

MWPS-72357

Warm Dairy Barn

80 Free Stalls

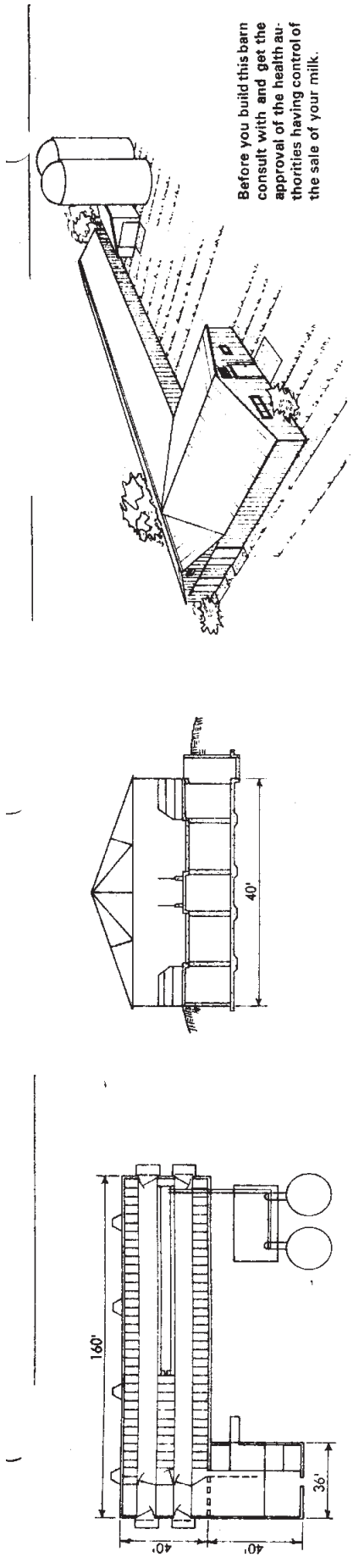
CAUTION!

Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access. **Furthermore, any deviation from the given specifications may result in structural failure, property damage, and personal injury including loss of life.**

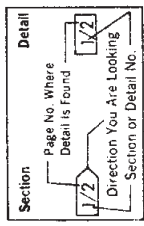
WARRANTY DISCLAIMER

This plan provides conceptual information only. **Neither midwest plan service nor any of the cooperating land-grant universities, or their respective agents or employees, have made, and do not hereby make, any representation, warranty or covenant with respect to the specifications in this plan.** Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access.

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Warm Dairy Barn-80 Free Stalls
Title Page
MIDWEST PLAN NO. 72357



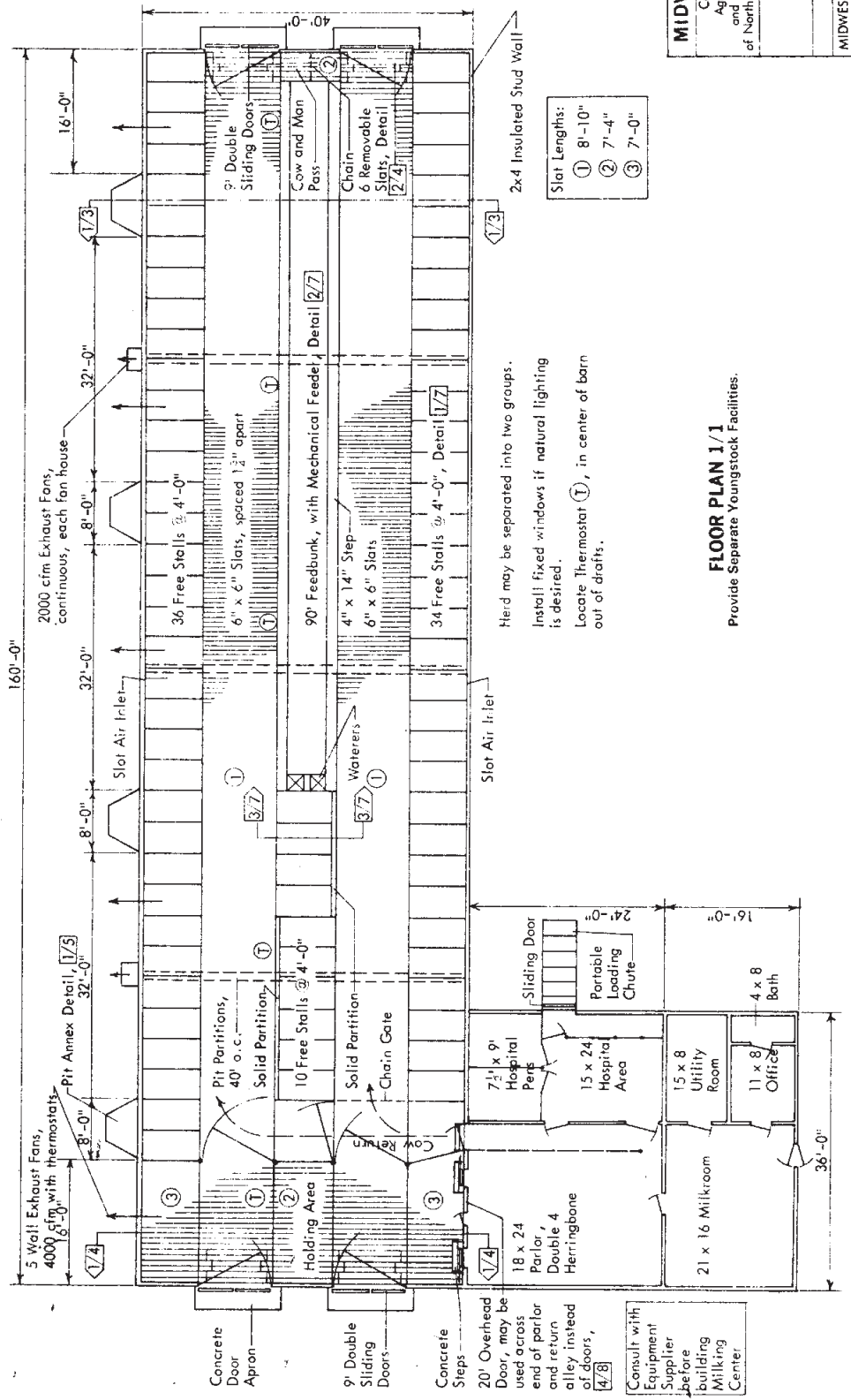
Before you build this barn consult with and get the approval of the health authorities having control of the sale of your milk.



