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VIA EMAIL AND EXPRESS MAIL

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**Re: Joint Comments on Draft 2016 Business Plan**

Dear Mr. Richard, Honorable Board Members, and Mr. Morales,

On behalf of Community Coalition on High-Speed Rail (“CC-HSR”) and Citizens for California High-Speed Rail Accountability (“CCHSRA”), we submit the following comments on the Draft 2016 Business Plan (the “DBP”) prepared by the California High-Speed Rail Authority (the “Authority”). CCHSRA and CC-HSR submit these comments while knowing, from long experience of past Authority recalcitrance, entrenchment, and denial, that these comments may be falling on primarily deaf ears. We implore each Authority Board member to be objective, reasonable, and empathetic when considering these and other public comments. We also call upon each member’s fiduciary duty as well as his or her sense of public duty and responsibility when determining the adequacy of the DBP and influencing the direction of this Project.

We have reviewed comments submitted by the Gary Patton, County of Kings, and William Grindley, agree with those comments and incorporate them herein by reference. We have also reviewed the comments submitted by Mark Powell, agree with those comments and incorporate them herein by reference. We reiterate these commenters’ requests for answers to a number of important questions concerning the California High-Speed Train Project (the “Project”). The comments herein supplement those submitted by others. For the reasons stated below and in the incorporated comments, the Authority should revise the seriously flawed DBP before considering it for approval and submitting the final 2016 Business Plan (FBP) to the Legislature.

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## I. INTRODUCTION

CC-HSR and CCHSRA are grassroots, non-profit corporations based on the San Francisco Peninsula and in Kings County, California, respectively. These two groups have worked for years to ensure that the proposed California high-speed train project does not adversely affect the economy, environment, or the quality of life of California's existing communities. Their members are California residents, farmers, business people, and landowners who are concerned that the Project will have significant negative impacts throughout the state. Because of the Project's potential for extreme local, regional, and statewide environmental, economic, and social impacts, CC-HSR and CCHSRA have been engaged throughout the planning and environmental review processes for the Project and vigilant in monitoring and commenting on the Authority's ever-evolving plans for implementation.<sup>1</sup> Because the Authority has not candidly answered the tough questions facing the Project or resolved the considerable challenges, CC-HSR and CCHSRA and other concerned members of the public must again devote substantial resources and attention towards pointing out what the DBP and past business plans should have revealed. Instead, the groups observe that the DBP is just the latest manifestation of the Authority's penchant for evasion and manipulation.

As with previous so-called "business plans" and other glossy Authority documents, the DBP reads more like a propaganda or marketing piece than a serious and honest analysis of the costs, risks, benefits, and trade-offs of the Project. For years, it has been obvious to the concerned public that the Authority has been more concerned with protecting its agenda, and those that will profit from it, than with frankly and honestly assessing the merits, impacts, and costs of the Project. The Authority is not prioritizing the best interests of the current and future citizens of this State. The rosy tone and one-sided message of the DBP reveals the institutional bias of the Authority's staff, and, if adopted, by its Board.

As explained below, the DBP must be substantially revised to provide the public and the legislature the information and analysis required by Public Utilities Code, section 185033.

## II. DISCUSSION

### A. **The San Jose Over the pass to Shafter ("SOS") Line Will Not Generate Sufficient Ridership to Enable the HSR System to Operate at a Profit**

The Authority has previously acknowledged that an Initial Operating System ("IOS") from the Central Valley to the south (the IOS-South) would have higher ridership than an IOS to the north (the IOS-North).<sup>2</sup>

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<sup>1</sup> CC-HSR and CCHSRA submitted comments on the 2014 Business Plan. *See, e.g.*, CCHSRA comments on 2014 draft Business Plan, dated April 6, 2014, pp. 3-4; *see also* my testimony at April 10, 2014 Authority Board meeting, Transcript, pp. 27-29. Because many of the concerns previously raised about the Project have not been addressed or remedied, those comments are incorporated herein by reference.

<sup>2</sup> *See* 2012 Revised Business Plan, p. ES-3.

Based on factors including ridership and revenue forecasts, capital and operating costs, public input, and potential for private-sector investment, the Revised Plan identifies the IOS-South as the preferred implementation strategy. This will close the gap between Bakersfield and Palmdale and connect the Central Valley to the Los Angeles Basin at San Fernando Valley, creating the first fully operational high-speed rail system. This will be coupled with investments in Northern California to provide near term benefits and lay the foundation for high-speed rail service to San Jose and San Francisco. Upgrades to the existing San Joaquins service will provide further time savings.<sup>3</sup>

The newly proposed initial operating line, the San Jose Over the pass to Shafter (“SOS”) line is a portion of IOS-North (it terminates short of both San Francisco and Bakersfield). This portion of IOS-North will not even have as much ridership as IOS-North because it will not extend to and directly connect with the heavily urbanized Peninsula, including San Francisco and will not directly connect with one of the largest cities in the Central Valley, Bakersfield. Thus, by the Authority’s past assessments, the SOS line will have substantially lower ridership than the previously preferred IOS-South. The DBP indicates that the Authority has, at most, enough funding to complete the SOS line (assuming Cap and Trade funds remain available). The DBP does not explain how the SOS line will satisfy the statutory requirement to operate at a profit despite its lower projected ridership.

#### **B. The DBP Provides an Unrealistically Low Construction Capital Cost Estimate**

The DBP includes an unrealistically low, and frankly not believable, construction cost estimate for Phase 1 that represents an 8% decrease from the estimate provided in the 2014 Business Plan (“from \$67.6 billion to \$62.1 billion in YOE\$”).<sup>4</sup> For years many have criticized the construction cost estimates presented by the Authority in its Business Plans as unrealistically low.

The 2000 Business Plan estimated that it would cost just \$25 Billion to construct the entire statewide Project (including what is now known as Phase 2, connecting Sacramento and San Diego to the San Francisco to Los Angeles line).<sup>5</sup> At that time, the Authority was highly confident in its estimates of future construction costs.

**The Authority is confident that the capital cost estimates presented here will be sufficient to construct a high-speed train system.** Many of the cost components involved, such as electrification, signaling, rail, and track bed are quantities well known from rail projects around the world. The costs for major civil works, including tunneling and structures, are specific to California’s geology, seismic conditions, and labor markets. Previously completed civil

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<sup>3</sup> See 2012 Business Plan, p. ES-3.

<sup>4</sup> See DBP, p. 53.

<sup>5</sup> See 2000 Business Plan, p. 15.

projects in California, including freeway construction, major water projects, urban rail projects, and preliminary engineering work done for the Los Angeles to Bakersfield segment of the network (Caltrans, 1994), all provide guidance on these more specialized costs. Thus, **capital costs can be estimated with a high degree of confidence even though the statewide engineering has proceeded only to the conceptual planning level.**<sup>6</sup>

Now, the Authority is less confident in its cost estimates:

Although the estimates presented in this Draft 2016 Business Plan represent the best information we have available, **the schedules and estimates are subject to further changes based on both internal and external factors**, including the availability and timing of funding. **Estimates will continue to evolve over time as we receive additional information and the program advances.**<sup>7</sup>

The past assurances that the Authority could deliver the entire Project for a relatively low cost are now long gone. Now, the taxpaying public has no assurances that the Authority can deliver even just Phase 1 for an amount that is more than twice that estimated in 2000 to deliver the entire Project.

Past estimates did not fully and realistically account for:

1. the costs of relocating extensive infrastructure, such as roads, overpasses, irrigation and drainage canals, and gas, telecommunication, and electric lines;<sup>8</sup>
2. right-of-way acquisition costs;<sup>9</sup>
3. unaddressed technical issues, including, *inter alia*, the implications to HSR from widespread land subsidence in the Central Valley, more costly Project design changes demanded by local communities and railroads, and dedicated renewable

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<sup>6</sup> 2000 Business Plan, p. 16, emphasis added.

<sup>7</sup> DBP, p. 57, emphasis added.

<sup>8</sup> During the Authority Board's meeting on April 12, 2016, several Board members acknowledged the risks of cost escalation associated with relocating infrastructure. Because of the Authority's rudimentary 15% design-build approach and its limited investigation of infrastructure relocation requirements, Authority staff have acknowledged that they do not know the full cost of relocating required infrastructure.

In litigation challenging the EIR/S for the Merced to Fresno section of the Project ("M-F EIR/S"), counsel for petitioners pointed out that if the estimated \$1.5+ Billion costs for infrastructure relocation and modification within the 29-mile Construction Package 1 ("CP1") were extrapolated to the entire 130-mile Initial Construction Section ("ICS") the costs for infrastructure relocation and modification alone would be almost \$7 Billion. See Attachment A: Excerpt from Petitioners' Memorandum of Points and Authorities in Support of Preliminary Injunction, pp. 6-7.

<sup>9</sup> The Authority must provide a conservative estimate for ROW parcel acquisition necessary for the entire Project, especially since many landowners have disputed the accuracy of Authority appraisals and have refused to voluntarily sell their property to the Authority for the low amounts offered.

