

Memorandum

TO: Nick Brand

FROM: George Mazur, David Kurth, Rachel Copperman, Michael Snavely

DATE: January 14, 2010

RE: 2030 and 2035 Ridership and Revenue Forecasts, December 2009 Scenarios

This technical report summarizes Cambridge Systematics' (CS) technical work completed from October 2009 through December 2009 under contract with the California High-Speed Rail (HSR) Program Management Team (PMT). Technical work completed by CS included a revised expansion factor procedure to obtain 2035 forecasts based on 2030 summary results and four additional ridership and revenue scenarios.

Section 1 of this technical memorandum presents new year 2035 ridership and revenue forecasts for the May 2009 Operating Plan and Santa Clarita Station Scenario runs using the revised factoring process. The results of three additional ridership and revenue scenarios are included in Sections 2 to 4. Each section describes the operating aspects and ridership and revenue results for the following scenarios:

- Section 2 - "Increased Parking Cost Scenario" - May 2009 operating plan with higher station parking costs. Two scenarios were run representing both Phase I and Full System configurations.
- Section 3 - "Hanford Station Scenario" - An additional station near Hanford/Visalia with modified May 2009 operating plan.
- Section 4 - "Grasslands South Scenario" - May 2009 operating plan with added 14 minutes run time between Gilroy and Merced.

1.0 Revised 2035 Factoring Process

CS developed a revised 2035 factoring process that produces more internally consistent, logical and explainable results. The revised method is a bottom-up approach that takes the TAZ to TAZ HSR trips and applies the 2030-2035 growth factors to obtain 2035 TAZ to TAZ HSR trips. These results are used to obtain station boardings, segment volumes, and region-to-region ridership, as in the 2030 runs.

The original 2035 factoring method was a top-down approach, which used region-to-region HSR market flows to estimate station boardings and segment volumes based on boarding

percentages for 2030. The revised method operates at a finer level of detail, applying growth factors to each individual TAZ rather than whole regions. In addition to producing more consistent results, this revised process eliminates the need for manual tweaking of the station boardings and line loads, thereby improving replicability and transparency.

The one downside of the revised approach is that it produced slightly different results for the May 2009 Operating Plan and Santa Clarita Station Scenario runs. Although systemwide changes are close to zero, some small increases for the LA Basin markets and decreases for the San Diego markets were observed. The revised results and a comparison to the original May 2009 Operating Plan and Santa Clarita Station Scenario 2035 results are summarized in Tables 1 through 8. No changes to travel costs, fares or operating characteristics were assumed in these refined year 2035 results.

2035 Results Comparison - Phase 1

Summary results for year 2035 Phase I using the old and new factoring processes are displayed in Tables 1 and 2.

May 2009 Operating Plan

The Phase 1 results for the May 2009 operating plan show a total high-speed rail annual ridership of 55.8 million in the year 2030. In the year 2035, based on the initial factoring process, annual ridership increased from 2030 by 4.3 percent to total 58.2 million (Table 1). Based on the revised factoring process, in the year 2035 annual ridership increases from 2030 by 4.8 percent to total 58.5 million. The 0.3 million annual ridership difference between the two factoring methods is spread throughout the corridor, with the most notable changes as follows:

- Total ridership within the entire LA Basin increases by 0.1 million. The majority of this increase occurs in the North LA - South LA market.
- Total ridership between regions increases by 0.1 million. The majority of this increase occurs in the San Joaquin Valley - LA Basin, and LA Basin - Bay Area markets.

The additional total ridership results in an increase in annual 2035 revenue of \$7 million (in 2008 dollars). Table 3 presents a comparison of average daily station boardings and Table 4 presents a comparison of station-to-station segment daily trips. Boarding and line-load differences between the two factoring approaches are very small.

Santa Clarita Station Scenario

The previously reported Phase 1 results for the Santa Clarita Station Scenario showed a total high speed rail annual ridership of 55.2 million in the year 2030. In the year 2035, based on the initial factoring process, annual ridership increases from 2030 by 4.5 percent to total 57.7 million (Table 2). Based on the revised factoring process, year 2035 annual ridership increases from 2030 by 4.7 percent to 57.8 million. The 0.1 million annual difference in ridership between the two factoring methods is spread throughout the corridor - the most notable change in ridership occurs between the LA Basin and Sacramento markets, an increase of 0.1 million.

Table 1 2035 Phase 1 Annual Region-to-Region Ridership & Revenue Comparison (May 2009 Operating Plan)

Market	Initial 2035 Factoring Results				Revised 2035 Factoring Results			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$)	Revenue (2008 \$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$)	Revenue (2008 \$\$ in millions)
LA Basin – Sacramento	1.9	26%	\$68	\$131	1.9	25%	\$68	\$131
LA Basin – San Diego	0.2	0%	\$14	\$2	0.2	0%	\$14	\$2
LA Basin- Bay Area	12.2	57%	\$67	\$811	12.2	57%	\$67	\$810
Sacramento – Bay Area	0.0	0%	\$11	\$0	0.0	0%	\$11	\$0
San Diego- Sacramento	0.0	2%	\$69	\$3	0.0	2%	\$69	\$3
San Diego- Bay Area	3.4	37%	\$69	\$233	3.4	36%	\$69	\$235
Bay Area – San Joaquin Valley	8.1	9%	\$46	\$371	8.1	14%	\$46	\$374
San Joaquin Valley – LA Basin	8.9	11%	\$42	\$371	8.9	12%	\$41	\$370
Sacramento – San Joaquin Valley	0.6	3%	\$52	\$32	0.6	8%	\$52	\$32
San Diego – San Joaquin Valley	0.1	27%	\$46	\$4	0.1	25%	\$45	\$4
Within Bay Area Peninsula	5.3	0.1%	\$11	\$59	5.3	0.1%	\$11	\$60
Within North LA Basin	4.5	0.0%	\$12	\$54	4.5	0.0%	\$12	\$54
Within South LA Basin	1.6	0.0%	\$10	\$16	1.6	0.0%	\$10	\$16
North LA – South LA	3.9	0.1%	\$11	\$43	4.0	0.1%	\$11	\$44
Within San Diego region	-	-	-	-	-	-	-	-
Within San Joaquin Valley	1.1	0.0%	\$31	\$33	1.1	0.0%	\$31	\$34
Other	6.5	0.1%	\$47	\$303	6.5	0.1%	\$47	\$304
Total	58.2	0.0%	\$42	\$2,465	58.5	0.1%	\$42	\$2,472
Within San Diego region	-	-	-	-	-	-	-	-
Within entire LA Basin	9.9	0.0%	\$11	\$113	10.0	0.0%	\$11	\$114
Within entire MTC	5.3	0.1%	\$11	\$59	5.3	0.1%	\$11	\$60
Total between regions	43.0	0.0%	\$53	\$2,293	43.1	0.2%	\$53	\$2,299

Table 2 2035 Phase 1 Annual Region-to-Region Ridership & Revenue Comparison (Santa Clarita Station Scenario)

Market	Initial 2035 Factoring Results				Revised 2035 Factoring Results			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$\$)	Revenue (2008 \$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$\$)	Revenue (2008 \$\$ in millions)
LA Basin – Sacramento	1.9	26%	\$68	\$132	2.0	25%	\$68	\$132
LA Basin – San Diego	0.2	0%	\$14	\$2	0.2	0%	\$14	\$2
LA Basin- Bay Area	12.2	47%	\$67	\$817	12.2	57%	\$67	\$812
Sacramento – Bay Area	0.0	0%	\$11	\$0	0.0	0%	\$11	\$0
San Diego- Sacramento	0.0	2%	\$69	\$2	0.0	2%	\$69	\$2
San Diego- Bay Area	3.4	37%	\$69	\$235	3.4	36%	\$69	\$235
Bay Area – San Joaquin Valley	8.1	9%	\$46	\$372	8.1	18%	\$46	\$374
San Joaquin Valley – LA Basin	8.8	11%	\$43	\$377	8.8	12%	\$42	\$373
Sacramento – San Joaquin Valley	0.6	3%	\$52	\$32	0.6	8%	\$52	\$32
San Diego – San Joaquin Valley	0.1	27%	\$46	\$4	0.1	26%	\$45	\$4
Within Bay Area Peninsula	5.3	0.1%	\$11	\$59	5.3	0.1%	\$11	\$60
Within North LA Basin	4.5	0.0%	\$12	\$54	4.5	0.0%	\$12	\$54
Within South LA Basin	1.6	0.0%	\$10	\$16	1.6	0.0%	\$10	\$16
North LA – South LA	3.8	0.1%	\$11	\$42	3.8	0.1%	\$11	\$43
Within San Diego region	-	-	-	-	-	-	-	-
Within San Joaquin Valley	1.0	0.0%	\$31	\$32	1.1	0.0%	\$32	\$33
Other	6.0	0.1%	\$46	\$288	6.1	0.1%	\$46	\$280
Total	57.7	0.0%	\$43	\$2,455	57.8	0.1%	\$42	\$2,453
Within San Diego region	-	-	-	-	-	-	-	-
Within entire LA Basin	9.9	0.0%	\$11	\$112	9.9	0.0%	\$11	\$114
Within entire MTC	5.3	0.0%	\$11	\$59	5.3	0.1%	\$11	\$60
Total between regions	42.4	0.0%	\$54	\$2,284	42.5	0.2%	\$54	\$2,280

