

**ASCE 7 Standards Committee
Proposal to Revise the 2005 Edition of ASCE 7**

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Considered by ASCE 7 Task Committee on: ___ Wind _____
Task Committee Action on Proposal: _____

SCOPE: ASCE 7-05 Table 6-3 [revise footnotes]

PROPOSAL FOR CHANGE: (please use strike-out and underline format – please also include related modification/proposed addition to Commentary)

Revise Table 6-3 as follows:

Velocity Pressure Exposure Coefficients, K_h and K_z
Table 6-3

Height above ground level, z		Exposure (Note 1)			
		B		C	D
ft	(m)	Case 1	Case 2	Cases 1 & 2	Cases 1 & 2
0-15	(0-4.6)	0.70	0.57	0.85	1.03
20	(6.1)	0.70	0.62	0.90	1.08
25	(7.6)	0.70	0.66	0.94	1.12
30	(9.1)	0.70	0.70	0.98	1.16
40	(12.2)	0.76	0.76	1.04	1.22
50	(15.2)	0.81	0.81	1.09	1.27
60	(18)	0.85	0.85	1.13	1.31
70	(21.3)	0.89	0.89	1.17	1.34
80	(24.4)	0.93	0.93	1.21	1.38
90	(27.4)	0.96	0.96	1.24	1.40
100	(30.5)	0.99	0.99	1.26	1.43
120	(36.6)	1.04	1.04	1.31	1.48
140	(42.7)	1.09	1.09	1.36	1.52
160	(48.8)	1.13	1.13	1.39	1.55
180	(54.9)	1.17	1.17	1.43	1.58
200	(61.0)	1.20	1.20	1.46	1.61
250	(76.2)	1.28	1.28	1.53	1.68
300	(91.4)	1.35	1.35	1.59	1.73
350	(106.7)	1.41	1.41	1.64	1.78
400	(121.9)	1.47	1.47	1.69	1.82
450	(137.2)	1.52	1.52	1.73	1.86
500	(152.4)	1.56	1.56	1.77	1.89

Notes:

1. **Case 1:** a. All components and cladding.
 b. ~~Main wind force resisting system in low rise buildings designed using Figure 6-10.~~
Case 2: a. All main wind force resisting systems in buildings ~~except those in low rise buildings designed using Figure 6-10.~~
 b. ~~All main wind force resisting systems in~~ and other structures.

(remaining footnotes are unchanged and renumbered accordingly)

REASON FOR PROPOSAL: (a reason statement providing the rationale for the proposed change must be provided – attach additional pages if necessary)

The need for this proposal and relevant research was discussed by the Wind Task Committee at its June 25-26 meeting in Dallas. Included in that discussion and in a prior version of this proposal were a number of background studies which indicate wind loads are conservatively defined for Exposure B conditions in ASCE 7 for two primary reasons: (1) the absence of any consideration of shielding effects in the building and natural environment and (2) the selection of a conservative parameters to define the surface roughness and resulting K_z factors for Exposure B (*Residential Building Loads: Review and Roadmap for Future Progress*, ASCE-SEI, 2006, pp19-21).

While this proposal does not address these fundamental concerns, it does address one contributing factor in Table 6-3 that affects the magnitude of MWFRS loads for buildings in Exposure B and less than 30 feet in height when determined following Figure 6-10 low-rise building procedure. This proposal changes footnotes in Table 6-3 such that Case 1 (truncated Exposure B velocity pressure coefficients) applies only to components and cladding wind loads and not MWFRS wind loads per Figure 6-10. Thus, this change recognizes that MWFRS loads should be governed by the Case 2 velocity pressure coefficients regardless of the method used to determine MWFRS loads (e.g., Figure 6-6 vs. Figure 6-10), even though different answers result. The reason for differences in MWFRS wind loads calculated by different methods in ASCE 7 is not caused by wind exposure effects, but rather a difference in the manner of processing or evaluating time-varying wind pressures to create simplified design pressure patterns that emulate structural actions caused by the net effect of time-varying localized wind pressures that vary also by wind direction. The truncated profile for components and cladding wind loads is retained because the magnitude of reduction in individual peak local pressures acting on a given spot of a building envelop is not so sensitive to exposure effects because of increased turbulence intensity that occurs with increased surface roughness of surroundings.

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