

Consult with Equipment Supplier before building Milking Center

Before you build this barn consult with and get the approval of the health authorities having control of the sale of your milk.

**FLOOR PLAN**

SCALE: UNLESS OTHERWISE NOTED

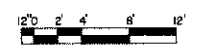
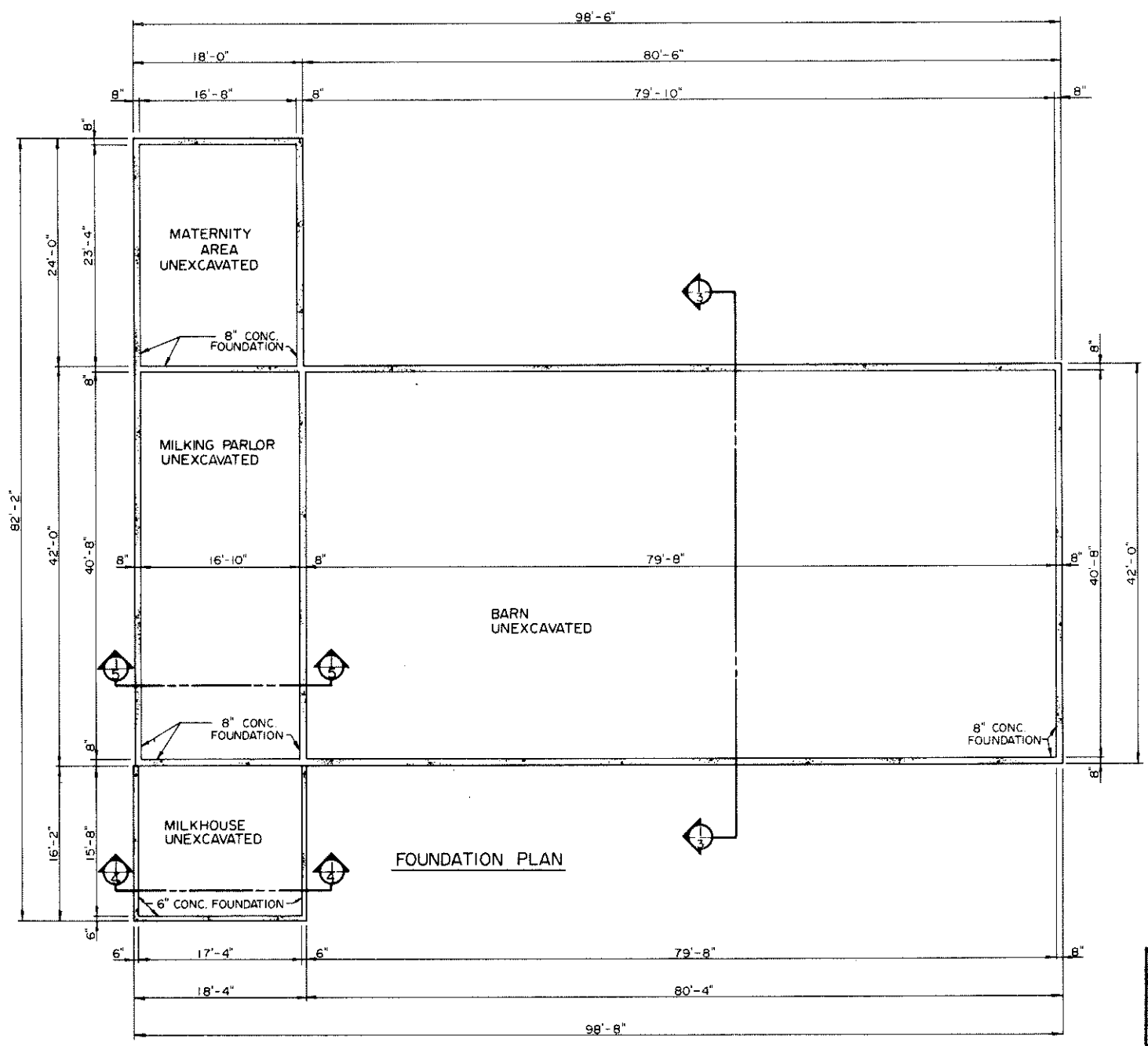
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**FREE STALL DAIRY BARN**  
40 COW

MINN. '78 6292 SHEET 1 OF 7

BASED ON: UNIV. OF MINN. PLAN



SCALE: UNLESS OTHERWISE NOTED

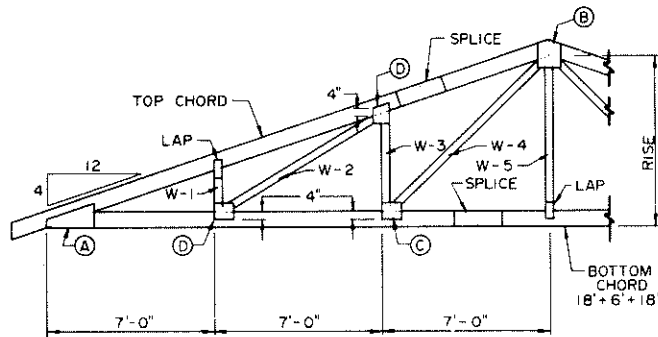
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**FREE STALL DAIRY BARN**  
40 COW

