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GUIDE TO HELP DETERMINE CRATE REQUIREMENTS & ANNUAL PIG PRODUCTION FOR FARROWING SOWS (2 TO 4 WEEKS WEANING)

- 1. Easy Choice Stalls**
of sows = # of stalls
- 2. Loose Housing – ESF's Required**
Up to 80 sows per ESF
- 3. # of Breeding Stalls**
Weekly wean target + weekly gilt target = total # of Breeding Stalls

CALCULATING CRATE REQUIREMENTS

1. Calculate Litters per Week

	Ex. 1	Ex. 2
Number of Sows	500	1500
Litters/Sow/Year	2.3	x 2.3
	<hr/>	<hr/>
Litters/Year	1150	3450
	<hr/>	<hr/>
Litters/Week	22	66

2. Calculate Crate Cycle Time

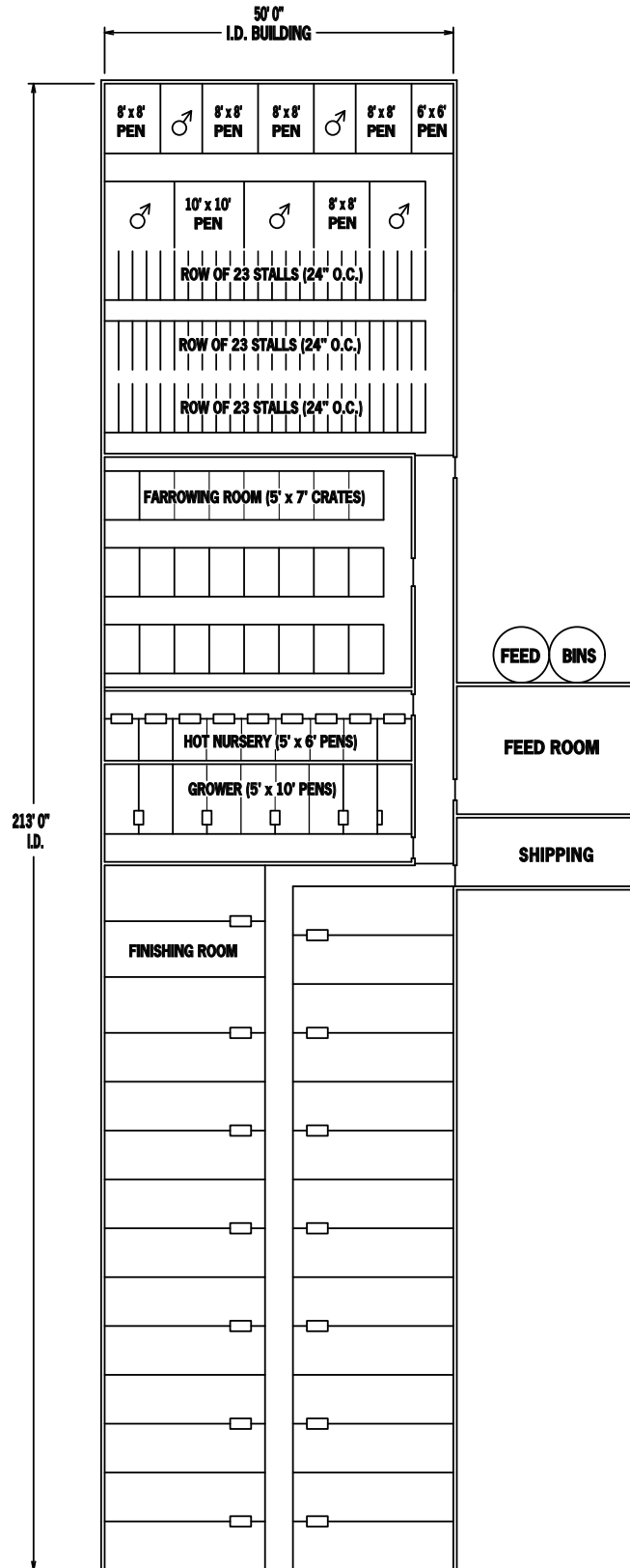
Fill Time	2 days
Nursing Time	21 days
Cleaning Time	2 days
	<hr/>
Crate Cycle Time	25 days (3.6 weeks)

3. Calculate Number of Crates

Litters/Week	22	66
Crate Cycle Time	x3.6	x3.6
	<hr/>	<hr/>
Number of Crates Needed	80	238

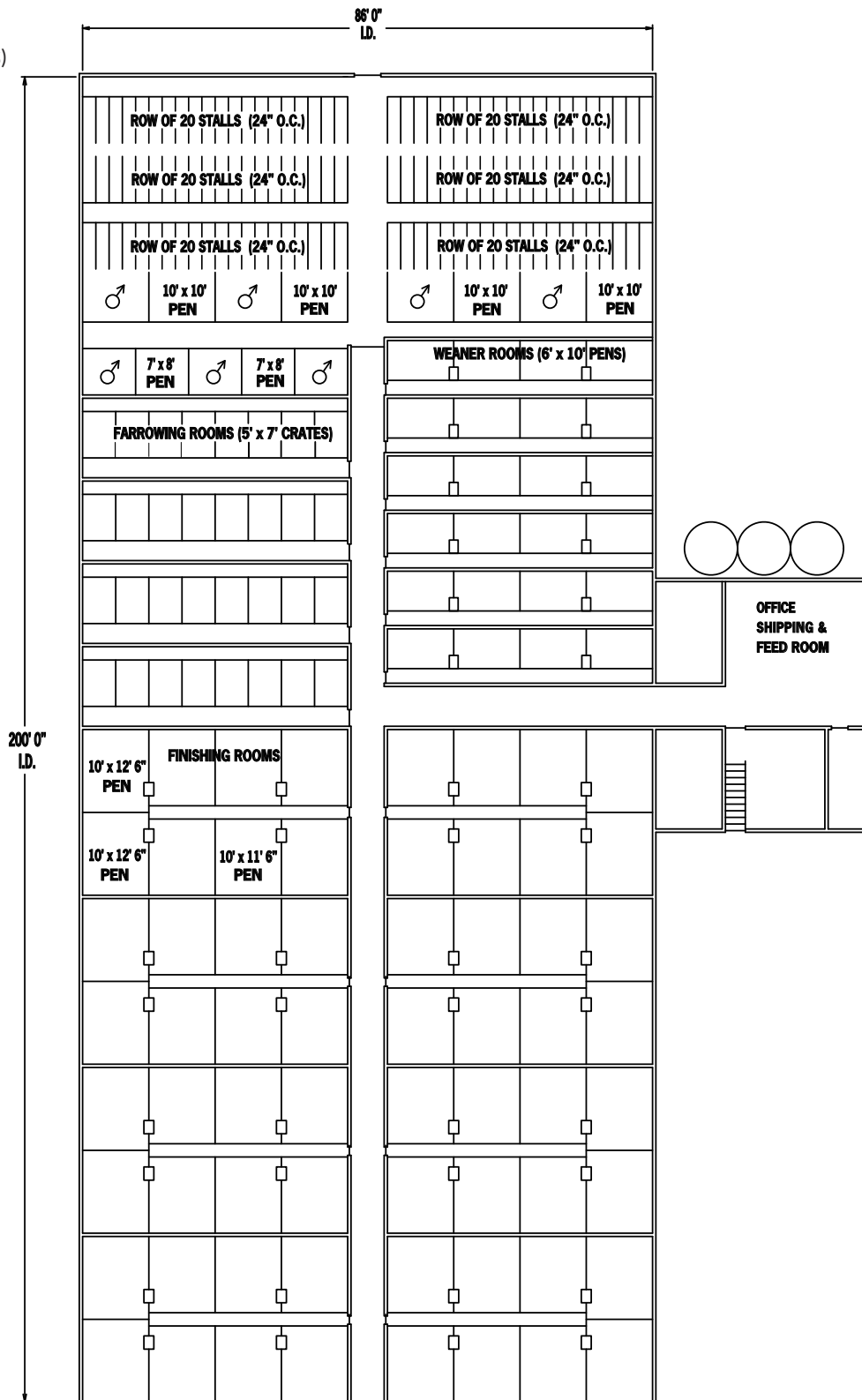
100 SOW BARN (4 WEEK WEANING)

