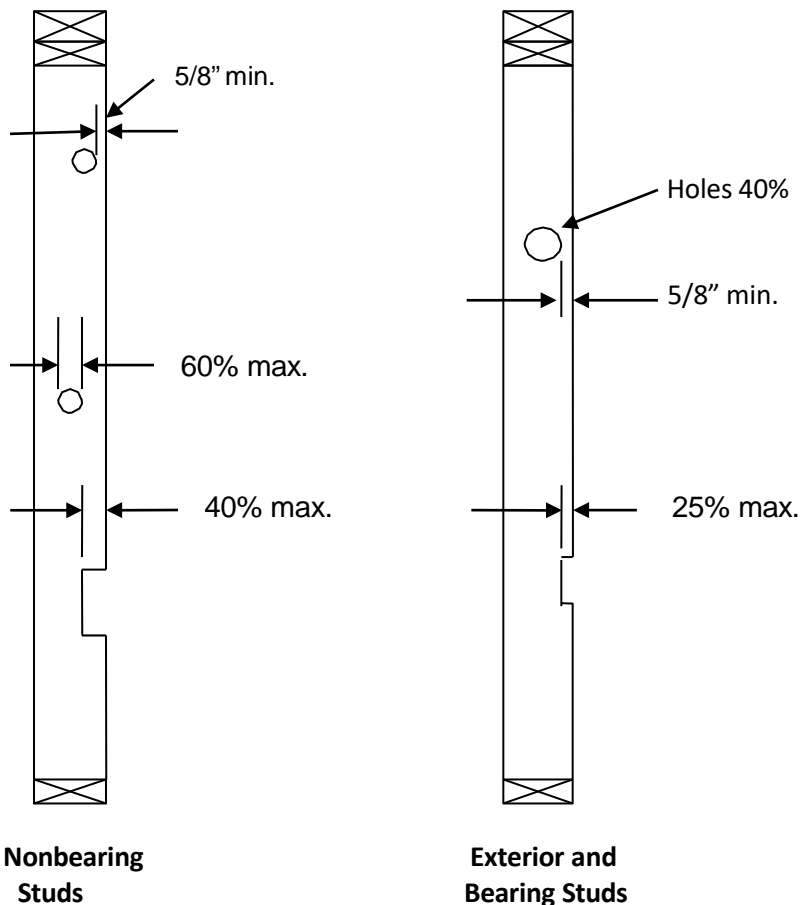


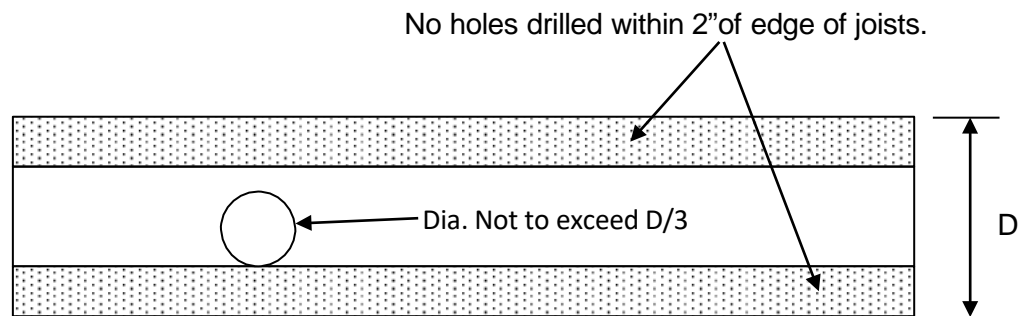
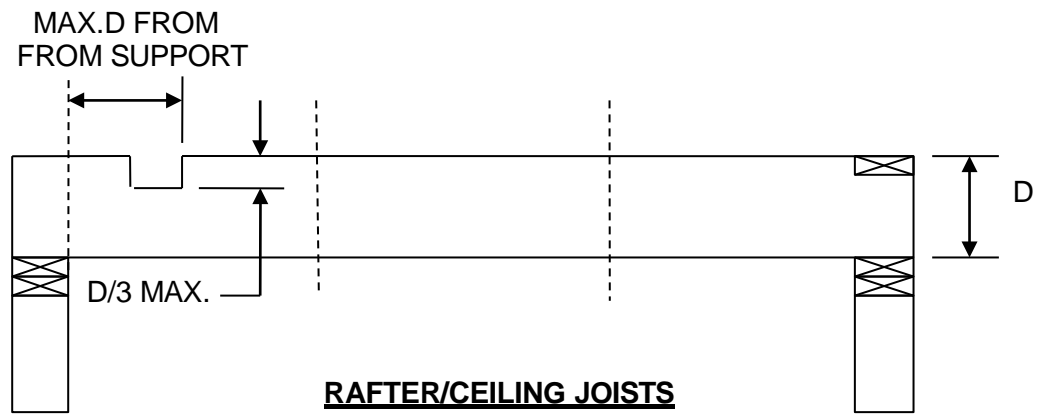
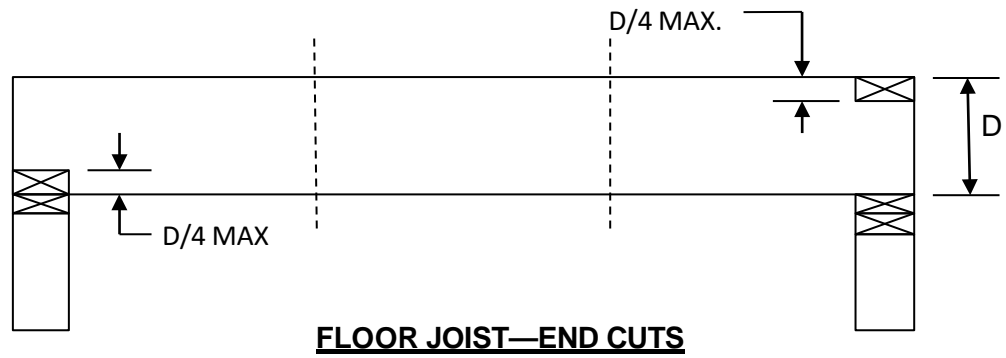
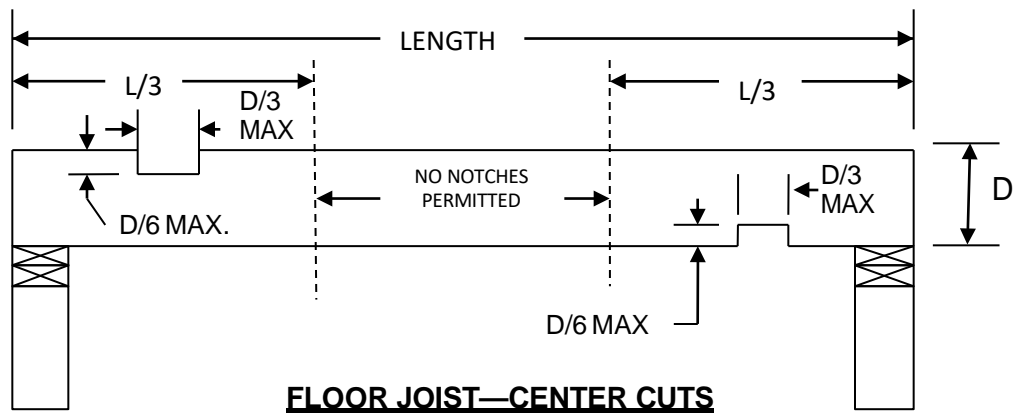
## Notching and Boring Guidelines

