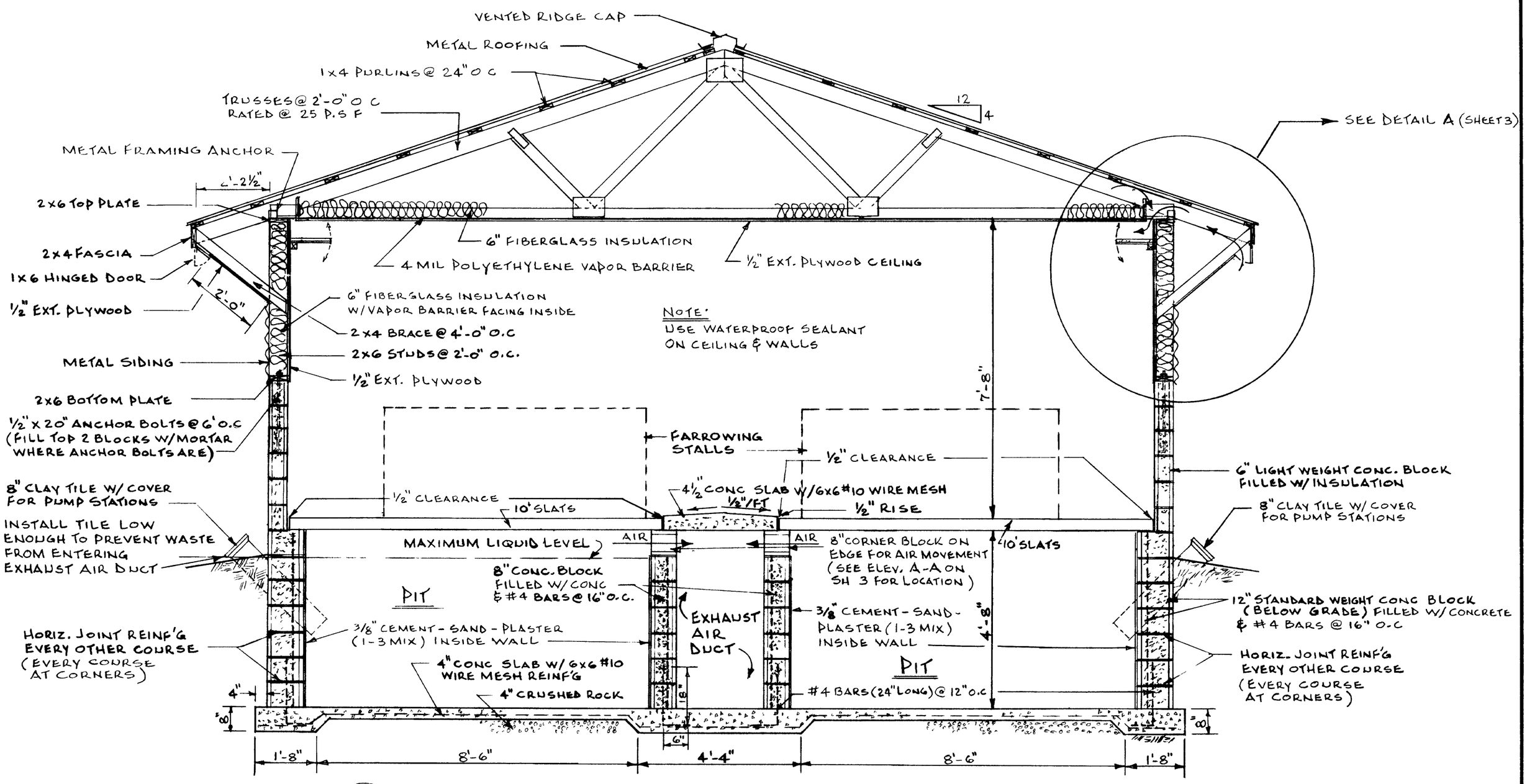
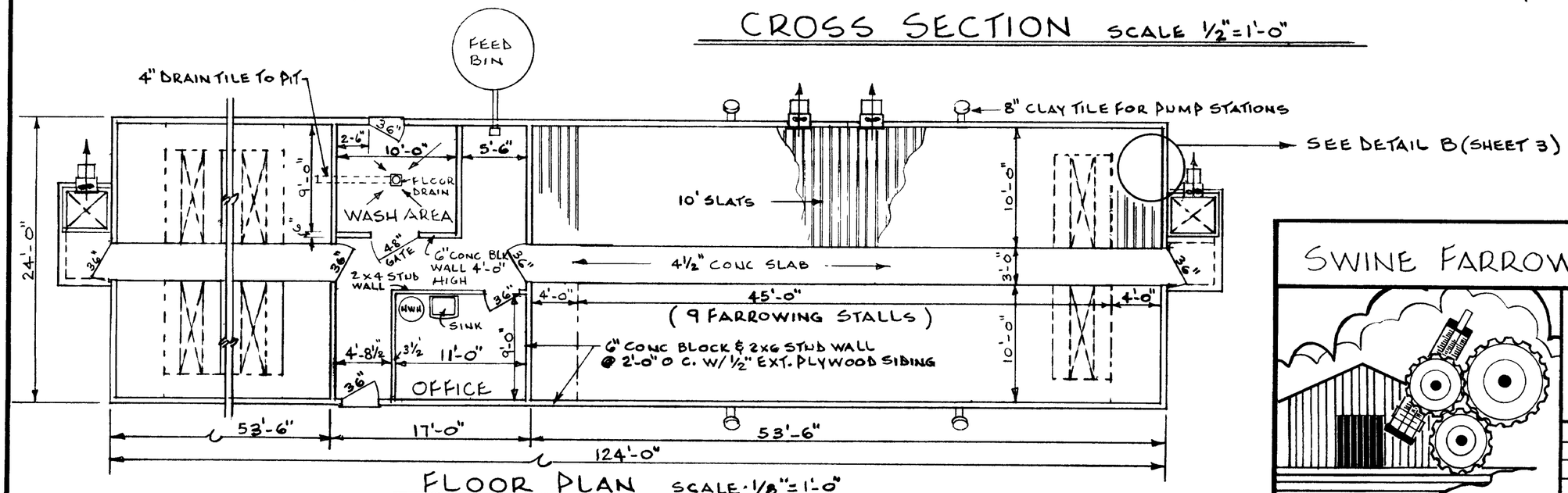
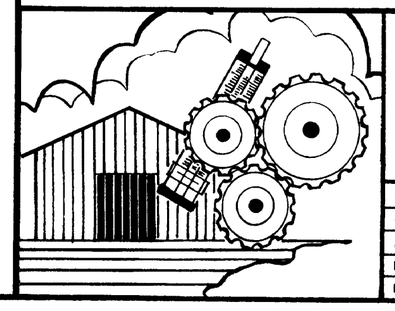



