



**Secura Fence System
by
Alabama Metal Industries Corporation**

**U.S. / Mexico Border
San Diego, CA Sector
Pacific Ocean to the Otey Mesa Crossing**

Retired General Michael Hayden recently addressed a meeting of the Metals Service Center Institute. General Hayden was appointed to the post of the Director of National Security Agency and served from 1999-2005. From April 2005 to May 2006 General Hayden was the number one intelligence officer in the country and in this capacity he oversaw the entire intelligence community, including the CIA, NSA, the National Geospatial – Intelligence Agency and the National Reconnaissance Office. In 2006 General Hayden served as the Director of the CIA.

General Hayden addressed the Institute on the four hot spots in the world that jeopardize the security of the United States. Number one on his list was Iran. Number two, and this came as a real surprise to the Institute was Mexico, followed by Al Qaeda, and then North Korea.

Mexico being so close to the United States and so high on his list of hot spots should not be underestimated.

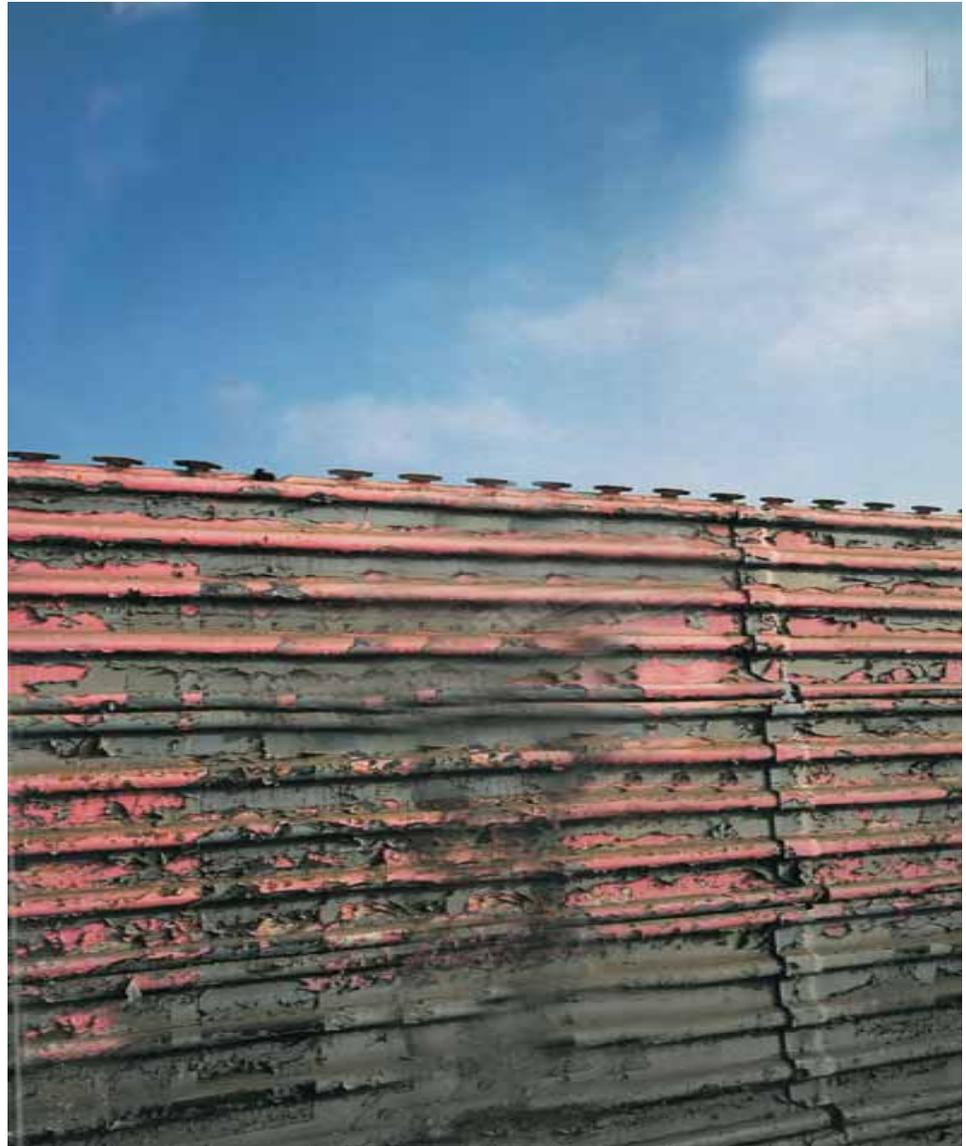
In 1997 the San Diego Sector of the U.S. border with Mexico was the number one illegal crossing point on the entire US / Mexico border.

Because of the illegal crossing activity this area was identified for the first installation of new security border fencing. The area designated actually extended 1/4-mile out in the Pacific Ocean and eastward 16 miles to the Otey Mesa Border Crossing.

This new fence was designed and installed to replace the old fence made from World War II landing mats.