Table 3 2035 Phase 1 Average Daily HSR Station Boardings Comparison

Origin Station	May 2009 Operating Plan		Santa Clarita Station Scenario	
	Total (Initial Factoring)	Total (Revised Factoring)	Total (Initial Factoring)	Total (Revised Factoring)
San Francisco (Transbay)	35,700	35,600	35,700	35,900
Millbrae	3,300	3,300	3,300	3,200
Redwood City	5,600	5,700	5,500	5,600
San Jose	11,000	11,300	10,900	11,600
Gilroy	6,500	6,600	6,400	6,600
Merced	7,900	8,000	7,700	6,700
Fresno	6,800	6,900	6,800	6,800
Bakersfield	7,900	8,100	7,900	8,100
Palmdale	17,400	17,200	16,100	16,000
Santa Clarita			3,800	3,700
Sylmar	7,800	7,600		
Burbank	4,100	4,000	6,400	6,200
Los Angeles (Union)	18,200	18,100	20,200	19,900
Norwalk	6,200	6,100	6,200	6,000
Anaheim	32,900	32,500	32,900	32,500
TOTAL DAILY	171,300	170,800	169,800	168,900

The additional total ridership translates into a **decrease** in annual 2035 revenue of \$2 million (in 2008 dollars). This change is associated with the adjustments to the factoring process, which in this case result in higher ridership and lower overall revenue due to decreased average trip lengths. Table 3 presents a comparison of average daily station boardings, and Table 4 presents a comparison of station-to-station segment daily trips. Once again, boarding and line-load differences between the two factoring approaches are very small.

2035 Results Comparison - Full System

Summary results for year 2035 Phase I using the old and new factoring processes are displayed in Tables 5 and 6.

Table 4 2035 Phase 1 Daily High-Speed Rail Trips on Each Station to Station Segment (Southbound)

Origin Station	Destination Station	May 2009 Operating Plan		Santa Clarita Station Scenario	
		Total Trips (Initial Factoring)	Total Trips (Revised Factoring)	Total Trips (Initial Factoring)	Total Trips (Revised Factoring)
San Francisco (Transbay)	Millbrae	35,700	35,500	35,700	35,800
Millbrae	Redwood City	37,300	37,100	37,200	37,300
Redwood City	San Jose	39,700	39,300	39,500	39,600
San Jose	Gilroy	42,600	42,300	42,200	42,800
Gilroy	Merced	2,500	2,500	2,500	2,100
Gilroy	Fresno	46,000	45,600	45,500	45,400
Merced	Fresno	5,400	5,400	5,200	4,600
Fresno	Bakersfield	46,800	46,400	46,000	45,700
Bakersfield	Palmdale	43,500	43,100	40,800	42,400
Palmdale	Sylmar Santa Clarita	50,800	50,400	48,400	48,900
Sylmar Santa Clarita	Burbank	45,400	44,900	46,300	48,900
Burbank	Los Angeles (Union)	41,500	40,900	40,300	42,600
Los Angeles (Union)	Norwalk	37,700	36,800	37,500	36,700
Norwalk	Anaheim	33,500	32,600	33,500	32,500

May 2009 Operating Plan

The Full System results for the May 2009 operating plan show a total high-speed rail annual ridership of 98.3 million in the year 2030. In the year 2035, based on the initial factoring process, annual ridership increases from 2030 by 4.2 percent to total 102.4 million (Table 5). Based on the revised factoring process, in the year 2035 annual ridership increases from 2030 by 4.8 percent to total 103.0 million. The 0.6 million annual difference in ridership is spread throughout the corridor - the most notable changes occur in the following markets:

- Total ridership increases by 0.1 million between the entire LA Basin and Sacramento, and 0.1 million between the entire LA Basin and San Diego.
- Total ridership within the entire LA Basin increases by 0.1 million. The majority of this increase occurs within the South LA market.
- Total ridership within the Bay Area Peninsula increases by 0.1 million.

The additional total ridership results in a total increase in annual 2035 revenue of \$23 million (in 2008 dollars). Table 7 presents a comparison of average daily station boardings and Table 8 presents a comparison of station-to-station segment daily trips. Boarding and line-load differences between the two factoring approaches are very small.

Table 5 2035 Full System Annual Region-to-Region Ridership and Revenue (May 2009 Operating Plan)

Market	Initial 2035 Factoring Results				Revised 2035 Factoring Results			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin – Sacramento	3.9	50%	\$66	\$261	4.0	51%	\$66	\$263
LA Basin – San Diego	22.5	14%	\$31	\$692	22.6	15%	\$31	\$694
LA Basin- Bay Area	12.4	48%	\$68	\$838	12.4	50%	\$68	\$843
Sacramento – Bay Area	3.1	4%	\$45	\$140	3.1	4%	\$45	\$140
San Diego- Sacramento	0.1	5%	\$78	\$8	0.1	5%	\$78	\$8
San Diego- Bay Area	3.8	41%	\$81	\$304	3.8	39%	\$81	\$306
Bay Area – San Joaquin Valley	8.6	10%	\$45	\$387	8.6	11%	\$46	\$391
San Joaquin Valley – LA Basin	8.7	11%	\$44	\$380	8.7	12%	\$44	\$380
Sacramento – San Joaquin Valley	2.2	9%	\$42	\$94	2.2	9%	\$43	\$95
San Diego – San Joaquin Valley	0.1	27%	\$55	\$5	0.1	25%	\$56	\$5
Within Bay Area Peninsula	6.5	0.1%	\$11	\$71	6.6	0.1%	\$11	\$72
Within North LA Basin	6.3	0.1%	\$12	\$77	6.3	0.1%	\$12	\$77
Within South LA Basin	3.6	0.0%	\$10	\$38	3.7	0.0%	\$10	\$38
North LA – South LA	7.0	0.2%	\$11	\$78	7.0	0.2%	\$11	\$78
Within San Diego region	0.4	0.0%	\$9	\$3	0.4	0.0%	\$11	\$4
Within San Joaquin Valley	2.4	0.0%	\$29	\$70	2.4	0.0%	\$29	\$71
Other	10.9	0.1%	\$53	\$576	11.0	0.1%	\$53	\$577
Total	102.4	0.2%	\$39	\$4,021	103.0	0.2%	\$41	\$4,044
Within San Diego region	0.4	0.0%	\$9	\$3	0.4	0.0%	\$11	\$4
Within entire LA Basin	16.9	0.1%	\$11	\$193	16.9	0.1%	\$11	\$193
Within entire MTC	6.5	0.1%	\$11	\$71	6.6	0.1%	\$11	\$72
Total between regions	78.7	0.4%	\$48	\$3,758	79.1	0.5%	\$48	\$3,779

Table 6 2035 Full System Annual Region-to-Region Ridership and Revenue (Santa Clarita Station Scenario)

Market	Initial 2035 Factoring Results				Revised 2035 Factoring Results			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin - Sacramento	3.9	50%	\$66	\$259	3.9	51%	\$66	\$261
LA Basin - San Diego	22.5	14%	\$31	\$688	22.6	15%	\$31	\$691
LA Basin- Bay Area	12.3	48%	\$68	\$835	12.4	59%	\$68	\$839
Sacramento - Bay Area	3.1	4%	\$45	\$139	3.1	4%	\$45	\$140
San Diego- Sacramento	0.1	5%	\$78	\$8	0.1	4%	\$77	\$8
San Diego- Bay Area	3.7	41%	\$81	\$302	3.8	39%	\$81	\$306
Bay Area - San Joaquin Valley	8.6	10%	\$45	\$387	8.6	11%	\$45	\$389
San Joaquin Valley - LA Basin	8.6	11%	\$44	\$379	8.6	12%	\$44	\$379
Sacramento - San Joaquin Valley	2.2	9%	\$42	\$93	2.2	9%	\$42	\$94
San Diego - San Joaquin Valley	0.1	27%	\$56	\$5	0.1	26%	\$57	\$5
Within Bay Area Peninsula	6.5	0.1%	\$11	\$71	6.6	0.1%	\$11	\$72
Within North LA Basin	6.9	0.1%	\$12	\$84	6.9	0.1%	\$12	\$84
Within South LA Basin	3.6	0.0%	\$10	\$38	3.7	0.0%	\$10	\$38
North LA - South LA	7.0	0.2%	\$11	\$80	7.1	0.3%	\$11	\$80
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within San Joaquin Valley	2.4	0.0%	\$29	\$70	2.4	0.0%	\$29	\$71
Other	10.1	0.1%	\$52	\$527	10.2	0.2%	\$52	\$528
Total	102.0	0.2%	\$39	\$3,968	102.6	0.2%	\$39	\$3,988
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within entire LA Basin	17.6	0.0%	\$11	\$202	17.6	0.1%	\$11	\$202
Within entire MTC	6.5	0.0%	\$11	\$71	6.6	0.1%	\$11	\$72
Total between regions	77.7	0.4%	\$48	\$3,696	78.4	0.4%	\$48	\$3,714