CROSS SECTION SCALE ½"=1'-0"




FLOOR PLAN SCALE: 1/8"=1'-0"

# SWINE FARROWING BUILDING

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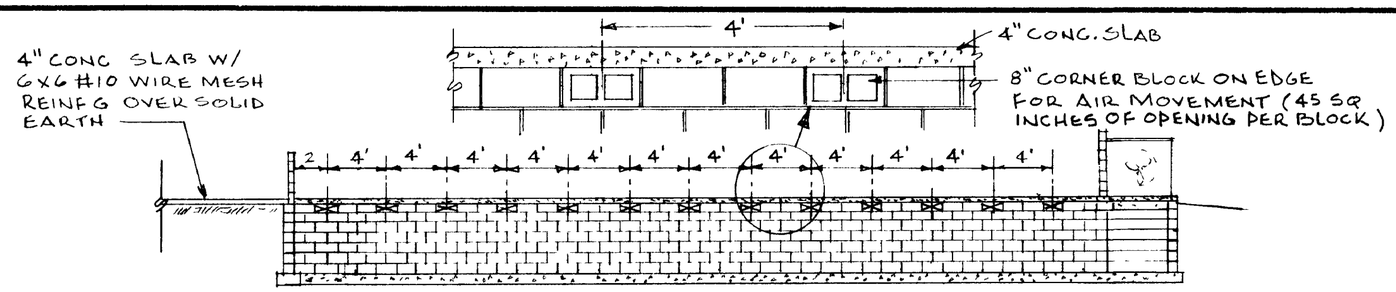
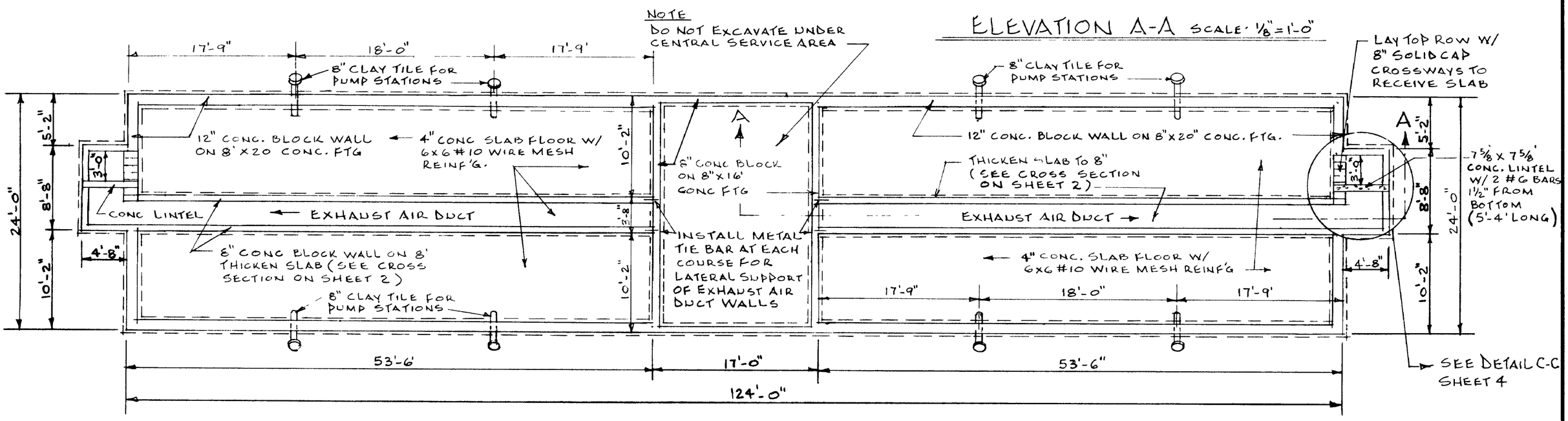
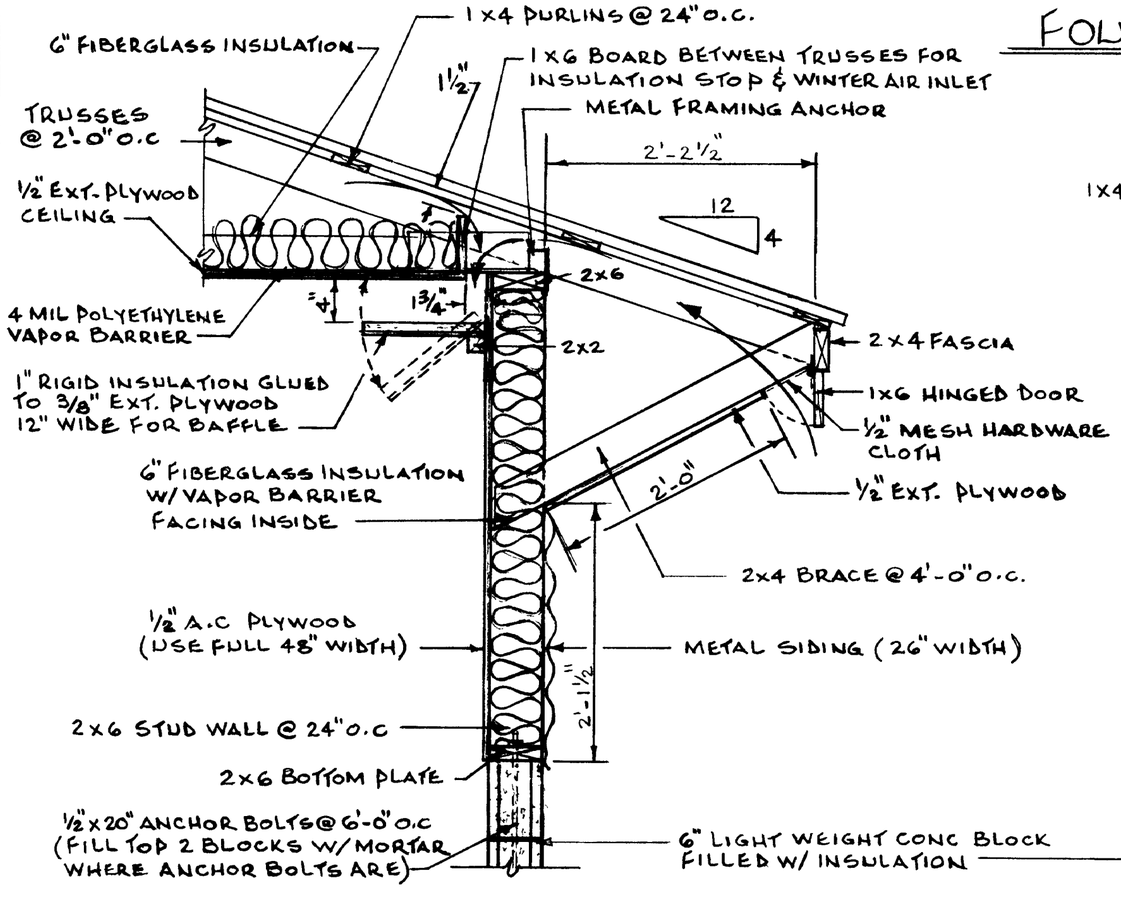
| | |
|---|---|
| DESIGNED BY R. F., D.O. | SHEET 2 OF 4 |
| CHECKED BY J N.W. | PLAN NUMBER |
| DRAWN BY B E.P. | KY. II. 726-31 |
| DATE 6-78 | |
| REVISIONS 1-79 10-81 | |