- 24 FARROWING CRATES (1 ROOM)
- 9 NURSERY PENS (1 HOT ROOM)
- 9 GROWER PENS (1 ROOM)
- 46 DRY SOW STALLS
- 23 BREEDING STALLS with
 5 BREEDING PENS ATTACHED
- 7 HOLDING PENS
- 28 FINISHING PENS
- 1 FEED ROOM
- 1 SHIPPING ROOM

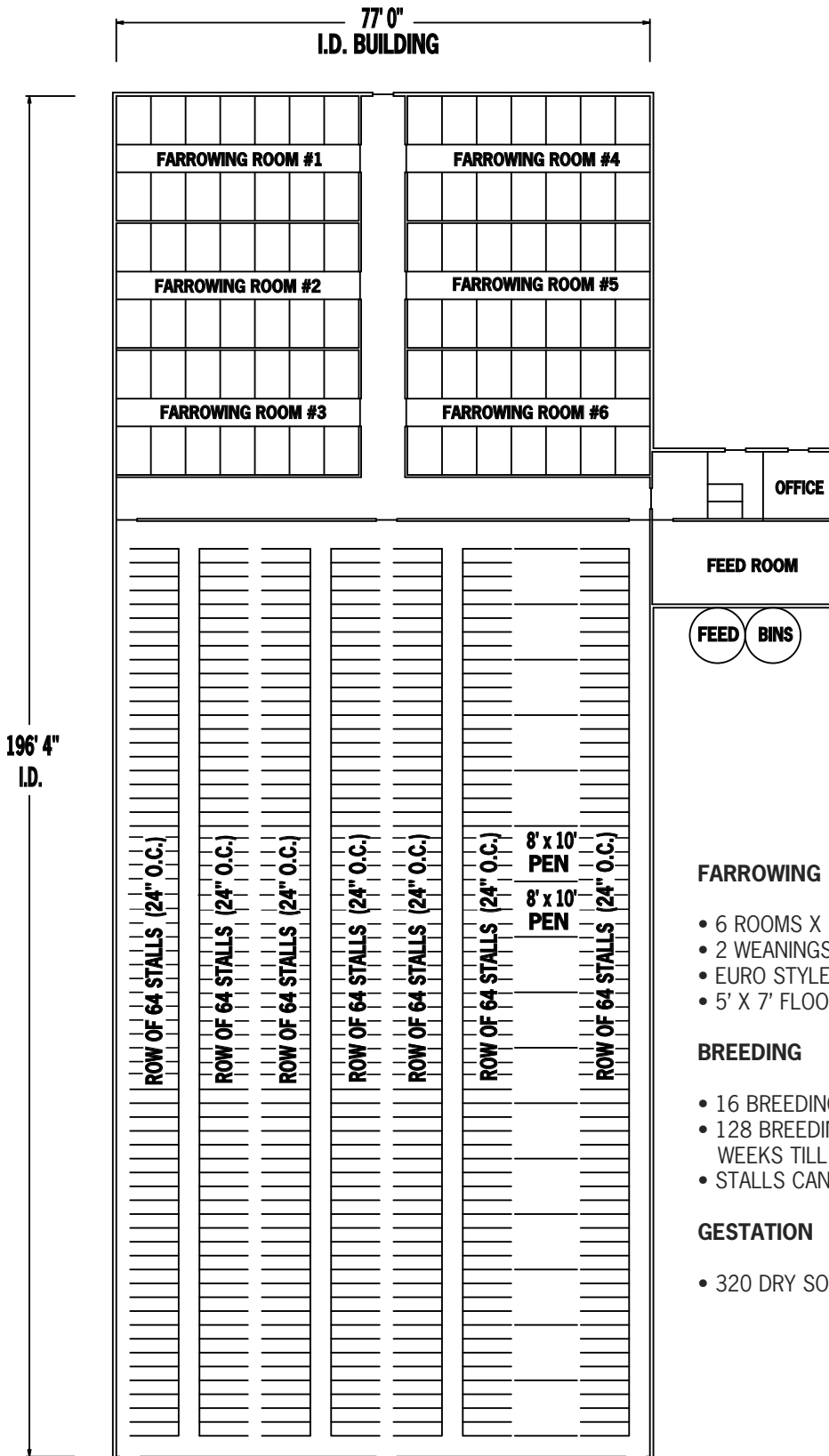


150 SOWS (3 WEEK WEANING)

- 32 FARROWING CRATES (4 ROOMS)
- 24 WEANER PENS (6 ROOMS)
- 120 DRY SOW STALLS
- 8 BREEDING PENS
- 5 HOLDING PENS
- 8 FINISHING ROOMS
- OFFICE, FEED & SHIPPING ROOMS



500 SOW BARN (2 WEEK WEANING)



FARROWING

- 6 ROOMS X 14 CRATES PER ROOM = 74 CRATES
- 2 WEANINGS PER WEEK
- EURO STYLE CRATES
- 5' X 7' FLOORS

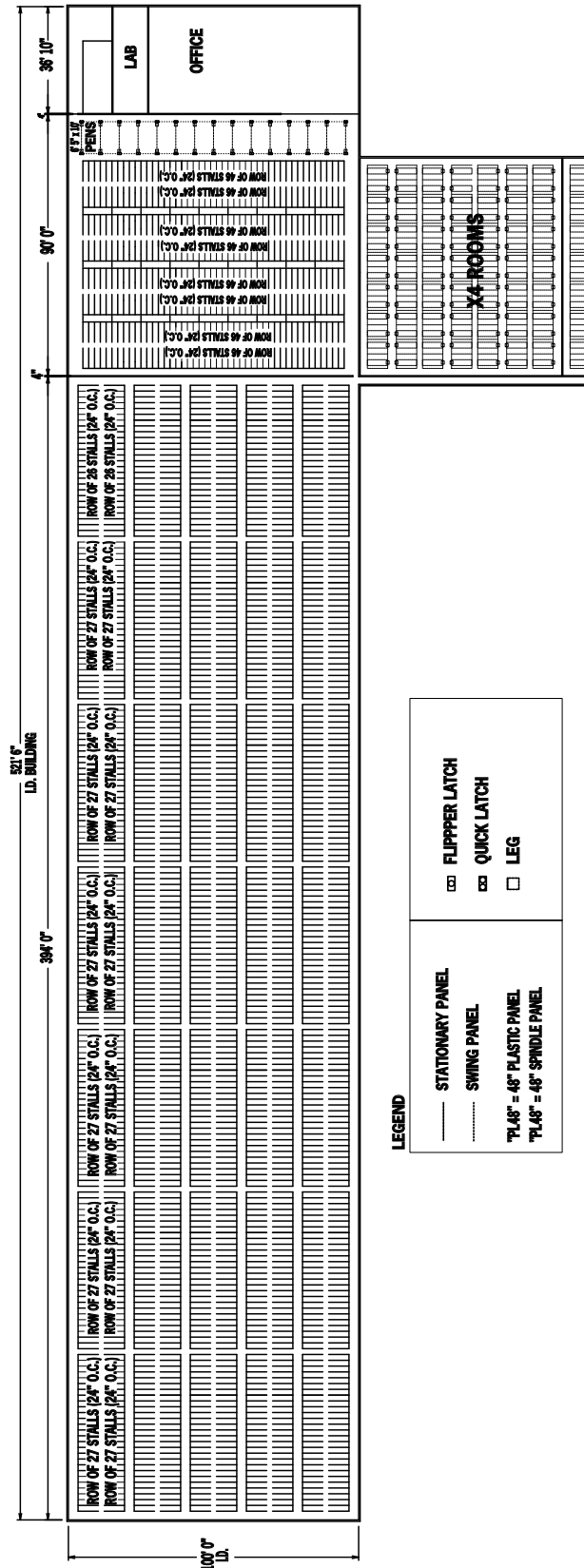
BREEDING

- 16 BREEDING PENS OR A.I.
- 128 BREEDING STALLS - WILL HOLD SOWS FOR 4 WEEKS TILL REPEAT HEAT + OVERFLOW
- STALLS CAN BE ADAPTED TO HOLD BOARS

