Chapter 25

A COLONIAL HOUSE

THIS house was especially designed for building with concrete masonry blocks. It is a good example of the colonial type of architecture, and it will fit into almost any locality, regardless of terrain or the style of the surrounding homes.

Anyone who prefers to build with concrete masonry blocks rather than wood will do well to pick this house for his own.

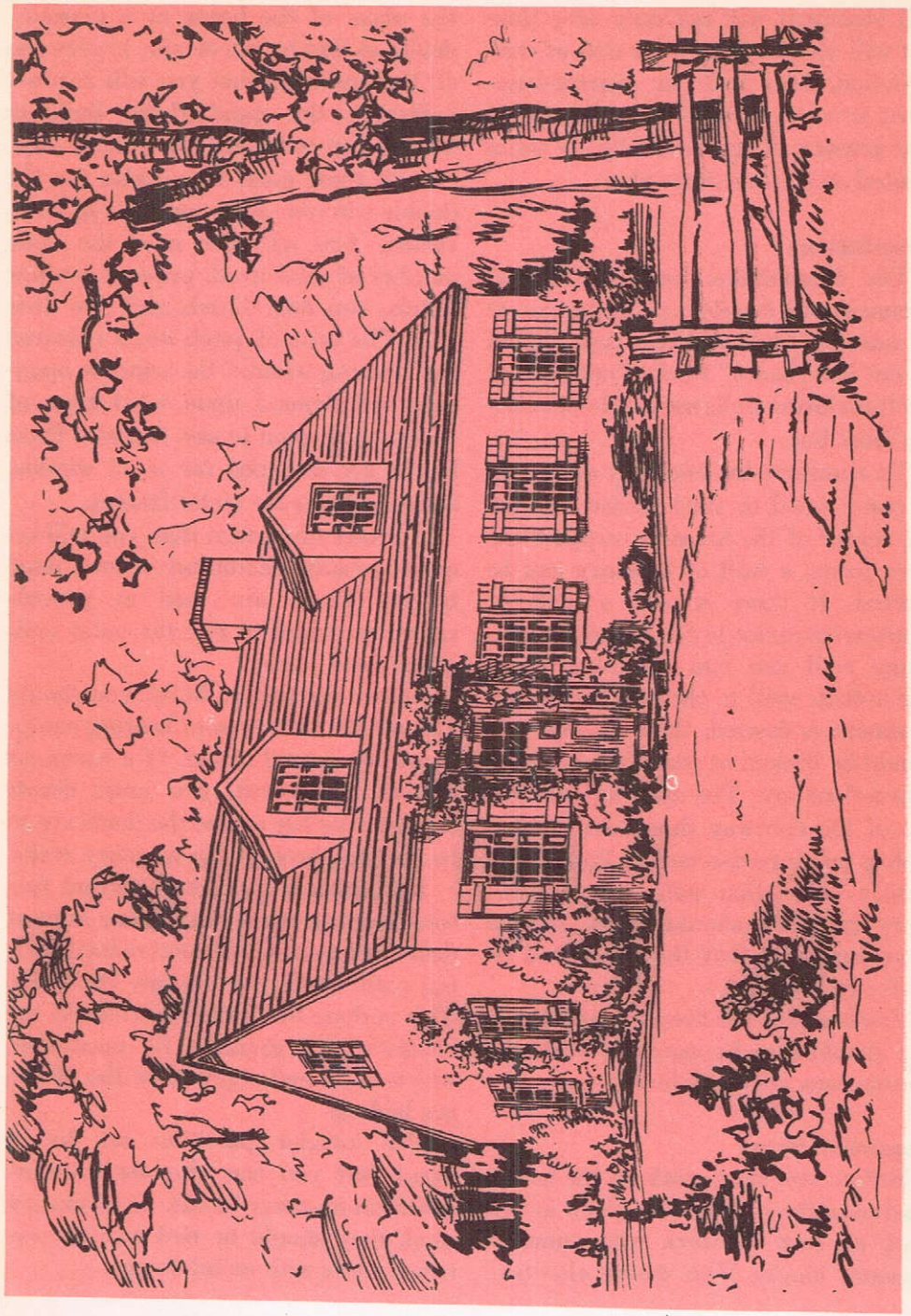
The outstanding features of the front of the house are the four windows with small lights and batten shutters, the colonial-style front door, the trim and the two dormer windows in the roof. The rear elevation shows four windows, a back door and step and a large dormer projection in the roof that contains four windows. This large dormer provides sufficient headroom in the attic to turn this space into additional rooms. With the rear dormer, the front dormers and the two side windows provide adequate light as well as ventilation for the second-floor rooms.

The first-floor plan shows that the house, in spite of its relatively small size, contains two bedrooms, a large living room and a kitchen as well as a bathroom, a hall and ample closet space. The bathroom has been designed to accommodate a shower stall in addition to a bathtub, but either one of these can be omitted to decrease construction costs. The stairs shown on the first-floor plan lead to the attic and to the basement.

The kitchen is large enough to contain, besides the usual and necessary items, a breakfast bar that will actually serve the members of the household for lunch and dinner too.

Basement Utility Room

As there is no utility room on the first floor, the heating and similar equipment will have to be located in the basement. This does not mean that the house must have a full basement. In fact, the basement need only be large enough to accommodate such items as the furnace, hot-water heater, water pump and any other necessary mechanical apparatus. You should leave sufficient room, however, so that these pieces of equipment can be easily serviced and maintained. Building a basement utility room rather than a



The Colonial House

full basement will not only save time but will also decrease your cost of construction. If a half- or quarter-basement is used, it must be positioned so that access to it can be had by the stairs located on the first-floor plan.

Foundations

The foundations for the Colonial House should be either poured concrete or masonry blocks. Either type should be not less than 8" thick. Footings for the foundation walls must extend below the frost line.

To eliminate the necessity of having to use a wood or steel girder through the center of the house to support the floor joists, a wall of masonry can be erected. If there is only a half- or quarter-basement in the house, the masonry wall can run unbroken from one outside wall to the other. If a full basement is desired, the masonry wall should be broken at some point to provide a doorway. The opening over the top of the doorway should be covered with a reinforced-concrete lintel. The outside foundation walls and the masonry partition should all be of the same height so that the joists will be perfectly level.

Footings for the fireplace and chimney should also be installed while the foundations are being built.

Important Items

Before you start work on the house, read over the instructions given in this book on how to work with concrete masonry blocks. You should also take the plans of the house to a masonry dealer so that he will be able to give you all the materials that you will require.

Besides the standard-size building blocks, you will need 14 window sills. One of these must be suitable for the double window shown on the right elevation. You will also need the same number of reinforced, pre-cast window lintels, two door lintels and two door sills. The type of jamb block required for framing around the window openings will depend upon what type of window you plan to use. Some of these blocks are designed for wood window frames, others for metal frames.

Another important item you will require is a suitable number of joist jamb blocks. These are used to provide spaces on which to rest the outer ends of the floor joists.

Before starting to build, you should also decide what type of heating equipment you intend to use. If a warm-air system is selected, you must decide further whether or not the ducts are to be run up through the masonry walls.

Insulation is another important factor. You can make your home a great deal more comfortable and reduce heating costs too if you insulate the walls. This is done by filling the voids in the blocks with a granular fill insulation, which is poured right in as the blocks are laid up.

The interior partition can be of wood, but you can also use interior-partition masonry blocks. If blocks are used, they should be tied into the exterior walls with metal straps.

Floor joists should be 2″x10″s, and they should be spaced 16″ on center. You will need bridging between the joists on all spans that are more than 8′ wide.

All joist-ends that rest on the masonry walls should be cut to a bevel 3″ deep. If this is not done and the joists should fall by any chance, they will damage the walls badly.

After the joists are in place, you can cover them with sub-flooring. This will provide you with a good working platform for building up the walls.

The Finished Walls

The appearance of the finished walls can be affected considerably by the manner in which the mortar joints between the blocks are finished off. If the outside wall is to be covered with stucco, the mortar joints can be struck off flush with the wall surface and, when partially set, can be compacted with a rounded or V-shaped tool.

If you would like to give to the wall the appearance of bevel siding, the mortar joints must be treated in a special manner during construction. The vertical joints between blocks must be struck off flush and then rubbed with a piece of carpet or burlap to remove the sheen from the surface. The horizontal joints are struck flush and, when partially set, are compacted with a pointing tool. This treatment will emphasize the horizontal joints and obscure the vertical ones.

