

A MOBILE OFFICE-LABORATORY¹

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In August 1963 the Orange County Health Department, in a contracted arrangement with the California Department of Public Health, activated a research project on Fly Control Methods Pertaining to Poultry Operations. Since office and laboratory space was in short supply, one of the first functions of the project was to design a mobile office-laboratory (Fig. 1) that would satisfy project requirements. The limited manpower available to the project also encouraged the development of a unit that could be moved to various locations where investigations were being conducted within the county and thereby utilize man hours more efficiently by cutting down on travel time.

Following development of the initial design and a listing of project office-laboratory functions, a local trailer manufacturer who had considerable experience in the desired type of unit was contacted. The manufacturer provided design suggestions and building code specifications that led rapidly to the final versatile unit (Figs. 2, 3) which cost approximately \$3,600.00.

The following specifications are those used in the construction of the trailer:

- 1) External box length 19 feet.
- 2) External box width 8 feet.
- 3) Roof sloping from center to outer sides, running lengthwise with 1 foot overhang both ends.
- 4) Permanent mount single axle with wheels.
- 5) Exterior aluminum painted white.
- 6) Seven-foot ceilings throughout.
- 7) Walls, floor, ceiling, insulated.
- 8) One ton A/C 100A-115V air conditioner mounted on roof and

vented in ceiling at length's and width's center point.

- 9) Wired throughout for 115V, 60 cycle, connections with 3-cord electrical ground.
- 10) Standard trailer external sewer connection near sink drain.
- 11) Chemical resistant vinyl tile floor, mottled light tan.
- 12) Light Poly-clad (tan) internal side-walls and ceilings.
- 13) Two 4-tube, 48-inch long, 115V, 60 cycle, ceiling-mounted fluorescent lights, one on each side of air conditioner vent, centered at midpoint of trailer's width and running with trailer's length. Individual switches on end wall above customer's own desk.
- 14) Two 115V, fan type ceiling electric heaters centered at midpoint of trailer's width and at farthest ends of fluorescent lights. The heater mounted at the trailer's front not directly above counter top. Individual switches on end wall above customer's own desk.
- 15) Thirty-four-inch wide door centered in rear wall. Lower half solid, upper half clear glass adjustable louvers.
- 16) Internal left side of trailer from rear to front:
 - a) Thirty-three-inch wide floor to ceiling open space with 2 reefer vents and 1 double socket electrical outlet on left wall.
 - b) Thirty-six-inch high, 24-inch wide, counter, with foot space overhang at top, balance length of trailer to front counter, with:
 - 1) Four drawers about 18 inches wide, 20 inches long, 6 inches deep.
 - 2) Nine-gallon propane gas wa-

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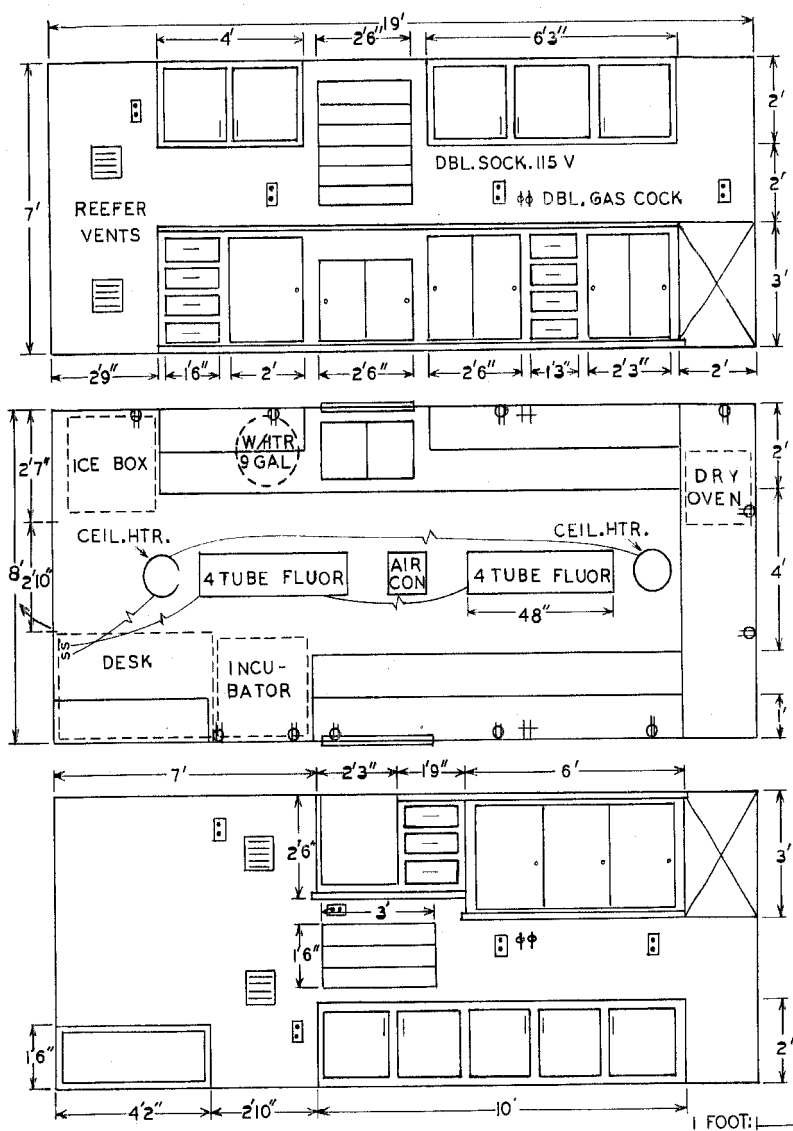


FIG. 1.—A versatile mobile office-laboratory designed for conducting research in fly control methods pertaining to poultry operations.

