

MWPS-72058

50' Pole Utility Building

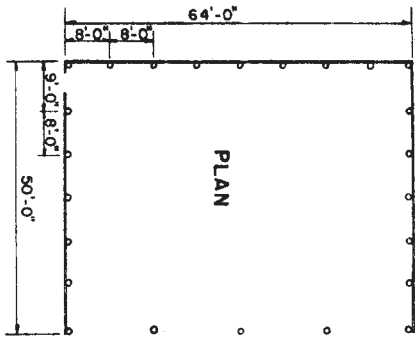
CAUTION!

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.**

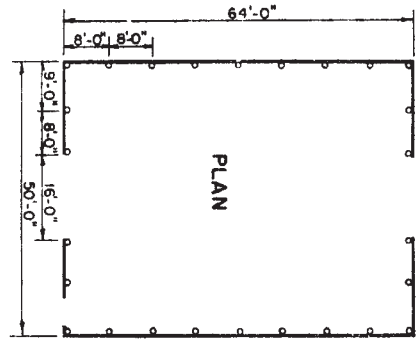
WARRANTY DISCLAIMER

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.

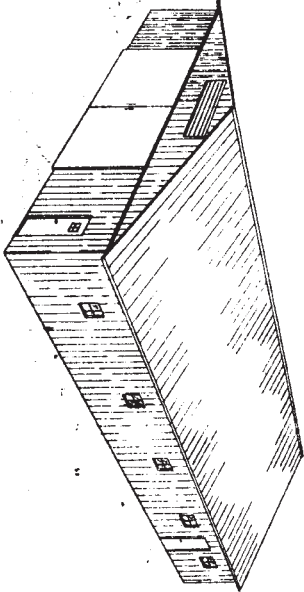
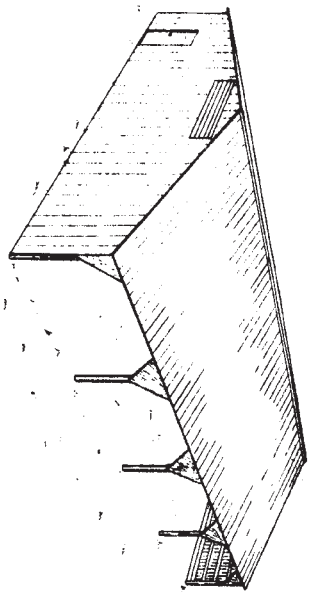
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
50' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72058



WITH ONE SIDE OPEN, THE BUILDING CAN BE USED FOR:
Beef housing and/or feeding.
Dairy resting barn.
Machinery housing.

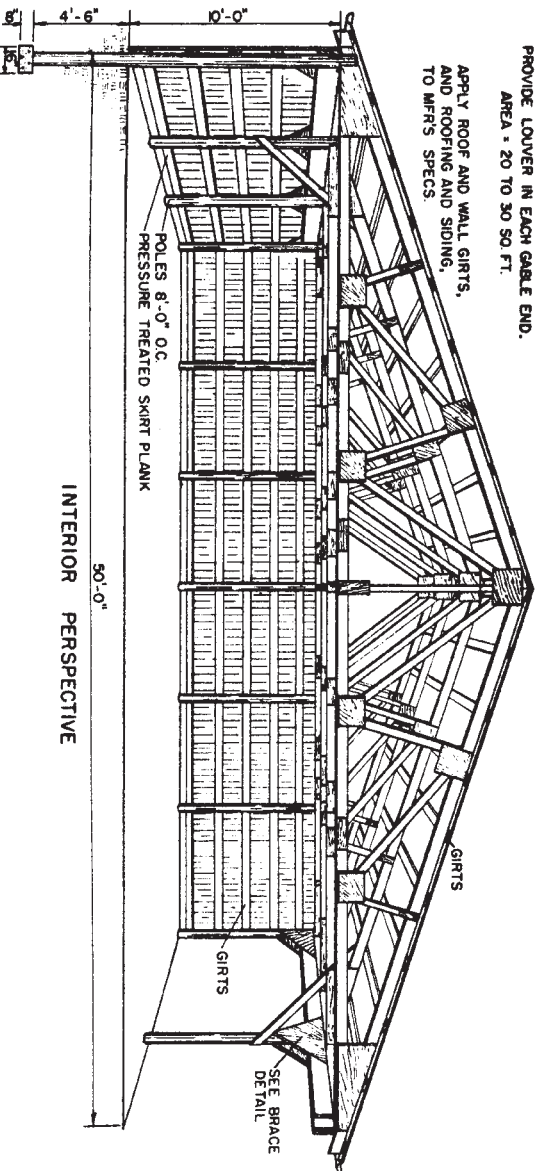


WITH ALL SIDES CLOSED, AND SUITABLE DOORS, THE BUILDING CAN BE USED FOR:
Drive-through machinery housing.
Rural warehousing.