MINN. '78 6292 SHEET 2 OF 7

span, 4 - web



4/12 SLOPE

4' TRUSS SPACING

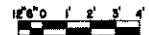
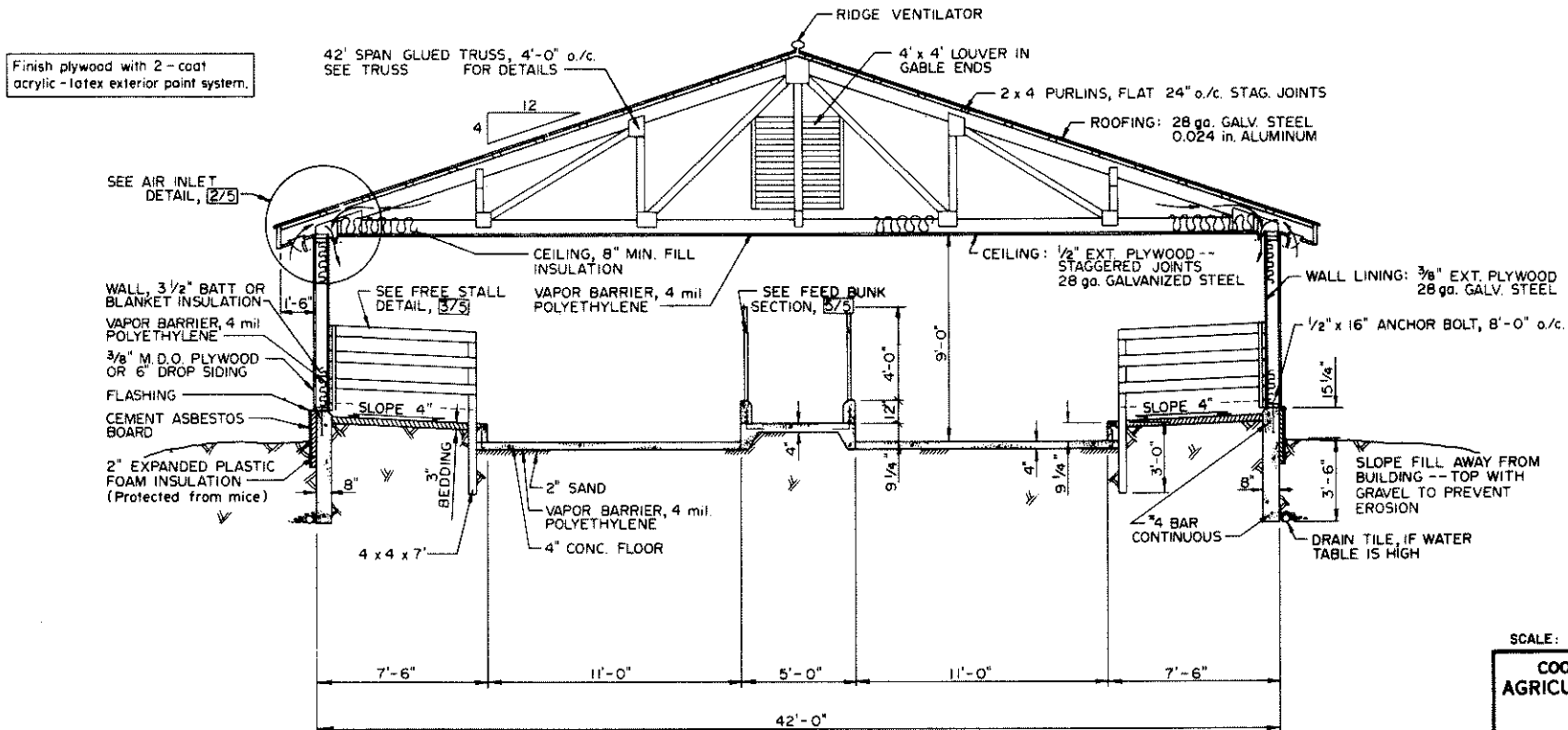
42' SPAN,  
4 - WEB

DEAD LOAD	SNOW ZONE	LUMBER TYPE	TOP CHORD	BOTTOM CHORD	GUSSET SIZES, in.				W1 AND W5 ARE 2 x 4'S	W2	W4	CRANE LOAD lbs.
					A T, H, W,	B H, W,	C H, W,	D H, W,				
MED	III	DOUG	2 x 8	2 x 6	1/2' x 4' x 24"	12' x 12"	8' x 10'	8' x 8"	2 x 4	2 x 4	2 x 4	1921

ROOF SLOPE	RISE	TOP CHORD	W1	W2	W3	W4	W5
4/12	7'-0"	18'+6"	2'	8'	5'	10'	7'

Gussets B, C, and D are 3/8" thick plywood.