- energy sources to comply with the Authority's commitment to using 100% renewables;
4. the costs of mitigating project impacts (e.g., traffic mitigation caused by HSR interference with transportation facilities and disruption of established travel patterns, compensating for loss of wildlife habitat and for agricultural lands preservation, planting trees to offset construction GHGs, etc.);<sup>10</sup> and
  5. change orders that will likely be required during Project construction due to the Authority's 15% design-build approach (which defers too many design details).

Incredibly, rather than correct past inaccuracies and omissions that have resulted in underestimated construction costs, the DPB perpetuates them and predicts a lower overall capital cost for the Project than did the 2012 Business Plan and the 2014 Business Plan. The DBP does not fully account for the five cost categories identified above, despite recent evidence that utility relocations, ROW parcel acquisition, technical challenges, mitigation, and change orders will increase Project cost.<sup>11</sup> By including an unrealistically low capital cost estimates, Authority staff have proven themselves to be more interested in keeping the troubled Project "alive" politically than to honestly assessing the full cost of the Project.

Simply put, the DPB's 8% reduction in construction costs for Phase 1 is not believable. Much of the claimed cost savings come from items that were removed from the Project's scope. For example, the DBP removes a \$1.5 billion contribution towards the Transbay Transit Center ("TTC") in San Francisco. Several planned viaducts in San Jose and in Fresno have been replaced with at grade alignments. Value engineering has apparently modified plans for tunnels over the Pacheco Pass (but these modifications are not described). The Authority has also accepted "design variances" for Construction Package ("CP") 1 and CP 2-3, and is considering design variances for CP 4, that will cause new or more severe environmental impacts.<sup>12</sup> Items that are being descoped or modified have not been discussed at the Board level or vetted by local

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<sup>10</sup> These mitigation costs will be substantial, especially if the California Supreme Court determines that CEQA is not preempted by the Interstate Commerce Commission Termination Act ("ICCTA"). Despite past assurances that it would comply fully with CEQA, the Authority has attempted to invoke federal preemption to avoid CEQA's more stringent requirements. See briefs filed by parties and amici curiae in *Friends of the Eel River v. North Coast Railroad Authority*.

<sup>11</sup> See, e.g., Attachment B: CP1 Monthly Status Report for Authority Board Meeting 030816

<sup>12</sup> See Design Variance Reports for CP 1 and CP 2-3, available at: [http://www.hsr.ca.gov/docs/programs/construction/HSR\\_13\\_06\\_B3\\_PtD\\_Sub5\\_Design\\_Variance\\_Report.pdf](http://www.hsr.ca.gov/docs/programs/construction/HSR_13_06_B3_PtD_Sub5_Design_Variance_Report.pdf) and [http://www.hsr.ca.gov/docs/programs/construction/CP23\\_executed/P13\\_57\\_05\\_IVG\\_01\\_Design\\_Variance\\_Report.pdf](http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_05_IVG_01_Design_Variance_Report.pdf), respectively (accessed April 18, 2016); see also CRB, Executive Summary and Technical Proposal, p. 21 [Figure 1-11] ["Environmental Re-examination for ATCs – Changes to approved alternative right-of-way and moving viaduct to an at-grade embankment (ATC 2); raised HSR alignment (ATC 11); and shift in HSR alignment (ATC 13b) trigger reexamination for transportation, aesthetics, air quality, noise and vibration], 37-39 [description of ATCs], available at: [http://www.hsr.ca.gov/docs/programs/construction/CRB\\_Volume\\_2\\_Exec\\_Summary\\_and\\_Tech\\_Proposal.pdf](http://www.hsr.ca.gov/docs/programs/construction/CRB_Volume_2_Exec_Summary_and_Tech_Proposal.pdf) (accessed April 18, 2016).

agencies and the public. We understand from recent news reports that the Authority may be scheduling planning meetings where decisions will be made concerning these and other Project design changes. The Authority staff should not consider these items off the books or modified until there are decisions to remove them by the Authority Board, and those decisions may only be made after supplemental environmental review.

Instead, the DBP should be based on the most conservative cost estimates for Project design features that have already been presented to the public and vetted, not based on the untested cost-saving design change proposals. The purpose of the business plan requirement is to give the public and the legislature an honest assessment of the Authority's developed plans for Project implementation and the challenges those plans face. This DBP instead assumes many untested cost-saving changes for the sake of political expediency.

Additionally, how can the Authority delay construction of the Tehachapi and San Gabriel range crossings (which will require extensive tunneling through faulted and geologically complex strata) and the southern sections through urbanized Southern California—some of the most costly sections of the entire Project—and claim with a straight face that overall construction costs for Phase 1 (excluding the planned “enhancements” in the L.A. to Anaheim corridor) will decrease by approximately \$5 Billion? The DBP does not appear to have factored in expected cost escalation for construction materials and labor?<sup>13</sup> While construction costs declined in the recent recession, they can be expected to increase over time. Therefore, delayed construction of the sections in Southern California, including the tunnels and viaducts through and across the San Gabriel and Tehachapi Mountains and the relocation of extensive transportation infrastructure and other existing improvements in the urbanized southland can be expected to increase construction costs. The DBP appears to ignore or, even worse, purposefully disregard this fact.

In October 2015, the L.A. Times reported that the Authority had substantially underestimated the costs for crossing the Tehachapi mountains.<sup>14</sup> The article revealed how the Authority concealed a draft presentation from its lead consultant that reported a 31% increase in costs for this section of the Project (a.k.a., IOS-South). The Authority had previously instructed another contractor, URS, to not report a \$1 Billion increase in estimated costs to construct the Fresno to Bakersfield section.<sup>15</sup> In both instances, the Authority denied any

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<sup>13</sup> See Attachment C: CA Dept. of Transportation (“DOT”), Construction Cost Indices and Forecast; see also Attachment D: DOT, Price Index for Selected Highway Construction Items, 4th Quarter Ending December 31, 2015.

<sup>14</sup> See L.A. Times, \$68-billion California bullet train project likely to overshoot budget and deadline targets, dated Oct. 24, 2015, available at: <http://www.latimes.com/local/california/la-me-bullet-train-cost-final-20151025-story.html> (accessed April 16, 2016). This article is incorporated herein by reference.

<sup>15</sup> See L.A. Times, Estimated cost of key bullet train segment rises \$1 billion, dated May 7, 2014, available at: <http://www.latimes.com/local/la-me-bullet-train-costs-20140508-story.html> (accessed April 16, 2016); see also The Press Enterprise, Editorial: California's money train bleeding cash, May 15, 2014, available at: <http://www.pe.com/articles/cost-694564-rail-project.html> (accessed April 16, 2016); see also Attachment E: Letter from URS to Authority's Regional Manager re: Fresno to Bakersfield Section Regional Consultant's January 2014 Monthly Progress Report, dated May 5, 2014.

wrongdoing and rejected the assertion that costs would increase above the initial estimates. However, true to its typical form, it did not provide the public with any substantiation for its estimates. Despite the Authority's best efforts to conceal the information, evidence of cost increases continues to surface.<sup>16</sup>

In Section 5 of the DBP, the Authority claims that it will cost \$20,680,000,000 to complete the new shorter IOS from Shafter to San Jose.<sup>17</sup> It's unclear from the DBP and the appendices whether the Authority has considered the engineering and construction challenges associated with crossing the Pacheco pass. These engineering and construction challenges may be similar to those that will increase the costs of crossing the Tehachapi mountain range. According to Jacobs Associates, an engineering firm that provided conceptual tunnel design support for this portion of the Project:

The California High Speed-Rail Authority undertaking envisions approximately five twin bore tunnels totaling some 63,800 linear feet (20,726 m) through Pacheco Pass. The tunnels will range in length from 3,000 to 26,000 feet (915–7,925 m). Geologic conditions vary from interbedded sandstone, siltstone, shale, and conglomerate to intensely sheared rocks of the Franciscan Complex.

The HST tunnels along the Pacheco Pass corridor will be located in Seismic Zone 4—in close proximity to several active earthquake faults, including the San Andreas, Calaveras, Silver Creek, and Ortigalita faults. As such, it is likely that during their serviceable life the tunnels will be subjected to significant ground shaking caused by a major earthquake. Therefore, the conceptual design efforts for the tunnels focused on a final lining design that will ensure serviceability following the design earthquake.<sup>18</sup>

The challenges posed by tunneling through an area in close proximity to a number of active earthquake faults could be similar to those described in the L.A. Times article from last October reporting the risk of cost overruns associated with constructing the Project tunnels required to cross the Tehachapi mountain range.<sup>19</sup> The DBP's Capital Cost Basis of Estimate Report should list tunnels required for all of Phase 1 and should identify the estimated cost for each tunnel and the total estimated cost.

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<sup>16</sup> See, e.g., L.A. Times, [Changes could add hundreds of millions of dollars to first 29 miles of bullet train](http://www.latimes.com/local/california/la-me-bullet-change-orders-20160328-story.html), dated March 28, 2016, available at: <http://www.latimes.com/local/california/la-me-bullet-change-orders-20160328-story.html> (accessed April 16, 2016).

