U-Link Montlake Tunnel Vibrations



1. Are you able to provide the street address of where you live or work in the Montlake neighborhood?

	Response Percent	Response Count
yes	100.0%	78
no	0.0%	0
	answered question	78
	skipped question	0

2. Have you at anytime since the end of August felt vibrations or heard sounds that seem to come from the ground or from your house itself?

	Response Percent	Response Count
YES	76.9%	60
NO	23.1%	18
	answered question	78
	skipped question	0

3. Do you think these sounds or sensations are associated with the Sound Transit Tunneling project that is happening under the Montlake neighborhood?

	Response Percent	Response Count
Yes	93.4%	57
No	0.0%	0
Not sure	6.6%	4
	answered question	61
	skipped question	17

4. What times of day do you feel and or hear these vibrations and or sounds? (check all that apply)

	Response Percent	Response Count
mornings (7AM - noon)	55.9%	33
afternoons (noon - 5PM)	57.6%	34
evenings (5PM - 10PM)	81.4%	48
nightime (10PM - 7AM)	78.0%	46
	answered question	59
	skipped question	19

5. You indicated you hear and or feel these vibrations and or sounds at night. Please indicate this experience as best you can.

	yes	no	Response Count
wakes me from sound sleep	38.6% (17)	61.4% (27)	44
prohibits me from falling back asleep if I am up for some other reason	51.1% (23)	48.9% (22)	45
leaves me wondering if I'll be able to fall back asleep before the next one hits	46.7% (21)	53.3% (24)	45
wakes my children	7.9% (3)	92.1% (35)	38
causes anxiety in me or family members	60.5% (26)	39.5% (17)	43
affects my pet or pets	28.2% (11)	71.8% (28)	39
		answered question	46
		skipped question	32

6. Do you suffer sleep loss from these vibrations or sounds?

	Response Percent	Response Count
yes	56.5%	26
no	43.5%	20
	answered question	46
	skipped question	32

7. You indicated you may have lost sleep from these sounds or vibrations. Estimate the amount of sleep you think you have lost on an average weeknight.

	Response Percent	Response Count
less than 30 minutes	19.2%	5
30 to 60 minutes	30.8%	8
1-2 hours	26.9%	7
2-3 hours	15.4%	4
3-4 hours	0.0%	0
more than 4 hours	7.7%	2
	answered question	26
	skipped question	52

8. How do you sense these vibrations or sounds?

	Response Percent	Response Count
hear	23.7%	14
feel	3.4%	2
both hear and feel	72.9%	43
	answered question	59
	skipped question	19

9. Thinking back to the period immediately before and the week after Thanksgiving, do you think these sounds and or vibrations changed?

	Response Percent	Response Count
not sure or wasn't around to compare	27.1%	16
they got better after the holiday	11.9%	7
they seemed about the same	27.1%	16
they got worse after the holiday	33.9%	20
	answered question	59
	skipped question	19

10. If you hear these sounds, try to pick from the following what best describes the things you hear (check all that apply)

	Response Percent	Response Count
high pitched whining	1.9%	1
pneumatic drill-like sound	9.6%	5
something like but clearly not airplanes or jets overhead	46.2%	24
something like but clearly not the sounds of vehicles in the street	34.6%	18
something like a very intense bass (sub woofer) speaker located near my home	65.4%	34
a deep churning, humming sound	42.3%	22
deep thumping sounds, like a huge bass drum	71.2%	37
something like distant artillery shells	13.5%	7
like a diesel engine accelerating	7.7%	4
like someone dragging a recycling bin up concrete steps	30.8%	16
	Please enter your own description if none of these fit	12
	answered question	52
	skipped question	26

11. If you feel vibrations, try to pick how they feel from this list (check all that apply)

	Response Percent	Response Count
tingles in my feet and legs	3.6%	1
just feel it in my bones	39.3%	11
distinct pulses of vibrations like someone touched my chair with an electric hair trimmer or other motor	21.4%	6
continuous vibrations like from a massage chair but not so intense	67.9%	19
	please enter your own description if needed	14
	answered question	28

12. How would you rank the intensity of the sounds or vibrations when they are at their most intense levels?

skipped question

50

	Response Percent	Response Count
only noticeable in a very quiet setting with no other noise or nearby activities	24.1%	14
intense enough to feel and or hear if I am undergoing normal activities	27.6%	16
they can be distracting during normal conversation, TV or radio	19.0%	11
I hear and or feel these vibrations or sounds no matter what	29.3%	17
	answered question	58
	skipped question	20

13. How would you rank intensity of the sounds or vibrations when they are at their softest or lowest levels?

	Response Percent	Response Count
only noticeable in a very quiet setting with no other noise or nearby activities	55.2%	32
intense enough to feel and or hear if I am undergoing normal activities	32.8%	19
they can be distracting during normal conversation, TV or radio	3.4%	2
I hear and or feel these vibrations or sounds no matter what	8.6%	5
	answered question	58
	skipped question	20