Section & Detail Indicator

TABLE OF CONTENTS

Description	Page
Floor Plan	1
Longitudinal Pit Section	2
Wall Connection Detail	2
Beam and Partition Wall Connection	2
Partition Wall Detail	2
Column Footing Detail	2
Cross Section Thru Free Stalls Area	3
Cross Section Thru Holding Area	4
Slat Details	4
Beam Section	4
Annex Details	5
Pit Fan Housing Details	5
Fan Opening Framing	6
Fixed Window Framing	6
Air Inlet Detail	6
Free Stall and Cow Platform Details	7
Feedbunk Detail	7
Sliding Door Details	8
Truss Details	Truss Page



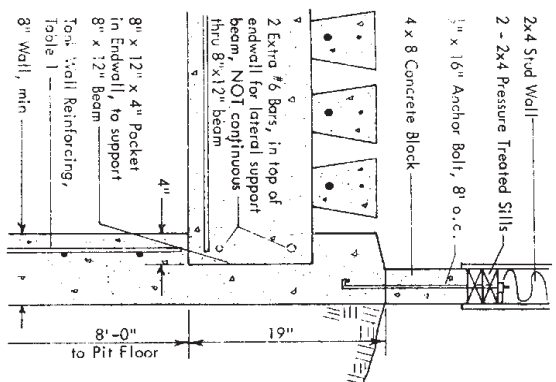
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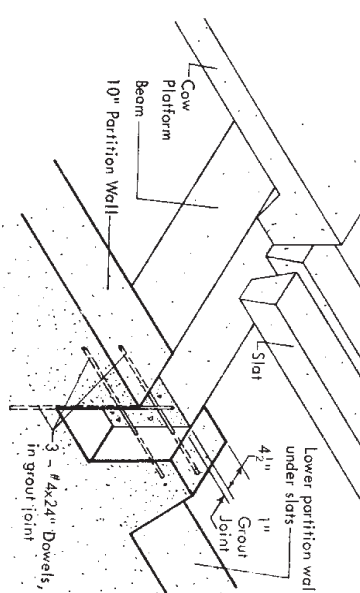
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 Page 1 of 8 Pages
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FLOOR PLAN 1/1
 Provide Separate Youngstock Facilities.

Consult with Equipment Supplier before building Milking Center.



WALL CONNECTION DETAIL 2/2



BEAM AND PARTITION WALL CONNECTION 3/2

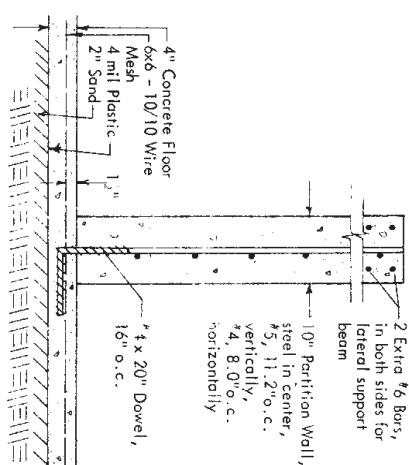
CONCRETE compressive strength = 3500 psi

Table 1. Manure Tank Wall Reinforcing.

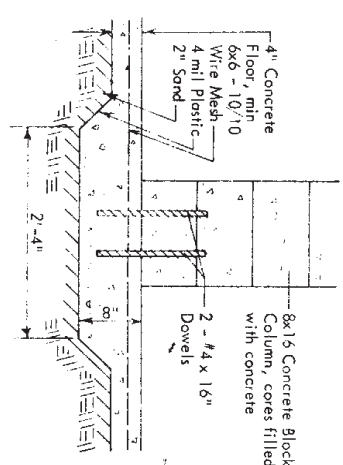
Grade 36 (36,000 psi) Reinforcing Bars (bar size, spacing)	Vertical Steel	Grade 60 (60,000 psi) Welded Wire Fabric (area of steel per ft. of wall)
30 psi moderately drained soil #3, 9'2"	60 psi poorly drained soil #5, 9'7"	30 psi moderately drained soil 0.1156
8" #3, 9'2"	60 psi poorly drained soil #3, 7'3"	60 psi poorly drained soil 0.2350
10" #3, 7'3"	60 psi poorly drained soil #4, 8'3"	60 psi poorly drained soil 0.1765

Wall Thickness	Reinforcing Bars	Grade 60 (60,000 psi) Welded Wire Fabric
8"	#4, 10'0"	0.1920
10"	#4, 8'0"	0.2400