Table 7 2035 Full System Average Daily HSR Stations Boardings

Origin Station	May 2009 Operating Plan		Santa Clarita Station Scenario	
	Total (Initial Factoring)	Total (Revised Factoring)	Total (Initial Factoring)	Total (Revised Factoring)
San Francisco (Transbay)	32,700	32,600	32,100	32,100
Millbrae	4,100	4,100	4,100	4,200
Redwood City	7,900	8,000	7,800	7,900
San Jose	13,600	13,900	13,500	13,700
Gilroy	6,600	6,600	6,600	6,600
Sacramento	19,300	19,500	19,000	19,200
Stockton	6,800	6,900	6,600	6,700
Modesto/SP Downtown	4,800	4,800	4,800	4,700
Merced	2,600	2,700	2,600	2,700
Fresno	8,600	8,700	8,600	8,600
Bakersfield	9,000	9,000	8,700	9,000
Palmdale	19,500	19,200	18,100	18,200
Santa Clarita			7,300	7,100
Sylmar	14,200	14,300		
Burbank	4,800	4,700	11,800	11,300
Los Angeles (Union)	34,800	33,900	37,400	36,300
Norwalk	7,900	7,800	7,800	7,800
Anaheim	24,600	24,500	24,700	24,800
City of Industry	7,200	7,200	7,400	7,300
Ontario	12,300	12,000	12,400	12,000
Riverside	15,200	15,000	15,000	15,100
Temecula / Murrieta	8,400	7,700	8,300	7,800
Escondido	8,200	8,600	8,200	8,600
University City	6,200	6,400	6,100	6,400
San Diego	20,400	21,100	20,400	21,000
Daily	299,700	299,200	299,300	298,900

Table 8 2035 Full System Daily High-Speed Rail Trips on Each Station to Station Segment (Southbound)

Origin Station	Destination Station	May 2009 Operating Plan		Santa Clarita Station Scenario	
		Total Trips (Initial Factoring)	Total Trips (Revised Factoring)	Total Trips (Initial Factoring)	Total Trips (Revised Factoring)
San Francisco (Transbay)	Millbrae	32,700	32,600	32,100	32,100
Millbrae	Redwood City	33,800	33,700	33,200	33,200
Redwood City	San Jose	36,900	36,800	36,200	36,100
San Jose	Morgan Hill	41,800	41,600	40,900	40,800
Morgan Hill	Gilroy	41,800	41,600	40,900	40,800
Gilroy	Merced	6,400	6,700	6,400	6,600
Gilroy	Fresno	35,900	35,600	34,900	34,800
Sacramento	Stockton	19,300	19,500	19,000	19,200
Stockton	Modesto/SP Downtown	25,300	25,500	24,900	25,100
Modesto/SP Downtown	Merced	28,400	28,600	28,000	28,100
Merced	Fresno	23,800	23,700	23,300	23,200
Fresno	Bakersfield	56,600	56,000	55,000	54,600
Bakersfield	Palmdale	52,100	51,600	50,700	50,300
Palmdale	Sylmar Santa Clarita	60,900	60,500	58,800	58,300
Sylmar Santa Clarita	Burbank	58,100	57,800	61,200	60,800
Burbank	Los Angeles (Union)	56,400	56,000	58,600	58,300
Los Angeles (Union)	Norwalk	28,500	28,100	28,600	28,400
Norwalk	Anaheim	24,800	24,500	25,000	24,800
Los Angeles (Union)	City of Industry	41,000	41,400	41,300	41,400
City of Industry	Ontario	43,400	43,900	43,700	44,000
Ontario	Riverside	42,900	43,400	42,700	43,600
Riverside	Temecula / Murrieta	39,000	39,600	39,300	39,600
Temecula / Murrieta	Escondido	34,000	35,000	34,000	34,900
Escondido	University City	26,400	27,000	26,400	27,000
University City	San Diego	20,600	21,100	20,600	21,000

Santa Clarita Station Scenario

The Full System results for the Santa Clarita Station Scenario show a total high-speed rail annual ridership of 97.9 million in the year 2030. In the year 2035, based on the initial factoring process, annual ridership increases from 2030 by 4.2 percent to total 102.0 million (Table 6). Based on the revised factoring process, in the year 2035 annual ridership increases from 2030 by

4.8 percent to total 102.6 million. The 0.6 million annual difference in ridership is spread throughout the corridor - the most notable changes occur in the following markets:

- Total ridership between the entire LA Basin and Bay Area and the entire LA Basin and San Diego increases by 0.2 million.
- Total ridership within the entire LA Basin increases by 0.2 million.

The additional total ridership results in a total increase in annual 2035 revenue of \$23 million (in 2008 dollars). Table 7 presents a comparison of average daily station boardings and Table 8 presents a comparison of station-to-station segment daily trips. Boarding and line-load differences between the two factoring approaches are very small.

2.0 Increased Parking Cost Scenario

The CS project team modeled the Increased Parking Cost Scenario for the Phase 1 System and Full System in 2030 and 2035. This scenario tested the effect of the alternative station parking costs shown in Table 9. At most HST stations, the parking cost for the “Increased Parking Cost Scenario” is higher than the parking rate at the closest airport. This scenario maintained all other assumptions associated with the May 2009 Operating Plan.

2030 and 2035 Ridership and Revenue Results – Phase 1

The Increased Parking Cost Scenario Phase 1 2030 run resulted in a predicted annual high-speed rail ridership of 52.1 million (see Table 10). This value represents a decrease of 3.7 million, or 6.6 percent, compared to the May 2009 Operating Plan runs. As expected, shorter distance riders are more sensitive to increases in parking cost than longer distance riders. This sensitivity is particularly the case for HSR because fares are distance based and parking costs are fixed, thus as distance decreases the share of total cost assigned to parking increases.

The results in Table 10 indicate that the ridership within a market area (intra-region) decreases far more significantly than ridership between markets (inter-region). For example, in 2030, total ridership within the entire LA Basin and within the entire MTC region decreases by 2.9 million (20 percent) compared to May 2009. Total ridership between regions only decreases by 0.9 million (2 percent).

The changes in market-to-market ridership translates directly to system revenues. The ridership decrease for long distance trips has a larger magnitude impact on inter-region travel revenues because of higher average fares (\$54 for inter-region compared to \$11 for intra-region travel). As a result, inter-region total revenue decreases by \$41 million (2 percent), while intra-region travel decreases by \$31 million (16 percent). Note that the percent decrease for intra-region is still higher as total revenues from these trips are only 6 percent of total corridor revenue. Total corridor revenue in 2030 decreases \$72 million (3 percent) because of the increased parking cost.

Table 9 Station Parking Cost Comparison

Station	Parking Cost per Trip (2005 \$)		
	May 2009 Operating Plan	Increased Parking Cost Scenario	Nearest Airport
San Francisco (Transbay)	\$25	\$36	\$25.50
Millbrae	\$3	\$16	\$25.50
Redwood City	\$3	\$16	\$25.50
San Jose	\$3	\$21	\$25.50
Gilroy	\$3	\$11	\$22.50
Sacramento	\$6	\$16	\$9.50
Stockton	\$3	\$11	\$3.00
Modesto/SP Downtown	\$3	\$11	\$3.00
Merced	\$3	\$11	\$3.00
Fresno	\$3	\$16	\$10.00
Bakersfield	\$3	\$16	\$7.50
Palmdale	\$3	\$11	\$18.50
Sylmar	\$3	\$16	\$18.50
Burbank	\$3	\$21	\$18.50
Los Angeles (Union)	\$6	\$32	\$19.00
Norwalk	\$3	\$16	\$10.50
Anaheim	\$3	\$21	\$17.00
City of Industry	\$3	\$11	\$10.00
Ontario	\$10	\$21	\$10.00
Riverside	\$3	\$11	\$10.00
Temecula / Murrieta	\$3	\$11	\$17.00
Escondido	\$3	\$11	\$18.00
University City	\$3	\$16	\$18.00
San Diego	\$12	\$27	\$18.00
Average Daily Cost	\$5	\$17	\$15

The ridership and revenue changes in Table 11 for 2035 follow a similar pattern, however the percent reduction in ridership is less than the 2030 analysis (6.2 percent compared to 6.6 percent), and the percent reduction in revenue is also less (2 percent compared to 3 percent). Fares and parking costs in 2035 are assumed equal to 2030 in the factoring process.

Table 12 presents the average daily boardings at each high-speed rail station. The impact of higher parking costs on daily boardings varies by station. In 2030 and 2035, Millbrae, Palmdale, Burbank, Los Angeles and Norwalk all show percent reductions in boardings over 10%. Los Angeles has the highest reduction at 17% in 2030 and 18% in 2035. The explanation for the higher reductions at these stations is that the share of intra-region trips with origins at these stations is comparatively higher than other stations. This makes sense – a large share of trips from Millbrae likely travel short distances to San Francisco and San Jose, while a large share of trips from Palmdale, Burbank, Los Angeles and Norwalk all travel within the LA Basin.

