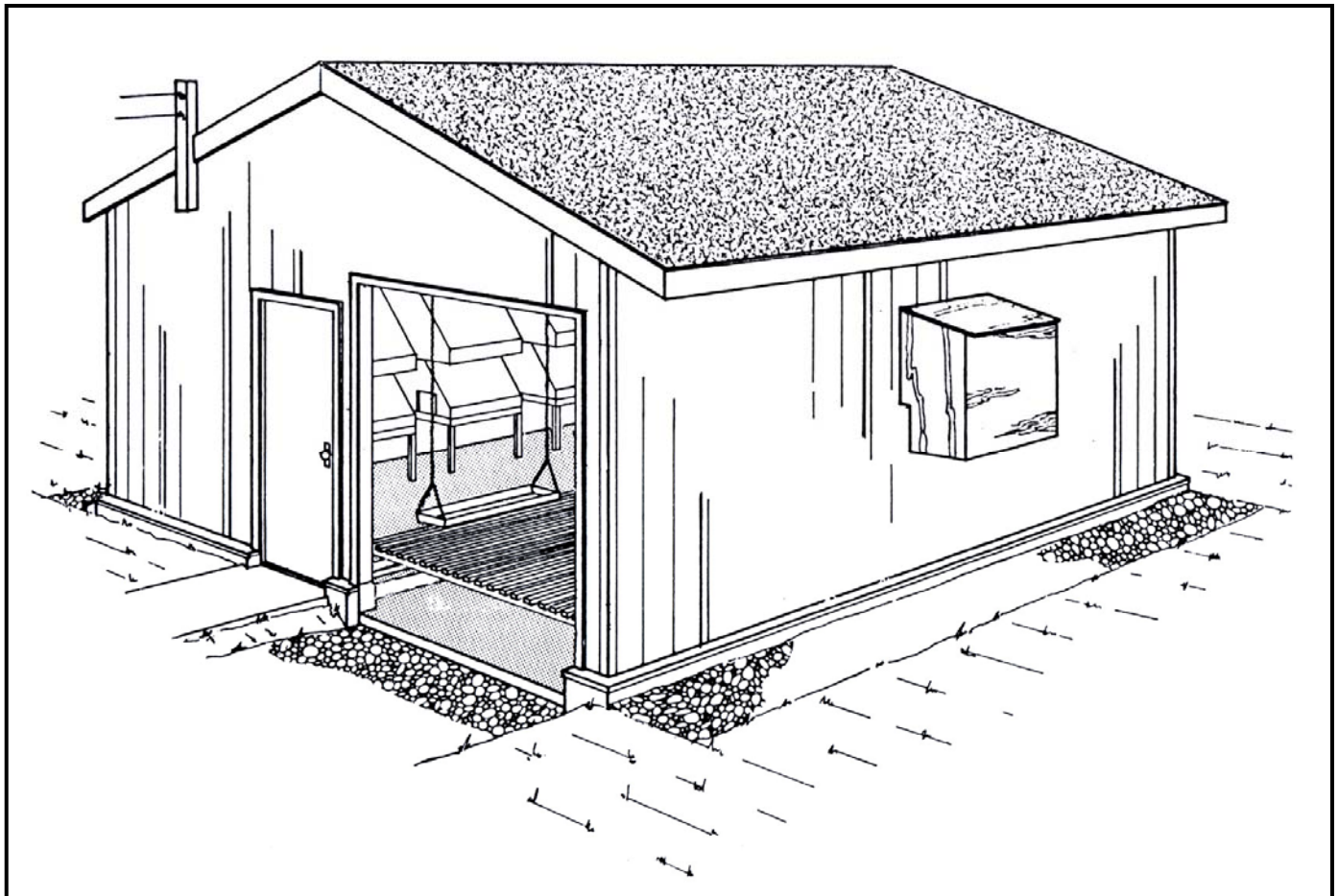




300 HEN LAYING HOUSE



This is a detailed plan for a building to house a small poultry flock on a part litter, part slatted floor system. The building is designed for a small laying flock of up to 300 birds, but it is also suitable for broiler or roaster chickens. The building is a simple truss rafter frame structure, about the size of a two-car garage. Alternatively, a simpler shed roof or pole frame building can be constructed; both styles are shown on the plan.