<sup>17</sup> See DBP, p. 57; see also DBP, Technical Supporting Document: Capital Cost Basis of Estimate Report, p. 12.

<sup>18</sup> See Jacobs Associates website at: [http://www.jacobssf.com/index.php/industry\\_overview/view/326](http://www.jacobssf.com/index.php/industry_overview/view/326) (accessed April 16, 2016).

<sup>19</sup> See fn. 14, *infra*.



According to a recent Authority-generated document “Tunnel construction costs generally range from \$200 to \$260 million per mile.”<sup>20</sup> Assuming that the costs here will be on the higher end of this range due to the active faults and geologically complex strata, the 12 miles of tunnels required to cross the Pacheco Pass alone would cost approximately \$3.1 Billion. This is approximately one third of the total amount the DBP projects it will cost to construct the entire 125-mile long San Jose to Merced section.<sup>21</sup> Estimating that it will only cost \$6 Billion for the remaining 113 miles of this section seems highly optimistic, at best.<sup>22</sup>

Of course, the costs of the alignment through urbanized areas in Gilroy, Morgan Hill, and especially San Jose will also be significant, especially where aerial structures or tunnels are planned and where grade separations and/or extensive infrastructure relocation is required. Chairman Richard recently acknowledged that the grade separations necessary in urban areas will be “enormously expensive,”<sup>23</sup> yet the DBP does not fully account for this large cost category.<sup>24</sup> In 2009, a State Auditor’s report identified the trend of increasing costs for grade separations, which then averaged \$26 Million each.<sup>25</sup> That average cost has only increased in the past seven years. The DBP’s Capital Cost Basis of Estimate Report should list the grade separations required for all of Phase 1 and should identify the estimated cost for each and the total estimated cost.

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<sup>20</sup> See Burbank to Los Angeles Project Section Supplemental Alternatives Analysis, April 2016, p. 29, citing Rostami, J., Sepehrmanesh, M., Gharahbaghm E.A., Mojtabei, N., Tunnelling and Underground Space Technology (2012).

<sup>21</sup> See DBP, Capital Cost Basis of Estimate Report, p. 15.

<sup>22</sup> The 2012 Business Plan included the following quote from a July 2010 World Bank report that estimated construction costs for high-speed rail projects:

Experience internationally is that construction and rolling stock capital costs [excluding the purchase or lease of real estate and professional services] . . . typically range from USD [\$56–\$112 million/mile], depending on the complexity of civil engineering works, the degree of urbanization along the route and required total rolling stock capacity. (2012 Business Plan, p. 3-12, quoting Amos, P., D. Bullock, J. Sondhi, High-Speed Rail: The Fast Track to Economic Development? (The World Bank, July 2010).

The DBP construction cost estimates purport to include the costs of rolling stock, real estate, and professional services. If the upper end of the World Bank average cost range (\$112 M/mile) is used to calculate the cost of the remaining 113 miles of the SJ-M Section, excluding the cost of ROW parcels, the cost would total more than \$12.6 Billion or more than twice the amount remaining in the DBP estimate for this section.

<sup>23</sup> See Silicon Valley Business Journal, Quicker arrival of high-speed rail causes expensive worries for Peninsula governments, dated March 25, 2016, available at: <http://www.bizjournals.com/sanjose/news/2016/03/25/quicker-arrival-of-high-speed-rail-causes.html> (accessed April 17, 2016).

<sup>24</sup> See DBP, p. 31; see also DBP, Capital Cost Basis of Estimate Report, p. 20.

<sup>25</sup> See California State Auditor Report 2009-406, dated February 2009, available at: <https://www.bsa.ca.gov/pdfs/sr2009/2007-106.pdf> (accessed April 17, 2016). A previous report by the State Auditor described how the actual costs of grade separations often exceed estimates. See BSA, Grade Separation Program: An Unchanged Budget and Project Allocation Levels Established More Than 30 Years Ago May Discourage Local Agencies From Taking Advantage of the Program, Report 2007-106, dated September 2007, pp. , available at: <http://www.bsa.ca.gov/pdfs/reports/2007-106.pdf> (accessed April 17, 2016).

The engineering and enhanced design features required to address challenges posed by land subsidence in the Central Valley also has apparently not been accounted for in the DBP.<sup>26</sup> According to the Authority's former Regional Consultant for the Central Valley sections:

**Regional Subsidence:** The potential for ground subsidence as a result of groundwater extraction and oil extraction was raised in the FB geotechnical reports, and its potential impacts on the FB HST structures are being discussed with the EMT. The RC has identified subsidence as a project risk, and considers this a program-wide issue that affects several HST segments and that may influence the choice of HST infrastructure, such as trackform. This information was expanded in the revised Draft Geotechnical and Seismic Hazard Report issued on April 19, 2013. Recent survey of the existing Authority monuments indicated up to 18 inches of settlement since their installation circa 2011, as well as some lateral movement.<sup>27</sup>

In response to concerns over subsidence, the Authority has simply assumed that it can modify the ballast track bed to adjust for declining land surface levels. This assumed but untested solution would not apply, however, to elevated sections of the Project which cannot be easily adjusted to compensate for subsidence. It also may not be sufficient if subsidence is rapid, uneven, or severe.

The DBP should be revised to provide (1) a conservative description of the challenges presented by all mountain ranges that Phase 1 sections must cross, including the Coast Range via Pacheco Pass, (2) a conservative description of the challenges presented by planning and implementing this Project through heavily urbanized areas, (3) a conservative description of the challenges presented by land subsidence, and (4) a realistic assessment of the anticipated costs associated with addressing these challenges. As to the fourth point, the cost estimates should also be presented in year of expenditure ("YOE") amounts, and the Bakersfield to Los Angeles Union Station YOE figures should be adjusted to reflect the increased costs that will result from postponing construction of these Project sections.

The Authority must also revise the DBP to include a conservative cost estimate for Phase 2 of the Project. Proposition 1A's business plan requirements mandate a summary of costs for all Project sections, not just Phase 1.<sup>28</sup> By omitting the cost estimate for Phase 2, the Authority has not satisfied its statutory duties and has not provided the information the Legislature

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<sup>26</sup> See Capitol Public Radio, Amy Quinton, [Central Valley Land Sink Issue For High Speed Rail, Flood Control, Water Deliveries](http://www.capradio.org/articles/2013/11/20/central-valley-land-sink-issue-for-high-speed-rail-flood-control-water-deliveries/), dated Nov. 20, 2013, available at: <http://www.capradio.org/articles/2013/11/20/central-valley-land-sink-issue-for-high-speed-rail-flood-control-water-deliveries/> (accessed April 16, 2016); see also Another Headache For High Speed Rail: The Earth Is Falling, available at: <http://sierra2thesea.net/central-valley/another-headache-for-high-speed-rail-the-earth-is-falling> (accessed April 16, 2016).

<sup>27</sup> See Regional Consultant Monthly Progress Report Fresno to Bakersfield, for the period April 27, 2013 through May 24, 2013, dated June 10, 2013, p. 6, available at: <http://www.calhsr.com/wp-content/uploads/2013/07/FB-URS-MPR-MAY-2013.pdf> (accessed April 16, 2016).

<sup>28</sup> See Pub. Utilities Code, § 185033(b)(1)(A); see also Streets & Hwy Code, § 2704.04(a).

deemed necessary. Applying the World Bank's 2010 range for average international HSR costs per mile, the cost for the entire 800-mile Project, not including rolling stock and professional services, produces a rough estimate of between \$44.8 and \$89.6 Billion. Of course, this cost range does not include the cost of acquiring a substantial amount of ROW property. Also, construction costs in California have increased since 2010, and California's challenging geology, its built environment, as well as its high land values must also be taken into account.

In Section 6 of the DBP, the Authority now claims that it has the necessary funding to complete the SOS portion of Phase 1.<sup>29</sup> However, the DBP relies heavily on the continued availability of Cap and Trade ("C&T") funds for its SOS. As explained in the section concerning risks below, for several reasons this source of funding may cease to be available.

When enacting Proposition 1A, the voters did not give the Authority a blank check. And yet the Authority has acted as if it can spend the public's money however it wishes, with little real oversight or accountability. True, the Democrats that dominate the state legislature have generally abdicated their oversight role. And Governor Brown has not shown concern for the Project's enormous and growing costs. But the taxpaying public is very concerned about cost escalation, especially in light of the Authority's practice of providing unrealistically low estimates and other state agencies' scandals concerning ballooning costs for infrastructure. State agencies have repeatedly shown that they cannot be trusted when it comes to their early optimistic cost estimates and controlling growing costs for mega projects.<sup>30</sup> The DBP should provide conservative cost estimates that reflect a realistic assessment of the many challenging obstacles that will tend to increase costs.

