



COOPERATIVE EXTENSION SERVICE

Departments of
Human Environment and Design
Agricultural Engineering
Urban Planning and Landscape Architecture

MICHIGAN STATE UNIVERSITY

EXTENSION BULLETIN E-847

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BUYING A HOUSE?

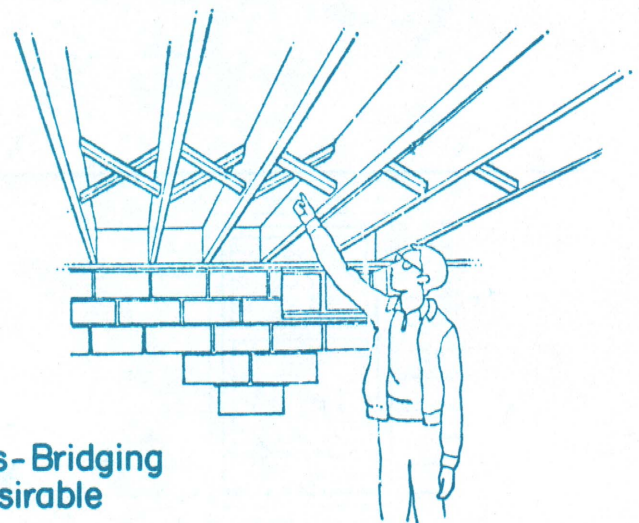
Are you overwhelmed with what a salesman tells you about his house for sale? Do not be fooled with shiny paint or gadgets. For a prospective home owner you should be more interested in the basic construction behind the surface.

Following are some features which should be considered:

Construction

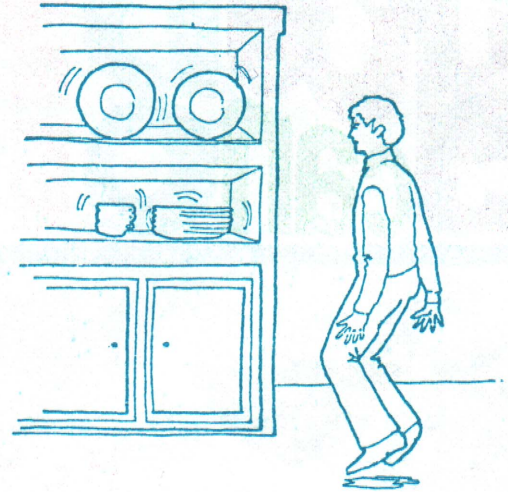
Much of the basic construction is covered up when you see the house. Check these points:

1. Are floor joists adequate? They are usually spaced 16" o.c. so 2 x 8 joists should be no longer than 12 feet; 2 x 10 should be no longer than 16 feet. Usually you can check the floor joists from the basement.

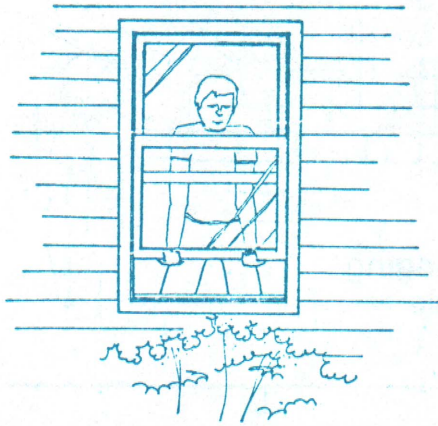
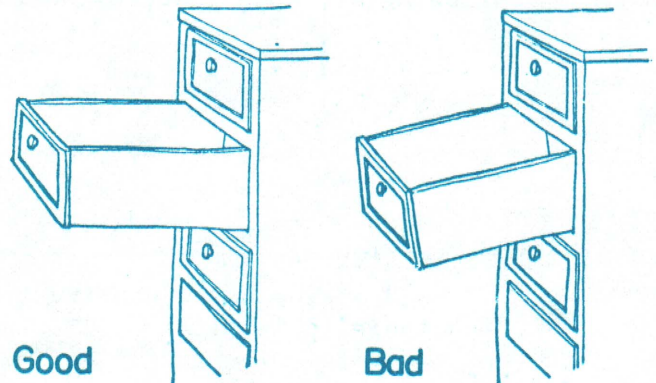


Cross-Bridging
Is Desirable

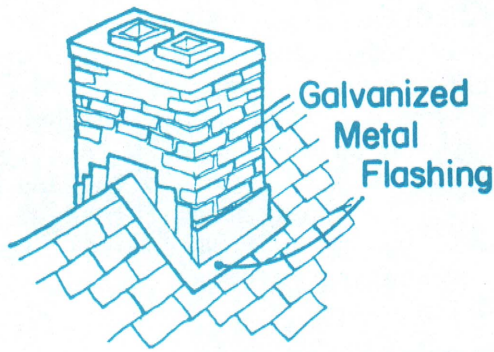
2. You can check the floor construction by jumping on the floor in the middle of one of the larger rooms. A good floor does not shake or vibrate. If there are people living in the house check to see if dishes rattle or pictures tilt when you jump.