Detailed plans are on the following page. Be sure to read the management information on the following page. Small flock producers should check the regulations regarding size of operation allowed under poultry marketing legislation in your area.

300 HEN LAYING HOUSE

This is a detailed plan set for a building to house a small poultry flock on a part litter scratch area, and slatted roosting floor. The building is insulated wood frame construction, 20x24 feet (6.0x7.4m) with a concrete foundation and floor. Insulated square pole frame is also a good building alternative.

It has an optional large door and slatted roost platform that is removable for manure clean-out by a small tractor loader.

Automatic float-controlled waterers hang above the roosting area. Birds are fed by round metal tube feeder or homemade wood feeders, manually filled.

The feeders hang over the bedded scratch area. Roll-away community nest are fixed along the wall opposite the roosts. See attached plan 5015 – “Nests”.

VENTILATION SYSTEMS

Adjustable ceiling air inlets near one side wall and two exhaust fans in the opposite wall give controlled ventilation. The inlets may be made manually adjustable or with counterweights for automatic opening (plan M-9715). A variety of commercial inlets are also available. All exterior air inlets should be coarse-screened to keep out rodents and birds.

A two-fan system is preferred, one to provide a set amount of fresh air for coldest weather, and the second a variable rate for temperature control. The small single speed fan is controlled by a switch; it runs continuously, moving about 100 L/s (200 cfm) of air for winter ventilation and moisture removal.

The two-speed or variable speed fan is controlled by a thermostat set to start at slow speed when the barn warms up to 20°C, and to switch to high speed when it reaches 22°C, to provide cooling. On low speed it should move about 190 L/s (400 cfm), and on high speed 660 L/s (1400 cfm). Together, the two fans provide up to 850 L/s (1800 cfm) for maximum summer ventilation.

A 6 kW (20,000 BTU/h) unit heater provides supplementary heat to help provide adequate ventilation to keep the litter dry in the coldest winter weather. It is important that the heater control be interlocked with the ventilation system so these are not working against each other.

Controls should be located near the centre of the room, 2 ft from the ceiling. Electrical services should be approved non-metallic, surface mounded. Fixtures and electrical boxes should be approved for damp locations, preferably of the rigid plastic type.

For more detailed references on ventilation see the following CPS Leaflets: - 9700 ***Ventilation Principles & Rates*** and 9750 ***Ventilating and Heating Small Rooms***.

LIGHT CONTROL

Control of lighting, both the intensity and photo-period is desirable for laying houses to keep hens producing during decreasing hours of natural light.


Laying hens exposed to decreasing hours of daylight will go into a moult and quit laying. For this reason, the building should be window-less and light-tight. Lights should be operated on a simple timer to provide about 15 hours of "daylight" per day. Exhaust fans should be equipped with light baffles so they do not admit light during long summer days. These can be made removable.

