

NATIONAL STOCKYARD SYSTEMS



*Australia's Best Stock Yards,
designed by stockmen for stockhandlers*

Sheep Yards



NATIONAL STOCKYARD SYSTEMS PTY LTD

Australia's Best Stockyards

Sheep • Cattle • Horses • Goats • Alpacas

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NEW

Exciting Innovations

National Stockyard Systems was awarded an Award For Excellence at the Australian Nation Field Days at Orange in October 2008

The judges gave the award for the whole system from the moment the sheep enter the yards until they leave the yards.



One recent improvement is a simple push – pull gate prior to the draft at both the main V Race draft and prior to the draft box at the end of the main working race. This gate is much quicker and less cumbersome than the traditional tumble – swing gate.



NEW

Additions to our Sheepyards



For more ramps see our loading ramp section in our cattleyard brochure or website

A new range of sheep loading ramps is available utilizing our patented pre cast concrete floor. Ramps can be adjustable in height. All fixed height ramps have a variable height bumper board and all ramps are supplied with spigots which drop through sleeves. The spigots are then concreted ensuring that trucks cannot shunt the ramp about.

An ideal location for the ramp is adjacent to the main force. Sheep will load very well here as they think they are escaping both the main race and V Race.

The force for the load ramp is 2 gates which will lay back beside the ramp when not loading. This ensures uninterrupted access around the force and race for operators and dogs.



Many Western clients are purchasing yards with the outside perimeter goat proof. These panels are 8 rail, 1300mm high with bottom 5 rail spacing's reduced to 90mm.



OVERVIEW

“These sheep yards are designed for one person operation. The finished product is the result of years of development and fine tuning. The basic bugle and fundamental yard design is a copy of a timber set of yards that I built on a property that I had leased at Manilla in the 1980’s and 90’s. One person drafting (with dogs) was easy and drenching 400 wethers per hour was normal.”

Murray Schaefer
Managing Director
National Stockyard Systems

IMPORTANT INFORMATION

- **Our patented bolt together system will handle uneven or sloping ground.**
A 3.2 meter can rise or fall 6 inches via our slotted holes. Greater rises or falls are possible using our extender cleats. **Importantly, impact is still spread over the adjacent panels if a sheep hits hard**, minimizing damage to sheep and yards.
- **The steel we use is Grade 450 (very high tensile and gal inside and out)**, Australian Made and generally is sourced from Bluescope Steel.
- **Our bolt together system will eliminate rattle noise and is stronger than pins**, acts as a theft deterrent and does not take much longer to erect than a pin together system.
- Alternative joining systems utilizing cleats and pins result in a trap point for animal legs and human arms in the gap between the panels at the top
- If a gate does swing back to lay flat against the adjacent panel, then it is very easy for the gate hinges to be broken, or the gate hinge to be torn off the post (due to the fulcrum effect).
That is why some other yard manufacturers swing their gates on the outside perimeter of the yards. (This results in the operator having to do a figure of 8 around the yard when transferring sheep to the next yard.) **Our gates generally swing from the inside, thereby minimizing operator walking and greatly enhancing sheep flow.**
- **The shape and placement of our slam catches makes them non-bruise.** Also there is a 90 mm long slot to cater for rise and fall of the gate. This prevents having to manually lift a sagging gate to engage the catch as per traditional slam keepers.
- **Our pricing is GST inclusive** (as per the law)
- **The longer panels we use result in the erected yards being bigger than they appear on paper.**
- **We provide realistic working and holding capacities.** Holding capacities are based on 3 sheep / square metre. **Working capacities leave room for drafting and processing.** When comparing yards with other suppliers it is vital to check the total area of the yards and flexibility with regard to processing. (Our capacities equate to good conditioned 4 tooth medium wool wethers with a 6 month skin. Big framed ewes with plenty of skin and a high percentage of lambs will need double the area. – to relate it to your individual operation, a standard semi deck has approximately 29M² of deck space – How many of your sheep do you load per deck?).
- **The automatic stoppers on our gates prevent the gates over riding the keeper when slammed and eliminates the gate being pushed through when counting. The slam catch pin rotates back behind the gate post so as not to be a rib catcher when counting.** The absence of chains on all gates under 3.3 metres eliminates noisy chain rattle and chains flapping about on the end of gates or off posts.
- A 360 degree swinging gate with a double gudgeon and chain latch can result in a big gap between the gate post and the latch post. Lambs can file through and adult sheep get their heads stuck in the gap. Drop bolt gate latches are a real rib catcher and can be slow to engage.
- **Main drafting race body is 4.0 metres long** to give more time for accurate ear mark drafting
- **The draft gates on both the V Race and Draft Box have 7 rails** so lambs cannot get their head between the rails. Also the gates are longer than standard to make drafting easier.

- **Standard height is 1100mm (3'7")** which is higher than in the past as sheep are getting bigger and a broken legged lamb is now a dear bag of dog tucker. However the top rail of the main working race is can be incrementally lowered to facilitate beside race husbandry.
- **Standard race internal width is 700 mm (2'4")**. This is still a comfortable width for drenching, mouthing etc while in the race. Some others supply a race that is only 550 to 600mm wide. If a big sheep gets spun around or tipped over in a narrow race then the operator often has to back it all the way out of the race. Also when a race is too narrow, and a woolly sheep baulks or stops, then it stops the whole flow of sheep as other sheep cannot file past it.
- **The V Race is separate from the main working race.** If sheep have to file through the V Race into the working race it makes for a slow fill. Also sheep will not pack up tight.
- **The draft box shown at the end of the race (forming part of the main working race) will be used often** – taking off the odd cull, fly blown, neighbour's stray, rams out of the ewes etc. In addition it is extremely time saving when classing or mouthing etc.
- **Vertical rails in the race gates** minimise the chance of a broken leg.
- **The yards are designed to be fully erected and then the concrete is poured in place.** The V Race and Draft Box have their own inbuilt formwork so the only additional formwork required is along the race.
- Yards can be easily adapted for load out facilities, count out pens and shed loading. An important consideration is direction of race in relation to the shed. It is vital for sheep flow that the finished yard does not have the bugle, working race or V Race headed back toward the shed

We are often asked by resellers to sell through them, but we only sell direct. Thus, by purchasing direct the end user is receiving practical advice and a superior product at a lower cost than going through a reseller. *Some resellers push clients into products they make the most margin on, rather than the most suitable product.*

PANEL STYLES

Two pane styles are available or some clients choose to use the 6" Beam panels in the main working race and force with the 6 rail oval in the balance of the yards.

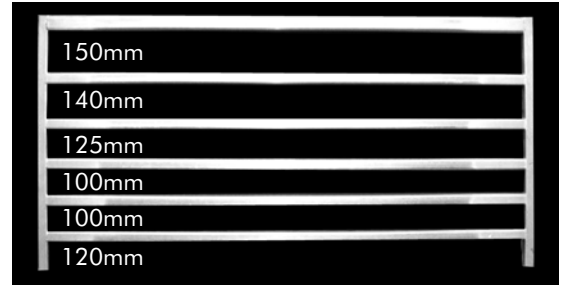
No mesh is used in the yards as mesh has been responsible for many dogs breaking their legs and sheep breaking their necks



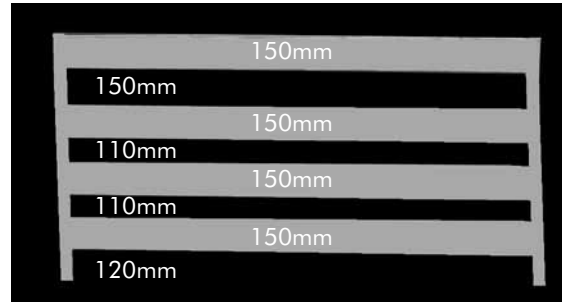
PANEL STYLES (cont.)