As you can see the old border fence made from WWII landing mats including corrugated grooves which provided a ladder to climb over the barrier.

It also eliminated any visibility to enable Border Patrol agents to detect possible intruders.



The new security barrier was installed utilizing a no-mans-land which was the area between the old and new barrier.



Installed 1997

View of border fence from no-mans-land showing the old fence on the right and the new fence on the left orientated toward Mexico.

The new barrier's overall height is 15-feet with a 12-foot vertical section plus a 5-foot overhang at 45° making the overall height of 15-feet.



The barrier was installed on and embedded in a 2-foot x 4-foot deep concrete curb to deter tunneling.



View of the barrier from no-mans-land.

Installed 1998

Now Fleeing the Border Patrol: Its Own Agents

As Illegal Crossings From Mexico Plummet, Force Is Plagued By Boredom and Attrition

By MARJORIE VALBRUN

Staff Reporter of THE WALL STREET JOURNAL

SAN DIEGO - Every Tuesday and Thursday morning, during regular working hours, Greg Hartfield heads to Nicoloff Elementary School in nearby San Ysidro to help student learn to read.

YOUR CAREER MATTERS

He tutors at another area school on Mondays and Wednesdays. In the afternoons, he works in the

local libraries, assisting children with homework.

Mr. Hartfield's occupation? U.S. Border Patrol agent, with a mandate to keep illegal immigrants from entering the United States from Mexico.

Border Agents, once an alluring branch of law-enforcement, now face a career predicament: they have done their job so well that it lacks the action and drama that made many of them sign up in the first place. The result: growing morale and attrition problems among the "pistoleros."

Recent arrests along the Candian border have heightened fears that terrorists may be trying to infiltrate the country. But when it comes to illegal immigration, the Immigration and Naturalization Service, which runs the Border Patrol, says the border is under better control than ever. That's thanks to "Operation Garekeeper," which



Maytag repairman? Border Patrol agent Greg Hartfield spends most of his work week tutoring.

over a five-year period boosted manpower, added state-of-the-art detection equipment and directed the construction of a 12-foot high fence along more than 70 miles of the U.S.-Mexico border.

The San Diego sector covers just 66 miles of the 1,200-mile border, but it accounted for about 40% of all crossing before Operation Gatekeeper began. In fiscal 1995, one year after the program began, 524,231 migrants were apprehended in San Diego. In fiscal 1999, which ended on Sept. 30, only 182,248 border crossers were stopped there, a 25

year low. Now San Diego accounts for just 12% of border crossings.

For agents, the new pace leaves plenty of time during the workday for tutoring and other community service. San Diego sector Chief William Veal encourages them to take advantage of the opportunity, enabling some, including Mr. Hartfield, to do so full-time. Others put in several hours a week during working hours. Many are none to pleased about it.

"The agents are bored to death. The sense of apathy, I see it in their eyes. Everybody is frustrated," says Joseph Dassaro, an agent since 1992 and vice president of Local 1613 of the National Border Patrol Council. "An agent will not stay in the border patrol for 25 years just to read to eighth graders," said Mr. Dassaro, who does no volunteer work. "Every agent I know has an application in somewhere else," some new agents are leaving even before they complete the one-year probationary period.

In the San Diego sector of the patrol, the 2,136-person force is hemorrhaging agents even as it struggles to buttress its ranks, partly to comply with federal requirements that the patrol nationwide add 1,000 agents a year, through 2001. In the last four years, the sector hired 1,709 new agents but lost 1,189. In fiscal 1997, 324 agents left. And in fiscal 1998, the same year a union survey found that 60% of the agents were actively pursuing work elsewhere, the sector lost 337 agents.

The slower pace is especially disappointing to the new agents, says Roy Villarreal, a

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REPRINT FROM THE WALL STREET JOURNAL – 1999

This fence works and agents are moving out of the sector.

This pic shows the 5-foot wide overhang allowing a 3-foot extension in height.

The only problem encountered so far with this system concerns the overhang section.

the “illegals” would construct homemade ladders, climb to the top of the overhang, rest on the 45 degree overhang, slide to the 12-foot level and then jump to the ground.

Installed 1997



The current barrier in use is reflected in this picture.

The barrier was modified to replace the overhang with a vertical panel to maintain the barrier height at 15-feet.

In recent years barbed tape has been allowed by the federal government to be added to the top of the barrier for further security and deterrence to entry.



Installed 1999



Another view of the barrier from no-mans-land.

Again note the barrier's adaptability to rough terrain.