GLUED TRUSSES



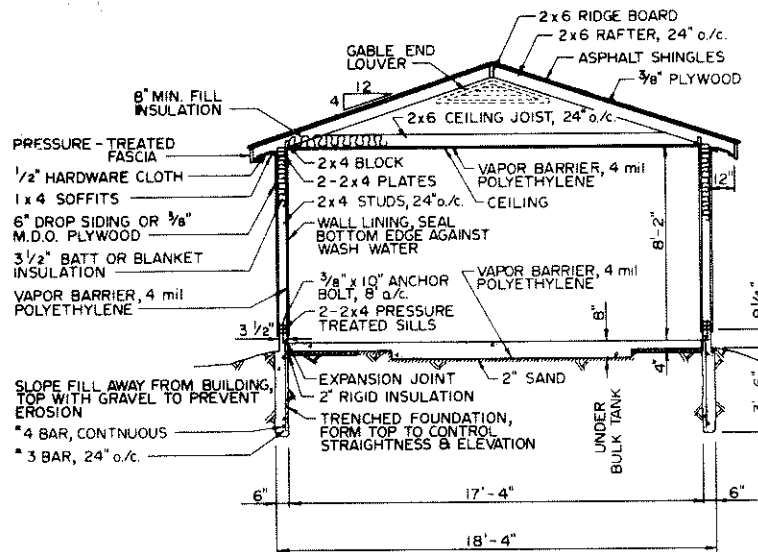
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**FREE-STALL DAIRY BARN**  
40 COW

MINN. '78 6 2 9 2 SHEET 3 OF 7

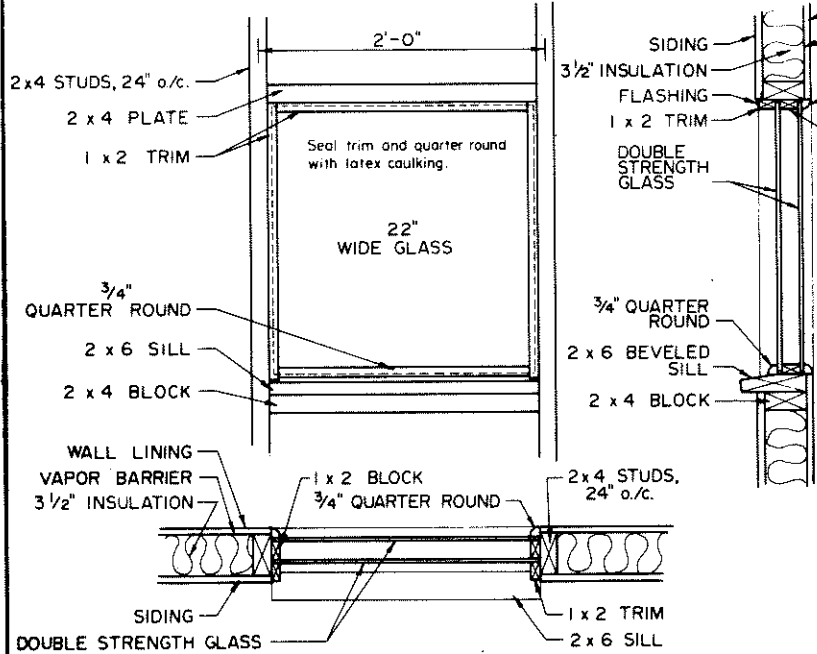
WALL SECTION 1/3



**WALL SECTION 1/4**  
SCALE -  
12' 0' 1' 2' 3' 4'

**CEILING ALTERNAT:**  
 3/8" M.D.O Plywo...  
 staggered joints, an... with 6d nails  
 Fiberglass reinforced plastic surface  
 laminated on 3/8" Ext Plywood,  
 install similar to 3/8" M.D.O. Plywood  
 0.024 in. Aluminum  
 28 ga. Galv Steel, with baked on  
 paint  
 3/8" Ext. Plywood, painted