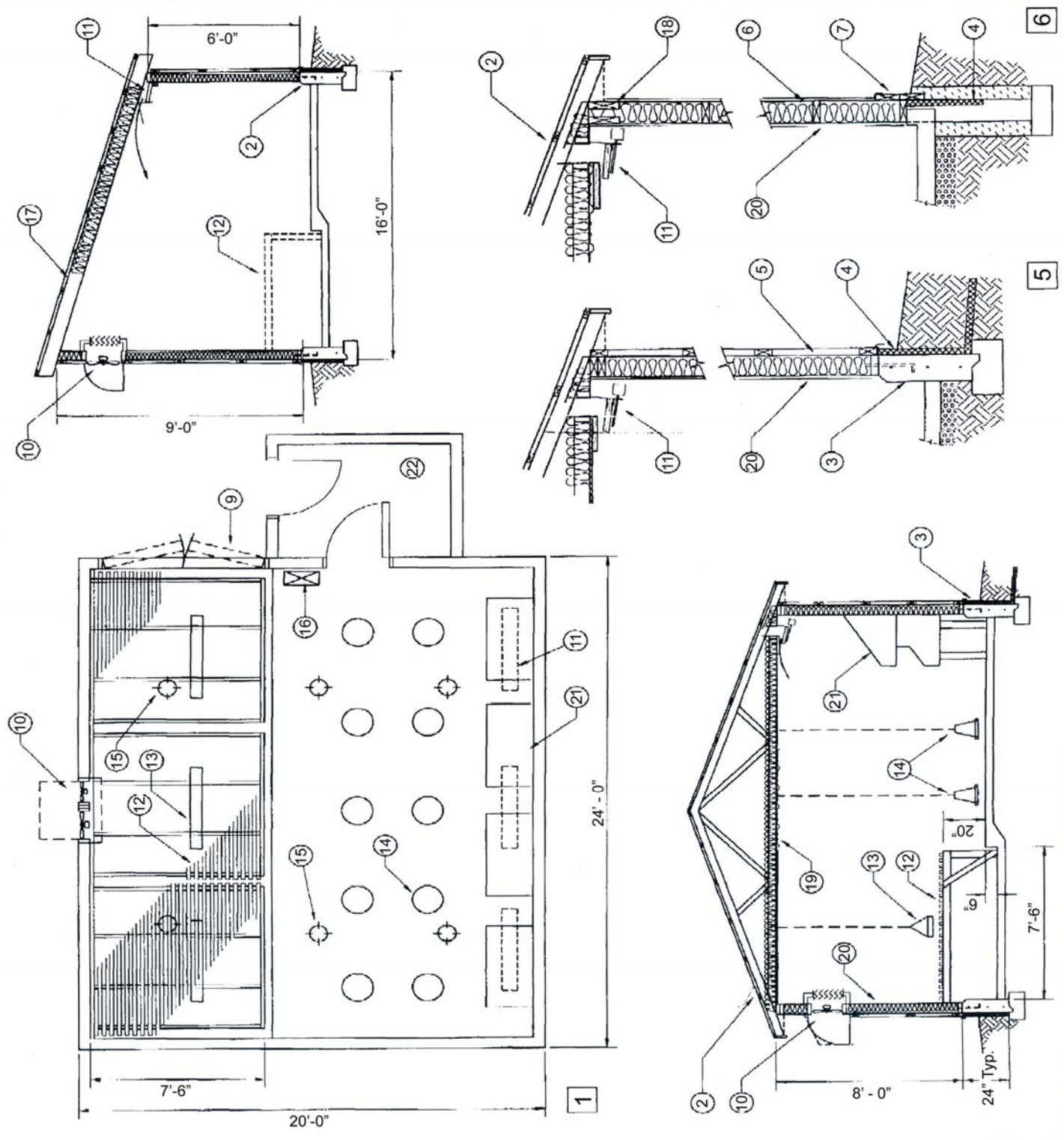
Another desirable feature is to add a vestibule entrance which provides a cold weather buffer, as well as a small room to store cleaning supplies, eggs or feed supplements.

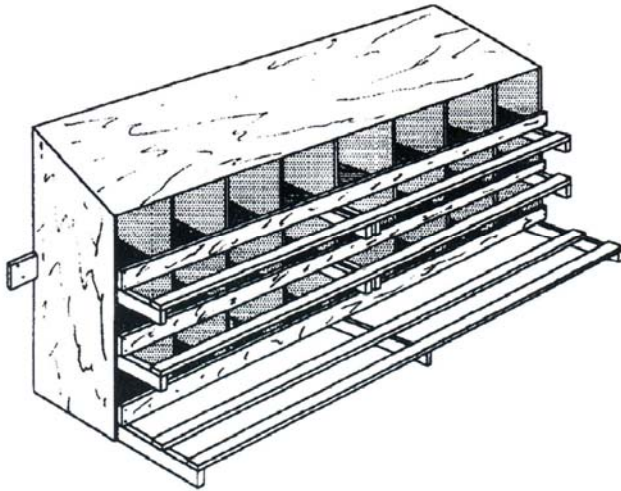
Plans and Leaflets can be viewed online at the Canada Plan Service website:

<http://www.cps.gov.on.ca/english/frameindex.htm>

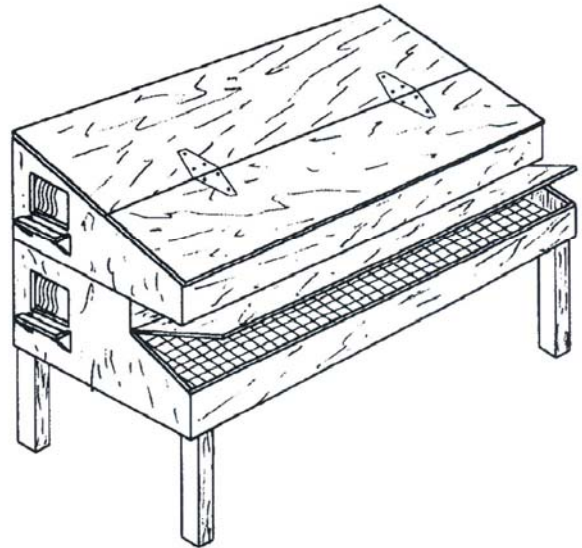
1. Floor Plan
2. Truss roof to suit design load
3. Concrete foundation on 8"x16" spread footing; 3-15M rebar
4. Rigid insulation with protective covering; horiz. extension opt.
5. Stud frame option
2x6 studs 24" o.c.
vapor barrier, R20 insulation interior sheathing exterior metal on 2x4 girts
6. Post frame option
4x6 PT posts 8'-0" o.c.
vapor barrier, R20 insulation interior sheathing exterior metal on 2x6 girts 2-2x8 for up to 1.8 kPa roof.
7. 6" PT splash plank
8. 4" conc. floor over gravel
9. Access for small tractor, or hand clean only.
10. Two exhaust fans with light baffled enclosure (see text and Plan 5911)
11. Air inlets, 3 @ 6"x48", with baffle cable controlled or balanced.
12. Movable roosts; 2x4 frame, 2x2 slats @ 3.5" o.c.
13. Float controlled waterers
14. Suspended feeders
15. 60W light circuit on timer
16. 20,000 BTU unit heater
17. Shed roof option; 2x8 @ 24" for 1.2 kPa snow; or 2.3 kPa @ 16" o.c.
18. Plate beams, 2-2x8 up to 2.2 kPa roof snow load
19. Plywood or steel ceiling over vapor barrier and R28 insulation
20. Interior sheathing, plywood or metal
21. Roll-away nest (Plan 5015)
22. Vestibule entry and storage area

REV	DATE	BY	APP'D
 			
LAYING HOUSE SMALL FLOCK (300 HENS)			
DESIGNER	D.D.	DATE	1985-04
DRAWN	D.D.	REVISED	1985-04
SCALE	1/4" = 1'-0"	PROJECT NO.	5255
DATE	1988-05	DATE OF ISSUE	1988-05
PROJECT NO.	5255	SHEET NO.	1 OF 1