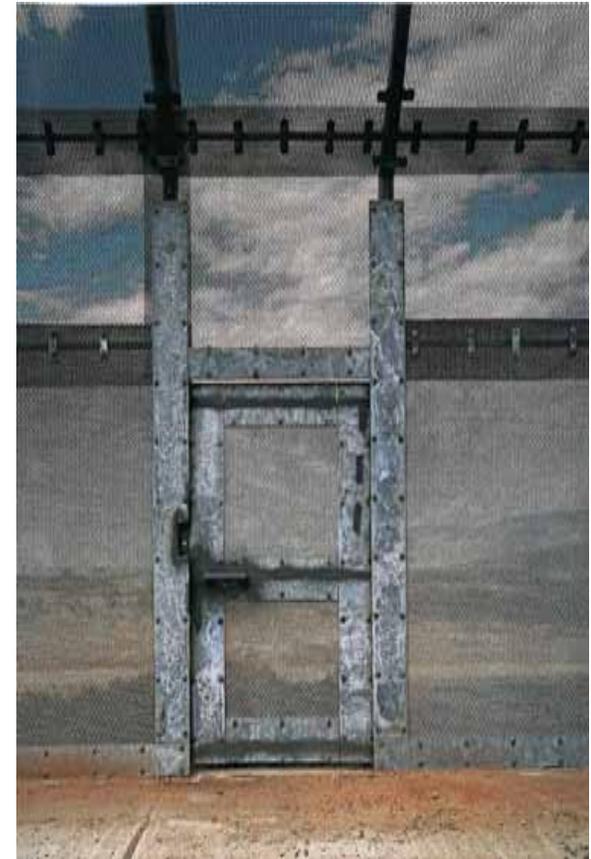
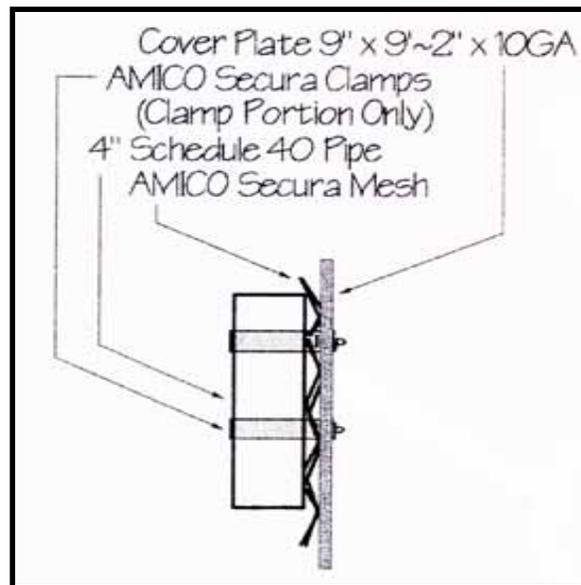
Installed 1997

Panel joints are considered to be the most vulnerable to attack and viewed as the weakest point of a fence.

The lower panel joints and fittings are further secured with steel plates.

Plate Description – 10GA x 9-inches wide pre-drilled for installation.

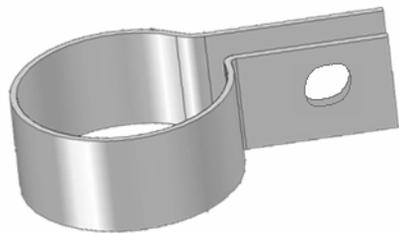
Joints above 7'~6" are not easily accessible to tampering and not fitted with plates.



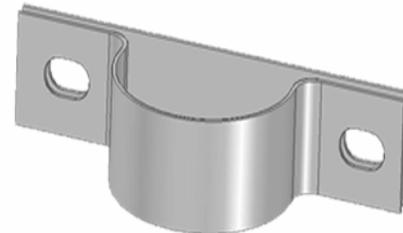
Installed 1997

Modified expanded metal panels are secured to post and rail framework using heavy duty attachment hardware.

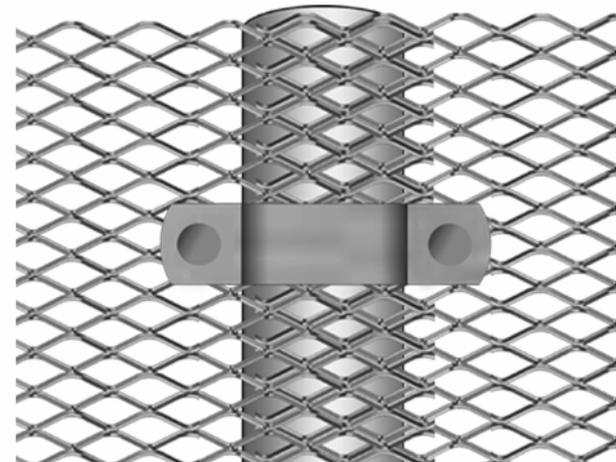
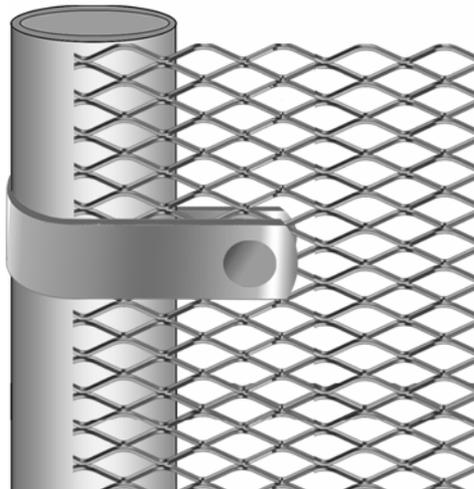
The method of attachment of heavy duty bands, heavy duty clamps and cover plates play a major role in preventing breaches.