Unless you are able to get hold of a machine to cut the concrete blocks at the proper angle, it is not worth the time to try to make the gable ends of the house with blocks. Level off the four walls at the correct height and then attach top plates. After the roof rafters are in place, the gable ends can be framed with wood studding and covered with a siding that will resemble the exterior treatment of the concrete blocks.

Partition; Joists; Rafters

The next job is to construct the main bearing partition. This runs through the approximate center of the house and can be made of wood or masonry blocks. It must be brought to the same height as the four outside walls. It must also be capped with a wood plate so that the ends of the ceiling joists can be secured to it.

The ceiling joists are 2″x8″s and they are spaced 16″ on center. One end of each joist will rest on the foundation wall and the other on the main bearing partition.

Roof rafters are 2″x10″s, also spaced 16″ on center. They should be strengthened by collar beams and knee studs, whether or not you plan to finish off the attic. A bevel cut will let them rest on the top plate, while a heel cut will let them overhang.

After the rafters are up, frame the gable ends and then go to work on installing the dormer windows. These are framed in exactly the same manner as the dormers described for the basic house. Roofing boards can be applied after the dormers have been framed.

Chimney; Interior Walls

The chimney and fireplace should be constructed next. They can be built out of concrete masonry blocks made especially for this type of work. After the chimney has been brought through the roof, the roofing material should be applied.

Window and door frames are now installed in the spaces left for them in the exterior walls.

The construction of the interior partitions follows. Like the main bearing partition, they can be built either of wood or of masonry blocks. If blocks are used, you must plan to bring the required pipes for the bathroom and kitchen up through the center of the walls as you build them. If the partitions are to be of wood, the pipes can be run up after the walls have been framed.

The inside walls of the house must now be lined with wood furring strips. Regular 2″x2″ stock will be sufficient, and it should be spaced 16″ on center.

When all the strips are up, you can install the electrical system. The furring strips can be used to support the outlet and switch boxes as well as the cables.

After all these are in place, the interior-wall material can be applied. It can be either plaster or wallboard.

The plumbing fixtures and final electrical fixtures are installed at this point.

Exterior Walls

The exterior masonry walls of the house can be left plain, but this is not always satisfactory. If the joints were treated to give the effect of bevel siding, the surface should be coated with a white or gray cement paint. Cement paints can also be used, of course, when there has been no special joint treatment.

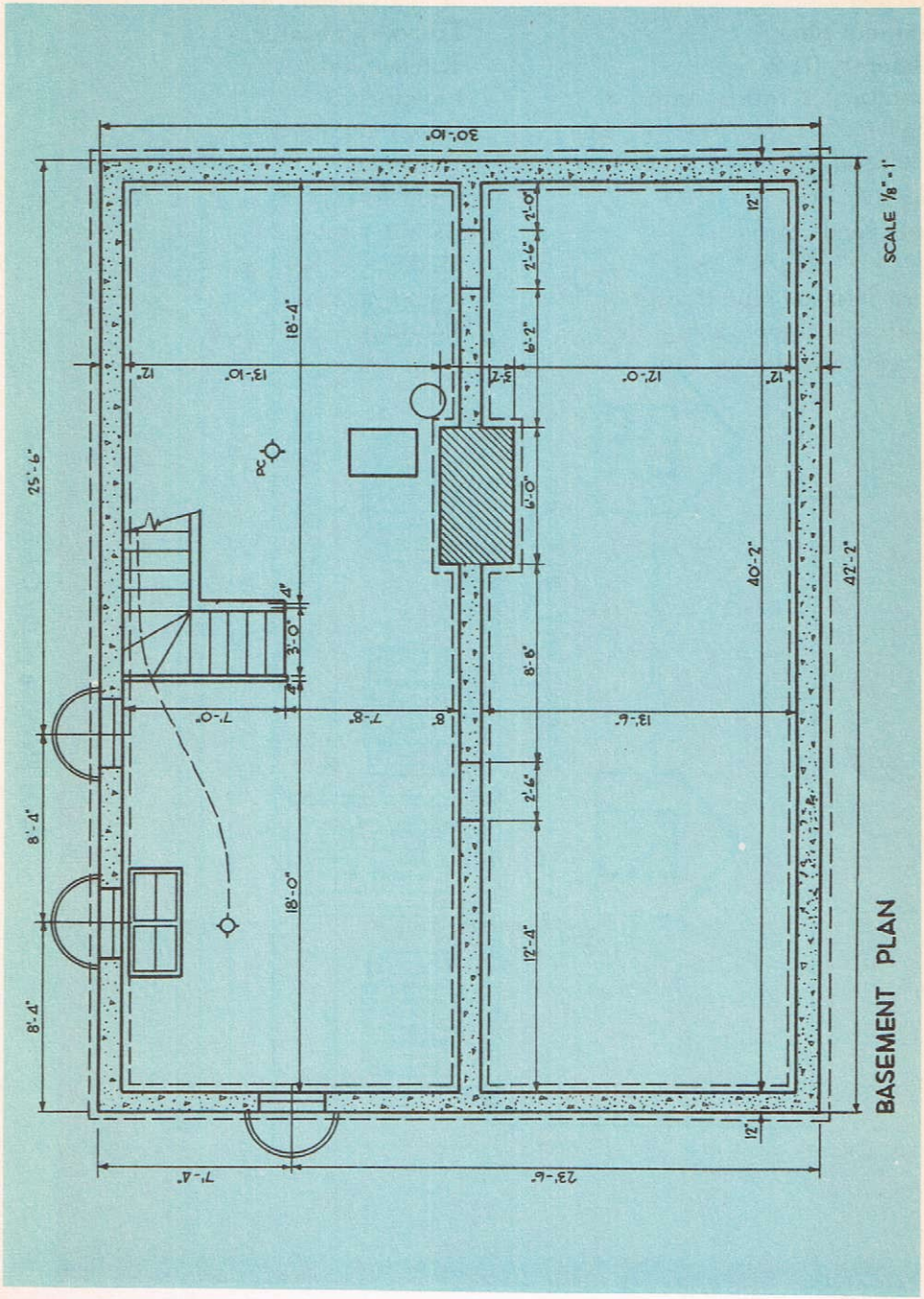
MATERIALS LIST FOR COLONIAL HOUSE

Material	*Quantity*	*Dimensions*
Mixed cement	53 cu. yds.	
Concrete or cinder blocks	2,000	
Mortar	3 cu. yds.	
4″ x 4″	2	12′
2″ x 12″	3	16′
2″ x 10″	149	16′
	70	20′
2″ x 8″	11	16′
2″ x 6″	10	16′
	10	14′
2″ x 4″	32	16′
2″ x 2″	50	16′