INDIVIDUAL NESTS



COMMUNITY NEST

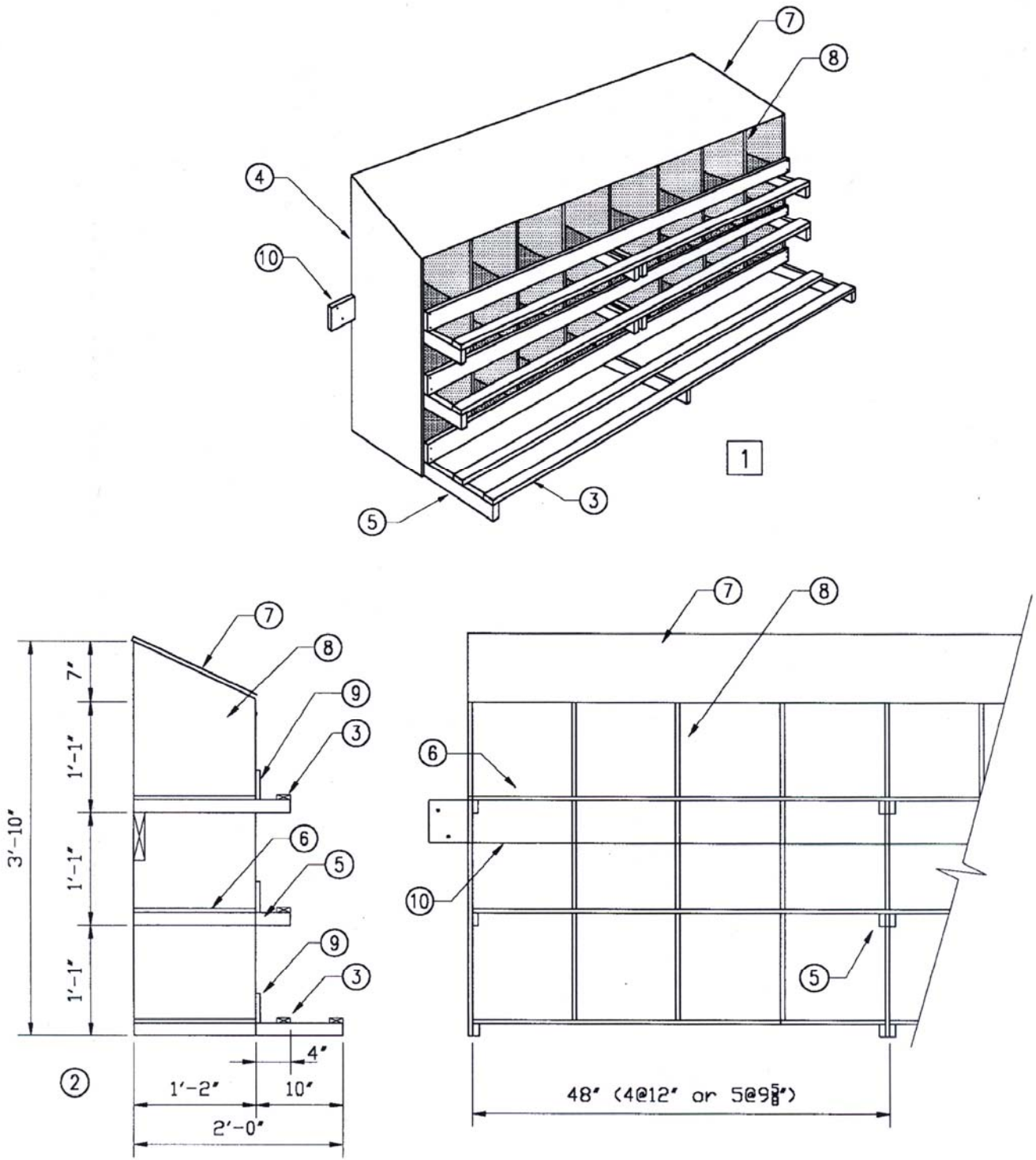
PLAN 5015 1985 R:2001:01

Floor housing systems, such as broiler-breeder flocks and small laying flocks, require nesting systems. Two popular styles of nests are detailed on this plan.

The sloping roof of either type discourages birds from roosting on the nest.