### **C. The Authority Again Refuses to Substantiate or Provide Sufficient Details for Its Construction Cost Estimates**

The Authority's past business plans and its other reports that provided information supporting cost estimates, while sometimes more detailed than the 2014 Business Plan and the DBP, have lacked substantiation for construction cost estimates.<sup>31</sup> When commenting on the Draft 2014 Business Plan, CCHSRA pointed out:

The 2014 Business Plan and the supporting technical appendices do not provide any substantiation for the Authority's current cost estimates. Without detailed substantiation the public and decisionmakers are unable to verify the accuracy of

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<sup>29</sup> See DBP, p. 61.

<sup>30</sup> See News To The Next Power, *The San Francisco-Oakland Bay Bridge: Basic Reforms for the Future*, July 2014, available at: <http://stran.senate.ca.gov/sites/stran.senate.ca.gov/files/DeWolkreportfinal.pdf> (accessed April 16, 2016); see also The Atlantic, CityLab, *From \$250 Million to \$6.5 Billion: The Bay Bridge Cost Overrun*, dated Oct. 13, 2015, available at: <http://www.citylab.com/politics/2015/10/from-250-million-to-65-billion-the-bay-bridge-cost-overrun/410254/> (accessed April 16, 2016); see also SF Gate, *Caltrans muzzled Bay Bridge critics, report says*, dated Aug. 4, 2014, available at: <http://www.sfgate.com/bayarea/article/Caltrans-muzzled-Bay-Bridge-critics-report-says-5660867.php> (accessed April 16, 2016).

<sup>31</sup> See Revised 2012 Business Plan, Ch. 3; compare, e.g., 2009 Report to the Legislature, pp. 84-89 with 2014 Business Plan and DBP.

the estimates. This is a conspicuous omission, given the substantiation for other estimates (e.g., O&M costs, ridership, etc.). Based on our review of “Task Orders” concerning relocating infrastructure to make way for the ICS, the initial construction contract for Construction Package 1 (“CP1”) of the ICS, the consultant contracts, and the major hurdles that the Authority faces in building Project sections through major metropolitan areas and over mountain ranges, we are convinced that the 2014 Business Plan again substantially underestimates the projected costs of the Project.

Given the recent cost escalation for the east span of the Bay Bridge and the cost escalation for Boston’s “Big Dig” project, it is imperative that the Authority substantiate its cost estimates and put measures in place to prevent costs from escalating. Without protective measures, taxpayers will bear the risk of higher Project costs.<sup>32</sup>

Last fall, in anticipation of the release of the DBP, we requested the substantiation for 2014 Business Plan construction cost estimate.<sup>33</sup> In response, after an inexplicable and apparently unnecessary two-week delay, the Authority asserted that the estimate for the last business plan was based on the 2012 Business Plan estimate and adjusted for inflation and there were no responsive documents.<sup>34</sup> We criticized that response as inconsistent with statements made by Authority officials and evasive and we reiterated our request for responsive documents.<sup>35</sup> We explained that the Authority’s response was directly contradicted by claims by Chairman Richard and CEO Morales that “scores” of analysis were used in developing those cost estimates. The Authority never provided a further response or any responsive documents. The Authority’s credibility is further eroded by these inconsistent statements concerning the basis for the 2014 Business Plan’s capital cost estimates.

The Authority has now included a “Capital Cost Basis of Estimate Report” that purports to provide an explanation for the construction cost estimates presented in the DBP. This effort at substantiating the estimates only appears to be an improvement over the 2014 Business Plan. But the appendix document emphasizes the differences in cost estimates between the 2014 Business Plan and the DBP. Because the 2014 Business Plan itself failed to substantiate its cost estimates and because those estimates were based on outdated and incomplete 2012 information, this comparison is hardly helpful. Instead, the asserted reductions in costs are meaningless.

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<sup>32</sup> See CCHSRA Letter Commenting on Draft 2014 Business Plan (“2014 DBP”), p. 4. CCHSRA’s and CC-HSR’s comments on the 2014 DBP are incorporated herein by this reference.

<sup>33</sup> See Attachment F: CCHSRA and CC-HSR’s Public Records Request, dated Oct, 16, 2015.

<sup>34</sup> See Attachment G: Authority Response to CCHSRA and CC-HSR Public Records Request, dated Nov. 12, 2015. The response letter did not explain why it was necessary to spend four weeks preparing a response that denied the existence of any responsive documents, the response should have been provided within 10 days, as required.

<sup>35</sup> See Attachment H: CCHSRA and CC-HSR Follow-up Letter re Public Records Request, dated Nov. 19, 2015.

Additional detailed information should be provided to substantiate the cost figures provided in Tables 7 through 17 Capital Cost Basis of Estimate Report. The information should include, at a minimum, the following:

- A brief description of the major features of each Project section (e.g., tunnels, viaducts, stations);
- A brief description of necessary major modifications to the existing roadways, utilities, and structures for each section;
- A brief description of the ROW parcels that must be acquired for each section; and
- A description of any unique features within a section that may lead to cost escalation.

The Authority should then provide corresponding cost estimates to each of the items described in the above categories and total costs for each category. Only by providing this detailed information, which can be scrutinized by the public, can the Authority claim that it has been “transparent.”

We requested substantiation for the 2014 Business Plan construction cost estimates because we believed they would inform our analysis of the DBP. Because responsive documents were never provided, and because the DBP also fails to include substantiation, we, the public in general, and the legislature, will be unable to verify the accuracy of the DBP’s cost estimates. Given the Authority’s track record of obfuscation, evasion and concealment,<sup>36</sup> we can only conclude that the Authority purposefully makes its cost projections opaque.

Please revise the DBP to include more detailed information and substantiation supporting construction cost estimates.

**D. The DBP Does Not Adequately Address the Significant Risks to Successful Project Implementation.**

**1. The DBP Does Not Analyze the High Risk of Cost Escalation Caused by the Authority’s Failure to Meet Milestones on Schedule.**

The schedule and timeline for constructing the Project has been slipping steadily for years. When Project planning was in its early stages, the Authority’s predecessor agency, the Intercity High Speed Rail Commission, expected the entire statewide Project to take only 10 to 15 years to fully implement, from commencement of planning through the end of

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<sup>36</sup> See news articles cited in Section II.B., above.

construction.<sup>37</sup> Yet already 10 years have elapsed since the Statewide PEIR/S was finalized and certified, and construction in the Central Valley is only now commencing.<sup>38</sup>

The Authority’s assurances concerning the Project milestones that will be met are not worth the considerable volume of paper their printed on.

Scheduled Milestones				
Document	ICS/FCS	Phase 1/SOS	Phase 2	Full System Operational
<b>2000 Business Plan</b>	N/A	Unspecified	Unspecified	2020 <sup>39</sup>
<b>2005 Statewide PEIR/S</b>	Unspecified	Unspecified	Unspecified	2020 <sup>40</sup>
<b>FRA/CHSRA Coop. Agmt., Amd. 5</b>	2017 <sup>41</sup>	Unspecified	Unspecified	Unspecified
<b>2012 Partially Revised Bay Area PEIR/S</b>	Unspecified	2028 (blended Phase 1) 2033 (full) <sup>42</sup>	Unspecified <sup>43</sup>	Unspecified
<b>2012 Business Plan</b>	2017 <sup>44</sup>	2028	Unspecified	Unspecified
<b>M-F FEIR/S</b>	2018 <sup>45</sup>	2028	2027	2035
<b>F-B FEIR/S</b>	2022 <sup>46</sup>	2026	2027	2035
<b>2014 Business Plan</b>	Unspecified	2028 <sup>47</sup>	Unspecified	Unspecified
<b>2016 Business Plan</b>	Unspecified <sup>48</sup>	2028 <sup>49</sup>	Unspecified <sup>50</sup>	Unspecified

<sup>37</sup> See Attachment I: Excerpts from 1996 Intercity HSRC Action Plan, p. 9-1 [“High-speed rail would be a major infrastructure project that would be implemented over a 10 to 15 year period, on par with building California’s freeway system or water projects”].

<sup>38</sup> See Sacramento Bee, Groundbreaking at Fresno for California high-speed rail, dated Jan. 6, 2015, available at: <http://www.sacbee.com/news/politics-government/capitol-alert/article5519280.html> (accessed April 17, 2016).

<sup>39</sup> See 2000 Business Plan, p. 15 [Project “implementation is expected to take 16 years from the start of the environmental review process to full operation”], 17 [describing HSR service beginning in 2020], 58.

<sup>40</sup> See 2005 Statewide EIR/S, p. S-4 [describing HSR service beginning in 2020]

<sup>41</sup> See Grant Agreement, Amendment 5, p. 56; see also March 2011 Statement of Work attached to Grant Agreement, Amendment 5, p. 9, available at: [http://www.hsr.ca.gov/docs/about/funding\\_finance/HSIPR/M-B%20Application.pdf](http://www.hsr.ca.gov/docs/about/funding_finance/HSIPR/M-B%20Application.pdf) (accessed April 15, 2016).

<sup>42</sup> See 2008 Partially Revised Bay Area EIR/S, p. 5-4.

<sup>43</sup> See *id.* at p. 10-5.

<sup>44</sup> 2012 Business Plan, p. 2-13.