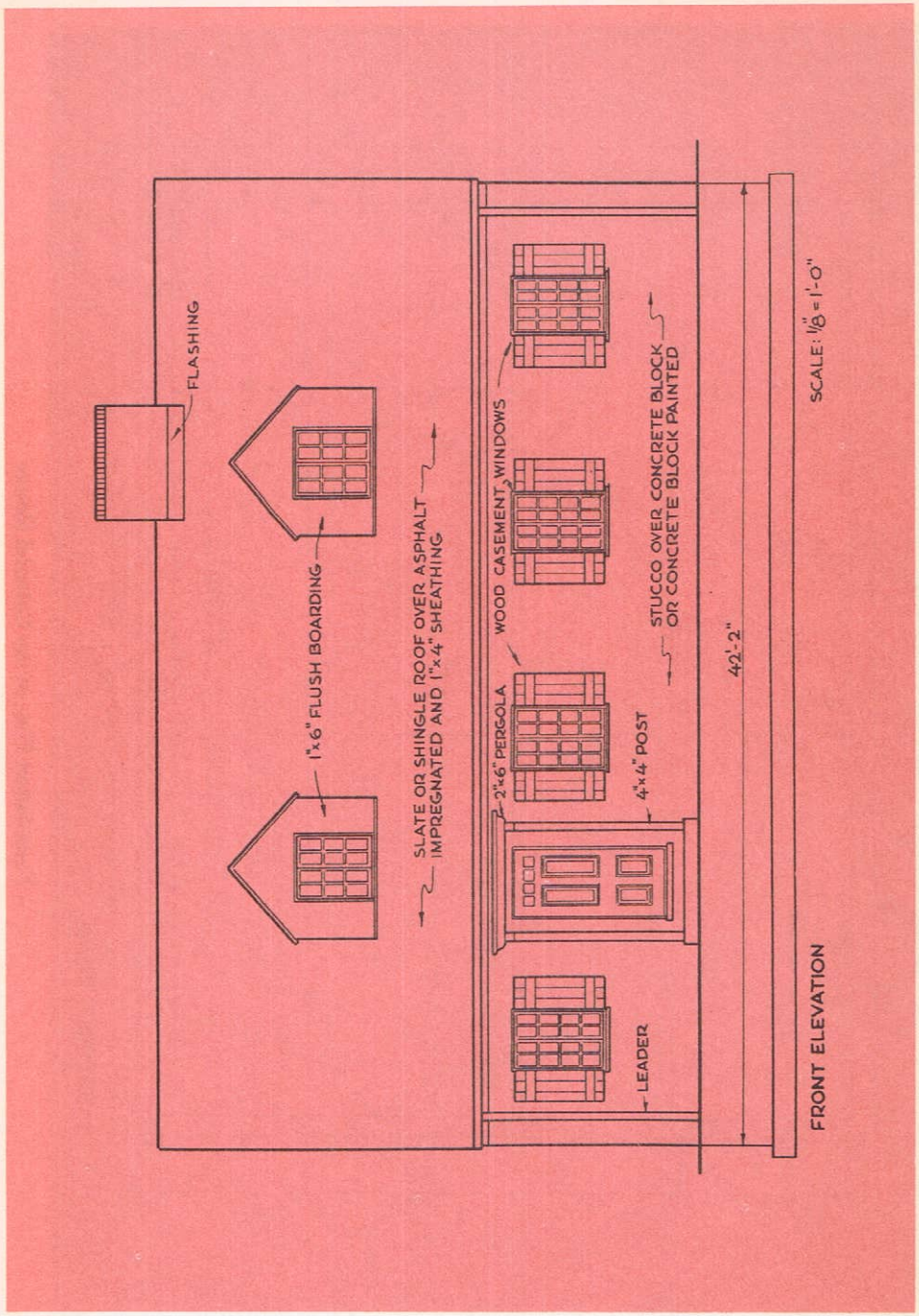
Material	*Quantity*	*Dimensions*
1″ x 6″	5,385 board ft.	
1″ x 3″	1,300′	
Finish flooring	4,757 board ft.	1″ x 3″
Roofing material	1,780 sq. ft.	
Copper flashing	104′	12″
Shelving	150′	1″ x 6″
Flue-tile	32 sections	12″ x 8″ x 2′
		Rough Openings
Entrance doors with frame and sill	2	3′4″ x 6′9½″
Casement windows with frame and trim	1	3′5½″ x 6′8″
	7	3′5½″ x 4′
	4	4′1½″ x 2′8″
	2	3′5½″ x 2′8″
	6	3′0″ x 3′0″

Insulation, 3000 sq. ft.
Wallboard, 4417 sq. ft.
Base mold, 500′
Nails: 20*d*, 36 lbs; 16*d*, 24 lbs; 10*d*, 160 lbs; 8*d*, 45 lbs; 4*d*, 108 lbs; 5*d*, 15 lbs
Louvers, 2
Gutters, 84′
Flight box stairs, 2
Closet doors, trim, jambs, stops, 11
Interior doors, trim, jambs, stops, 11
Hinges: brass, 6; interior, 44
Mortice locks, 24
Paint: water-thinned, 9 gal.; interior enamel, 1½ gal.
Common bricks, 3,000
Chimney thimble
Clean-out door
Firebricks, 180
Fireclay, 60 lbs
Hearth assembly, 2
Mixed cement, 4 cu. ft.
Mortar, 1 cu. yd.
Dampers, 2
Angleirons: 42″, 2; 36″, 2
Entrance cable, 16′
Switch box
Service head
Sill plate
Grounding bushing
Ceiling fixtures, 9
Ceiling fixtures with pull chain, 2
Wall fixtures, 3
Outside fixture
Convenience outlets, 23
Single switches, 9
Double switch
3-way switches, 2
4″ outlet boxes with plates, 11
2½″ outlet boxes with plates, 13
Cable connectors and bushings, 100
Metal hangers, 11
Door bells and buttons, 2
No. 14 2-wire, 350′
No. 12 wire, 50′
Forced warm-air heating system
Y branch

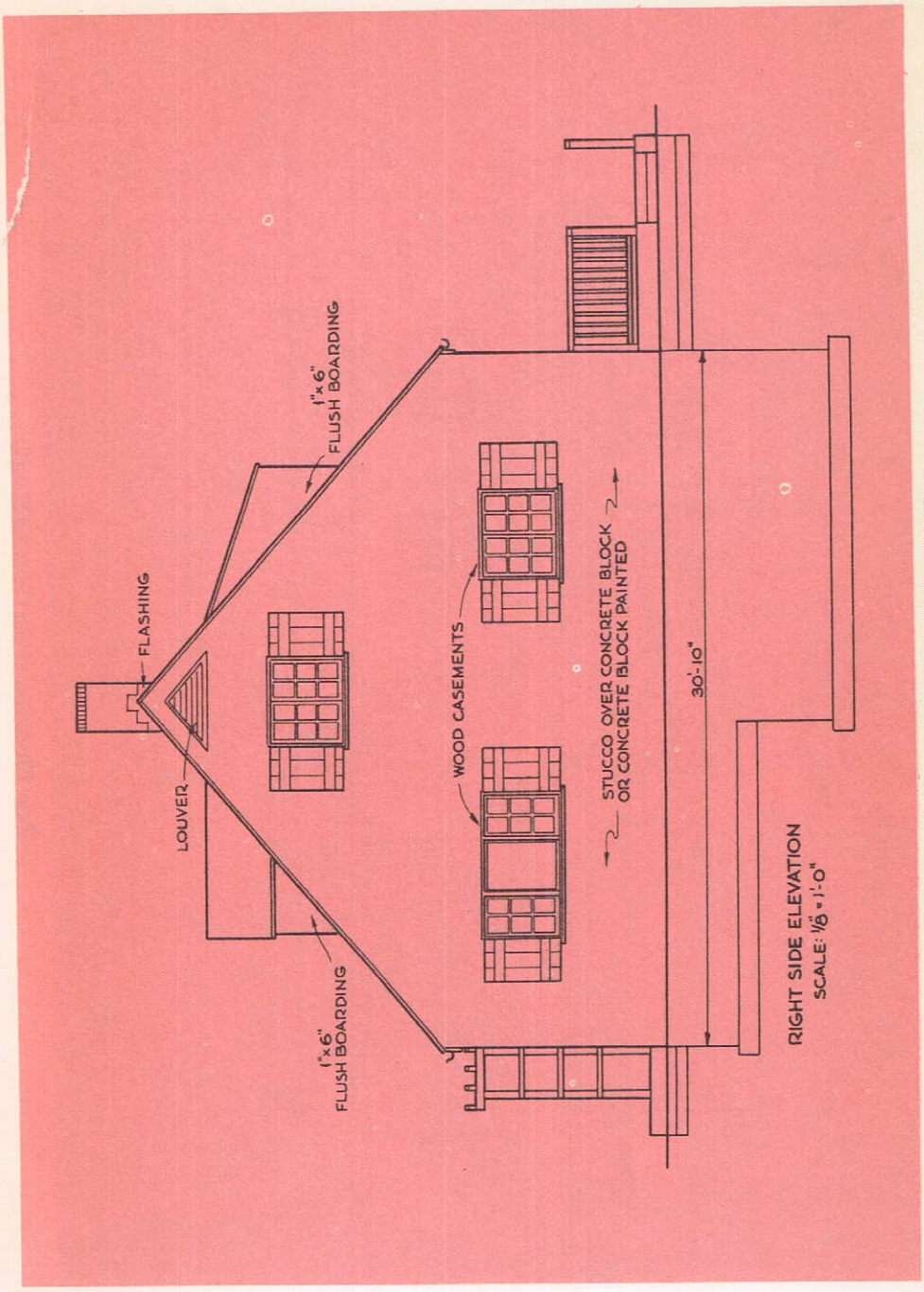
Increaser
Clean-out plug
4″ sanitary T, 2
4″ sanitary T with 2″ tapp., 3
Elbows: 2″, 4; 1½″, 14; ¾″, 22
2″ ¼-bend
Traps, 7
Closet bends, 2
Tees: 1½″, 22; ¾″, 18
4″cast-iron soil pipe, 8 sections
2″ galvanized pipe, 20′
1½″ galvanized pipe, 110′
¾″ galvanized pipe, 50′
Hot-water heater
Kitchen sink
Lavatory, 2
Water closets, 2
Bathtub
Stall showers, 2
Laundry tubs, 2
Medicine closets, 2
Towel racks, 4
Toothbrush holders, 2
Soap dishes, 2