3. The trim around doors, windows, and cabinets should fit tight with no space between two pieces of wood. Drawers of built-in cabinets should slide straight in and not bind. When fully extended they should not droop down like they are falling out.

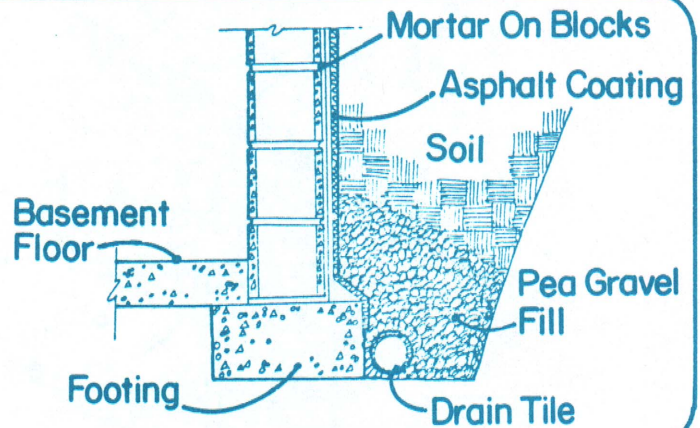


4. Movable windows should operate smoothly and yet be weatherstripped to keep out cold air. Be sure you try all windows to be sure they fit tight. Stationary windows should be double glazed to save heat in cold weather and keep summer sun's heat out.



5. Leaks in the roof usually occur around chimneys and vent pipes projecting through the roof. Good construction is to use metal flashing between the chimney and the roof or where a wall adjoins the roof. caulking compound or asphalt are poor substitutes. Beware of brown spots on plaster as they usually indicate a leak.

6. Basements should be dry. If a house is a year or two old you have a better way of determining if a basement will be wet. A tile should extend around the perimeter of the house at the level of the bottom of the footings and discharge into a suitable outlet. This may be a sump pump or the city drainage system. Get a letter from the contractor certifying that the foundation drain is installed with a suitable outlet.



7. If the house is new or several years old and has a concrete block basement wall, this should have no cracks. The outside of the wall should be coated with a heavy coat of waterproofing asphalt and a high quality job will have a layer of fibered paper mopped into the asphalt layer.

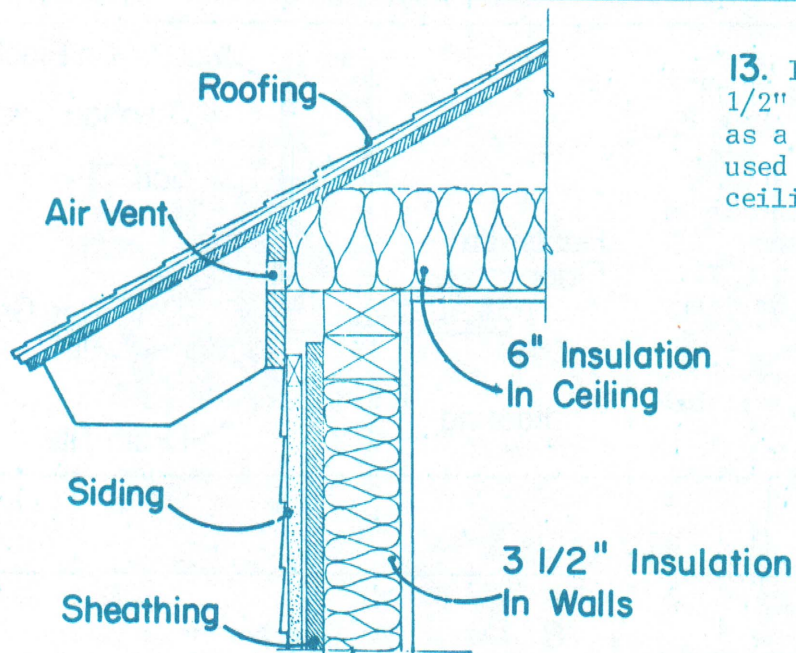
8. Interior walls can be either dry-walled (plaster board) or plastered. Most new houses have dry-wall which allows construction to proceed faster, doesn't require the drying time or plaster, and good plasters are scarce. Dry-wall construction will usually give a truer wall than a custom plastered wall.

