

Installation and Use of Mirrors in an Indoor Arena, by Jennie Hakes

*I am silver and exact. I have no preconceptions.
Whatever I see I swallow immediately
Just as it is, unmisted by love or dislike.
I am not cruel, only truthful,
The eye of a little god, four-cornered.*

- Excerpt from "Mirror," a poem by Sylvia Plath

What an imaginative description! A mirror doesn't lie – what you see is what you get (excepting fun-house mirrors). This is why fitness gyms and dance studios have mirrors. If you don't believe your fitness trainer's or dance instructor's corrective advice, a look in the mirror can convince you that what he or she is telling you is true, often to your surprise. Many indoor riding arena walls have mirrors for the same reason. When you glance in the mirror the feedback on you and your horse's form is immediate, and a correction can be made promptly, as opposed to watching a video of your ride after the fact and trying to remember how it felt. The four-cornered little god does not lie.

Arena mirrors are a valuable tool in my horsey toolbox, both as a riding instructor and as a rider. Mirrors do not take the place of good instruction but are helpful if you are riding on your own. However, mirrors can turn into a tool for much self-criticism and negativity. Another caution is you might get too focused on your appearance instead of how your body feels (proprioception). And of course, you must be able to ride without the help of mirrors.

When we built our new horse farm outside of Aitkin, Minnesota, arena mirrors were in the plan. This article outlines our summer-of-2018-mirror-project.

Research. I had hoped that I could find a cut-and-dried process on-line, but no such luck. I did hours of research, much of it on the Chronicle of the Horse forum, my "go to" for horsey stuff. So many opinions and ideas! The best advice was from a person who had installed arena mirrors for a company for 25 years. He said to always use safety glass, never mylar, acrylic, etc. Always use mastic to attach so if it breaks, the pieces are still stuck to the wall, and no one bleeds. I also asked horsey friends what they had done. This ranged from buying closet door mirrors and DIY to having a mirror business do the whole shebang. Some people used J hooks to hold the mirrors instead of wood with a channel. Warning: Googling around can send you down a rabbit hole, so my advice is to find a good mirror installer and a good carpenter and let them figure it out with you, especially if your time is money.

Cost. My budget was \$5k for 44' feet of mirrors, which was accurate - no surprises there. The mirrors and installation by the local mirror/glass company was \$4,436, and the carpentry work, including lumber, was about \$500. Expensive, you betcha. But I think of it as a one-shot deal and when I factored the cost over the next 20 years, it came to \$250 a year, or a mere \$21 a month (I love my justification).

Specs. Our arena is 70' x 160'. The kickboards are 4' high. I chose to go with 4' wide x 6' tall mirrors. The taller the mirrors, the better. We already had one 4' x 7' freebie mirror, and we ordered ten 4' x 6' mirrors. Placement: 20' on long side at letter B (middle of a long side), 20' on short side to the left of garage door, and the freebie mirror on the same short side to the right of the garage door near the wall. The total was 44' feet of mirrors, which sounds like a lot but doesn't feel like a lot when you are riding.

Picking the right people. I used the local glass/mirror place in Aitkin. One reason was that if they broke anything, it was on them and not me. Also, they had worked with my trusty carpenter Jeff before (Jeff did all the cabinetry in our new house, plus the kickboards in the arena), so I knew they would work well together. My mirror guys had done the local high school gym mirrors, so I trusted them. In a small town, word gets around if you do a bad job, but also if you do a great job. Another reason to shop locally.

Carpentry. The mirrors had to be fastened to something. We chose chipboard. To hold the mirrors, Jeff and I decided to use grooved pieces of wood at top and bottom and slide the mirrors in with mastic holding them in place on the chipboard, with tiny clear dividers between each mirror so they didn't touch each other (important). Jeff made the frames in his workshop ahead of time. With not even 1/8" between the mirrors, they would look continuous. Each bank of mirrors would be completely framed.



Process.

- First, I ordered the mirrors from the mirror guy. It took a little over a week for them to arrive. However, I didn't have them delivered until the morning of installation. Again, I highly recommend mirrors at least 6' tall. Also, use safety glass. Finally, I wanted the mirrors to meet safety codes. No bleeding!
- Do not skip this step! I had to make sure that I could see myself in a "test" mirror. We used my lone scavenged mirror for the test. It was quite heavy, so I had the mirror guy come out with suction cups and he and Jeff the Carpenter held the mirror on top of a kickboard while I rode my horse around to see what I could or couldn't see. With the mirrors that tall, I was able to see everything without having to tilt the mirror. That was a major decision.
- With that out of the way, the next step was to make the backboard that the mirrors would be stuck on. Jeff fastened 4' x 6' chipboard to the wall

with wood spacers between the arena posts. Our posts are 5' on center, and the chipboard and mirrors are 4', so he had to make sure the whole thing was perfectly flat and plumb. Again, very important!

