

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

Appendix 2- Measurements and Barn Design

Feed Bunk Design

The surface(s) of the feeding alley(s) (where the feed is located) are composed of (if different around farm indicate which pens have what composition):

- A) Concrete
- B) Plastic/Resin/PVC
- C) Ceramic
- D) Fiberglass
- E) Stainless steel
- F) Rubber
- G) Epoxy
- H) Wood
- I) Other: _____

Does the barn design use headlocks? Y / N, If so fill out the following. If not move onto the next question (try and use cm as the measurement whenever appropriate):

Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Feed Bunk Length (from first to last head gate)				
# of Headlocks (count total for each pen)				
Headlock Width (from big post to big post)				
Feed Side Height (to base of manger)				
Feed Side Height (to mid-point of head gate)				
Feed Side Height (to top of rail or head gate)				
Cow Side Height (to base of manger)				

Does the barn design use a post and rail system? Y / N, If so fill out the following. If not move onto the next question (try and use cm as the measurement whenever appropriate):

Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Feed Bunk Length (from start of bunk to end)				
Feed Side Height (to base of manger)				
Feed Side Height (to top of rail or head gate)				
Cow Side Height (to base of manger)				

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

Other Feeding Area Measures

The following questions are about feeding alley(s) (where the cows stand when eating from the bunk):

What is the composition of the flooring around the feeding alley (indicate in notes if it does not fit a description or if it is different within the pen)

Pen	Smooth Concrete (SC)	SC with groves (SCG)	Concrete with Rubber Mats (CRM)	Slated Floor (SF)	Other (please specify)
Pen 1					
Pen 2					
Pen 3					
Pen 4					

Notes: _____

Water Measurements

Pen	Number of Water Bowls	Dimensions (L X W X D)
Pen 1		
Pen 2		
Pen 3		
Pen 4		

What is the width of the feed alley(s)?

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

Pen	Alley #1	Alley #2	Alley #3
Pen 1			
Pen 2			
Pen 3			
Pen 4			

Cow Traffic System

What is the cow traffic system used?

- A) Milk First B) Feed First C) Free Flow

If A or B is water offered in both the feed and lying areas? Y / N

Robotic Milker Set Up

Draw the entry and exit route for the cow (AMS):

What are the dimensions of the crossover by the robot?

Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Crossover Length				
Crossover Width				
Crossover height				

Lying Area

The surface of the stall is made of?

- A) Concrete C) Mattress E) Other (Specify): _____
B) Rubber D) Deep Bedding

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

What are the main type(s) of bedding used (select all that apply and indicate pens beside choice):

- | | | |
|-----------------------|---------------|---------------------------|
| A) Wheat Straw | F) Wood chips | K) Recycled manure solids |
| B) Barley Straw | G) Shavings | L) Recycled Paper |
| C) Oat Straw | H) Sawdust | M) Cardboard |
| D) Other Cereal Straw | I) Sand | N) Other: _____ |
| E) Crop residue | J) Peat moss | |

Is there any additional information about the lying area to discuss:

Does the lying area consist of (select all that apply):

- A) Stalls B) Pack C) Other: _____

What is the approximate depth of bedding? _____

Lying Area- Stall Specific

What is the width of the lying alley(s) (any alley where feed is not offered on either side)?

Pen	Alley #1	Alley #2	Alley #3	Alley #4
Pen 1				
Pen 2				
Pen 3				
Pen 4				

How many stalls are in each row of each pen?

Pen	Alley #1	Alley #2	Alley #3	Alley #4
Pen 1				
Pen 2				
Pen 3				
Pen 4				

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ Date: _____ Person: _____

Stall Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Curb height (to top of stall base)				
Stall width				
Neck rail height (base to neck rail)				
Length of the stall				

Stall Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Brisket board Length (if applicable)				
Brisket board height (if applicable)				
Deterrent height (if applicable): _____				

Lying Area- Pack Barn Specific

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

For Pack Barns, what are the dimensions of the pack (break this up into sections such that total area could be added up ideally this will be triangles and squares).