Table 10 2030 Phase 1 Annual Region-to-Region Ridership and Revenue, Increased Parking Cost Scenario

Market	May 2009 Operating Plan				Increased Parking Cost Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$\$)	Revenue (2008 \$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$\$)	Revenue (2008 \$\$ in millions)
LA Basin – Sacramento	1.9	25%	\$68	\$125	1.8	25%	\$68	\$124
LA Basin – San Diego	0.2	0%	\$14	\$2	0.2	0%	\$14	\$2
LA Basin- Bay Area	11.9	57%	\$67	\$790	11.7	56%	\$67	\$777
Sacramento – Bay Area	0.0	0%	\$11	\$0	0.0	0%	\$11	\$0
San Diego- Sacramento	0.0	2%	\$69	\$2	0.0	2%	\$69	\$2
San Diego- Bay Area	3.2	36%	\$69	\$221	3.2	35%	\$69	\$219
Bay Area – San Joaquin Valley	7.6	11%	\$46	\$346	7.4	10%	\$46	\$340
San Joaquin Valley – LA Basin	8.5	12%	\$42	\$352	8.2	11%	\$42	\$340
Sacramento – San Joaquin Valley	0.6	3%	\$52	\$29	0.6	3%	\$52	\$29
San Diego – San Joaquin Valley	0.1	25%	\$46	\$3	0.1	25%	\$47	\$3
Within Bay Area Peninsula	5.1	0.1%	\$11	\$57	4.2	0.1%	\$11	\$47
Within North LA Basin	4.3	0.0%	\$12	\$52	3.6	0.0%	\$12	\$43
Within South LA Basin	1.6	0.0%	\$10	\$16	1.2	0.0%	\$10	\$12
North LA – South LA	3.8	0.1%	\$11	\$42	3.0	0.1%	\$11	\$33
Within San Diego region	-	-	-	-	-	-	-	-
Within San Joaquin Valley	1.0	0.0%	\$31	\$30	0.9	0.0%	\$31	\$29
Other	6.2	0.1%	\$47	\$293	6.1	0.1%	\$47	\$287
Total	55.8	0.1%	\$42	\$2,362	52.1	0.1%	\$44	\$2,290
Within San Diego region	-	-	-	-	-	-	-	-
Within entire LA Basin	9.7	0.0%	\$11	\$110	7.7	0.0%	\$11	\$88
Within entire MTC	5.1	0.1%	\$11	\$57	4.2	0.1%	\$11	\$47
Total between regions	41.1	0.2%	\$53	\$2,195	40.2	0.2%	\$54	\$2,154

Table 11 2035 Phase 1 Annual Region-to-Region Ridership and Revenue, Increased Parking Cost Scenario

Market	May 2009 Operating Plan				Increased Parking Cost Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$)	Revenue (2008 \$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008 \$)	Revenue (2008 \$\$ in millions)
LA Basin – Sacramento	1.9	26%	\$68	\$131	1.9	25%	\$68	\$130
LA Basin – San Diego	0.2	0%	\$14	\$2	0.2	0%	\$14	\$2
LA Basin- Bay Area	12.2	47%	\$67	\$811	12.0	56%	\$67	\$797
Sacramento – Bay Area	0.0	0%	\$11	\$0	0.0	0%	\$11	\$0
San Diego- Sacramento	0.0	2%	\$69	\$3	0.0	2%	\$69	\$2
San Diego- Bay Area	3.4	37%	\$69	\$233	3.4	35%	\$69	\$232
Bay Area – San Joaquin Valley	8.1	9%	\$46	\$371	8.0	14%	\$46	\$368
San Joaquin Valley – LA Basin	8.9	11%	\$42	\$371	8.6	11%	\$43	\$367
Sacramento – San Joaquin Valley	0.6	3%	\$52	\$32	0.6	8%	\$52	\$32
San Diego – San Joaquin Valley	0.1	27%	\$46	\$4	0.1	25%	\$46	\$4
Within Bay Area Peninsula	5.3	0.1%	\$11	\$59	4.4	0.1%	\$11	\$50
Within North LA Basin	4.5	0.0%	\$12	\$54	3.7	0.0%	\$12	\$45
Within South LA Basin	1.6	0.0%	\$10	\$16	1.2	0.0%	\$10	\$13
North LA – South LA	3.9	0.1%	\$11	\$43	3.1	0.1%	\$11	\$34
Within San Diego region	0.0	0.0%	\$0	\$0	-	-	-	-
Within San Joaquin Valley	1.1	0.0%	\$31	\$33	1.0	0.0%	\$32	\$32
Other	6.5	0.1%	\$47	\$303	6.4	0.1%	\$47	\$299
Total	58.2	0.1%	\$42	\$2,465	54.6	0.1%	\$44	\$2,408
Within San Diego region	0.0	0.0%	\$0	\$0	-	-	-	-
Within entire LA Basin	9.9	0.0%	\$11	\$113	8.0	0.0%	\$11	\$91
Within entire MTC	5.3	0.1%	\$11	\$59	4.4	0.1%	\$11	\$50
Total between regions	43.0	0.2%	\$53	\$2,293	42.2	0.2%	\$54	\$2,267

Table 12 Phase 1 Daily HSR Station Boardings, Increased Parking Cost Scenario

Origin Station	May 2009 Operating Plan		Increased Parking Cost Scenario	
	2030	2035	2030	2035
San Francisco (Transbay)	33,900	35,700	32,600	34,200
Millbrae	3,100	3,300	2,800	2,900
Redwood City	5,400	5,600	5,000	5,200
San Jose	10,800	11,000	10,000	10,500
Gilroy	6,400	6,500	5,800	6,000
Merced	7,500	7,900	7,200	7,600
Fresno	6,500	6,800	6,400	6,800
Bakersfield	7,500	7,900	7,300	7,900
Palmdale	16,300	17,400	14,500	15,300
Sylmar	7,300	7,800	6,700	7,000
Burbank	3,800	4,100	3,300	3,400
Los Angeles (Union)	17,500	18,200	14,500	15,000
Norwalk	5,900	6,200	5,300	5,500
Anaheim	31,300	32,900	29,300	30,500
TOTAL DAILY	163,200	171,300	150,800	157,900

Table 13 presents daily station-to-station line loadings. The decrease in station-to-station trips is smallest (on average 2 to 4 percent) in the San Joaquin Valley. This result is explained by the small share of intra-region ridership - of 17.2 million total trips with an end in the San Joaquin Valley, only 0.9 million (5 percent) are intra-region trips. In the LA Basin, 26 percent of region ridership are intra-region trips, and in the Bay Area, 16 percent of regional ridership are intra-region trips. Shorter, intra-region trips are affected more significantly by higher parking costs, therefore station to station trips in the Bay Area (average reduction of 3 to 5 percent) and the LA Basin (average reduction of 5 to 9 percent) are more significantly impacted in 2030 and 2035.

2030 and 2035 Ridership and Revenue Results - Full System

The Increased Parking Cost Scenario forecast for 2030 resulted in a predicted annual high-speed rail ridership of 92.4 million (see Table 14). This value represents a decrease of 5.9 million, or 6 percent, compared to the May 2009 Operating Plan runs. Similar to Phase 1 results, shorter distance riders are more sensitive to increases in parking cost than longer distance riders. This sensitivity is particularly the case for HSR because fares are distance based and parking costs are fixed, thus as distance decreases the share of total cost assigned to parking increases.

Table 13 Phase I Daily Line Loads, Increased Parking Cost Scenario

Origin Station	Destination Station	May 2009 Operating Plan		Increased Parking Cost Scenario	
		2030	2035	2030	2035
SF Transbay	Millbrae	33,900	35,700	32,700	34,200
Millbrae	Redwood City	35,300	37,300	34,000	35,600
Redwood City	San Jose	37,500	39,700	36,300	38,100
San Jose	Gilroy	40,400	42,600	39,800	41,700
Gilroy	Merced	2,400	2,500	2,300	2,400
Gilroy	Fresno	43,500	46,000	42,700	44,800
Merced	Fresno	5,100	5,400	4,900	5,200
Fresno	Bakersfield	44,300	46,800	43,500	45,600
Bakersfield	Palmdale	41,300	43,500	40,500	42,200
Palmdale	Sylmar	48,500	50,800	46,100	48,000
Sylmar	Burbank	43,200	45,400	40,900	42,600
Burbank	Los Angeles	39,400	41,500	37,600	39,200
Los Angeles	Norwalk	35,300	37,700	33,200	34,500
Norwalk	Anaheim	31,200	33,500	29,300	30,500

The results in Table 14 indicate that the ridership within a market area (intra-region) decreases far more significantly than ridership between markets (inter-region). For example, in 2030, total ridership within the LA, San Diego and San Francisco regions decreases by 4.1 million compared to May 2009. Total ridership between regions only decreases by 1.7 million.

The changes in market-to-market ridership translates directly to system revenues. The ridership decrease for long distance trips has a larger magnitude impact on inter-region travel revenues because of higher average fares (\$48 for inter-region compared to \$11 for intra-region travel). As a result, inter-region total revenue decreases by \$72 million (2 percent), while intra-region travel decreases by \$46 million (18 percent). Note that the percent decrease for intra-region is still higher as total revenues from these trips are only 6 percent of total corridor revenue. Total corridor revenue in 2030 decreases \$114 million (3 percent) because of the increased parking cost.

