento City Limits	25	2	1.32	1.45
SR 113—Solano County Line to Sutter County Line	98	1	0.33	0.77
SR 128—Solano County Line to I-505	76	4	2.12	1.94
I-505—Solano County Line to I-5	84	4	0.27	0.50

Note: Shading indicates an actual accident rate that is higher than the average accident rate for similar roadway facilities.

[a] Accidents per million vehicle-miles.

Source: Caltrans District 3 TASAS Table B, July 1, 2000 to June 30, 2003.

Table Trans-2 shows that SR 16, SR 45, and SR 128 have higher accident rates per million vehicle miles then the average accident rate on similar roadway facilities. Comparatively, the number of accidents on SR 16, which has an average daily volume of approximately 2,000 to 13,800 vehicles, is 20% higher than the number of accidents on I-5, which has an average daily volume of approximately 22,400 to 54,000 vehicles.

More detailed investigation of accident rates on sub-segments of the SR 16 corridor also revealed high accident rates compared to statewide averages. According to the Capay Valley Highway 16 Corridor Concept Study, Capay Valley Vision, November 24, 2003, the accident rate on SR 16 between I-505 and Esparto from July 1999 to June 2002 was more than twice the statewide average.

Public Transportation System

Public transportation in Yolo County consists of the following services and facilities:

- public bus service,
- commercial bus service,
- passenger train service,
- taxi service,

- vanpools and carpools, and
- park-and-ride facilities.

The Yolo County Transportation District (YCTD) operates YOLOBUS, which serves the residents of Yolo County and provides regional, intercity, and local fixed-route services throughout the County. For the fixed-route service, 10 routes are local (within Yolo County), and eight routes provide commuter route service to Sacramento County and Solano County (see Figure Trans-6). In fiscal year 2003–2004, the YCTD served approximately 1.2 million riders. Route 42, which provides primarily commuter service to Sacramento and Sacramento International Airport to/from Woodland and Davis, experienced the highest ridership with a monthly average of approximately 43,900. The YCTD plans to increase services to include 27 new buses for replacement and expanded service countywide by 2010, based on the *A Bold First Step for Mobility in the Sacramento Region: Metropolitan Transportation Plan for 2025*, published by the Sacramento Area Council of Governments.

The YCTD also provides paratransit through YOLOBUS Special, which provides local city, intercity, and rural county service. These services provide on-demand, door-to-door transportation primarily for elderly and disabled passengers. The paratransit service is in addition to the approximate ¾-mile route deviations that can be requested on some of the local fixed-routes. Paratransit ridership during the fiscal year 2003–2004 was approximately 14,400.

Commercial bus service is provided by Greyhound, which provides over 3,600 service locations within North America. Greyhound provides limited service bus stops with stops in Davis and Woodland. Service at these bus stops may vary by schedule, day, week, carrier, or season, and no Greyhound ticketing or baggage facilities are available at these locations. These limited service bus stops provide connections to full-service stations located in the San Francisco Bay Area and the greater Sacramento area.

Amtrak provides commercial bus service along with passenger train service. Amtrak offers round-trip train service from the downtown Davis train station on Second Street (see Figure Trans-6) that links Davis to the San Francisco Bay Area and downtown Sacramento. The station is open 7 days a week for ticket sales and baggage service. Free short- (more than 2 hours) and long-term parking is provided for Amtrak passengers. Trains that stop in Davis include the Coast Starlight (1 daily round trip), California Zephyr (1 daily round trip), and the Capitol Corridor (12 weekday round trips and 9 weekend round trips). In addition, Davis is served by Amtrak commercial buses connecting to and from San Joaquin trains in Stockton (6 daily round trips).

The Capitol Corridor is an intercity passenger train service that provides service between San Jose, Oakland/San Francisco, and Sacramento/Placer County along a 170-mile rail corridor. The Capitol Corridor Joint Powers Authority (CCJPA) is a partnership among the six local transit agencies in the eight-county service area that shares the administration and management of the Capitol Corridor. The San Francisco Bay Area Rapid Transit District (BART) provides day-to-day

management support to the CCJPA along with the partners who help deliver the Capitol Corridor service, that include Amtrak, Union Pacific Railroad, and Caltrans. Between 1998 and 2003, ridership has increased 146% to approximately 1.14 million riders, and revenue has more than doubled to $12.8 million. In 2003, service was expanded by 33% on weekdays for a total of 24 daily trips between Sacramento and Oakland/San Francisco.

Taxi services are provided by several local companies located in Davis, Woodland, West Sacramento, and Knights Landing and are available on demand or by reservation.

