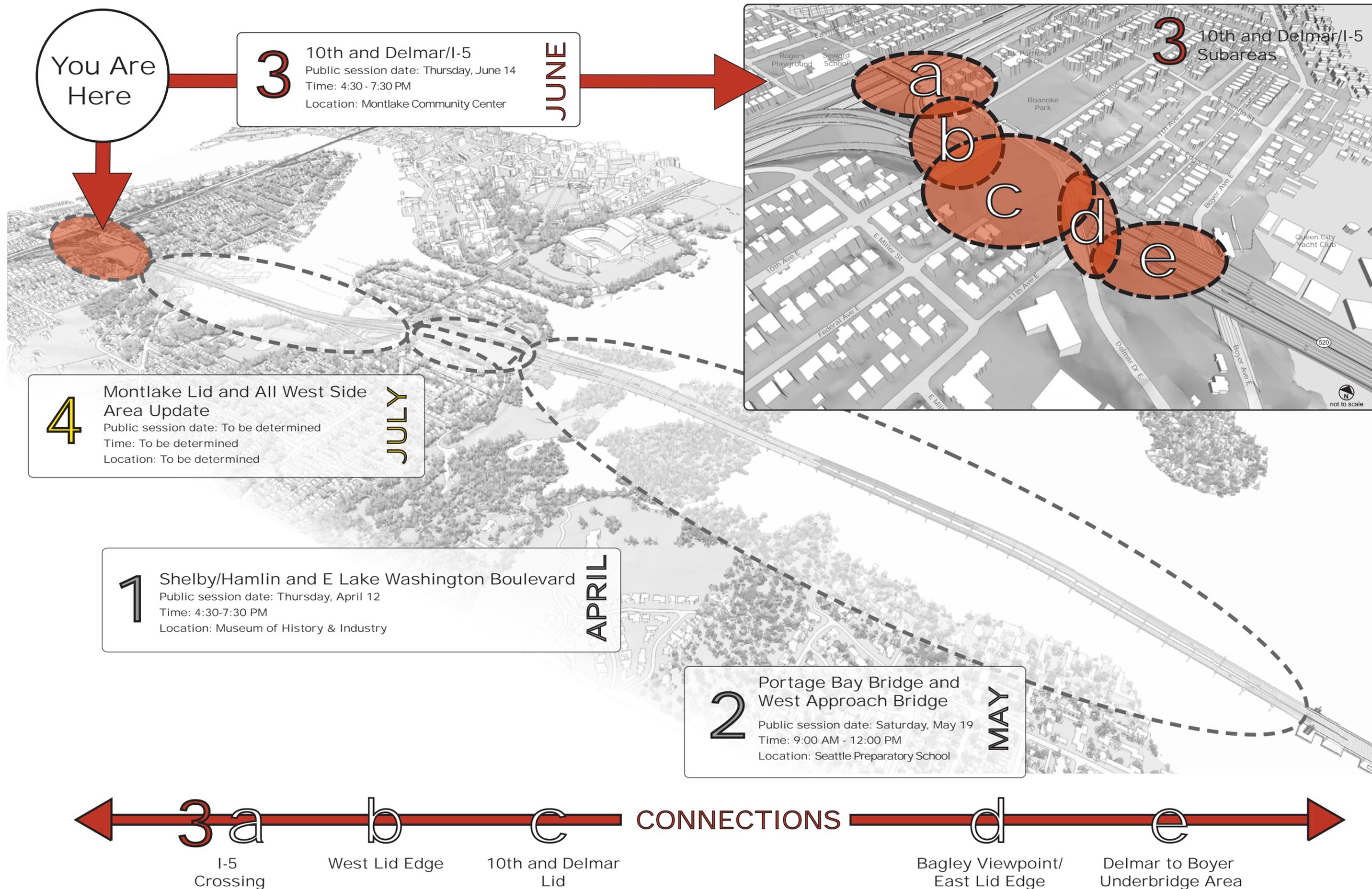


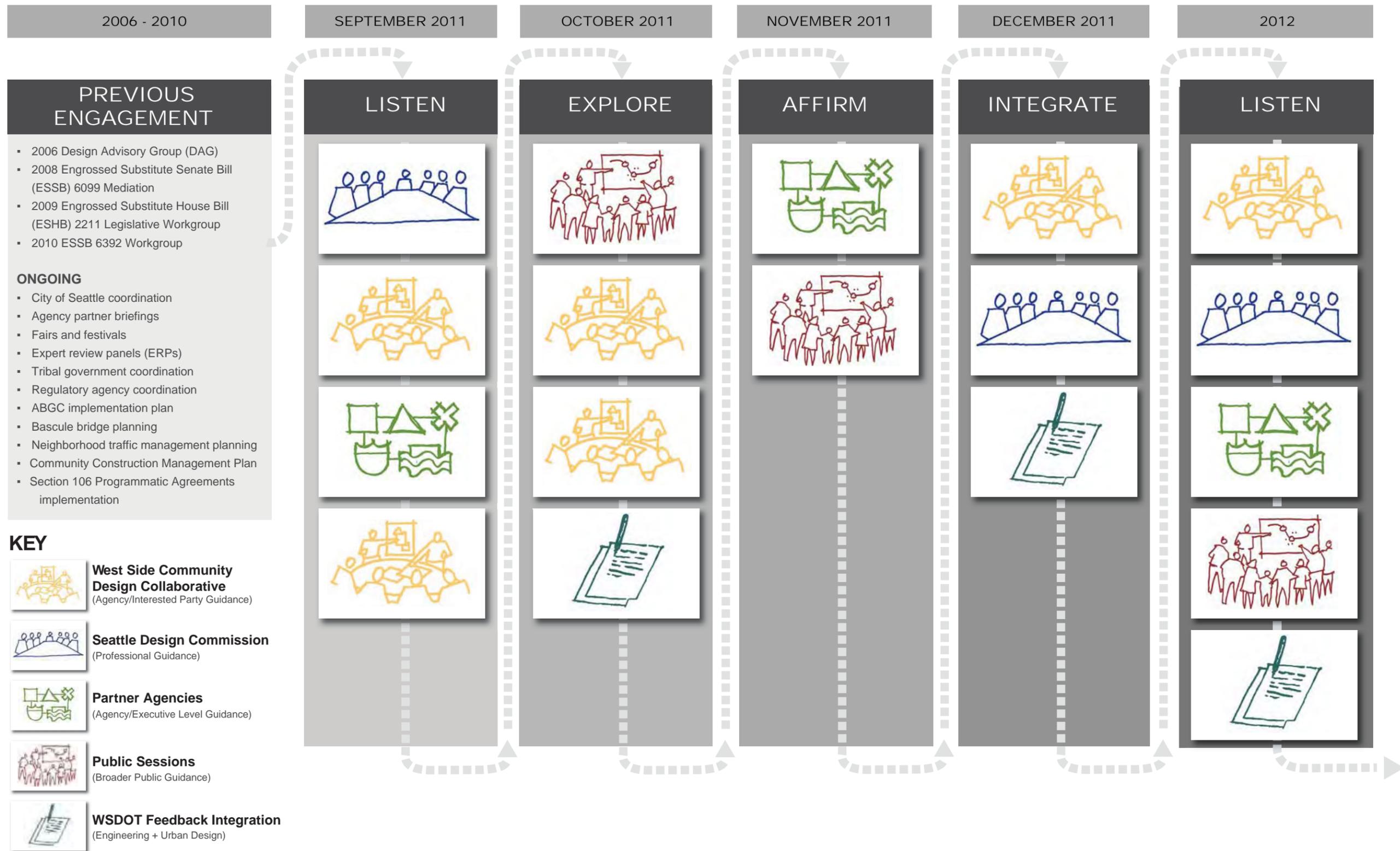
Seattle Community Design Process - How it all Connects

Public Session Dates by Discussion Areas



Seattle Community Design Process (SCDP)