Secura Bands secure mesh to terminal and gate posts.



Secura Clamps secure mesh to posts and rails.





Another view from US side of the border.

Installed 1998

The Border Patrol ended this 16-mile run of fence that began in the Pacific Ocean allowing the extremely rough and mountainous terrain shown here at the end of the fence to act as the deterrent to illegal crossings.



Installed 1998

Heavily fortified gates are strategically placed along the border to gain access to the no-mans-land area.

These are massive gates, each equipped with automatic gate operators.

Extra mesh was used on either side of the gate openings to further fortify and to close up any gap or space in the gate and gate opening.



The yellow structure at the right of the gate is a barrier to secure a drainage culvert from illegal access.

Installed 1998

View showing
6-miles of new
border barrier
traversing
extremely
rough terrain.



Installed 1999

View of the barrier extending 1/4-mile into the Pacific Ocean. This section of the barrier is constructed from Stainless Steel.

This extension of the barrier into the ocean is a deterrent to wading or swimming around and gaining illegal entry.

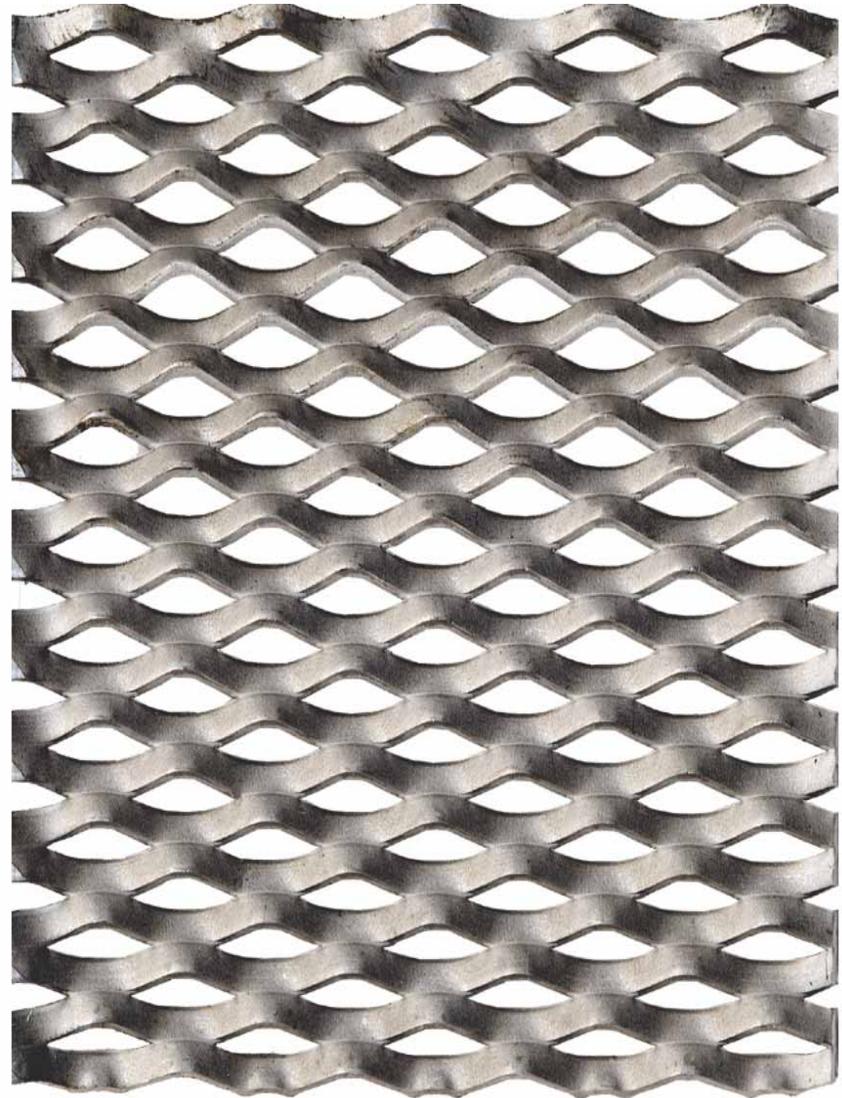


Installed 1998

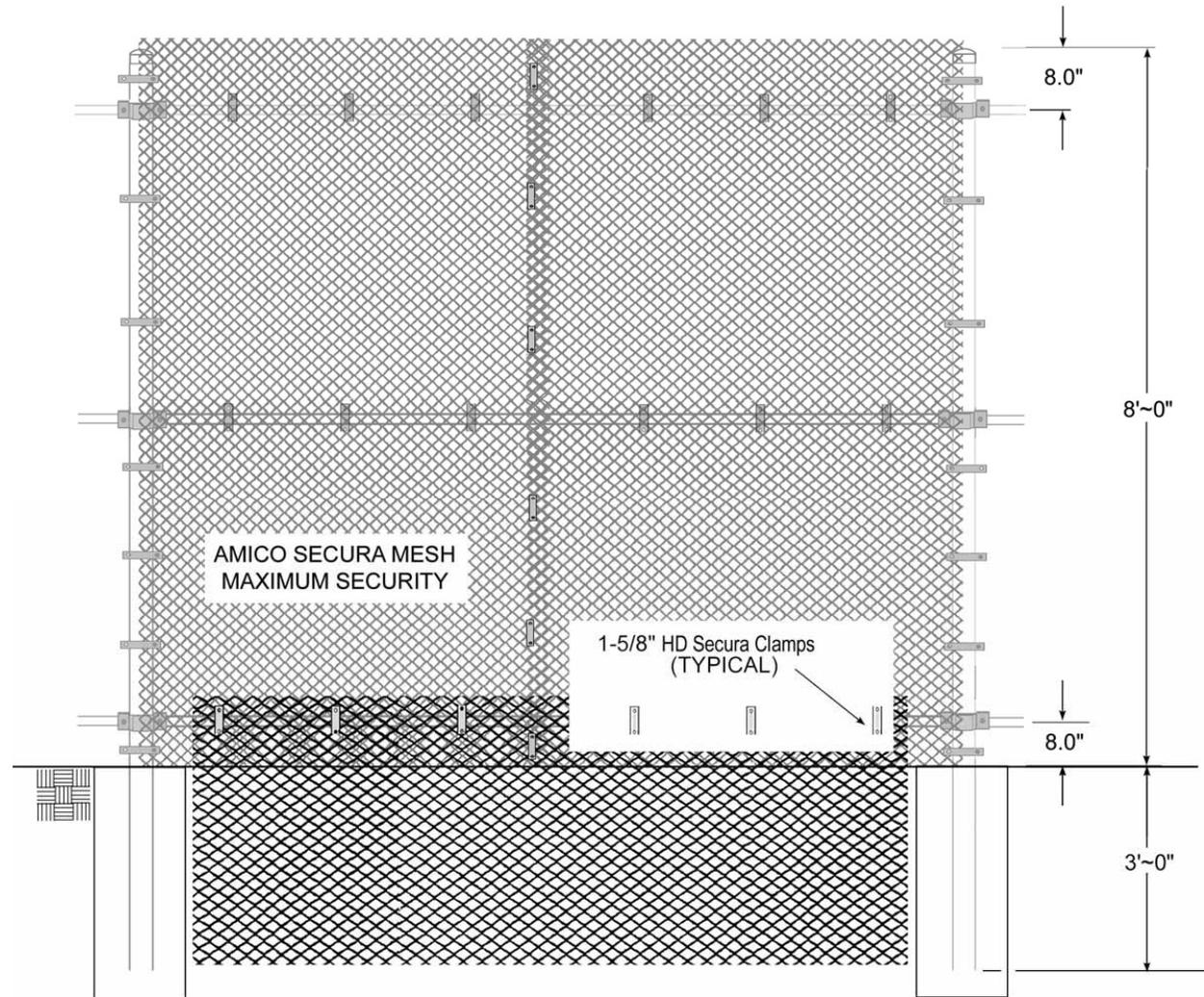
This modified metal barrier is designed to prevent cutting, climbing or crawling under.

This barrier has been a very successful tool for the U.S. Border Patrol. The mesh is very difficult to cut. Heavy duty mechanical tools or cutting torches are required to breach.

By either cutting mechanically or with a torch one creates loud noise or a bright display of sparks that announces and pinpoints any attempt at entry giving the Border Patrol time to react to the breach.



In lieu of the concrete curb a mesh Trench Insert Fill Mesh Panels can be used to prevent shallow digging under the barrier.