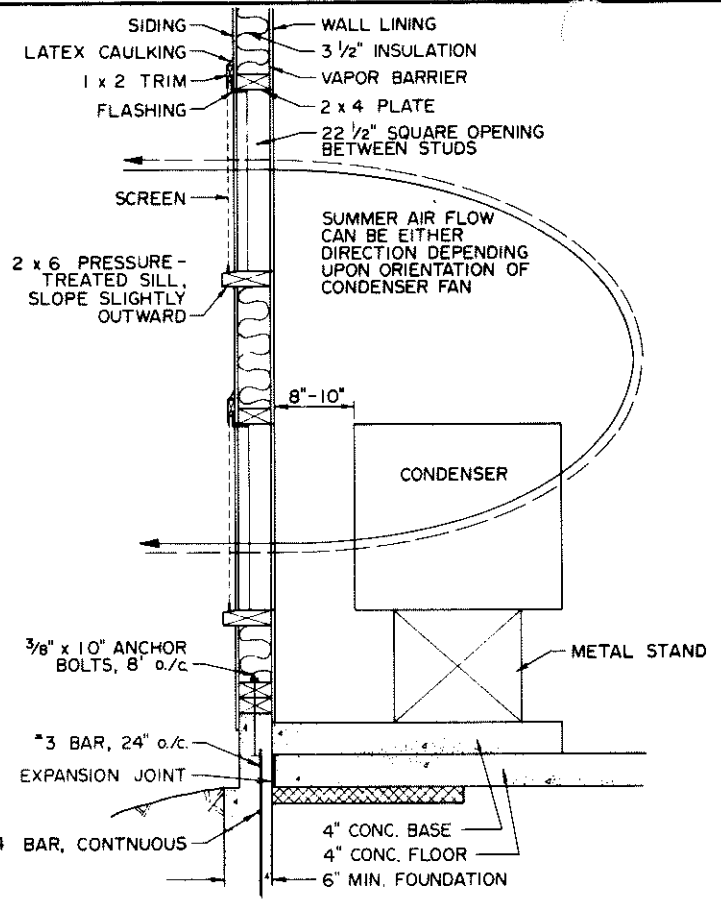
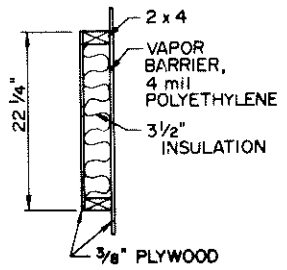
**WALL LINING ALTERNATIVES:**  
 28 ga. Galv Steel, with baked on  
 paint, over 3/8" Plywood  
 Structural Glazed Tile  
 Fiberglass Reinforced Polyester  
 Resin Board  
 Fiberglass reinforced plastic surface  
 laminated on 3/8" Ext. Plywood  
 3/8" M.D.O. Plywood, painted  
 3/8" Ext. Plywood, painted  
 USE GALV. NAILS EXCEPT WITH  
 ALUMINUM.  
 Finish M.D.O and Ext. Plywood with  
 2 coat acrylic-latex exterior  
 paint system.



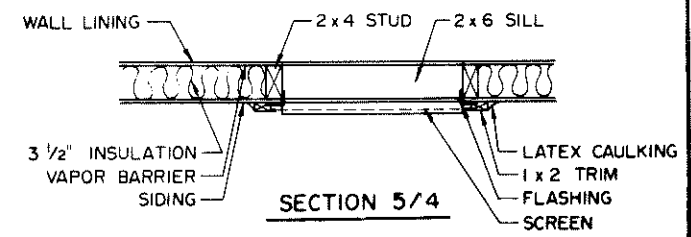
**FIXED WINDOW FRAMING 2/4**  
SCALE -  
12' 9' 6' 3' 0'

**REMOVABLE WALL PANEL 4/4**

Install in screened opening in cold weather so  
condenser heat remains in milkhouse.



**CONDENSER VENTILATION DETAIL 3/4**  
12" 9" 6" 3" 0" SCALE -

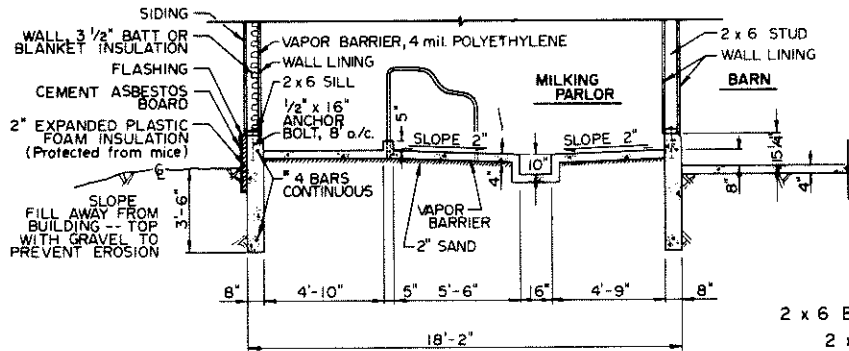


**SECTION 5/4**

FILL WITH PLYWOOD WITH 2-COAT ACRYLIC-LATEX EXTERIOR PAINT SYSTEM.