<sup>45</sup> See M-F EIR/S, pp. 1-29 – 1-30 [added explanation re discrepancies between the timeline assumed in the M-F EIR/S analysis and the timeline assumed in the 2012 Business Plan].

<sup>46</sup> See Fresno to Bakersfield section EIR/S (“F-B EIR/S”), pp. 1-30 – 1-33 [added explanation re discrepancies between the timeline assumed in the F-B EIR/S analysis and the timeline assumed in the 2012 Business Plan].

<sup>47</sup> See 2014 Business Plan, p. 3.

<sup>48</sup> See DBP, pp. 85-86.

Given the Authority's poor track record in meeting the milestone's it has previously set, there is a strong likelihood that the schedule for Project implementation will slip even further. The DBP must analyze the very real risk that delays in implementation will increase Project costs. The current section of the DBP that addresses Risk Management (Section 9) mentions the possibility of delays that lead to increased construction costs, but it does not address the likelihood of delay or the amount that construction costs may increase for each month or year of delay.

**2. The Project's Potential to Exacerbate Public Health Problems Caused by the Valley Fever Fungus May Delay Timely Project Completion and Increase Costs.**

The serious public health hazards posed by Valley Fever (*Coccidioides immitis*) were brought to the Authority's attention in 2014, during its process of approving the Fresno to Bakersfield section of the Project. At that time, members of the public pointed out that the project-level EIR/S for that section did not adequately address the environmental impacts posed by Valley Fever. Construction of the Fresno to Bakersfield section alone will require excavation, transport, placement, and compaction of at least 24 million cubic yards of fill dirt.<sup>51</sup> Moving this massive volume of soil carries the risk of spreading Valley Fever.

The Authority assumed that standard dust control measures would be sufficient to address Valley Fever: on this basis, the Authority concluded, without analysis or factual support, that the risk of spreading Valley Fever during construction or operation was less than significant.<sup>52</sup> In contrast, in 2013 the CEC recommended enhanced dust control measures to reduce a project's potential to spread Valley Fever. Commenters requested that the F-B EIR/S be revised to provide a robust and transparent analysis of the risk the Project may exacerbate the Valley Fever problem. The Authority refused and it still has not squarely addressed the risks posed by Valley Fever and the Project's potential to exacerbate those risks.

The Valley Fever problem may also expose the Authority to substantial liability risks. Construction workers successfully sued CalTrans for failing to warn them of the risk of contracting Valley Fever.<sup>53</sup> In that lawsuit the jury awarded the victims \$12 Million.<sup>54</sup> Has the

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<sup>49</sup> See DBP, p. 98.

<sup>50</sup> The 2016 vaguely predicts that sometime after 2015 there will be "Further planning and eventual construction of Phase 2 extensions to Sacramento and San Diego." (p. 86.)

<sup>51</sup> The F-B EIR/S only reported the need for 11.3 million cubic yards of fill dirt for the 114-mile Fresno to Bakersfield section. (F-B EIR/S, pp. 3.9-1 – 3.9-2.) In contrast, the Authority's application to the SJVAPCD for Indirect Source Review ("ISR") provided a more accurate estimate of the amount of fill required for CP1c, CP2 and CP3. There, the Authority's stated that 24 million cubic yards of imported fill would be required for only 70 miles of the 114-mile Section, directly contradicting the information and impact analysis in the FEIR/S.

<sup>52</sup> See Staff Response to Comments Raised Orally on May 6, 2014, p. 1. While the Staff Response document asserts that the F-B EIR/S analyzed the potential to cause Valley Fever impacts, Chapter 3.3 of that document, which addresses air quality impacts does not even mention Valley Fever.

<sup>53</sup> See L.A. Times, [Jury awards \\$12 million in fungus-related valley fever lawsuit against Caltrans](http://www.latimes.com/local/lanow/la-me-ln-caltrans-lawsuit-20160122-story.html), available at: <http://www.latimes.com/local/lanow/la-me-ln-caltrans-lawsuit-20160122-story.html> (accessed April 16, 2016).



Authority considered the risk that its construction workers, members of the public, or local jurisdictions, may sue if Project construction causes Valley Fever infections?

**3. The Growing Problem of Land Subsidence in the Central Valley Will Cause Engineering and Maintenance Costs to Soar.**

As stated in comments concerning the DBP's unrealistically low construction cost estimates, above, the issue of land subsidence also poses risks to the Project's budget and completion timeline. The Authority's regional consultant expressed concerns about subsidence in 2013, but the Authority does not appear to have yet addressed those concerns in a serious manner.<sup>55</sup> Instead, as with so many other challenges, it simply assumes there will be a cheap and relatively easy solution.

However, subsidence can cause major damage to infrastructure, including to canals, roadways, and the HSR trackbed.<sup>56</sup> Designing the Project to avoid damage caused by subsidence and repairing any damage that does occur will add substantial cost to the Project that the DBP must account for.

**4. All Necessary Third Party Agreements with Railroads Are Still Not in Place Compromising The Availability of Federal Funds.**

The Authority still has not entered into all necessary agreements with railroads concerning the use of, or impingement upon, their rights-of-way along what is now described as the "First Construction Section" ("FCS") (a shrunken version of the 130-mile Initial Construction Section ("ICS)).<sup>57</sup> In fact, earlier this month the Authority finally delegated Authority to its staff to negotiate Relocation and Construction agreements and a Joint Corridor Agreement with Burlington Northern Santa Fe Railroad ("BNSF") Railroad ("BNSF Agreements for the FCS").

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<sup>54</sup> *Ibid.*

<sup>55</sup> In December, 2014, the Authority issued a Request for Qualifications ("RFQ") for firms to provide engineering services to address subsidence issues in the Central Valley and Antelope Valley. See Request for Qualifications for Professional and Technical Ground Subsidence Study Services, dated Dec. 5, 2014, available at: [http://www.hsr.ca.gov/docs/about/doing\\_business/HSR14\\_31\\_RFQ\\_Ground\\_Subsidence\\_Study.pdf](http://www.hsr.ca.gov/docs/about/doing_business/HSR14_31_RFQ_Ground_Subsidence_Study.pdf) (accessed April 17, 2016). However, it does not appear that a contract has been awarded for this work or that any work has been performed to address the issue. See Memorandum re Preaward Review HSR14-31, dated May 13, 2015, available at: [http://hsr.ca.gov/docs/brdmeetings/2015/brdmtg\\_060915\\_FA\\_14\\_Results\\_Memo\\_HSR14\\_31.pdf](http://hsr.ca.gov/docs/brdmeetings/2015/brdmtg_060915_FA_14_Results_Memo_HSR14_31.pdf) (accessed April 17, 2016).

<sup>56</sup> See Tara Moran, Janny Choy, and Carolina Sanchez, The Hidden Costs of Groundwater Overdraft (Stanford Woods Institute for the Environment, September 2014), ["Land surface elevation changes can have serious consequences for infrastructure, including the loss of conveyance capacity in canals, diminished levee effectiveness, and damage to roads, bridges, building foundations, and pipelines"] available at: <http://waterinthewest.stanford.edu/groundwater/overdraft/index.html> (accessed April 16, 2016).

<sup>57</sup> See Attachment J: Staff Report to Authority Board re "Consider Delegating Authority to Negotiate and Finalize Agreements with the BNSF Railway Company (BNSF)", dated April 12, 2016.



Yet, the December 21, 2012 Amendment No. 5 to the Grant Agreement between the Authority and the FRA states:

The Grantee [Authority] represents that it has entered into and will abide by, or will enter into and abide by, a written agreement, in form and content satisfactory to FRA, with any railroad owning property on which the Project is to be undertaken, ... **The Grantee may not obligate or expend any funds (federal, state, or private) for final design and/or construction of the Project, or any component of the Project, without receiving FRA's prior written approval of the executed railroad agreement satisfying the requirements of this section [the ICS].**<sup>58</sup>

Under the clear and unmistakable language of the Grant Agreement quoted above, the Authority must have entered into the BNSF Agreements for the FCS (and all other necessary agreements with BNSF and the Union Pacific (“UP”) Railroad) before it can “obligate” or “expend” (spend) **any** of the federal grant funds for design and construction of the FCS portion of its Project. Pursuant to this contractual language between the federal Grantor and State Grantee, the Federal funds should simply not be presently available to the Authority.

Resolution #HSRA 16-11, adopted by the Authority Board implicitly acknowledged the importance of the railroad agreements by stating: “executing agreements for relocation, construction and joint corridor sharing with BNSF Railway are critical to successfully constructing and operating the First Construction Section in the Central Valley.” The DBP, however, does not address the risk of outstanding railroad agreements to “on time” and “on budget” delivery of the FCS and SOS.