The 6 rail Oval panel has a 75 x 40 mm rail on top as this is the rail that is subject to pressure when sheep hit it with their brisket. The other five rails are 53 x 35 mm oval rail. The strength of these rails eliminates the need for a support strap in the middle of the panel as is necessary when panels are made from small diameter pipe. A flat bar support in the middle of the panel will result in many more broken horns with resultant fly strike.

The four rail 6" Beam panel is the strongest panel on the market and virtually eliminates broken legs in sheep or dogs. The flat side is always placed inside of perimeter yards and inside as yards work their way back from the force. Because of the high visibility of this panel sheep tend not to have a go at it.



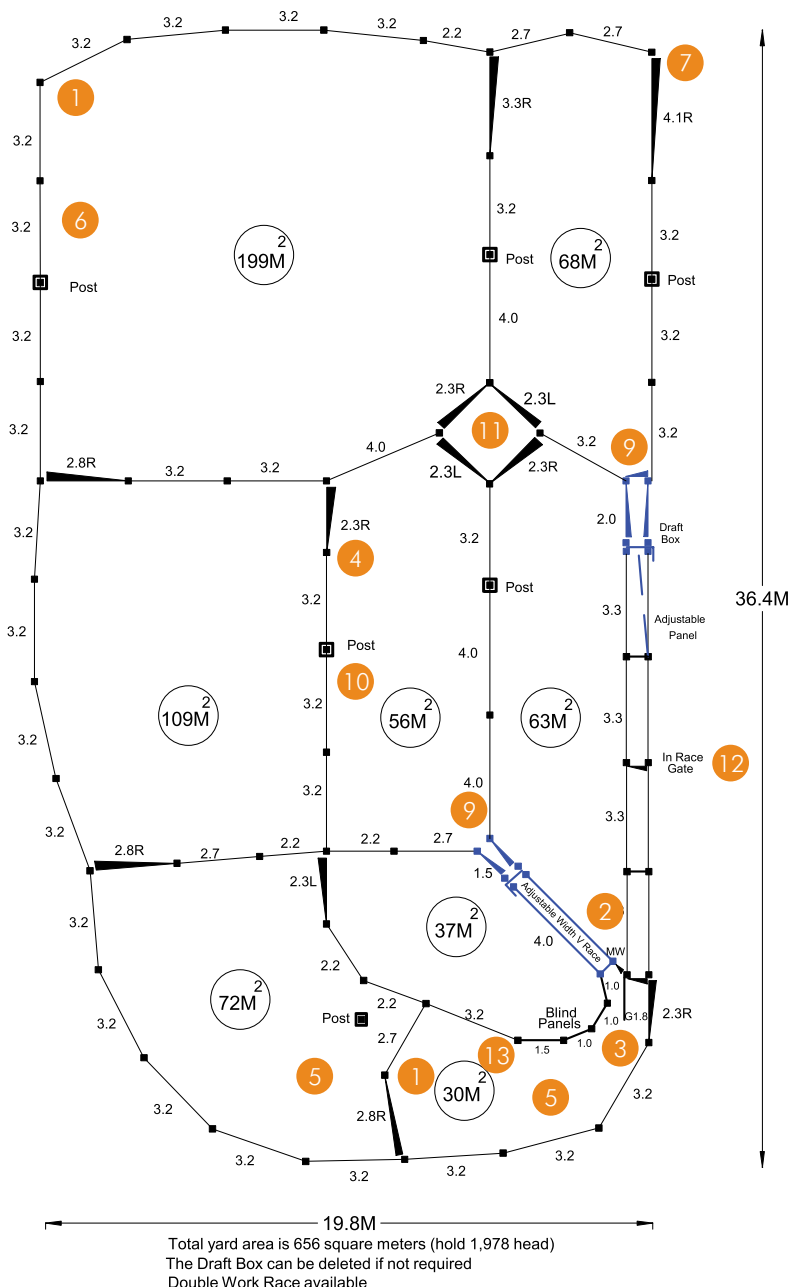
6 Rail Oval Panel 1100mm high



6" Beam Panel 1100mm high

YARD DESIGN

NSS-1200-15MSR



- 1 Yards have rounded backs to encourage stock flow. No working yard corner is under 90 degrees
- 2 Manway provided between force and inside of working race
- 3 Working Race and V Race entrance has one side parallel to the race preventing 2 sheep jamming and then both turning back. Generally the outside sheep will go forward and the inside one will follow. The entrance to the working race is off set so as not to cause a bruise point.
- 4 Gates fold right back 180 degrees (symbol) and through 100 degrees. Gates are hinged to minimize operator walking and maximize sheep flow. Gates cross over where needed for stock transfer.
- 5 Yards get smaller as sheep approach race.
- 6 The longer panels used in outside yards balance the yards, and, offer better value for money.
- 7 Wide entrance gates are standard on large yards.
- 8 The yards go together like a meccano set, thus gates can be added and positions altered
- 9 3 Way draft out of the working and V Race.
- 10 Sheep in main exit yard are visible to sheep entering V Race which assists sheep flow
- 11 Attwood Diamond in many plans makes correcting drafting mistakes easy
- 12 Race dividing gate standard on longer races to minimize smothering of weaners and woolly hoggets.
- 13 Force yard gets bigger as the race increases in length. Forces are designed to hold 1 1/2 races meaning that the force only has to be filled every second race fill.
- 14 An often repeated comment from clients is that the actual yards are bigger than they appear on paper
- 15 Standard plans cater for sheep running anti-clockwise. Dogs and operators work the outside of the race. Most people are right handed and this is why standard flow is anti-clockwise (hands are not crossed over when drenching or mouthing etc) however the yards can be mirror reversed if required. (See page 13)

THE STEEL

Rail profiles are manufactured by Australian Tube Mills. The sections are doubly – symmetric oval for increased bending strength, bruise minimisation and stiffness in stockyard applications. The rail is manufactured to High Tensile Grade 350LO- 450LO, conforms to Australian Standards AS 1163, and is galvanised inside and out for long lasting rust protection. The posts used conform to the same properties as the rail. The 6" Beam has a double rounded back and is fully enclosed to prevent dirt build up.



The SupaGal is manufactured and tested to meet the requirements of the following specifications
*AS/NZ 4792 _ Hot Dip galvanised (zinc) coatings on ferrous hollow sections applied by a continuous or a specialised process
*Minimum Coating Mass : 100g/M2 inside and out.