14. Try to rate how you feel when you sense these vibrations or sounds

	none	somewhat	a lot	Response Count
angry	46.6% (27)	34.5% (20)	19.0% (11)	58
fearful	46.6% (27)	43.1% (25)	10.3% (6)	58
anxious	32.8% (19)	41.4% (24)	25.9% (15)	58
irritated/annoyed	20.7% (12)	43.1% (25)	36.2% (21)	58
forgiving	77.6% (45)	19.0% (11)	3.4% (2)	58
depressed	79.3% (46)	17.2% (10)	3.4% (2)	58
calm	72.4% (42)	24.1% (14)	3.4% (2)	58
sad	72.4% (42)	24.1% (14)	3.4% (2)	58
happy	94.8% (55)	5.2% (3)	0.0% (0)	58
			answered question	58
			skipped question	20

15. Does the location in Montlake where you experience these vibrations and or sounds have a basement?

	Response Percent	Response Count
yes, there is basement	94.8%	55
no, the foundation is on ground level	5.2%	3
	answered question	58
	skipped question	20

16. Where in your home do you feel or hear these vibrations or sounds? (choose all that apply)

	Respons Percent	-
basement	76.49	6 42
ground level floor	87.39	6 48
upper floor(s)	72.79	6 40
	answered questio	n 55
	skipped questio	n 23

17. Using numerical ranking where 1 is least and 5 is most, please rank the intensity you feel or hear sounds and or vibrations in your home or Montlake business

	0 (not at all)	1	2	3	4	5	Response Count
basement	6.3% (3)	12.5% (6)	8.3% (4)	18.8% (9)	18.8% (9)	35.4% (17)	48
ground floor	1.9% (1)	19.2% (10)	11.5% (6)	23.1% (12)	25.0% (13)	19.2% (10)	52
upper floor 1	13.0% (6)	15.2% (7)	10.9% (5)	21.7% (10)	21.7% (10)	17.4% (8)	46
upper floor 2	47.4% (9)	0.0% (0)	21.1% (4)	15.8% (3)	5.3% (1)	10.5% (2)	19
					answere	d question	55
					skippe	d question	23

18. Where in your home do you feel or hear these vibrations or sounds? (choose all that apply)

	Response Percent	Response Count
ground level floor	100.0%	3
upper floor(s)	33.3%	1
	answered question	3
	skipped question	75

19. Using numerical ranking where 1 is least and 5 is most, please rank the intensity you feel or hear sounds/vibrations in the following locations in your home

	0 (not at all)	1	2	3	4	5	Response Count
ground floor	0.0% (0)	33.3% (1)	33.3% (1)	33.3% (1)	0.0% (0)	0.0% (0)	3
upper floor 1	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	2
upper floor 2	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	2
					answere	d question	3
					skippe	d question	75

20. As regards the issue of	mass transport in general, how do you feel?	
	Response Percent	Response Count
very friendly towards mass transport, we really need more and better of it	72.5%	50
supportive	18.8%	1;
neutral	7.2%	
there is enough mass transit already	0.0%	
mass transit should make way for more personal ways of getting around	1.4%	
	answered question	6
	skipped question	

21. As regards Sound Transit in general, how do you feel?					
	Response Percent	Response Count			
dislike Sound Transit much or most of the time	4.3%	3			
not transparent and not trustworthy	15.7%	11			
neutral about Sound Transit	28.6%	20			
support Sound Transit's efforts in general	50.0%	35			
Sound Transit is doing everything right	1.4%	1			
	answered question	70			
	skipped question	8			

22. As regards the Sound Transit U-Link tunnel project design and concept, how do you feel?

	no opinion	agree	neutral	disagree	Response Count
Choice of a tunnel instead of a surface or elevated route	8.7% (6)	63.8% (44)	18.8% (13)	8.7% (6)	69
The location and convenience of stations	5.9% (4)	38.2% (26)	33.8% (23)	22.1% (15)	68
It will be something I look forward to using for my travel/commuting in the city	4.3% (3)	53.6% (37)	31.9% (22)	10.1% (7)	69
Seems like a complete waste of money	5.8% (4)	10.1% (7)	13.0% (9)	71.0% (49)	69
			an	swered question	69
			s	kipped question	9

), Q10. If you hear these sounds, try to pick from the following what best describes all that apply)	the things you hear
1	vibrations that sometimes cause paintings on walls to buzz	Dec 11, 2011 6:41 PM
2	like a washing maching running in the next room	Dec 11, 2011 4:53 PM
3	Intense, long lasting bowling ball with intermittent ka chunks	Dec 11, 2011 2:20 PM
4	deep rumbling sound with vibration	Dec 10, 2011 4:04 PM
5	a doppler effect, sound approches grows louder, reaches high level, then lessens as device passes.	Dec 10, 2011 12:31 PM
6	something like distant heavy bombing	Dec 9, 2011 8:57 AM
7	Like the biggest gang banger car I've ever heard rolling through the neighborhood. Thumping bass.	Dec 7, 2011 9:45 PM
8	I find it like a car stereo that's too loud but blocks away. Not bothersome.	Dec 7, 2011 5:36 PM
9	This is a tough one, because the sounds are different at times	Dec 7, 2011 3:34 PM
10	A constant rumble with rhythmic thumps	Dec 7, 2011 12:13 PM
11	Rhythmic thumping sound, exactly like standing next to train tracks when a freight is passing	Dec 7, 2011 8:24 AM
12	Rumbeling of thunderstorm	Dec 6, 2011 11:02 PM