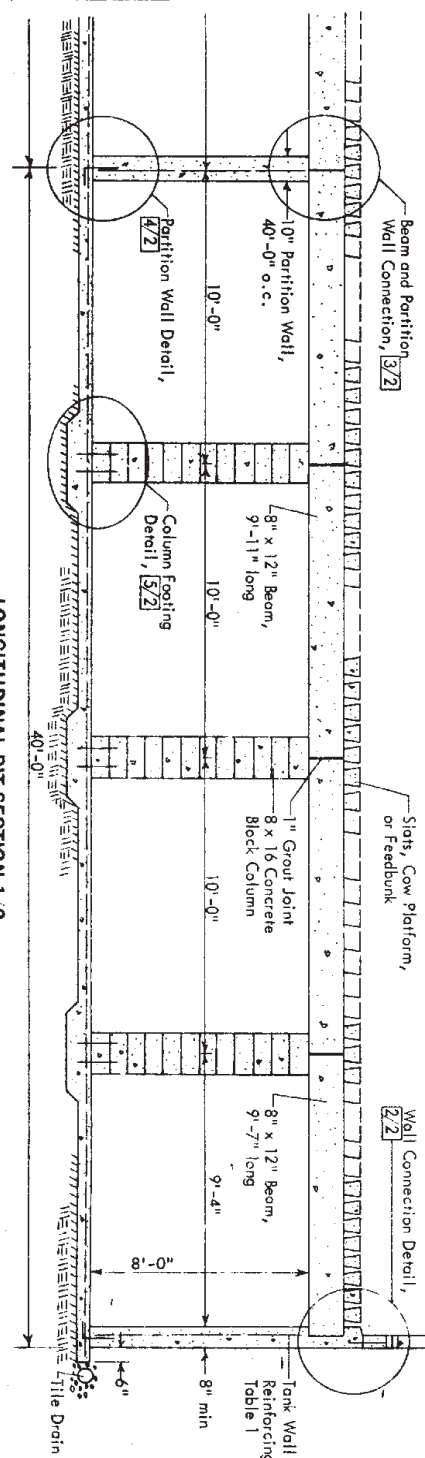
NOTE: Flat sheets of welded wire fabric should be used, not rods. Two layers may be used to provide required steel area. Reinforcing bars (Grade 60, #3, #4, or #5 sl) may be attached to welded fabric to increase steel area.



PARTITION WALL DETAIL 4/2



FOOTING DETAIL 5/2



LONGITUDINAL PIT SECTION 1/2

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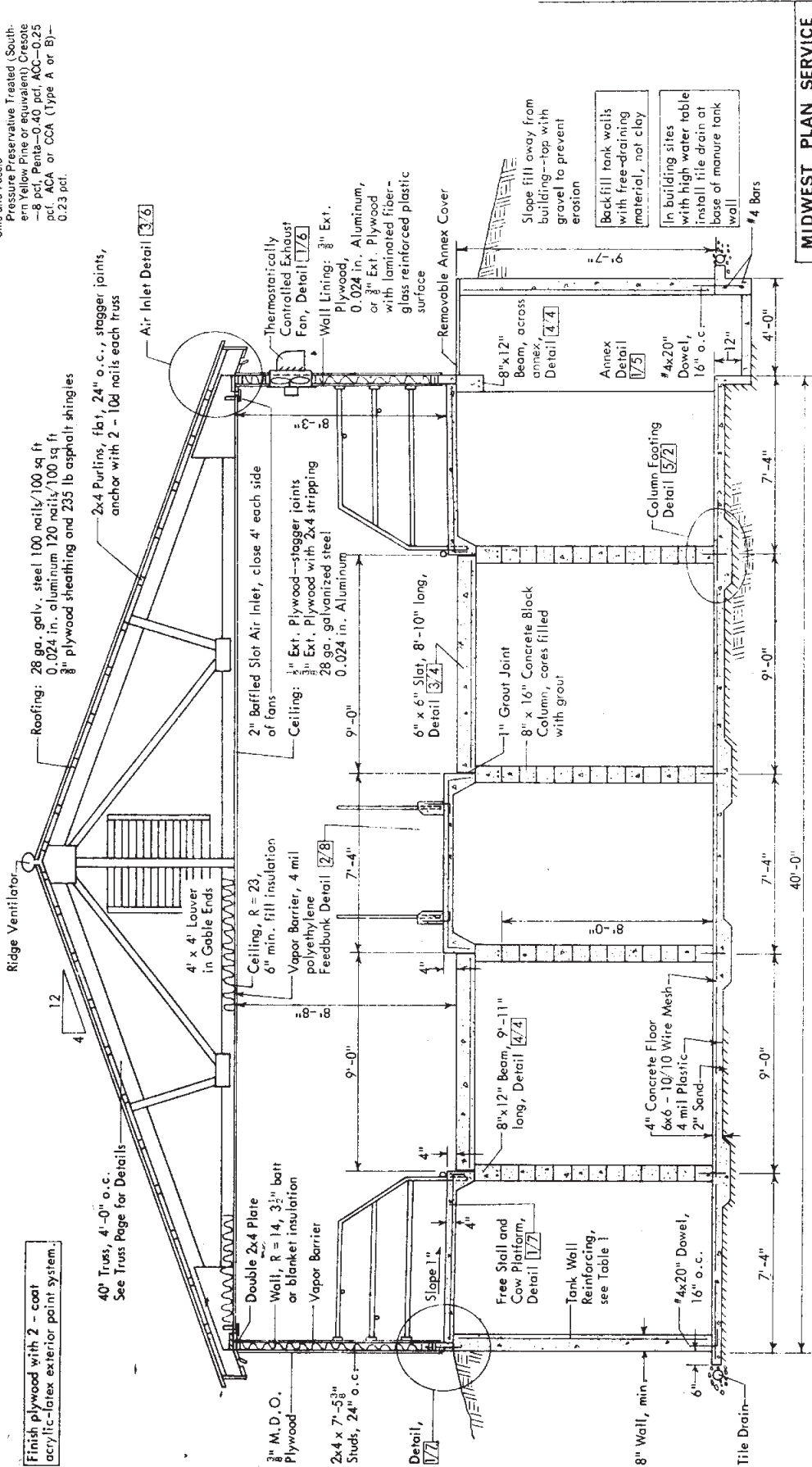
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WARM DAIRY BARN
80 Free Stalls