TRENCH FILL MESH PANELS
PREVENT SHALLOW TUNNELING

Barry M. Goldwater Air Force Range Yuma Arizona

34 miles of Secura Mesh

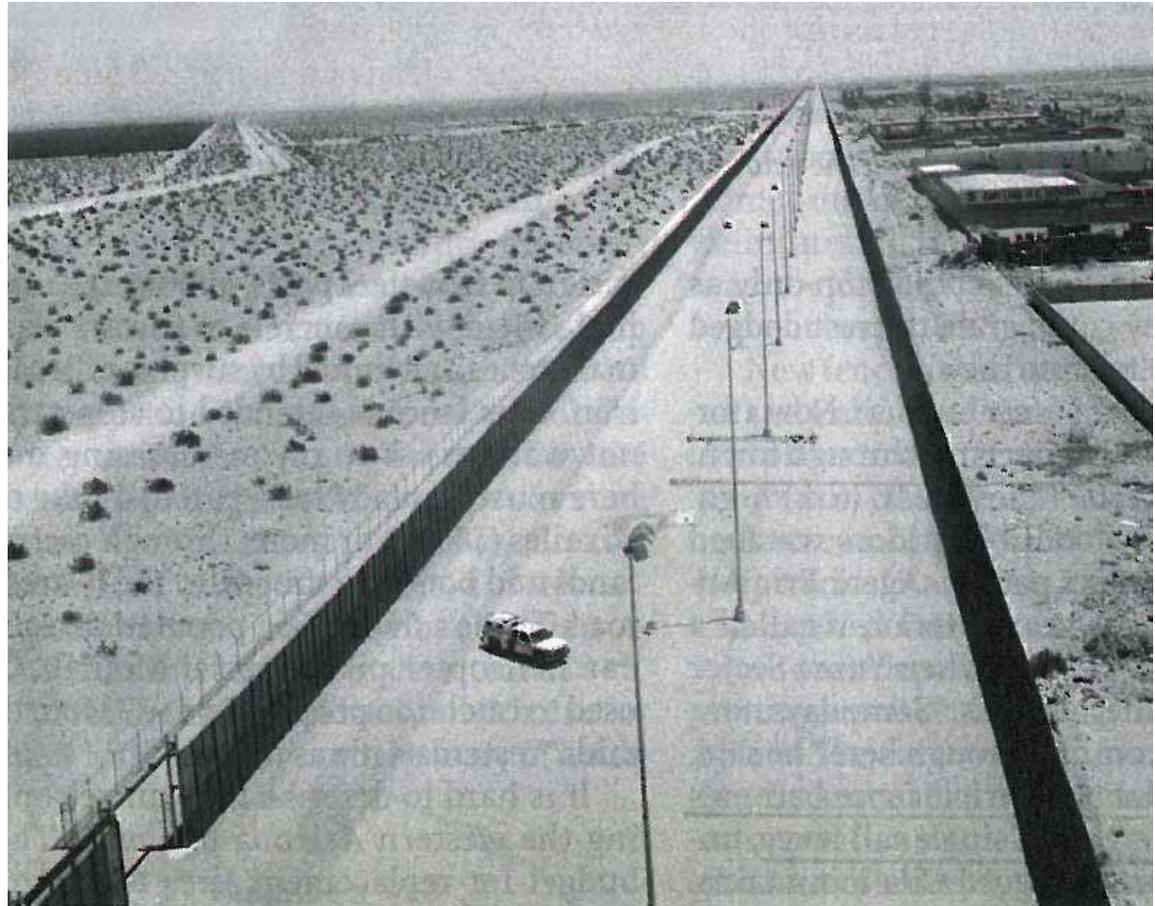


Installed 2007

San Luis, AZ

A barrier that works.

Installed 2007.



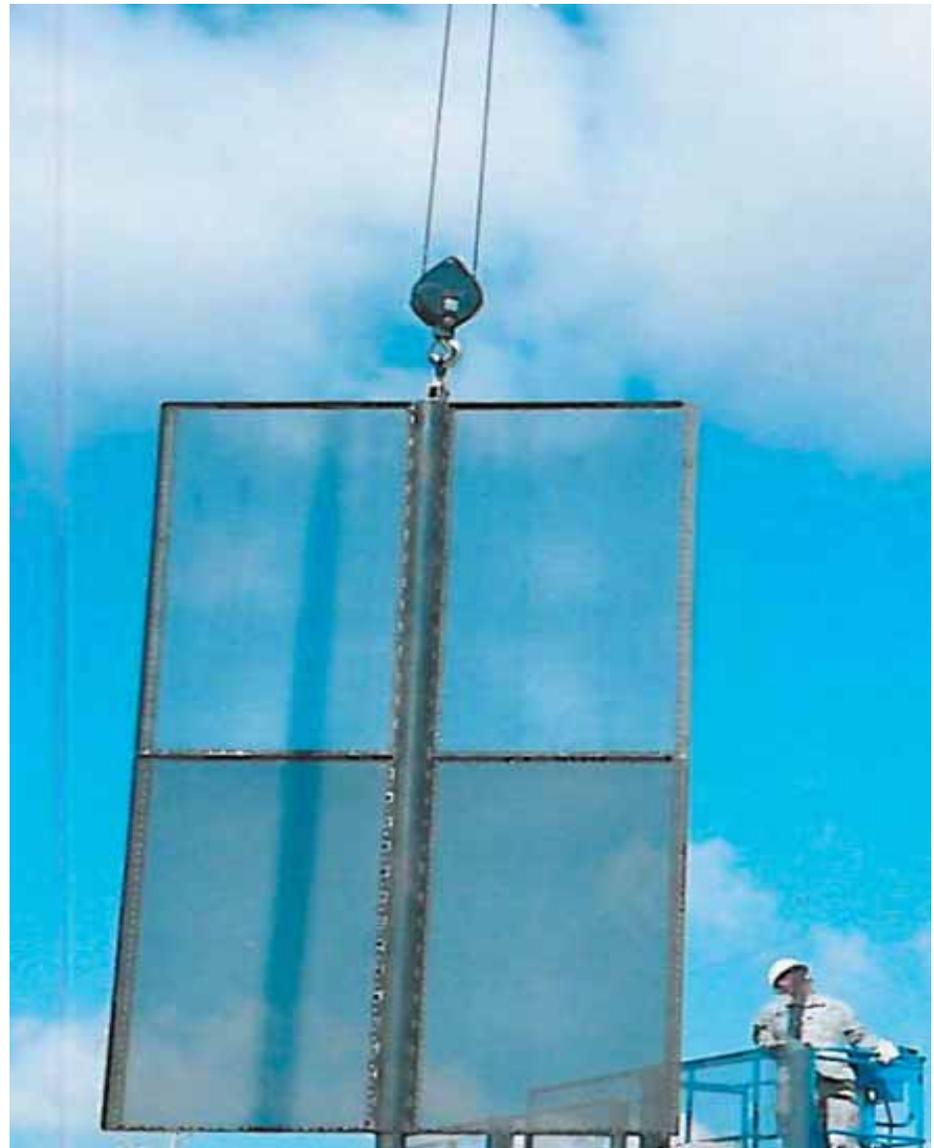
The difference in this barrier and the San Diego barrier is in the construction. This barrier utilizes the same mesh welded into a 2-inch angle iron frame.

