

Chapter 8

Long-Range Forecast of Transit Conditions

Due to the many “unknowns” associated with 20-year projections, it is appropriate to consider long-range future conditions from a more general level (focusing on general services, rather than specific route details) than is considered for the short-range alternatives. Using the forecasts in transit demand presented in Tables 27 through 36 in Chapter 4 as a basis, transit ridership, service, and financial forecasts can be established. Specifically, demand forecasts are applied to existing EDCTA ridership levels to estimate future ridership estimates. These estimates in turn are used to forecast service, fleet, and financial requirements.

These forecasts are based on the following assumptions:

- ▶ The area’s population and employment will grow in accordance with SACOG projections;
- ▶ There will be no significant changes in external factors such as fuel costs or parking charges that would reduce the relative attractiveness of the transit mode in comparison with the private automobile.
- ▶ Short-term improvements to the local Diamond Springs, Cameron Park, CRC, and Pollock Pines deviated fixed-route routes will be implemented to improve service reliability and convenience.
- ▶ By 2010, services will be warranted to employment areas in the Folsom area, as well as warranted to serve LRT in the Folsom area. This new service will also serve Sacramento County residents working along the US 50 corridor in El Dorado County.
- ▶ Existing commuter services to downtown Sacramento and Rancho Cordova will continue to be provided, as they will provide a more direct and convenient service for El Dorado County residents than will transfer to Light Rail.

As is typical for long-range forecasts, this analysis does not consider the impacts of inflation (either on transit costs or on passenger revenues), but rather is conducted in 2002 dollars.

Ridership Forecasts

As shown in Table 40, it is assumed that realized ridership on each of the various services will vary with the following parameters:

- ▶ Sacramento Commuter ridership will vary with Home-Based Work (HBW) person-trips between El Dorado County residential areas and downtown Sacramento.
- ▶ Rancho Cordova Commuter ridership will similarly vary with HBW person-trips between El Dorado residential areas and the Rancho Cordova area.
- ▶ Folsom / Light Rail Commuter ridership will vary with HBW person-trips in other portions of the US 50 corridor: Folsom, Orangvale / Citrus Heights / Carmichael / Fair Oaks, and Sacramento outside of the downtown area, as well as the HBW person-trips of Sacramento County residents working in El Dorado County.
- ▶ Local Fixed Route ridership will vary with general public transit demand.
- ▶ Dial-A-Ride ridership will vary with elderly & disabled non-program transit demand.
- ▶ Social Service ridership will vary with program transit demand.

TABLE 40: Analysis of Long-Range 2025 EDCTA Ridership

Demand Parameter	EDCTA Service							Total EDCTA
	Sacramento Commuter			Rancho Cordova Commuter		Folsom / LRT Commuter	Local Fixed Route (1)	
	Eldorado - Downtown Sacramento HBW Trips	El Dorado - Rancho Cordova HBW Trips	El Dorado - Other HBW to US 50 Corridor (3)	Total Annual Demand	Elderly / Disabled Demand	Social Service Program Demand		
<u>Demand Parameter Value</u>								
2002	1,731	9,256	17,141	2,483,420	68,470	1,241,160		
2005	1,867	9,091	18,115	2,795,580	75,780	1,360,140		
2010	2,093	10,319	21,468	3,153,030	83,920	1,493,040		
2015	2,319	11,546	24,820	3,493,500	91,660	1,620,070		
2020	2,192	11,406	26,066	3,720,080	97,320	1,716,320		
2025	2,064	11,266	27,311	3,882,160	101,930	1,800,350		
<u>Annual Ridership</u>								
2002	111,000	18,300	0	101,400	16,300	43,700		290,700
2005	119,700	17,900	0	131,800	18,000	47,800		335,200
2010	134,200	20,300	42,400	148,700	19,900	52,500		418,000
2015	148,700	22,700	49,000	164,800	21,700	57,000		463,900
2020	140,500	22,400	51,400	175,500	23,000	60,400		473,200
2025	132,300	22,100	53,900	183,100	24,100	63,400		478,900
<u>Change over 2002</u>								
2005	8,700	(400)	0	30,400	1,700	4,100		44,500
2010	23,200	2,000	42,400	47,300	3,600	8,800		127,300
2015	37,700	4,400	49,000	63,400	5,400	13,300		173,200
2020	29,500	4,100	51,400	74,100	6,700	16,700		182,500
2025	21,300	3,800	53,900	81,700	7,800	19,700		188,200
<u>Percent Change over 2002</u>								
2005	8%	-2%	--	30%	10%	9%		15%
2010	21%	11%	--	47%	22%	20%		44%
2015	34%	24%	--	63%	33%	30%		60%
2020	27%	22%	--	73%	41%	38%		63%
2025	19%	21%	--	81%	48%	45%		65%
Note 1: Including Seasonal Fixed Route Service Note 2: Including UTN Dial-A-Ride Note 3: Excluding Downtown Sacramento and Rancho Cordova, but including commuters from Sacramento County to El Dorado County.								