PROVIDE LOUVER IN EACH GABLE END.
AREA = 20 TO 30 SQ. FT.
APPLY ROOF AND WALL GIRTS,
AND ROOFING AND SIDING,
TO MFR'S SPECS.

INTERIOR PERSPECTIVE



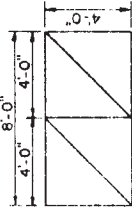
VENTILATION:
Provide louvers in each end for minimum ventilation. For animal housing in the open shed leave backwall eave open. Drop down doors improve summer ventilation.
Walls can be 12' high for machine shed. Provide pressure-treated skirt boards inside poles for cattle housing (usually 3' to 4' high).

SHEET 4: 50' SPAN TRUSSES

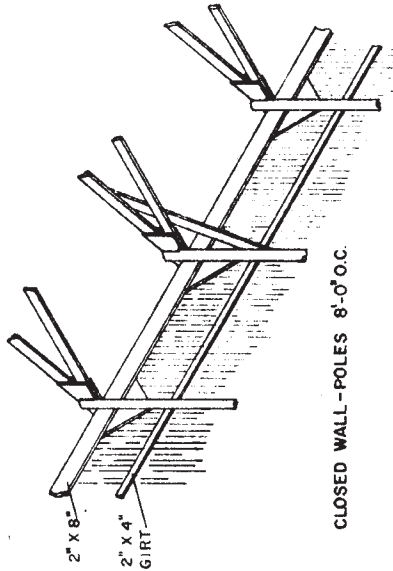
MIDWEST PLAN SERVICE
Cooperative Extension Work in
Agriculture and Home Economics
and Agricultural Experiment Stations
of North Central Region - USDA Cooperating
50' POLE
UTILITY BUILDING
MIDWEST PLAN NO. 72056
Sheet 1 of 4 Sheets

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- 1/2" BOLTS
- 8d NAILS
- 40d NAILS ARE DEFORMED HARDENED STEEL

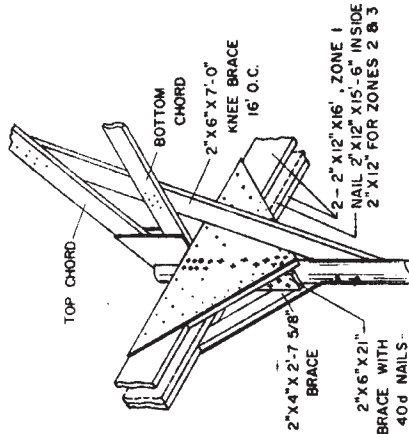


3/8" C-C EXT. PLYWOOD CUTTING DIAGRAM



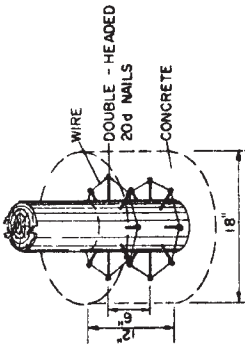
CLOSED WALL-POLES 8'-0" O.C.

PRESSURE TREATED POLES AND POSTS
 Squared Posts, 16' O.C. 6" x 6"
 8' O.C. 4" x 6"
 12' Wall 6" x 8"
 *Note: Wider dimension is parallel to trusses.
 Class 5
 (5 1/2" Min. Top) (6" Min. Top)
 Douglas Fir, western hemlock, southern pine, or equivalent.



