From: Lacy, Paul

- Sent: Thursday, February 12, 2009 8:00 AM
- To: Williamson, Alec
- **Cc:** Preedy, Matt; Greco, Theresa

Subject: Settlement monitoring

Alec,

Just for planning.

I had a conference call last night with the survey and mapping section down at HQ.

We have a rough cost estimate for the surveying and settlement monitoring for the bored tunnel. The estimate is in the range of 5 FTE starting in April 2009 with the preliminary survey for the right of way plans, and setting up control for the monitoring. This ends up to be about \$40k per month for 72 months. (about \$3 million) spread over 09-11, 11-13, and 13-15

We will need to have the pre condition of all the buildings before we start construction, and will need to do the final after the construction is done.

This same team will be available to monitor buildings for the tear down of the Viaduct, but that is not included in this estimate.

They will send me a spread sheet estimate, and I will get all the work detailed.

This seems like a lot of money, but it is a small portion of the PE and CE we will spend on the project.

Paul