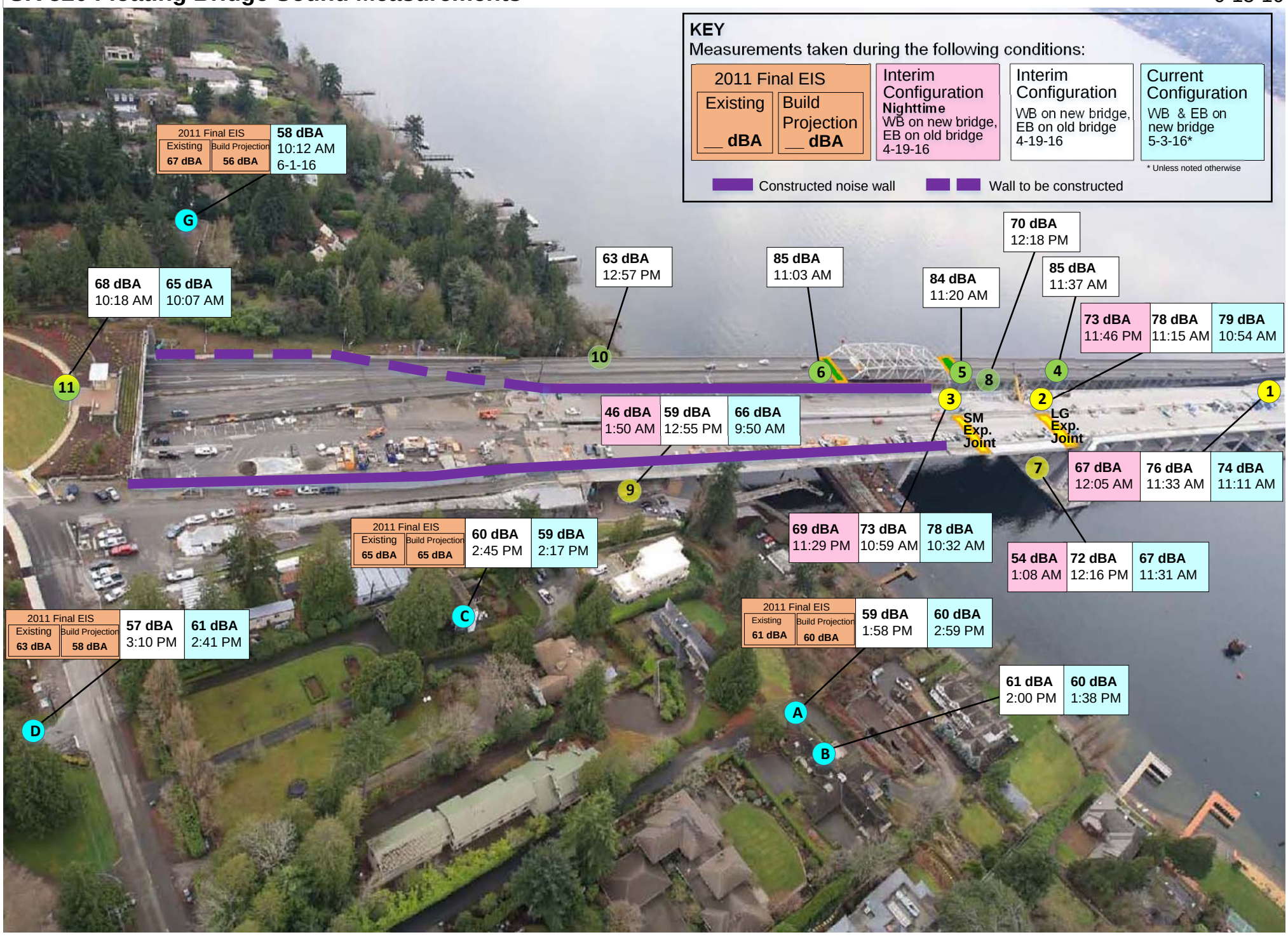
Washington State Department of Transportation

# SR 520 Bridge Replacement and HOV Program

STATE ROUTE 520

## SR 520 Floating Bridge Sound Measurements

6-13-16




### Sound Level Measurements from the New and Old Bridges

| | General Location | Location Description |
|---|---|---|
| 1 | Pavement West of Expansion Joints | In EB lanes of new bridge, standing approx. 1,200 feet west of the expansion joints. |
| 2 | Large Expansion Joint | In EB lanes of new bridge, standing immediately adjacent to the large expansion joint. |
| 3 | Small Expansion Joint | In EB lanes of new bridge, standing immediately adjacent to the small expansion joint. |
| 4 | Pavement West of Expansion Joints | In the WB lanes of the old bridge, standing approx. 200 feet west of the expansion joints. |
| 5 | Large Expansion Joint | In the WB lanes of the old bridge, standing immediately adjacent to the large expansion joint. |
| 6 | Small Expansion Joint | In the WB lanes of the old bridge, standing immediately adjacent to the small expansion joint. |
| 7 | Under Large Expansion Joint | On the pontoon below the WB lanes approximately 70 feet directly under the large expansion joint |
| 8 | Under Large Expansion Joint | On the pontoon below the EB lanes approximately 70 feet below the expansion joint. |
| 9 | East Shoreline Under Bridge – North Side | North side of the new bridge on the road leading to the SR 520 maintenance building |
| 10 | East Shoreline Under Bridge - South Side | South side of the old bridge on the road leading to the SR 520 maintenance building. |
| 11 | West end Evergreen Point Lid | Standing in the public viewing area on the west side of the Evergreen Point Road lid. |

