

**APPENDIX 3.12**

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**Traffic Noise Modeling**

**Westbrook Off-Site Alternative  
Traffic Noise Levels**

ROADWAY NAME Segment	Conditions	Number of Lanes in Each Direction	Median Width	ADT Volume	Design Speed (mph)	Distance From Edge of Pavemt	Alpha (1) Factor	Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL
									Medium Trucks	Heavy Trucks	
Sunset west of Industrial	2025	1	15	22,600	35	50	0	0	1.3%	0.3%	66.4
Sunset west of Industrial	2025 + Project	3	0	32,400	35	50	0	0	1.3%	0.3%	67.3
Foothills south of Athens	2025	1	15	20,840	35	50	0	0	1.3%	0.3%	66.1
Foothills south of Athens	2025 + Project	2	0	22,110	35	50	0	0	1.3%	0.3%	66.1

**Notes:**

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site, such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.

**Assumed 24-Hour Traffic Distribution**

**Weighted Traffic Distribution (%)**

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%