GESTATION

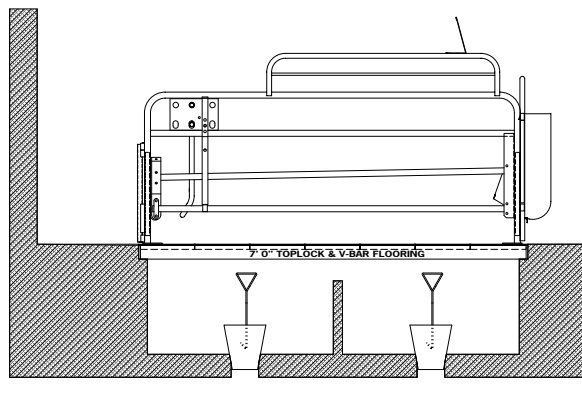
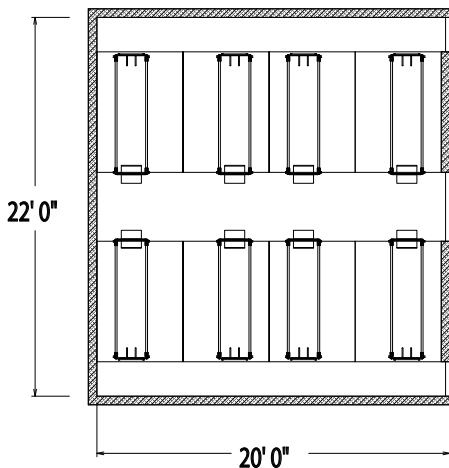
- 320 DRY SOW STALLS

GESTATION & BREEDING & FARROWING BARN
2000 SOW UNIT MULTIPLIER BARN

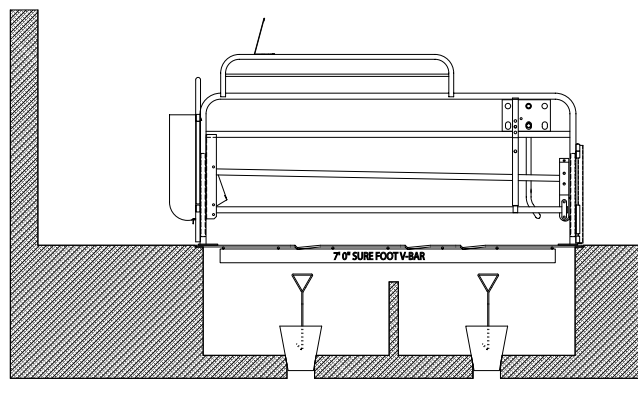
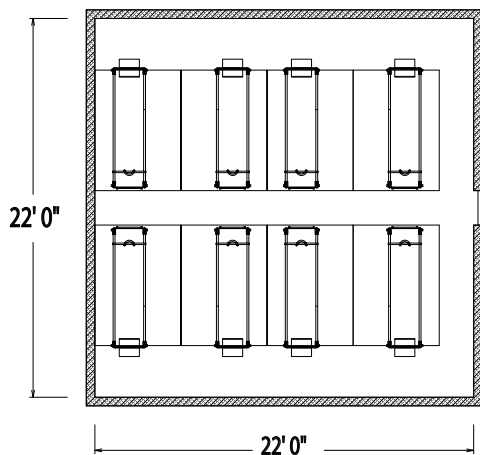


MODEL 2001 FARROWING CRATES

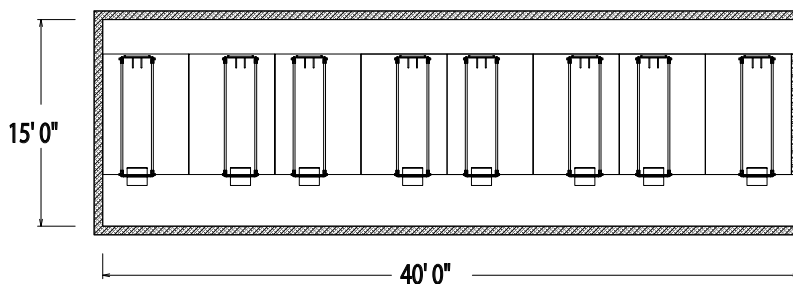
HEAD TO HEAD 3 DOORS



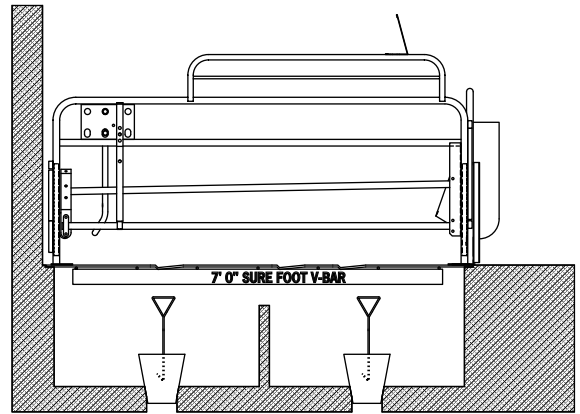
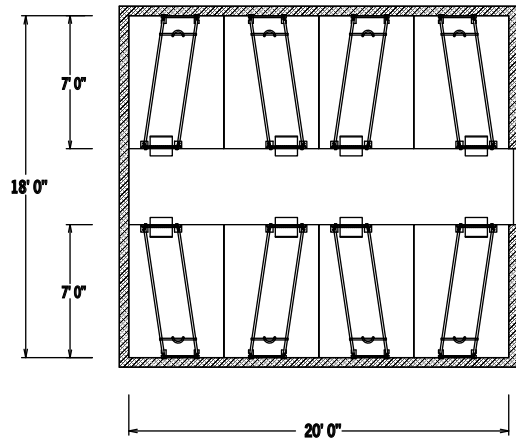
TAIL TO TAIL FRONT ACCESS ALLEYS



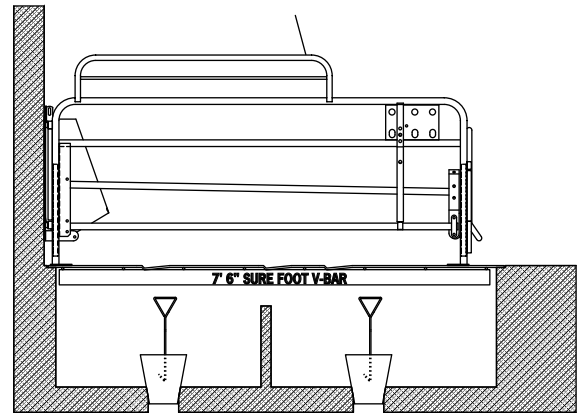
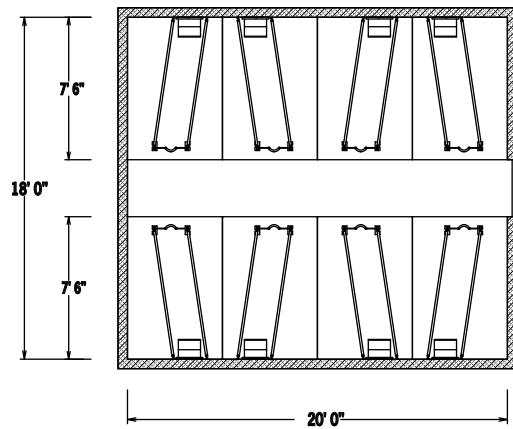
SINGLE ROW + 2 DOORS