THE JOINING SYSTEM

Best of both worlds “the environment of permanent yards with the flexibility and price of relocatable yards”



- The joining system utilises elongated hole cleats, which mean that the panels will follow most ground undulations.
- Bolts are M12-30 hot dip galvanised with a wide flat head. Washers are hot dipped 32mm wide and nuts are standard hot dipped.
- **This system is protected by Australian Registered Design No 14534/2005 and totally eliminates the noise associated with conventional pinning systems.**
- Whilst eliminating panel rattle noise, gate sag etc the joining system will offer a degree of movement if a sheep hits a panel hard.
- It only takes about an extra 10% time to build the NSS yards compared to others. (Dropping a pin in or putting a nut and washer on the bolt is the quickest and easiest part of yard erection).
- Delivery and erection is a service available to clients if required.
- The need for cost-adding false posts that some others require is eliminated.
- There is no gap at the top of the panels for a sheep, dog or horse to get a leg caught in.

PEGGING DOWN



Ground pegs are supplied with all NSS yards. Two pins are supplied with all gates, manways, bows and sliding gates. Y16mm deformed bar pegs are supplied. If yards are **not** pegged down the yards **will** move and distort under normal pressure. If the panels are also required to be pegged, then a peg down plate is supplied and the ground pegs are hammered 400mm into the ground.

IN GROUND POSTS



Posts are supplied to strengthen straight runs. The posts are incorporated as the yards are built. Once the yards are built, the hole is marked; the adjoining panels unbolted, the hole dug, post placed in hole, panels rejoined and concrete poured. This is best done when the race and draft are concreted.

WE OFFER A COMPLETE SERVICE

WE CAN CUSTOM DESIGN to work in with existing infrastructure (lane ways, holding paddocks, shearing sheds, or shade trees etc)

WE CAN DELIVER Delivery charges are applicable but our experienced driver / yard builder will stand the yards up when he delivers. The only thing you will have to do after he goes will be to tighten the bolts, drive the ground pegs in, concrete and then let the dogs off the chain.

WE CAN ERECT but generally erect with your assistance otherwise you are paying for a person to travel to and fro sitting in the truck



THE GATES

The gate system and joining system are protected by Australian Registered Design No 11434/2005 and Australian Patent No. 2009100939.

This revolutionary gate and joining system was also awarded the Encouragement Award at the prestigious "The Land & NSW Farmers Association Farm Inventor Of The Year Competition" at Ag Quip 2005.

The system is exclusive to National Stockyards Systems Pty Ltd.



- 1 Mitre cut and welded for strength (not straight cut or bent).
- 2 Gusset braced to maintain frame square.
- 3 Ground pin cleats standard. Ground pins are included with all pricing.
- 4 Gate swings back 180 degrees to follow sheep flow and generally rests beside a panel to prevent stock being stuck behind it or breaking gate off its hinges. Also a 2.8-meter gate can be closed while standing 6 meters from the latch.
- 5 Fail safe stop prevents gate flying past slam catch.
- 6 Gate will swing over 90 degrees through if sheep flow direction is required to be reversed. This is simply achieved by lifting the gate. Solid continuous gudgeon allows for vertical movement to override the fail safe slam catch if required.
- 7 Slam catch is standard on all gates under 3.3M on all yards. Even small yards for small numbers should facilitate easy, low stress and enjoyable stock handling.
- 8 Not just a generic gate. Note the left hand or right hand closing of the gates. This tailors each gate to sheep flow requirements. (Pictured is a left hand closing gate).
- 9 Most gates close on the outside of the yard. As the gate can be swung and latched from any position this means you are closer to the centre of the yards which mean less walking.

Slam catches standard on all gates under 3.3metres

THE SLAM CATCH



- 1 20mm Bright Bar shoot pins (not round bar) Smother action, tighter tolerances and greatly enhanced zinc coating adhesion.
- 2 Hollow Bar Cams (not pipe) Grade 750 – high tensile and very hard wearing – guarantees cam matches shoot bar with no seam.
- 3 Linished leading edges results in easier closing and prevents a narrow groove developing on the catch which binds up action.
- 4 Stainless Steel Cam Latch Spring give consistent longer lasting pressure than conventional springs.
- 5 All latch components are individually zinc plated prior to assembly with a 5-micron coating to ensure long-term rust prevention and ease of operation.
- 6 Body is 32 x 10mm flat for strength.
- 7 Note when the latch handle is rotated the pin withdraws behind the gate edge. This position is maintained automatically until the latch is re-engaged by the operator – Non bruise if counting sheep through gateway – in association with the NSS Sure Stop and eliminates a potential point of injury to both animal and operator.
- 8 The catch allows for up to the 70mm vertical movement in gate location and closing positions and with normal corner location, shape is non-bruise.
- 9 Protector plate prevents accidental opening of catch by stock in adjacent yard.



THE WORKING RACE



- 1 Standard width is 700 mm. This is still a comfortable width for drenching, mouthing etc while in the race. If the is only 550 to 600 mm wide and a big sheep gets spun around or tipped over in a narrow race then the operator often has to back it all the way out of the race. Also when a race is too narrow, and a big woolly sheep baulks or stops, then it stops the whole race as other sheep cannot file past it.
- 2 The strength of design eliminates the need for overhead bows.
- 3 The race is quickly adjustable in height from 900 mm to 1025 mm (after concreting). This innovation is exclusive to National Stockyard Systems
- 4 Race dividing gates are standard on all plans with longer races. This minimizes the chance of smothering weaners or woolly hoggets
- 5 All race gates have vertical rails as these positions are where sheep tend to jump. These minimize the chance of broken legs. Also sheep will run up and stand closer to a vertical rail gate than a horizontal rail gate.
- 6 The catches on the entrance and exit gates are auto catch which can be closed under pressure.
- 7 Handle on gates aid closing under pressure
- 8 Double working race available. (Note: we increase the size of the force yard when supplying a yard with a double work race.) (See page 18)
- 9 The top rail of the main working race is can be incrementally lowered to facilitate beside race husbandry.



THE V RACE



- 1 Draft module with tumble swing gate is included in the pricing
- 2 Tumble swing is closed prior to drafting (not after as with some others)
- 3 Main body of race is 4.0 metres long. This aids earmark drafting of woolly sheep
- 4 Drafting gates are 7 rail and 1.5 metres long . These longer gates make for easier drafting as you are not trying to drag a large sheep across prior to the next sheep exiting as you are with a shorter gate. The 7 rails mean that a lamb cannot get it's head between the rails, spin around and head off back up the race.
- 5 Draft gates are see through. Sheep flow is impeded if the draft gates are solid.
- 6 Draft gate handles are off set toward the operator so the operator is not leaning across the race as far. Also, their offset position and shape protects hands and knuckles when drafting.
- 7 The race width is incrementally adjustable in width at the base from 100 to 500 mm. The ability to fully open the race enables easier drafting of horned rams.
- 8 Base forms formwork for concreting
- 9 Sides do not have the tinny rattling of sheeting. Sides are solid.
- 10 Flanged entrance aids sheep flow
- 11 Tumble Swing gate is quickly operated and folds flat against the race when not in use
- 12 Swing panel either directs sheep up the working race or drafting race.
- 13 Sheep in main exit yard are visible to sheep entering V Race which assists sheep flow



THE DRAFT BOX



If you have never had a draft box at the end of your race you will wonder how you went for so long without having one. You will be surprised at the number of times you use it and how much time it will save you.

