PENNA TURN PIKE

RECONSTRUCTION AND WIDENING PROJECT

Milepost 124.5 to 133.8

New Baltimore Noise Barrier Layout

East - New Baltimore Noise Barrier Analysis Summary

Receiver Number	Equivalent Residential Unit (ERU)	2040 Build Predicted Noise Level	Optimized Height 12-20 feet (Average 14.4 feet)	
		Leq	Leq	Insertion Loss
M-08	0.15	59	54	5
M-09	6	57	51	6
M-10	1.5	58	53	5
M-12	1	**68**	58	9
M-13	2	65	58	7
M-14	2	**71**	63	9
M-15	1	**74**	64	10
P-18	2	57	52	6
P-19	7	50	45	5
P-24	4	63	56	7
P-25	1	**70**	62	8
P-26	1	**72**	63	9
P-28	2	**71**	63	8
P-46	0.15	56	52	4
P-47	0.15	57	52	5
P-48	0.15	59	54	4
P-49	0.15	58	51	7
P-50	0.15	57	51	6
P-51	0.15	59	54	5
P-52	0.15	59	53	6
P-53	0.15	58	52	6
P-54	0.15	61	54	7
P-55	0.15	60	53	6
P-56	0.15	58	52	6
Barrier Length (feet)			3,873	
Area (square feet), from TNM			55,753	
Total Number of Benefitted ERUs (5 dB(A))			32	
Square Feet per Benefitted ERU (SF/BR)			**1,742**	

West - New Baltimore Noise Barrier Analysis Summary

Receiver Number	Equivalent Residential Unit (ERU)	2040 Build Predicted Noise Level	Optimized Height 18-20 feet (Average 19.74 feet)	
		Leq	Leq	Insertion Loss
T-01	1	**68**	58	10
M-05	3	53	51	3
M-07	4	55	50	5
P-07	1	52	52	1
P-08	3	58	51	8
P-09	1	57	52	5
P-10	2	60	52	8
P-11	2	57	50	7
P-12	1	65	55	9
P-13	4	55	48	7
P-14	7	55	49	6
P-15	6	61	53	8
P-16	1	**69**	58	11
P-17	2	57	52	5
P-45	1	57	50	7
Barrier Length (feet)			1,650	
Area (square feet), from TNM			32,576	
Total Number of Benefitted ERUs (5 dB(A))			35	
Square Feet per Benefitted ERU (SF/BR)			**931**	

Notes:

1. Impacted receivers are those that warrant the investigation of noise abatement due to noise impacts. This occurs where the predicted noise levels meet any of the following criteria: (1) Predicted Highway Traffic Noise levels equal or exceed 66 dB(A) or (2) Predicted Highway Traffic Noise substantially exceed (by 10 dB(A) or more) the existing Highway Traffic Noise levels.
2. Barrier square footage from TNM is based upon its length and its height from the finished ground elevation at the base of the barrier to its top elevation (acoustical profile line).
3. Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.