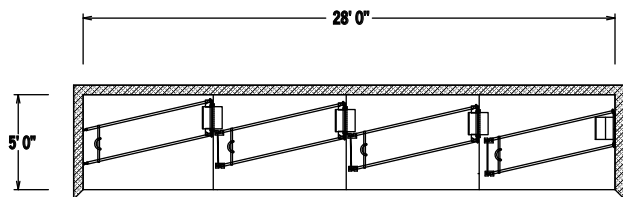
HEAD TO HEAD



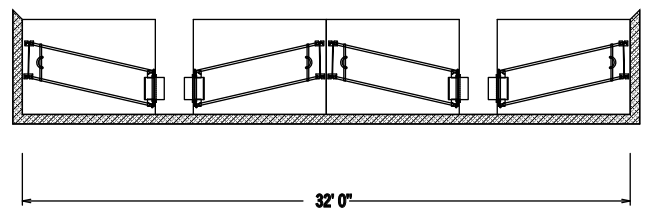
TAIL TO TAIL



SIDWAYS (IN A ROW)



SIDWAYS (IN A ROW)



**GUIDE TO HELP DETERMINE DRY SOW STALLS, BREEDING PENS
NUMBER OF BOARS AND GILT REPLACEMENT REQUIREMENTS**

Herd Size # Sows	Breeding Pens 85% Conception 2.4 Gestation	Boars Required	Sows in Dry Sow Barn 114 Days			Gilts in Barn At Any Time 33% Replacement
			4 Week Weaning	3 Week Weaning	2 Week Weaning	
30	1.6	2	25			
40	2.1	2	33			
50	2.7	3	41	43		6
60	3.2	3	50	52		7
70	3.7	4	58	61		8
80	4.2	4	66	69		9
90	4.8	5	74	78		10
100	5.3	5	83	87	90	11
110	5.8	6	91	95	99	12
120	6.4	6	99	104	108	13
130	6.9	7	107	112	117	14
140	7.4	8	116	121	126	15
150	8.0	8	124	130	135	17
160	8.5	9	132	138	144	18
170	9.0	9	140	147	153	19
180	9.5	10	149	156	162	20
190	10.2	10	157	164	171	21
200	10.6	11	165	173	180	22
250	13.3	14		216	225	28
300	15.9	16		260	270	33
400	21.2	22		346	360	44
500	26.5	27		433	450	55
600	31.8	? + A.I.			540	66
700	37.1	? + A.I.			630	77
800	42.4	? + A.I.			720	88
900	47.7	? + A.I.			810	99
1000	53.0	? + A.I.			900	110

MANURE PRODUCTION OF MANURE

	PER ANIMAL PER DAY		
	Imp. Gal.	US Gal.	Litre
Feeder Hogs	1.5	1.8	7.1
Sow & Litter	2.5	3.0	11.4
Dairy Cow	12.0	14.4	54.6
Beef Cow	10.0	12.0	45.5
Feeder Cattle	8.0	9.6	36.4
Laying Hen	0.1	0.1	0.5
Sheep	1.5	1.8	6.8
Rabbits	0.4	0.5	1.7

These tables are approximate and are calculated with enough water added to make the manure into a slurry for pumping.

PIT CAPACITIES

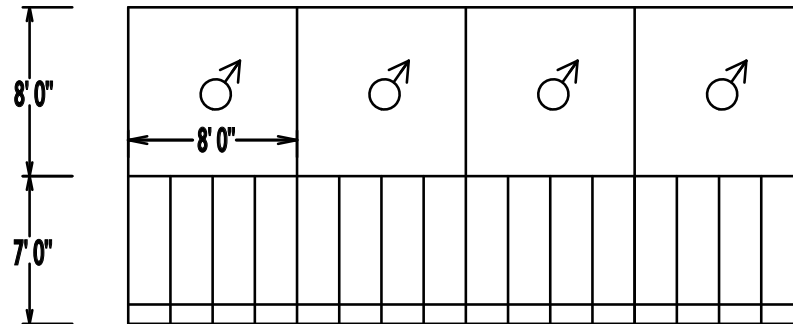
DIA. X DP	Imp. Gal.	US Gal.	Litre
50 X 8	98,218	58,920	223,036
10	122,773	73,651	278,797
12	147,328	88,380	334,554
60 X 8	140,169	168,333	637,208
10	175,212	210,417	796,514
12	210,254	252,500	955,815
70 X 8	192,325	230,969	874,309
10	240,406	288,711	1,092,886
12	288,487	346,453	1,311,462
80 X 8	251,120	301,578	1,141,592
10	374,000	377,092	1,427,444
12	376,800	452,510	1,712,933
90 X 8	315,381	378,750	1,433,722
10	394,221	473,432	1,792,129
12	473,724	568,909	2,153,549
100 X 8	392,500	471,365	1,784,305
10	490,625	598,206	2,230,038
12	588,788	707,057	2,676,494

To calculate square or rectangle pits:

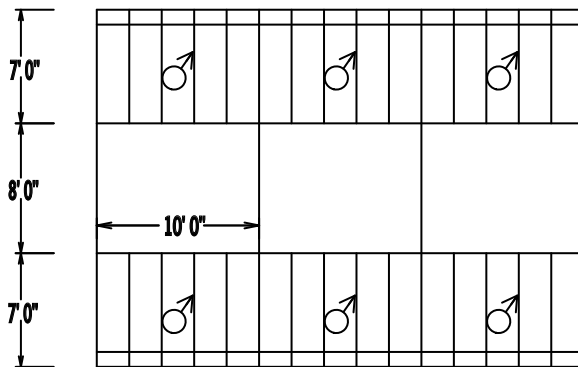
Cubic Feet x 6.25 = Imperial Gallons
 x 7.51 = U.S. Gallons
 x 28.41 = Litres

In metric, 1000 Litres = 1 Cubic Metre

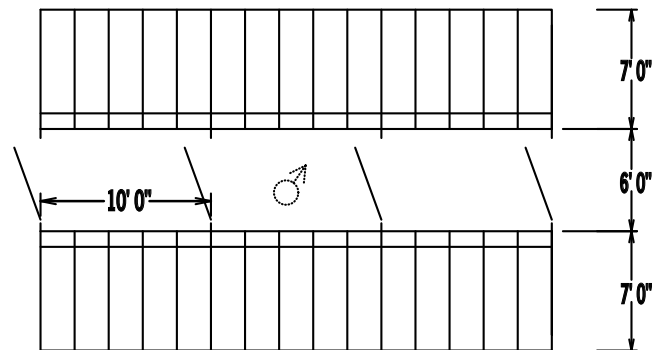
SINGLE ROW WITH BOAR PENS BEHIND



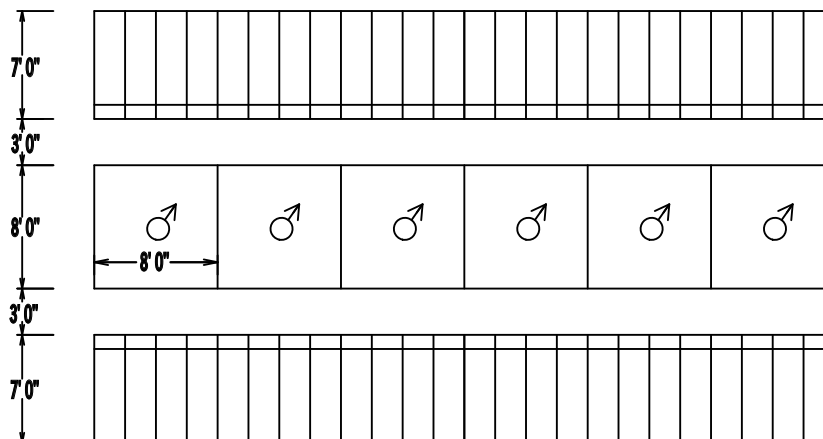
DOUBLE ROW WITH BREEDING IN BETWEEN + BOARS IN STALLS