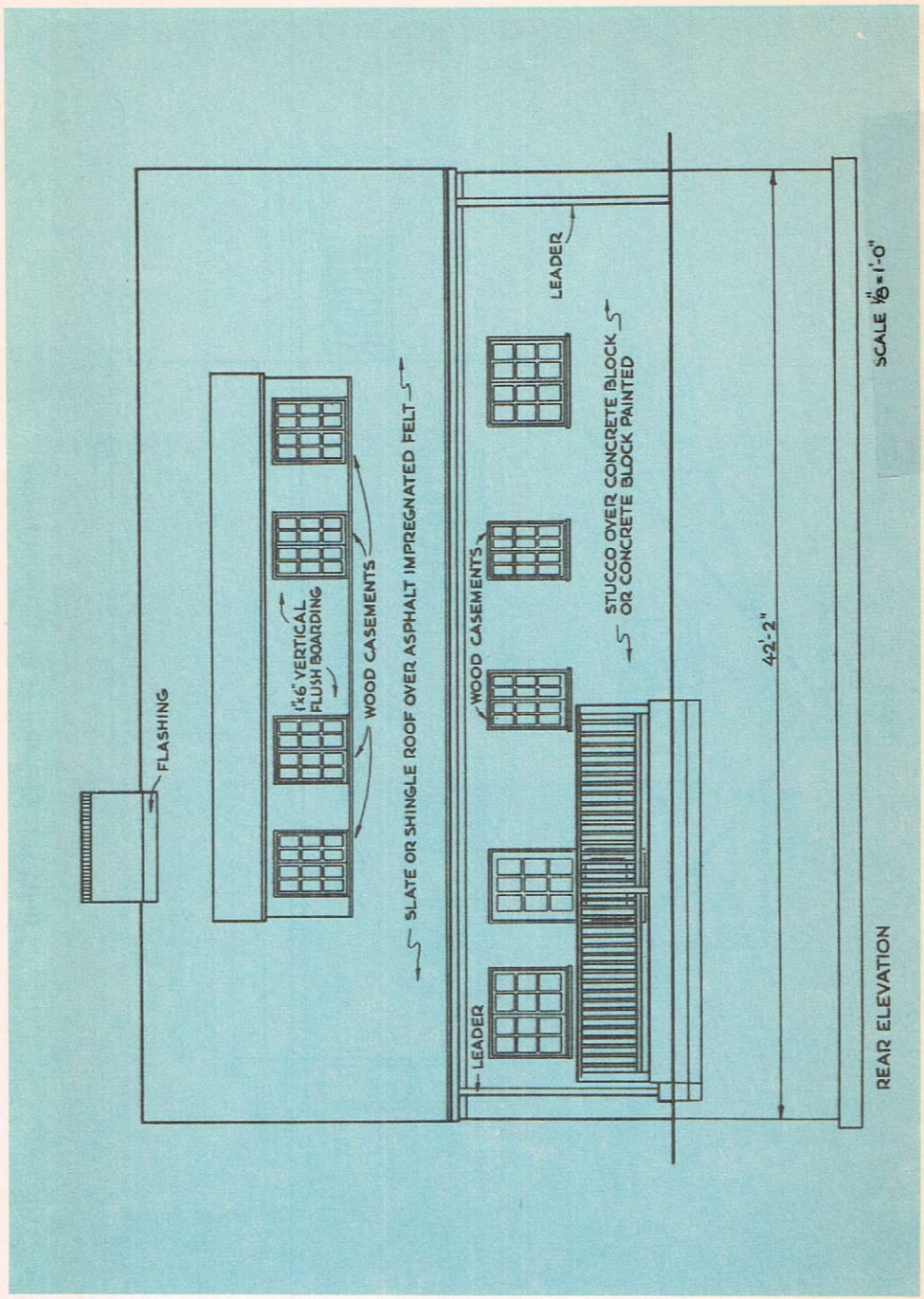
Foundation Plan of the Colonial House



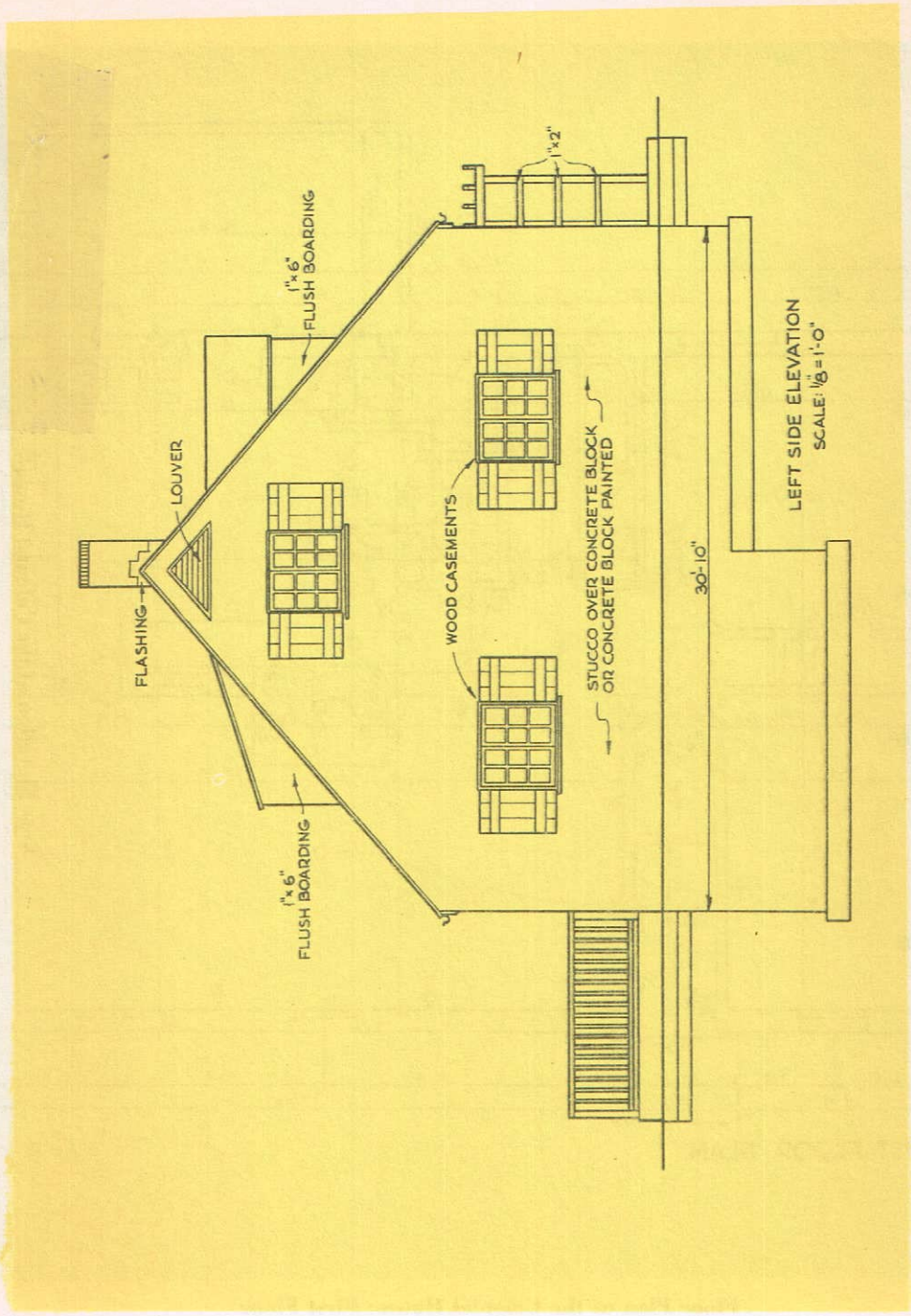
Front Elevation of the Colonial House



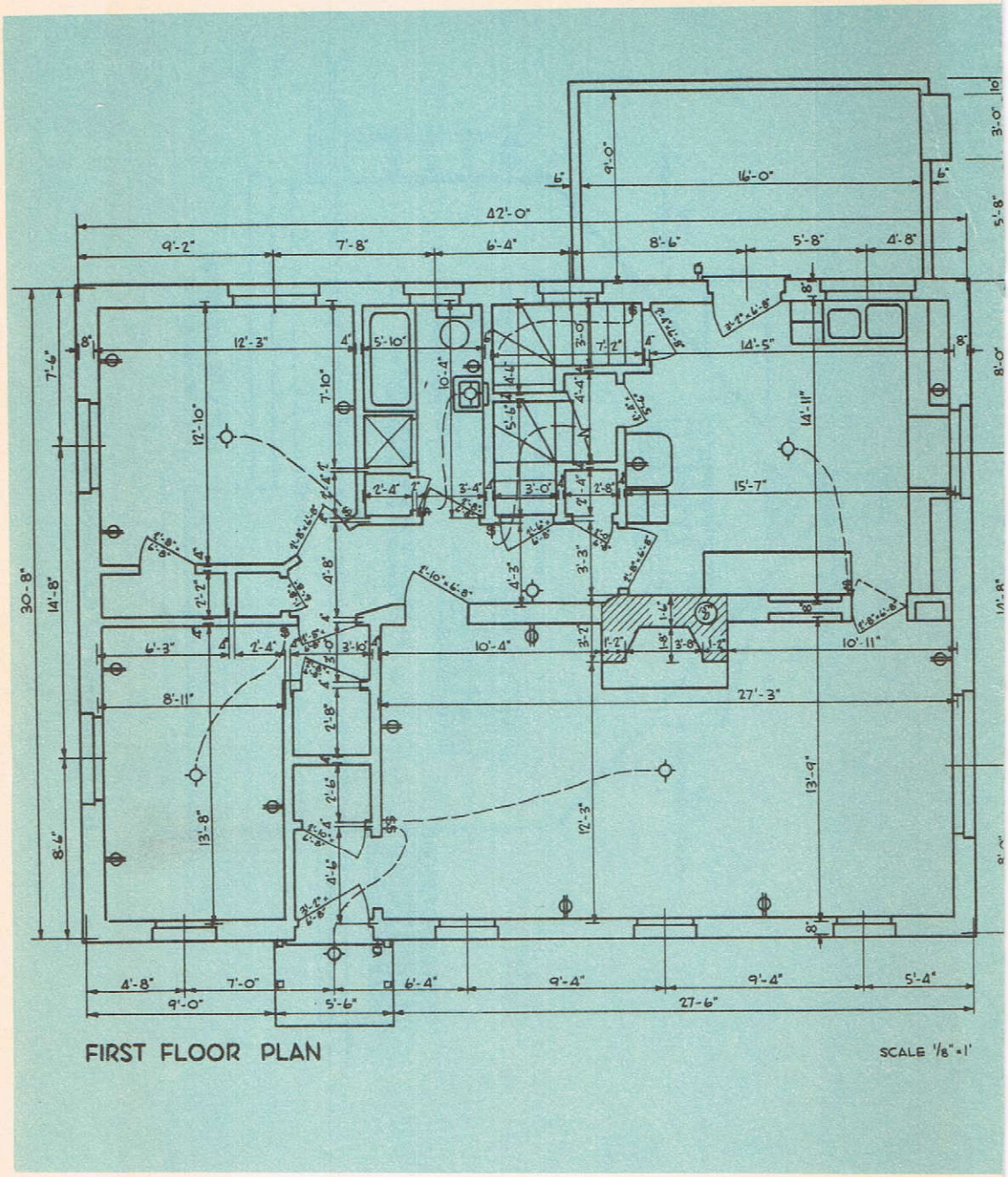
Right Side Elevation of the Colonial House