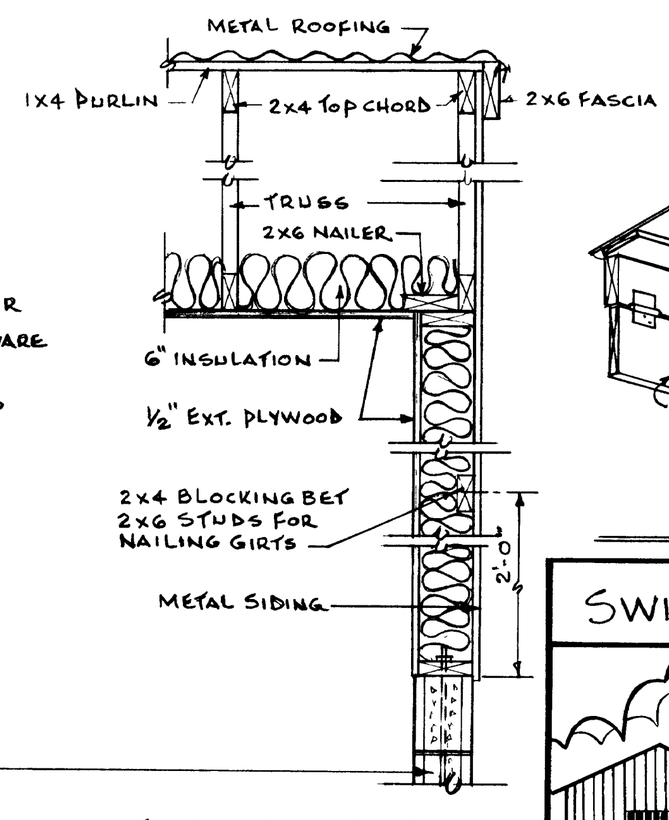

ELEVATION A-A SCALE: 1/8" = 1'-0"