Note that the seasonal services (Holly Jolly Trolley) are included in the local fixed route total, while the Unmet Transit Needs service is included in Dial-A-Ride figures.

Ridership forecasts were made by factoring existing ridership by the proportionate change in the value of the appropriate design parameter. In addition, the ridership benefit of the improved local fixed-route discussed above was added, as presented in Table 41. Finally, the ridership generated by the new Folsom / Light Rail commuter service is estimated based upon the existing ratio of daily HBW trips and transit ridership on the EDCTA Rancho Cordova commuter service, factored by the relative number of HBW trips in the corridor.

As presented in Table 41 and depicted in Figure 29, overall system ridership is forecast to increase by 68 percent between 2002 and 2025. Much of this growth is expected to occur in the next 12 years: ridership is forecast to grow by 15 percent in 2005, and by a full 44 percent by 2015.

By service, the largest growth between 2002 and 2025 (81,700 annual passenger-trips) is forecast to occur on the local fixed-route services. As a whole, the annual commuter service ridership will grow by 79,000 passenger-trips by 2025, with most of this growth consisting of ridership to Folsom and to/from Light Rail. Based upon the SACOG data for commuting between El Dorado County and downtown Sacramento, ridership on this specific service will peak around 2015 at 148,700 trips per year before declining to 132,300 trips per year in 2025. On a passenger-trip basis, ridership growth on the Dial-A-Ride and program services will be relatively low, at 7,800 trips and 19,700 trips, respectively.

On a proportionate basis, ridership will grow most substantially on the local fixed-route services, which are forecast to increase by 81 percent by 2025. Commuter service will increase by 61 percent, followed by Dial-A-Ride service at 48 percent and program service at 45 percent.

Service Level and Financial Forecasts

As shown in the top portion of Table 41, the farebox revenues generated by each service can be estimated from the ridership forecasts, and assuming that the average fare revenue per one-way passenger-trip (exclusive of inflation) remains constant. Overall, fare revenues are forecast to increase by \$440,100 per year, equivalent to a 60 percent increase over 2002 levels.

It is next necessary to estimate annual vehicle service hour levels that would be required. For Dial-A-Ride service, any significant change in passenger demand will generate a proportionate change in vehicle-hours of service. For the other existing services, estimates were made of the proportion of available capacity – the level of ridership increase that could be accommodated within existing service levels, based upon existing ridership and capacity. In addition, the increase of annual vehicle service hours associated with improving the local fixed-route services presented in Table 37 were included. Finally, the annual vehicle service hours associated with new Folsom / Light Rail service were estimated assuming four round-trips per day. As also indicated in Table 41, vehicle service hours would increase by 19,700 per year, or 57 percent over existing levels. The largest proportion of this (11,600 vehicle-hours) is forecast to consist of expansion in the local fixed-route services.

Operating costs associated with each service were then estimated by factoring the total operating cost per vehicle service hour identified for each service in Table 24 in Chapter 3 by annual vehicle service hours. Overall operating costs are forecast to increase by \$1,303,000 per year (exclusive of inflation), or a 54 percent increase over current levels. Of this total, the largest proportions are the \$709,200 associated with expanded local deviated fixed-route service and \$256,800 associated with expansion of the commuter services.