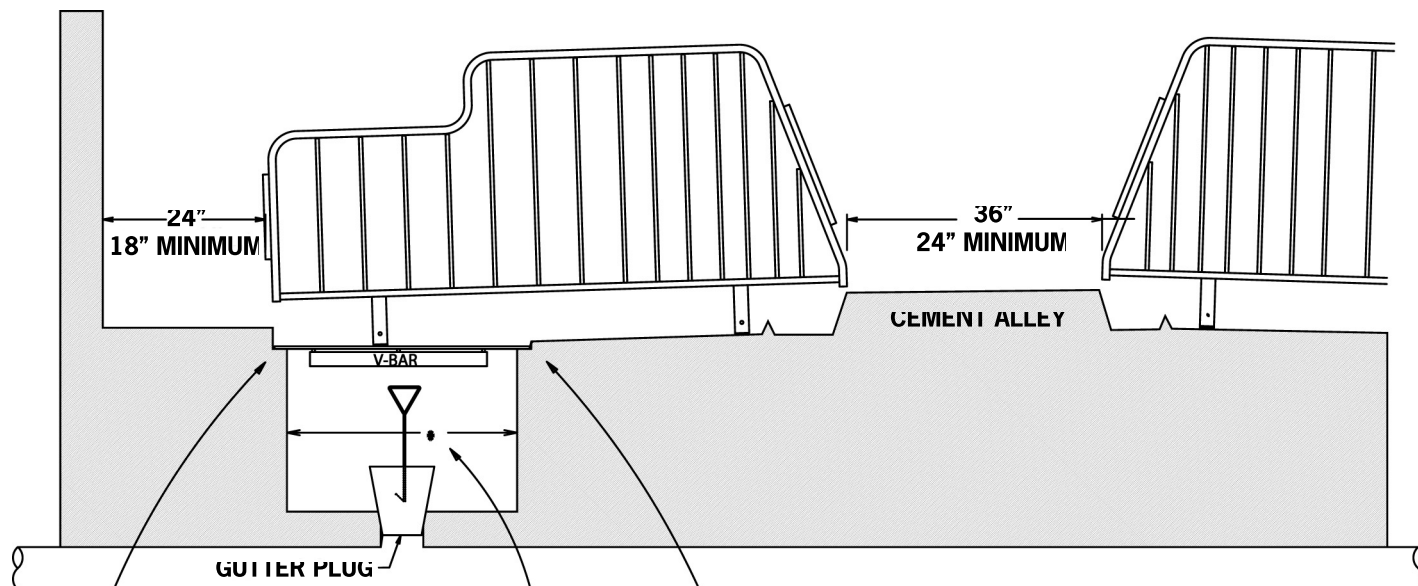
HEAD TO HEAD + STIMULATION PENS



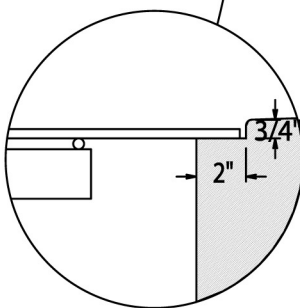
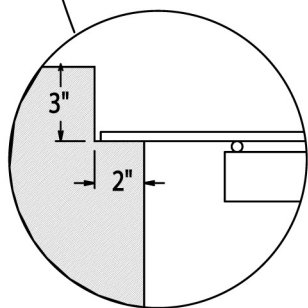
DOUBLE ROW WITH BOAR PENS IN THE CENTRE



GESTATION



20 1/2" I.D. FOR 24" V-BAR
26 1/2" I.D. FOR 30" V-BAR
32 1/2" I.D. FOR 36" V-BAR



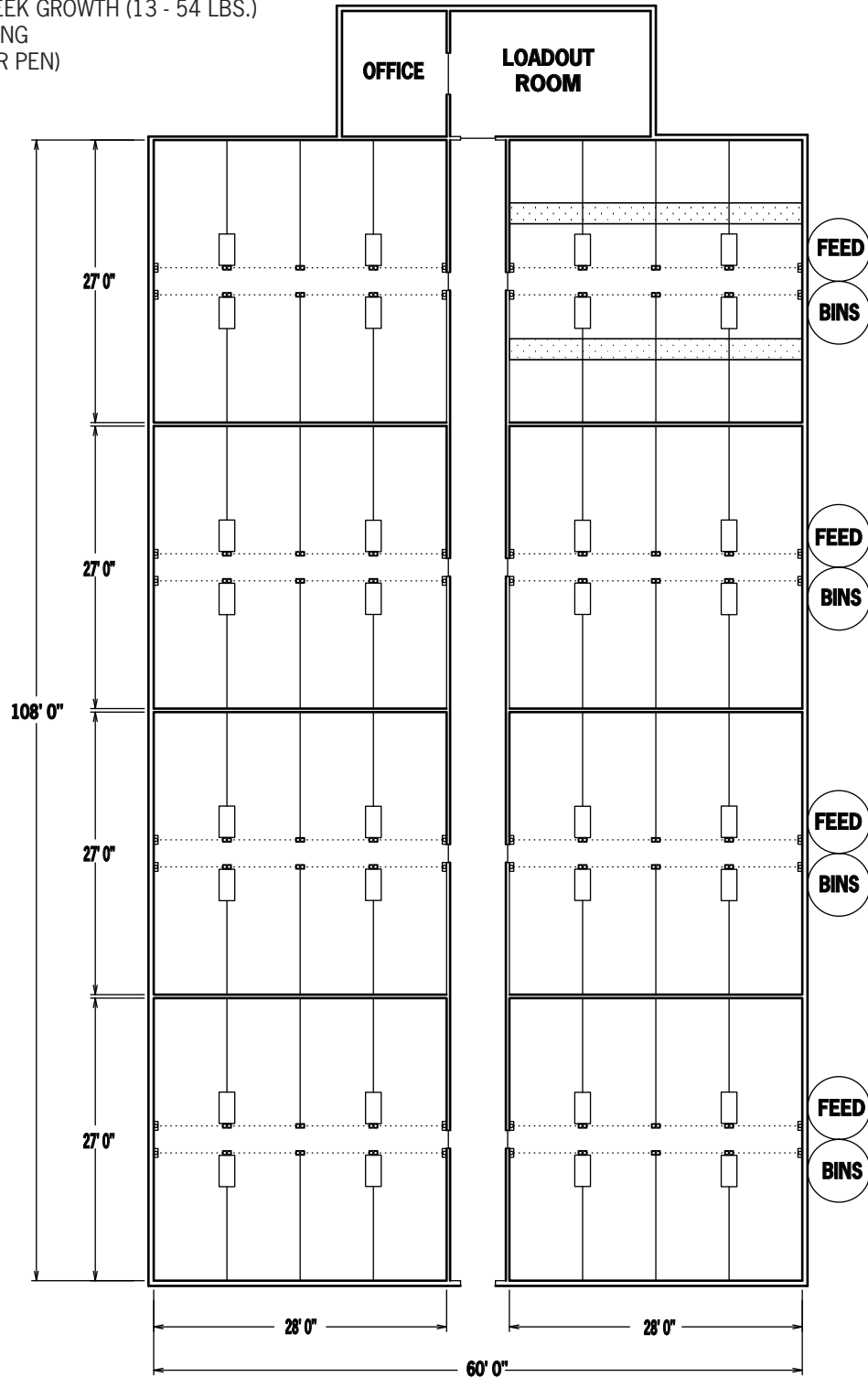
AREA PER PIG REQUIRED FOR FARROWING, WEANING, FINISHER, GESTATION & BREEDING

The chart also shows the weight of the pigs at various weeks of age. Pigs growing at this rate are average. (With good management, these growth figures can be exceeded).

