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**From:** Williamson, Alec
**Sent:** Thursday, February 05, 2009 4:00 PM
**To:** Greco, Theresa; White, John
**Cc:** Preedy, Matt
**Subject:** FW: Initial Bored Tunnel Implementation Plan (Design)
**Attachments:** Implementation Plan for Bored Tunnel Delivery.doc

Per our lunchtime discussion today- we made good progress on the Task CE "design support of the EIS: snapshot drawing set" scope discussion with PB this afternoon. (My note below references task order CD which has since been revised to CE) Our plan is to negotiate on Tuesday afternoon if our estimates are close on Monday. We will let you know as soon as we have the estimates as to how they compare.

Alec

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**From:** Williamson, Alec
**Sent:** Friday, January 23, 2009 10:40 AM
**To:** Preedy, Matt
**Cc:** Robison, Jim (Consultant); Schmitt, Sara; Amiri, Ali; Lacy, Paul; Grigware, Mike; Clark, Gordon T. (Consultant); Jarnagan, Harry (Consultant); Anderson, Ward; Benito, Roland; Anderson, Mark - UCO; Conte, Rick (Consultant); Rigsby, Mike (Consultant)
**Subject:** Initial Bored Tunnel Implementation Plan (Design)

Hi Matt-

Per your request, attached is my initial cut at an outline for implementation of the bored tunnel design. The focus is short term- through June of this year. This will be the basic framework from which we will scope task order CD with PB for configuration plans and other design support of the RFQ/RFP process. Please let me know when you would like to discuss it with John and Theresa- I am welcome to feedback, it is just a start and will need fleshing out over the next couple of weeks. As you will see, I think we will need additional budget to make this happen. My prior budgeting assumptions were for a continuation of the planning process; the current expectation is ultra-fast track delivery for a program of this magnitude. We will need to get off to a fast start to have any chance of meeting the schedule.

Alec

# Implementation Plan for Bored Tunnel Delivery

## *Dimensions*

**Milestones**

**Major Deliverables**

**Scope and Project Elements**

**Teams**

**Resource/Budget Needs**

**Key Assumptions**

### *Milestones*

**Key project objectives**

**Bored tunnel open to traffic by 12/15**

**ROD by end of 12/10**

**Begin tunnel boring by 1/12**

**Key short term milestones to support EIS development**

**Preferred alternative selection: 1/09**

**Geometric Design Criteria Definition: 3/09**

**North portal interchange config: 4/09**

**South portal interchange config: 4/09**

**Bored tunnel basic configuration plan set: 6/09**

**EIS analysis launch: 7/09**

**Key milestones to support tunnel RFQ/RFP process**

**Contract package definition 6/09?**

**RFQ Advertisement 9/09?**

**Award Constructor Contract 4/10**

## *Major Deliverables*

**Short Term (first 6 months)**

### Basic Configuration Plans

***Plan, Profile, Sections***

***Bored tunnel and CC tunnel portal locations***

***North and South Interchange Plans***

***Horizontal Alignments w/Stationing***

***Draft R/W Limits Identified***

***Ventilation Approach and Validation***

***Egress Approach and Validation***

***Monitoring and Controls Approach***

***Major ITS Facilities Plan***

***Detour/Maintenance of Traffic Approach***

### Design Approval Package

***Access Determination***

**Current Classification: Class 1 Managed Access**

**Acquiring Limited Access**

Cost and schedule implications

Typically higher design speed -55mph

Principal Arterial Standards

Transitions/interface at north and south

Jurisdictional O/M clarity

**Managed Access**

Existing corridor analysis

45 mph design speed – flexibility

Managed Access Standards – flexibility

Consistent with north and south ends

Local Agreement for O/M

***Design Speed***

***Corridor Report (if needed to set design speed)***

***Design Matrix Selection***

***Deviation Identification***

## Phase 1 of Geotechnical Baseline Report

***Assume 10 deep borings on current alignment***

***Permitting/Traffic Control***

***No analysis and reporting***

## Medium Term (6-12 months)

### Start Geotechnical Baseline Report

***Assume an additional 20 borings***

***Limited analysis and reporting***

### Begin RFQ Process

***Tunneling Machine Contract***

***DB Contract***

**Engage TBM and Contracting Community**

**Advertise RFQ**

***Scope and Project Elements***

**Four Lane Bored Tunnel**

**South cut and cover w/facilities**

**South off-ramp and north on-ramp**

**North cut and cover w/facilities**

**Multiple tight geometry access points north of Denny**

**New roadway between AW and Elliott/Western**

**Viaduct removal – limits?**

**Waterfront restoration – limits?**

***Teams***

**South Portal Design**

**Bored Tunnel Design**

**North Portal Design**

**“Armory Way” connector**

**Civil Standards/Criteria**

**Fire and Life Safety Standards/Criteria**

**Major Discipline Support**

**Transportation/Traffic**

**Utilities**

**Geotechnical**

**Public Involvement**

**Program Mgmt**

**Environmental**

**Cost Estimating**

**Structural Engineering**

**Technical and Other Resources**

**HMM Tunneling and Systems**

**HMM Geotechnical**

**Tolling**

**Contract Packaging**

**EIS Strategy/Streamlining**

**CEVP**

**Value Engineering**

**Project Management Planning**

**FHWA Coordination/Approvals**

## *07/09 Biennium Resource/Budget Needs*

**Design Teams**

**5 FTE transitioning to 25 FTE**

**Range estimate – add'l $2.0-$2.4 million**

**TDY/ODC additional ???**

**Geotechnical Investigation**

**Range estimate – $700-850 thousand**

**HMM Support (Task AC)**

**$500-600 thousand**

**Other Technical Resources/Specialty Services**

**$400 thousand (SWAG)**

**GEC Management/Overhead**

**$400-600 thousand**

## *Key Assumptions*

**Tunnel Preferred Alternative Decision 1/09**

**Construction Traffic Impacts Minimal (no long term closures of SR 99)**

**Viaduct remains open until bored tunnel open to traffic**

**EIS contains one build and one no-build only**

**Tunnel is Design Build Construction**

**Tunnel is single bore 54' diameter**

**Tunnel alignment is as shown on 1/09 roll plot**

**EIS includes only basic two lane roadway from Elliott/Western to Alaskan Way at Pike**

**Viaduct removal south of Pike not included in EIS**

**Seawall not included in EIS**

**North Alaskan Way not included in EIS**

**Streetcar not included in EIS**