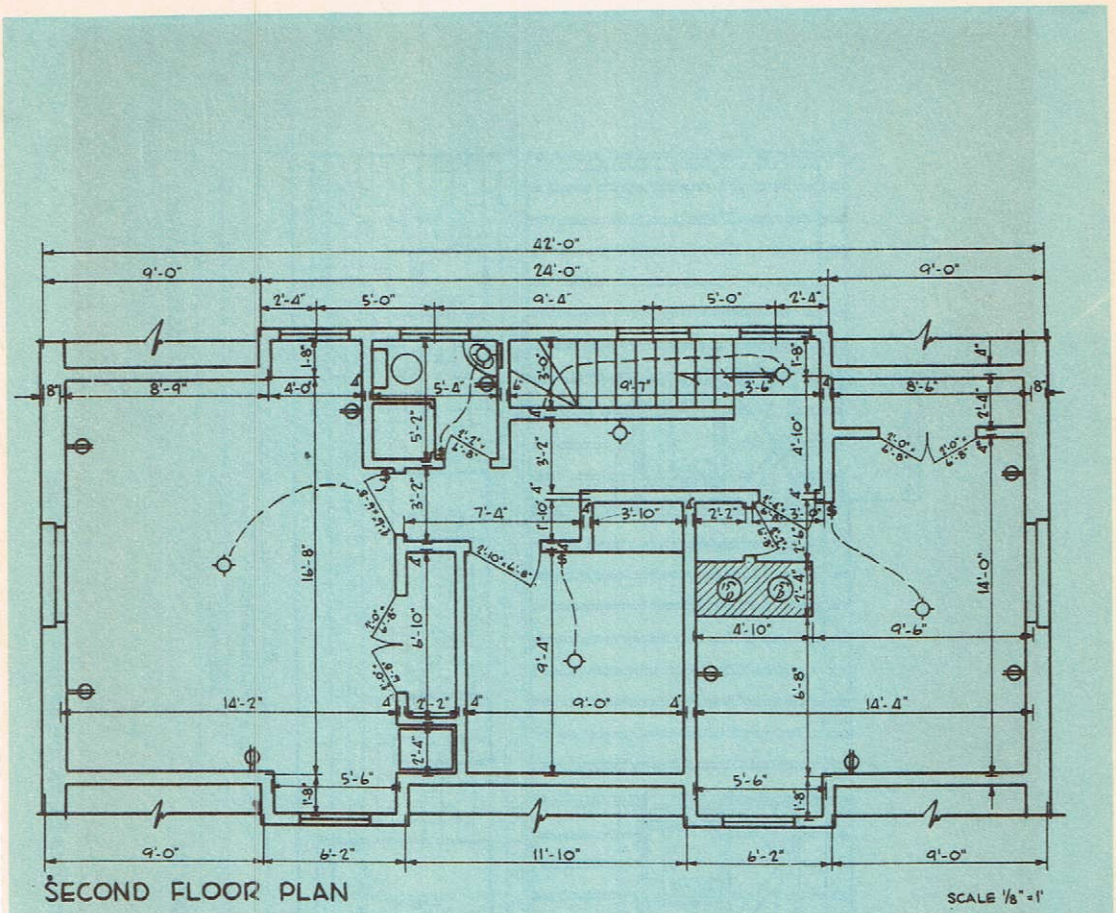
Rear Elevation of the Colonial House



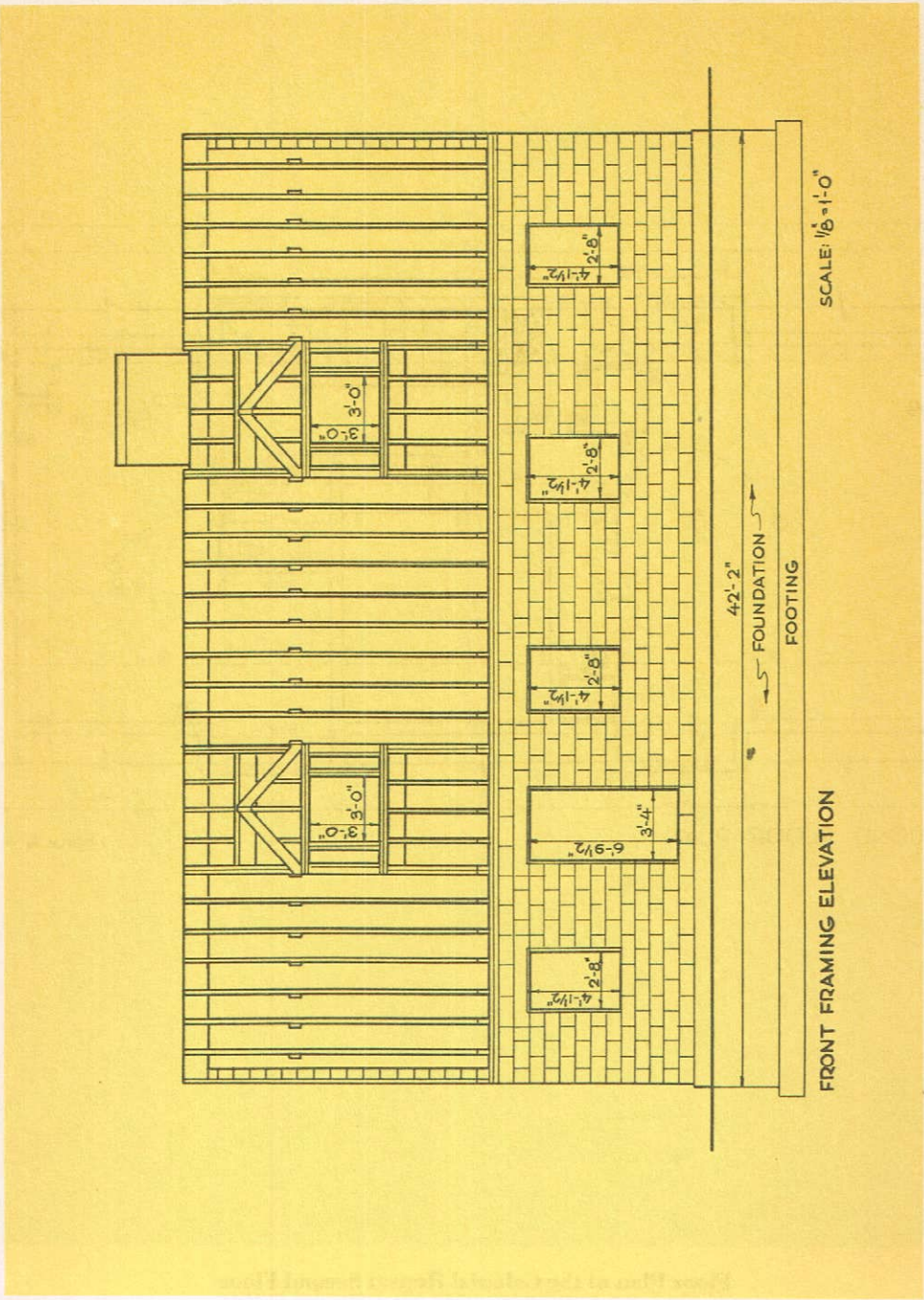
Left Side Elevation of the Colonial House