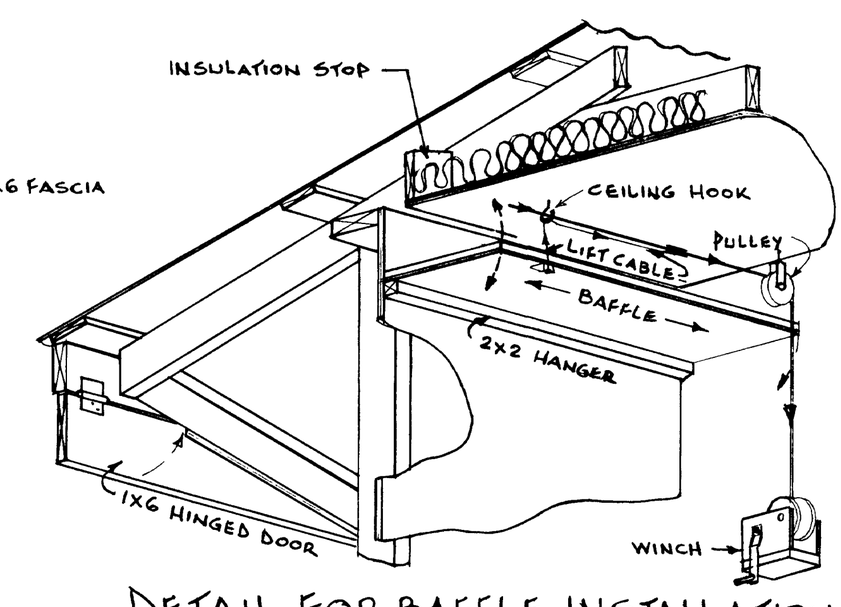

FOUNDATION PLAN
SCALE: 1/8" = 1'-0"




DETAIL A
SCALE 1" = 1'-0"

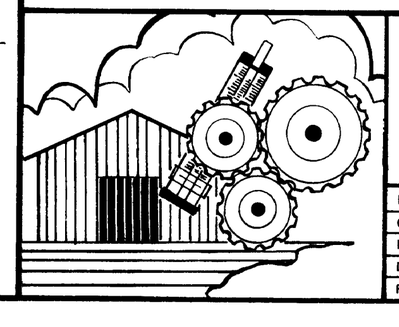



END WALL DETAIL B
SCALE: 1" = 1'-0"




DETAIL FOR BAFFLE INSTALLATION
N.T.S.

# SWINE FARROWING BUILDING



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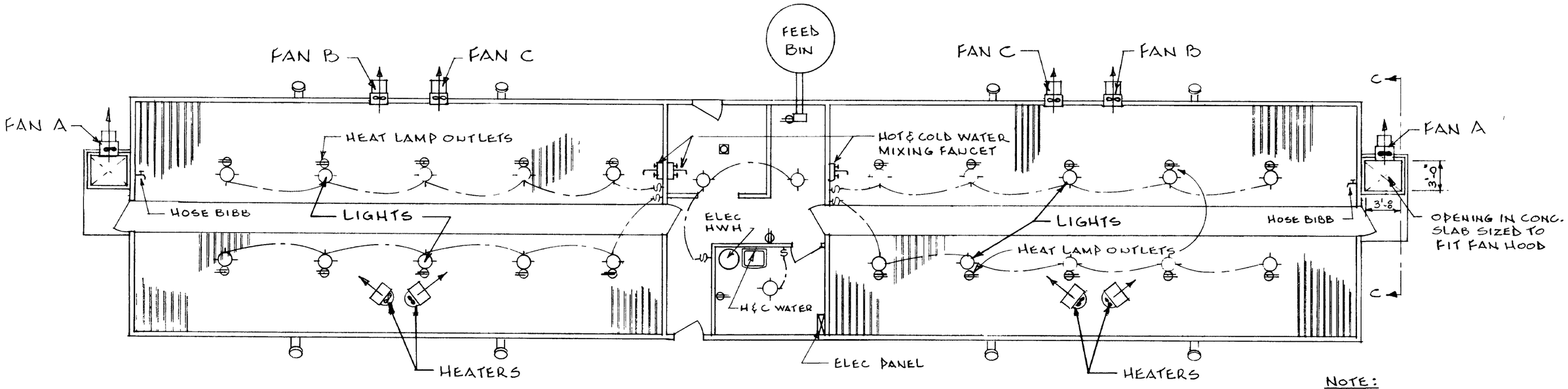
| | |
|---|---|
| DESIGNED BY R F., D.O | SHEET 3 OF 4 |
| CHECKED BY J N W. | PLAN NUMBER |
| DRAWN BY BEP | KY. II. 726-31 |
| DATE 6-78 | |
| REVISIONS 1-79 10-81 | |




# ELECTRIC, PLUMBING, HEATING & VENTILATION LAYOUT

SCALE: 1/8"=1'-0"

NOTE:
CHECK LOCAL ELECTRICAL CODE REQUIREMENTS BEFORE CONSTRUCTION BEGINS

## FAN TYPE AND RATING FOR EACH FARROWING ROOM

| FAN | TYPE | CFM RATING AT 1/8 INCH STATIC PRESSURE |
|---|---|---|
| A | VARIABLE SPEED | 400 - 3500 |
| B | SINGLE SPEED | 3500 |
| C | SINGLE SPEED | 3500 |

## SUPPLEMENTAL HEATERS FOR EACH FARROWING ROOM

MINIMUM REQUIREMENTS 40,000 BTU PER HOUR TOTAL
20,000 BTU PER HOUR PER HEATER OR 6 KW

HEATER FANS SHOULD PROVIDE A 20 FT. THROW.