Page 2 of 8 Pages
MIDWEST PLAN NO. 72387

LUMBER SPECIFICATIONS

Ridge Purlins and Studs
Construction Grade, Doug Fir, Southern Yellow Pine or Hemlock
Trusses
See Truss Page
Plywood Sheathing—3/8" c.c Ext (1" Identical Index = 20.0)
Siding and Wall Lining and Ceiling—3/8" or 1/2" c.c Ext with Medium Density Overlay
Sill and Fascia
Pressure Preservative Treated (South End) Red Pine or Loblolly Shortleaf Pine
8 mil. Polyethylene
40' Truss—40' A.C.C.—0.25
2x4 Studs—CCA or CCA (Type A or B)—0.23 pct.



Finish plywood with 2-coat acrylic-latex exterior paint system.

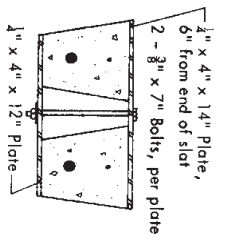
40' Truss, 4'-0" o.c.
See Truss Page for Details

CROSS SECTION THRU FREE STALLS 1/3

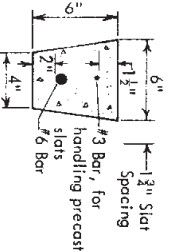
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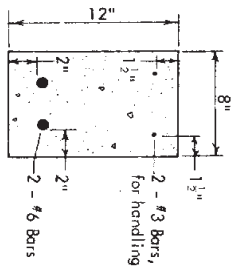
MIDWEST PLAN NO. 72357
Page 3 of 8 Pages
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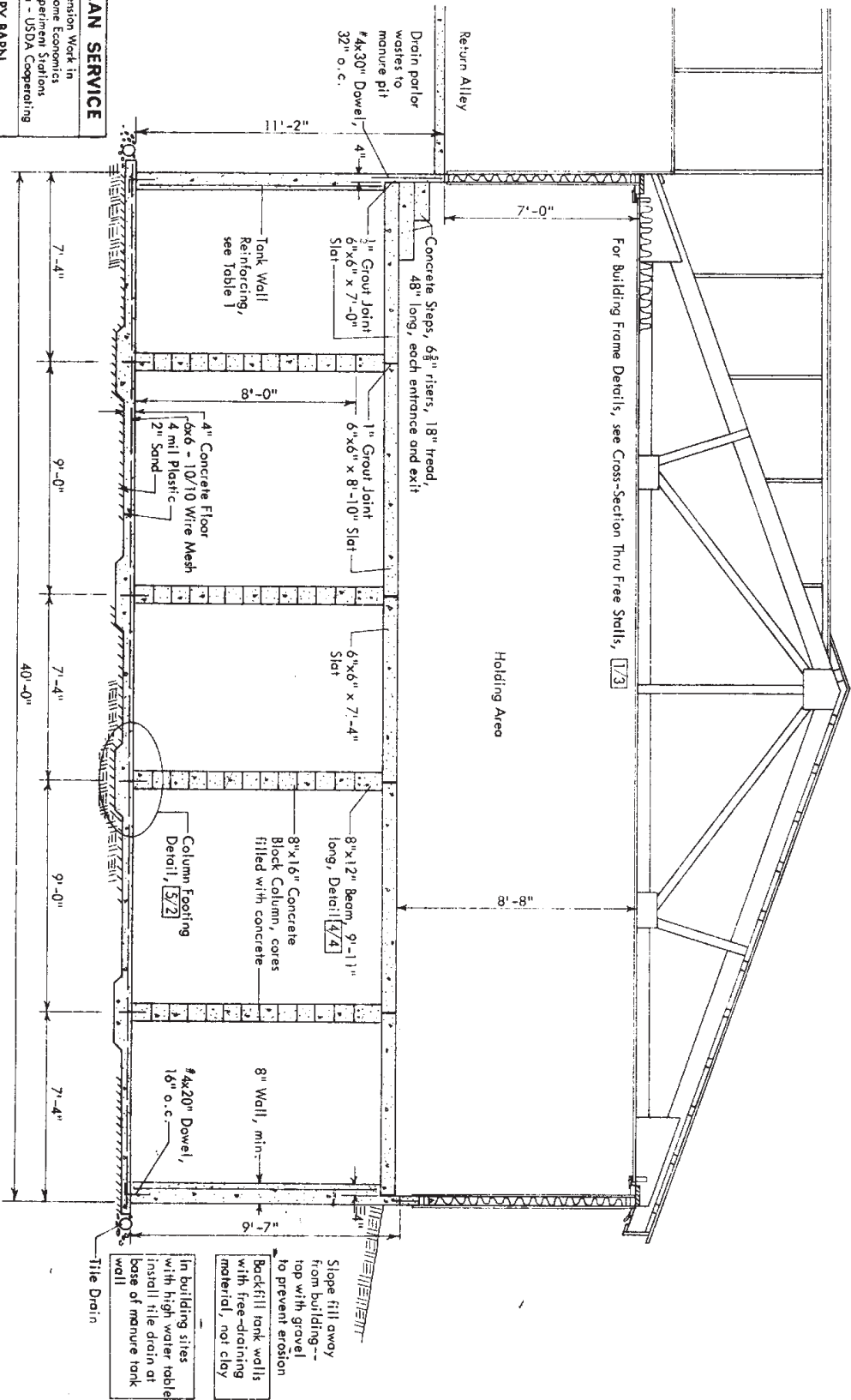
REMOVABLE SLAT DETAIL 2/4



