

# **Bored Tunnel Implementation Work Plan**

1. General Program & Project Management
  
2. Environmental Work Items
  - a. Environmental Strategy (**White Paper**)
    - i. Determine Lead, Cooperating, and Participating Agencies
    - ii. Purpose & Need
    - iii. Range of Alternatives
    - iv. Methodology Reports
  - b. Draft EIS (**Reader Friendly Report**)
    - i. Main Body Report
    - ii. Technical Discipline Reports
    - iii. Response to Comments
  - c. Final EIS (**Reader Friendly Report**)
    - i. Main Body Report
    - ii. Discipline Reports
    - iii. Response to Comments
  - d. Other Environmental Compliance Issues (**Supporting Material**)
    - i. Endangered Species Act
    - ii. Section 106
    - iii. Section 4(f)
  - e. Record Of Decision (**Decision Document**)
  - f. Permitting
    - i. Permit Strategy
    - ii. Permit Applications
    - iii. Monitoring & Compliance
  
3. Engineering Work Items
  - a. Configuration Definition (**Snapshot Plan Set**)
    - i. South Portal
    - ii. North Portal
    - iii. Bored Tunnel
    - iv. Viaduct Demolition and Yesler Way to Elliott Avenue Surface Street
  - b. Basis of Design & Criteria Documents (**Basis of Design Reports**)
    - i. Civil
      1. Civil Design Criteria
      2. Plans, Profile, & Typical Sections
      3. Drainage Design
      4. Traffic Control Plans
    - ii. Structural
      1. Structural Design Criteria
      2. Structural Conceptual Plans
      3. Existing Building Foundation Information

- 4. Blast Vulnerability Analysis
- iii. Geotechnical
  - 1. Geotechnical Design Criteria
  - 2. Geotechnical Data Report
  - 3. Geotechnical Baseline Report
- iv. Tunnel Systems
  - 1. Mechanical Systems
    - a. Determine Tunnel Fire Size
    - b. Confirm Egress Approach
    - c. Ventilation System
      - i. Ventilation Building Siting Study
    - d. Fire Suppression System
    - e. Electrical System
  - 2. Electrical Systems
    - a. Illumination System
    - b. Power Distribution System
    - c. Communication Systems
      - i. Closed Circuit Television
      - ii. Radio Rebroadcast
      - iii. Fire Detection and Alarm
      - iv. Supervisory Control and Data Acquisition
    - d. Fire Detection and Alarm System
  - 3. Traffic Surveillance and Control System
    - a. Incident Detection and Response
    - b. Carbon Monoxide Monitoring
    - c. Security Monitoring
  - 4. Commissioning, Operations, & Maintenance
- v. Utilities
  - 1. Locate Existing Utilities
  - 2. Utility Agency Coordination
  - 3. Railroads
- vi. Architecture & Urban Design
  - 1. Preliminary Architectural Criteria
  - 2. Landscape Architectural Criteria
- vii. ROW & Survey
  - 1. Base Map and Property Ownership Data
  - 2. Record of Survey
- viii. Project Visualization
- ix. CADD & GDMS
  - 1. Project CADD Standards
- x. Design/Build Procurement Support (**RFQ/RFP**)
  - 1. RFQ Support
  - 2. RFP Support
  - 3. Design/Build Contract Support
- xi. Design/Bid/Build Procurement Support (**Conceptual Plans**)
  - 1. Conceptual Design Preparation

## 2. Design Services Contract Support

4. Construction Planning & Cost Estimating Work Items
  - a. Construction Sequencing Planning (**Flow Charts**)
  - b. Contract Packaging and Delivery Methods Planning (**White Papers**)
    - i. Design/Bid/Build
    - ii. Design/Build
    - iii. Tunnel Boring Machine Procurement Strategy
  - c. Cost Estimating Support (**Cost Estimates**)
    - i. Capital Costs
    - ii. O&M Costs
  - d. Scheduling Support (**Schedules**)
  - e. Risk Register and Risk Analysis (**Risk Register**)
  
5. Transportation Planning Work Items
  - a. Travel Demand Modeling
  - b. Traffic Operational Modeling
  
6. Real Estate & Right of Way Work Items
  
7. Public Involvement Work Items