OPEN WALL GIRDER-POLE CONNECTION

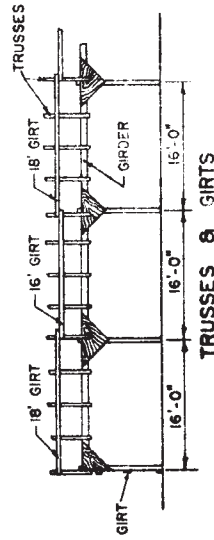
NOTE: DO NOT SUBSTITUTE OTHER FRAMING METHODS FOR THE PLYWOOD GUSSETS SHOWN



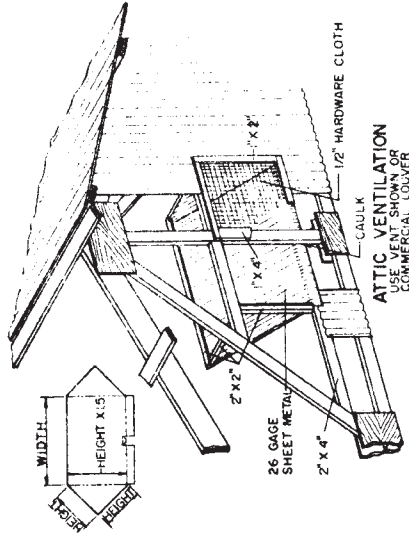
CONCRETE COLLAR DETAIL

LIST OF MAJOR MATERIALS (Open Front, Upward)

ITEM	DESCRIPTION	BUILDING SECTION	
		BEGINNING (48')	ADDITIONAL (16')
Concrete - under poles		11.3 Cu. Yds.	0.4 Cu. Yds.
Poles	6" top x 16"	18	2
Girders	2" x 12" x 16'-0"	9	3
Trusses	2" x 8" x 16'-0"	3	1
Bracing	2" x 4" x 8" c-c Ext. Plywood	42	1
	2" x 4" x 12'-0"	3	1
	2" x 6" x 12'-0"	3	1
	2" x 6" x 14'-0"	2	1
Trusses - 8'	2" x 6" x 16'-0"	54	11
Girts	2" x 4" x 18'-0"	30	12
Skirt	2" x 4" x 18'-0"	8	2
Roofing Squares		29	20
Sliding		20	96
Eaves Trough, Ln. Ft.			

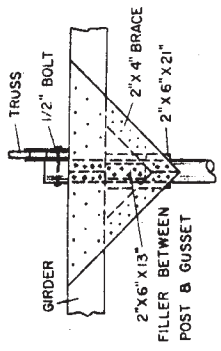


TRUSSES & GIRTS

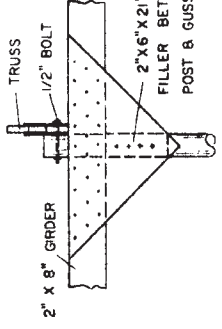


ATTIC VENTILATION

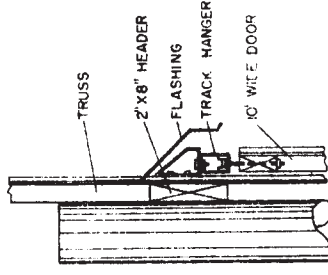
Gussets may be omitted on one side of endwall truss if building will never be lengthened.



NAILING DIAGRAM GIRDER GUSSETS - 16' O.C.



NAILING DIAGRAM GIRDER GUSSETS - 8' O.C.



DOOR HANGER DETAIL (ENDWALL)

SHEET 4: 50' SPAN TRUSSES

MIDWEST PLAN SERVICE

Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region, USDA Cooperating

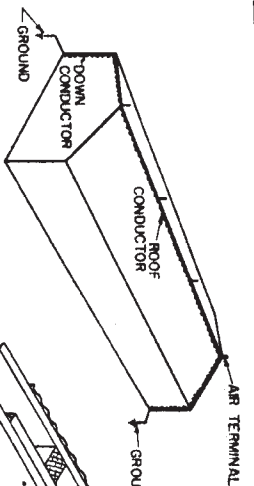
50' POLE

UTILITY BUILDING

SHEET 2 of 4 Sheets

MIDWEST PLAN NO. 72058

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LIGHTNING PROTECTION FOR GABLE ROOFS

Air Terminals

At least 24" long.
Up to 35' apart, 8" aluminum.
3/8" copper tubing, wall thickness over 0.032"

Conductors

Copper: 17 AWG wires, 1874W/1000'.
Aluminum: 14 AWG wires, 954W/1000'.
Two down conductors, minimum, on opposite corners.
For bldgs. over 110' long, use one down conductor per 50' add 1' length.