### REFERENCE: 2018 International Residential Code

Contractors/homeowners can compromise the structural integrity of a building member by incorrectly cutting, notching, or drilling structural and non-structural members. The following information is a guide and does not necessarily cover all types of members.



- **NOTCHING** – Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partition may be notched to a depth not to exceed 40% of a single stud width.
- **DRILLING** – Any stud may be bored or drilled, provided that diameter of the resulting hole is no more than 60% of the stud width and the edge of the hole is no more than 5/8" to the edge of the stud, and the hole is not located in the same area as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than 2 successive doubled studs bored.



(Diagrams are not to scale.)

**NOTCHING & BORING LIMITS**

- Ends of joists notches: equal to or less than ¼ depth (D).
- Top or bottom of joists notches: equal to or less than 1/6<sup>th</sup> the depth (D).
- Notches shall not be located in the center 1/3 of the span.
- Bored holes shall not be within 2 inches of the top or bottom of the joists.
- The hole diameter shall not exceed 1/3 the depth of the joists.
- Holes are to be separated by a min. of 2".
- No holes are to be drilled with 2" of a notch.

**Engineered wood products**—Cuts, notches, and holes bored in I-joists, trusses, laminated veneer lumber, and glue-laminated members are **not permitted** unless the effects of such penetrations are specifically considered in the design by the manufacturer.

| ALLOWABLE NOTCH AND BORED HOLE DIMENSIONS* |        |        |        |        |               |        |                  |
|--|--------|--------|--------|--------|---------------|--------|------------------|
| JOISTS AND RAFTERS                         |        |        |        |        | BEARING STUDS |        | NONBEARING STUDS |
| NOMINAL                                    | ACTUAL | D/6    | D/4    | D/3    | .25D          | .40D   | .60D             |
| 4"   | 3 ½"   | 9/16"  | 7/8"   | 1 1/8" | 7/8"          | 1 3/8" | 2 1/8"           |
| 6"   | 5 ½"   | 7/8"   | 1 3/8" | 1 7/8" | 1 3/8"        | 2 ¼"   | 3 ¼"             |
| 8"   | 7 ¼"   | 1 ¼"   | 1 7/8" | 2 3/8" | 1 7/8"        | 2 7/8" | 4 3/8"           |
| 10"  | 9 ¼"   | 1 ½"   | 2 3/8" | 3 1/8" |               |        |                  |
| 12"  | 11 ¼"  | 1 7/8" | 2 7/8" | 3 ¾"   |               |        |                  |
| 14"  | 13 ¼"  | 2 ¼"   | 3 3/8" | 4 3/8" |               |        |                  |

**\*The above dimensions are guidelines and are approximate.**