OUTREACH SCHEDULE



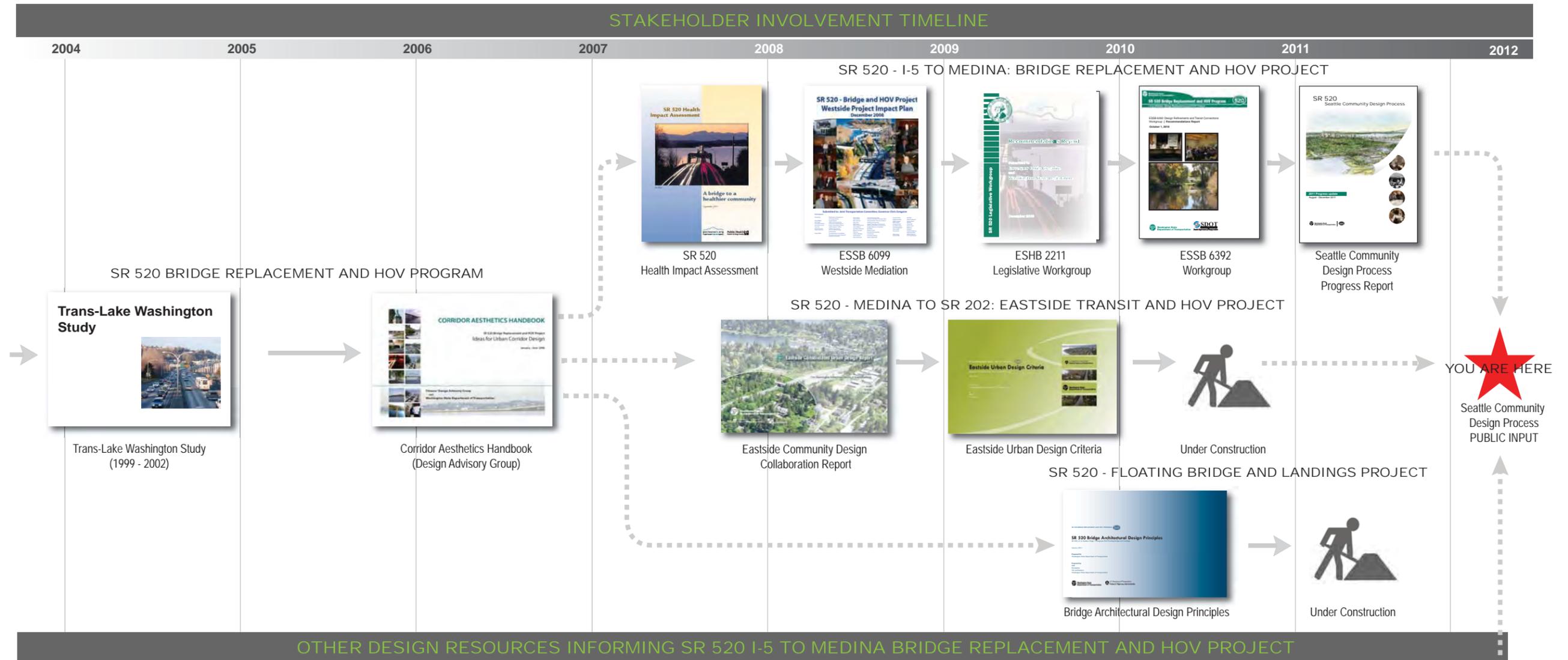
Stakeholder Involvement - Cultivating Design Principles

Description

Throughout the SR 520 Bridge Replacement and HOV program stakeholder input has shaped the development of aesthetic design criteria used for planning and construction. Stakeholder input is part of WSDOT's approach of

Context Sensitive Solutions (CSS), a process that broadens the focus of project development to look beyond basic transportation issues, and develop projects that are integrated with the unique contexts of the project setting.

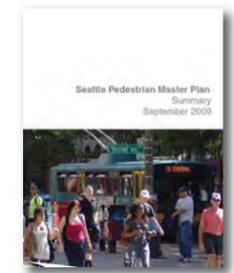
CSS is a collaborative effort that obligates participants to understand the impacts and trade-offs associated with project decisions.



Seattle Parks Foundation Bands of Green (2002)



City of Seattle Bicycle Master Plan (2007)



City of Seattle Pedestrian Master Plan (2009)



Washington Park Arboretum North Entry Conceptual Design (2011)



City of Seattle Neighborhood Plans (ongoing)

How does noise work?