- 1 The panel prior to the draft box can be closed up to ensure sheep approach single file prior to drafting
- 2 The overall length is 2.0 metres to enable a weigh or scanning crate to be placed in it
- 3 Tumble swing gate folds flat against the panel when in use for drafting of wet / dry, wool classing, mouthing etc.
- 4 Allows for a 3 way draft out of the race.
- 5 Forms part of the main working race when not being used for drafting
- 6 Drafting off of the odd sheep is still possible without narrowing the entrance.
- 7 Base frame eliminates the need for formwork when concreting.
- 8 Draft gate handles are off set toward the operator so the operator is not leaning across the race as far. Also, their offset position and shape, protects hands and knuckles when drafting.
- 9 Box can be deleted if not required and replaced with panels and a bow.



LOADING RAMPS

We make a range of loading ramps varying in length from 3.0 metres to 5.0 metres.

Width is 740mm to aid sheep flow. If the ramp is too narrow all movement is stopped if one sheep baulks as the sheep following cannot file past the one that is baulked.

All ramps have our patented concrete floor. Steel floors should be avoided due to noise and sheep do not like stepping on a shiny galvanised floor. (They think they are walking on water.)

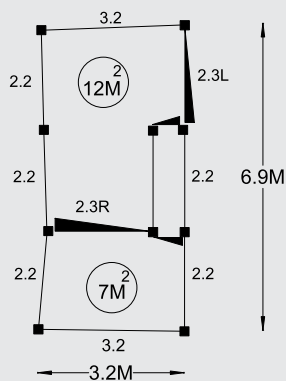
Ramps are generally located off the apex of the working race and V Race. Two gates with no external support frames are swung off the back of the loading ramp. (See page 17) These swing back and fold flat against the ramp when not loading. This allows uninterrupted access along the race for operator and dogs when not loading.

Sheep will load very well up the ramp if located in this position as they believe they are by-passing the race and draft.

See www.nationalstockyards.com.au for more information on our loading ramps. They are identical to our cattle loading ramps with the exception that the sides are lower.

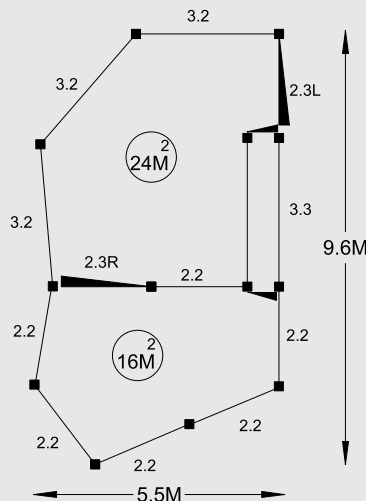
STANDARD PLANS

NSS-20-2MSR-(NVR)



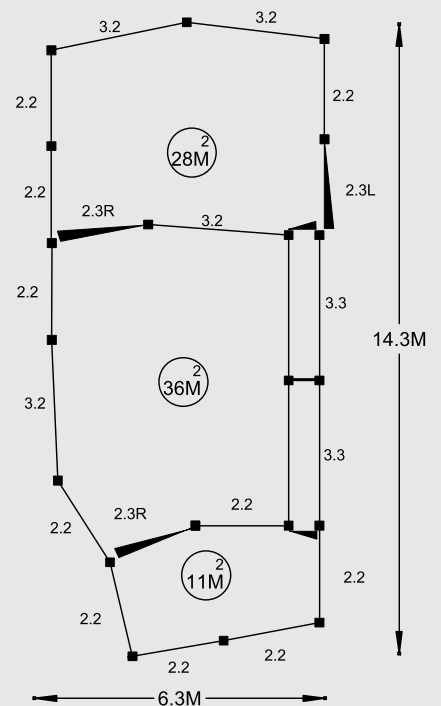
Total yard area is 21 square meters (hold 63 head)

NSS-40-3MSR-(NVR)



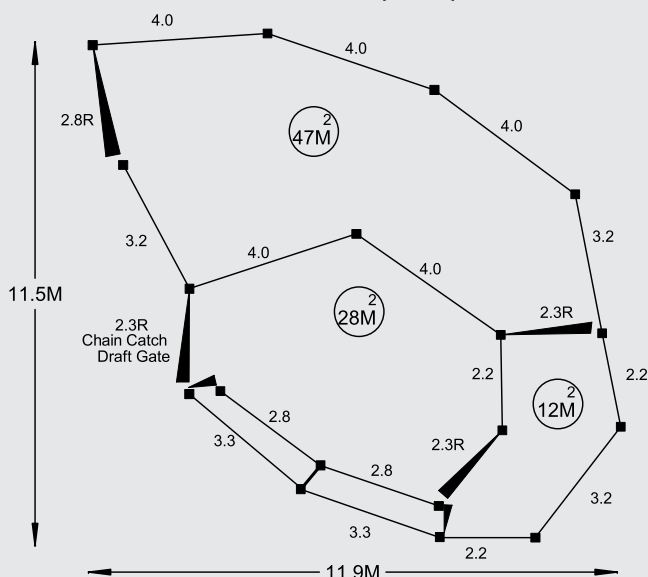
Total yard area is 43 square meters (hold 129 head)

NSS-100-7MSR-(NVR)



Total yard area is 80 square meters (hold 240 head)

NSS-150-7MSR-(NVR)

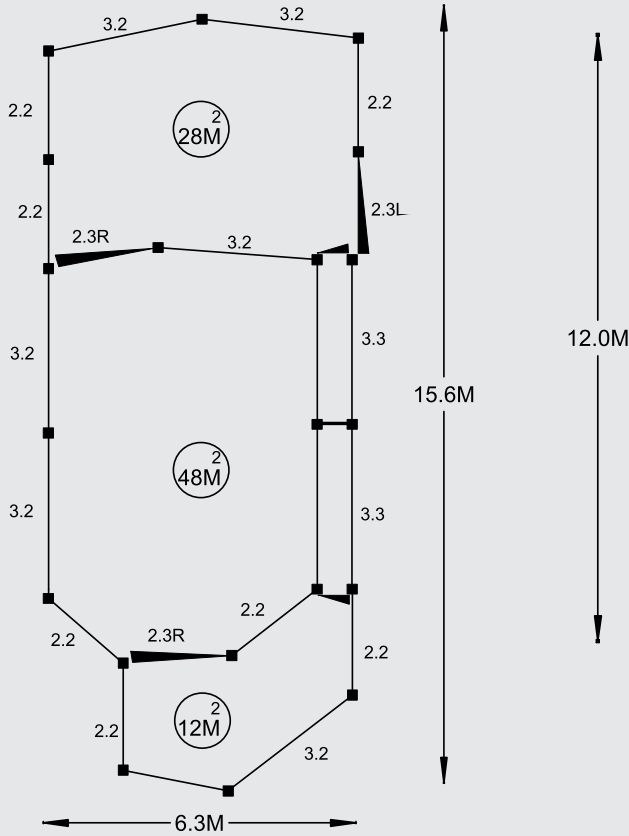


Total yard area is 90 square meters (hold 270 head)