Two frames per side of each post making one complete unit ready to install.



Installed 2007

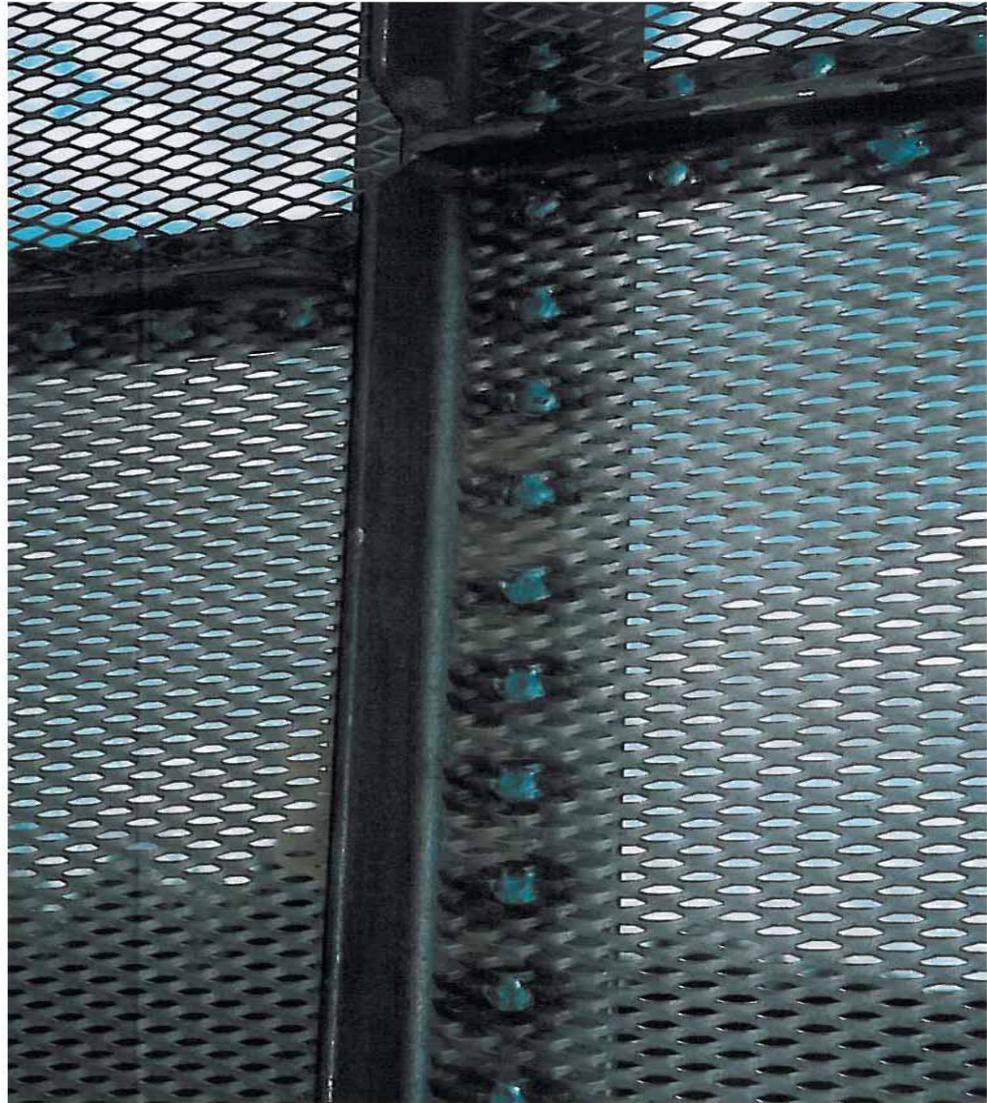
Finished unit consisting of one post and 4 panels ready for installation