Many miles of the Authority’s proposed FCS alignments are located contiguous to, and maybe even within, the rights-of-way of both the UP and the BNSF Railroad. The work required within the FCS pursuant to the Agreements with BNSF is substantial. The staff report concerning Resolution #HSRA 16-11 summarized the anticipated costs for this work as follows:

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<sup>58</sup> Grant/Cooperative Agreement between FRA and Authority, Amendment No. 5, dated December 5, 2012, p. 8 (10 pdf) (“Grant Agreement, Amendment 5”), emphasis added, available at: [http://www.hsr.ca.gov/docs/about/funding\\_finance/funding\\_agreements/FR-HSR-0009-10-01-05.pdf](http://www.hsr.ca.gov/docs/about/funding_finance/funding_agreements/FR-HSR-0009-10-01-05.pdf) (accessed April 16, 2016).

DESCRIPTION	CP 1	CP 2-3	CP 4
TRACK STRUCTURE & TRACK		\$23,595,666	\$11,537,588
SITWORK (REMOVAL OF BALLASTED TRACK)		\$270,638	
COMMUNICATIONS AND SIGNALING		\$6,968,637	\$3,256,621
PROFESSIONAL SERVICES (FINAL DESIGN, PROJECT MANAGEMENT FOR DESIGN, CONSTRUCTION ADMIN & MANAGEMENT, PERMITS & FEES, SYSTEMS START-UP)		\$4,580,835	\$2,415,337
BNSF FLAGGING SERVICES, DOCUMENT REVIEW AND INSPECTIONS	\$12,040,600	\$23,696,740	\$7,483,660
TOTAL BY CP	\$12,040,600	\$59,112,517	\$24,693,206
ESCALATION 2014 3RD QTR. TO 2016 1ST QTR. (@ 3.75%/YR.)		\$2,216,719	\$925,995
SUBTOTAL FOR CP01, CP 2/3, CP04 AND ESCALATION			\$98,989,037
		ROUNDED	\$100,000,000

The Authority is currently construction CP1 and has entered into or will enter into Design-build contracts for CP-2, CP-3, and CP-4. The November 2012 Statement of Work in Grant Agreement, Amendment 5 states that the Authority expects to complete construction of the Merced to Fresno Section and the Fresno to Bakersfield Section (a portion of the Project that extends substantially beyond the termini of the FCS “by the end of September 2017.”<sup>59</sup> The lack of railroad agreements (as well as many other challenges, including the slow progress of obtaining ROW properties, incomplete environmental review for portions of the F-B Section and M-F Section) will likely substantially interfere with the Authority’s ability to meet its September 2017 completion target. The DBP does not address this.

Further, as was apparent at the Authority Board’s April 12, 2016 meeting, the Authority has still not entered into all railroad agreements necessary for construction of the rest of the SOS. In fact, a March 2016 Federal Railroad Presentation indicates that the majority of railroad agreements remain outstanding.

**Railroad Agreements:**

Entity	Agreement Status
UPRR	5 executed, 1 pending
BNSF	1 executed, 4 pending
SJVR	1 executed, 3 pending

Source: FRA, Grant Update and Status Briefing, March 2016

Thus, the Authority cannot count on the availability of Federal funding in its DBP until all necessary railroad agreements are final, executed, and approved by the FRA.

<sup>59</sup> See Grant Agreement, Amendment 5, pp. 56-57.

The DBP superficially acknowledges risks stemming from “Delays associated with railroad agreement review and approval.”<sup>60</sup> But it does not wrestle with the contractual implication of the outstanding railroad agreements: namely, unavailable Federal funding for the FCS.

Thus, as CCHSRA pointed out in its comments on the 2014 Business Plan, “under the clear, unmistakable requirements of the Grant Agreement, it is difficult to see how the FRA can legally allow the Authority to obligate or spend federal grant funds before the essential requirement of master agreements with the railroads has been satisfied.” CCHSRA understated the problem for the Authority: the absence of 100% of the required Railroad Agreements to complete the FCS should currently be a complete bar towards the Authority’s access to the Federal funding.

**5. Current Project Designs Do Not Reach the Required Phase 1 Termini: Union Station in L.A. and Transbay Transit Center in S.F.**

The DBP indicates that the “extension” from San Jose to San Francisco would terminate at the existing Caltrain station at 4<sup>th</sup> and King St.<sup>61</sup> This station, however, is not the required location for the norther terminus of Phase 1.

The Bay Area PEIR stated that:

The Transbay Transit Center site is the preferred station location option for the San Francisco HST Terminal. The Transbay Transit Center would offer greater connectivity to San Francisco and the Bay Area than the 4<sup>th</sup> and King site (about a mile from the financial district) because of its location in the heart of downtown San Francisco and since it would serve as the regional transit hub for San Francisco....

[T]he Transbay Transit Center is compatible with existing and planned development and is the focal point of the Transbay redevelopment plan that includes extensive high-density residential, office, and commercial/retail development. Sensitivity analysis on the Pacheco Pass "Base" forecasts (low-end forecasts) concluded that the Transbay Transit Center would attract about 1 million more annual passengers a year by 2030 than the 4th and King station location option.<sup>62</sup>

In April 2010, the Authority Board voted to designate the TTC as the northern terminus for Phase 1 of the high-speed rail system.

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<sup>60</sup> DBP, p. 92.

<sup>61</sup> See DBP, pp. 61, 64.

<sup>62</sup> 2008 Bay Area PEIR/S, p. 8-18.

The DBP does not address the expansion of the TTC to accommodate Project requirements. It also does not address the costs and schedule for constructing the extension from the 4<sup>th</sup> and King Station to the Transbay Transit Center, a project known as the Downtown Rail Extension (“DTX”).<sup>63</sup> We understand that the cost for DTX will be enormous,<sup>64</sup> but the DBP fails to include this cost in its Phase 1 estimates.

The DBP also lacks detailed information concerning the logistics for getting to the southern terminus of Phase 1, Union Station, and the associated costs. After years of planning for a tunnel alignment into Union Station, the Authority has again changed course by eliminating the plan for a tunnel and identifying an at-grade alignment.<sup>65</sup> While the Capital Cost Basis of Estimate Report includes a half million cost increase for planned work at Union Station, it does not provide any information concerning the work involved there, or within the approach alignment to Union Station, or the risk that the projected costs will increase.<sup>66</sup> For example, how will the new at-grade alignment cross I-5 and SR 110 near Union Station and how much will that crossing cost? In addition, the DBP does not address how this change, which, because of its serpentine design, will likely result in longer travel times between Union Station and Burbank, may compromise the Project’s ability to meet statutory speed requirements.

**6. Because the Transbay Transit Center Has Limited Capacity for Trains, the Authority Cannot Satisfy Operational Headway Requirements of 12 Trains Per Hour, In and Out of the Station.**

The Transbay Transit Center is apparently being designed to only handle four (4) trains in and out per peak hour (4 tpph/d), a frequency that is only one-third (1/3) of the statutory headway requirement of a train every five minutes or less (12 trains per hour).<sup>67</sup> This design is inconsistent with statutory requirements for HSR.

In January 2009, the Authority apparently informed the Transbay Joint Powers Authority (“TJPA”) that the TTC would need to accommodate 12 trains per hour.<sup>68</sup> However, the TTC has

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<sup>63</sup> See Transbay Joint Powers Authority Website: <http://transbaycenter.org/project/downtown-rail-extension> (accessed April 16, 2016).

<sup>64</sup> See StreetsBlog SF, [Guest Editorial: SF Needs to Get Serious About Connecting Caltrain](http://sf.streetsblog.org/2016/01/05/guest-editorial-sf-needs-to-get-serious-about-connecting-caltrain/) [DTX will cost approximately \$2.6 Billion], available at: <http://sf.streetsblog.org/2016/01/05/guest-editorial-sf-needs-to-get-serious-about-connecting-caltrain/> (accessed April 16, 2016).

<sup>65</sup> Burbank to Los Angeles Project Section Supplemental Alternatives Analysis, April 2016, p. 3.

<sup>66</sup> See DBP, Technical Supporting Document: Capital Cost Basis of Estimate Report, p. 16.

<sup>67</sup> See Draft Supplemental Environmental Impact Statement/Environmental Impact Report for the Transbay Transit Center Program (“TTC DSEIS/R”), dated December 2015, pp. 2-14 [no project alternative includes four HSR tpph/d], 2-18 [project analyzed in DSEIS/R assumes same operational requirements]; available at: [http://transbaycenter.org/uploads/2015/12/TJPA\\_Draft\\_SEIS-EIR\\_Main\\_Document\\_Final.pdf.pdf](http://transbaycenter.org/uploads/2015/12/TJPA_Draft_SEIS-EIR_Main_Document_Final.pdf.pdf) (accessed April 16, 2016); Sts. &Hy. Code, § 2704.09(c). Because the statute does not distinguish between peak hours and non-peak hours, the requirement for 12 trains per hour requires for all hours of HSR operation.