9. Doors can vary from a cheap light hollow panel door to a high quality cored door that has better sound proof qualities and thicker surface panels. Door hardware can also vary in quality which can sometimes be detected by opening and closing the door and noticing size and construction of striker plates.

10. Floors which are carpeted do not require a hard wood floor underneath. If in the future you might want a polished floor with scatter rugs, the hardwood floor will cost more than a plywood or hardboard base.

11. Outside trim or wood siding should be put on with galvanized or aluminum nails which will not rust. Steel nails will eventually rust and show as dark spots through the paint.

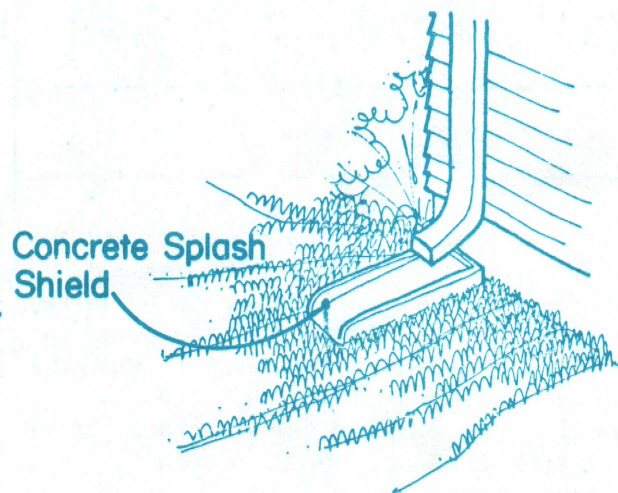
12. On bathroom walls where water is splashed a hard surface like ceramic tile is best. New reinforced plastic sheets are also good. Hardboard or plywood sheets coated with a thick paint or film do not withstand hard use. In application the edges must be well sealed or moisture will penetrate the backing material causing it to deteriorate.



13. Insulation for Michigan means 3-1/2" in the walls and 6" in the ceiling as a minimum. When electric heat is used 10" or more is recommended for the ceiling.

Michigan Homes Should Be Well Insulated.

14. Backfilling close to the house should be enough so there is a definite slope away from the house in the first 6 to 10 feet. This causes rainwater to run away from the house. All fill will settle so if concrete walks are poured on a new fill they will probably settle. Each downspout should connect to a subsurface drain or be directed from the house by a concrete slab.

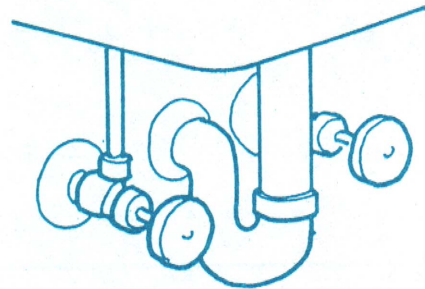


Ground Should Slope Away From The House

Where a building code is enforced, the electrical and plumbing systems must be put in according to the code. However, workmanship in doing this may vary considerably. Some things can be checked to help determine the ability of the contractor.

Plumbing

15. Are shut-off valves installed in water lines below sinks, lavatories, and toilet tanks? When faucet washers wear out and must be changed these allow you to make the repairs without running down to the basement to shut off the water.