The Yolo Transportation Management Association (TMA) sponsors carpools and vanpools that operate within Yolo County and to/from surrounding areas. The Yolo TMA has an incentive program for both carpool and vanpool members. Formal and informal carpools are offered by organizations such as Cache Creek Resort Casino, Yolo County, City of Davis, and UCD. Formal vanpools are organized and operated by Enterprise Rideshare within Yolo County. Companies that operate vanpools include UCD, UCD Medical Center, Caltrans, and the Franchise Tax Board.

Park-and-ride lots provide a place for commuters in single-occupant vehicles to transfer to public transit or carpools. Yolo County has four park-and-ride facilities with three along I-80 and one near I-505 in the City of Winters (see Figure Trans-6 for lot locations and transit service availability). Caltrans owns three, and Caltrans and the City of Davis own one jointly. The park-and-ride lot near Mace Boulevard in Davis has three designated electric vehicle spaces, eight bike racks, a covered transit shelter, and complies with the Americans with Disabilities Act (ADA). These parking sites are intended to encourage ridesharing by providing a safe, attractive, and convenient place to leave a personal vehicle to use public transportation or another form of ridesharing.

To reduce traffic volumes on SR 16 in conjunction with the Cache Creek Indian Bingo & Casino expansion and hotel project, Yolo County has entered into an agreement with the Cache Creek Indian Bingo & Casino to construct a new park-and-ride facility. The *Intergovernmental Agreement Between the County of Yolo and the Rumsey Band of Winturn Indians* was signed on October 22, 2002. The agreement requires the Rumsey Band of Winturn Indians (the Tribe) to provide funding for of a park-and-ride facility that can accommodate no less than 800 passenger vehicles and shuttle service to and from the casino for employees and customers. The location of the park-and-ride facility is to be located within the service area of the YCTD; and upon completion of the facility, the Tribe will establish a mandatory shuttle service policy for casino and hotel employees.

Bicycle and Pedestrian System

The bicycle and pedestrian transportation system in Yolo County is composed of local and regional bikeways and trails. Yolo County is a favorable area for bicycling because of its flat terrain, mild climate, and relatively short distance

between cities. In addition, the City of Davis and UCD have an extensive network of bicycle facilities with numerous connections to the County's bicycle network. Bicycles are widely used for commuting in the county. According to the 2000 U.S. Census, the number of bicycle trips to work by county residents was approximately 5,630 per average weekday. Pedestrian trips to work in 2000 were approximately 2,830 per average weekday.

Bikeways are classified into three types (also refer to Figure Trans-7):

- **Class I:** off-street bike paths.
- **Class II:** on-street bike lanes marked by pavement striping.
- **Class III:** on-street bike routes that share the road with motorized vehicles.

The County of Yolo Bicycle Transportation Plan (BTP) was updated by the Yolo County Transportation Advisory Committee in May 2002. The Board of Supervisors adopted the plan on May 28, 2002. According to the Yolo County BTP, five major bikeways exist within the unincorporated area, with a Class I path along I-80 and Russell Boulevard, and Class II bike lanes along County Road 32A, County Road 102, County Road 99, County Road 31, and Russell Boulevard (Figure Trans-8).

Some of the Class II bike lanes need additional pavement width and updated striping and signage based on Chapter 1000 of the Highway Design Manual 5th Edition (Caltrans 2001). In particular, the Class II bike lanes along Russell Boulevard and County Road 31 have designated bike lane signage only at major intersections but not at a maximum of 1-kilometer (0.62 miles) intervals as specified under Section 1004.3. Bike lane width on County Road 32A is less than the required width, as specified under Section 1003.2, of 1.2 meters (3.94 feet) for a typical roadway in outlying areas where parking is prohibited.

The County is in the process of developing a Parks Master Plan intended to include descriptions and maps of hiking trails within unincorporated parts of the county.

Aviation System

Yolo County has four general aviation airports (Figure Trans-9). The Yolo County Airport is owned and operated by the County. Watts-Woodland Airport and Borges-Clarksburg Airport are both privately owned, and the University Airport is owned and operated by UCD. The airports are used by local residents and visitors as well as government agencies, including UCD. A brief summary of physical and operational conditions at each airport is provided below and is based on data provided by http://www.airnav.com.

The Yolo County Airport, located southwest of the City of Woodland, is the largest airport in the county in terms of runway size. It has a single runway approximately 6,000 feet long and 100 feet wide. About 70 aircraft are based at

the field; ten are multi-engine, and three are jet airplanes. Aircraft operations average about 165 per day, with 50% for transient general aviation, 50% for local general aviation, and less than 1% for air taxi purposes. The Yolo County Airport Master Plan was updated by P&D Consultants, Inc. in May 1998.