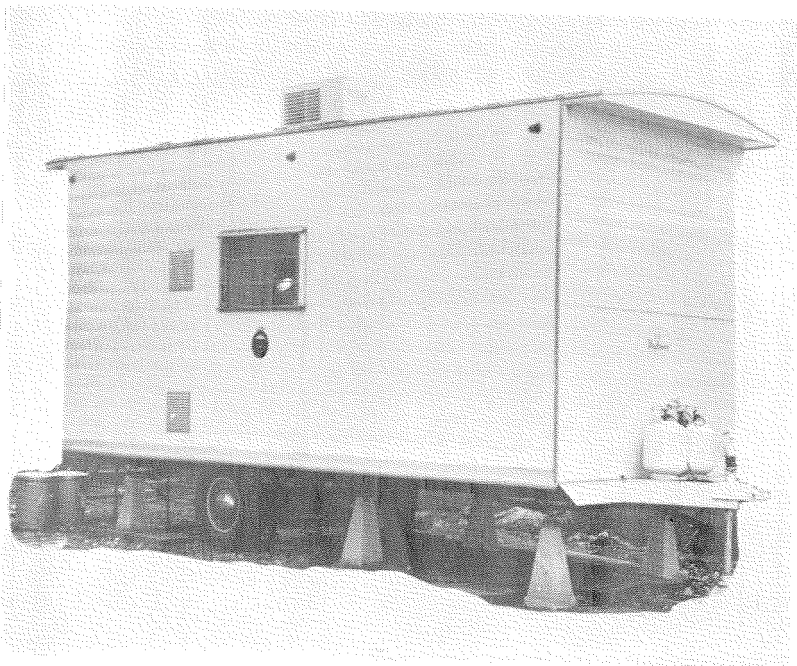


FIG. 2.—When the trailer is on location a 2½" black plastic pipe, as seen under the tow bar, connects the sink drain to a sewer connection, six concrete blocks with metal screw jacks stabilize the trailer, and a set of portable metal steps are placed outside the rear end entrance.

- ter heater under counter with removal space covered by swing-open door. Include all connections for operation.
- 3) Acid resistant porcelain sink, about 2½ feet long, 1½ feet wide, two compartments, mounted in counter top with two sliding doors covering 30-inch space beneath sink. Hot and cold water connections for each sink compartment should be installed with outlet(s) at back of sink.
 - 4) Thirty-inch cabinet with two sliding doors and adjustable shelf.
 - 5) Four drawers, about 15 inches wide, 20 inches long, 6 inches deep.
 - 6) Cabinet about 2¼ feet wide with 1 adjustable shelf and two sliding doors.
 - c) One overhead cabinet 48 inches long, 2 feet high, 1 foot deep, with two swing open doors and one adjustable shelf in each compartment.
 - d) One clear glass adjustable louvered window about 2½ feet wide, 3 feet high in 40-inch wide wall space above sink.
 - e) One overhead cabinet about 6¼ feet long, 2 feet high, 1 foot deep, divided into three equal size compartments each with one adjustable shelf and one 2-foot wide swing open door.
 - f) Two-foot wide space from counter top to ceiling.
 - g) Three double socket electrical