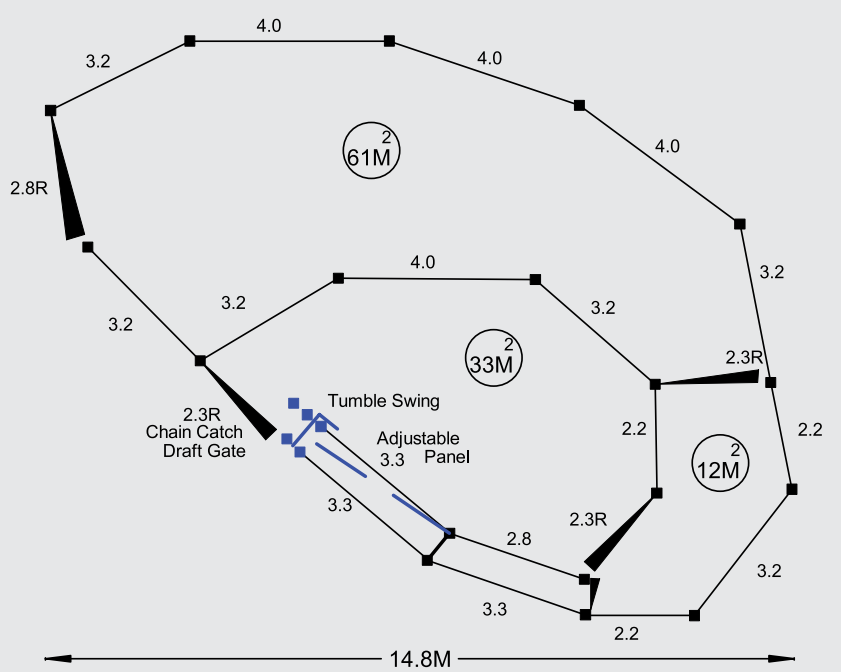
8 Rail combination panels can make holding yards dual purpose

NSS-140-7MSR-(NVR)



Total yard area is 86 square meters (hold 258 head)

NSS-200-7MSR-(NVR)



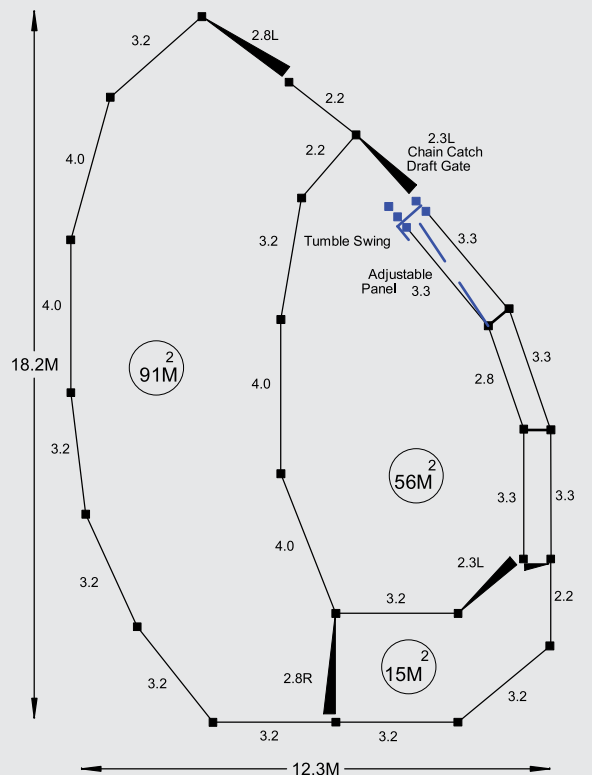
Total yard area is 110 square meters (hold 330 head)

All yards can be mirror reversed



The back of the 6" Beam
 Rails are fully sealed to prevent moisture and dirt from gathering. The smooth side is always inside the yards with the rolled back behind and outside yards to minimise bruising and maximise operator and sheep comfort.

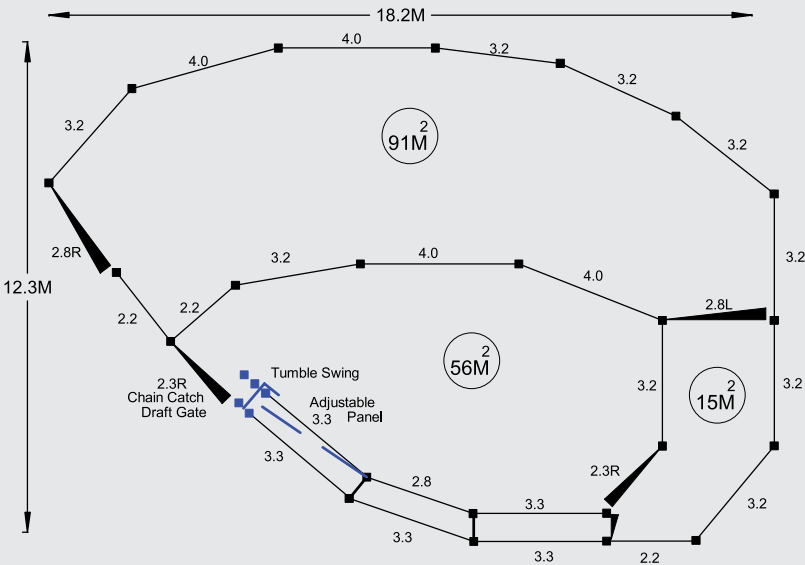
NSS-270-10MCR-(NVR)-MR



Total yard area is 169 square meters (hold 507 head)

The Tumble-swing gate can be removed

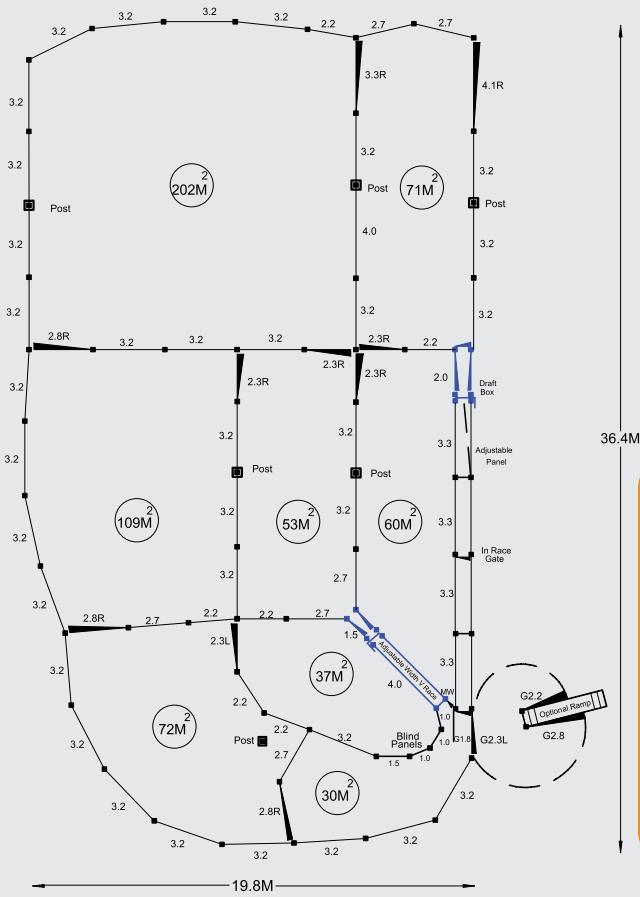
NSS-270-10MCR-(NVR)



