

## MEETING AGENDA

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### Bored Tunnel Fire Life Safety Meeting

**Date:** April 23, 2009

**Time:** 1:00 PM – 2:30 PM

**Location:** 23<sup>rd</sup> Floor Large Conf Rm

**Lead:** Don Phelps

**Attendees:** Allen, Archie; Bendelius, Art; Hawkins, Chris; Clark, Gordon T.; Conner, Bill; Everett, Randy; English, Gary; Getchman, Geoffrey; Grace, Kareem; Bandy, Mark; Phelps, Don; Byrd, Russ; Walsh, Wendi; Melvin, Bob; Williamson, Alec; Renshaw, Mark; Diemert, Lois; Lentz, Tom; Tipler, Kenneth; Conte, Rick; Vanantwerp, J Scott

**Purpose:** Review of current tunnel geometry, tunnel systems design criteria, systems space proofing, and current design update

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|------------|---|----------------|
| <b>I</b>   | <b>Opening</b>  | Don Phelps     |
| <b>II</b>  | <b>Review of Current Tunnel Geometry</b>  | Gordon Clark   |
| <b>III</b> | <b>Tunnel Systems Design Criteria</b>   | Chris Hawkins  |
| <b>IV</b>  | <b>Systems Space Proofing</b>   | Rich Matrisian |
| <b>V</b>   | <b>Current Design Update:</b>   |                |
|            | <b>Lighting</b>   | Kareem Grace   |
|            | <b>Power Supply</b>   | Kareem Grace   |
|            | <b>Drainage</b>   | Rich Matrisian |
|            | <b>Tunnel Ventilation</b>   | Chris Hawkins  |
|            | <b>Fire Suppression</b>   | Chris Hawkins  |
|            | <b>Tunnel Dampers</b>   | Chris Hawkins  |
| <b>VI</b>  | <b>Issues To Be Resolved (Significant unresolved FLS issues compiled from last meeting)</b>   |                |
|            | • How to do variable message signs (VMS) and other signage factor in SR 99 Bored Tunnel traffic control and emergency evacuation.   |                |
|            | • Consider making the tunnel roadway's right shoulder a consistent width and narrow up left shoulder for emergency vehicles.  |                |
|            | • Working space is needed for maintenance and equipment; this may be more of a construction issue. Space planning is needed.  |                |
|            | • Two-way communication is needed between agencies but interoperability is a problem to be addressed.   |                |
|            | • How to get SR 99 Bored Tunnel connected to WSDOT's fiber optic system will be an issue.   |                |
|            | • Can maintenance be performed without taking the tunnel out of commission? WSDOT needs to be able to take a system down and still operate the tunnel. This suggests the need for redundant system and equipment. |                |

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- There is a possibility for a need to provide Seattle City Light (SCL) with space to put in transmission lines. It was noted that a vault fire can be very tenacious to fight; it's another fire to fight. As a limited access facility, WSDOT may choose to not go there.
- Emergency generator sizing – the generator capacity will be driven by how the tunnel is operated during a city-wide power outage. Traffic could be banned or permitted to use in restricted mode, such as not trucks.
- Construction Phase: Need a tunnel fire rescue plan/ emergency response plan specifically for the tunnel conditions while it is being constructed.
- Consider requirements for reinforcing the tunnel structure against terrorist events.

Action Item: Russ Berger is drafting requirements regarding UL listings for proprietary or central system and will send information to Mark Bandy.