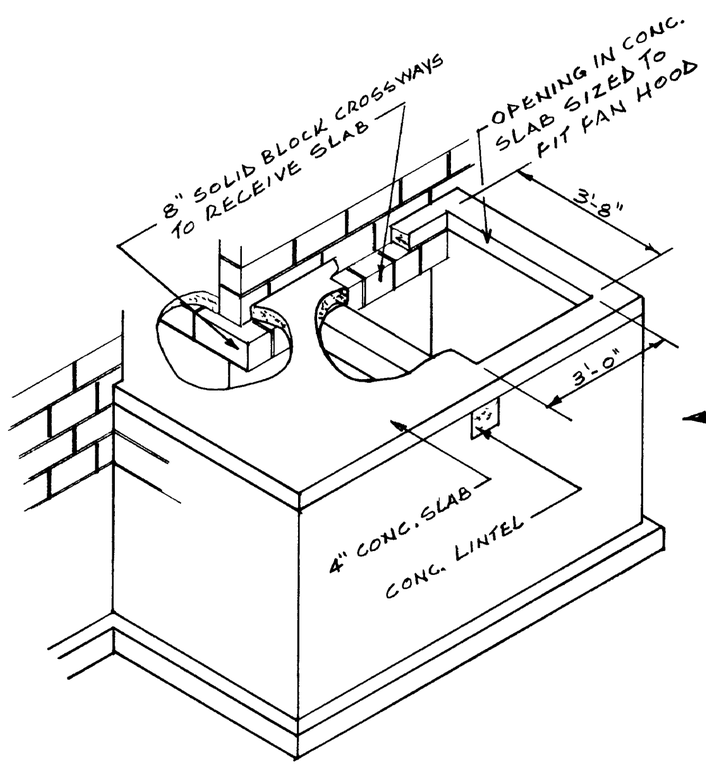
## THERMOSTATS

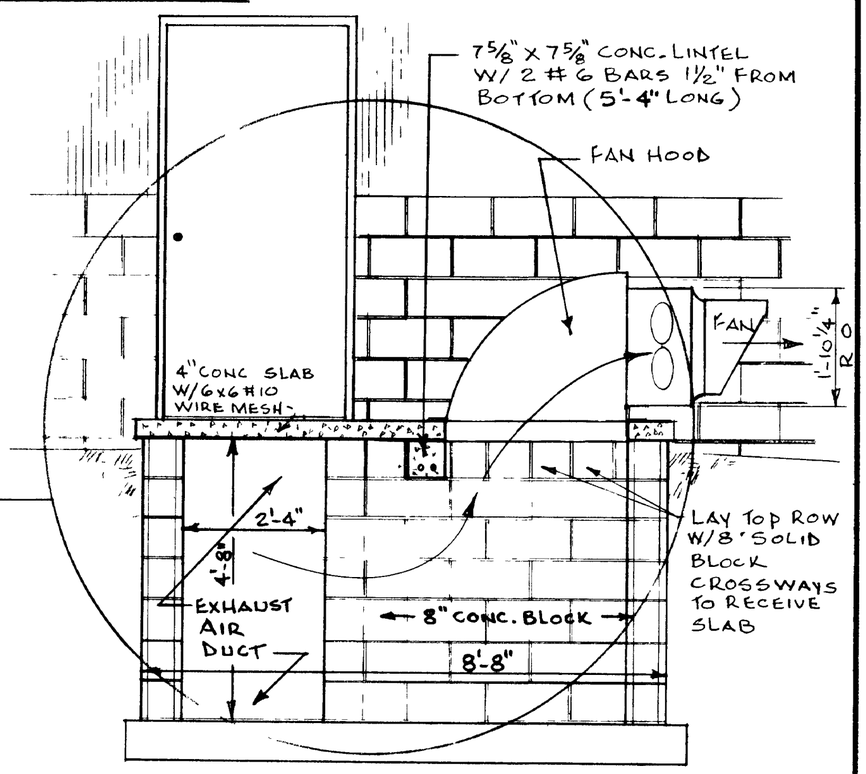
| THERMOSTAT | TYPE (FOR LINE VOLTAGE APPLICATIONS) |
|---|---|
| HEATER | OPEN ON RISE |
| FAN A | SOLID STATE CONTROL, WITH MINIMUM CUTOFF |
| FAN B | CLOSE ON RISE |
| FAN C | CLOSE ON RISE |

THERMOSTAT LOCATION: NEAR CENTER OF BUILDING.
AS LOW AS POSSIBLE BUT OUT OF ANIMAL REACH.
NOT IN A DIRECT LINE WITH THE HEATER OUTPUT.