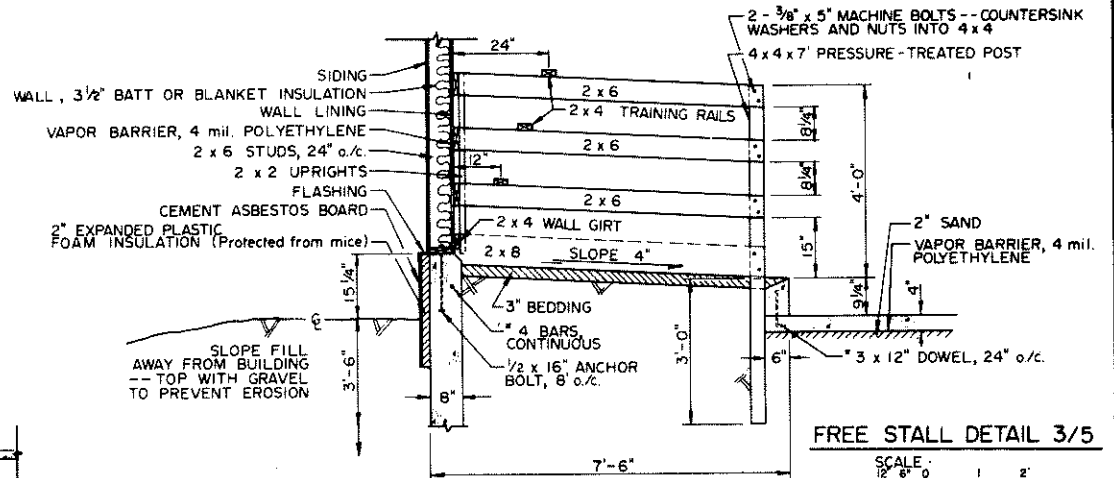
WALL LINING:  $\frac{3}{8}$ " EXT. PLYWOOD  
28 ga. GALV. STEEL

SIDING:  $\frac{3}{8}$ " M.D.O. PLYWOOD  
6" DROP SIDING



WALL SECTION 1/5

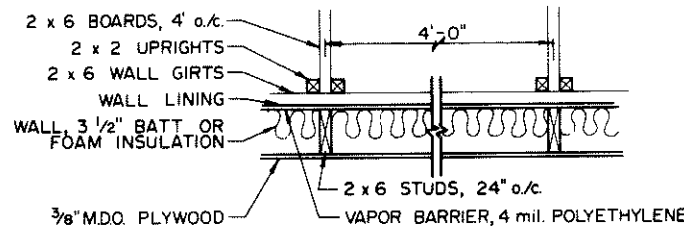
SCALE -  
12' 0" 1' 2' 3' 4'



FREE STALL DETAIL 3/5

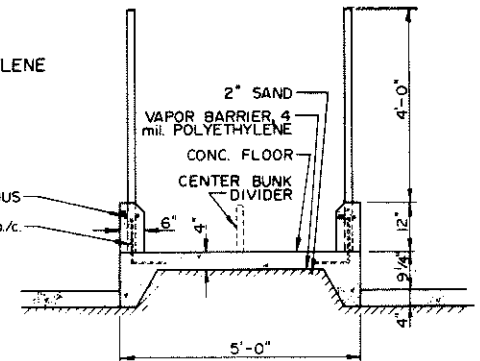
SCALE -  
2'

INSTALL 2x4 TRAINING RAILS IF COWS TURN AROUND IN STALLS OR DEPOSIT MANURE AT BACK OF STALL - 3 RAILS WILL FORCE THE COW TO MOVE BACK AS IT GETS UP SO ITS SHOULDERS CAN'T GET CAUGHT UNDER THE TOP RAILS. INSTALL 2x8 BOTTOM STALL PARTITION BOARD TO PREVENT COWS FROM DIGGING HOLES IN EARTH STALL BOTTOMS.



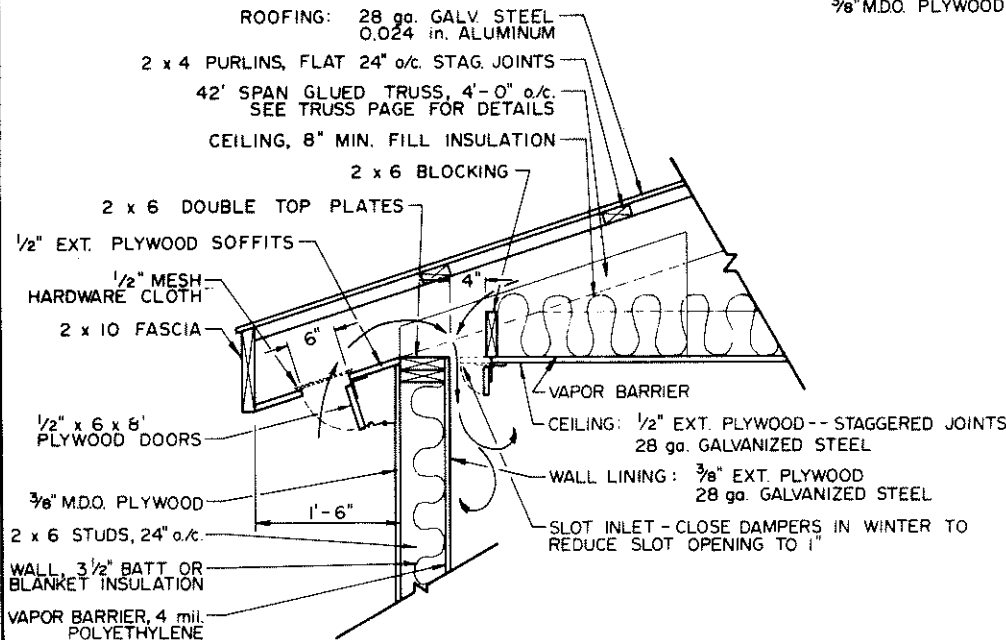
WALL CONNECTION 4/5

SCALE -  
12' 6" 3' 0"



