



# DEPARTMENT OF PUBLIC WORKS – BUILDING DIVISION

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***BLD-22-006.1***

## Brace Wall Analysis, Wind Speed (Revised)

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Effective immediately, the following procedure supersedes Memo 006 – Brace Wall Analysis, Wind Speed issued on July 11, 2022. All Plans submitted prior to July 11, 2022 will be reviewed based on the June 17, 2022 criteria for less than 140 mph.

### **For Residential Building (Risk Category II) Brace Wall Analysis**

1. To determine wind speed, use the ASCE 7 Hazard Tool website:

<https://asce7hazardtool.online>

2. If the wind speed calculated by the ASCE 7 Hazard Tool is less than **130 mph** then:

- a. The American Plywood Association (APA) Calculator output will be accepted for the Brace Wall Analysis per the 2018 IRC (International Residential Code).

Note: The use of other wind speed reduction factors cannot be used to further reduce the wind speed input into the APA calculator.

- b. Submit the APA Calculator Analysis as part of the Residential Permit Application that shall be signed and stamped with expiration date by the Hawaii Licensed Architect or Structural Engineer of Record.

<https://www.apawood.org/calculator>

- c. Additional structural engineering calculations for wall bracing will not be required.

3. If the wind speed calculated by the ASCE 7 Hazard Tool is **130 mph** or greater then:

- a. Submit a brace wall design and calculations prepared, signed and stamped with expiration date by the Hawaii Licensed Architect or Structural Engineer of Record.

This procedure is limited to the wall bracing design and shall not be applicable to the wind borne debris zone requirements of County of Hawaii Chapter 5B R301.2.1.1, and subsections as shown in Figure R301.2(5)(b) delineated by Ultimate Wind Speed 130 mph and higher.