SLAT SECTION 3/4



BEAM SECTION 4/4



CROSS-SECTION THRU HOLDING AREA 1/4

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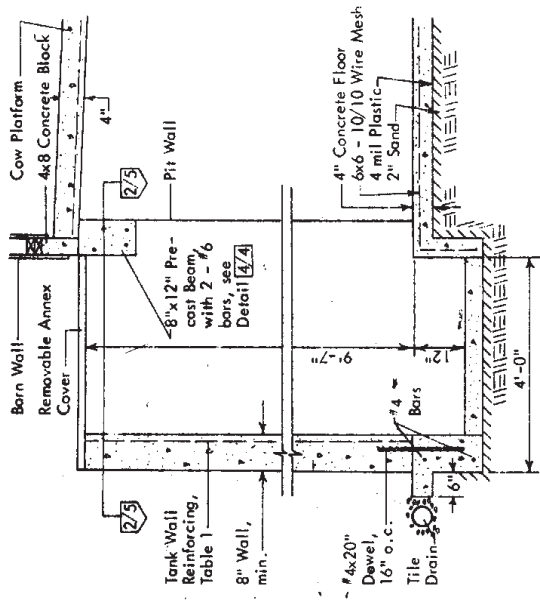
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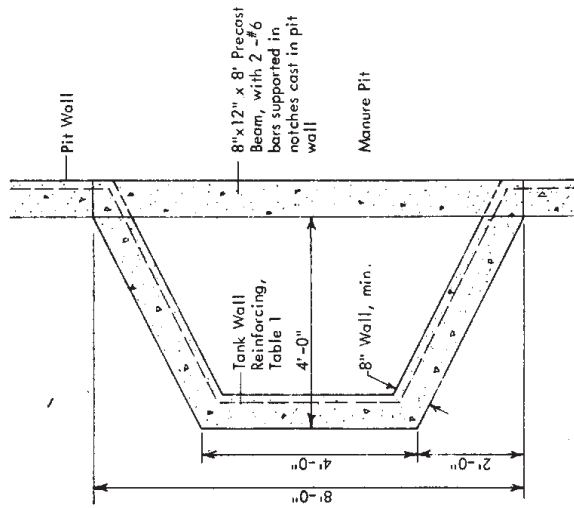
Page 4 of 8 Pages

MIDWEST PLAN NO. 72357

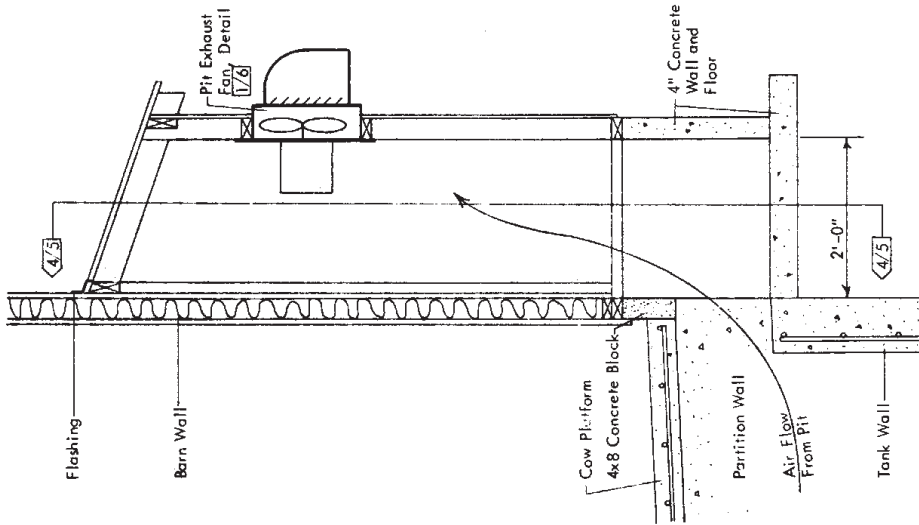
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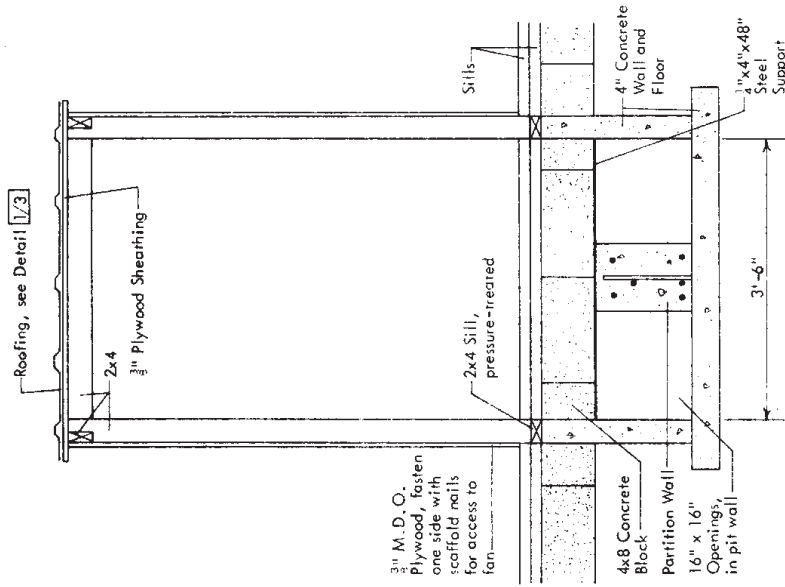
ANNEX DETAIL 1/5