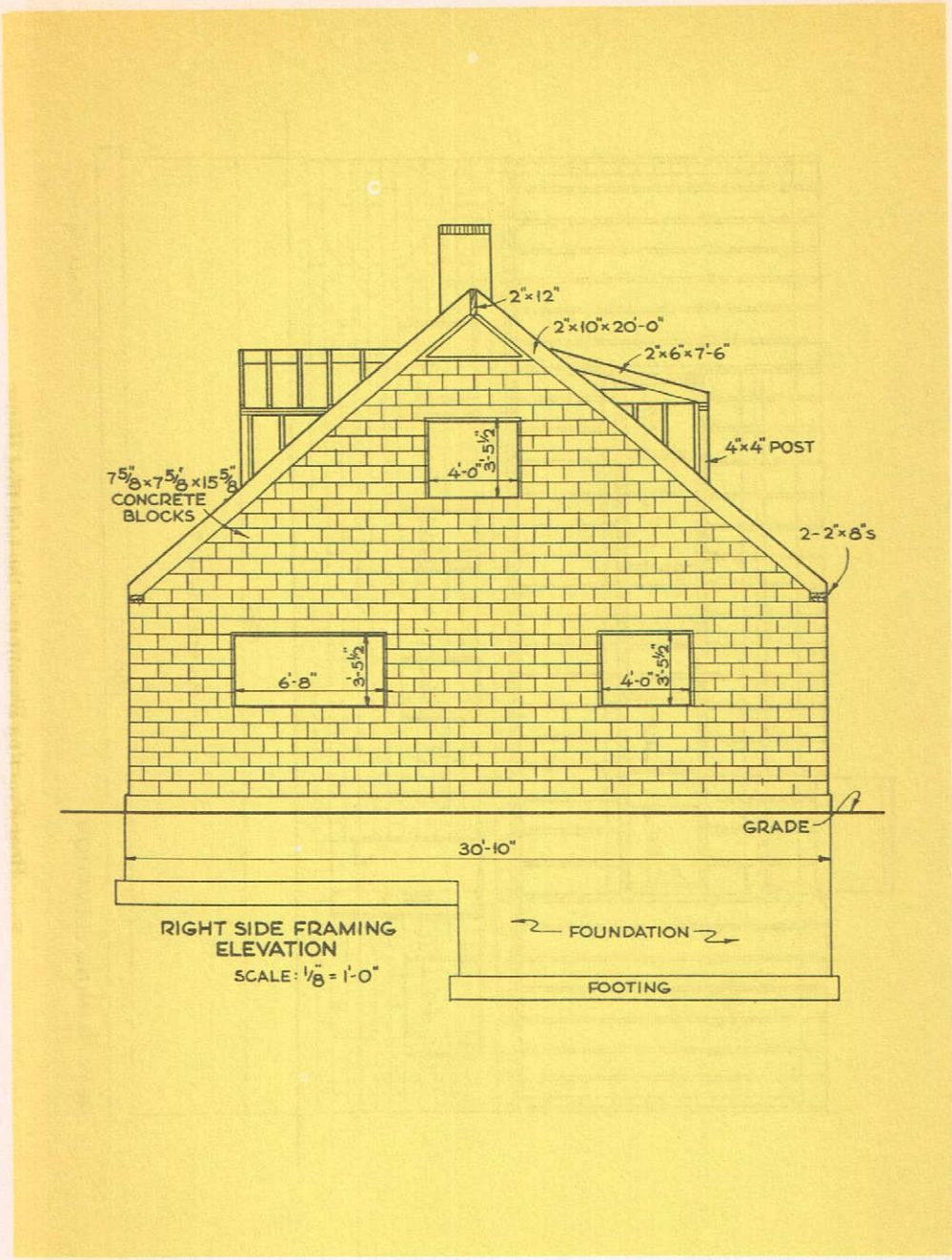
Floor Plan of the Colonial House: First Floor



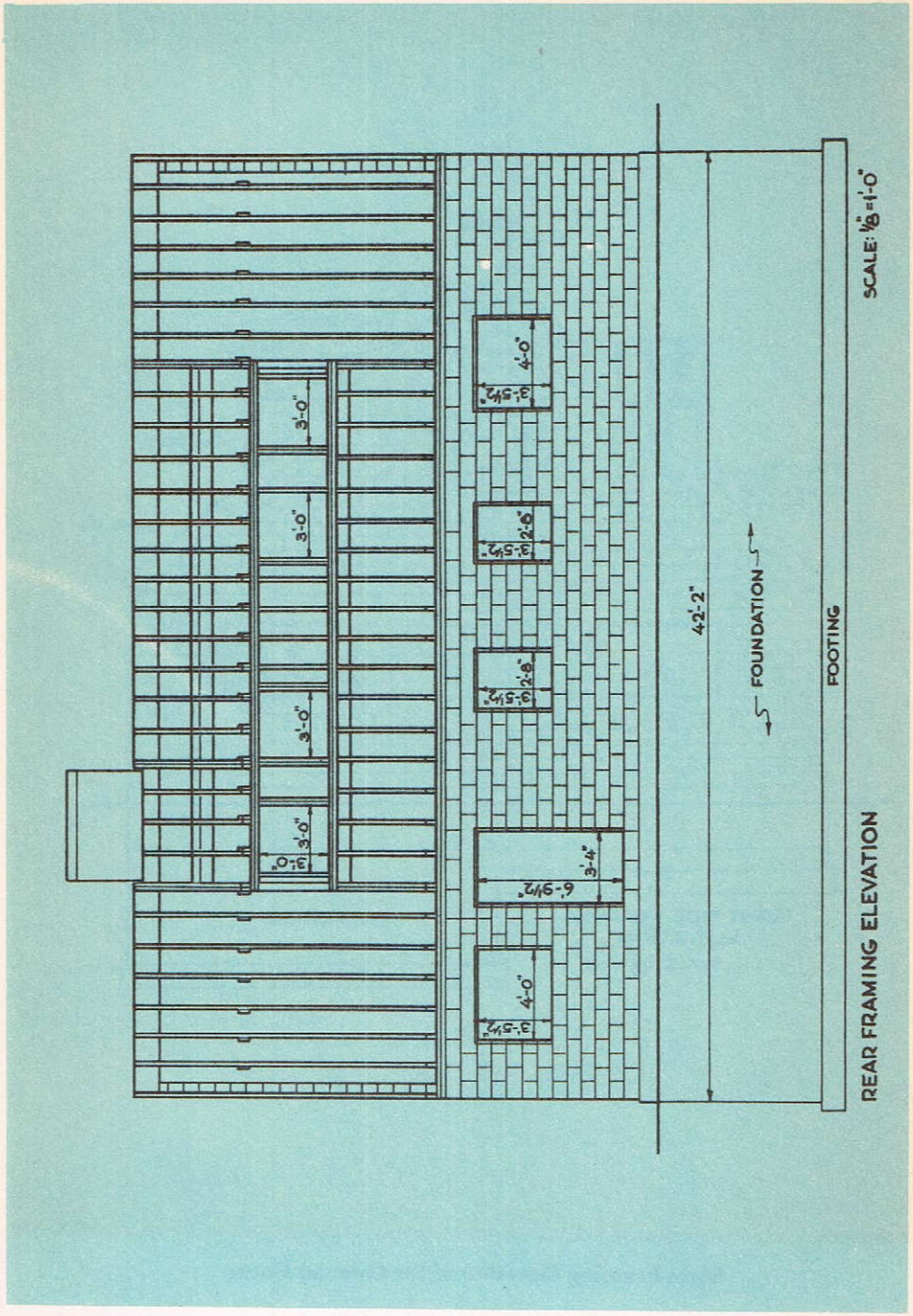
Floor Plan of the Colonial House: Second Floor