The ridership and revenue changes in Table 15 for 2035 follow a similar pattern, however the percent reduction in ridership is less than the 2030 analysis (5.5 percent compared to 6 percent), and the percent reduction in revenue is also less (2 percent compared to 3 percent). Fares and parking costs in 2035 are assumed equal to 2030 in the factoring process.

Table 14 2030 Full System Annual Region-to-Region Ridership and Revenue, Increased Parking Cost Scenario

Market	May 2009 Operating Plan				Increased Parking Cost Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin – Sacramento	3.8	51%	\$66	\$254	3.8	50%	\$66	\$249
LA Basin – San Diego	21.4	15%	\$31	\$659	20.8	15%	\$31	\$637
LA Basin- Bay Area	12.3	59%	\$68	\$836	12.2	59%	\$68	\$827
Sacramento – Bay Area	3.0	4%	\$45	\$132	2.8	4%	\$45	\$127
San Diego- Sacramento	0.1	5%	\$78	\$7	0.1	4%	\$77	\$7
San Diego- Bay Area	3.5	39%	\$81	\$280	3.4	38%	\$81	\$274
Bay Area – San Joaquin Valley	8.0	11%	\$45	\$359	7.8	11%	\$45	\$354
San Joaquin Valley – LA Basin	8.4	12%	\$44	\$367	8.2	11%	\$44	\$360
Sacramento – San Joaquin Valley	2.1	9%	\$42	\$87	2.0	9%	\$43	\$86
San Diego – San Joaquin Valley	0.1	26%	\$55	\$4	0.1	27%	\$56	\$5
Within Bay Area Peninsula	6.2	0.1%	\$11	\$68	5.1	0.1%	\$11	\$57
Within North LA Basin	6.0	0.1%	\$12	\$75	5.0	0.1%	\$12	\$61
Within South LA Basin	3.5	0.0%	\$10	\$36	2.9	0.0%	\$10	\$30
North LA – South LA	6.8	0.2%	\$11	\$76	5.5	0.2%	\$11	\$61
Within San Diego region	0.4	0.0%	\$11	\$4	0.3	0.0%	\$11	\$3
Within San Joaquin Valley	2.3	0.0%	\$29	\$65	2.1	0.0%	\$29	\$62
Other	10.5	0.1%	\$53	\$554	10.3	0.1%	\$53	\$547
Total	98.3	0.1%	\$39	\$3,863	92.4	0.2%	\$41	\$3,749
Within San Diego region	0.4	0.0%	\$11	\$4	0.3	0.0%	\$11	\$3
Within entire LA Basin	16.3	0.1%	\$11	\$187	13.3	0.0%	\$11	\$153
Within entire MTC	6.2	0.1%	\$11	\$68	5.1	0.0%	\$11	\$57
Total between regions	75.3	1%	\$48	\$3,608	73.6	1%	\$48	\$3,536

Table 15 2035 Full System Annual Region-to-Region Ridership and Revenue, Increased Parking Cost Scenario

Market	May 2009 Operating Plan				Increased Parking Cost Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin - Sacramento	3.9	50%	\$66	\$261	3.9	50%	\$66	\$258
LA Basin - San Diego	22.5	14%	\$31	\$692	21.9	15%	\$31	\$672
LA Basin- Bay Area	12.4	48%	\$68	\$838	12.3	59%	\$68	\$836
Sacramento - Bay Area	3.1	4%	\$45	\$140	3.0	4%	\$45	\$135
San Diego- Sacramento	0.1	5%	\$78	\$8	0.1	4%	\$78	\$8
San Diego- Bay Area	3.8	41%	\$81	\$304	3.7	38%	\$81	\$299
Bay Area - San Joaquin Valley	8.6	10%	\$45	\$387	8.5	11%	\$45	\$383
San Joaquin Valley - LA Basin	8.7	11%	\$44	\$380	8.5	11%	\$44	\$374
Sacramento - San Joaquin Valley	2.2	9%	\$42	\$94	2.2	9%	\$43	\$93
San Diego - San Joaquin Valley	0.1	27%	\$55	\$5	0.1	27%	\$56	\$6
Within Bay Area Peninsula	6.5	0.1%	\$11	\$71	5.4	0.1%	\$11	\$59
Within North LA Basin	6.3	0.1%	\$12	\$77	5.1	0.1%	\$12	\$64
Within South LA Basin	3.6	0.0%	\$10	\$38	3.0	0.0%	\$10	\$31
North LA - South LA	7.0	0.2%	\$11	\$78	5.7	0.2%	\$11	\$64
Within San Diego region	0.4	0.0%	\$9	\$3	0.3	0.0%	\$11	\$4
Within San Joaquin Valley	2.4	0.0%	\$29	\$70	2.3	0.0%	\$29	\$38
Other	10.9	0.1%	\$53	\$576	10.8	0.1%	\$53	\$570
Total	102.4	0%	\$39	\$4,021	96.8	0.2%	\$41	\$3,923
Within San Diego region	0.4	0.0%	\$9	\$3	0.3	0.0%	\$11	\$4
Within entire LA Basin	16.9	0.1%	\$11	\$193	13.8	0.0%	\$11	\$158
Within entire MTC	6.5	0.1%	\$11	\$71	5.4	0.0%	\$11	\$59
Total between regions	78.7	0%	\$48	\$3,758	77.3	1%	\$48	\$3,705

Table 16 presents the average daily boardings at each high-speed rail station. The impact of higher parking costs on daily boardings varies by station. In 2030 and 2035, Millbrae, Palmdale, Burbank, Los Angeles and Norwalk all show percent reductions in boardings over 10%. Los Angeles has the highest reduction at 14% in 2030 and 16% in 2035. The explanation for the higher reductions at these stations is that the share of intra-region trips with origins at these stations is comparatively higher than other stations. This makes sense – a large share of trips from Millbrae likely travel short distances to San Francisco and San Jose, while a large share of trips from Palmdale, Burbank, Los Angeles and Norwalk all travel within the LA Basin. The increase in daily parking cost at these stations are consistent with the average increases for the entire corridor.

Table 17 presents daily station-to-station line loadings. The decrease in station-to-station trips is smallest (on average 1 to 2 percent) in the San Joaquin Valley, and in the San Diego region (on average 0 to 3 percent). This result is explained by the small share of intra-region ridership (i.e. of 24.4 million total trips with an end in the San Diego region, only 0.3 are intra-region trips (1 percent)). In the LA Basin, 30 percent of region ridership are intra-region trips, and in the Bay Area, 19 percent of regional ridership are intra-region trips. Shorter, intra-region trips are affected more significantly by higher parking costs, therefore station to station trips in the Bay Area (average reduction of 4 to 5 percent) and the LA Basin (average reduction of 5 to 10 percent) are more significantly impacted in 2030 and 2035.

Table 16 Full System Average Daily HSR Stations Boardings, Increased Parking Cost Scenario

Origin Station	May 2009 Operating Plan		Increased Parking Cost Scenario	
	2030	2035	2030	2035
San Francisco (Transbay)	31,100	32,700	29,700	31,200
Millbrae	4,000	4,100	3,500	3,600
Redwood City	7,700	7,900	7,000	7,300
San Jose	13,300	13,600	12,100	12,700
Gilroy	6,400	6,600	6,200	6,400
Sacramento	18,500	19,300	18,100	19,100
Stockton	6,500	6,800	6,300	6,700
Modesto/SP Downtown	4,500	4,800	4,400	4,600
Merced	2,500	2,600	2,500	2,600
Fresno	8,200	8,600	8,000	8,400
Bakersfield	8,300	9,000	8,100	8,800
Palmdale	18,300	19,500	16,400	17,300
Sylmar	13,700	14,200	12,900	13,400
Burbank	4,600	4,800	4,100	4,300
Los Angeles (Union)	32,700	34,800	28,100	29,100
Norwalk	7,600	7,900	6,800	7,000
Anaheim	23,700	24,600	21,700	22,400
City of Industry	6,900	7,200	6,400	6,700
Ontario	11,600	12,300	10,600	11,000
Riverside	14,400	15,200	13,700	14,300
Temecula / Murrieta	7,400	8,400	7,100	7,400
Escondido	7,800	8,200	7,800	8,300
University City	5,800	6,200	5,900	6,200
San Diego	20,000	20,400	19,200	20,300
Daily	285,500	299,700	266,400	279,000