ANNEX SECTION 2/5

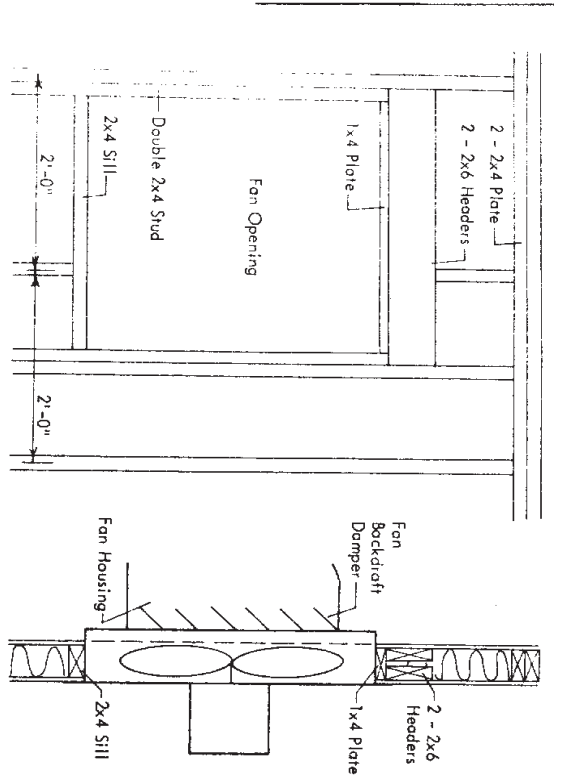


PIT EXHAUST FAN HOUSING 3/5

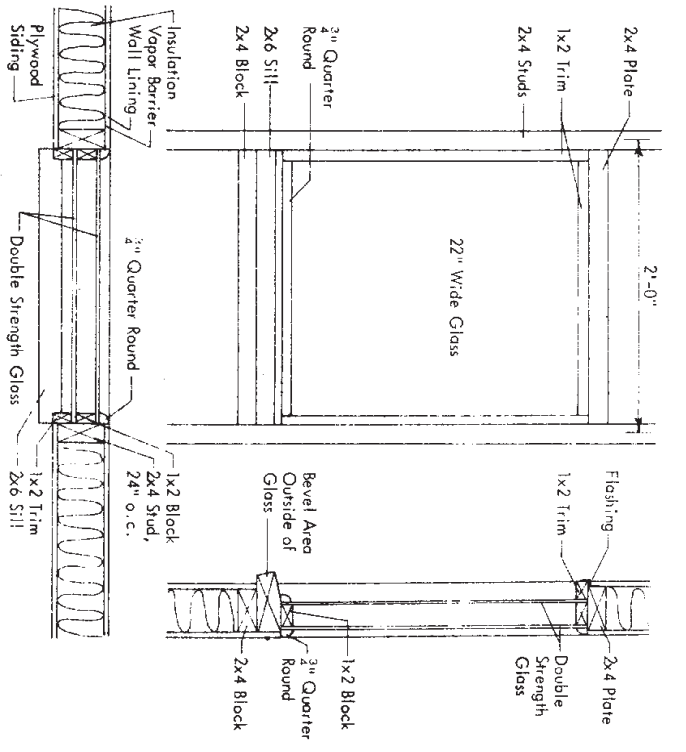


FAN HOUSING SECTION 4/5

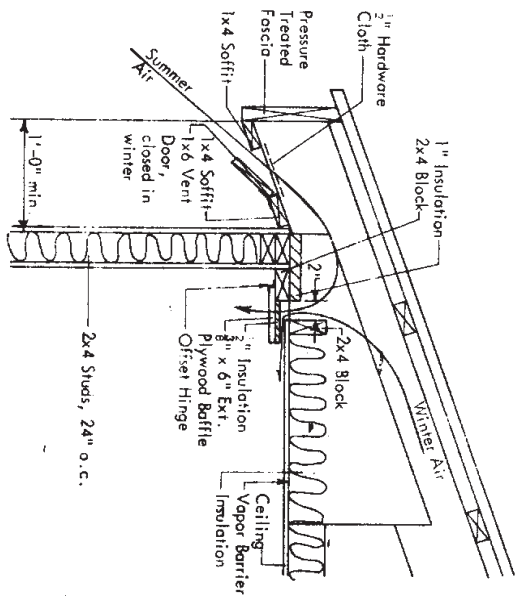
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WARM DAIRY BARN 80 Free Stalls
MIDWEST PLAN NO. 72357
Page 5 of 8 Pages
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FAN OPENING FRAMING 1/6
 Seal fan housing with latex caulking.