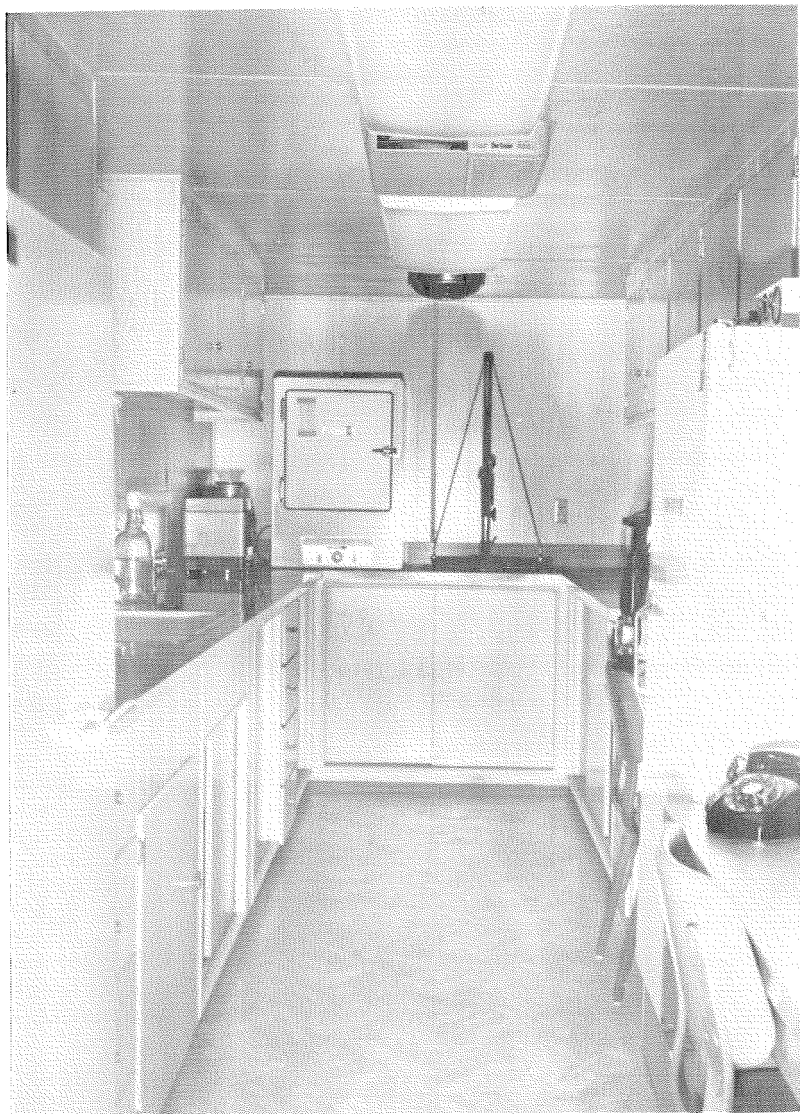


FIG. 3.—Inside the trailer there are areas for specific functions, and related supplies and equipment are stored in them.

outlets equally spaced under overhead cabinet.

- h) One double stopcock for propane gas, brass, with flange, $\frac{3}{8}$ inch IPS coupling with 2 tubing connections, mounted on

counter top 3 inches out from wall or on wall 3 inches above counter top. External outlet at front of trailer with Propane gas tank connectors.

- 17) Across internal front of trailer:

- a) Thirty-inch high, 24-inch wide counter, with foot space overhang at top.
 - b) Cupboard openings under counter with sliding doors and one shelf. Open space for cupboard openings is about $3\frac{3}{4}$ feet.
 - c) Two double socket electrical outlets above counter, 2 feet in from each side wall.
 - d) Open space from counter top and width to ceiling.
- 18) Internal right side of trailer from rear to front:
- a) Open space at least 50 inches long, 30 inches wide, for customer's own desk.
 - b) One shelf, 12 inches wide, 14 inches high (for 3 ring standard size binders) with shelf bottom $5\frac{1}{2}$ feet above floor.
 - c) Thirty-four to 36-inch floor to ceiling open space with 2 socket electrical outlet and 2 recerf vents.
 - d) Thirty-inch high, 48-inch long, 24-inch deep, desk with knee hole on desk's right (toward trailer's rear) and three drawers on left.
 - e) Thirty-six-inch high, 24-inch wide counter, with foot space overhang at top, from built in desk to front counter, with three equal size cupboard openings with sliding cabinet doors and one adjustable shelf.
 - f) One clear glass adjustable louvered window about $1\frac{1}{4}$ feet high and 3 feet wide above built in desk.
 - g) Three double socket electrical outlets, one above built in desk, two above counter.
 - h) One double stopcock for propane gas. Same specifications as previous (16,h).
 - i) Overhead cabinet about 9 feet 8 inches long, 2 feet high, 1 foot deep (cabinet should extend over built in desk and counter to edge of 2-foot-wide front counter), five equal size compartments, each with one adjustable shelf and one swing open door.
- 19) Desk top: chemical and heat resistant wood grained pattern formica.
 - 20) Counter top: chemical and heat resistant light green linen pattern formica.
 - 21) Cabinet finish similar to walls and ceiling.
 - 22) Standard tow bar on front of trailer with mounting above for two 5-gallon propane gas tanks.
 - 23) Exterior circuit breaker box near main current inlet.
 - 24) Two CO₂ fire extinguishers, one above customer's own desk and one above counter opposite sink.
- Following receipt of the trailer the theme of harmonious colors was continued in the selection of large pieces of equipment. A large gray metal desk with two letter-size file drawers and a white incubator were installed in the right rear space and a turquoise colored refrigerator in the left rear space. Laboratory equipment such as a drying oven, balance and pH meter, supplies such as glass and plastic ware, and chemicals were organized according to their inter-related functions so that a smooth flow evolved from one activity into another. In this manner near maximum efficiency was realized and personnel did not get in each other's way. The small area's harmonious and predominantly pastel colors lent themselves to less tiring days, particularly when there was a great deal of routine and often tedious work to be done. Consequently three persons were able to work simultaneously and efficiently in the trailer.
- ACKNOWLEDGMENT. The photographs of the trailer were made by Mr. Spurgeon Sparks, Orange County Health Department.