

## ON THE CONSEQUENCES OF THE INCREASING COST PER MILE IN THE CENTRAL VALLEY

### Brief Note #20 – August 18<sup>th</sup> 2011

From the authors of *The Financial Risks Of California's Proposed High-Speed Rail Project*, six subsequent Briefing Papers, and *The Financial Analysis of Proposed CHSR Project*. Available at [www.cc-hsr.org](http://www.cc-hsr.org)

**Finding:** The increasing costs per mile in the August 2011 CHSRA EIRs validate the early 2011 independent estimates of roughly \$66Billion for the Phase One Corridor construction costs.

**Background:** The CHSRA 2009 Business Plan contained a set of construction costs for each of the seven segments that make up Phase One (San Francisco to Los Angeles/Anaheim). The total of these costs were \$43Billion in YOE (Year of Expenditure) \$. The earlier 2008 Plan had been for \$34Billion in 2008 \$s.

In late 2010, the CHSRA Board discussed where they were going to build their first segments. It became apparent that the costs they were discussing were much higher than those in the 2009 Plan.<sup>1</sup> CARRD had noted this 'disconnect' in their review of detailed engineering documents during the latter part of 2010. This new information led to two independent efforts, by CARRD and William Warren, to estimate more current cost estimates for Phase One and for the 'Entire System'. The results of these two efforts are presented in "*Big Trouble For California's \$66Billion Train*" and "*Financial Analysis of the CHSR Project*".<sup>2</sup> These reports shows the \$43Billion, which the CHSRA in 2009 said was the cost of building Phase One, was now in the range of \$66Billion in YOE (Year of Expenditure) based dollars. Additionally, using these costs per mile, the completion of the 'Entire System' which includes San Diego, Riverside, Oakland, and Sacramento was estimated to be about \$116Billion. These conclusions were some of the most important projections in the *Financial Analysis* report, as they led to the analysis of the various forms and magnitude of alternative mixes of the required financing.<sup>3</sup>

The August CHSRA EIRs from CHSRA gave seven alternative cost structures for the Merced to Fresno segment and twenty-four for the Fresno to Bakersfield segment.<sup>4</sup>

Averaging these estimates in each of the EIRs results in \$59Million/mile, based on the number of miles shown in the two EIRs. However, these EIR numbers are in 2010 dollars, not YOE (Year of Expenditure) dollars.

Merced to Bakersfield – Estimated Construction Costs per Mile (Millions \$)					
	11/2008 2008\$s	11/2009 YOE\$s	08/2011 2010\$s	08/2011 YOE\$s	01/2011 YOE\$s
<b>CHSRA Estimates</b>	\$40	\$41	\$59	\$67	na
<b>Independent Estimates</b>	na	na	na	na	\$73

Distributing the 2010\$s spending over a bell shaped curve covering five years; then inflating the yearly spending by the CHSRA's 2009 Business Plan specified inflation rate of 3%, leads to their \$11.8Billion in 2010 dollars becoming \$13.5Billion in YOE dollars – which is \$67Million/mile. These fifteen percent Engineering Design level projections are now within ten percent of the average (\$73Million/mile) of the January 2011 work CARRD and William Warren did in YOE dollars

**Conclusion:** The CHSRA cost increase from \$41Million/mile to \$67Million/mile is a 63% increase in about two years. CHSRA's \$67Million/mile is now within ten percent of CARRD and Warren's January estimate of \$73Million/mile. This \$73Million/mile is the basis of a Phase One estimated construction cost of \$66Billion, and the 'Entire System' construction cost estimate of \$116Billion. It is very likely that actual costs will exceed even these estimates.

<sup>1</sup> CHSRA Board Meeting Reports and Minutes, December 10, 2010

<sup>2</sup> *Big Trouble For California's \$66Billion Train*; March 2011, Figure 1, page 4, *Financial Analysis Report*, Exhibit 1 and Appendix A and B, June 2011, and Briefing Notes #16 and #17, August 2011. All available at [www.cc-hsr.org](http://www.cc-hsr.org)

<sup>3</sup> These are shown in the *Financial Analysis*'s Financial Summary (pages 8 and 9).

<sup>4</sup> CHSRA EIR for Merced to Fresno, August 2011, page S-23, and CHSRA EIR for Fresno to Bakersfield, August 2011, page S-23