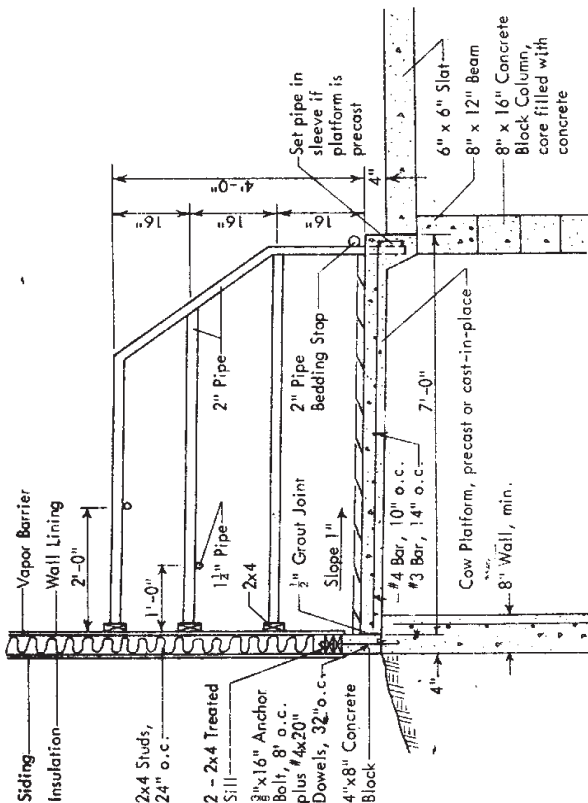


FIXED WINDOW FRAMING 2/6
 Seal trim and quarter round with latex caulking.



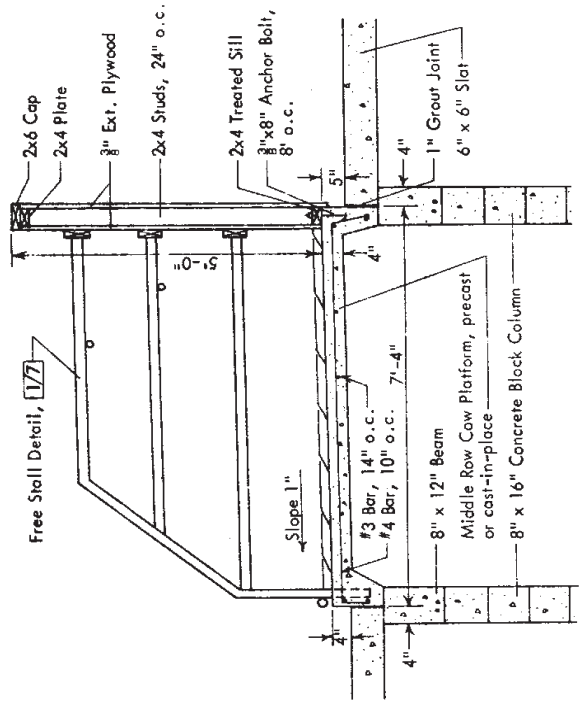
AIR INLET DETAIL 3/6

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WARM DAIRY BARN 80 Free Stalls
Page 6 of 8 Pages
MIDWEST PLAN NO. 72357

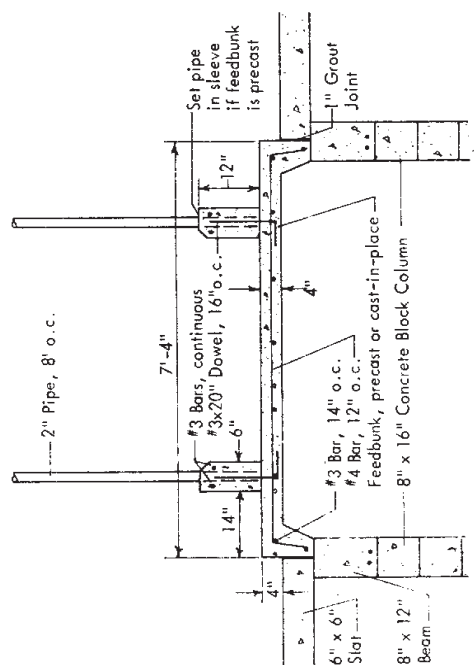


FREE STALL AND COW PLATFORM 1/7

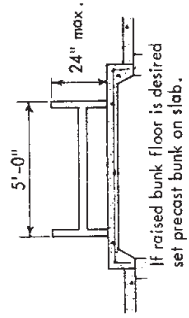
Install 1 1/2" pipe training rails if cows turn around in stalls or deposit manure at back of stall. 2 rails will force cow to move back as it gets up so its shoulders can't get caught under the rails.



MIDDLE ROW COW PLATFORM 3/7



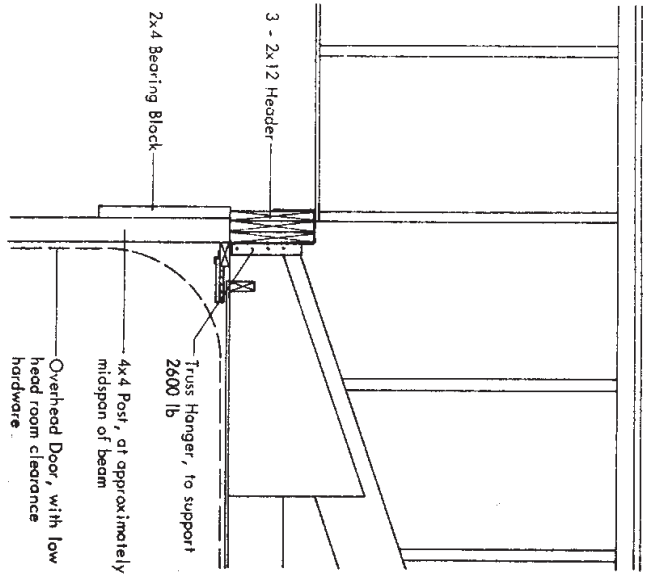
FEEDBUNK DETAIL 2/7



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WARM DAIRY BARN 80 Free Stalls
Page 7 of 8 Pages
MIDWEST PLAN NO. 72357