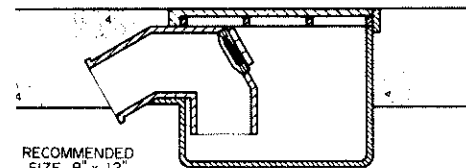
FEEDBUNK CROSS SECTION 5/5

Install center bunk divider if herd is divided and fed different rations.



AIR INLET DETAIL 2/5

SCALE -  
12' 9' 6" 3' 0"



RECOMMENDED SIZE 8' x 12'

DRAIN TO SUITABLE DISPOSAL  
DEEP SEAL FLOOR DRAIN 6/5

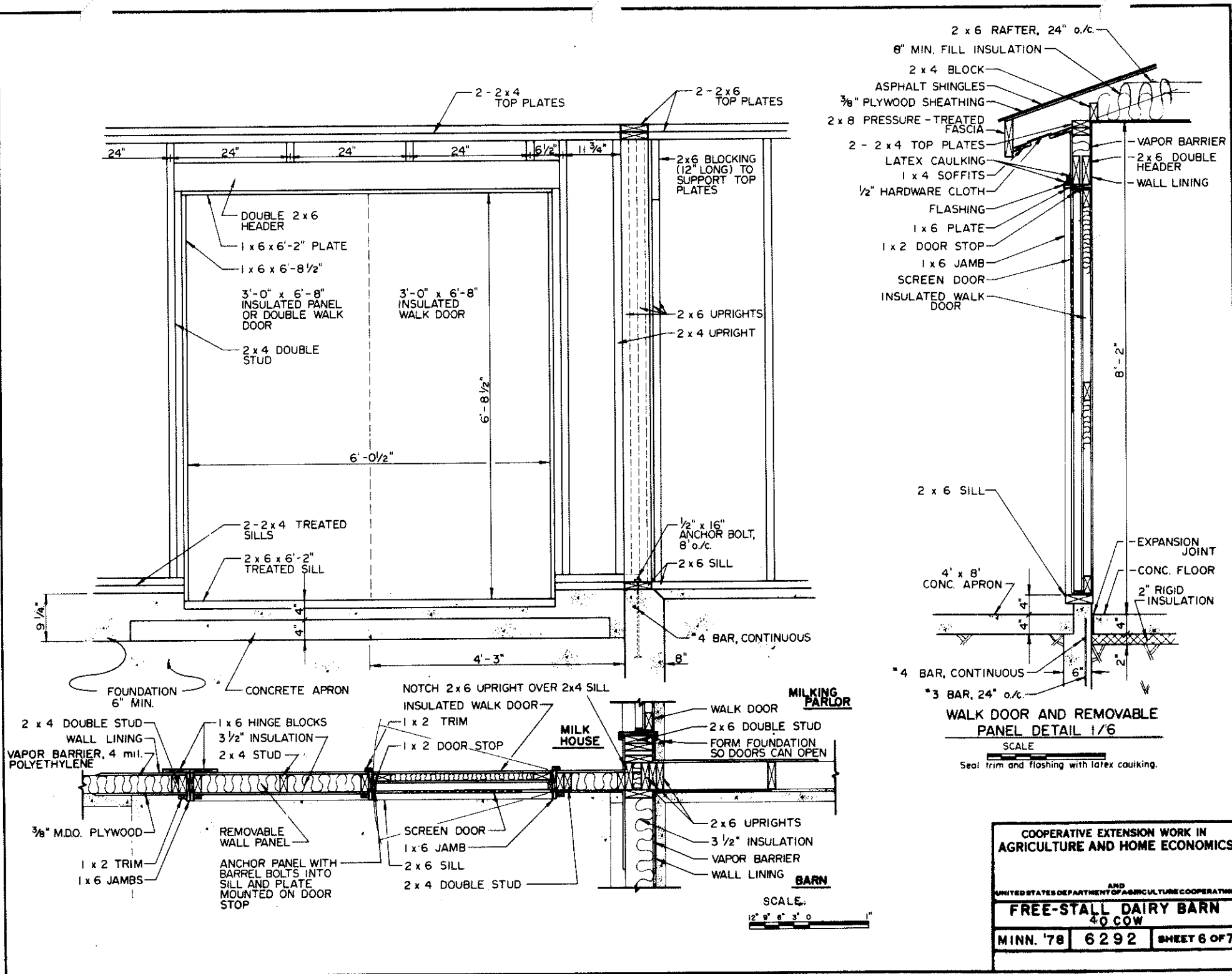
SCALE  
6' 5' 4' 3' 2' 1' 0"

