

Pole Selection Guide

Poles should initially be selected, according to lighting application needs, and second, but equally important, according to the structural requirements imposed on the pole by the lighting fixtures, bracketry and wind. Before attempting to make this selection, it would be helpful to have an understanding of the terminology, such as steady or sustained wind velocity, gust velocity, EPA, special wind region, and maximum weight. Then a step-by-step procedure can be followed to select the proper pole for your particular requirements.

WIND VELOCITY

The attached isotach maps show wind speeds based on 3-second-gusts measurements. The velocities are from the ASCE 7-05 wind maps except for the separate State of Florida map. The wind velocities for Florida are the requirements of the Florida Building Code. This maps are provided for reference only. **Consult local authorities to determine the maximum velocities for your area.**

GUST VELOCITY

Please note that the wind speeds are based on 3-second-gusts. These wind speeds are typically higher than shown on previous maps we have provided but the 1.3 gust factor previous added is not required and the gust factors are included in the calculations used to determine the maximum EPAs.

EFFECTIVE PROJECTED AREA

Effective Projected Area (EPA) is the exposed surface area of a fixture and bracket multiplied by a shape factor which varies depending on the shape of the fixture and bracket. For example, a large rectangular fixture will present more resistance to the wind than will a round or cylindrical shape.

SPECIAL WIND REGIONS

Many locations such as mountainous areas, coastal areas and areas surrounding the Great Lakes exhibit wind velocities considerably higher than the surrounding areas. **Consult local authorities to determine maximum wind velocities and select equipment accordingly.**

MAXIMUM WEIGHT

This is the maximum allowable weight based on EPA loads. The weight is based on 30 pounds per square foot of EPA. Weight exceeding the 30 pound per foot of EPA may reduce the allowable EPA rating of the pole.

POLE SELECTION PROCEDURE

With an understanding of the parameters for pole selection, you can follow this simple step-by-step procedure and, with confidence, select a pole to meet your particular requirements.

1. Determine the site location and wind velocity requirements by referring to the appropriate isotach map. The isotach maps are provided for reference only. **Consult local authorities to determine the maximum velocities in your area.**
2. Total the **EPA** for the required luminaires and bracketry.
3. Total the **weight** of the luminaires and bracketry.
4. Compare steps 2 and 3 with the maximum allowable EPA and weight tables shown for the style, material, and height pole required. The maximum allowable must be equal to or exceed the totals from steps 2 and 3.

POLE SELECTION CONCERNS

Caution: These selection methods are guidelines only. Hubbell Lighting assumes no responsibility for selection and recommends you consult qualified professionals for verification of overall system design, site suitability, foundation considerations and applicable code and regulatory conformance.

Maintenance: The facility owner's/manager's regular scheduled maintenance program must include initial and regular follow-up inspections for structural damage, broken welds, tampering, nut loosening, missing wire covers, dangling electrical wiring, internal or external corrosion, foundation settlement, excessive shaft deflection and vibration for all lighting poles. Immediate repair or replacement may be necessary.

Overloading: Do not overload poles by attaching flags, banners, or any items that can add excessive wind or mechanical load to designed pole assemblies.

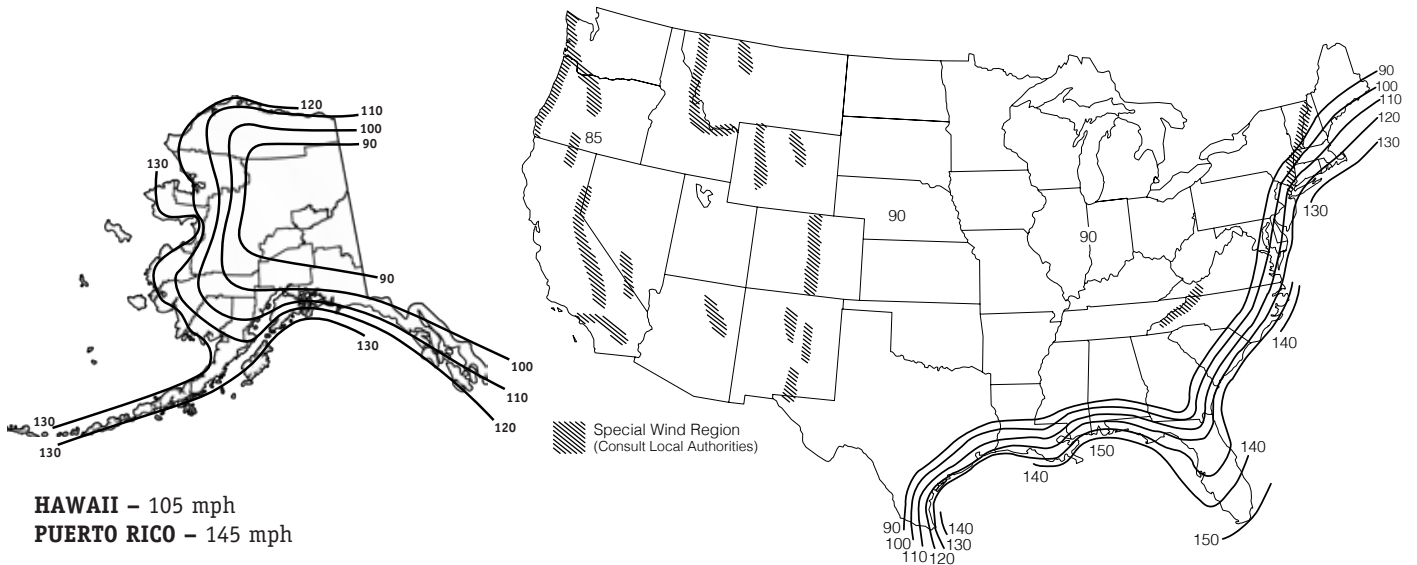
Observation: Installation and local area conditions can dramatically affect lighting pole performance. Excessive vibration may result from some wind and mounting conditions. Only individuals with local knowledge, who have observed or inspected the site can effectively evaluate site specific issues. Consult the factory for information on vibration dampers, special corrosion, foundation settlement, excessive shaft deflection and vibration for all lighting poles. Immediate repair or replacement may be necessary.



WIND MAPS

ASCE7-05 WIND MAP

POLES

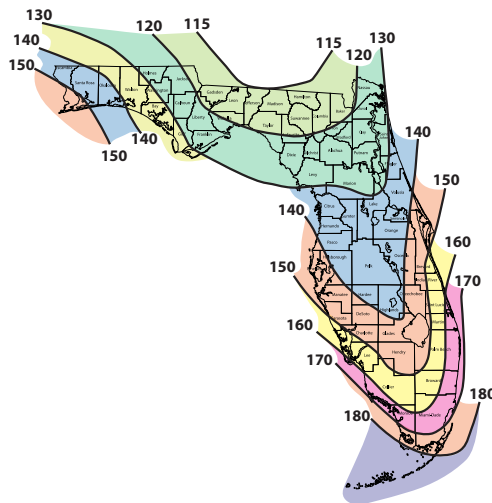


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FLORIDA REGION WIND MAP

Florida Building Code utilizes a different calculation method than ASCE, which results in different allowable EPAs. Consult your local authorities to determine which standard to use for your project.

- Florida region wind map above is based upon 3-second gust winds and the 2014 Florida Building Code



NOTES

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations.
http://cdn.hubbelloutdoor.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HLOI0022.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings



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