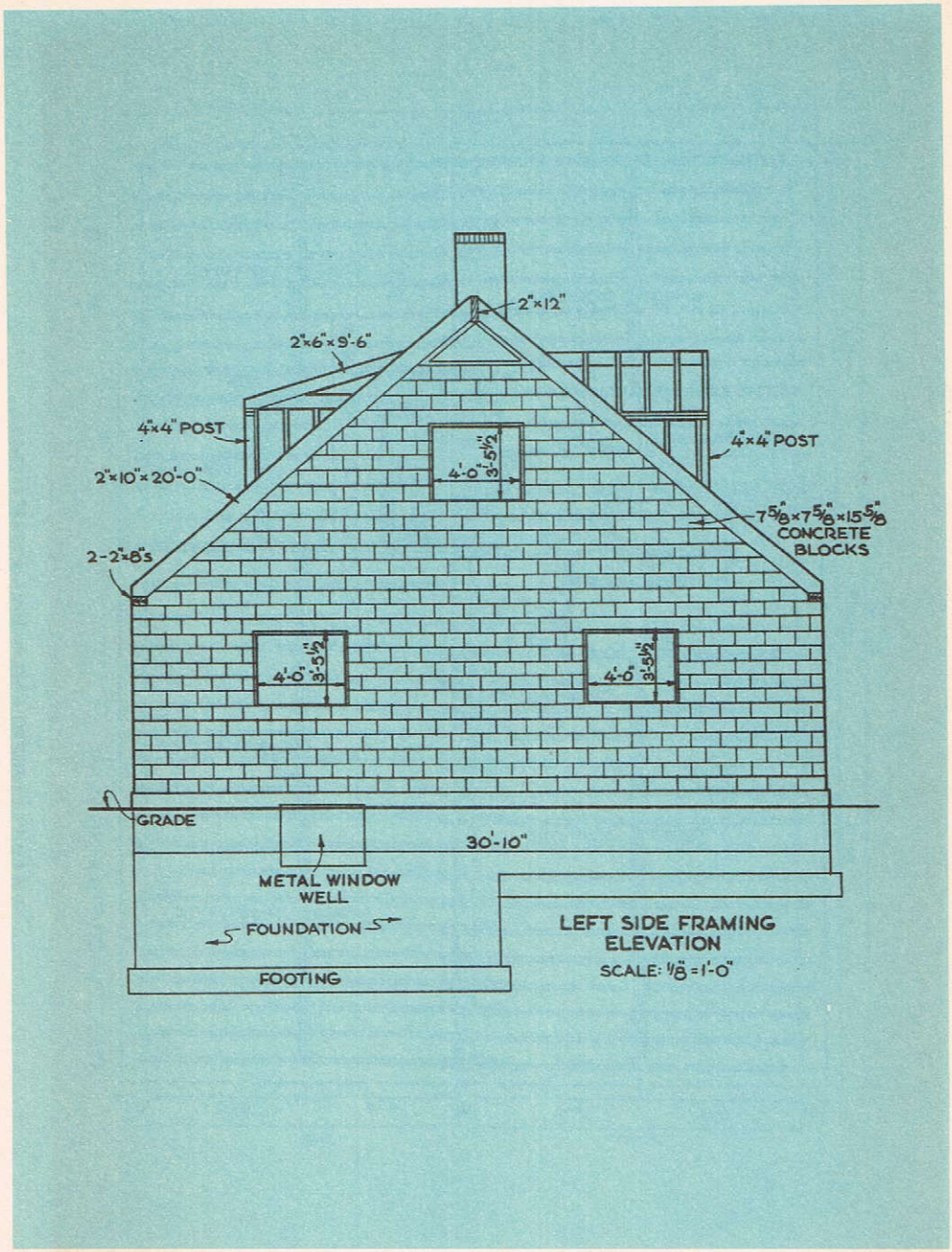
Front Framing Elevation of the Colonial House



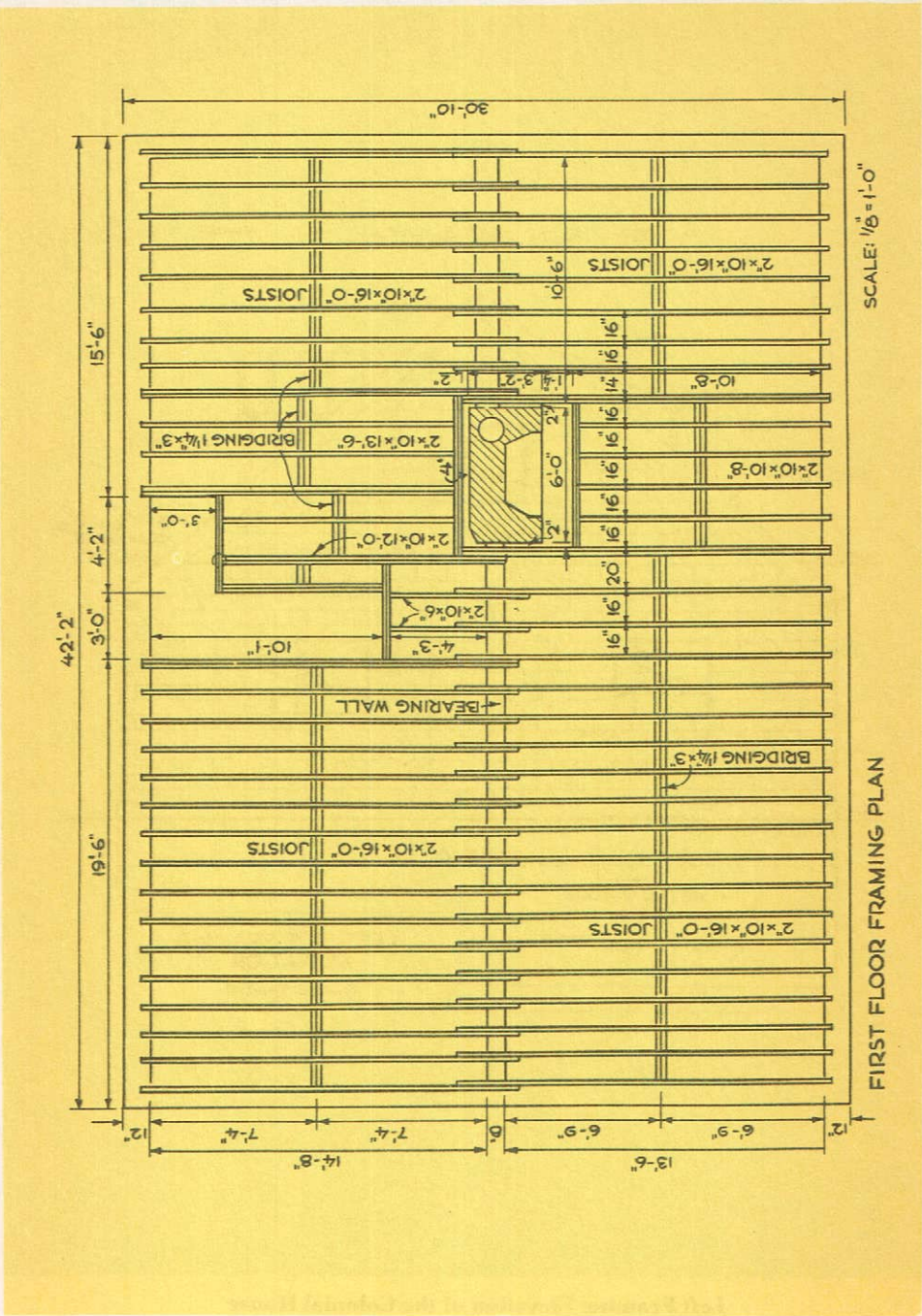
Right Framing Elevation of the Colonial House



