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January 1, 2025
Letter valid for one year of the above date with purpose of review by Engineer when expired.

Pack Sheds, LLC dba BAS Buildings
1641 US 70 Hwy. East
Garner, NC

This letter addresses and provides structural certification for the Organizer style shed in 8, 10, 12, and 16-foot widths built by Pack Sheds, LLC dba BAS Buildings. The following describes design and construction requirements for each of the three models.

The 8' and 10' Organizer will have 2" x 4" rafters. The 12 and 16 ft Organizer will have 2" x 6" rafters. All rafters will be spaced at 2' centers and pitch may vary between from 5:12 to 10:12 without further engineering analysis. All rafters shall be cross-tied with 2x4 collar ties located at the 1/3 point extending downward from the ridge and spaced at 4'-0" on center. The collar ties should be attached at each rafter with a minimum of (8) 10d nails.

The 10, 12 and 16-foot Organizer shed shall have as a minimum a 2" x 8" ridge board installed. The 8 foot shed may have the rafters attached at the peak with a butt joint and heavily stapled with 1" staples. All Variations will have the walls constructed with 2" x 4" studs at 16" centers.

The flooring system shall be constructed as follows. For the 8- and 10-foot Organizer shed, 2" x 4" joists at 16" centers shall be used. For the 12- and 16-foot sheds, 2" x 6" joists at 16" centers shall be used. All joists are to be supported with (2) 4" x 4" skids for the 8 foot wide shed and (3) 4" x 4" skids for 10 foot and wider sheds. The exterior skids shall be located 12 inches from the parallel side edge of the shed. This 12-inch cantilever of the joists, created by the offset of the skids, shall not be exceeded. The Skids on all models must be supported by piers at a maximum of 4' on center. As an alternative for the 4" x 4" skids, a double 2" x 6" beam may be used for the skids, they must be supported on piers at a maximum of 5' on center. Shed will be equipped with a hurricane package that includes anchors, straps, and H-clips and will be able to withstand wind zones equal to or greater than 120 miles per hour.

The piers for all models shall be made up with a minimum of 8"x16" CMU piers which bear directly on the soil. If necessary, for elevation requirements, the piers may be constructed with dry stacked concrete masonry units, with solid units top and bottom and hollow 8" concrete masonry units for the remainder of the pier at a maximum height of 36". All The floor framing should be tied down with 30" screw anchors and 1" metal strapping across the floor joists.

Wood headers over openings not exceeding 6'-6" in the end walls (non-load bearing) shall be (2) 2" x 4" studs bearing on a single 2" x 4" jack stud at each end. Headers over openings not exceeding 6'-6" in the side walls (load bearing) shall be (2) 2" x 6" headers bearing on a single 2" x 4" jack stud at each end.

All loads and code compliance are pursuant to the 2018 Edition of the North Carolina Residential Building Code and meets or exceeds the Building code requirements with respect to loading and serviceability. All lumber is to be SPF #2 or better (exterior grade where required).

Please do not hesitate to contact me if you have any questions, or if I may be of further assistance regarding this matter.

Sincerely,

John F. Oerter, PE

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