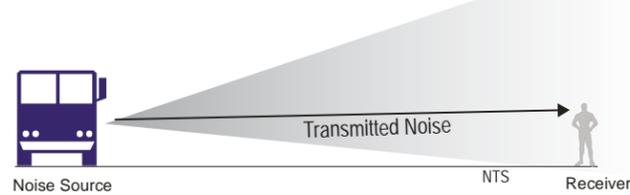
relative loudness of typical noise sources

NOISE SOURCE OR ACTIVITY		SUBJECTIVE IMPRESSION	RELATIVE LOUDNESS (human judgment of different sound levels)
Jet aircraft takeoff from carrier (50 feet)	140	Threshold of pain	64 times as loud
50-horsepower siren (100 feet)	130		32 times as loud
Loud rock concert near stage	120	Uncomfortably loud	16 times as loud
Jet takeoff (200 feet)	110		8 times as loud
Float plane takeoff (100 feet)	100	Very loud	4 times as loud
Jet takeoff (2,000 feet)	90		2 times as loud
Heavy truck or motorcycle (25 feet)*	80	Moderately loud	Reference loudness
Garbage disposal (2 feet)	80		
Pneumatic drill (50 feet)	70		1/2 as loud
Vacuum cleaner (10 feet)	70		
Passenger car at 65 mph (25 feet)*	60		1/4 as loud
Typical office environment	60		
Light auto traffic (100 feet)*	50	Quiet	1/8 as loud
Bedroom or quiet living room	40		1/16 as loud
Bird calls	40		
Quiet library, soft whisper (15 feet)	30	Very quiet	
High quality recording studio	20		
Acoustic test chamber	10	Just audible	
	0	Threshold of hearing	

* See diagram *Natural Noise Reduction Over Distance* for examples for specific **point** (e.g. church bell) and **line** (e.g. constant flowing traffic) sources.
Sources: Beranek (1988) and U.S. EPA (1974).