Total yard area is 169 square meters (hold 507 head)

The Tumble-swing gate can be removed

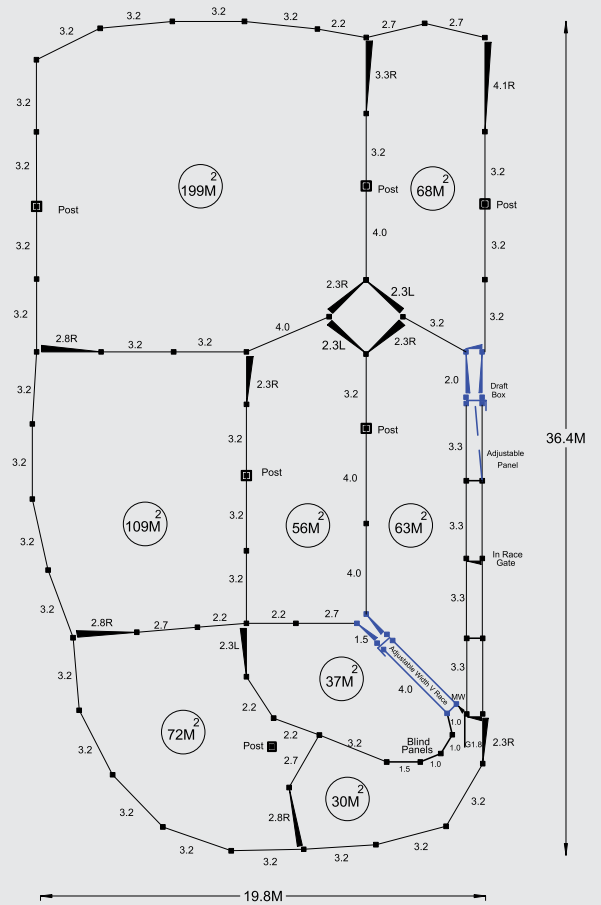
NSS-1210-15MSR-RAMP



Total yard area is 656 square meters (hold 1,978 head)
 The Draft box can be deleted if not required
 Double Work Race available

This an ideal location for the loading ramp

NSS-1200-15MSR



Total yard area is 656 square meters (hold 1,978 head)
 The Draft box can be deleted if not required
 Double Work Race available

NSS-1220-12MSR



Total yard area is 819 square meters (hold 2,457 head)
 The Draft box can be deleted if not required
 Double Work Race available

All let go yards can be increased in size

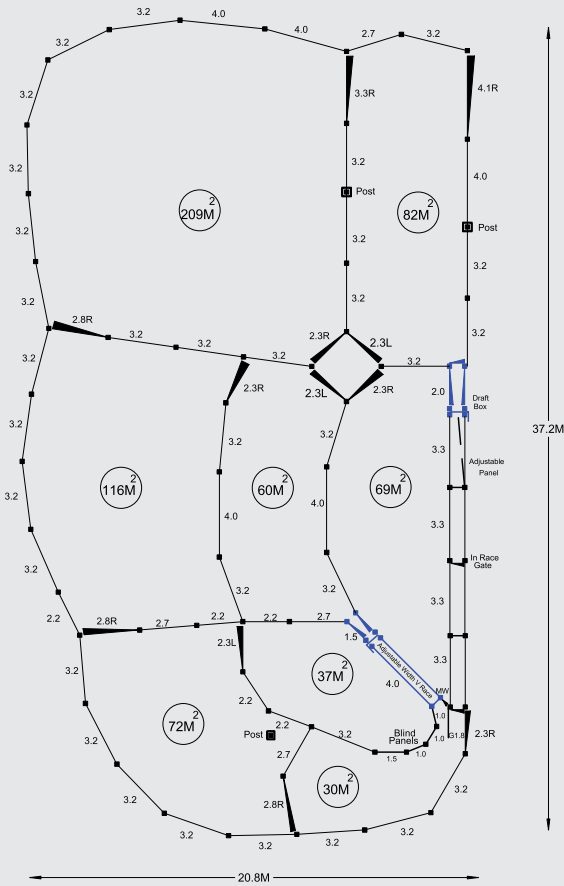


Ready to concrete

Race panels are adjustable in height.

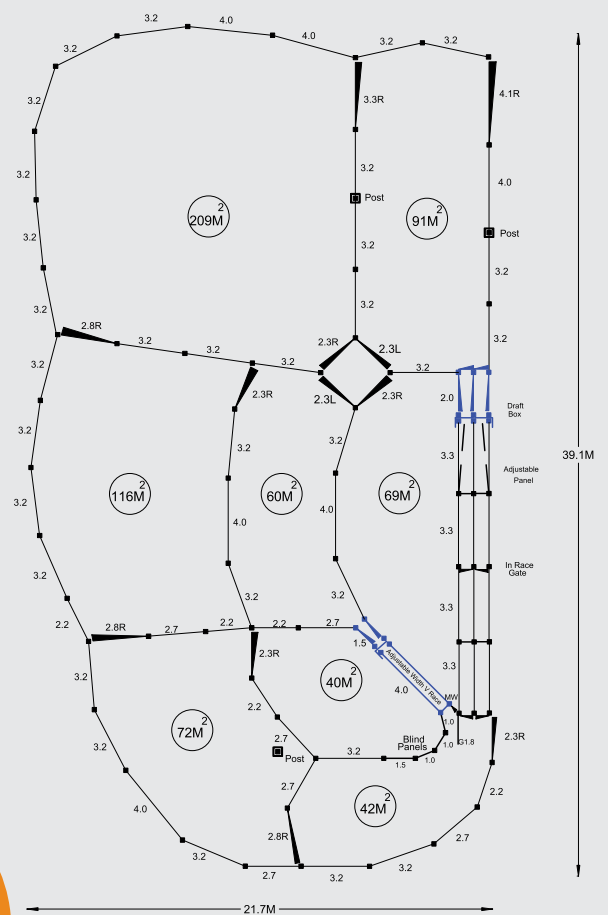
This system is exclusive to National Stockyard Systems

NSS-1300-15MSR



Total yard area is 696 square meters (hold 2,088 head)
The Draft box can be deleted if not required
Double Work Race available