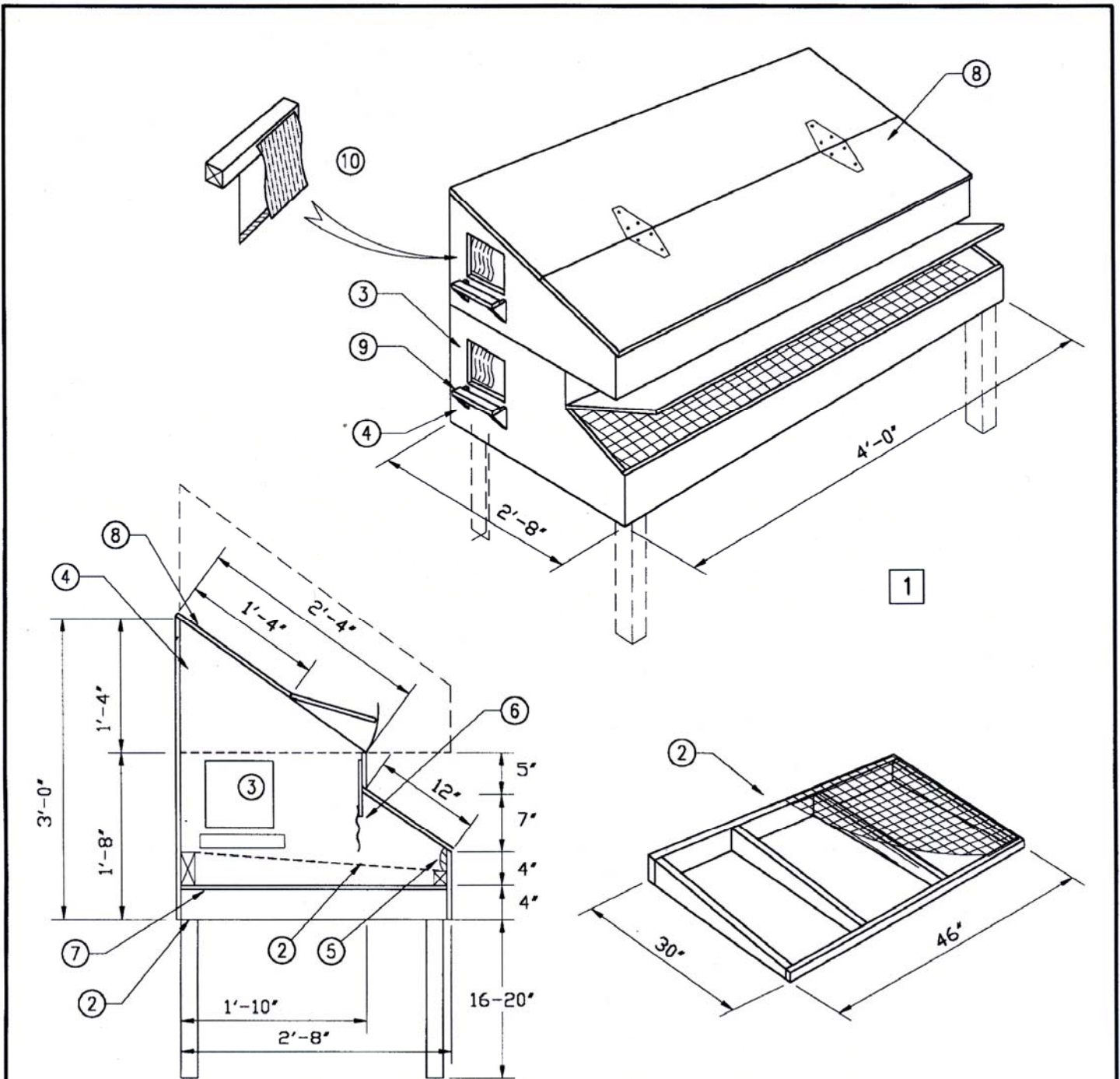
Community Nests are large nesting boxes for 3-6 hens. The roll-away style as shown is preferred for easier egg gathering and cleaner eggs. Simpler nests could be built if desired. Community nests like this can be stacked two tiers high to save space. Allow one nest box for 20-25 hens of light breeds, or one box for 16 hens of heavy breeds.

Individual Nests are particularly popular for the small flock operator. The plan shows one practical system of construction; various similar ideas can be used. Make the nest boxes this size, since two hens will try to crowd into larger nests. Provide one nest for every 6-8 birds.



INDIVIDUAL NESTS

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Perspective 2. End section 3. Perch of 1 x 2 4. End panels of 12.5 mm plywood 5. 1 x 2 supports | <ul style="list-style-type: none"> 6. Floor of 15.5 mm plywood 7. Top of 12.5 mm plywood 8. Nest dividers, wood panel 9. 1 x 4 or plywood front 10. 1 x 6 girt for wall hanging |
|--|--|



ROLL-AWAY COMMUNITY NEST

- | | |
|--|--|
| 1. Perspective of two-tier nest | 7. Floor of 15.5 mm plywood |
| 2. Frame, 1 x 4 on 2 x 2 legs | 8. Top of 12.5 mm plywood, hinge as shown |
| 3. 8" opening each end, with light curtain | 9. Perch of 1 x 2 |
| 4. End panels of 12.5 mm plywood | 10. Attach light curtain to 2 x 2 frame |
| 5. Foam rubber bumper pad | 11. Removable laying floor, 0.5" galv wire mesh
2 x 4 top and 2 x 2 lower rails |
| 6. Plywood baffle and cloth curtain | 12. 1 x 4 or plywood front |