Table 41

TABLE 41: Analysis of Long-Range EDCTA Service Requirements

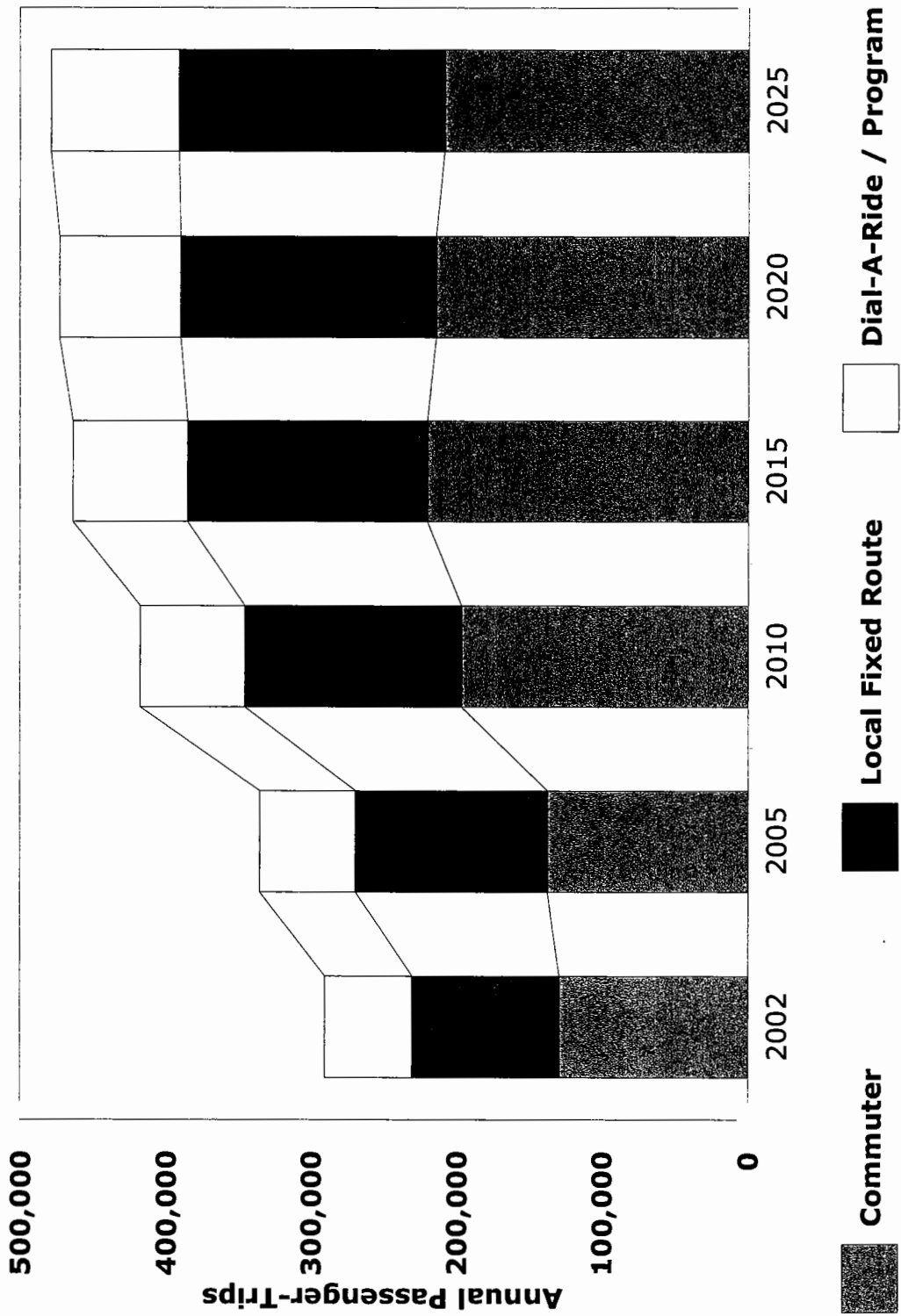
Service	EDCTA Service							Excluding Impacts of Inflation		
	Sacramento Commuter	Rancho Cordova Commuter	Folsom / LRT Commuter	Local Fixed Route (1)	Dial-A-Ride (2)	Social Service	Total EDCTA	# Growth Over Total	% Growth Over Total	% Growth Over Total
Farebox Revenues										
2002	\$393,800	\$64,800	\$0	\$90,700	\$34,800	\$155,100	\$739,200	--	--	--
2005	\$424,500	\$63,500	\$0	\$117,800	\$38,400	\$169,800	\$814,000	\$74,800	10%	10%
2010	\$475,900	\$72,000	\$150,400	\$132,900	\$42,500	\$186,500	\$1,060,200	\$321,000	43%	43%
2015	\$527,400	\$80,500	\$173,800	\$147,300	\$46,300	\$202,500	\$1,177,800	\$438,600	59%	59%
2020	\$498,300	\$79,400	\$182,300	\$156,900	\$49,100	\$214,600	\$1,180,600	\$441,400	60%	60%
2025	\$469,200	\$78,400	\$191,200	\$163,700	\$51,500	\$225,300	\$1,179,300	\$440,100	60%	60%
Vehicle Service Hours										
2002	8,500	1,700	0	12,400	6,600	5,500	34,700	--	--	--
2005	8,500	1,700	0	16,200	7,200	5,500	39,100	4,400	13%	13%
2010	9,400	1,700	2,500	18,800	8,000	6,000	46,400	11,700	34%	34%
2015	10,500	1,700	2,500	21,200	8,700	6,500	51,100	16,400	47%	47%
2020	9,800	1,700	2,500	22,900	9,300	7,000	53,200	18,500	53%	53%
2025	9,200	1,700	2,500	24,000	9,700	7,300	54,400	19,700	57%	57%
Total Operating Cost										
