

SECTION/SHELF DETAIL

NOTES:

1. REFRIGERATION: MANY VEGETABLES ARE BEST STORED AT 32° F. SOME AT 45° F. AND OTHERS, LIKE TOMATOES, CLOSER TO 55° F. USUALLY A COMPROMISE IS MADE - ACCEPTING SOMEWHAT SHORTER SHELF LIFE FOR A LESS COSTLY WARMER TEMPERATURE. WITH BOX TEMPERATURES BELOW 40° - 45° F. (DEPENDING ON EQUIPMENT CHOICES), DEFROSTING IS NEEDED FOR COILS. TO AVOID FREEZING OF COILS, OPERATE ABOVE THIS RANGE. CONTINUOUS OPERATION OF THE COOLING COIL BLOWER WILL REDUCE THE CHANCES OF FROST BUILD-UP AND IMPROVE AIR CIRCULATION.

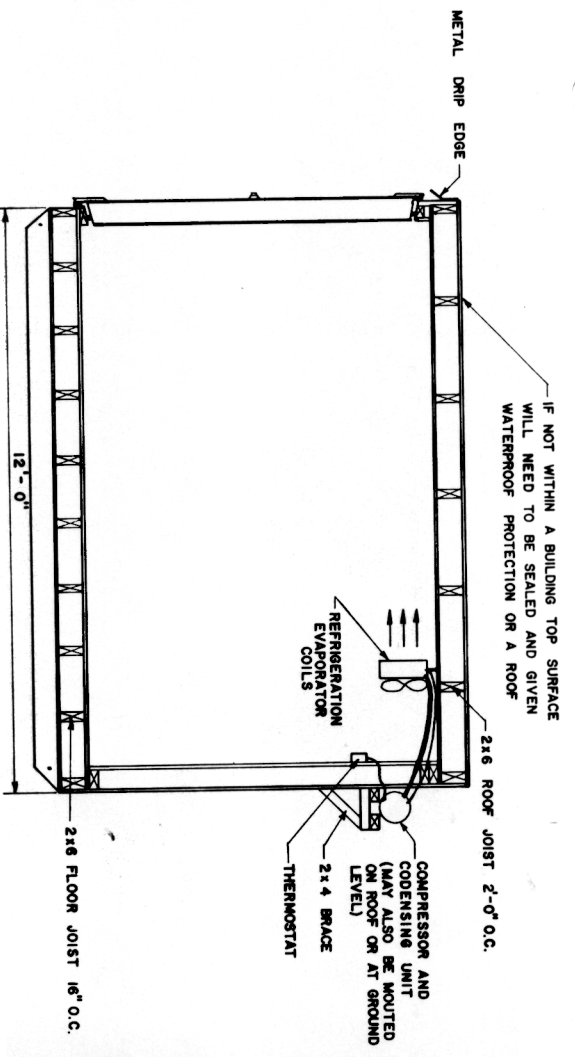
ASSUMING A TEMPERATURE DIFFERENCE OF 50° F. BETWEEN INSIDE AND OUTSIDE AIR AND USING 4000 BTU/HR FOR THE HEAT LOAD DUE TO CONDUCTION THROUGH SURFACES AND AIR EXCHANGE, A 3/4 HP UNIT (ABOUT 9000 BTU/HR) SHOULD COOL 1/4 TON IN 5 HOURS, A 1 HP UNIT SHOULD COOL 1/2 TON IN 5 HOURS. MORE VEGETABLES COULD BE COOLED WITH LESS THAN A 50° F. TEMPERATURE DIFFERENCE OR IF VEGETABLES WERE BROUGHT IN AT A TEMPERATURE LESS THAN THAT OF THE HOT PART OF THE DAY.

2. FRESH AIR: GOOD SANITATION AND MANAGEMENT REDUCES THE NEED FOR FRESH AIR. ORDINARILY THE DOOR WILL BE OPENED OFTEN ENOUGH TO SUPPLY FRESH AIR. IF NOT, A SMALL 60 CFM FAN COULD BE INSTALLED NEAR THE CEILING IN ONE END TO BLOW AIR INTO THE BOX, WITH ANOTHER SIMILARLY SIZED OPENING AT THE OTHER END TO RELEASE THE AIR. A FLAP SHOULD BE INSTALLED TO COVER BOTH OPENINGS WHEN THE FAN IS OFF. OPENINGS SHOULD BE COVERED WITH SCREEN. KNOWLEDGE OF PRODUCE NEEDS IS IMPORTANT, I.E. TOMATOES EXHIBIT ETHYLENE TO WHICH SOME OTHER PRODUCTS ARE SENSITIVE. FRESH AIR DILUTES THE ETHYLENE.