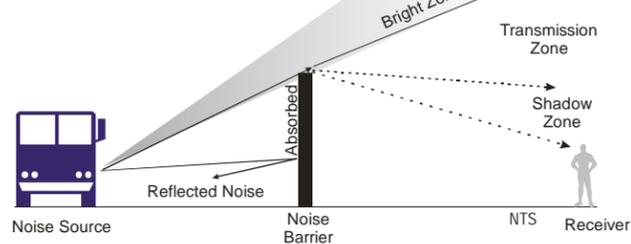
typical noise properties

NOISE SOURCE, PATH AND RECEIVER



Source: Adapted from *Noise Barrier Design Handbook (USDOT 2000a)*

NOISE WALL ABSORPTION, TRANSMISSION, REFLECTION AND DIFFRACTION



Source: Adapted from *Noise Barrier Design Handbook (USDOT 2000a)*

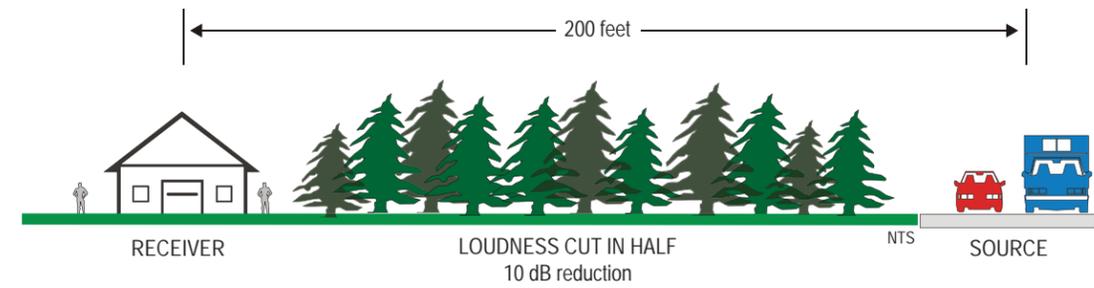
NTS = not to scale



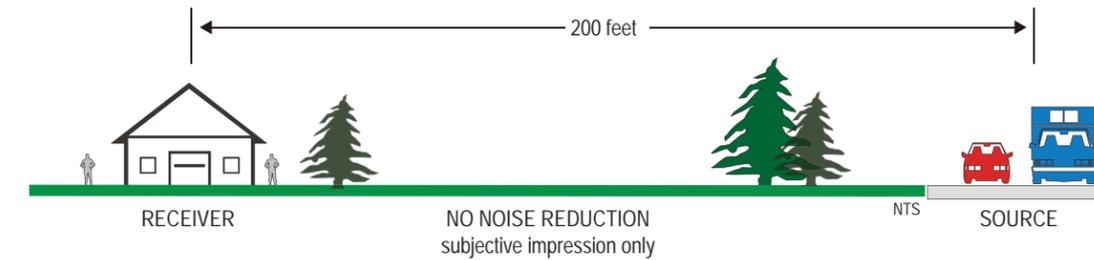
LINK TO FEIS Noise Discipline Report

barrier comparison

DENSE EVERGREEN COVER (200-FOOT MINIMUM)



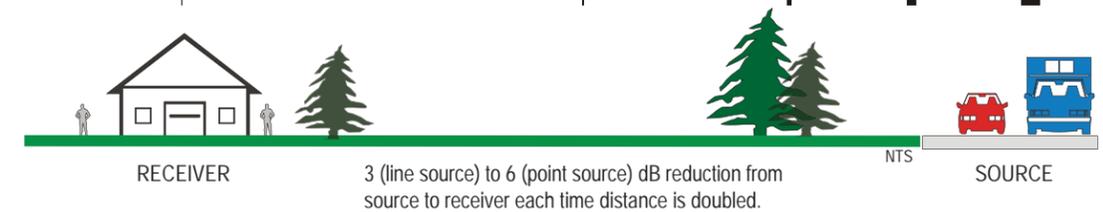
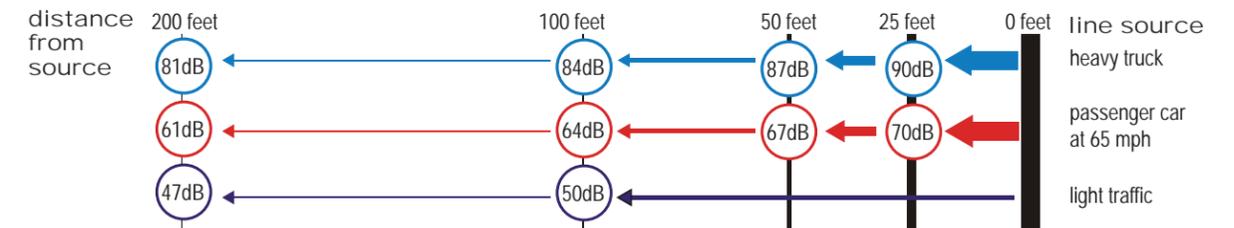
MINIMAL TO NO VEGETATION COVER



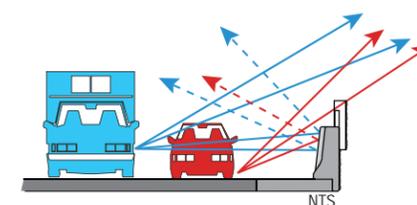
Source: Adapted from *Highway Traffic Noise Analysis and Abatement Policy and Guidance (FHWA 2011)*
http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/polguide/polguide05.cfm

The FHWA does not consider the planting of vegetation to be a noise abatement measure. The planting of trees and shrubs provides only psychological benefits and may be provided for visual, privacy, or aesthetic treatment, not noise abatement. Vegetation must be at least 100 feet of evergreens to have any noticeable impact, with slight reductions in traffic noise levels up to 5 dBA.

