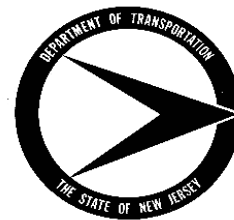


*New Jersey Department of Transportation*

*Baseline Document Change*



**Noise Barriers  
BDC96MB - 001**

**November 22, 1996**

**MEMORANDUM  
Baseline Document Change -Design Manual-Bridges and Structures**

**Subject: Noise Barriers-Wind Load Table**

The following **Baseline Document Change** is being made available for your immediate use. Tables 1-4 (listed on pages 2 & 3 ) supersede Table 48-1 in the **Department's Bridge Design Manual** and should be used for the design of noise walls.

- Table 1 is to be used for both Ground mount and structure mounted sound barriers in flat unobstructed areas exposed to wind flowing over large bodies of water and extending inland from the shoreline a distance of one half mile.
- Table 2 is to be used in open terrain with scattered obstructions. This category includes flat, open country and grasslands. This exposure shall be used for all sound barriers located on bridge structures, retaining walls, or traffic barriers that are not covered by Table 1.
- Table 3 should be used in urban and suburban areas with open terrain not meeting the requirements for Table 4. This table should generally be used for ground mounted sound barriers.

- Table 4 may be used in urban and suburban areas with numerous closely spaced obstructions having the size of single-family dwellings or larger that prevail in the upwind direction from the noise wall for a distance of at least 1500 feet.

TABLE 1<sup>a</sup>  
Minimum Wind Pressure On Sound Barriers Located In Coastal Regions

Distance from average level of adjoining ground surface to centroid of loaded area in each height zone, ft, H	C <sub>c</sub>	Minimum Pressure, psf, for Indicated Wind Velocity, mph			
		80	90	100	110
0 < H ≤ 14	1.2	40	50	62	75
14 < H ≤ 29	1.37	46	58	71	87
greater than 29	1.49	50	63	77	94

TABLE 2<sup>a</sup>  
Minimum Wind Pressure On Sound Barriers Located On Bridge Structures, Retaining Walls, or Traffic Barriers

Distance from average level of adjoining ground surface to centroid of loaded area in each height zone, ft, H	C <sub>c</sub>	Minimum Pressure, psf, for Indicated Wind Velocity, mph			
		80	90	100	110
0 < H ≤ 14	.80	27	34	42	50
14 < H ≤ 29	1.00	33	42	52	63
greater than 29	1.10	37	46	57	69

TABLE 3<sup>a</sup>  
Minimum Wind Pressure On Sound Barriers Not Located On Structures

Distance from average level of adjoining ground surface to centroid of loaded area in each height zone, ft, H	C <sub>c</sub>	Minimum Pressure, psf, for Indicated Wind Velocity, mph			
		80	90	100	110
0 < H ≤ 14	.59	20	25	31	37
14 < H ≤ 29	.75	25	32	39	47
greater than 29	.85	28	36	44	53

TABLE 4<sup>a</sup>  
Minimum Wind Pressure On Sound Barriers Not Located On Structures

Distance from average level of adjoining loaded area in each height zone, ft, H	C <sub>c</sub>	Minimum Pressure, psf, for Indicated Wind Velocity, mph			
		80	90	100	110
0 < H ≤ 14	.37	12	16	19	23
14 < H ≤ 29	.59	17	21	26	31
greater than 29	.59	20	25	31	37

<sup>a</sup> Source: AASHTO. *Bridge Guide and Manual Interim Specifications*. Washington, DC: AASHTO 1992

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This memorandum is being distributed to all those in possession of the Design Manual-Bridges and Structures. This memorandum is also being posted on the NJDOT's Electronic Bulletin Board System under Conference number 10-Highway Design, File Area 56-Baseline Document Change Memorandums.

Recommended by:

Approved by:

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Brian Strizki  
Manager  
Quality Management Services

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Russell Tong  
Assistant Commissioner  
Capital Program Management