## FAN AND HEATER OPERATING SEQUENCE, AND BAFFLE SETTING

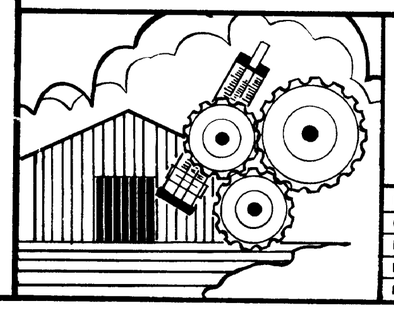
| INSIDE TEMPERATURE | FAN A | FAN B | FAN C | HEATER | BAFFLE SETTING |
|---|---|---|---|---|---|
| ABOVE 85°F | MAXIMUM | ON | ON | OFF | 12 INCHES |
| 80°-85° | MAXIMUM | ON | OFF | OFF | 1 |
| 70°-80° | VARIABLE | OFF | OFF | OFF | 1/4 |
| BELOW 70° | MINIMUM | OFF | OFF | ON | 1/16 |




CROSS SECTION C-C SCALE: 1/2"=1'-0"

# SWINE FARROWING BUILDING



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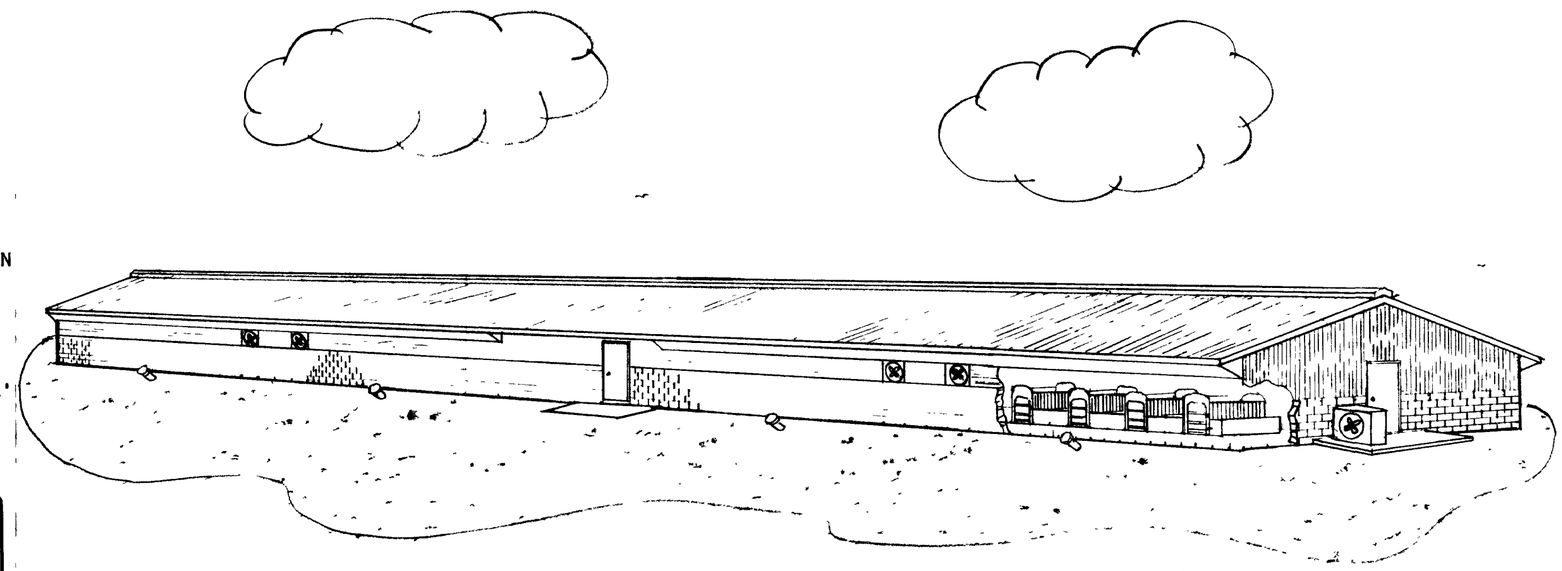
| | |
|---|---|
| DESIGNED BY R F, D O | SHEET 4 OF 4 |
| CHECKED BY J.N.W | PLAN NUMBER |
| DRAWN BY B E P | KY. II. 726-31 |
| DATE 6-78 | |
| REVISIONS 1-79 10-81 | |

THIS PLAN IS FOR A 24' x 124' BUILDING HOUSING 2 - 18 STALL FARROWING ROOMS AND A CENTRAL OFFICE AND SERVICE AREA. THE BUILDING IS COMPLETELY FAN VENTILATED AND USES BOTH VARIABLE SPEED AND SINGLE SPEED EXHAUST FANS. TOTALLY SLATTED FLOORS ARE UTILIZED FOR FARROWING WITH MANURE STORED AS A LIQUID IN A DEEP PIT BENEATH THE SLATS. WINTER VENTILATION AIR IS EXHAUSTED FROM THE MANURE PIT WHICH AIDS IN REDUCING ODORS. SINCE AIR IS CIRCULATED ABOVE AND BELOW THE PIGS, TEMPERATURE CONTROL IS VERY CRITICAL. SUPPLEMENTAL HEAT SHOULD BE PROVIDED AS INDICATED AND CLOSE ATTENTION SHOULD BE GIVEN TO THE PROPER CONTROL SETTINGS FOR THE HEATERS AND FANS.

