



**San Francisco Bay Area Rapid Transit District (BART)
Earthquake Safety Program**

**Citizens' Oversight Committee Meeting
2013 – 2015 Term**

Thursday, November 13, 2014 4:30 pm

**Conference Room 1700
Kaiser Center Tower, 17th Floor
300 Lakeside Drive, Oakland CA 94612**

Meeting Number	Meeting Date	Meeting Time
Term 4, Meeting 9	November 13, 2014	4:30 pm
Attendees	<i>Members</i> Ralph Mason Sayed Sultan Robert Barksdale <i>Alternates</i> Sang Bak Lee Ching Wu	<i>Staff</i> Thomas Horton Molly McArthur Kate Claassen <i>BART Director</i> Robert Raburn <i>Member of the Public</i> Wen Huang
Agenda Item	Action Taken	
<i>Welcome & Introductions</i>	M. McArthur called the meeting to order at approximately 4:35 pm. K. Claassen noted members' attendance. M. McArthur noted that BART Director Robert Raburn was in attendance. Director Raburn addressed the Committee Members and thanked them for their services.	





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<p><i>Review of Administrative Matters</i></p>	<p>Members received and approved the August 5, 2014 meeting minutes, with an amendment to include Director Raburn on the attendees list (The record was checked, and he attended the May 6, 2014 meeting).</p> <p>M. McArthur stated that the recruitment process for the next term is ongoing and current members interested in serving in the next term will be contacted soon.</p> <p>M. McArthur stated that the "Community at Large" seat is still being recruited for.</p> <p>R. Mason asked for consideration to only hold two to three meetings during the next term, since there has been a major reduction in active construction.</p> <p>M. McArthur stated that if members agree, the new meeting schedule would reflect this request for next term.</p>
<p><i>Program Updates</i></p>	<p>T. Horton noted that the program has completed 26 contracts.</p> <p>T Horton stated that the Right-of-Way Acquisition is complete.</p> <p>T. Horton stated that the 35% design for the Transbay Tube Contract has been received.</p> <p>T. Horton gave a brief update about the Transbay Tube Contract.</p> <p>T. Horton stated that the design for the upgrade of 4 R-Line piers is complete, as well as the design of all remaining A-Line work.</p> <p>T. Horton stated that the 15SV-130 Seismic Retrofits and Repairs at Various Locations Contract will go to the BART Board for award in December.</p> <p>T. Horton stated that there are three contracts currently under construction.</p> <p>C. Wu asked who the design contractor is for the Transbay Tube contract.</p>





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	<p>T. Horton stated that Moffatt & Nichol is the contractor for structure and liner design for the Transbay Tube Contract, with assistance from multiple different contractors.</p> <p>R. Barksdale asked which contractor will perform the quality control on the Transbay Tube Contract.</p> <p>T. Horton stated that Moffat & Nichol along with Jacobs, will perform the quality control.</p> <p>T. Horton gave a brief update on the construction schedule and noted that the next calendar year will see an increase in construction retrofits.</p>
<i>Financial Report</i>	<p>T. Horton provided an overview of the program's finances, noting the following:</p> <ul style="list-style-type: none">• October 2014 Inception-to-Date is roughly \$556 million• October 2014 Cash Expended (four month average) is roughly \$354,000
<i>Special Presentation: Berkeley Hills Tunnel Study</i>	<p>The Berkeley Hills Tunnel Study:</p> <ul style="list-style-type: none">• The Berkeley Hills Tunnel (BHT) carries the Bay Area Rapid Transit's Pittsburg/Bay Point–SFO/Millbrae line through the Berkeley Hills, between the Rockridge and Orinda stations.• The earthquake-active Hayward Fault bisects the tunnel about 1,000 feet (300 m) inside the west portal (Oakland side).• The BHT currently is in a condition that will require some retrofitting soon, to deal with the ongoing fault creep. The extra size that was originally built into the tunnel is almost used up, and it's estimated that within the next 3-5 years the tunnel cross section will begin to affect train speeds.• If no retrofit is done and an earthquake of at least M6 occurs, the current estimate of the tunnel closure before return of minimal train service is 6-7 months, and the return to full operation is 25 months.• The risk of doing nothing has the biggest impact on economic losses, not only directly to BART but to the region as a whole.• The BHT study compared the cost benefits of 29 different



approaches for retrofitting the tunnels, including the “do nothing” alternative.

- It also included development of design concepts and cost estimates, and schedules for implementing the concepts for retrofitting the tunnels.
- In addition, for each approach, the study evaluated the cost and schedule for repairing the tunnel and restoring train service in the event of different levels of fault offset.
- A cost benefit analysis was performed to determine which of the alternatives would provide the most benefit to BART. The cost benefit analysis included an evaluation of the overall economic impact on the San Francisco Bay Area for the loss of train service for the estimated duration of repair.

Committee Members were briefed on the retrofit concepts associated with the Berkeley Hills Tunnel (BHT).

M. McArthur stated that the BHT Study consists of a series of suggested ways to retrofit the Berkeley Hills Tunnel.

T. Horton stated that the BHT was constructed slightly oversized to account for fault creep/earthquakes. The retrofit was not included in 2002 because no practical retrofit was identified.

T. Horton and Committee Members went on to discuss the different retrofit options that were presented in the BHT presentation.

R. Mason stated that the economic loss in the East Bay area would be tremendous if BART could not run trains for months through the tunnel.

R. Mason asked if the study considered reducing the current operational hours of trains running through the BHT while retrofit construction was ongoing.

T. Horton stated that the reduced operational hours during retrofit was considered by the proposal to single track after 9 pm, nightly.

C. Wu asked if the Caldecott Tunnel could be used as an option to run BART trains if the BHT is rendered un-usable.



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	<p>T. Horton stated that the Caldecott Tunnel could not be used without major geometric re-alignment and reducing traffic lanes for cars.</p> <p>T. Horton stated that a new tunnel for BART trains could be built to the north of the existing BHT.</p> <p>C. Wu asked how much the reduced train speed, through the BHT, would impact trains servicing the Concord area.</p> <p>T. Horton stated the reduced speed is only through the Hayward fault zone within the BHT and normal speed is regained after exiting the fault zone. So, the impact is not as great as imagined.</p> <p>M. McArthur stated that the next step is to present this study to the BART General Manager and eventually to the BART Board Members.</p>
<i>Other Business</i>	<p>M. McArthur stated that this is the last meeting for the 2013-2015 term and that some members will be returning and some members will be departing.</p> <p>M. McArthur thanked Robert Barksdale and Sayed Sultan for their service.</p> <p>R. Barksdale provided some parting remarks about Auditing.</p> <p>M. McArthur and Committee Members decided that the first meeting for the new term would be in March, 2015.</p>
<i>Adjournment</i>	<p>M. McArthur adjourned the meeting at approximately 6:05 pm.</p>