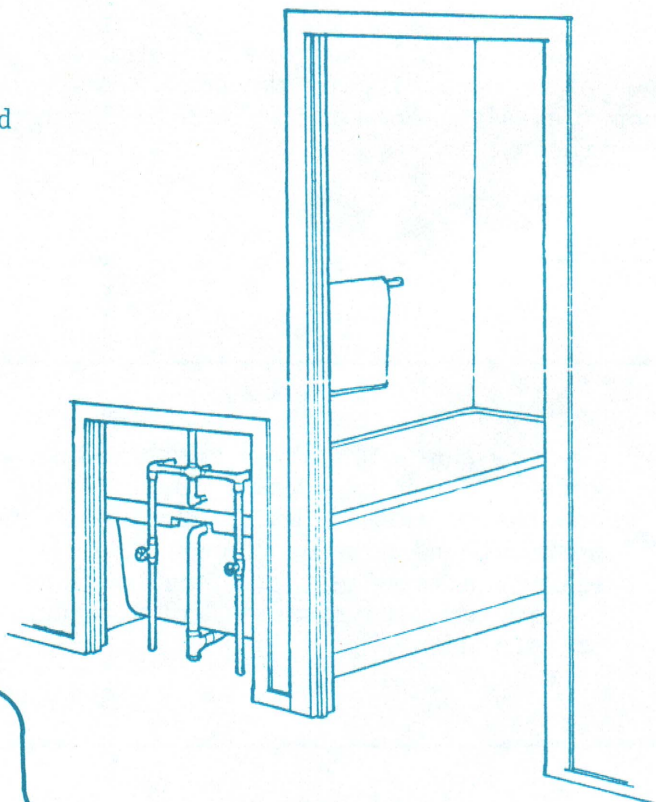
16. The valve in the main supply line from the city water supply should be a washerless valve so that its operation does not depend on an expendable washer.

17. Water pipes in newer houses should be copper which is longer lasting and less subject to damage. Old iron pipes often rust through and begin to leak. Repairing old pipes requires specialized tools and considerable knowledge or practice.

18. Faucets when turned on should allow a good stream of water to flow. If the water tends to trickle out, the pipes may be so small that water can't come through. A low pressure in the supply line to the house may also cause slow running faucets.

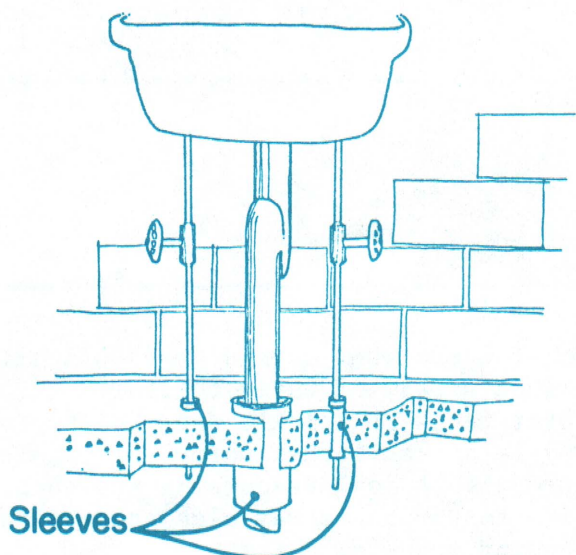
19. Drains can be tested at the same time as faucets. Water should drain out of the sink about as fast as it flows in.

20. An access panel should be provided in the wall which contains the plumbing for both the tub and shower. This is a convenience for the future when repairing this plumbing.



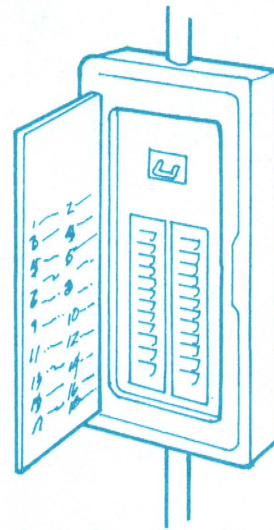
21. Twenty- five or fifty dollars paid to a local plumber for his evaluation may be money well spent.

22. Where water pipes or drainpipes go through a concrete floor, a sleeve should be used so the concrete does not set against the pipe.



Electrical

23. Electrical service boxes for modern homes should be a minimum of 100 amps. Open the door on the front of the panel and there should be 12 or 14 circuit breakers. In older houses fuses which look like round plugs with a window in them were used as a safety device to prevent overloading the wires. New houses should have circuit breakers which can be reset without having to search for a new fuse.



24. The electrical panel should have a master switch or circuit breaker which will cut-off power to the whole house.

25. Electric wires which are exposed in living areas are not good as they can be snagged, used as hangers for clothes, et cetera, which could cause fires.

26. Small lamp cords fastened to the wall surface with tacks or staples are a hazard. Eventually the insulation on these cords deteriorates and becomes brittle.

27. A small fee to have a good electrician go over the electrical system might be a good investment.

In Michigan the heating plant is a very important part of a house. Hot air furnaces can be used for both heating and cooling. If the house has not been lived in over a winter, it will be difficult to determine the adequacy of the system. Some fuel companies have people who can give you a rough idea of how much heat should be required to maintain the required temperature. This could be compared with the bills for the last year or two to determine the cost for heating.

By James Boyd, Extension Housing Specialist, Depts. of Agricultural Engineering and Human Environment & Design

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