2002	\$692,000	\$134,300	\$0	\$757,900	\$425,500	\$396,800	\$2,406,500	--	--	--
2005	\$692,000	\$134,300	\$0	\$990,300	\$466,900	\$399,500	\$2,683,000	\$276,500	11%	11%
2010	\$762,300	\$134,300	\$202,700	\$1,149,200	\$518,800	\$435,800	\$3,203,100	\$796,600	33%	33%
2015	\$851,600	\$134,300	\$202,700	\$1,295,900	\$564,200	\$472,200	\$3,520,900	\$1,114,400	46%	46%
2020	\$794,800	\$134,300	\$202,700	\$1,399,800	\$603,100	\$508,500	\$3,643,200	\$1,236,700	51%	51%
2025	\$746,100	\$134,300	\$202,700	\$1,467,100	\$629,000	\$530,300	\$3,709,500	\$1,303,000	54%	54%
Subsidy Required										
2002	\$400,100	\$65,800	\$0	\$667,200	\$390,700	\$241,700	\$1,765,500	--	--	--
2005	\$267,500	\$70,800	\$0	\$872,500	\$428,500	\$229,700	\$1,869,000	\$103,500	6%	6%
2010	\$286,400	\$62,300	\$52,300	\$1,016,300	\$476,300	\$249,300	\$2,142,900	\$377,400	21%	21%
2015	\$324,200	\$53,800	\$28,900	\$1,148,600	\$517,900	\$269,700	\$2,343,100	\$577,600	33%	33%
2020	\$296,500	\$54,900	\$20,400	\$1,242,900	\$554,000	\$293,900	\$2,462,600	\$697,100	39%	39%
2025	\$276,900	\$55,900	\$11,500	\$1,303,400	\$577,500	\$305,000	\$2,530,200	\$764,700	43%	43%
Vehicles Required (3)										
2002	10	2	0	7	5	2	26	--	--	--
2005	10	2	0	9	6	2	29	3	12%	12%
2010	11	2	3	11	7	2	36	10	38%	38%
2015	12	2	3	12	7	2	38	12	46%	46%
2020	11	2	3	13	8	3	40	14	54%	54%
2025	11	2	3	14	8	3	41	15	58%	58%

