Feed alley
• 24-30" (61-76 cm) per cow bunk space, VERY IMPORTANT
• 12-14’ (3.7-4.3 m) wide
• Be cognizant when locating equipment to prevent congestion (cow brushes, waterers, etc.)

Freestalls
• Tiled manger preferred, however mattresses also work if enough organic bedding on top
• 80” (203 cm) divider spacing minimum
• Brisket board & neck rail 70” (178 cm) from curb
• Neck rail 50” (127 cm) above bed surface
• 36” (90 cm) clear in front of brisket board for bobbing
• When many cows are perching, you’ve done something wrong

Freestall alley
• 15-16’ (4.6-4.9 m) wide if feeding on one side
• 18-20’ (5.5-6.1 m) wide if feeding on both sides
• +6” (150 mm) above feed alley level

Foot baths
• Located at exit of robot, serves as entrance
• Ensure so they can be easily filled & cleaned
• Make sure all cows can pass through
• Can also be placed in common

Post-sort separation pen
• Cows have access to feed & beds
• Return to robot possible
• Near work area (Vet room & trim chute)

Short-term
• No beds, possibly no feed access
• Cows must be removed promptly
• Common for retrofits

Fetch pen
• 8-10% fetch rate, will vary for different cow traffic layouts
• ~33” (83.8 cm) per cow fetch all fence cows at once
• Design has to be thinking in one person job
• Allow main group cows to access robot while fetch pen is in use
• Use finger gates to ease entrance to fetch pen

Feed lane
• 15-20” (38-51 cm) wide if feeding on one side
• 16-20” (41-51 cm) wide if feeding on both sides
• +1” (2.54 cm) above feed alley level
• Tiled manger preferred

Waterers
• Minimum two per pen
• Length of combined waterer to be <2” (50.8 mm)
• Place where cow flow is not inhibited with cows drinking

Foot baths
• Located at exit of robot, serve as entrance
• Ensure so they can be easily filled & cleaned
• Make sure all cows can pass through
• Can also be placed in common

Design summary
• 4 robots
• Free-flow cow traffic
• 240 cows in 8 pens of 60
• Post-milk sorting
• Centralized milking & wash area
• Flexible space can be adapted for all cow traffic scenarios
• Expandable, can be rearranged to add 4 additional robots

Freestalls
• Tiled manger preferred, however mattresses also work if enough organic bedding on top
• 80” (203 cm) divider spacing minimum
• Brisket board & neck rail 70” (178 cm) from curb
• Neck rail 50” (127 cm) above bed surface
• 36” (90 cm) clear in front of brisket board for bobbing
• When many cows are perching, you’ve done something wrong

Feed alley
• 25-30’ (7.6-9.1 m) per cow bunk space, VERY IMPORTANT
• 12-14’ (3.7-4.3 m) wide
• Be cognizant when locating equipment to prevent congestion (cow brushes, waterers, etc.)

Waiting area
• 23’ (7 m) clear to nearest obstruction, oversize this area when possible
• Blocking fence to prevent annoyances for cow in stall
• Exit lane to prevent blocking

Vet room/Herd management room
• Near work area

Work area
• Space for a trim chute
• Near separation pen
• Access to cow for both sides

Robot access gates
• Allows simultaneous robot access for queued fetch cows & on-time cows providing 24/7 free access
• Swing gate style
• Make sure they aren’t noisy