TECHNICAL BULLETIN

Code Effective Date: January 1, 2008

Source Document: 19 NYCRR 1220 - Residential Code of New York State (RCNYS)
19 NYCRR 1221 - Building Code of New York State (BCNYS)

Topic: Clarification of Wind Maps

This document provides information on the location of the wind contour lines depicted in wind maps found in the Residential Code of New York State (RCNYS) Figure R301.2(4) and the Building Code of New York State (BCNYS) Figure 1609, respectively. This document also provides information on the identification of wind-borne debris regions and on selecting basic wind speeds in special wind regions.

Given the relatively small scale of the wind maps, is there a better definition of the wind contour lines in BCNYS Figure 1609 and RCNYS Figure R301.2(4)?

Due to the variables in graphical and statistical data associated with the wind contour lines depicted on the wind maps, this information is advisory. For the purpose of uniform regulation of the Code with respect to wind loads, it has been determined to define the location of the wind contour lines by identifying these with municipal boundaries. The following is a listing of the municipalities which are located between the wind contour lines identified below. [This bulletin is only to help in identifying the location of the municipality relative to the wind contour lines. The designer should use the higher wind speed listed or use linear interpolation to identify the correct wind speed for the subject location.]

120 MPH
In Suffolk County:
T/East Hampton
T/Shelter Island
T/Southampton
T/Southold
V/Dering Harbor
V/East Hampton
V/Greenport
V/North Haven
V/Quogue
V/Sag Harbor
V/Southampton
V/Southold
V/West Hampton Dunes

110 MPH to 120 MPH
All municipalities in Nassau County
All municipalities in Suffolk County not listed above
110 MPH to 100 MPH

C/Mount Vernon

C/New Rochelle

C/Rye

C/White Plains

C/Yonkers

T/Eastchester

T/Harrison

T/Mamaroneck

T/North Castle

T/Pelham

T/Pound Ridge

T/Rye

T/Scarsdale

V/Bronxville

V/Harrison

V/Larchmont

V/Mamaroneck

V/Pelham

V/Pelham Manor

V/Port Chester

V/Rye Brook

V/Scarsdale

90 MPH to 100 MPH

All municipalities in Westchester County not listed above

All municipalities in Rockland County

All municipalities in Putnam County

In Dutchess County:

T/Pawling

V/Pawling

T/Beekman

T/East Fishkill

T/Dover

90 MPH

Any municipality which does not appear in the above listings is subject to a fixed wind speed value of 90 MPH. ¹

¹In Kings and Queens Counties, sound engineering judgement should be used in determining the wind speeds within these counties.

How do the Codes of NYS handle determining the applicability of wind-borne debris regions?

The BCNYS Section 1609.2 and the standards referenced in RCNYS Section R301.2.1.1 have definitions of windborne debris regions. In areas where the basic wind speed is 110 mile per hour (MPH) or greater, the wind-borne debris region is applicable at a distance of one (1) mile inland from the mean high water line. In areas where the basic wind speed is 120 MPH and greater, the entire area shall comply with the additional requirements of the windborne debris regions. ASTM E1996, 1998 edition, has more specific requirements on the levels of protection required in these areas. Specific to the area between the 110 MPH and 120 MPH wind contour lines, the measurement of the one (1) mile distance is determined by the local Code Enforcement Official. It should be noted that the distance should not be based on a barrier island, reef, or any other incidental landmass separate from the main body of land.

What additional requirements should local Code Enforcement Officials and design professionals be aware of concerning special wind regions? ²

The only specific requirement that is based on the special wind region is RCNYS Section R905.2.6, which requires additional fasteners for asphalt strip shingles. Otherwise, the BCNYS, RCNYS, and associated reference standards do not specify any additional requirements for wind loads within the designated special wind region. According to the publication Minimum Design Loads for Buildings and Other Structures,
ASCE Standard 7-98 Commentary, special wind regions are geographical regions in which wind speed abnormalities are known to exist. The commentary suggests that “When selecting basic wind speeds in these special regions, use of regional climatic data and consultation with a qualified professional engineer or meteorologist is advised.” The special wind region should serve as a warning to design professionals in evaluating wind loading conditions. Wind speeds higher than the derived values taken from Figure 1609 of the BCNYS and Figure R301.2(4) of the RCNYS are likely to occur and should be considered in the design.

2 The Counties of Columbia, Dutchess, Putnam, Rockland, Westchester, and parts of Orange, Rensselaer, and Ulster fall within a special wind region.

Ronald E. Piester, AIA, Director
Division of Code Enforcement and Administration