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- 2 x 6 RAFTER, 24" o.c.
- 8" MIN. FILL INSULATION
- 2 x 4 BLOCK
- ASPHALT SHINGLES
- 3/8" PLYWOOD SHEATHING
- 2 x 8 PRESSURE-TREATED FASCIA
- 2 - 2 x 4 TOP PLATES
- LATEX CAULKING
- 1 x 4 SOFFITS
- 1/2" HARDWARE CLOTH
- FLASHING
- 1 x 6 PLATE
- 1 x 2 DOOR STOP
- 1 x 6 JAMB
- SCREEN DOOR
- INSULATED WALK DOOR
- VAPOR BARRIER
- 2 x 6 DOUBLE HEADER
- WALL LINING

- 2 x 6 SILL
- 4' x 8' CONC. APRON
- 2" RIGID INSULATION
- EXPANSION JOINT
- CONC. FLOOR
- 4 BAR, CONTINUOUS
- 3 BAR, 24" o.c.

**WALK DOOR AND REMOVABLE PANEL DETAIL 1/6**

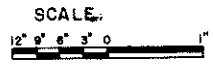
SCALE  
Seal trim and flashing with latex caulking.

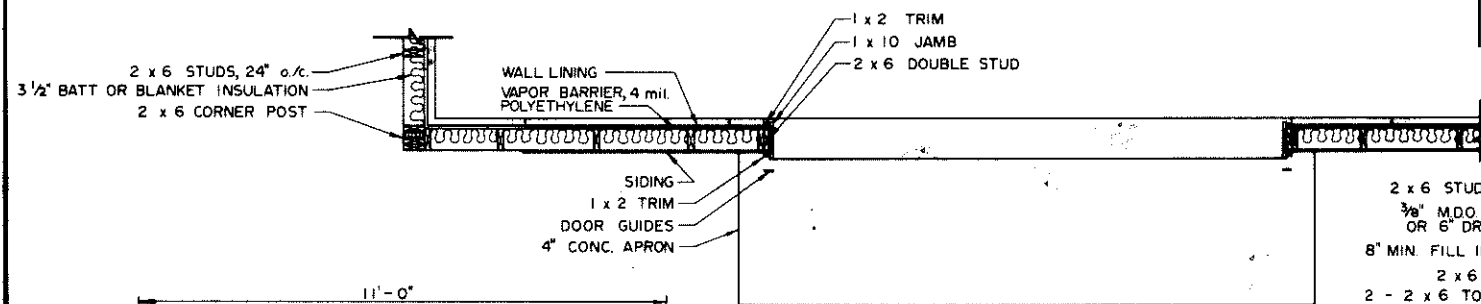
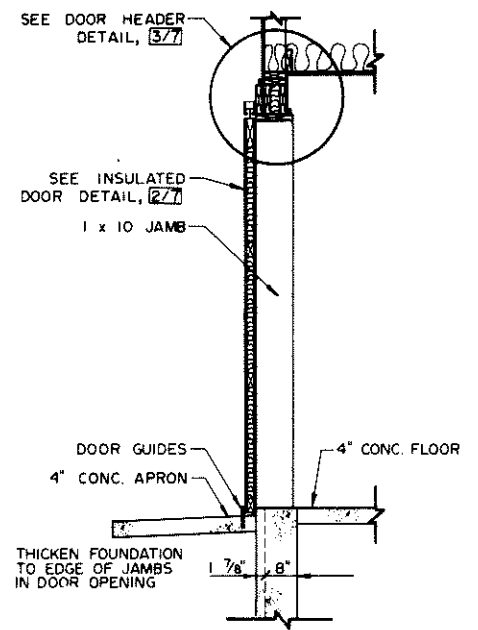
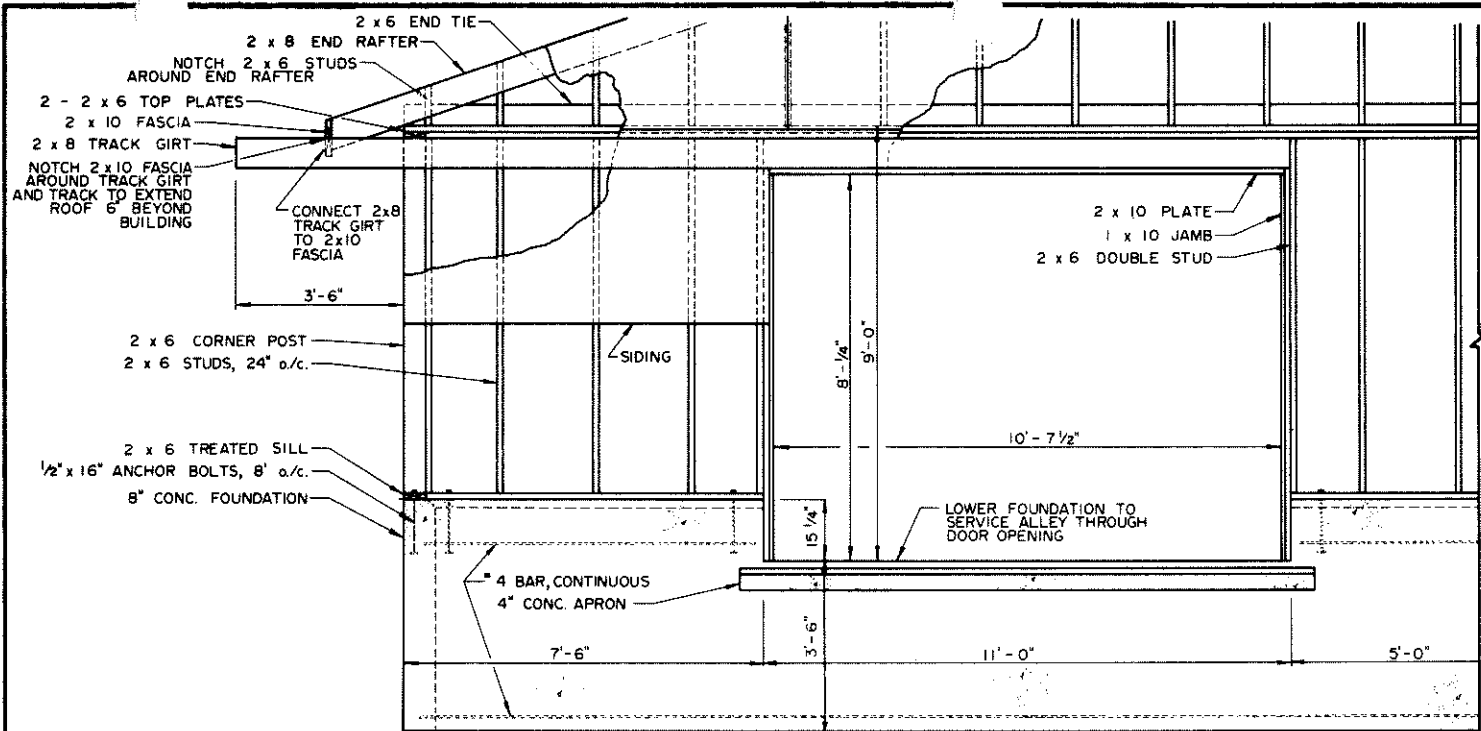
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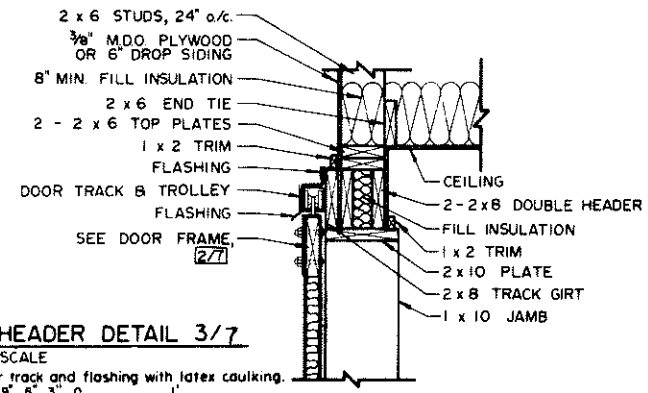
MINN. '78 6292 SHEET 6 OF 7





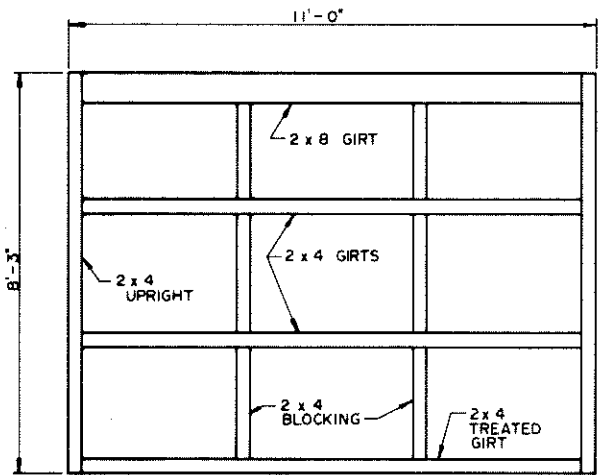
**SLIDING DOOR FRAMING 1/7**

Seal trim, door track and flashing with latex caulking.



**DOOR HEADER DETAIL 3/7**

Seal trim, door track and flashing with latex caulking.  
SCALE - 12" 8" 6" 3" 0"



**SLIDING DOOR FRAME 2/7**

SCALE - 12" 8" 0" 1' 2'

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