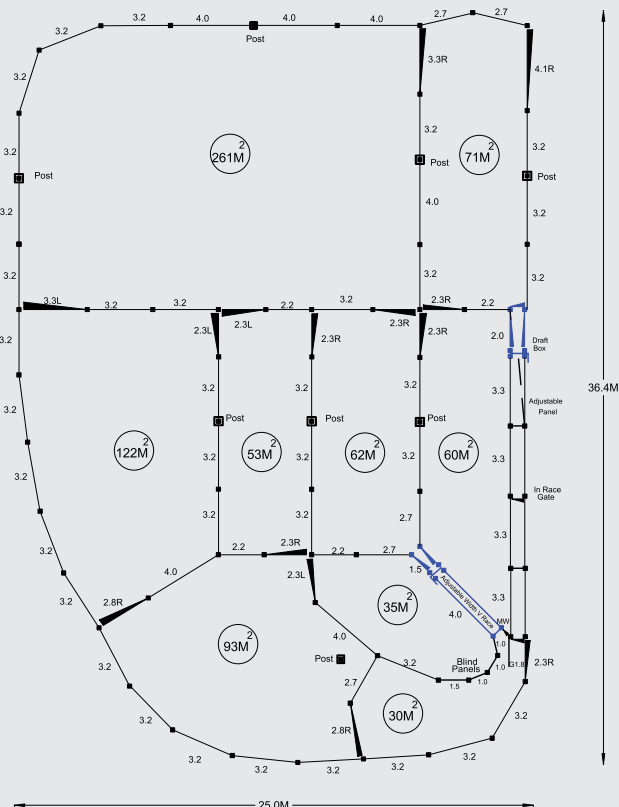
NSS-1300-15MSR-(DWR)



Total yard area is 735 square meters (hold 2,205 head)
The Draft box can be deleted if not required
Double Work Race available

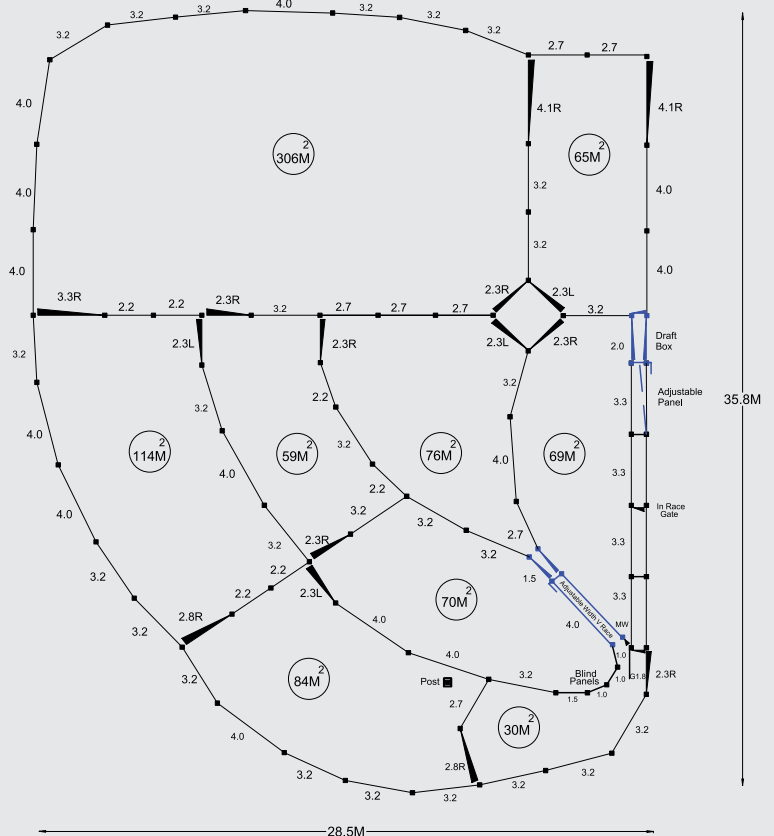
Note how the force yard increases in size when adding a double work race

NSS-1600-15MSR



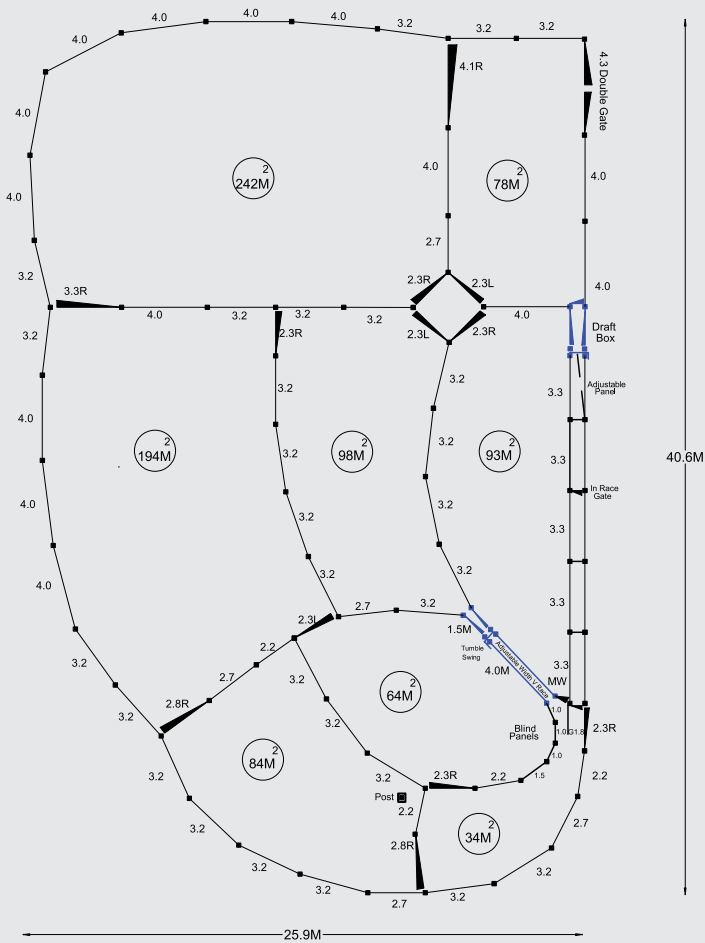
Total yard area is 802 square meters (hold 2,406 head)
The Draft box can be deleted if not required
Double Work Race available

NSS-1650-15MSR



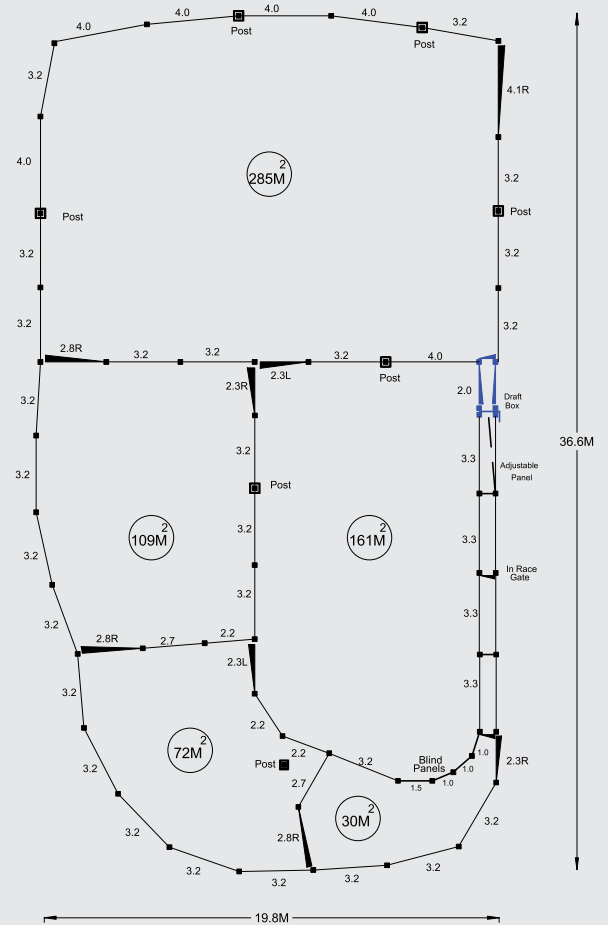
Total yard area is 890 square meters (hold 2,670 head)
The Draft box can be deleted if not required
Double Work Race available