AGE WEEKS	WEIGHT		AREA		COMMENTS
	LBS.	(KG)	(SQ. FT.)	(SQ. M)	
FARROWING					
2	10	(4.5)	35	(3.25)	Crate & Creep Area (5' x 7') LACTATION
WEANERS					
3	13	(6)			
4	17	(8)			
5	21	(10)			
6	27	(12)			
7	36	(16)			
8	44	(20)	2.8	2.8	(7 WKS IN WEANER PENS)
9	54	(25)	3.0	3.0	
FINISHERS					
10	65	(29)			
11	75	(34)			
12	85	(39)	4.0		
13	96	(44)			
14	107	(49)			
15	118	(54)	5		
16	129	(59)			
17	140	(64)			
18	151	(69)	6.0		
19	163	(74)			
20	174	(79)			
21	185	(84)			
22	196	(89)	7.0		
23	208	(94)			
24	220	(101)			
25	230	(105)			
26	240	(109)	8.0		
DRY SOWS					
115 Day Gestation Period			20 - 25	(1.86 - 2.32)	Sows (Loose Pens)
			15 - 20	(1.40 - 1.86)	Gilts (Loose Pens)
			14	(1.3)	Dry Sow Stalls (Sows & Gilts)
BOARS					
Holding Pens		6' x 10'			(Hand Mating Only)
Breeding Pens		8' x 10'			(8' Sides Minimum)
Stalls		24" x 7'			(Small Boars)
Stalls		28" x 7 1/2'			(Big + Long Boars)

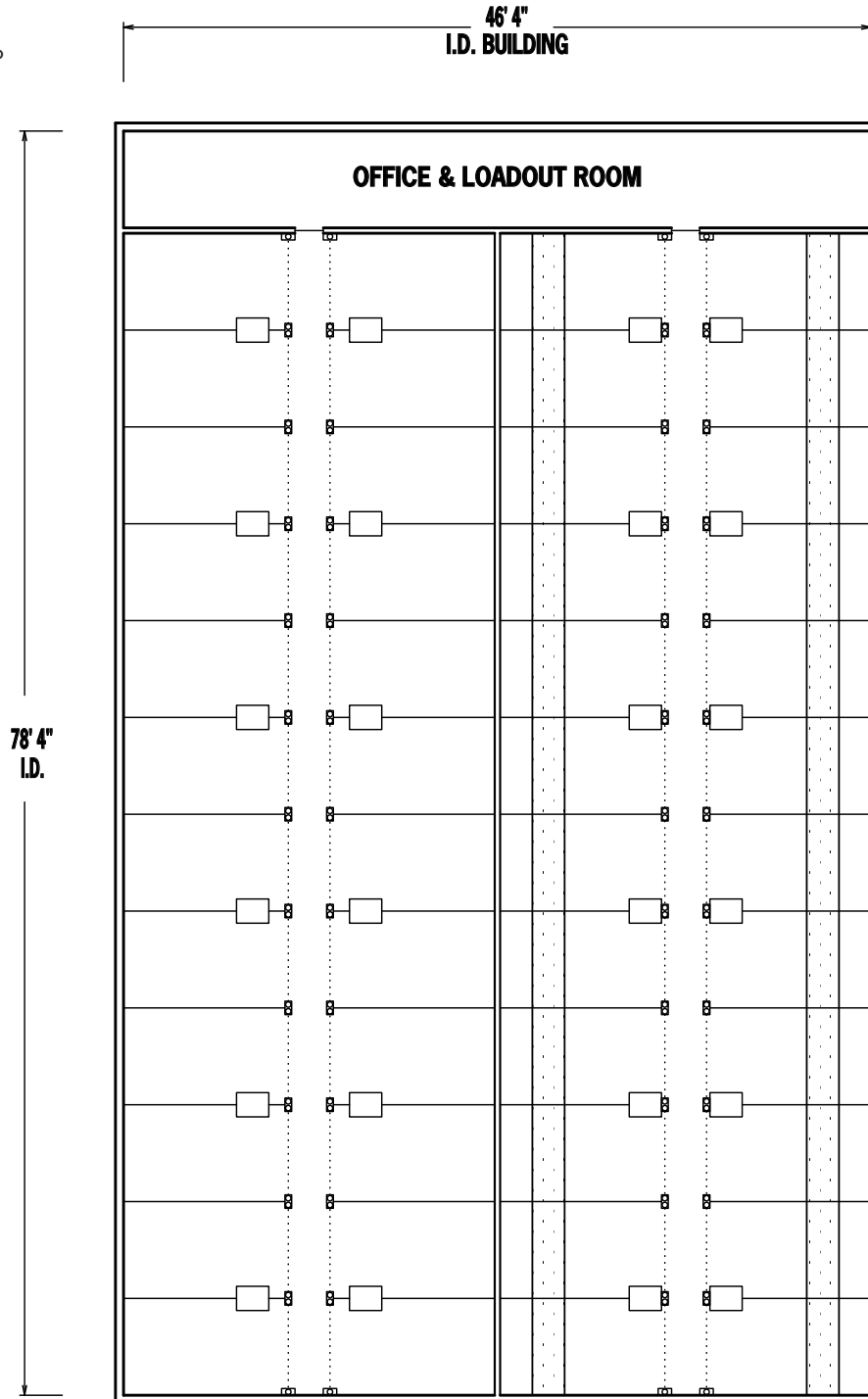
**1500 HEAD WEANER BARN (2 WEEK WEANING)
 (FOR 500 SOW HERD)**

- 8 ROOMS X 215 PIGS (ALL IN ALL OUT)
- 7 ROOMS WITH PIGS = 7 WEEK GROWTH (13 - 54 LBS.)
- 1 ROOM EMPTY FOR CLEANING
- 3 SQ. FT. / PIG (27 PIGS PER PEN)
- PENS = 7' WIDE X 12' DEEP
- 3' DOUBLE SIDED FEEDERS
- FLOOR HEATING










1000 HEAD WEANER BARN

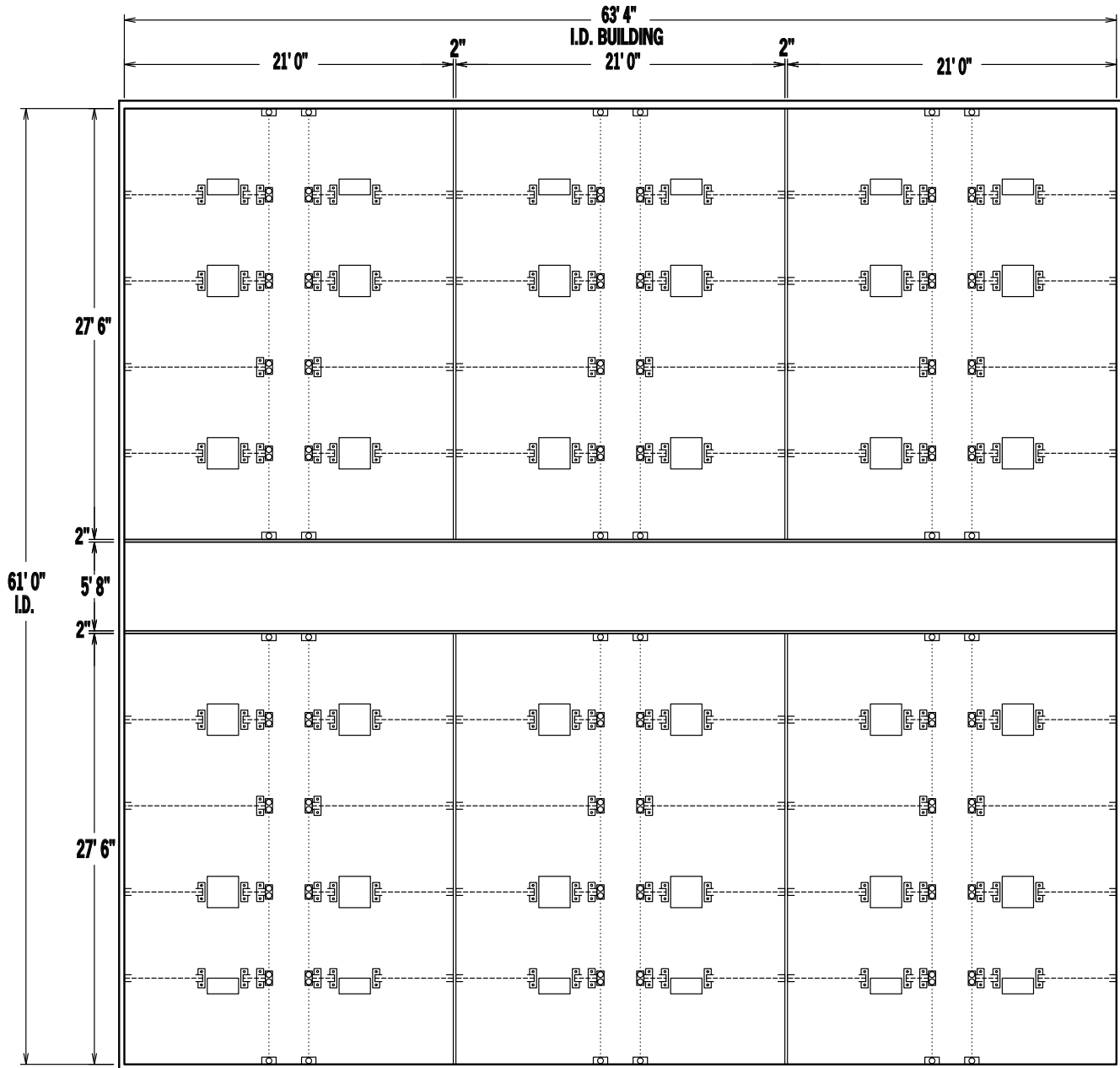
- 2 ROOMS X 500 PIGS
- 3 SQ. FT. / PIG
- 21 PIGS PER PEN
- PENS = 6' WIDE X 10' DEEP
- 2' DOUBLE SIDED FEEDERS
- FLOOR HEATING (PROGRESSIVE FARMING)