<sup>68</sup> See Presentation to TJPA Board, dated March 12, 2009 [Authority informed TJPA that “All trains coming to Bay Area will go into the [TTC]”).

since been planned to accommodate only HSR's near-term ridership, not its forecasted long-term ridership demand.<sup>69</sup>

The statutory headway requirements for HSR are not divided into near-term and long-term levels. The DBP is required to evaluate the costs and challenges to fully carrying out the HSR Project pursuant to statutory requirements, including the requirement that “[a]chievable operating headway (time between successive trains) shall be five minutes or less.” Because the TTC is the designated northern terminus of the HSR System, it cannot be a bottleneck to the five-minute headway requirement. Yet that is what the current designs of the TTC, the DTX, and the SF Extension contemplate. The DBP must be revised to analyze the risk that the current design for the TTC (and DTX) will further compromise the Authority's ability to satisfy its statutory mandates for the Project. It must also be revised to honestly assess the cost of completing the San Jose to San Francisco to TTC, its approved northern terminus for all HSR trains.

#### **7. The Authority's Reliance on Cap and Trade Revenue as a Perpetual Project Funding Source is Misplaced.**

The DBP does not adequately address the multiple risks threatening continued availability of Cap and Trade funding. Instead, it relies heavily upon C&T funding for 50% of the cost of the SOS section of Phase 1.<sup>70</sup> It unabashedly assumes that:

The three sources of funding that have already been committed to the program will be directed to constructing the [SOS] line, include[e] previously appropriated Federal grant funds, Proposition 1A bond proceeds **and Cap and Trade proceeds.**

...

And

**We will use Cap and Trade proceeds received through 2024** to help fund the capital costs for the Silicon Valley to Central Valley line. We estimate this amount to be \$5.341 billion including amounts spent to date.

And

**We will use the \$500 million of annual Cap and Trade proceeds received after 2024 to repay financing.**<sup>71</sup>

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<sup>69</sup> See TTC DSEIS/R, dated December 2015, pp. 2-14, \_\_\_\_; see also FRA memorandum re Environmental Clearance for advance construction of “train box” portion of [TTC], available at: [http://transbaycenter.org/uploads/2010/05/Exhibit-6a-and-6b\\_FTA-Memo-re-Train-Box-and-FRA-letter-re-400-million-for-Train-Box.pdf](http://transbaycenter.org/uploads/2010/05/Exhibit-6a-and-6b_FTA-Memo-re-Train-Box-and-FRA-letter-re-400-million-for-Train-Box.pdf) (accessed April 16, 2016).

<sup>70</sup> See DBP, p. 61.

<sup>71</sup> DBP, p. 61, emphasis added.

The State implements its C&T program through authorization received through AB 32. The California Air Resources Board (“CARB”) implements the C&T program as means to meet the State’s GHG reduction targets through authority it receives via Health and Safety Code, section 38550, 38551, 38560, 38562, and 38570(c). Pursuant to Section 38562(c), the statutory authority for the C&T program will expire on December 31, 2020. If the Legislature wants CARB to continue to implement the C&T program it will have to extend this deadline.

However, by the time December 2020 arrives, the Legislature may be in no mood to extend the enabling legislation for the C&T program. Or it may exclude HSR from receiving funds through the program because it has not helped the state meet its GHG reduction goals prior to 2020, as required by the Authorizing statute.

The Legislature is already receiving lukewarm reviews of the use of C&T funding for HSR. In February 2014, the California Legislative Analyst’s Office (LAO) released a report, “The 2014-15 Budget: Cap-and-Trade Auction Revenue Expenditure Plan,” that described the then \$250 million C&T proposal for the Project. The report was lukewarm about using C&T auction proceeds for HSR:

**Some Outcomes Would Depend on Changes in Behavior.**

In addition, the amount of greenhouse gas reductions for some proposed programs would depend on changes in behavior that are difficult to predict. For example, the administration assumes that the high-speed rail...proposals would result in some individuals shifting their mode of transportation, resulting in a net reduction in vehicle miles traveled in cars. While such changes might very well occur and could result in net greenhouse gas emission reductions, it would be difficult to predict with precision the likely marginal net greenhouse gas reduction due to these efforts. This uncertainty increases the risk that the administration’s plan would not achieve its maximum potential emission reductions.

**Some Reductions Would Likely Occur Beyond 2020.**

We also find that some proposed activities would not contribute significant greenhouse gas reductions before 2020, which as mentioned above, is the statutory target for reaching 1990 emissions levels. For example, plans for the high-speed rail system indicate that the first phase of the project will not be operational until 2022. Moreover, the construction of the project would actually generate greenhouse gas emissions of 30,000 metric tons over the next several years. The High-Speed Rail Authority plans to offset these emissions with an urban forestry program that proposes to plant thousands of trees in the Central Valley. We also note that High-Speed Rail Authority’s greenhouse gas emission estimates for construction do not include emissions associated with the production of construction materials, which suggests that the amount of emissions requiring mitigation could be much higher than currently planned. Therefore, it is possible that the construction of the Initial Operating Segment

may result in a net increase in greenhouse gas emissions, even when accounting for proposed offsets.”<sup>72</sup>

The LAO report also listed several implementation problems of the Governor’s proposed plan to spend Cap-and-Trade auction proceeds. As the Project’s completion date is further delayed and its costs escalate, the so-far complacent and complicit Legislature will have to answer to some long-deferred tough political questions. At that point, it may view continued diversion of a quarter of C&T funds as throwing good money after bad, and will turn off the Project’s life support.

The Authority’s reliance on C&T funds is further misplaced based on its past assurances of where those funds would be spent. In its 2012 Revised Business Plan (“2012 RBP”), the CHSRA made a commitment to the California Legislature when it asserted that in exchange for cap and trade funding, it would build the first leg of the High Speed Rail System south and would accelerate construction of the Burbank to Palmdale segment.<sup>73</sup>

In a letter addressed to Senator Fran Pavley on June 14, 2014, the HSRA committed to use the cap and trade funds granted to the agency through the Senator’s SB 862 to “accelerate work on the segment from Burbank to Palmdale... The Burbank-Palmdale segment, which potentially could become an operating segment on its own, would accelerate benefits to the Los Angeles region.”

Alternatively, the Authority’s use of C&T funding may ultimately be barred through litigation.

Consequently, it is improper for the DBP to rely so heavily on the perpetual availability of C&T funding.

**8. The Risk that Supplemental Environmental Review Will Be Required Due to Design Changes Threatens Both the Project’s Completion Timeline as Well as the Low Construction Cost Estimate.**

The DBP’s discussion of Project risks does not address the real possibility that ongoing modifications to the Project will trigger the need for supplemental environmental review (discussed further below). As discussed below, there is a strong likelihood that changes made through value engineering and Project scope modifications will need to be addressed in new CEQA and NEPA analyses and in other permit determinations.

For example, URS, the former regional consultant for Central Valley sections observed in 2013 that:

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<sup>72</sup> See LAO report, pp. 11-12, underlining added, available at, <http://www.lao.ca.gov/reports/2014/budget/cap-and-trade/auction-revenue-expenditure-022414.pdf> (accessed April 16, 2016).

<sup>73</sup> See 2012 RBP, p. ES-3 [“Cap and trade funds are available, as needed, upon appropriation, as a backstop against federal and local support **to complete the IOS**”], emphasis added.

Following discussions with Caltrans regarding the constrained area of HST alignment between BNSF and SR 43 north of Corcoran, the RC was tasked with assessing the environmental impacts of widening the corridor into an adjacent lacustrine and grassland habitats to facilitate Caltrans' long-term plan to widen SR 43 from two to four lanes.... It is understood that offsetting either the HST or Caltrans ROWs to the east will require re initiating consultation with the U.S. Fish and Wildlife Service (USFWS) and opening the recently issued Biological Opinion (BO). RC is awaiting further direction on the preferred option in this area.

In addition, the contract documents for CP 1, CP 2-3, and CP 4 indicate that supplemental environmental review may be required for approved changes to the design of the FCS. Because the Project's sections are only designed a relatively crude 15% level of design for the purposes of environmental review, the refinements and changes to that design following certification of EIR/S documents and issuance of permits carry the risk of triggering supplemental review. The DBP should be revised to address the very real risks to the Project's timeline and budget posed by the Authority's design-build approach to implementation.

#### **E. Supplemental Environmental Review is Required for the Project**

The DBP reveals that the Authority is considering and approving a number of substantial changes to Project design and scope based on its goal to cut costs. The changes to the Project will cause new and more severe impacts, triggering the need for supplemental environmental review, pursuant to CEQA and NEPA.

##### **1. Changes to the Project, Including Those Made Through Value Engineering, and Will Result in New Impacts That Have Not Been Analyzed and Mitigated Pursuant to CEQA and NEPA, as Required.**

The DBP and other Authority documents allude to, but do not specifically describe, numerous substantial changes to the Project's design that implicate the environmental review process. For example, in a number of locations at-grade alignments have replaced aerial structures and earthen berms have replaced viaducts.<sup>74</sup> The newly substituted earthen berms, which create impermeable barriers to movement, will result in impacts that were not considered in the already certified M-F EIR/S and F-B EIR/S. Impermeable earthen berms would result in numerous new and increased significant impacts, including increased traffic impacts in urban areas and increased impacts to wildlife in rural areas due to constrained wildlife habitat connectivity.