NSS-1800-18MSR



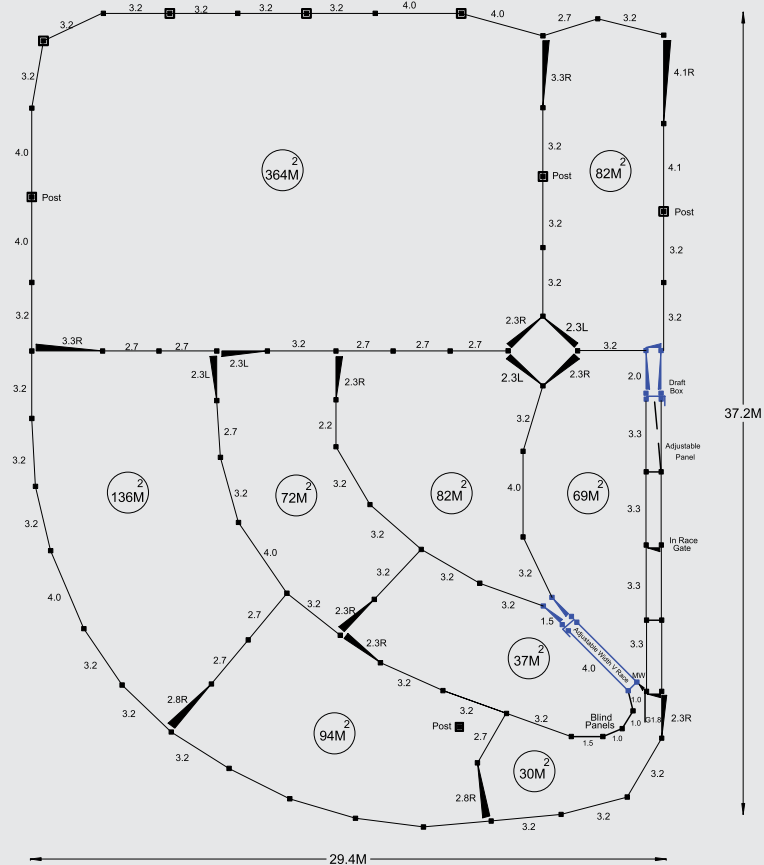
Total yard area is 907 square meters (hold 2,721 head)
The Draft box can be deleted if not required
Double Work Race available

NSS-1400-15MSR-(NVR)



Total yard area is 664 square meters (hold 1,992 head)
The Draft box can be deleted if not required
Double Work Race available

NSS-1950-15MSR

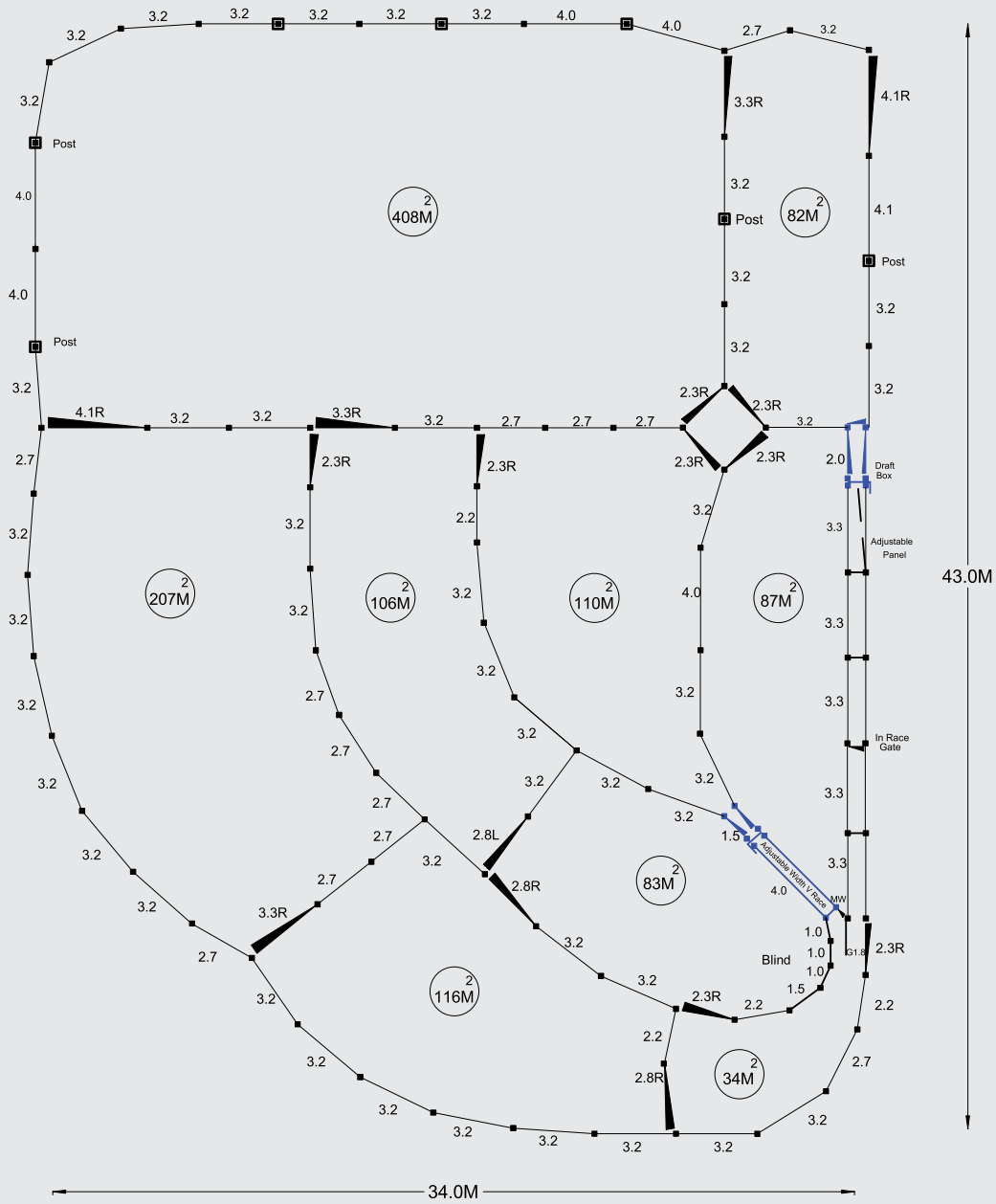


Total yard area is 1009 square meters (hold 3,027 head)
The Draft box can be deleted if not required
Double Work Race available



All Race Gates have
lamb proof vertical
rails to minimise
broken legs

NSS-2600-18MSR



Total yard area is 1,257 square meters (hold 3,771 head)
 The Draft box can be deleted if not required
 Double Work Race available



Will, Steve and Scott Leslie, Euston.

"We could not go past the value, quality and functionality of these yards compared to others on the market"



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