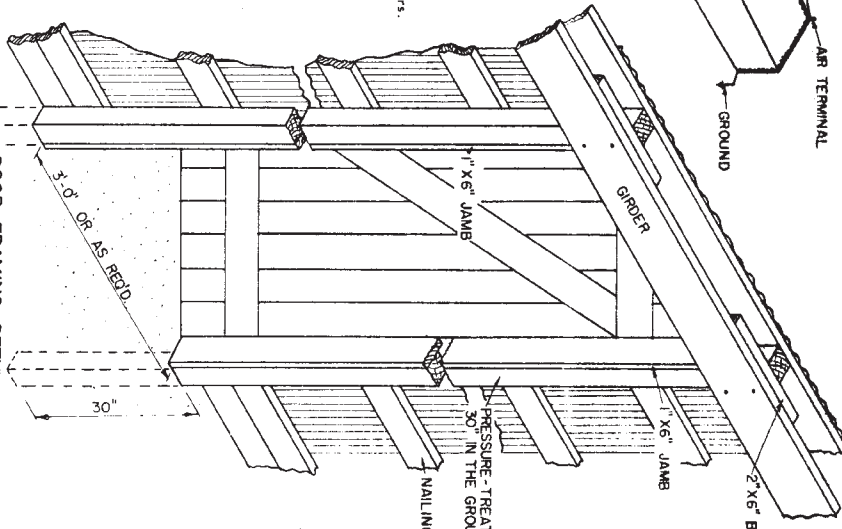
Grounds

One ground per down conductor.
Rods buried at least 10'.
If water pipe enters bldg. bond at least one down conductor to it.

Metal Roofs

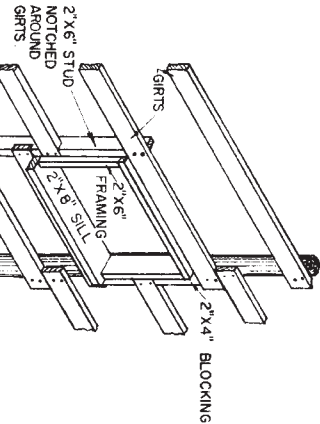
Ground metal roofs without air terminals by attaching conductors to metal roof with 2-3/8" J or U bolts. Ground down conductors as with air terminals.

Master Label
For maximum lightning protection obtain a Master Label System as approved by the Underwriters Laboratories, Inc.



DOOR FRAMING DETAIL

USE SIMILAR FRAMING FOR LARGE DOOR IN ENDWALL



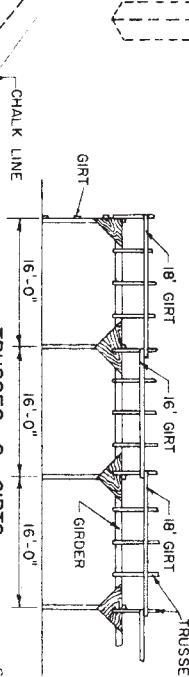
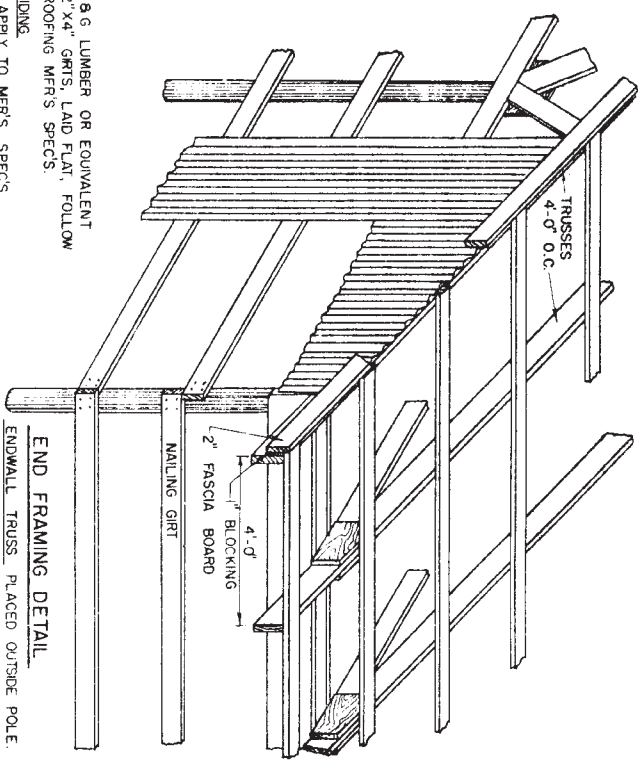
TYPICAL WINDOW FRAMING

SELECT STOPS & HARDWARE TO SUIT TYPE OF SASH USED

ROOF DECK
SOLID 1" T & G LUMBER OR EQUIVALENT
SPACED: 2" x 4" GRTS. LAID FLAT, FOLLOW ROOFING MFR'S SPECS.
ROOFING & SIDING
OPTIONAL. APPLY TO MFR'S SPECS.

