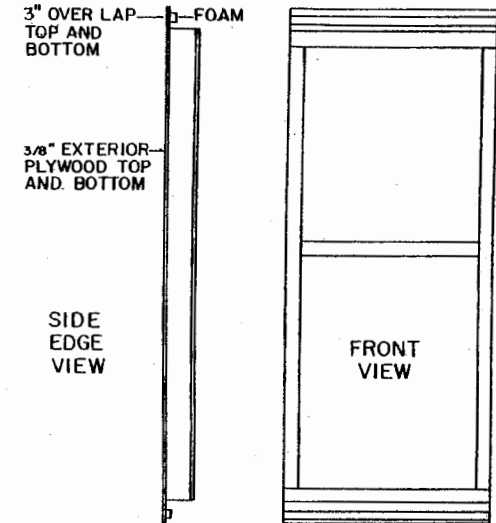


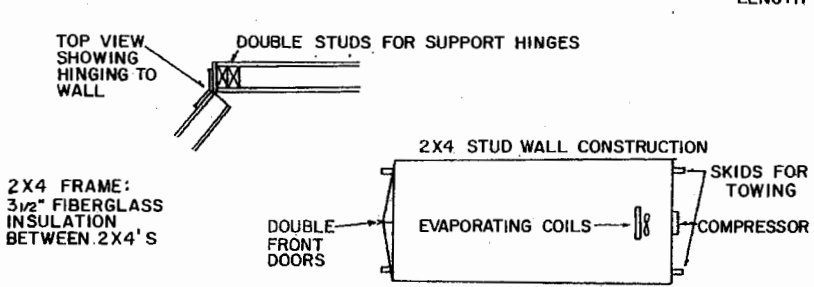
FRONT ELEVATION

SIDE ELEVATION

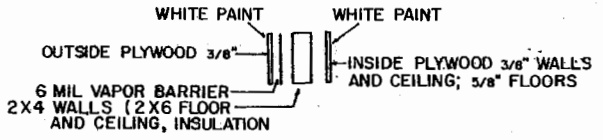
LENGTH VARIABLE



DOOR CONSTRUCTION  
(COMMERCIAL REFRIGERATION DOOR PREFERABLE)



PLAN VIEW



DOOR & WALL CONSTRUCTION

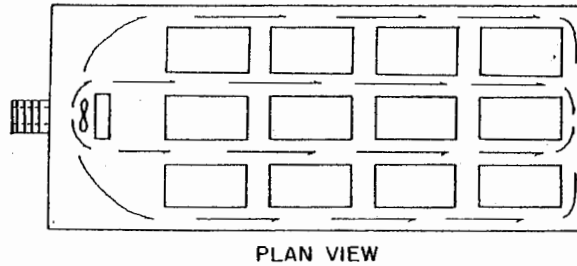
NOTES: CONVENTIONAL STUDWALL CONSTRUCTION

1. PAINT ALL EXTERIOR SURFACES WHITE TO REFLECT HEAT
2. 3 1/2" FIBERGLASS OR EQUAL FOAM INSULATION BETWEEN STUDS IN ALL WALLS
3. USE 5 1/2" FIBERGLASS OR EQUIVALENT "R" VALUE FOAM INSULATION BETWEEN FLOOR AND CEILING JOISTS.
4. BE CAREFUL WHEN INSTALLING POLYETHYLENE VAPOR BARRIER TO AVOID PUNCTURES, TEARS, ETC. WHEREVER POSSIBLE SEAL WITH DUCT TAPE.

<b>LSU</b> AgCenter <small>RESEARCH &amp; EXTENSION</small>			
<b>TWO-TON PRE-COOLER</b>			
ENGINEER	BRANCH	SCALE	3/4" = 1'-0"
DRAWN BY	NICHOLS	SHEET	1 OF 2
TRACED BY	NICHOLS	DATE	1-'86 NO. 84-02

## MATERIAL LIST FOR 12' COOLER

1. 35 WALL STUDS @ 16" O.C. - CUT LENGTH TO 6'-7 1/8"
2. CEILING AND FLOOR JOISTS @ 24" O.C., 7-2X6X8' FOR CEILING AND 7-2X6X8' TREATED FOR FLOOR; CUT LENGTHS TO 7'-3 1/4"
3. BAND JOISTS: 4-2 X 6 X 12' (2 FOR FLOOR TREATED) - CUT LENGTHS TO 11'-9 1/4"
4. PLATES:
  - 6- 2X4X12' (CUT LENGTH TO 11'-11 1/4")
  - 6- 2X4X8' (CUT LENGTH TO 7'-4 1/4")
  - USE TREATED FOR BOTTOM PLATES
5. SKIDS 2-4 X 6 X 12' PRESSURE TREATED FOR GROUND CONTACT
6. SHEATHING:
  - 29 SHEETS OF 3/8" PLYWOOD
  - 3 SHEETS OF 5/8" PLYWOOD
7. INSULATION: 192 SQ. FT. OF R19-22 1/2" WIDTH
8. PAINT: 2 GALLONS OF WHITE OIL BASE
9. ONE TON REFRIGERATION UNIT
  - COULD USE TWO STAGE TO SAVE ON ELECTRICITY
10. 1/4 hp, 8" WHEEL SQUIRREL CAGE FAN (800 c.f.m. @ 0.25 S.P.)
11. 8'X100' 6 MIL VAPOR BARRIER
12. 1-8' METAL DRIP EDGE
13. 1-50' ROLL OF "STICK ON" FOAM RUBBER WEATHER STRIPPING FOR SEALING DOORS.
14. 2 PAIR OF HEAVY DUTY DOOR HINGES  
1 DOOR LATCH SET AND LOCK
15. ROOF 8-2X6X12'; 144 SQ. FT. ROOFING, SHEATHING, AND PURLINS.