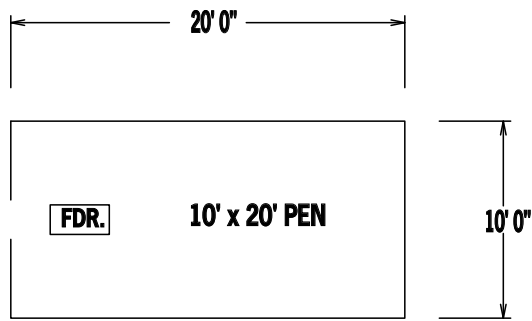
300 SOW NUCLEUS WEANER BARN

LEGEND

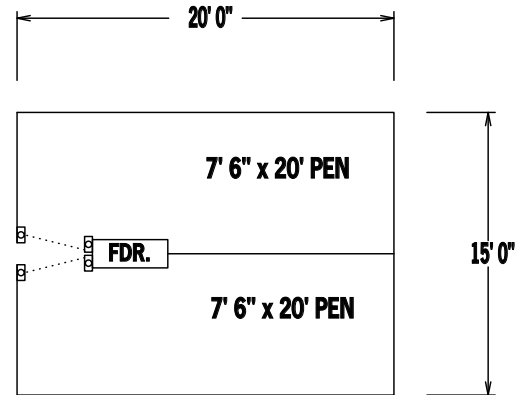
-----	STATIONARY PANEL		FLIPPER LATCH
.....	SWING PANEL		QUICK LATCH
			30" CHANNEL WITH PLATE
			30" FEEDER CHANNEL C/W FLIPPER
			WALL CHANNEL



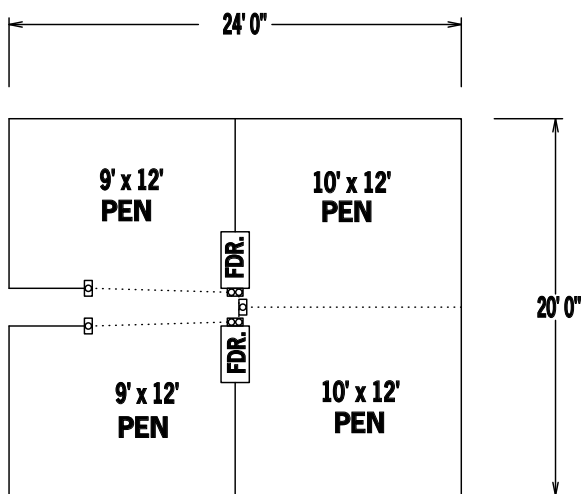
1 ROOM - 1 PEN (66 PIGS)



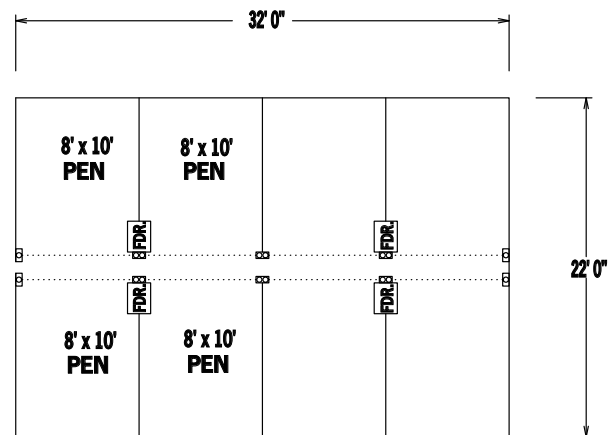
1 ROOM - 2 PENS (NO ALLEY)(100 PIGS)



1 ROOM - 1 PEN (66 PIGS)



1 ROOM - 2 PENS (NO ALLEY)(100 PIGS)



8' X 10' = 26 WEANERS - 2' DOUBLE FEEDER

9' X 12' = 36 WEANERS - 3' DOUBLE FEEDER

10' X 12' = 40 WEANERS - 3' DOUBLE FEEDER

7'6" X 20' = 54 WEANERS - 4' DOUBLE FEEDER

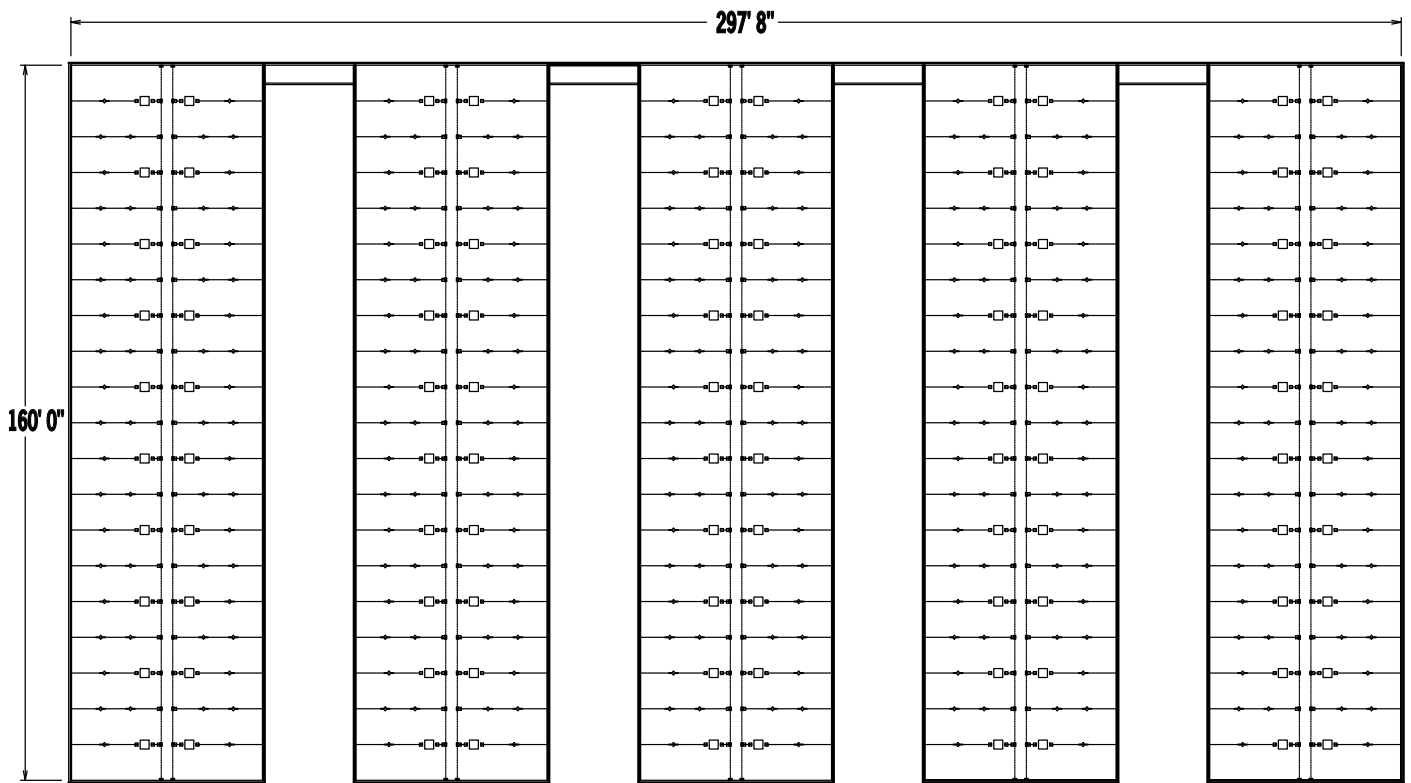
10' X 20' = 66 WEANERS - 3' DOUBLE FEEDER (BOTH SIDES)