3. SHELVING: PERFORATED OR EXPANDED METAL TREATED TO PREVENT RUST WOULD INSURE BETTER AIR CIRCULATION. METAL POST AND SHELF SUPPORTS WOULD BE A FURTHER IMPROVEMENT. NOTE: 20" SHELF DEPTH MAY BE TOO NARROW FOR SOME OPERATIONS. PRESERVATIVE TREATED SHELF SUPPORTS AND SHELVING SHOULD LENGTHEN LIFE BUT BE SURE THAT THE PRESERVATIVE IS APPROVED FOR THIS USE.

4. INSULATION: TO MINIMIZE SURFACE HEAT EXCHANGE USE R-19 INSULATION WITH 2x6 STUDS, 2x4 O.C., BUT MANY OPERATORS PREFER THE EXTRA 4" OF INTERIOR WIDTH THAT 2x4 STUDS PROVIDE. NOTE: A PLASTIC STRIP CURTAIN INSIDE OF DOOR REDUCES HEAT GAIN WHEN OPENING DOOR.

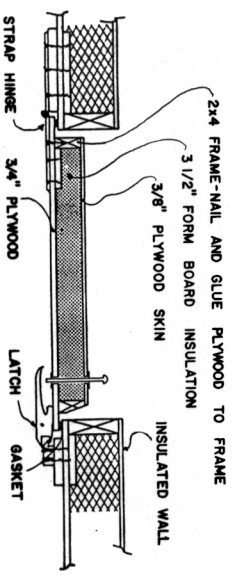
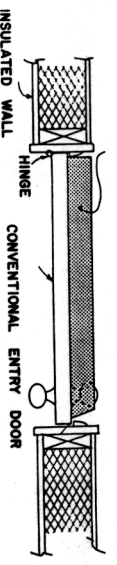
5. LAMPS SHOULD BE INSTALLED AS NEEDED BUT USED SPARINGLY TO REDUCE HEAT GAIN.



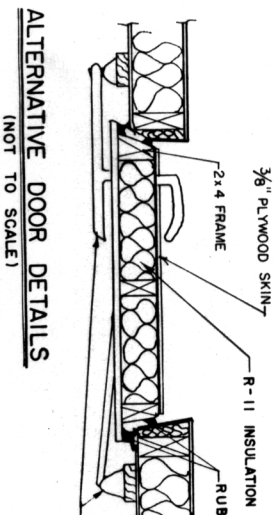
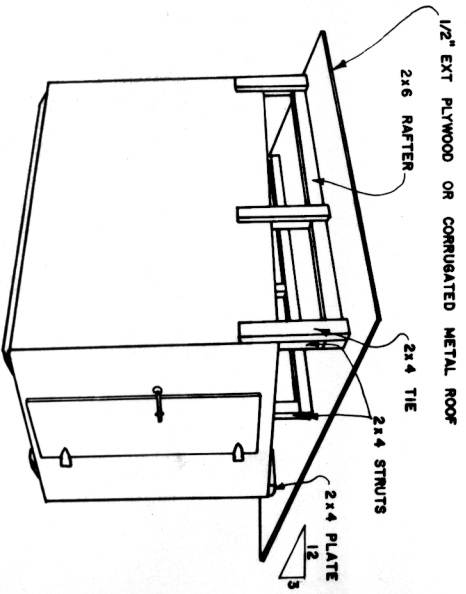
SIDE VIEW

IF NOT WITHIN A BUILDING TOP SURFACE WILL NEED TO BE SEALED AND GIVEN WATERPROOF PROTECTION OR A ROOF

2" FOAM BOARD INSULATION SECURED TO INSIDE OF DOOR



PERSPECTIVE WITH OPTIONAL SHED (NOT TO SCALE)



CHECK WITH LOCAL SUPPLIER FOR AVAILABLE HANDLE AND HINGE
 PROVIDE INSIDE LATCH RELEASE TO ASSURE SAFE OPERATION

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
COOPERATIVE EXTENSION SERVICE			
AGRICULTURE AND HOME ECONOMICS			
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FARM MARKET WALK-IN			
REFRIGERATOR			
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