

The Alaskan Way Viaduct & Seawall Replacement Program



Central Waterfront

**Alaskan Way Viaduct
Stakeholder Advisory Committee**

**Assess Changes in Traffic Noise
December 4, 2008**

Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

Guiding Principle 4, Measure 5:

Assess changes in traffic noise levels on the waterfront and in adjacent Center City neighborhoods.

Noise

- Modeled
 - PM peak hour noise levels at Pier 55
 - Noise abatement not included
- Qualitatively assess
 - Traffic noise changes in adjacent areas
 - Noise from tunnel ventilation structures

Central Waterfront

Key Findings

Distance from edge of existing pavement (feet)	Scenario									
	Existing	A	B	C	D	E	F	G	H	E at 150 feet from openings
3	72	65	65	64	68	70	63	63	66	62
28	71	63	63	62	69	66	61	61	65	61
53	70	62	62	61	69	65	60	60	64	61
78	69	61	61	59	69	63	59	58	63	60
103	68	60	60	58	68	62	58	57	62	60
128	68	59	59	57	68	61	57	57	61	60
153	67	59	59	57	67	60	56	56	60	59
178	67	58	58	56	67	60	55	56	59	59

Bold indicates levels at or above the 66 dBA abatement criterion.

Key Findings

- Noise levels at Pier 55 would be lower than existing levels for all scenarios.
- Highest noise levels for elevated scenarios (D, E).
- Scenarios A, B, and H have second highest noise levels.
- Scenarios C, F, and G have the lowest noise levels.

Key Findings

- **Scenario D Independent Elevated**
 - Main source of noise is traffic on elevated structure.
- **Scenario E Integrated Elevated**
 - Highest noise opposite opening at 3 feet from edge of pavement (70 dBA).
 - Between openings (150 feet) noise level is 62 dBA or less.
- **Scenario H Lidded Trench**
 - 10 feet from an opening SR 99 noise levels would be 70 dBA.
 - 35 feet from an opening SR 99 noise levels would be 67 dBA.

Key Findings

- Surface and transit scenarios
 - Main source of noise is Alaskan Way.
 - Couplet (Scenario C) has lowest noise level at Pier 55, but higher noise levels on Western Avenue.
- Tunnel ventilation
 - Fans would not exceed either 60 dBA at the nearest commercial uses or 57 dBA at the property line of the nearest residential use (between 7 AM and 10 PM).

Key Findings

- Ground level receivers in the Central Business District
 - Noise levels would be similar to existing noise levels for all scenarios.
- Upper level receivers east of the existing viaduct
 - Noise levels would be lower than existing, except near openings of Scenario E where noise levels would be similar to existing conditions.
 - Scenario D noise levels would be higher than existing conditions.

Key Findings

- Ground level receivers 25 feet east of the existing viaduct
 - Noise levels would be lower than existing, except near openings of Scenario E where noise levels would be similar to existing conditions.
- Ground level receivers at Western Avenue and Spring Street
 - Noise levels would be similar to existing, except for Scenarios C, E and F where noise levels would be higher than existing noise levels.

What Did We Learn?

- Compared to today, noise levels will generally decrease or stay the same with all scenarios.
 - Noise levels would be lower than existing, except near openings of Scenario E where noise levels would be similar to existing conditions.
 - Noise levels would be higher than existing at ground level on Western Avenue with scenarios C, E, and F.
- Abatement could be added to reduce reflected noise with Scenarios E and H.
 - Noise barriers could block some views.