

FIVE THINGS EVERY PRACTICE SHOULD KNOW BEFORE BUILDING

By Heather E. Lewis AIA, NCARB

Because there are so few equine hospital projects built and because the equine veterinary market is small in general, there is little information available to equine veterinarians to assist them in making informed decisions during the design and construction process. If we can help you anticipate some of the most common pitfalls, you will save time and money, and be much more satisfied with your new hospital.

One: Think Ahead to Future Expansion

It is impossible to overemphasize the importance of thinking ahead in laying out an equine hospital site. Properties that grow without an overall plan develop a variety of preventable, long-term woes. You may recognize some of these common problems:

- Chaotic traffic flow
- Little space to maneuver trailers
- Poor drainage
- Inappropriate adjacencies of buildings and services
- Insufficient infrastructure

The best way to avoid these problems is to develop a long-term plan for buildings that you are planning to construct now



Courtesy Heather Lewis

Having a well-defined plan that allows for changes and future improvements will keep you within budget and happier with the end result.

and in the future.

Below are some areas that you should consider:

- Plan the flow of horses, people and vehicles, and create paths for all three.
- Consider the required turning

radii for horse trailers, hay delivery vehicles, emergency access vehicles and trash trucks. It's best to create circular circulation paths so no one has to back up large vehicles.

- Plan the locations of buildings and future expansions.
- Locate septic fields and be sure

there is enough room to expand them.

- Locate wells the proper distance away from septic fields.
- Develop a service area for trash, recycling and soiled manure storage. Ideally this area should be away from the front door of the buildings and out of the client traffic flow.
- Identify the low spots on your site. These areas can be used for storm water detention or for open space. Arrange arenas and paddocks on higher ground to allow them to drain better and for easier maintenance.
- Oversize the building services as

needed to account for future expansion.

Two: Know How Much Your Project Will Cost

Practice owners and contractors are consistently surprised by the cost of equine veterinary projects. Equine hospitals are pricey because they are big, tall spaces that are built to be bombproof and washed with a hose. Most hospital buildings price similarly to small animal projects, in the \$200-\$250 per-square-foot range, and higher in more expensive markets.

In addition to the “hard cost” of your building, you will need to plan ahead for your overall project costs, including land costs, site development and all of the

“soft costs” that typically include equipment and furnishings, professional fees, contingencies and inflation. Excluding the purchase of major medical equipment, these usually add 30-33% on top of the hard cost of the building.

If you have trusted colleagues who have recently built a hospital, it’s a great idea to call them to find out how much their projects cost and to listen to any advice they might have. Ask them which budget line items surprised them, so you can avoid the same mistakes.

Three: Assemble the Right Team Members

The best way to ensure that you will plan the *right* project for your practice is to secure a great team that will act as your advocate during the development of your project. Many equine veterinarians are tempted to do it themselves; then they don’t have the time and resources to manage the design and construction while still fulfilling all of their numerous professional obligations.

Make your job easier by getting the right team on board. This begins with your financial team. You may find it easier to work with a veterinary finance professional because he or she will be familiar with your business and can better map how much you can and should borrow. This amount depends on the financial health of your practice, your potential for growth and your tolerance for risk.

Once you have determined how much you can afford to build, work with a skilled architect and a trusted contractor to develop a design that meets your goals. We recommend hiring both an architect and a contractor early. By having both the design advice and the cost estimating feedback, you can work with your team to manage your expectations and design a project that fits your



Courtesy Heather Lewis

The construction of a veterinary clinic—or the addition of buildings to provided needed services—should be planned well in advance to avoid financial and emotional turmoil during the construction phase.

budget.

Four: Reiterate the Size and Power of Horses

Architects and contractors who are not familiar with horses and equine facilities cannot anticipate the size and power of horses. You simply cannot repeat “horses are big and strong” enough during the design process. Specifically, work with your team to make sure that:

- Rooms are large enough to safely handle horses, maneuver around equipment and get in and out of doors.
- There are adequate head heights to prevent accidents and to allow for equine veterinary equipment. For example, hoist beams into surgery rooms generally need to be placed no lower than 14 feet from the floor in order to prevent a horse’s head from dragging.
- Walls are reinforced to survive kicks, damage from pulling back against tie rings and impacts from horses falling against them. Induction and recovery walls need to be built with extreme care.
- All items that horses could possibly hurt themselves on are out of the way. If there is a corner, a sharp object or anything in which horses can possibly entangle themselves, they will!

Five: The Most Easily Removed Items Are the Ones You Care Most About

In a hastily or ineffectively planned building project, it is common to have a budget crisis at the last moment. Common causes for budget crises include:

- The cost of the project is higher than anticipated.
- An unexpected condition was discovered.
- Something happened that was beyond anyone’s control (such as material cost escalations).
- The practice did not have adequate funds to cover normal cost increases and change orders, which typically total between 3-5% of the project costs for new construction.

The problem with removing scope from a project at the last moment is that it is always the things you care most about that are the first to go. These typically include:

- Removing specialty equine flooring (this is a very pricey line item)
- Removing specialty plumbing, such as piped medical gas
- Removing skylights, windows or interior windows between spaces
- Reducing the quality or output of building mechanical systems
- Using cheaper materials and finishes
- Removing cabinetry
- Removing drainage from floors

Sometimes items are removed with the idea that they could be added later, but this rarely happens. For example, you could theoretically replace your cheap flooring five years after you open, but you probably will not because it becomes more of a hassle than it’s worth. Take the time to plan your project right so you can hang onto the line items that

will make your hospital great.

Take-Home Message

Every new building is a prototype, and equine hospitals are no exception. In fact, they are particularly specialized and unique. Start your equine hospital project with the idea that you will learn as much as you possibly can from those who have built hospitals before you. This approach grows the knowledge base in our industry, and will turn your project into a success story.

Heather E. Lewis AIA, NCARB, joined Animal Arts in August 2000 and has been a principal in the firm since 2004. Her primary area of expertise is the design and management of equine and large animal projects. Examples of Lewis’ equine and large animal work include master planning for Woodside Equine Clinic in Ashland, Virginia, the repurposing of existing buildings for equine hospitals in Kamuela, Hawaii, and Murrysville, Pennsylvania, and freestanding equine facilities such as Evergreen Equine in Reading, Vermont. Lewis has worked on the design of two significant equine facilities in Australia, including the Equine Health Centre for the University of Adelaide, Roseworthy Campus in Roseworthy, South Australia. She recently completed work on the renovation of the equine adoption center for the Harmony Equine Center for the Dumb Friends League in Franktown, Colorado. Lewis speaks regularly about the design of large animal facilities at the Veterinary Economics Hospital Design Conference for the Central Veterinary Conference. She also spoke at the 2012 American Association of Equine Practitioners conference on “the equine hospital of the future.” Lewis has been published on large animal facility design topics in Blackwell’s Five-Minute Veterinary Practice Management Consult and Veterinary Practice News. You can find out more at www.animalarts.biz.