SINCE THE FARROWING HOUSE IS THE MOST EXPENSIVE STRUCTURE USED IN SWINE PRODUCTION, A PRODUCER SHOULD DEVELOP A PRODUCTION SCHEDULE THAT PROVIDES FOR INTENSE USE OF THE FARROWING HOUSE. THE PRODUCTION SCHEDULE ILLUSTRATED BELOW FARROWS ONE ROOM (18 SOWS) EACH THREE WEEKS WITH ALL PIGS WEANED AT 5 WEEKS OF AGE. THIS PRODUCTION SCHEME REQUIRES 7 GROUPS OF SOWS AND THE PLAN AS ILLUSTRATED (18 STALL ROOMS) SHOULD PRODUCE 306 LITTERS ANNUALLY AT FULL CAPACITY (17 FARROWINGS FROM 7 GROUPS). TO SUCCESSFULLY FOLLOW THIS PRODUCTION SCHEDULE A PRODUCER MUST FIRST RIGIDLY FOLLOW AND CONTROL HIS BREEDING TO LIMIT FARROWINGS TO ONE WEEK. HE SHOULD ALSO CONSTRUCT A NURSERY BUILDING, (PLAN NUMBER KY. 11.726-32) TO REAR THE PIGS FROM WEANING TO 8 WEEKS OF AGE.

THIS PLAN IS ONE OF A COMPLETE SWINE PRODUCTION SYSTEM WHICH INCLUDES PLANS 11.726-31, FARROWING BUILDING, 11.726-32, NURSERY BUILDING; 11.726-33, GROWING BUILDING, 11 726-34, FINISHING BUILDING; 11.726-35, GESTATION BUILDING; AND 11.726-36, BREEDING BUILDING.



## RECOMMENDED PRODUCTION SCHEDULE

FARROW EVERY 3 WEEKS· 7 GROUPS OF SOWS:
2 FARROWING ROOMS WEAN AT 5 WEEKS.

| GROUP | BREED MON. Day # | FARROW WED. Day # | ROOM | WEAN TUES. Day # | BREED MON. Day # | FARROW WED. Day # | ROOM |
|---|---|---|---|---|---|---|---|
| A | 0 | 114 | 1 | 148 | 154 | 268 | 2 |
| B | 21 | 135 | 2 | 169 | 175 | 289 | 1 |
| C | 42 | 156 | 1 | 190 | 196 | 310 | 2 |
| D | 63 | 177 | 2 | 211 | 217 | 331 | 1 |
| E | 84 | 198 | 1 | 232 | 238 | 352 | 2 |
| F | 105 | 219 | 2 | 253 | 259 | 373 | 1 |
| G | 126 | 240 | 1 | 274 | 280 | 394 | 2 |

ROOM 1 WILL BE IDLE FOR 7 DAYS AFTER YOU WEAN GROUP G. ROOM 2 WILL BE IDLE FOR 7 DAYS AFTER YOU WEAN GROUP F. SELL ALL SOWS IN GROUP G THAT FAIL TO REBREED ON FIRST ESTRUS AFTER WEANING.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| $A_2$ | 154 | 268 | 2 | 302 | 308 | 422 | 1 |
| $B_2$ | 175 | 289 | 1 | 323 | 329 | 443 | 2 |
| $C_2$ | 196 | 310 | 2 | 344 | 350 | 464 | 1 |
| $D_2$ | 217 | 331 | 1 | 365 | 371 | 485 | 2 |
| $E_2$ | 238 | 352 | 2 | 386 | 392 | 506 | 1 |
| $F_2$ | 259 | 373 | 1 | 407 | 413 | 527 | 2 |
| $G_2$ | 280 | 394 | 2 | 428 | 434 | 548 | 1 |

ROOM 1 WILL BE IDLE FOR 7 DAYS AFTER YOU WEAN GROUP F. ROOM 2 WILL BE IDLE FOR 7 DAYS AFTER YOU WEAN GROUP G. SELL ALL SOWS IN GROUP G THAT FAIL TO REBREED ON FIRST ESTRUS AFTER WEANING.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| $A_3$ | 308 | 422 | 1 | 456 | 462 | 576 | 2 |
| $B_3$ | 329 | 443 | 2 | 477 | 483 | 597 | 1 |
| $C_3$ | 350 | 464 | 1 | 498 | 504 | 618 | 2 |

## DAILY WORK SCHEDULE

| WEEK | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|---|
| 1 | MOVE PIGS G TO F* N TO G* | WEAN | CLEAN FARROW HOUSE | CLEAN FARROW HOUSE | MOVE IN SOWS |
| 2 | BREED | BREED FARROW | FARROW BREED | FARROW | FARROW |
| 3 | ----------TAKE CARE OF PIGS ---------- | | | | |
| 4 | ----------REPEAT WEEK ONE ---------- | | | | |

*G TO F = GROWER TO FINISHER.
*N TO G = NURSERY TO GROWER.