deep rhythmic pulses tht correspond to the sounds; also will occasionally rattle wine glasses in our kitchen cabinets and/or the glass portion of the cabinets themselves! 3 distant shocks that cause ground to jump a little 4 subtle vibtration 5 Dec 10, 2011 4:04 PM 5 South Tunnel, device in tunnel is loudest South bound, less noise North bound. 6 thumping is the most distinct 7 Windows rattle 8 very faint vibrations 9 I sense and feel someone has broken into our house downstairs, get up to check, nothing. 10 You can hear and feel the windows in the basement rattle 11 subtle, but when I put my hand on the kitchen table I can feel the vibration when a train is passing 12 very low frequency, rhythmic, thumping vibrations Dec 6, 2011 11:02 PM 14 soft, percussive wave that builds then diminishes Dec 6, 2011 7:14 PM		0, Q11. If you feel vibrations, try to pick how they feel from this list all that apply)	
wine glasses in our kitchen cabinets and/or the glass portion of the cabinets themselves! 3 distant shocks that cause ground to jump a little 4 subtle vibtration 5 Dec 10, 2011 4:04 PM 5 South Tunnel, device in tunnel is loudest South bound, less noise North bound. 6 thumping is the most distinct 7 Windows rattle 8 Dec 8, 2011 3:11 PM 8 very faint vibrations 9 I sense and feel someone has broken into our house downstairs, get up to check, nothing. 10 You can hear and feel the windows in the basement rattle 11 Subtle, but when I put my hand on the kitchen table I can feel the vibration when a train is passing 12 very low frequency, rhythmic, thumping vibrations Dec 6, 2011 11:02 PM 13 Pressure in my eardrums Dec 6, 2011 11:02 PM	1	see answer to question 10	Dec 11, 2011 6:41 PM
subtle vibtration Dec 10, 2011 4:04 PM South Tunnel, device in tunnel is loudest South bound, less noise North bound. Dec 10, 2011 12:31 PM thumping is the most distinct Dec 9, 2011 10:04 AM Windows rattle Dec 8, 2011 3:11 PM very faint vibrations Dec 8, 2011 11:24 AM I sense and feel someone has broken into our house downstairs, get up to check, nothing. You can hear and feel the windows in the basement rattle Dec 8, 2011 8:31 AM You can hear and feel the windows in the basement rattle Dec 7, 2011 10:07 AM a train is passing Very low frequency, rhythmic, thumping vibrations Dec 6, 2011 11:02 PM Pressure in my eardrums	2	wine glasses in our kitchen cabinets and/or the glass portion of the cabinets	Dec 11, 2011 4:51 PM
South Tunnel, device in tunnel is loudest South bound, less noise North bound. Dec 10, 2011 12:31 PM thumping is the most distinct Dec 9, 2011 10:04 AM Windows rattle Dec 8, 2011 3:11 PM very faint vibrations Dec 8, 2011 11:24 AM I sense and feel someone has broken into our house downstairs, get up to check, nothing. You can hear and feel the windows in the basement rattle Dec 8, 2011 8:58 AM You can hear and feel the windows in the basement rattle Dec 8, 2011 8:31 AM subtle, but when I put my hand on the kitchen table I can feel the vibration when a train is passing very low frequency, rhythmic, thumping vibrations Dec 7, 2011 8:24 AM Pressure in my eardrums Dec 6, 2011 11:02 PM	3	distant shocks that cause ground to jump a little	Dec 10, 2011 6:46 PM
thumping is the most distinct Dec 9, 2011 10:04 AM Windows rattle Dec 8, 2011 3:11 PM resure and feel someone has broken into our house downstairs, get up to check, nothing. Dec 8, 2011 11:24 AM Dec 8, 2011 8:58 AM Dec 8, 2011 8:31 AM results, but when I put my hand on the kitchen table I can feel the vibration when a train is passing results from the put my hand on the kitchen table I can feel the vibration when a train is passing Pressure in my eardrums Dec 6, 2011 11:02 PM	4	subtle vibtration	Dec 10, 2011 4:04 PM
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	12	very low frequency, rhythmic, thumping vibrations	Dec 7, 2011 8:24 AM
14 soft, percussive wave that builds then diminishes Dec 6, 2011 7:14 PM	13	Pressure in my eardrums	Dec 6, 2011 11:02 PM
	14	soft, percussive wave that builds then diminishes	Dec 6, 2011 7:14 PM