Table 17 Full System Daily Line Loads, Increased Parking Cost Scenario

Origin Station	Destination Station	May 2009 Operating Plan		Increased Parking Cost Scenario	
		2030	2035	2030	2035
San Francisco (Transbay)	Millbrae	31,100	32,700	29,800	31,100
Millbrae	Redwood City	32,200	33,800	30,800	32,200
Redwood City	San Jose	35,100	36,900	33,800	35,400
San Jose	Morgan Hill	39,800	41,800	38,900	40,800
Morgan Hill	Gilroy	39,800	41,800	38,900	40,800
Gilroy	Merced	6,200	6,400	6,100	6,400
Gilroy	Fresno	34,200	35,900	33,700	35,100
Sacramento	Stockton	18,500	19,300	18,100	19,100
Stockton	Modesto/SP Downtown	24,200	25,300	23,700	25,000
Modesto/SP Downtown	Merced	27,200	28,400	26,700	28,100
Merced	Fresno	22,600	23,800	22,200	23,300
Fresno	Bakersfield	53,700	56,600	53,000	55,300
Bakersfield	Palmdale	49,800	52,100	49,100	50,900
Palmdale	Sylmar	58,400	60,900	55,900	57,800
Sylmar	Burbank	55,800	58,100	53,300	55,200
Burbank	Los Angeles (Union)	54,100	56,400	51,900	53,900
Los Angeles (Union)	Norwalk	27,100	28,500	25,100	26,000
Norwalk	Anaheim	23,700	24,800	21,700	22,400
Los Angeles (Union)	City of Industry	39,500	41,000	37,500	39,200
City of Industry	Ontario	41,900	43,400	39,800	41,800
Ontario	Riverside	41,300	42,900	39,700	41,800
Riverside	Temecula / Murrieta	37,500	39,000	36,200	38,200
Temecula / Murrieta	Escondido	33,000	34,000	32,000	33,900
Escondido	University City	25,500	26,400	24,700	26,200
University City	San Diego	19,800	20,600	19,200	20,300

3.0 Hanford Station Scenario

The CS project team modeled the Hanford Station Scenario operating plan for the Full System in 2030 and 2035. A description of the operating plan and analysis of the results compared to the baseline May 2009 operating plan is included within this section.

Operating Plan

The Hanford Station Scenario operating plan modifies the May 2009 operating plan through the addition of a new station near Hanford (between Fresno and Bakersfield stations). Four peak period HST trains stop at this station; pattern #28, #4, #20 and #15. Patterns #28 and #4 serve the full corridor between San Diego and San Francisco, while pattern #20 serves the corridor between Los Angeles and San Francisco. Pattern #15 serves the Los Angeles to Sacramento market. The addition of the Hanford/Visalia station adds 8 minutes run time to pattern #28 and 6 minutes run time to patterns #4, #20 and #15. All other peak period patterns are identical to the May 2009 operating plan. For off-peak service, patterns #26, #15, #4, and #16 stop at the Hanford/Visalia station. The addition of the Hanford/Visalia station adds 6 minutes run time to these four off-peak patterns. Tables 18 and 19 show the Full System operating plan for both the peak and off-peak periods, respectively.

2030 and 2035 Ridership and Revenue Results

The Hanford Station Scenario Full System travel forecast for 2030 resulted in a predicted annual high-speed rail ridership of 98.1 million (see Table 20). This represents a decrease of 0.2 million, or 0.2 percent, compared to the May 2009 operating plan. The added Hanford/Visalia station increases total ridership within the San Joaquin Valley by 0.5 million, while reducing ridership to/from the San Joaquin Valley by the same total. Other region-to-region ridership changes include 0.1 million less riders between the LA Basin and Bay Area and 0.1 million less riders between San Diego and the Bay Area. Passengers traveling between these two sets of markets would experience the added travel time (6-8 minutes) on 18 of 48 total trains operating during the peak period between these markets. The result is a slight decrease in total ridership compared to the May 2009 operating plan.

The change in market-to-market ridership translates directly to system revenues. System revenues between the LA Basin, Sacramento and Bay Area decrease by \$13 million. System revenues also decrease between the San Joaquin Valley and all other markets by \$13 million. However, for trips within the San Joaquin Valley, total revenues increase by \$15 million. For the entire system, the addition of the Hanford/Visalia station in 2030 results in total revenue of \$3,836 million, a decrease of \$27 million (0.7 percent) from the May 2009 operating plan.

Table 18 High-Speed Rail Operating Plan for the Hanford Station Scenario, Peak-Period

Station	Run Time from Start Station (minutes)													
	0	1	2	29	28	4	20	41	42	14	39	25	15	35
San Francisco	0	0	0	0	0	0	0			0	0			
Millbrae					15	15	15			15				
Redwood City/Palo Alto		20		20	25	25	25			25	20			
San Jose		35	30	35	40	40	40			40	35			
Gilroy		51		51	56	56				56				
Merced										91				
Modesto										108				
Stockton										124	104			
Sacramento										146	126	0	0	0
Stockton												22	22	22
Modesto													38	
Merced													55	
Fresno					97	97	93					68	78	68
Visalia/Hanford					111	111	107						92	
Bakersfield						144	140						125	
Palmdale				151	172	178						135	159	
Sylmar				173		200	189					157	181	
Burbank						209						166	190	
Los Angeles	160	175	163	188	206	219	204	0	0			176	200	154
Norwalk	173		176				217					189	213	
Anaheim	184		187				228					200	224	
City of Industry				208	226			19						174
Ontario		203		220	238	247		31						186
Riverside		216		233	251	260		44	35					199
Murrieta				250	268			61						216
Escondido				268	286			79						234
University City		258		283	301	302		94						249
San Diego		270		295	313	314		106	85					261
Frequency (trains per hour)	1	2	1	1	1	1	1	1	1	1	1	1	1	1

Notes: “|” indicates no station stop for indicated pattern.

Table 19 High-Speed Rail Operating Plan for the Hanford Station Scenario, Off-Peak

Station	Run Time from Start Station (minutes)							
	1	27	26	15	17	4	16	14
San Francisco	0	0	0		0	0	0	0
Millbrae			15			15	15	15
Redwood City/Palo Alto	20	20	25		20	25	25	25
San Jose	35	35	40		35	40	40	40
Gilroy	51	51	56		51	56	56	56
Merced								91
Modesto								108
Stockton								124
Sacramento				0				146
Stockton				22				
Modesto				38				
Merced				55				
Fresno			97	78		97	97	
Visalia/Hanford			111	92		111	111	
Bakersfield			144	125		144	144	
Palmdale		151		159	151	178		
Sylmar		173		181	173	200		
Burbank		182		190	182	209		
Los Angeles	175	192	200	200	192	219	200	
Norwalk				213	205		213	
Anaheim				224	216		224	
City of Industry		212	220					
Ontario	203	224	232			247		
Riverside	216	237	245			260		
Murrieta		254	262					
Escondido		272	280					
University City	258	287	295			302		
San Diego	270	299	307			314		
Frequency (trains per hour)	1	1	1	1	1	1	1	1

Notes: “|” indicates no station stop for indicated pattern.

Table 21 reflects a similar, although not as significant in magnitude, pattern of market ridership and revenue changes in 2035. The ridership decrease for long distance trips between San Diego / LA Basin and the Bay Area is the same as in 2030. For trips to/from the San Joaquin market, the decrease is 0.3 million compared to the 2035 May 2009 Operating Plan Scenario. The primary difference between 2030 and 2035 results is that the Hanford station increases ridership within the San Joaquin valley by 0.7 million in 2035, an increase of 0.2 million over the 2030 change.

Therefore, in 2035 total corridor ridership increases compared to the May 2009 Scenario by 0.4 million (0.4 percent). While ridership does increase in 2035, total revenue is still less than the May 2009 Scenario by \$7 million. The increase in ridership is for the short trips within the San Joaquin Valley, generating less revenue than the revenue lost by the ridership over the long distance trips between San Diego/LA Basin and the Bay Area.

Table 22 presents the average daily boardings at each high-speed rail station. Total boardings at Fresno, Hanford and Bakersfield are 1,110 more in 2030 and 1,200 more in 2035. While total boardings at end of line stations (San Francisco, Sacramento, Los Angeles, Anaheim and San Diego) decrease in total by 1,200 in 2030 and 1,200 in 2035.

Table 23 presents daily station-to-station line loadings. Compared to the May 2009 operating plan, the Hanford Station Scenario plan generally shows lower trips on all stations north of the Hanford station to San Francisco and Sacramento, and all stations south of the Hanford station to Los Angeles. From Los Angeles to San Diego, station-to-station trips are the same or slightly higher than the May 2009 operating plan in both 2030 and 2035.