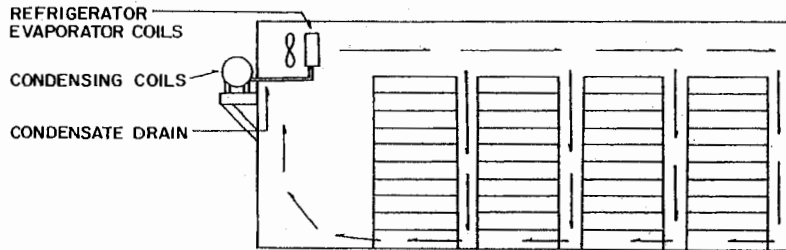


PLAN VIEW

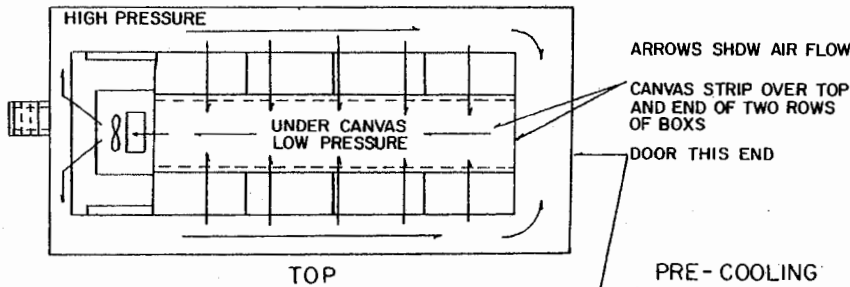
ARROWS SHOW AIRFLOW

### COLD STORAGE OPERATION

LOW AIR FLOW FROM EVAPORATOR FAN TO REDUCE DEHYDRATION OF PRODUCE



SIDE ELEVATION



TOP

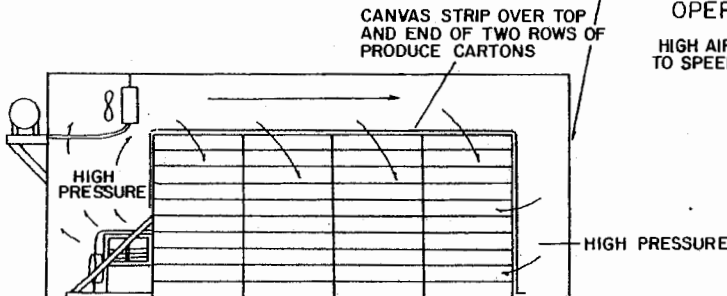
ARROWS SHDW AIR FLOW

CANVAS STRIP OVER TOP AND END OF TWO ROWS OF BOXS

DOOR THIS END

### PRE-COOLING OPERATION

HIGH AIR FLOW TO SPEED COOLING



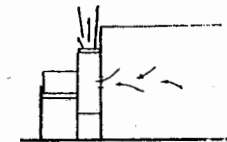
SIDE

SQUIRREL CAGE FAN AND PLATFORM (CREATES SUCTION TO FORCE AIR THROUGH CARTONS)

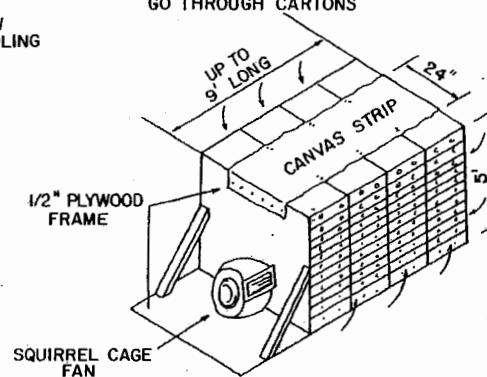
- CONTAINERS STACKED TIGHTLY TO PREVENT AIR LEAKAGE
- NARROW DIMENSION PARALLEL TO AIR FLOW
- CARTON OPENINGS SHOULD BE AT LEAST 4% OF SIDE AREA
- CANVAS STRIP FORCES AIR TO GO THROUGH CARTONS

NOTE: ADAPTED FROM PLAN DEVELOPED BY

ROBERT F. KASMIRE  
EXTENSION VEGETABLE  
MARKETING SPECIALIST  
UNIVERSITY OF CALIFORNIA  
DAVIS, CALIFORNIA



AIR FLOW THROUGH STACK AND FAN



SQUIRREL CAGE FAN



### TWO-TON PRE-COOLER

ENGINEER	BRANCH	SCALE
DRAWN BY	NICHOLS	SHEET 2 OF 2
TRACED BY	NICHOLS	DATE 1-'86 NO. 84-02

## Disclaimer

This site makes available conceptual plans that can be helpful in developing building layouts and selecting equipment for various agricultural applications. These plans do not necessarily represent the most current technology or construction codes. They are not construction plans and do not replace the need for competent design assistance in developing safe, legal and well-functioning agricultural building system. The LSU Agriculture Center, the Mid-West Plan Service, the United States Department of Agriculture and none of the cooperating land-grant universities warranty these plans.