### Sound Level Measurements Collected at Nearby Residences

| | Residential Address |
|---|---|
| A | 3223 Evergreen Point Rd, Medina (outside house) |
| B | 3223 Evergreen Point Rd, Medina (on 2nd floor balcony) |
| C | 3205 Evergreen Point Road, Medina |
| D | 3204 76th Ave NE, Medina |
| E | 8901 NE 34th St, Yarrow Point |
| F | 3245 Evergreen Point Road, Medina |
| G | 2839 Evergreen Point Road, Medina |
| H | Three Points Elementary School, Medina |

**KEY**

- Measurement taken on new bridge
- Measurement taken on old bridge
- Measurement taken on new lid
- Measurement taken at residence

**NOTE**

All sound level measurements are in **Leq**. The **Leq** or equivalent sound level is the time weighted average sound level over the 15-minute measurement period.

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## Sound Level Measurement Results

| Site number | Location | Date | Time | Leq (dBA) | Lmax (dBA) |
|---|---|---|---|---|---|
| 1 | Pavement West of Exp. Joints | 4/19/16 | 11:33 a.m. | 76 | 93 |
| | | 4/19/16 | 12:05 a.m. | 67 | 90 |
| | | 5/3/16 | 11:11 a.m. | 74 | 89 |
| 2 | Large Exp. Joint | 4/19/16 | 11:15 a.m. | 78 | 92 |
| | | 4/19/16 | 11:46 p.m. | 73 | 92 |
| | | 5/3/16 | 10:54 a.m. | 79 | 91 |
| 3 | Small Exp. Joint | 4/19/16 | 10:59 a.m. | 73 | 86 |
| | | 4/19/16 | 11:29 a.m. | 69 | 88 |
| | | 5/3/16 | 10:32 a.m. | 78 | 92 |
| 4 | Pavement West of Exp. Joints (old) | 4/19/16 | 11:37 a.m. | 85 | 94 |
| 5 | Large Exp. Joint (old) | 4/19/16 | 11:20 a.m. | 84 | 94 |
| 6 | Small Exp. Joint (old) | 4/19/16 | 11:03 a.m. | 85 | 97 |
| 7 | Pontoon Under Large Exp. Joint | 4/19/16 | 12:16 p.m. | 72 | 99 |
| | | 4/19/16 | 1:08 a.m. | 54 | 69 |
| | | 5/3/16 | 11:31 a.m. | 67 | 75 |
| 8 | Pontoon Under Large Exp. Joint (old) | 4/19/16 | 12:18 p.m. | 70 | 86 |
| 9 | East Shoreline Under Bridge North Side | 4/19/16 | 12:55 p.m. | 59 | 71 |
| | | 4/19/16 | 1:50 a.m. | 46 | 66 |
| | | 5/3/16 | 9:50 a.m. | 66 | 80 |
| 10 | East Shoreline Under Bridge South Side (old) | 4/19/16 | 12:57 p.m. | 63 | 74 |
| 11 | West end Evergreen Point Lid | 4/19/16 | 10:18 a.m. | 68 | 80 |
| | | 5/13/16 | 10:07 a.m. | 65 | 80 |
| A | 3223 Evergreen Point Rd, Medina (Outside house) | 4/20/16 | 1:58 p.m. | 59 | 71 |
| | | 5/3/16 | 2:59 p.m. | 60 | 72 |
| B | 3223 Evergreen Point Rd, Medina (On 2nd floor balcony) | 4/20/16 | 2:00 p.m. | 61 | 72 |
| | | 5/3/16 | 1:38 p.m. | 60 | 71 |
| C | 3205 Evergreen Point Road, Medina | 4/20/16 | 2:45 p.m. | 60 | 75 |
| | | 5/3/16 | 2:17 p.m. | 59 | 71 |
| D | 3204 76th Ave NE, Medina | 4/20/16 | 3:10 p.m. | 57 | 76 |
| | | 5/3/16 | 2:41 p.m. | 61 | 85 |
| E | 8901 NE 34th St, Yarrow Point | 4/20/16 | 3:40 p.m. | 54 | 68 |
| | | 5/3/16 | 1:09 p.m. | 51 | 70 |
| F | 3245 Evergreen Point Road, Medina | 5/10/16 | 11:08 a.m. | 57 | 72 |
| G | 2839 Evergreen Point Road, Medina | 6/1/16 | 10:12 a.m. | 58 | 75 |
| H | Three Points Elementary School, Medina | 6/1/16 | 10:38 a.m. | 60 | 80 |

Summary table of measurements taken by WSDOT experts in April through June 2016.
See reverse side for map of locations.