## THERMOSTAT ADJUSTMENT

THE THERMOSTAT SETTINGS GIVEN BELOW ALLOW THE BUILDING TEMPERATURE TO VARY FROM A MINIMUM OF 70°F IN THE WINTER TO A MAXIMUM OF 85°F+ IN THE SUMMER.
TO RAISE THE INSIDE TEMPERATURE IN THE WINTER, DURING THE WEEK OF FARROWING, ADJUST THE THERMOSTATS AS SHOWN BELOW.

| THERMOSTAT | NORMAL SETTING | FARROWING SETTING |
|---|---|---|
| FAN A (LOW TEMPERATURE CUT OFF) | 65°F | 65°F |
| HEATER | 70° | 75° |
| FAN A (SET POINT ON VARIABLE SPEED CONTROLER) | 75° | 80° |
| FAN B | 80° | 90° |
| FAN C | 85° | 90° |

NOTE: CHECK THE AIR TEMPERATURE AT THE LEVEL OF THE PIGS AND ADJUST THE THERMOSTATS IF YOUR READING IS SUBSTANTIALLY DIFFERENT FROM THE DESIRED TEMPERATURE.

## ALTERNATIVE FARROWING ROOM SIZE FOR EXPECTED PRODUCTION

| STALLS/ FARROWING ROOM | LITTERS PRODUCED PER YEAR | APPROXIMATE SOW INVENTORY | PIGS PRODUCED PER YEAR* |
|---|---|---|---|
| 10 | 170 | 85 | 1275 |
| 12 | 204 | 102 | 1530 |
| 14 | 238 | 119 | 1785 |
| 16 | 272 | 136 | 2050 |
| 18 | 306 | 153 | 2295 |
| 20 | 340 | 170 | 2550 |
| 22 | 374 | 187 | 2805 |
| 24 | 408 | 204 | 3060 |

*7.5 PIGS SOLD PER LITTER· ON A PRODUCTION SCHEDULE OF FARROW EVERY 3 WEEKS: 2 FARROWING ROOMS: WEAN AT 4 TO 5 WEEKS.

## ESTIMATED MATERIAL LIST

1/2" EXT PLYWOOD ---------- 162 PC.
3/8" EXT. PLYWOOD ---------- 8 PC.
LUMBER (EXCLUDING TRUSSES) ---------- 5000 B.F.
24' TRUSSES (4/12 PITCH) ---------- 63
6" LIGHTWEIGHT CONCRETE BLOCK --------- 1625
8" STANDARD WEIGHT CONCRETE BLOCK ----- 1800
CONCRETE (FLOORS, FOOTINGS & BLOCK FILL) 90 YDS.
12" STANDARD WEIGHT CONCRETE BLOCK-----1400
6" INSULATION (CEILING & WALLS) --------3968 SQ.FT.
10' SLATS ----------1440 SQ.FT.
METAL ROOFING & SIDING ----------4660 SQ.FT.

## SLATS

A SLAT WITH A HIGH PERCENTAGE OPEN AREA IS EASY TO CLEAN AND IS REQUIRED IN THIS BUILDING.
SLOT OPENINGS: 3/8 INCH; WITH CONCRETE SLATS USE 1 INCH SLOT BEHIND SOW; COVER OPENINGS DURING FARROWING.

## FEED AND WATER REQUIREMENTS

FEED· 12# PER SOW PER DAY - 3024# TOTAL PER WEEK
1# PER PIG PER DAY - 290# TOTAL PER WEEK

WATER· 4 GAL PER DAY PER STALL
144 GAL PER DAY TOTAL
MINIMUM PUMPING RATE: 8 GAL PER MINUTE

## WASTE STORAGE REQUIREMENTS

0 5 CUBIC FEET OF STORAGE PER DAY PER STALL
THIS FACILITY PROVIDES 112 DAYS OF MANURE STORAGE PER USEFUL FOOT OF PIT DEPTH, 300 DAYS STORAGE TOTAL.

NOTE: 2 FEET OF PIT DEPTH IS GENERALLY NOT CONSIDERED USABLE STORAGE VOLUME, BECAUSE SOME OF THE SOLIDS ARE NOT REMOVED DURING CLEANING AND THE LIQUID LEVEL SHOULD NOT BE ALLOWED WITHIN 1 FOOT OF THE BOTTOM OF THE SLATS.

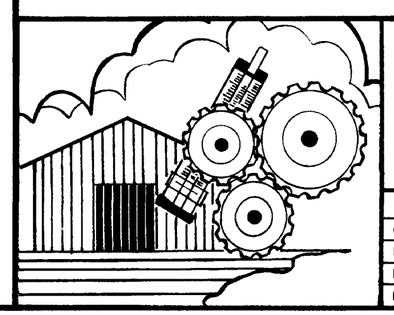
## DESIGN VENTILATION RATES AND SUPPLEMENTAL HEAT

MINIMUM 20-25 CFM PER STALL (VARIABLE SPEED FAN RECOMMENDED)
MAXIMUM 575-600 CFM PER STALL
SUPPLEMENTAL HEAT 2100-2400 BTU PER HOUR PER STALL

## ELECTRICAL POWER OUTAGES

SERIOUS PROBLEMS CAN BE ENCOUNTERED IN TOTALLY ENCLOSED SWINE BUILDING DURING AN ELECTRICAL POWER OUTAGE, WHEN THE VENTILATION FANS STOP. TO AVOID POSSIBLE PROBLEMS AN ENCLOSED SWINE BUILDING SHOULD BE EQUIPPED WITH AUTOMATIC WARNING SYSTEM TO ALERT YOU WHEN A POWER FAILURE HAS OCCURRED AND A STANDBY ELECTRICAL GENERATOR SHOULD BE AVAILABLE.

# SWINE FARROWING BUILDING

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DRAWN BY BEP
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SHEET 1 OF 4

PLAN NUMBER
**KY. II.** 726-31