Note 1: Including Seasonal Fixed Route Service

Note 2: Including UTN Dial-A-Ride

Note 3: Includes spares.

Figure 29
EDCTA Long-Range Ridership Forecasts



Subtracting the farebox revenue figures from the operating cost estimates yields the forecasts of operating subsidy requirements. Total subsidy is forecast to increase by \$764,700 per year, or 43 percent over current levels. Local fixed-route service improvements are expected to require the bulk of this additional subsidy (\$636,200). On the other hand, increased utilization of Commuter services (which generate relatively high fares per passenger-trip) are forecast to actually reduce the annual level of required subsidy on overall commuter services by \$121,600 per year. These forecasts, grouped by the major service categories are presented in Figure 30.

Finally, the annual vehicle service hour forecasts can be used to estimate the EDCTA fleet requirements over the coming 22 years. These figures, as shown in the bottom portion of Table 41 and in Figure 31, include spares. As indicated, the total fleet required to operate all EDCTA services is forecast to increase from 26 to 41, which is equivalent to a 58 percent increase in fleet size. By 2025, seven additional local fixed-route vehicles will be required, four additional commuter buses, and four additional Dial-A-Ride / program vans. Total fleet required for the commuter service is expected to peak around 2015 at 17 buses (5 more than at present).

FIGURE 30
EDCTA Long-Range Subsidy Forecasts

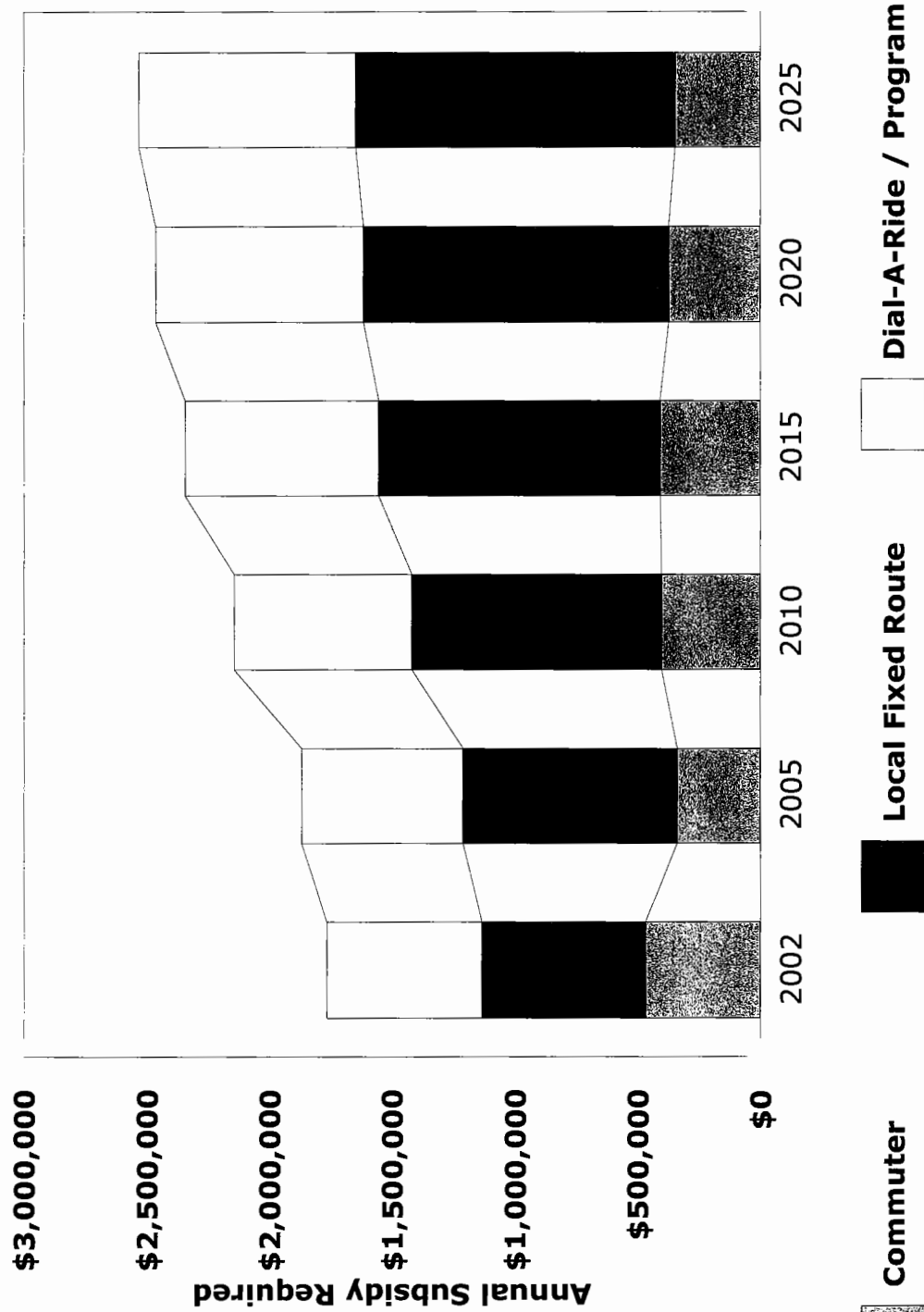


FIGURE 31
EDCTA Long-Range Fleet Size

