

# Structure

## MODULE

# FIELD EXERCISE 2

### INSTRUCTIONS

This exercise is based on Study Sessions 4 and 5.

Again, you are going to have to get into a number of houses. We are going to look at both wood and concrete floor systems. The concrete floor systems can be in the house, basement, garage or crawlspace. The wood flooring can be on the first, second or third floor, although you may see most of the details looking at the unfinished underside of a first floor level. Rarely is much of the framing visible on the underside of a second or third floor.

You should inspect at least 10 floor systems.

Allow yourself roughly 15 minutes to look at each floor system.

For each of the houses you look at, try to answer the following questions:

1. Joist material (e.g., solid wood, engineered wood, metal) –

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2. Species of wood (you may be able to get this from the stamp on the wood):

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3. a. joist size \_\_\_\_\_  
b. joist spacing \_\_\_\_\_  
c. joist span \_\_\_\_\_

4. What supported the joist?(e.g., beams, foundations, sills)

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5. What was the end bearing?(e.g., 2 inches)
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6. Did you see any fire cut joists?
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7. Did you see bridging, blocking or strapping?
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8. Did you see any headers? Where?
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9. Did you see any trimmers? Where?
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10. Did you see any doubled joists? Could you tell why they were doubled?
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11. Did you see any cantilevers? Were they entirely indoors, or were they partly indoors and partly outdoors? Where did you look for problems?
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12. Could you see the rim joists?
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13. Did you find any of these problems?
- a. rot and insect damage
  - b. sagging joists
  - c. poor end bearing
  - d. rotated or twisted joists
  - e. incomplete blocking, bridging or strapping
  - f. inappropriate notching or holes
  - g. split or damaged joists
  - h. weak cantilevers
  - i. weaknesses created by openings around stairs, chimneys and windows, etc.
  - j. prior repairs
  - k. concentrated loads
  - l. missing joists



14. Which was the most common?

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15. What kinds of subflooring did you see?

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16. Did you see any of these problems?

- a. rot and insect damage
- b. sagging or springy subfloorings
- c. damaged or cut subflooring
- d. cantilevered or unsupported ends
- e. prior repairs
- f. concentrated loads
- g. squeaks
- h. swollen waferboard
- i. cracking ceramic tiles

17. Which of these was the most common?

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18. Did you find:

- a. supported concrete slabs
- b. suspended concrete slabs
- c. pre-stressed concrete slabs (can't usually tell by looking)
- d. post-tensioned concrete slabs (can't usually tell by looking)

19. Did you find any of the following conditions?

- a. cracked
- b. settled
- c. heaved
- d. hollow below slab
- e. scaling or dusting
- f. spalling
- g. rusting reinforcing bar



20. Try to contact local builders or framing carpenters who have worked in your area for several years. Ask them what the most common floor framing materials are. Ask them what the most common problems have been.

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21. Speak to local builders who work with concrete floors. Are the majority of floors supported? Are there any prestressed or post-tensioned concrete floor slabs in 1 to 4 family dwellings in your area? If so, why are these used? What are the most common problems these people have found in concrete floors?

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Finished with the exercise? Great! Then it is time to look at the Inspection Tools and Inspection Checklist on the next two pages.