Table 20 2030 Full System Annual Region-to-Region Ridership and Revenue, Hanford Station Scenario

Market	May 2009 Operating Plan				Hanford Station Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin – Sacramento	3.8	51%	\$66	\$254	3.8	50%	\$66	\$250
LA Basin – San Diego	21.4	15%	\$31	\$659	21.5	15%	\$31	\$659
LA Basin- Bay Area	12.3	59%	\$68	\$836	12.2	59%	\$68	\$827
Sacramento – Bay Area	3.0	4%	\$45	\$132	3.0	4%	\$45	\$132
San Diego- Sacramento	0.1	5%	\$78	\$7	0.1	4%	\$77	\$7
San Diego- Bay Area	3.5	39%	\$81	\$280	3.4	38%	\$81	\$275
Bay Area – San Joaquin Valley	8.0	11%	\$45	\$359	7.9	11%	\$45	\$358
San Joaquin Valley – LA Basin	8.4	12%	\$44	\$367	8.2	12%	\$44	\$360
Sacramento – San Joaquin Valley	2.1	9%	\$42	\$87	1.9	9%	\$42	\$81
San Diego – San Joaquin Valley	0.1	26%	\$55	\$4	0.1	27%	\$56	\$5
Within Bay Area Peninsula	6.2	0.1%	\$11	\$68	6.2	0.1%	\$11	\$68
Within North LA Basin	6.0	0.1%	\$12	\$75	6.1	0.1%	\$12	\$75
Within South LA Basin	3.5	0.0%	\$10	\$36	3.5	0.0%	\$10	\$36
North LA – South LA	6.8	0.2%	\$11	\$76	6.8	0.2%	\$11	\$76
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within San Joaquin Valley	2.3	0.0%	\$29	\$65	2.8	0.0%	\$28	\$80
Other	10.5	0.1%	\$53	\$554	10.3	0.1%	\$53	\$544
Total	98.3	0.1%	\$39	\$3,863	98.1	0.1%	\$39	\$3,836
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within entire LA Basin	16.3	0.1%	\$11	\$187	16.3	0.1%	\$11	\$187
Within entire MTC	6.2	0.1%	\$11	\$68	6.2	0.1%	\$11	\$68
Total between regions	75.3	0.5%	\$48	\$3,608	75.2	0.5%	\$48	\$3,580

Table 21 2035 Full System Annual Region-to-Region Ridership and Revenue, Hanford Station Scenario

Market	May 2009 Operating Plan				Hanford Station Scenario			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin - Sacramento	3.9	50%	\$66	\$261	3.9	50%	\$66	\$259
LA Basin - San Diego	22.5	14%	\$31	\$692	22.6	15%	\$31	\$695
LA Basin- Bay Area	12.4	48%	\$68	\$838	12.3	59%	\$68	\$835
Sacramento - Bay Area	3.1	4%	\$45	\$140	3.1	4%	\$45	\$140
San Diego- Sacramento	0.1	5%	\$78	\$8	0.1	4%	\$78	\$7
San Diego- Bay Area	3.8	41%	\$81	\$304	3.7	38%	\$81	\$301
Bay Area - San Joaquin Valley	8.6	10%	\$45	\$387	8.5	11%	\$45	\$387
San Joaquin Valley - LA Basin	8.7	11%	\$44	\$380	8.6	11%	\$43	\$373
Sacramento - San Joaquin Valley	2.2	9%	\$42	\$94	2.1	9%	\$43	\$88
San Diego - San Joaquin Valley	0.1	27%	\$55	\$5	0.1	27%	\$56	\$5
Within Bay Area Peninsula	6.5	0.1%	\$11	\$71	6.6	0.1%	\$11	\$72
Within North LA Basin	6.3	0.1%	\$12	\$77	6.3	0.1%	\$12	\$77
Within South LA Basin	3.6	0.0%	\$10	\$38	3.7	0.0%	\$10	\$38
North LA - South LA	7.0	0.2%	\$11	\$78	7.0	0.2%	\$11	\$79
Within San Diego region	0.4	0.0%	\$9	\$3	0.4	0.0%	\$11	\$4
Within San Joaquin Valley	2.4	0.0%	\$29	\$70	3.1	0.0%	\$28	\$86
Other	10.9	0.1%	\$53	\$576	10.8	0.1%	\$53	\$567
Total	102.4	0%	\$39	\$4,021	102.8	0.2%	\$39	\$4,014
Within San Diego region	0.4	0.0%	\$9	\$3	0.4	0.0%	\$11	\$4
Within entire LA Basin	16.9	0.1%	\$11	\$193	16.9	0.1%	\$11	\$194
Within entire MTC	6.5	0.1%	\$11	\$71	6.6	0.1%	\$11	\$72
Total between regions	78.7	0%	\$48	\$3,758	79.0	0.3%	\$47	\$3,748

Table 22 Full System Average Daily HSR Stations Boardings, Hanford Station Scenario

Origin Station	May 2009 Operating Plan		Hanford Station Scenario	
	2030	2035	2030	2035
San Francisco (Transbay)	31,100	32,700	30,900	32,400
Millbrae	4,000	4,100	3,900	4,100
Redwood City	7,700	7,900	7,600	8,000
San Jose	13,300	13,600	13,300	13,800
Gilroy	6,400	6,600	6,400	6,600
Sacramento	18,500	19,300	18,100	19,100
Stockton	6,500	6,800	6,400	6,700
Modesto/SP Downtown	4,500	4,800	4,400	4,700
Merced	2,500	2,600	2,700	2,800
Fresno	8,200	8,600	6,200	6,600
Hanford/Visalia			3,100	3,300
Bakersfield	8,300	9,000	8,200	8,900
Palmdale	18,300	19,500	18,300	19,200
Sylmar	13,700	14,200	13,600	14,100
Burbank	4,600	4,800	4,600	4,700
Los Angeles (Union)	32,700	34,800	32,600	33,800
Norwalk	7,600	7,900	7,600	7,800
Anaheim	23,700	24,600	23,400	24,200
City of Industry	6,900	7,200	6,900	7,200
Ontario	11,600	12,300	11,600	12,000
Riverside	14,400	15,200	14,400	14,900
Temecula / Murrieta	7,400	8,400	7,400	7,700
Escondido	7,800	8,200	8,100	8,500
University City	5,800	6,200	6,000	6,400
San Diego	20,000	20,400	19,800	21,100
Daily	285,500	299,700	285,300	298,600

Table 23 Full System Daily Line Loads, Hanford Station Scenario

Origin Station	Destination Station	May 2009 Operating Plan		Hanford Station Scenario	
		2030	2035	2030	2035
San Francisco (Transbay)	Millbrae	31,100	32,700	30,900	32,400
Millbrae	Redwood City	32,200	33,800	32,000	33,500
Redwood City	San Jose	35,100	36,900	34,800	36,500
San Jose	Morgan Hill	39,800	41,800	39,500	41,300
Morgan Hill	Gilroy	39,800	41,800	39,500	41,300
Gilroy	Merced	6,200	6,400	6,300	6,700
Gilroy	Fresno	34,200	35,900	33,800	35,200
Sacramento	Stockton	18,500	19,300	18,100	19,100
Stockton	Modesto/SP Downtown	24,200	25,300	23,700	25,000
Modesto/SP Downtown	Merced	27,200	28,400	26,600	28,000
Merced	Fresno	22,600	23,800	22,200	23,300
Fresno	Hanford/Visalia			53,800	56,100
Fresno Hanford/Visalia	Bakersfield	53,700	56,600	53,100	55,400
Bakersfield	Palmdale	49,800	52,100	49,000	50,800
Palmdale	Sylmar	58,400	60,900	57,700	59,700
Sylmar	Burbank	55,800	58,100	55,200	57,100
Burbank	Los Angeles (Union)	54,100	56,400	53,500	55,400
Los Angeles (Union)	Norwalk	27,100	28,500	26,900	27,900
Norwalk	Anaheim	23,700	24,800	23,500	24,200
Los Angeles (Union)	City of Industry	39,500	41,000	39,200	41,100
City of Industry	Ontario	41,900	43,400	41,600	43,600
Ontario	Riverside	41,300	42,900	41,000	43,100
Riverside	Temecula / Murrieta	37,500	39,000	37,300	39,500
Temecula / Murrieta	Escondido	33,000	34,000	32,900	34,900
Escondido	University City	25,500	26,400	25,400	27,000
University City	San Diego	19,800	20,600	19,800	21,100

4.0 Grasslands South Scenario

The CS project team modeled the Grasslands South Scenario operating plan for the Full System in 2030. This operating plan modifies the May 2009 operating plan by adding 14 minutes run time between Gilroy and Merced to represent the new alignment south of the Grasslands Ecological Area. This change in run times impacts 12 trains in the peak period serving the San Francisco - Sacramento corridor, and 10 trains in the off-peak. Tables 24 and 25 show the Full System operating plan for peak and off-peak periods, respectively.

The Grasslands South Scenario resulted in a predicted annual high-speed rail ridership of 97.9 million for year 2030 (see Table 26). This represents a decrease of 0.4 million, or 0.4 percent, compared to the May 2009 operating plan. The 14 minutes of added travel time between Gilroy and Merced decreases total ridership between the Bay Area, Sacramento and San Joaquin Valley markets. Ridership between all other markets is approximately the same as the May 2009 results. The primary ridership decreases in 2030 are:

- Between Sacramento and the Bay Area ridership decreases by 0.3 million (10 percent)
- Between the Bay Area and the San Joaquin Valley ridership decreases by 0.2 million (2.5 percent).
- Between Sacramento and the San Joaquin Valley ridership decreases by 0.1 million (5 percent).

The change in market-to-market ridership translates to overall decreases in system revenues. System revenues in 2030 between the Bay Area, Sacramento and San Joaquin Valley markets decrease by \$18 million (3 percent). For the entire system, the added travel time in the Gilroy to Merced corridor in 2030 results in total revenue of \$3,847 million, a decrease of \$16 million (0.4 percent) from the May 2009 operating plan.

Table 27 presents the average daily boardings at each high-speed rail station. Total daily boardings at San Francisco, Millbrae, Redwood City, San Jose, Sacramento, Stockton and Modesto stations decrease in total by 1,300 (1.5 percent). Boardings on the remainder of the corridor remain approximately the same.