(ALLOW 10 TO 12 PIGS/LIN FT. OF FEEDING SPACE)

VENTILATION & HEATING GUIDELINES

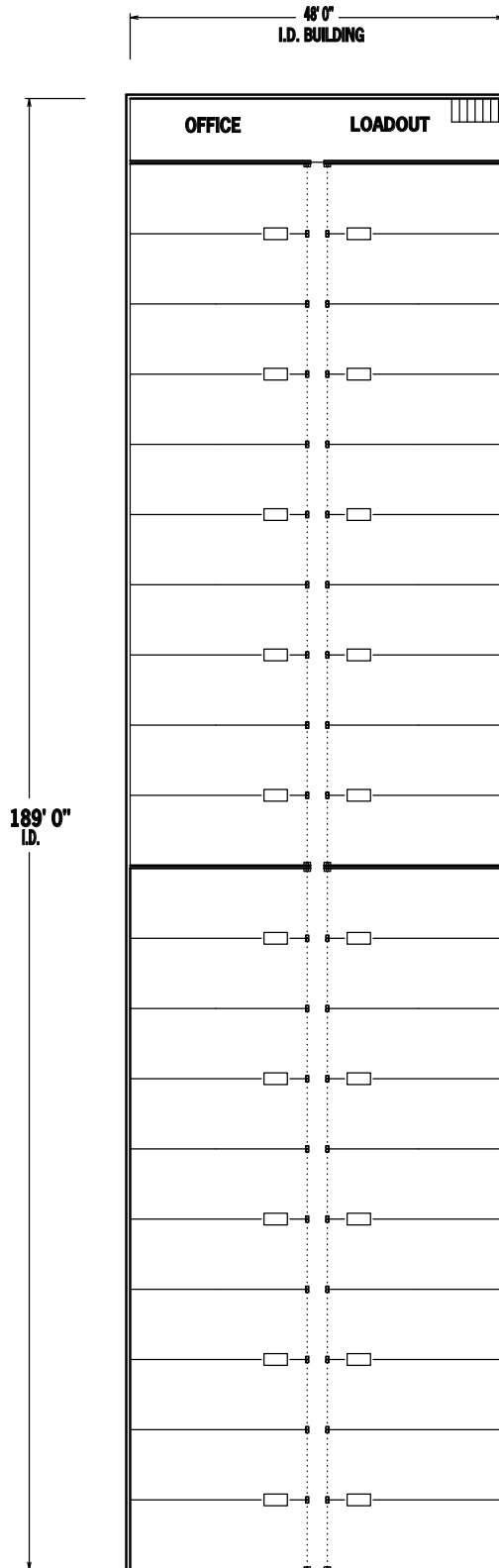
Type and Size of Pig	Minimum Ventilation Rate (cfm/ppg)	Supplemental Heat (BTU/h/pig)				
		-20°C	-10°C	0°C	10°C	20°C
Gestation/Breeding Area	10	500	250	0		
Farrowing Room (Sow & Litter)	17	1000	600	200	0	
Weaning Pig Room						
4 kg	1.3	225	180	130	90	60
7 kg	1.7	170	120	75	60	45
14 kg	2.2	110	70	30	10	6
21 kg	2.5	50	25	0		
30 kg	3.0	0				
Grower/Finisher Room						
25 kg	3.0	220	110	0		
40 kg	4.0	110	0			
60 kg	5.0	0				

FINISHER BARN

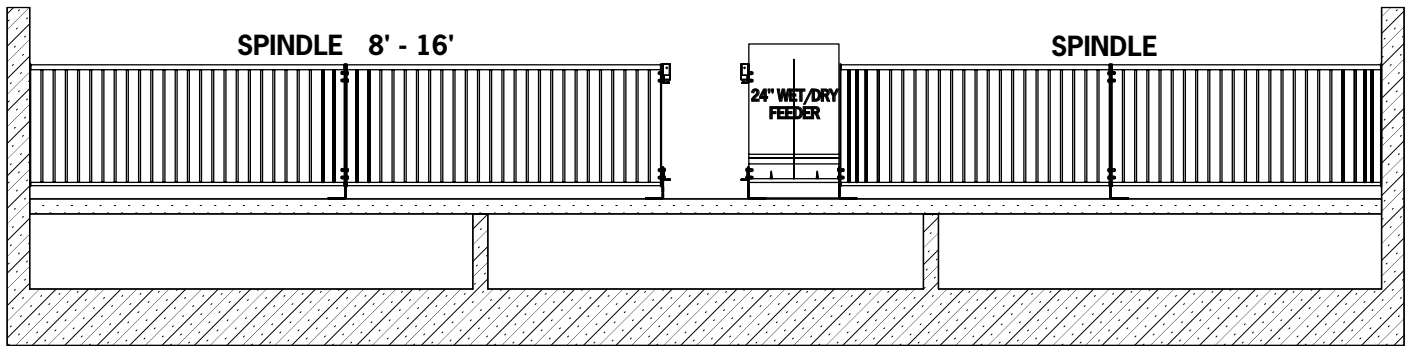


1000 HEAD FINISHER BARN

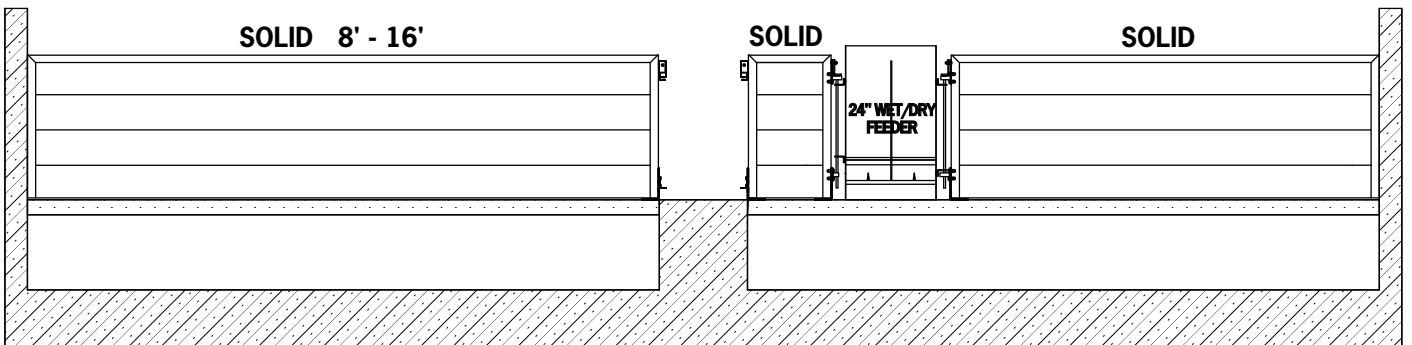
- ALL IN ALL OUT (3 SITE)
- 2 ROOMS X 500 PIGS
- 8 SQ. FT. PER PIG
- TOTAL SLATS
- 3' WET/DRY FEEDERS



TOTAL SLATS



DOUBLE PITS



HEAT PLATE LAYOUT

ASSEMBLY

H BOILER + EXPANSION TANK (APPROX. 70 BTU / HOUR / SQ FT OF HEAT PLATE)

MANIFOLD FEED & RETURN MANIFOLDS c/w PUMP
 THERMOMETER ON RETURN LINES TO SHOW WATER TEMP.

RETURN LINE NOT SHOWN

