

TO:  
**SUPERSEDED BY EB 01-010**  
**EFFECTIVE 2/6/01**

# ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

**SUBJECT:** Bridge Design Manual; Standard Specifications For Highway Bridges; Wind Forces Applied to Noise Barriers.  
**Subject Code:** 7.35-1

<b>Distribution:</b> 31 <input checked="" type="checkbox"/> Main Office    33 <input checked="" type="checkbox"/> Regions    34 <input checked="" type="checkbox"/> Special		<b>Code:</b> 85-17 <b>Date:</b> 3/8/85 <b>Supersedes:</b>
<b>APPROVED:</b>  _____ E.V. HOURIGAN, Deputy Chief Engineer (Structures)		

The table below lists lateral wind forces to be applied to noise barriers on bridges for 70 mph and 80 mph design wind velocities. These forces have been computed using the A.A.S.H.T.O. wind pressure formula  $P = .00256(1.3V)^2 C_h C_d$ . The variables in this formula are wind velocity (V), height coefficient ( $C_h$ ) and drag coefficient ( $C_d$ ). The Engineering Research and Development Bureau has determined that the drag coefficient ( $C_d$ ) is 1.2 for a long wall. The height used to determine the height coefficient ( $C_h$ ) is measured from the ground to the centroid of the barrier. For additional information on the wind pressure formula refer to "Section 2 - Loads" of the A.A.S.H.T.O. manual "Standard Specifications For Structural Supports For Highway Signs, Luminaires and Traffic Signals."

Questions or comments concerning this EI should be directed to the Structures Division, Special Design Unit at (518) 457-2459.

*See EI 85-12*

### DESIGN WIND FORCES

Height (ft)	$C_h$	$P$ (psf)	$P$ (psf)
		@ 70 mph	@ 80 mph
0 < H ≤ 14	.80	20.4	26.6
14 < H ≤ 29	1.00	25.4	33.2
29 < H ≤ 49	1.10	28.0	36.5
49 < H ≤ 99	1.25	31.8	41.5
99 < H ≤ 149	1.40	35.6	46.5
149 < H ≤ 199	1.50	38.2	49.8
199 < H ≤ 299	1.60	40.7	53.2

PREL.	FINAL
DESIGN	LANDSCAPE
RECEIVED FACILITIES DIVISION	
MAR 19 1985	
DIR.	FILE