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<sup>74</sup> See, e.g., DBP, Capital Cost Basis of Estimate Report, pp. 13 ["The San Jose-Merced section had a major cost reduction associated with changing the Diridon Station from being aerial to at-grade, extending the at-grade alignment in the Caltrain corridor to Tamien, and applying value engineering solutions to tunnel designs"], 15 [reporting "Increase in grade separations costs due to decrease in aerial guideway in CP 2-3"]; see also CRB, Executive Summary and Technical Proposal, p. 37 [proposed reduction of viaduct length through Wasco].



The Diridon station is now planned to be at grade, but the Bay Area PEIR's analysis was based upon an elevated station design.<sup>75</sup> An at-grade station through this heavily urbanized area will require a larger footprint for the station and connecting tracks. It also may create a barrier to movement around the station, causing new unanalyzed traffic impacts. It would also displace more people along the alignments leading to and from the station. These are all impacts that would need to be re-evaluated in an EIR.

During staff presentation of Agenda Item 5 at the March 8 Authority Board meeting, staff stated that the Project footprint for CP1 and CP 2-3 have had to be widened in order to accommodate changes to the Project's design.<sup>76</sup> While the staff report stated "Many of the [Alternative Technical Concepts ("ATCs")] introduce modifications to the needed ROW that must be acquired once those new features are environmentally cleared,"<sup>77</sup> there is no evidence that these changes have been subject to any environmental review pursuant to CEQA and NEPA.<sup>78</sup> This is surprising, given that the "design refinements" have led to approximately 500 parcels being required for the FCS beyond the original scope of services.<sup>79</sup> Project impacts within a widened footprint have the potential to increase the impacts analyzed in the M-F EIR/S and the F-B EIR/S and to cause new unanalyzed impacts.

Landowners have also discovered through investigation (rather than through Authority disclosure) that major alignment changes and secondary impacts to other facilities is causing increased construction-related impacts. For example, the Authority now plans to relocate a section of Highway 198 and also plans to create a trenched railroad section of the Cross Valley Railroad.

Each of these Project changes will cause unanalyzed significant impacts that necessitates supplemental CEQA and NEPA review. Yet the Authority is planning these changes behind closed doors, without public participation, and without the required supplemental impact analysis and mitigation. **The Authority cannot approve a business plan that simply assumes cost-saving design changes without first analyzing and mitigating the environmental impacts of those changes, and adopting those changes after complying with CEQA and NEPA.**

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<sup>75</sup> See, e.g., Bay Area PEIR, pp. 3.9-19 ["The HST would be accommodated by building a concourse and up to six HST tracks and three platforms above the existing platforms. The proposed platforms for HST would be located at 45 ft (13.7 m) above grade."], emphasis added, 3.9-21 [same], 4-13.

<sup>76</sup> See Transcript for March 8, 2016 Authority Board meeting, pp. 64-65, available at: [http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg\\_030816\\_Board\\_Meeting\\_Transcript.pdf](http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_030816_Board_Meeting_Transcript.pdf) (accessed April 17, 2016).

<sup>77</sup> See Staff Report for Agenda Item 5, Authority March 8, 2016 Board Meeting, p. 1, available at: [http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg\\_030816\\_Item5\\_Approval\\_to\\_Amend\\_Existing\\_ROW\\_Engineering\\_and\\_Survey\\_Support\\_Services\\_Contracts.pdf](http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_030816_Item5_Approval_to_Amend_Existing_ROW_Engineering_and_Survey_Support_Services_Contracts.pdf) (accessed April 17, 2016).

<sup>78</sup> A search of CEQANet website for all CEQA documents filed with the State Clearinghouse since 2013 reveals no environmental clearance documents have been filed for the approved ATCs within the FCS.

<sup>79</sup> See *id.* at pp. 2-3. The staff report does not describe the ATC's or "design refinements" that have widened the FCS's footprint.

CC-HSR and CCHSRA hereby request notice, pursuant to both CEQA and NEPA, of any supplemental environmental review being conducted for changes to the Project's design. Such notice should be sent to the undersigned at the email address in the above letterhead and to the following recipients:

Gary A. Patton, Attorney at Law  
Executive Director, Community Coalition  
on High-Speed Rail  
P.O. Box 1038  
Santa Cruz, CA 95061  
Email: [gapatton@gapattonlaw.com](mailto:gapatton@gapattonlaw.com)

Aaron Fukuda  
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**2. The Advertised "Benefit" of Creating Bedroom Communities in the Central Valley for Silicon Valley Workers Would Have Significant Environmental Impacts That the Authority Has Previously Denied.**

As approved by the California electorate in 2008, and as presently codified in California Streets and Highways Code, Proposition 1A includes express provisions that the Project be designed to achieve a number of very specific objectives, including the express requirements that "The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment."<sup>80</sup>

In spite of this statutory prohibition, the Authority is now advertising the first operating section of the Project as one that will facilitate the development of bedroom communities in the Central Valley that will house Silicon Valley workers. Specifically, it asserts:

The implications of the Silicon Valley to Central Valley connection are tremendous. Today it takes about three hours to drive from Fresno to the Bay Area; flights are available but often at exorbitant prices. With this new connection, a trip from Fresno to San Jose will take about an hour on high-speed rail which is a game changer both for the people and the economy of the Central Valley and for Silicon Valley as well. New job markets will be opened up for people living in the Central Valley and creating a high-speed connection to the Central Valley would help address the affordable housing crisis in the Bay Area. New linkages will be created between higher education institutions in the Central Valley and high-tech and other cutting edge industries in the Silicon Valley. And some high-tech companies might choose to locate certain corporate functions in the Central Valley where commercial real estate is less expensive, generating new job opportunities in this region.<sup>81</sup>

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<sup>80</sup> See St. & Hy Code, § 2704.09.

<sup>81</sup> DBP, p. 12, emphasis added.

However, in both the M-F EIR/S and the F-B EIR/S, the Authority denied that HSR would induce sprawl in the Central Valley and thereby contribute to conversion of agricultural lands to urban uses. (See General Response 3 in both documents, incorporated herein by reference).

The HST will not be a below market cost, subsidized commuter rail service, but instead would provide rapid long-distance travel, priced at commercial market rates. HST fares are expected to be tied to typical airplane fares. The cost of the fares will discourage relocation and a daily commute to and from the Bay area and the Los Angeles Basin.<sup>82</sup>

Thus, the promised benefit upon which the Authority relies to justify its switch to a northern IOS directly contradicts the prior assertions made by Authority when denying that HSR would induce urban sprawl. The Authority is speaking out of both sides of its mouth: it denies growth inducement when it is convenient to not admit environmental impacts (such as agricultural land conversion and destroyed habitat) and advertises growth inducement when its convenient to emphasize the asserted economic benefits of its major shift in implementation strategy.

If HSR will indeed spur the development of new housing in the Central Valley for commuting workers, then the Authority must conduct supplemental environmental review for the M-F and F-B sections, revisiting the issue of potentially significant impacts caused by induced sprawl.

### III. CONCLUSION

Please revise the DBP in response to the above comments and the incorporated comments. The Final DBP must fully and candidly address and substantiate Project cost increases, the Project completion schedule, and all the risks that threaten the Authority's highly optimistic estimates and assumptions. Until the DBP is revised as requested, it will not satisfy statutory requirements and will not provide the Legislature with accurate information upon which responsible decisions may be made concerning the Project.

You can contact me at 510-338-3759 or at [jason@holderecolaw.com](mailto:jason@holderecolaw.com) if you have any questions regarding the above comments.

Very truly yours,



Jason W. Holder

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<sup>82</sup> F-B EIR/S, p. 35-26, emphasis added. As commenters noted when criticizing the above General Response 3, HSR will not necessarily encourage infill development. Instead, the growth induced by HSR could sprawl across valley farmland, exacerbating the existing sprawl problem.

Enclosures:

Attachment A: Excerpt from Petitioners' Memorandum of Points and Authorities in Support of Preliminary Injunction

Attachment B: CP1 Monthly Status Report for Authority Board Meeting 030816

Attachment C: DOT, Construction Cost Indices and Forecast

Attachment D: DOT, Price Index for Selected Highway Construction Items, 4th Quarter Ending December 31, 2015

Attachment E: Letter from URS to Authority's Regional Manager re: Fresno to Bakersfield Section Regional Consultant's January 2014 Monthly Progress Report, dated May 5, 2014

Attachment F: CCHSRA and CC-HSR's Public Records Request, dated Oct, 16, 2015

Attachment G: Authority Response to CCHSRA and CC-HSR Public Records Request, dated Nov. 12, 2015

Attachment H: CCHSRA and CC-HSR Follow Up Letter re Public Records Request, dated Nov. 19, 2015

Attachment I: Excerpts from 1996 Intercity HSRC Action Plan

Attachment J: Staff Report to Authority Board re "Consider Delegating Authority to Negotiate and Finalize Agreements with the BNSF Railway Company (BNSF)", dated April 12, 2016

cc: (via email only)  
Client representatives