Table 28 presents daily station-to-station line loadings. Compared to the May 2009 operating plan, daily high speed rail trips on the San Francisco to Merced corridor are 200 trips less from San Francisco to Millbrae, and 600 trips less between Gilroy and Merced. The pattern is similar between Sacramento and Merced, where daily high speed rail trips between Sacramento and Stockton are 500 less, and increase to a maximum of 600 trips less between Modesto and Merced. This is a result of less boardings at each station on the line, leading to a progressive decrease in the number of station-to-station trips between San Francisco, Sacramento and Merced.

Table 24 High-Speed Rail Operating Plan for the Grasslands South Scenario, Peak-Period

Station	Run Time from Start Station (minutes)													
	0	0	0	0	0	0	0			0	0			
San Francisco	0	0	0	0	0	0	0			0	0			
Millbrae					15	15	15			15				
Redwood City/Palo Alto		20		20	25	25	25			25	20			
San Jose		35	30	35	40	40	40			40	35			
Gilroy		51		51	56	56				56				
Merced										105				
Modesto										122				
Stockton										138	118			
Sacramento										160	140	0	0	0
Stockton												22	22	22
Modesto													38	
Merced													55	
Fresno					97	97	93					68	78	68
Bakersfield						138	134						119	
Palmdale				151	164	172						135	153	
Sylmar				173		194	183					157	175	
Burbank						203						166	184	
Los Angeles	160	175	163	188	198	213	198	0	0			176	194	154
Norwalk	173		176				211					189	207	
Anaheim	184		187				222					200	218	
City of Industry				208	218			19						174
Ontario		203		220	230	241		31						186
Riverside		216		233	243	254		44	35					199
Murrieta				250	260			61						216
Escondido				268	278			79						234
University City		258		283	293	296		94						249
San Diego		270		295	305	308		106	85					261
Frequency (trains per hour)	1	2	1	1	1	1	1	1	1	1	1	1	1	1

Notes: “|” indicates no station stop for indicated pattern. The Grasslands South Scenario operating plan includes additional 14 minutes run time between Gilroy and Merced.

Table 25 High-Speed Rail Operating Plan for the Grasslands South Scenario, Off-Peak

Station	Run Time from Start Station (minutes)							
	0	0	0		0	0	0	0
San Francisco								
Millbrae			15			15	15	15
Redwood City/Palo Alto	20	20	25		20	25	25	25
San Jose	35	35	40		35	40	40	40
Gilroy	51	51	56		51	56	56	56
Merced								91
Modesto								108
Stockton								124
Sacramento				0				146
Stockton				22				
Modesto				38				
Merced				55				
Fresno		97	93	78		97	97	
Bakersfield		138	134	119		138	138	
Palmdale		172		153	151	172		
Sylmar		194	183	175	173	194		
Burbank		203		184	182	203		
Los Angeles	175	213	198	194	192	213	194	
Norwalk				207	205		207	
Anaheim				218	216		218	
City of Industry		212	214					
Ontario	203	224	226			241		
Riverside	216	237	239			254		
Murrieta		254	256					
Escondido		272	274					
University City	258	287	289			296		
San Diego	270	299	301			308		
Frequency (trains per hour)	1	1	1	1	1	1	1	1

Notes: “|” indicates no station stop for indicated pattern. The Grasslands South Scenario operating plan includes additional 14 minutes run time between Gilroy and Merced.

Table 26 2030 Full System Annual Region to Region Ridership and Revenue, Grasslands South Scenario

Market	May 2009 Operating Plan				Grasslands South Scenario Operating Plan			
	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)	HSR Ridership (millions)	HSR Mode Share	HSR Avg. Fare (2008\$\$)	Revenue (2008\$\$ in millions)
LA Basin – Sacramento	3.8	51%	\$66	\$254	3.8	51%	\$66	\$254
LA Basin – San Diego	21.4	15%	\$31	\$659	21.5	15%	\$31	\$659
LA Basin- Bay Area	12.3	59%	\$68	\$836	12.4	60%	\$68	\$840
Sacramento – Bay Area	3.0	4%	\$45	\$132	2.7	4%	\$45	\$118
San Diego- Sacramento	0.1	5%	\$78	\$7	0.1	5%	\$78	\$7
San Diego- Bay Area	3.5	39%	\$81	\$280	3.5	39%	\$81	\$279
Bay Area – San Joaquin Valley	8.0	11%	\$45	\$359	7.8	11%	\$45	\$355
San Joaquin Valley – LA Basin	8.4	12%	\$44	\$367	8.4	12%	\$44	\$368
Sacramento – San Joaquin Valley	2.1	9%	\$42	\$87	2.0	9%	\$42	\$87
San Diego – San Joaquin Valley	0.1	26%	\$55	\$4	0.1	26%	\$56	\$
Within Bay Area Peninsula	6.2	0.1%	\$11	\$68	6.2	0.1%	\$11	\$68
Within North LA Basin	6.0	0.1%	\$12	\$75	6.1	0.1%	\$12	\$75
Within South LA Basin	3.5	0.0%	\$10	\$36	3.5	0.0%	\$10	\$36
North LA – South LA	6.8	0.2%	\$11	\$76	6.8	0.2%	\$11	\$76
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within San Joaquin Valley	2.3	0.0%	\$29	\$65	2.3	0.0%	\$29	\$65
Other	10.5	0.1%	\$53	\$554	10.4	0.1%	\$53	\$552
Total	98.3	0.1%	\$39	\$3,863	97.9	0.2%	\$39	\$3,847
Within San Diego region	0.4	0.0%	\$11	\$4	0.4	0.0%	\$11	\$4
Within entire LA Basin	16.3	0.1%	\$11	\$187	16.3	0.1%	\$11	\$187
Within entire MTC	6.2	0.1%	\$11	\$68	6.2	0.1%	\$11	\$68
Total between regions	75.3	1%	\$48	\$3,608	74.9	0.5%	\$48	\$3,592

Table 26 Full System Average Daily HSR Stations Boardings, Grasslands South Scenario

Origin Station	May 2009 Operating Plan		Grasslands South Scenario Operating Plan	
	2030	2035	2030	2035*
San Francisco (Transbay)	31,100	32,700	31,000	
Millbrae	4,000	4,100	3,900	
Redwood City	7,700	7,900	7,600	
San Jose	13,300	13,600	13,000	
Gilroy	6,400	6,600	6,400	
Sacramento	18,500	19,300	18,000	
Stockton	6,500	6,800	6,400	
Modesto/SP Downtown	4,500	4,800	4,400	
Merced	2,500	2,600	2,500	
Fresno	8,200	8,600	8,200	
Bakersfield	8,300	9,000	8,200	
Palmdale	18,300	19,500	18,300	
Sylmar	13,700	14,200	13,700	
Burbank	4,600	4,800	4,600	
Los Angeles (Union)	32,700	34,800	32,700	
Norwalk	7,600	7,900	7,600	
Anaheim	23,700	24,600	23,700	
City of Industry	6,900	7,200	6,900	
Ontario	11,600	12,300	11,600	
Riverside	14,400	15,200	14,500	
Temecula / Murrieta	7,400	8,400	7,400	
Escondido	7,800	8,200	8,100	
University City	5,800	6,200	6,000	
San Diego	20,000	20,400	19,900	
Daily	285,500	299,700	284,600	

Note: Year 2035 forecasts were not developed.

Table 28 Full System Daily Line Loads, Grasslands South Scenario

Origin Station	Destination Station	May 2009 Operating Plan		Grasslands South Scenario Operating Plan	
		2030	2035	2030	2035*
San Francisco (Transbay)	Millbrae	31,100	32,700	30,900	
Millbrae	Redwood City	32,200	33,800	32,000	
Redwood City	San Jose	35,100	36,900	34,800	
San Jose	Morgan Hill	39,800	41,800	39,300	
Morgan Hill	Gilroy	39,800	41,800	39,300	
Gilroy	Merced	6,200	6,400	5,600	
Gilroy	Fresno	34,200	35,900	34,300	
Sacramento	Stockton	18,500	19,300	18,000	
Stockton	Modesto/SP Downtown	24,200	25,300	23,700	
Modesto/SP Downtown	Merced	27,200	28,400	26,600	
Merced	Fresno	22,600	23,800	22,600	
Fresno	Bakersfield	53,700	56,600	53,800	
Bakersfield	Palmdale	49,800	52,100	49,900	
Palmdale	Sylmar	58,400	60,900	58,400	
Sylmar	Burbank	55,800	58,100	55,800	
Burbank	Los Angeles (Union)	54,100	56,400	54,100	
Los Angeles (Union)	Norwalk	27,100	28,500	27,200	
Norwalk	Anaheim	23,700	24,800	23,700	
Los Angeles (Union)	City of Industry	39,500	41,000	39,500	
City of Industry	Ontario	41,900	43,400	41,900	
Ontario	Riverside	41,300	42,900	41,300	
Riverside	Temecula / Murrieta	37,500	39,000	37,500	
Temecula / Murrieta	Escondido	33,000	34,000	33,000	
Escondido	University City	25,500	26,400	25,500	
University City	San Diego	19,800	20,600	19,800	

Note: Year 2035 forecasts were not developed.