Coalition for Sonoran Desert Protection

Nearly a decade later:
Assessing the condition of the Oracle Road wildlife funnel fence

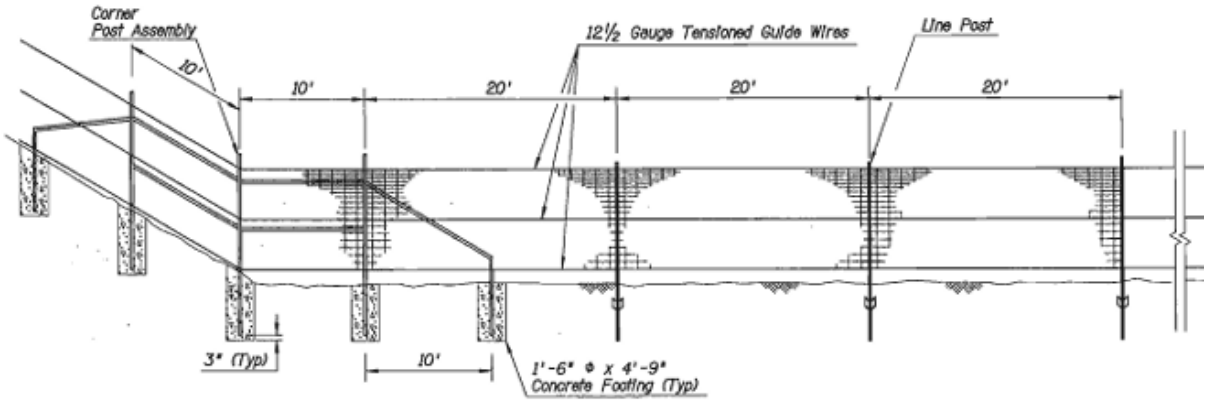
August 2025

Background:

The Arizona Department of Transportation (ADOT) installed wildlife funnel fencing in 2016 on Oracle Road/State Route 77, near Catalina State Park north of Tucson, Arizona. The fence extends for roughly four miles from East Thistle Road to East Thornydale Road (southbound lane/west fence), and four miles from East Canyon Springs Place to East Wilds Road (northbound lane /east fence). Approximately one mile of the wire mesh wildlife funnel fence on the west side is replaced instead by a concrete block sound wall, from just north of North Big Wash Overlook Place to East Vistoso Commerce Loop Road.

The fencing was installed as part of the wildlife underpass and wildlife bridge crossing project on Oracle Road, and serves to direct animals towards these crossing points and to keep animals off the 6-lane divided highway. Jump-outs provide escape ramps in several places along the fence line. Its design, an 8-foot high fence fabric with a 3-foot high mesh footer that is buried 12 inches in the ground, is made to keep out large animals like black bears and mule deer, and also small reptiles like snakes and tortoises. The fence is maintained by ADOT and extra fencing materials were set aside for maintenance and repair during its original construction.

Above: The wildlife funnel fence when first installed in 2016.



Above: Standard wildlife funnel fence design, created with input from Arizona Game and Fish Department.

Methodology:

In July and August 2025, Coalition staff and volunteers surveyed the seven miles of fence to document any damage. Volunteers walked the fence line and took photos and GPS locations at each damage site. "Breaks" were defined as any hole or opening large enough for a small animal the size of a cottontail rabbit or desert tortoise to pass through.

Results and observations:

We documented 59 breaks in the fence that were large enough for animal passage.

- Fence breaks appeared to be caused mostly by **digging animals (54%), erosion (32%), and by structural gaps (6%)**, but some were also due to vehicle collisions (3%) or deliberate vandalism (3%). We also found two spots where soil or vegetation was starting to compromise the fence.
- **Breaks occurred most often and more severely where drainage pipes opened inside of the right of way,** rather than outside of the fence; a lesson learned for future projects.
- Of the documented fence breaks, **21 (35%) showed obvious signs of recent animal use**, including tracks, trails, or scrapes.
- During the survey, we found 4 roadkilled animals, some bones and older remains, one live desert spiny lizard, and **two live rattlesnakes** within the right of way. We also documented javelina tracks traveling south under the wildlife bridge, inside the right of way.
- Where vehicle collisions caused fence damage, we noted that the fence had been partially patched back together using the existing fencing materials onsite.
- Both cases of vandalism appeared to be from someone cutting doors or openings in the fence to give people access to step through.

To maintain the effectiveness of the fence, we recommend repairs be made, at minimum, to the 21 high priority areas identified below.

Openings closer to the crossing structures, where many of these appear to be clustered, are particularly concerning, because presumably more animals trying to cross the highway will be funneled along the fence line to those locations before reaching the crossings.

Map of breaks found in the Oracle Road Wildlife Funnel Fence July-August 2025

Link to online map of survey results

This project was made possible with funding from the Santa Cruz Valley National Heritage Area, and with the help of our dedicated volunteers: Frank Staub, Erik Donkersley, Cody Scrimgeour, and Izetta Feeny. **Contact us at admin@sonorandesert.org to request data, available in excel or csv format with reference photos and waypoints.**

Northbound fence line located at 32.472264, -110.923503, collision damage to fence and posts that had been patched back together. One smaller opening was partially repaired with rocks.

South of the wildlife bridge at 32.466672, -110.926108, close to the waste transfer station driveway. Opening large enough for people. The wire was cut deliberately but requires stepping over. Javelina tracks present here on both sides of the fence.

Mesh footing has come loose allowing animals to push through or crawl under the fenceline at 32.452782, -110.932226. Needs reburied.

Erosion from a pipe culvert was hindered by rip rap, located at 32.461706, -110.927892, but still eroded a three-foot wide opening near the mouth of the culvert, creating an opening large enough for coyotes or javelina to use.

Near the Oracle Road/Wilds Road intersection, at 32.474369, -110.922778, water from a nearby pipe culvert has washed out an opening under this part of the wildlife fence big enough to accommodate small to medium-sized animals.

The soil embankment is eroding on this wildlife jump out at 32.461619, -110.927108, and dirt is slowly pushing the mesh footing outwards. This was tagged as low priority, but could soon become a problem.

Erosion and animal digging created a tunnel all the way underneath this concrete footing, located at a cattle guard at 32.459994, -110.927992. Small to medium sized animals (including rodents, rabbits, snakes) can gain access. For future projects, we also suggest that the end point of the fence be tied to, or continue along, the horizontal edge of the cattle guard so larger animals can't just step around the post.

Another large opening cut into the fenceline located at 32.455001, -110.930830.

Erosion caused this opening, located at 32.452782, -110.932226.

A break in the fence at 32.464717, -110.926284, likely animal-caused, is large enough for small animals or a tortoise to access. Animal tracks and trails showed recent use by rodents.

These structural issues are a weak point, where gates just have the mesh footing laid down on the ground instead of being buried. Over time, animals or just regular use can move the mesh up enough for animals to push underneath. 32.438051, -110.933609.