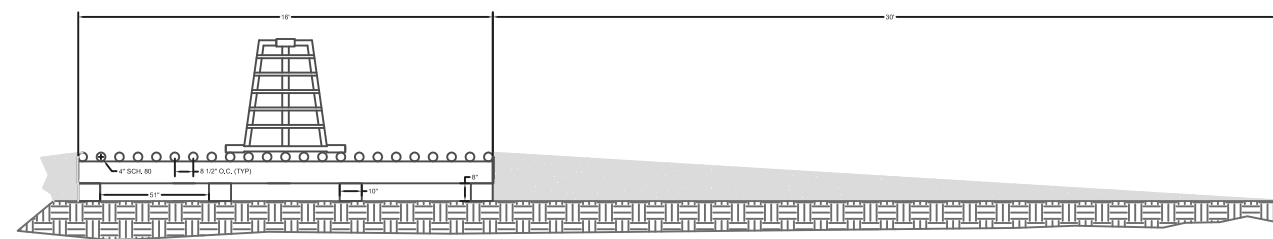


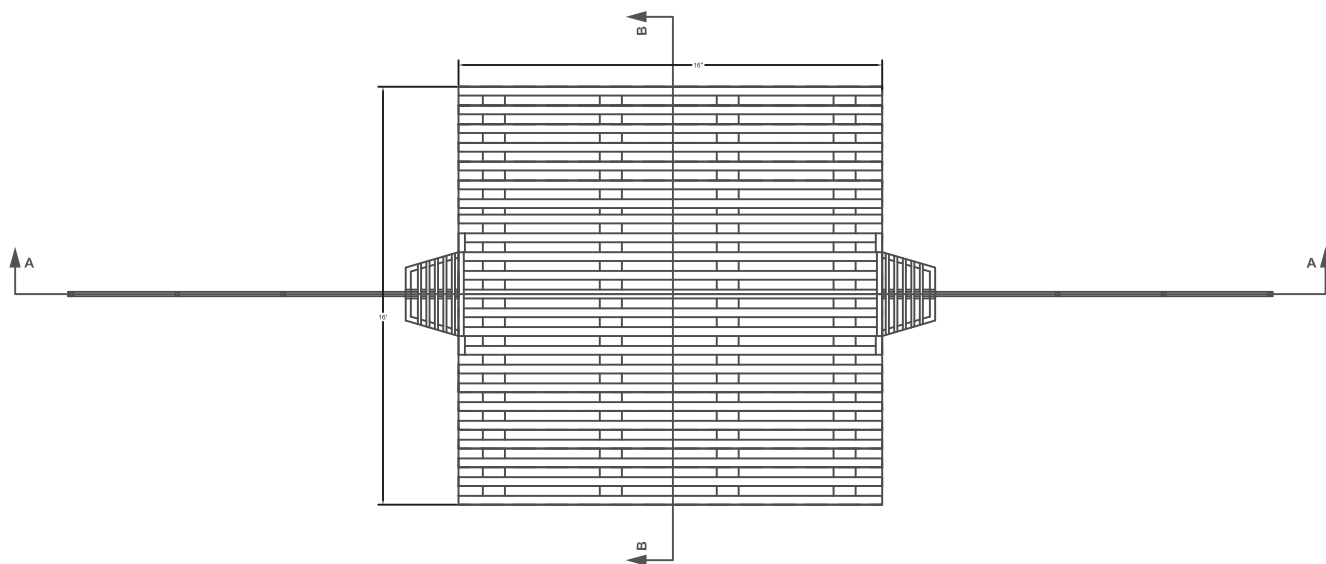
CATTLE GUARD SECTION A-A

SCALE: N.T.S.



CATTLE GUARD SECTION B-B

SCALE: N.T.S.



CATTLE GUARD DETAIL

SCALE: N.T.S.

**UNIVERSITY LANDS
CATTLE GUARD SPECIFICATIONS 16' x 16'
9-13-11**

Cattle Guards shall be constructed and installed according to the following specifications and photos.

Dimensions:

1. H-Braces coming into the cattle guard shall be place 28 feet apart running directly into the center of the cattle guard.
2. 2- six foot gates shall be hung and welded on the H-braces, one on each side of the cattle guard. Gates shall be constructed of 2 inch square tubing for a frame and 4 inch sheep and goat paneling and be 5 feet in height. Gates will be 6 feet wide at the bottom and 4 feet wide at the top with an angle parallel to the wings on the cattle guard. Gates should be able to swing to allow the cattle guard wings to fold down without affecting the gate or fence. Wire gaps constructed of barb wire or net wire are not an acceptable form of a gate or gap.
3. Overall width of the cattle guard shall be 16 feet.
4. Depth of the cattle guard shall be 16 feet.
5. Height of the cattle guard from ground level shall be a minimum of 22 inches.

Materials, Construction, and Installation:

All pipe used shall be schedule 80 steel pipe and all joints welded.

1. 4 wood ties/timbers 8" x 10" x 16' (height x width x length) or the equivalent, to be used as seals or blocks, shall be placed directly on top of level ground, running perpendicular to the road. The wood ties shall be equally spaced with a 51 inch gap between each tie (61 inch centers).
2. 4- 10 inch O.D. schedule 80 steel pipe shall be placed on top of the wood ties, running parallel to the road. These 10" pipe should be 16 feet long and spaced evenly across the wood ties with a 43 inch gap between each pipe (53 inch centers). The 10 inch pipes on the outside shall be centered 16.5 inches from the end of the wood seals and the 4 inch rails above.
3. 23- 4 inch O.D. schedule 80 steel pipe shall be placed on top of the 10 inch support pipes running perpendicular to the 10 inch pipe and road. These pipe shall be 16 feet in length and be welded to the 10 inch support pipes below. The 4 inch pipes shall have about a 4 1/2 inch gap between each pipe (8 1/2 inch centers). 2 inch pieces of sucker rod shall be cut and welded to the 10 inch and 4 inch pipe on both sides of the 4 inch pipe where it sits for support. The middle 4 inch pipe needs to be 20 feet long to support the wings when they are standing up.
4. 1/4 inch sheet metal shall be welded to both ends of the 10 inch support pipes to keep caliche from filling into the middle of the cattle guard. These pieces of sheet metal should be 16 feet long x 12 inches in height so as to seal from the top of the wood ties up to the top of the first 4 inch pipe rail.
5. Pipe wings shall be welded to each end of the cattle guard so as they are able to be folded down without tearing up the cattle guard or gates on either side of the cattle guard. Wings shall be constructed using 2 3/8 inch pipe and 2 7/8 inch pipe for the sleeves/hinges.
6. A four foot high gate made of 2 inch square tubing for the frame and 4 inch sheep and goat paneling shall be hung across the cattle guard. Some form of a locking device shall be constructed so as to insert locks and keep gate shut and locked at all times.
7. Caliche ramps shall be built running up to both sides of the cattle guard. The ramps should start a minimum of 30 feet from the cattle guard and gradually slope to the top of the cattle guard, flush with the top of the 4 inch rails.

SEPT 2011

**UNIVERSITY LANDS - 16'X16' CATTLE GUARD
DETAILS & SPECIFICATIONS**