ESTIMATING LIST

Quantity	Description	Unit	Quantity	Description	Unit
85	Manure Tanks		41	Building	
1400	Concrete, cubic yards		3200	Trusses, 40'	
130	Welded wire fabric, lbs		800	Studs, plates + blocks	
9100	Concrete, cubic yards		3600	Sills (pressure preservative treated)	
580	Columns		3500	2x4's, ft	
450	Bearings		3000	2x4's, ft	
2050	Steel Grade 36 Ibs		6400	Insulation	
490	Steel, 60' x 6' x 1/8 bars		6400	Wall Lining, sq ft	
36	7' 0" long		4	Ceiling, sq ft	
60	7' 0" long		80	Sliding Doors	
320	Cow platform, ft		4	Tree Stalls	
90	Feedbunk, ft		7	Fans	
			90	Mechanical Feeder, ft	

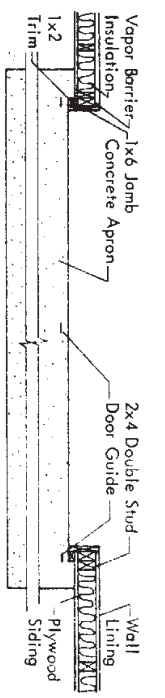
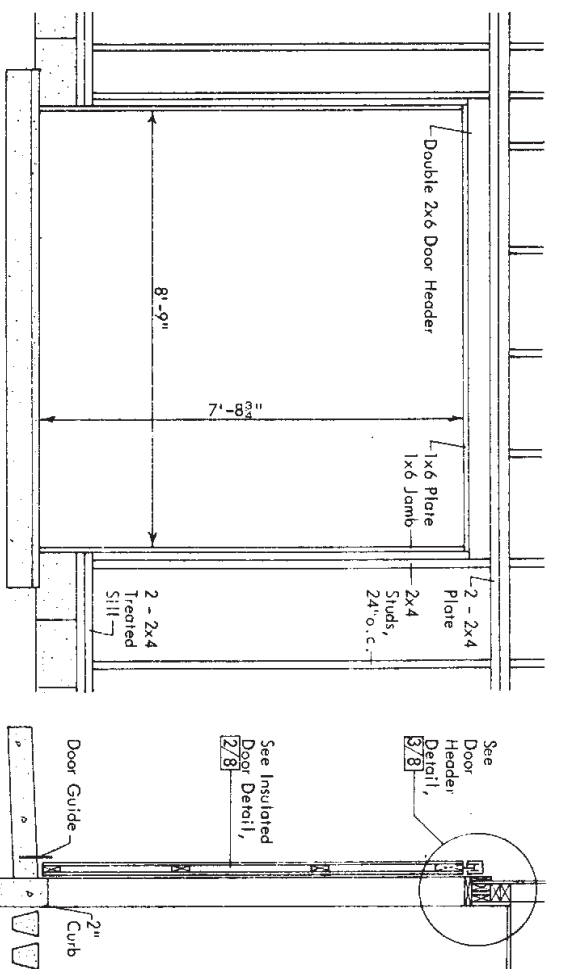


HEADER FOR OVERHEAD DOOR 4/8

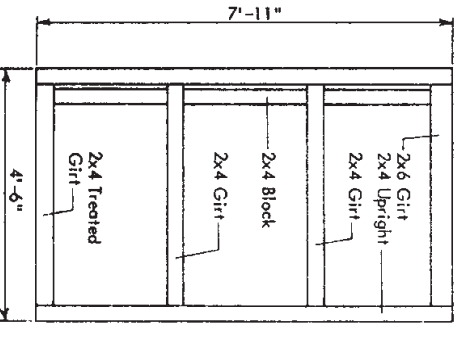
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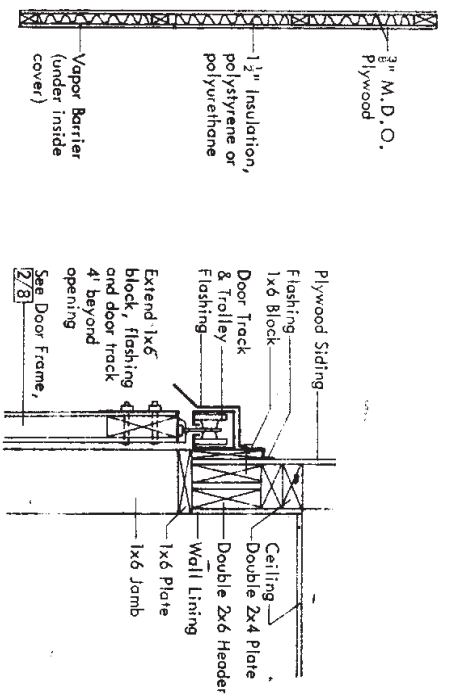
WARM DAIRY BARN
80 Free Stalls
Page 8 of 8 Pages
MIDWEST PLAN NO. 72357



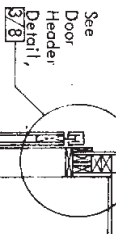
SLIDING DOOR FRAMING 1/8
Seal trim, door track and flashing with latex caulking.



Cover both sides with 2 1/2 sheets of 3/8" M.D.O. Plywood.
SLIDING DOOR FRAME 2/8



SLIDING DOOR HEADER DETAIL 3/8
Seal door track and flashing with latex caulking.



See Insulated Door Detail, 2/8