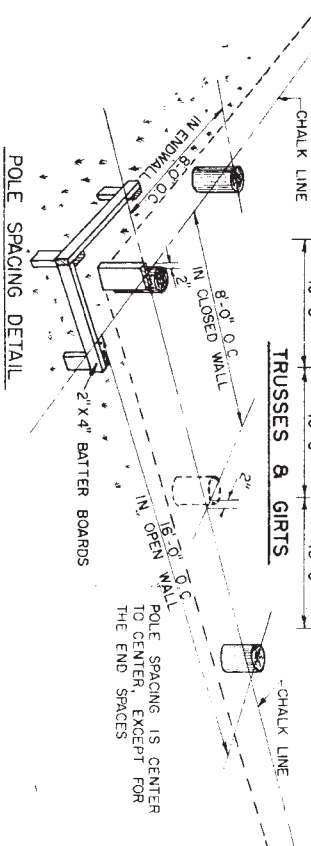
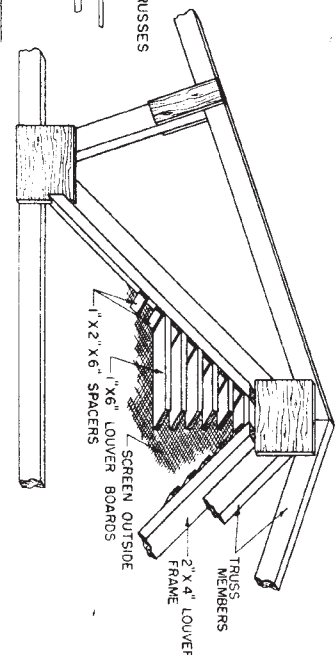
END FRAMING DETAIL

ENDWALL TRUSS PLACED OUTSIDE POLE.
NAIL SIDING TO TRUSS MEMBERS



TRUSSES & GIRTS

TYPICAL LOUVER CONSTRUCTION

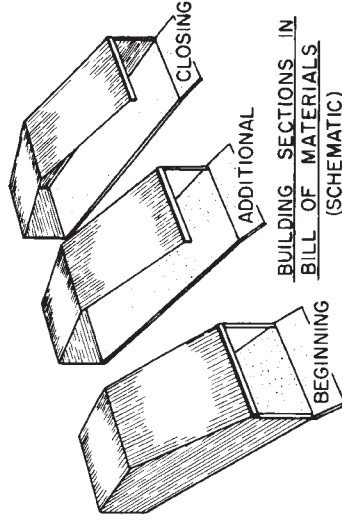


POLE SPACING DETAIL

SHEET 3. 24' SPAN TRUSSES	
MIDWEST PLAN SERVICE	
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION, USDA COOPERATING	
24' POLE UTILITY BUILDING	
6011	SHEET 2 OF 3 SHEETS
MIDWEST PLAN NO. 72054	

BUILDING SECTION (16' LONG)

ITEM	DESCRIPTION	BEGINNING NO. FBM	ADDITIONAL NO. FBM	CLOSING NO. FBM
Concrete Poles	Cu. feet 5" Top x 16'	4	2	2
	4" Top x 16'	4	2	2
Girders	2"x8"x16'0"	3	1	3
Bracing	$\frac{3}{4}$ "x4"x8' c-c, Ext. Plywood	4	85 1/3	85 1/3
	2"x4"x14'0"	1 1/2	1	1 1/2
	2"x6"x14'0"	3	18 2/3	9 1/3
	2"x6"x6'0"	2	1	1
	2"x6"x7'0"	2	14	6
Trusses	See Page 3	5	3	4
Girts	2"x4"x16'0"	7	74 2/3	74 2/3
	2"x4"x18'0"	7	84	84
Skirt	2"x6"x16'0"	10	3	10
Siding	2"x6"x16'0" Pressure-treated	5	80	160
Roofing	Sq. feet	445	160	445
	Sq. feet	448	448	448
Louver	Ln. feet Eaves trough	32	32	32
	2"x4"x6'0"	2	8	8
	1"x6"x10'0"	5	25	25
	1"x2"x12'0"	1	2	1
Man door	Sq. ft. screen	15	34	15
	4"x4"x12'6"	2	2	2
	2"x6"x2'0"	1	2	1
	1"x6"x10'0"	11	55	11



BUILDING SECTIONS IN
BILL OF MATERIALS
(SCHEMATIC)