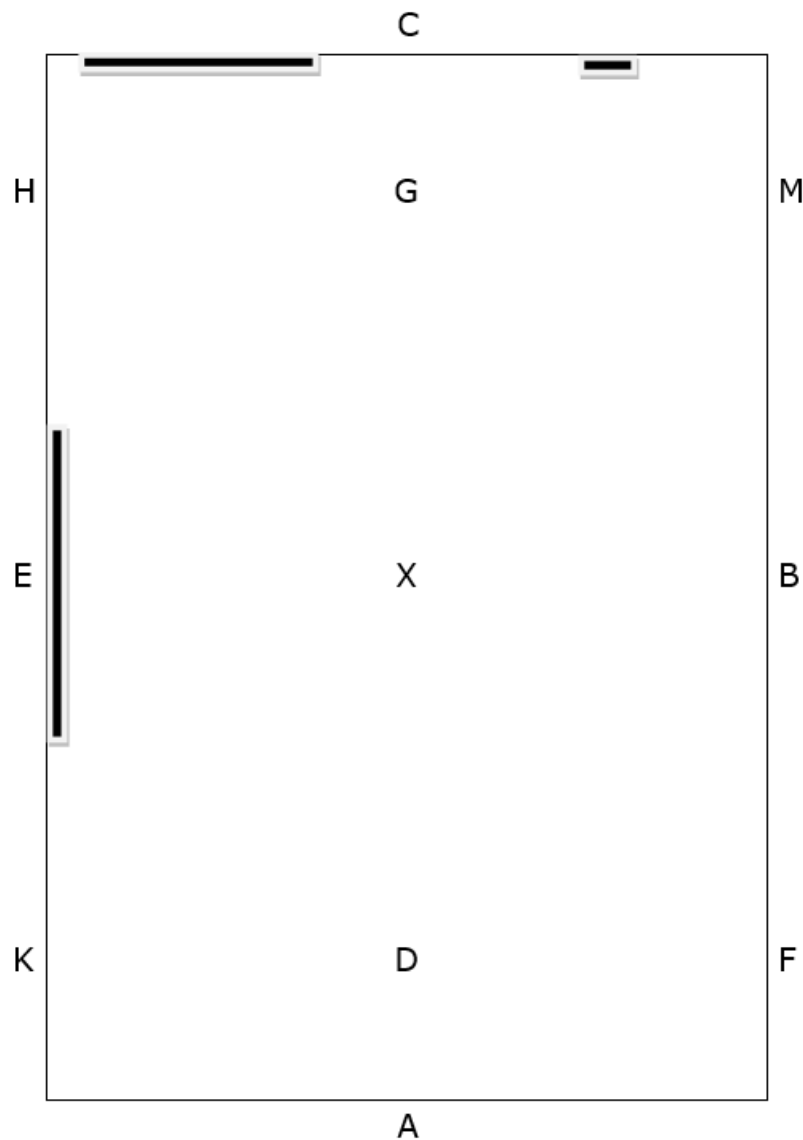
- Jeff routed pieces of wood with I think 3/4" to 1" wide slots about 1" deep for to set the mirrors in, top and bottom. He did that work in his workshop ahead of time and brought them over when the mirrors guys were ready.
- On installation day (sorry to say I was gone that morning, so no pictures of the installation), they drove their trucks into the arena. They did one mirror at a time (first the bottom frame piece, then the mirror, then top piece, and mastic adhesive to fasten to backboard, then the little clear spacer). The whole thing only took 2 1/2 hours for Jeff and the two mirror guys. By installing one mirror at a time, if one did break, it would be easy to remove it from the chipboard and replace it.

- Once finished, they advised me not to wash the mirrors for a couple of days until they settled in with the heat and humidity of June. However, they said glass mirrors will never warp.

Conclusion. It has been one year since the Big Mirror Project, and I have yet to wash a mirror. I owe that to the virtually dustless footing (thank you, magnesium chloride from the hardware store). So far, the mirrors are zero-maintenance. Because of the way they were mounted, it is impossible for them to shift, and if one should ever get broken, my Mirror Guy is only 5 miles away.

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Updates since publishing. Here is where we placed the mirrors.





We added insulation a couple of years after we took this photo.



Colinda Z's and my reflection in the mirrors between C and H. No distortion!