The Watts-Woodland Airport, located west of the City of Woodland, has a single runway (approximately 3,800 feet long and 60 feet wide). About 67 aircraft are based at the airport; 13 are multi-engine planes. Approximately 82 aircraft operations occur per day with 43% for transient general aviation, 43% for local general aviation, and 13% for air taxi purposes. The Watts-Woodland Airport Comprehensive Land Use Plan was developed by the Airport Land Use Commission in December 1988 and was amended in December 1992.

The Borges-Clarksburg Airport, located north of the town of Clarksburg, has a single runway approximately 2,300 feet long and 90 feet wide and 19 based aircraft, mostly single-engine planes. Approximately 57 aircraft operations occur per week with 33% for transient general aviation and 67% for local general aviation.

The University Airport, located west of the City of Davis, has a single runway approximately 1200 feet long and 50 feet wide. A total of 62 aircraft are based at the airport, with most being single-engine planes. Approximately 67 aircraft operations occur per day with 41% for transient general aviation, 49% for general aviation, 10% for air taxi, and less than 1% for military purposes.

Caltrans' Division of Aeronautics updates the California Aviation System Plan System Requirements Element (December 2003) every five years to identify and prioritize needed airport capacity and safety related infrastructure enhancements that impact the safety and effectiveness of the California Aviation Transportation System. Recommended enhancements for public airports within Yolo County include extending and widening both of the Watts-Woodland and University Airport runways, and providing 24-hour on-field automated weather service at these two airports and the Yolo County Airport. Total costs for these enhancements are estimated to be $930,000. The Borges-Clarksburg Airport was not included in the report since, as of 2002, the airport is no longer open to the public and is currently classified as a 'special use' airport.

Waterway System

The Port of Sacramento is located in West Sacramento in the southeast part of Yolo County (Figure Trans-9). The Port Authority operates the facility and consists of members from the City of Sacramento, Sacramento County, City of West Sacramento, and Yolo County. Facilities and terminals located at the port include five docking bays (each 600 feet long), a Union Pacific rail yard that services the port, and commodity handling facilities, including bulk rice and bulk grain elevators, bulk commodities bagging facility, and dry bulk cargo warehousing. The port reported a total of approximately 736,000 tons transported for the 2004 fiscal year compared to approximately 855,000 tons in

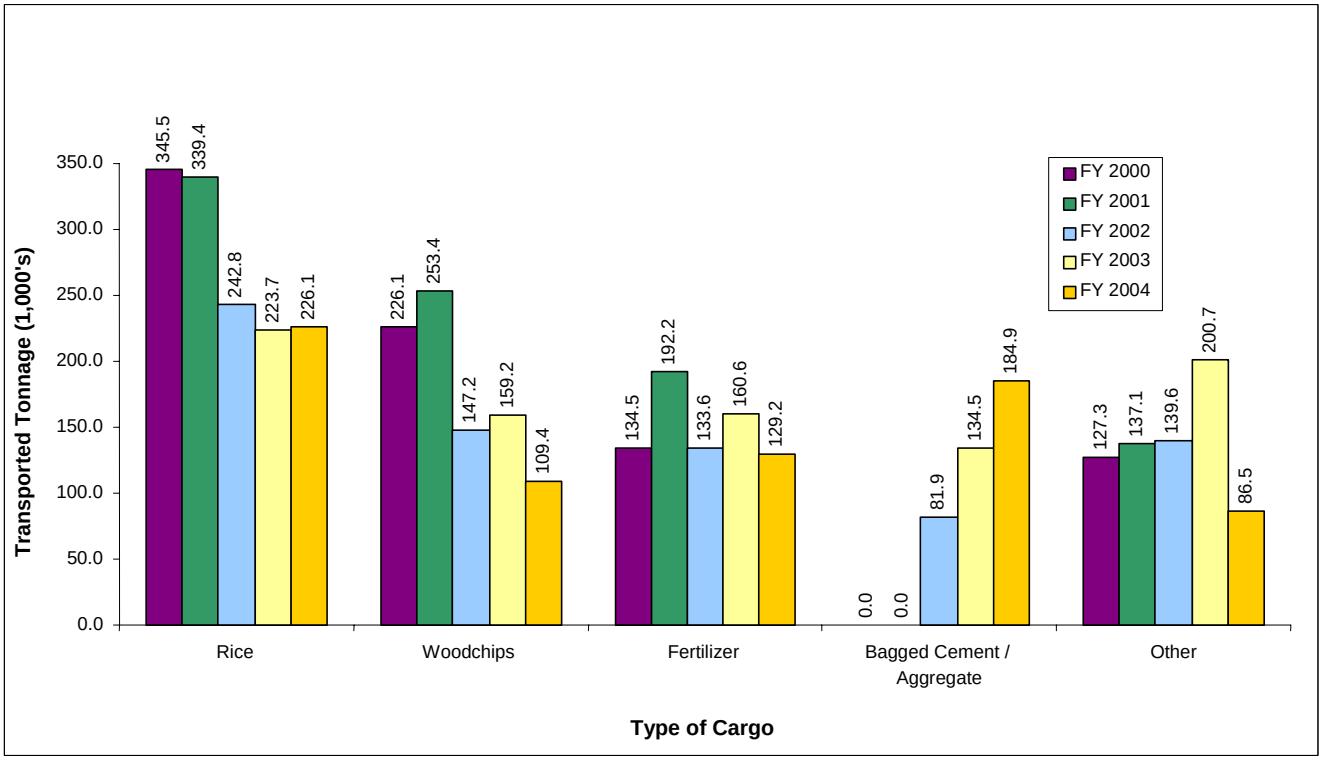
2003. Chart Trans-2 shows the transported tonnage for several major cargo categories for the fiscal years from 2000 to 2004.