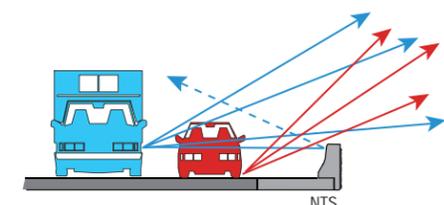
NATURAL NOISE REDUCTION OVER DISTANCE



4-FOOT NOISE ABSORPTIVE TRAFFIC BARRIER



2'-6" TRAFFIC BARRIER



DRAFT

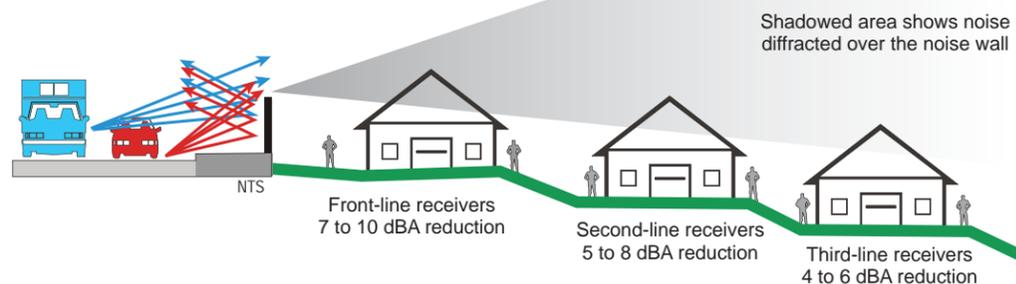
November 2011

CONCEPTUAL

DRAFT - THIS SKETCH ONLY DEPICTS THE IDEAL. ENGINEERING, OPERATIONS AND ENVIRONMENTAL ANALYSIS REQUIRED.

Typical Noise Reduction

Below-grade receiver

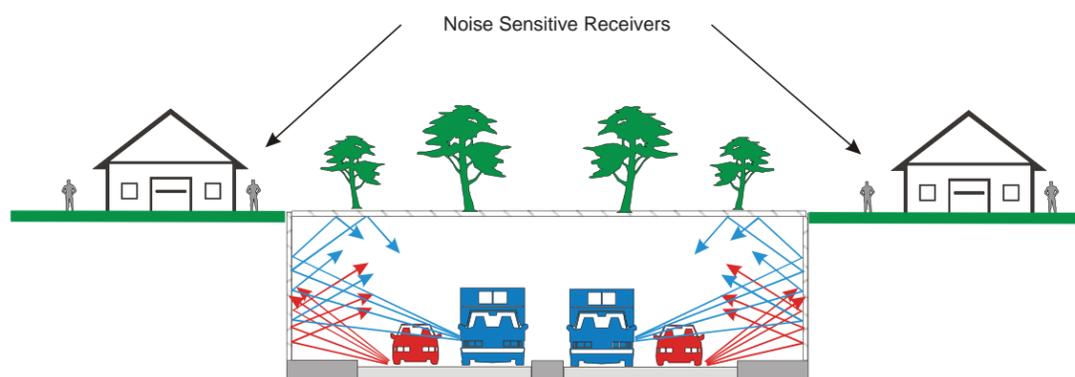


LOCATIONS: Shelby/Hamlin and Portage Bay neighborhoods

Typical sound wall heights for below-grade residences:

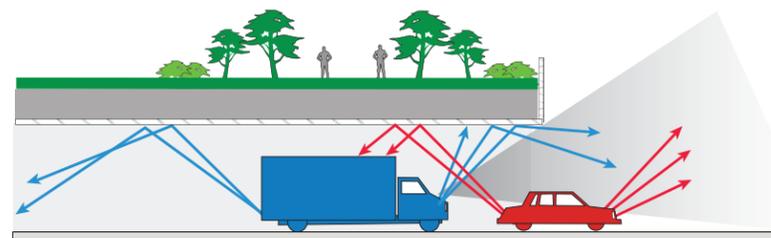
- 6 to 8 feet for roads with primarily passenger vehicle traffic
- 8 to 10 feet for major arterial roads and minor highways with some heavy truck traffic
- 10 to 12 feet for major highways with a high level of heavy truck traffic

