

1 Appendix M

2 **FTA MODELING FILES**

3 Appendix M contains Federal Transit Administration noise and vibration modeling files used to assess
4 transit-related noise and vibration for the IBR Project.

Table M-1. Wayside Transit Noise Predictions

IBR Transit Noise Assessment - 05Feb2023

Receiver #	Location of Receiver	Receiver Type	Address of Receiver	Transit Facility	Approximate Distance (ft)	Elevation of Receiver (ft)	Elevation of Transit Facility (ft)	Slant Distance	Speed (mph)	Existing Ldn	Reference Passby Noise Level at Receiver	Project Ldn	Moderate Impact	Severe Impact	Impact (Y/N)	Type of Track (direct fixation, ballast & tie, embedded, other?)	Near Special Trackwork? (Yes/No)
LRT-1	E 7th St./E C St.	MFR	316 E 7th St Vancouver, WA 98660	Track	46	46	43	46.1	50	83	81	69	66	71	Y	Direct Fixation	Yes
LRT-2	E 8th St/ E C St.	Hotel	801 C St Vancouver, WA 98660	Track	60	85	57	66.2	50	80	80	67	66	71	Y	Direct Fixation	Yes
LRT-3	Haydn Island Houseboats	SFR/S house boats	1625 N. Jantzen Ave.	Track	40	3	65	73.8	50	77	79	67	66	75	Y	Direct Fixation	

Table M-2. Wayside Transit Noise Predictions

Interstate Bridge Replacement

distances are from center line of near tracks to building façade

(Movable Point/Spring Frog and Low-noise frog are both considered low-imp)

ID Label	Location	FTA Category (drop-down menu)	Receiver Type	Address of Receiver	Transit Facility	Distance to tracks			Track Conditions										krad	Building Coupling Loss	Vibration Predictions (No Mitigation)							
						Horiz. dist. Near track (ft)	Horiz. dist. between tracks (ft)	Horiz. Dist. Far Track (ft)	Lw @ 50 mph	-106log(D)	-2.32log(D ²)	-87log(D ²)	Crossover Type	Crossover Distance (ft)	Train Speed (mph)	Track Type	Track Adjustment from DF	Speed Adjustment			Aerial Track Adjustment?	Structural Coupling Loss	Special Trackwork Adjustment	Safety Factor	Overall Level (VdB)	FTA Criteria (VdB)	Exceeds?	Amt Exceeds
LRV-1	E 7th St./E C St.	2 - residential	MFR	316 E 7th St Vancouver, WA 98660	Track	46	15	63	74	-2	-6	-4			50	Direct Fixation	0	0.0	0.0	-10	0.0	3	0	0	77	72	Y	5
LRV-2	E 8th St/ E C St.	2 - residential	Mixed Use Building w/Theater	801 C St Vancouver, WA 98660	Track	60	15	75	72	-2	-7	-5	Crossover	115	50	Direct Fixation	0	0.0	0.0	-10	6.4	3	0	0	81	72	Y	9
LRV-3	Haydn Island Houseboats	2 - residential	SFR	Haydn Island Houseboats	Track	Because these SF residences are on water, minimal transmission of ground vibration occurs. There is no exceedance of the FTA Vibration Criteria.																						
LRV-4	601 Broadway, Vancouver	Hotel	Hotel	Econo Lodge 601 Broadway, Vancouver	Track	110	15	125	66.6	-2.2	-9.7	-7.8			50	Direct Fixation	0	0	0.0	-10	0.0	3	0	0	70	72	-	-

FTA VIB CRITERIA

Other Cat 2	72	35
Cat 3	78	40