As shown in Chart Trans-2, the Port's main business of transporting rice, woodchips, and fertilizer generally dropped from the 2000 fiscal year to the 2004 fiscal year, while other cargo, including bagged cement and aggregate, generally increased over the same period.

San Francisco Bay is located approximately 79 nautical miles southwest of the Port of Sacramento. Ship access to the port is provided from San Francisco Bay up the Sacramento River and through the Sacramento Deep Water Ship Channel, a 30-foot-deep human-made canal. This route provides a direct and unrestricted passage to the port.

The Port of Sacramento finds itself at a critical juncture in its 40 years of operation. Cargo volumes and cash flows are down; a direct competitor, Port of Stockton, has benefited from the recent acquisition of Rough & Ready Island from the Navy; deepening of the Sacramento Deep Water Ship Channel to 35 feet has been on hold; and many West Sacramento citizens would prefer to see non-port or non-industrial development along the water. The Port of Sacramento is in the process of developing a Maritime Demand Analysis and Port Master Land Use Plan to examine the Port's future.

Chart Trans-2. Transported Cargo for Port of Sacramento



Goods Movement System

The railroad system and state highway system provide the major transportation network for the movement of goods within Yolo County. Each system is discussed below as it relates to operation and service of transporting freight.

Rail Freight Transportation

Yolo County is served by three freight railways including Union Pacific Railroad, Sierra Railroad, and California Northern Railroad Company (Figure Trans-9). Union Pacific Railroad serves 23 states in the western two-thirds of the United States. Transported commodities include chemicals, coal, food and food products, truck trailers and containers, forest products, grain and grain products, metals and minerals, and automobiles and parts. In Yolo County, the Union Pacific operates a railroad line connecting Davis to West Sacramento and provides services within the Port of Sacramento.

The Sierra Railroad operates two lines within Yolo County known as the Sacramento River Train (formally known as the Yolo Shortline Railroad Company). One railroad line is 11 miles long and extends south from West Sacramento to Clarksburg. West Sacramento is currently in the process of purchasing from Sierra Railroad the segment of the railroad line from the Barge Canal to Pumphouse Road under the Rails-to-Trails Conservancy program. The second railroad line runs from West Sacramento to Woodland and is 16 miles long. The company primarily transports agriculturally related freight products, most of which originates or terminates outside of California. Passenger excursions are also provided from May to October.

California Northern Railroad Company operates 254 miles of track within California linking freight customers in Northern California with the Union Pacific Railroad. The company operates a 110-mile-long railroad line that runs from the City of Davis in Yolo County to the town of Tehama near Red Bluff. Transported goods include lumber, wine, beer, food products, agricultural products, steel pipe, manufactured goods, and construction materials.

Highway Freight Transportation

All state and national highways within Yolo County have been designated as truck routes by Caltrans (Figure Trans-9). All Interstates and some roadway segments of the state highways are included in the National Network for Service Transportation Assistance Act of 1982 (STAA). Trucks are defined as heavy freight vehicles that meet the STAA definitions as found in the California State Vehicles Code. Roadway segments of SR 16, SR 128, SR 45, and SR 84 are part of the California Legal Network, which limits larger trucks allowed under the STAA network. No county roadways within the unincorporated parts of Yolo County are designated as truck routes.

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