Depressed Corridor with Lid



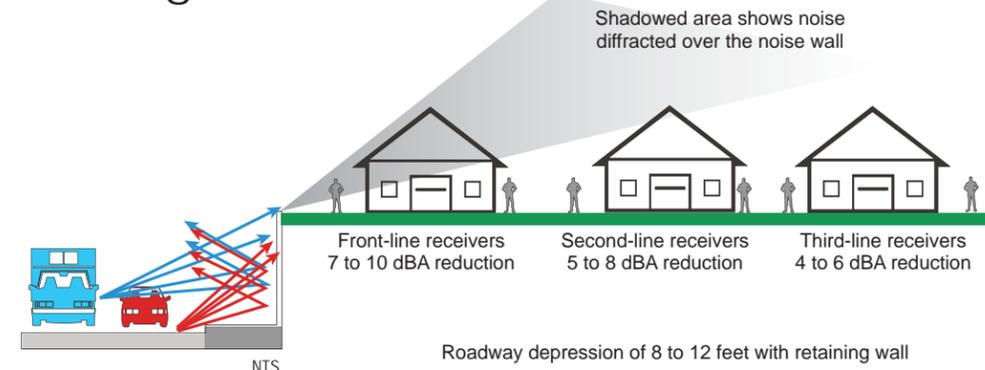
LOCATIONS: Montlake lid and 10th and Delmar lid

Lid Portal

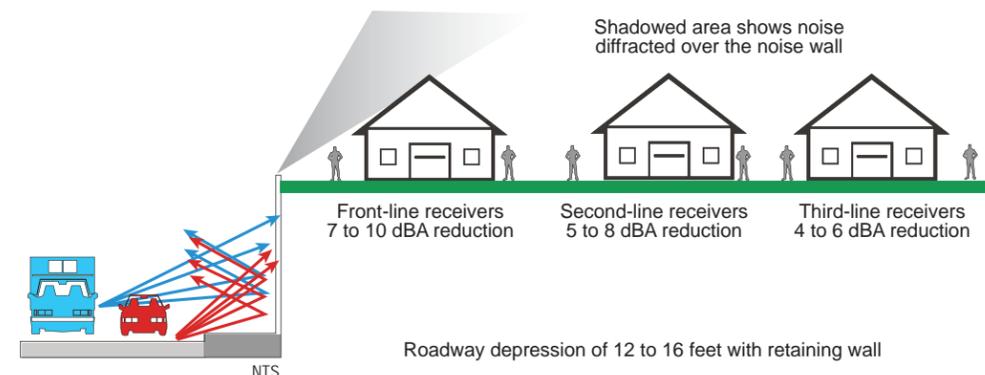


LOCATIONS: Montlake lid, 10th and Delmar lid, and I-5 enhanced pedestrian crossing

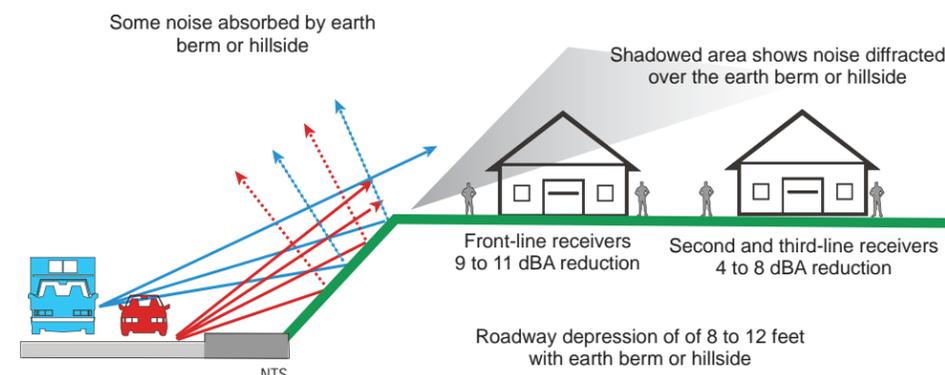
Above-grade receiver



LOCATIONS: Roanoke, North Capitol Hill and I-5/SR 520 Interchange



LOCATIONS: Roanoke, North Capitol Hill and I-5/SR 520 Interchange



LOCATIONS: Roanoke, North Capitol Hill and I-5/SR 520 Interchange

NTS = not to scale



LINK TO FEIS Noise Discipline Report

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