No More the Desert Nomad—Designing the Safest Barn for Your Arabian

By John Blackburn, AIA

While gentle, loyal, and congenial, Arabians are also powerful and spirited, so the goal is to create an indoor environment that both fosters good health and anticipates all the ways your horse could get injured. Here's how a well-designed barn can keep your Arabians protected from the elements and safe from injury.

Barn Placement

Where your barn sits on your property is the first significant choice to be made. Grade, drainage, proximity of service roads, prevailing winds, and barn angle in relation to the sun, all play a key role in health and safety. Equestrian site planning can help you avoid mistakes that can have significant health consequences for your horses, as well improve the efficiency of day to day operations.

Morven Stud in Charlottesville, Virginia, sits atop a hill positioned to catch prevailing breezes.

Light

Your horse thrives on natural daylight and seasonal changes in night and day patterns. Arabians were bred to tolerate blinding sunlight. Dark barns can be detrimental to their health. The use of continuous ridge skylights, Dutch doors, and sliding aisle doors are a few ways to let the sun shine in.

Ventilation

Creating vertical ventilation by design can be a healthier choice than ventilating with fans or expecting open aisle doors to provide cross ventilation.

The passive lighting and ventilation designed into this Virginia stable using skylights and ridge vents reduces the risk of both fire and disease.

Cross ventilation can transfer pathogens from one horse to the next and fans can increase the risk of fire.

Vertical ventilation is created by allowing fresh cooler air to enter the barn at ground level and escape through ridge vents at the top of the barn where the air is warmer. This design feature can create an upward draft or indoor wind on even the most stifling days of the summer and in the hottest climates.

Fire Prevention

Keeping your barn naturally ventilated and cool is the first step to take against fire because these design features reduce your dependence on electrical appliances. In addition, decisions regarding hay storage are critical. My recommendation is to keep hay storage separate from your stalls wherever possible. If hay must be stored within your barn, extra precautions must be taken to reduce fire risk such as fire separations. In the event of a fire, exterior stall doors provide the opportunity for horses to be led out of the barn from outside, reducing the risk of injury to horse and handler.

Stall Design

Never use swinging doors, since the wind can force them to open and knock into a horse. It's often difficult to tell if a hinged door is unlatched, as the door may appear closed even if it is not fully latched. A sliding door allows the door to remain open while the horse is removed from the stall without much effort or fuss, making it safer for both the horse and the handler leading it back to the stall. Also, when looking down an aisle, an open sliding door can easily signal an empty stall.

The pin latch is a simple, low maintenance, and inexpensive system for sliding doors, whereas hinged doors require a slightly more complex mechanism that may malfunction or expose bolts to horses.

Aisle Design

Giving your horses adequate aisle space is a crucial design element for safety. Spirited animals need room to maneuver without risk of collision with handlers, horses, and the barn itself. Ideally, an aisle is comprised of horse-friendly materials and kept clear of obstructions, sharp objects, and sharp corners. Recess anything that protrudes into the aisle, including hydrants, switches, ladders, fire extinguishers, etc. Similarly, provide several hydrants along the aisle, preferably recessed, to avoid pulling hoses down the aisle. Muck wagons, tractors, and the like do not belong in the aisle and can injure the horses if carelessly stowed or if the aisle is too narrow.

This Northern California barn is built with wide aisles and horse-friendly materials such as interlocking rubber brick flooring and smooth metal yoke gates for safety and comfort.

This Texas ranch uses elements from the local landscape and includes indoor and outdoor grooming stalls built to protect horses from possible injury.

Wash/Groom Stall Design

As in the aisle-way, the use of horse-friendly materials such as interlocking rubber-bricks and recessed fixtures that may injure a horse when it moves around the stall are important design choices. Either recess the hose reel or use a hose with an overhead wand, which is less likely to entangle the horse during bathing.

The back corner of the stall should have a recessed area for a shovel and muck bucket. This area can also double as a safe area for the handler in the case of an unruly horse, which may otherwise back its handler into a corner, causing serious injury.

Miscellaneous Details

A well-designed barn that reflects a careful regard to health and safety requires a lot of consideration. Over the past 25 years, we've developed a library of details that prove to be safe, economical, and practical. While no barn is hazard-free, minding the details during the design process can provide the safest possible environment for your Arabian horses that, just as in their desert past, depend on humans for their wellbeing.

Equestrian architect, John Blackburn, AIA, of Blackburn Architects, PC, has been designing safe barns for a quarter of a century all over the country and around the world.

To view his portfolio go to www.blackburnarch.com.