Pack Dimensions	Length	Width/Height	Shape
Pen 1			
Pen 2			

Pack Dimensions	Length	Width/Height	Shape
Pen 3			
Pen 4			

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

Overall Dimensions

Dimensions	Pen 1	Pen 2	Pen 3	Pen 4
Pen Length				
Pen Width				

Other notes about dimensions:

Additional Notes about survey (describe the pen design here)

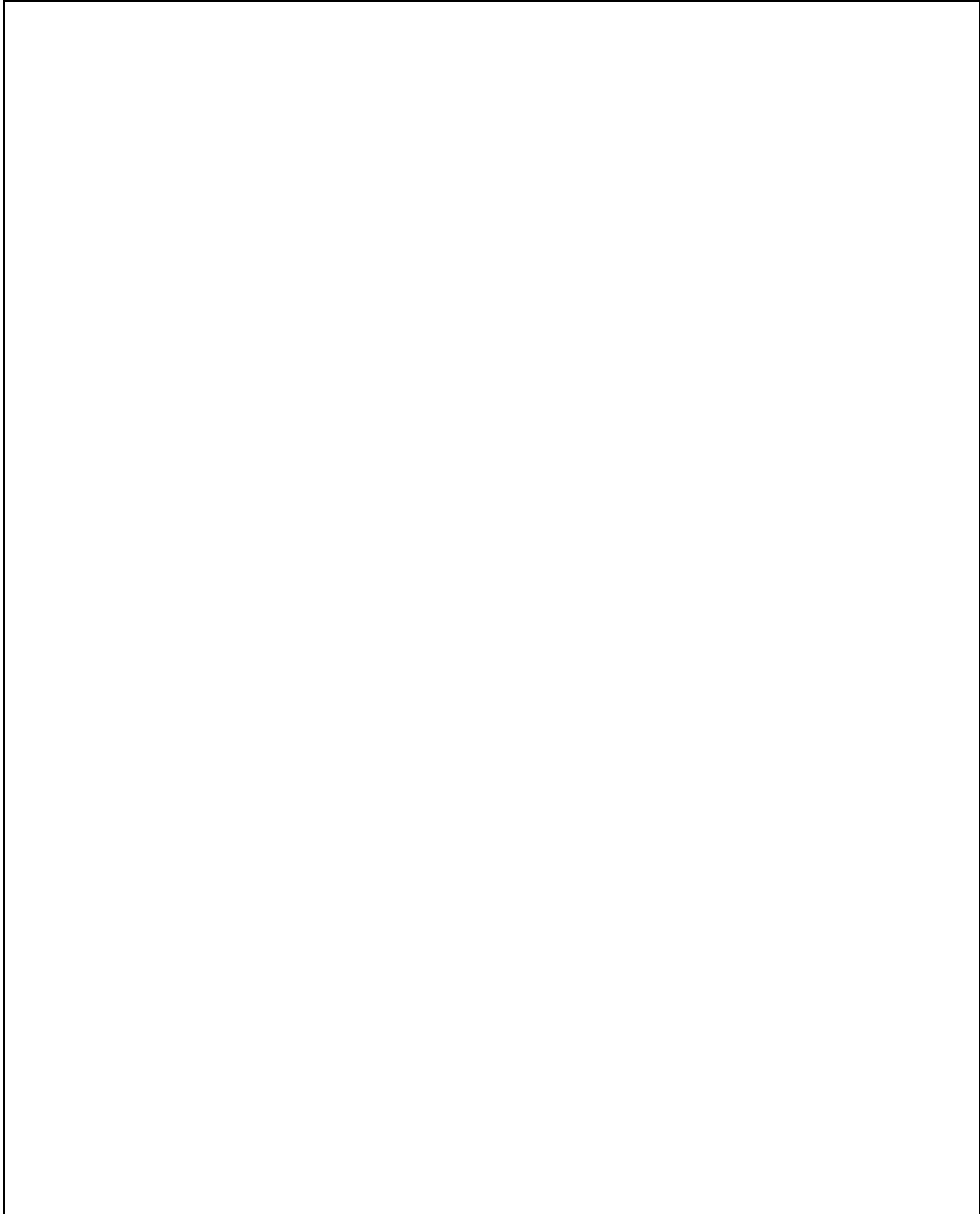
Notes: _____

Appendix 2: Matson et al., Measurements and Barn Design

Farm Number: _____ **Date:** _____ **Person:** _____

Overall Barn Design

Draw the overall structure of the barn (pay special attention to labelling pens, robot location and number, footbaths, water areas, cow traffic system flow):

A large, empty rectangular box with a thin black border, intended for drawing the overall structure of the barn. The box is currently blank.