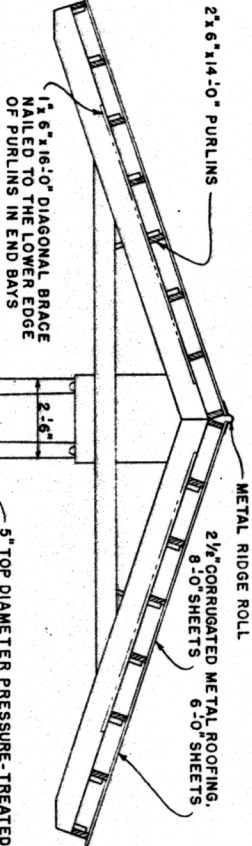


TWO RAFTER-UNITS ARE REQUIRED FOR EACH 14'-0" OF LENGTH. TWO UNITS ON EACH PAIR OF INSIDE POLES AND ONE UNIT ON THE INSIDE FACE OF THE END POLES.

### RAFTER-UNIT ASSEMBLY DIAGRAM

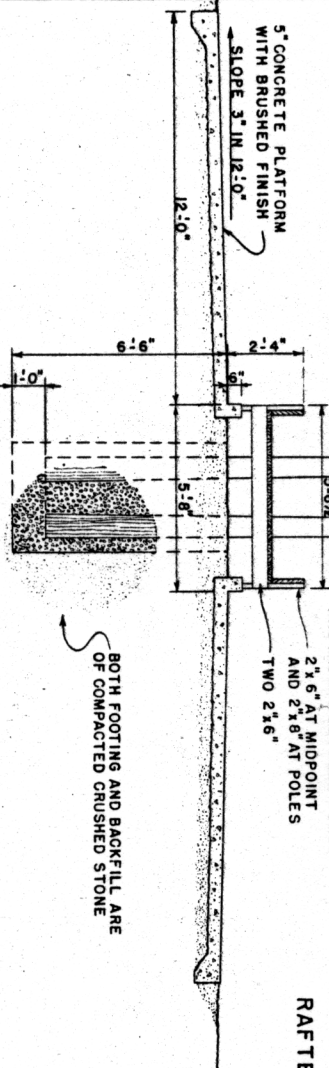
SCALE: 0 1 2 3 4 FT.



5" TOP DIAMETER PRESSURE-TREATED POLES 22'-0" LONG, SET IN PAIRS 14'-0" O.C. FOR INSIDE POLES AND 14'-0" TO THE OUTSIDE OF END POLES. TOPS OF POLES TO BE FLATTENED TO A NET THICKNESS OF 4"

MANGER SIDES ARE 2 1/2" 12"x14-0" THE BOTTOM IS 1 1/2" STOCK 2 1/2" 6"x14-0" ALL END JOINTS ARE AT POLES.

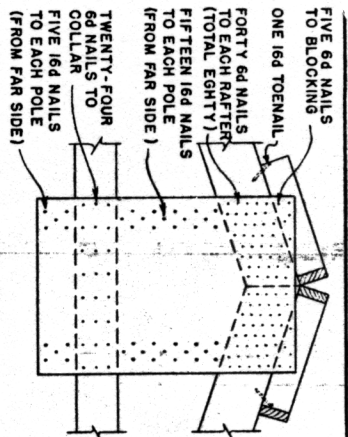
MANGER IS SUPPORTED AT POLES AND MIDWAY BETWEEN POLES 2 1/2" 6" AT MIDPOINT AND 2 1/2" 8" AT POLES TWO 2 1/2" 6"



BOTH FOOTING AND BACKFILL ARE OF COMPACTED CRUSHED STONE

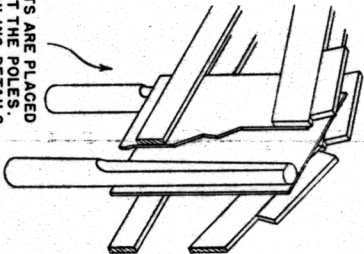
### TYPICAL CROSS SECTION

SCALE: 0 1 2 3 4 FT.



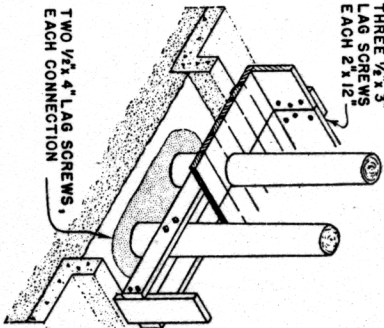
### NAILING DETAILS

SCALE: 0 1 2 FT.



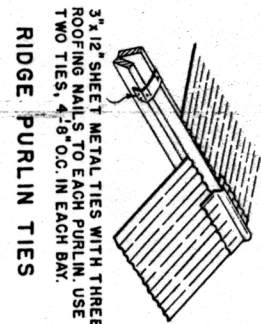
GUSSETS ARE PLACED AGAINST THE POLES. SEE NAILING DETAILS

### RAFTER-UNIT ERECTION



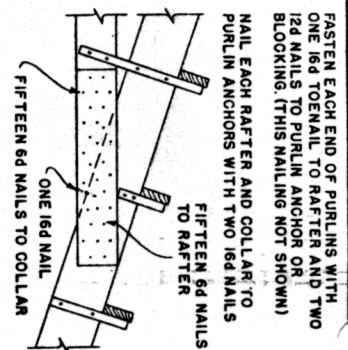
TWO 1/2" 4" LAG SCREWS, EACH CONNECTION

### MANGER CONSTRUCTION



### RIDGE PURLIN TIES

3 1/2" SHEET METAL TIES WITH THREE ROOFING NAILS TO EACH PURLIN. USE TWO TIES, 4-8 O.C. IN EACH BAY.



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS DEPARTMENT OF AGRICULTURAL ENGINEERING UNIVERSITY OF MARYLAND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING AND COLLEGE EXTENSION SERVICE

### CATTLE FEEDING SHELTER

ORE. 62 EX. 5939 SHEET 1 OF 1