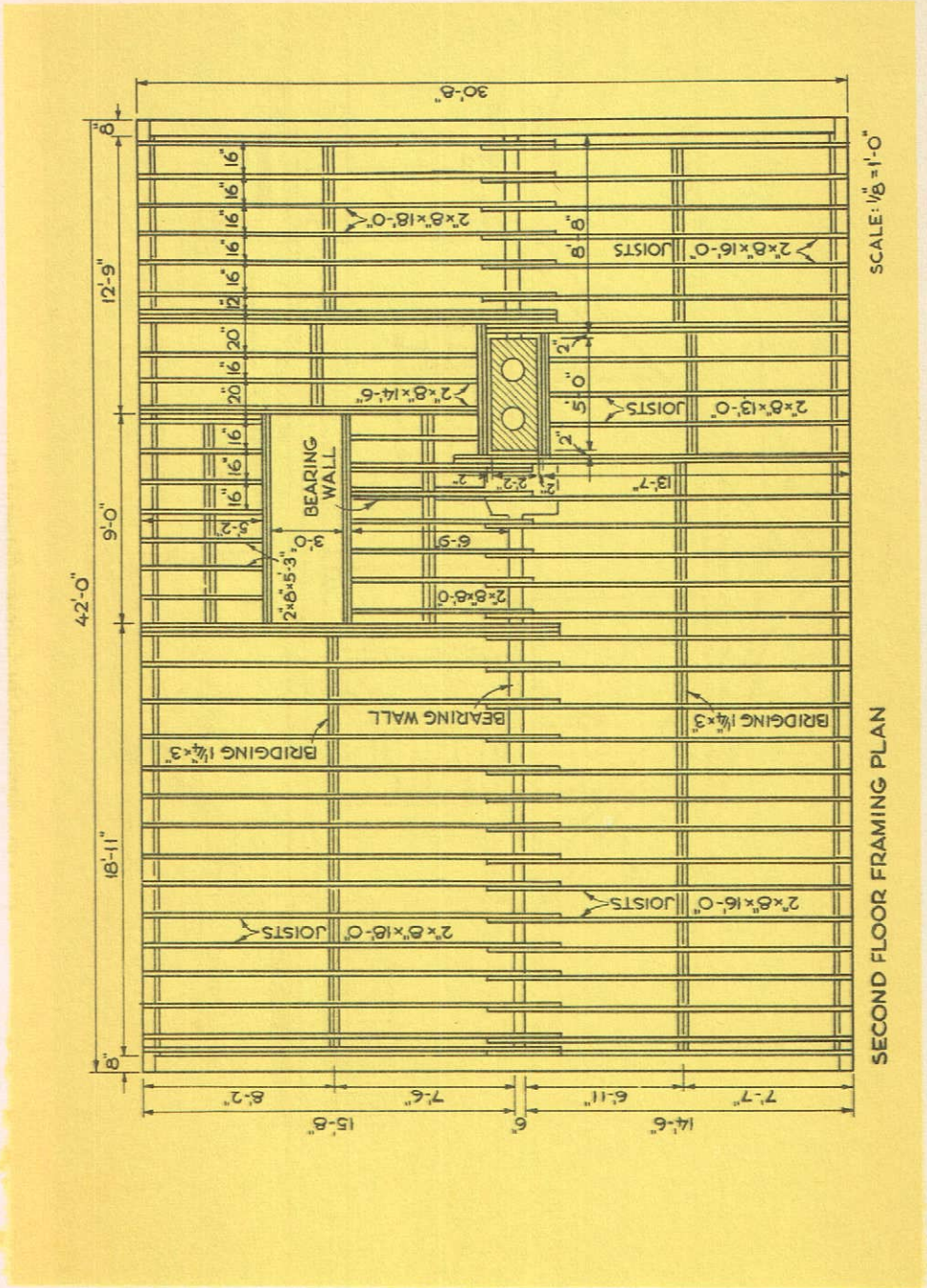
Rear Framing Elevation of the Colonial House



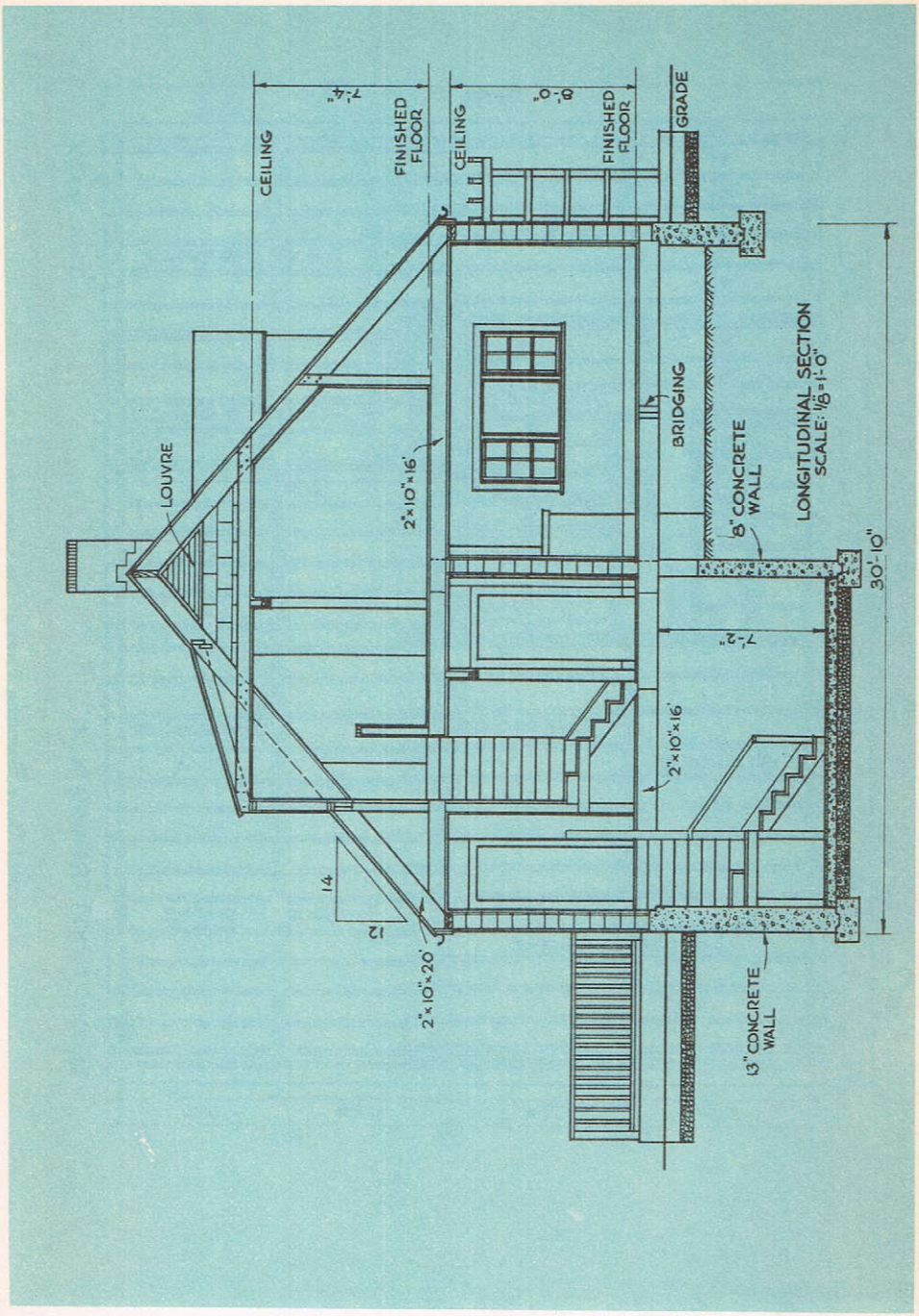
Left Framing Elevation of the Colonial House



First Floor Framing Plan of the Colonial House



Second Floor Framing Plan of the Colonial House



Section of the Colonial House