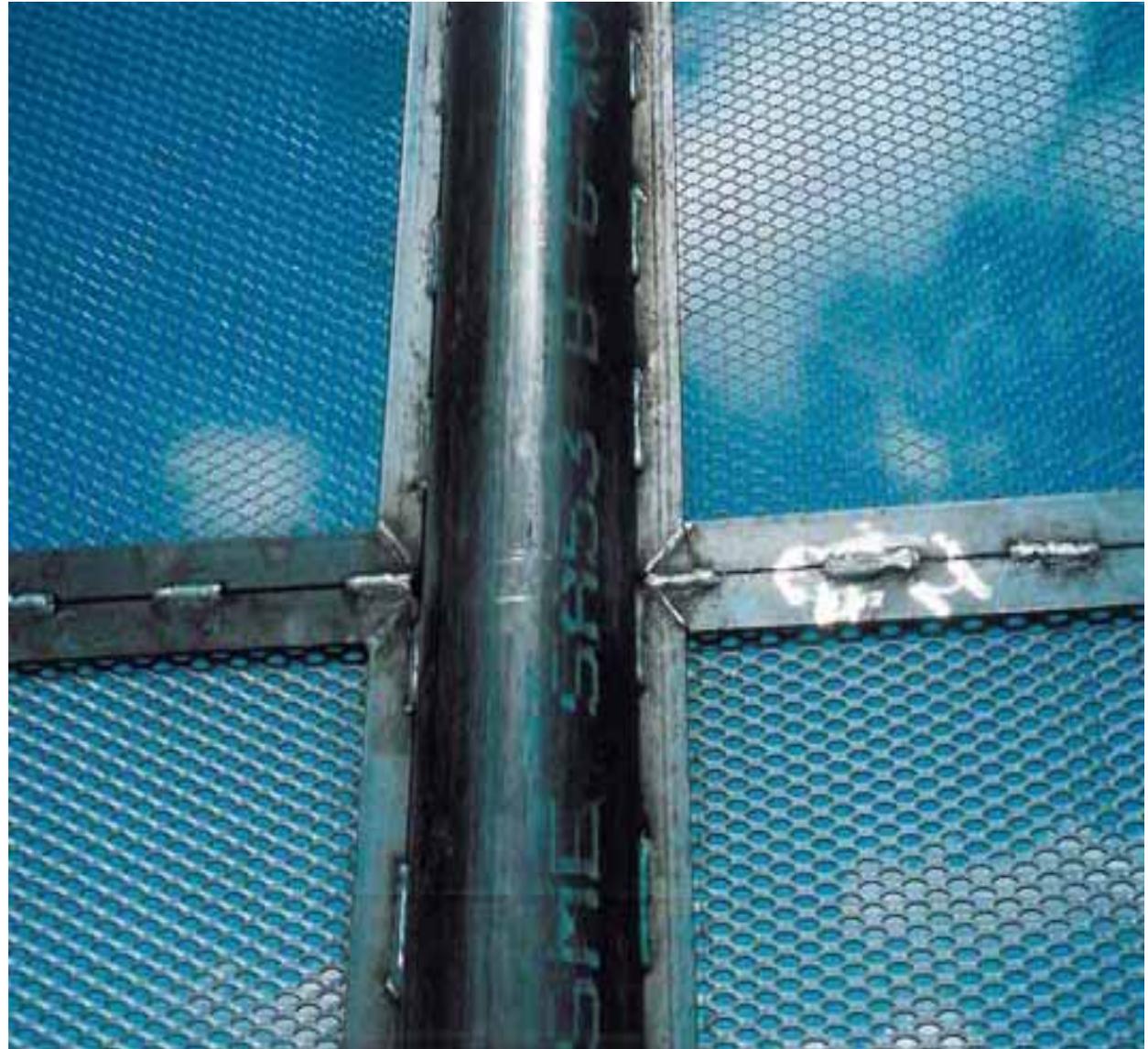
Mesh is welded every 4-inches into the 2-inch angle iron frame.

Due to the arid climate in Arizona, none of the components were hot dip galvanized.

All components used in the San Diego Sector were hot dip galvanized to prevent rusting.



Top frames are welded to bottom frames and then welded to posts forming one complete unit.



Another view of the welded units.



Complete units are set in post holes.

Individual units are aligned and welded to the adjacent unit.

Posts are then set in concrete.



Installed 2007

View of finished barrier with units aligned, welded and posts set in concrete.



Installed 2007

Finished fabricated units being unloaded on jobsite.

Due to the size of the finished unit not many units can be shipped per truckload resulting in higher freight costs.

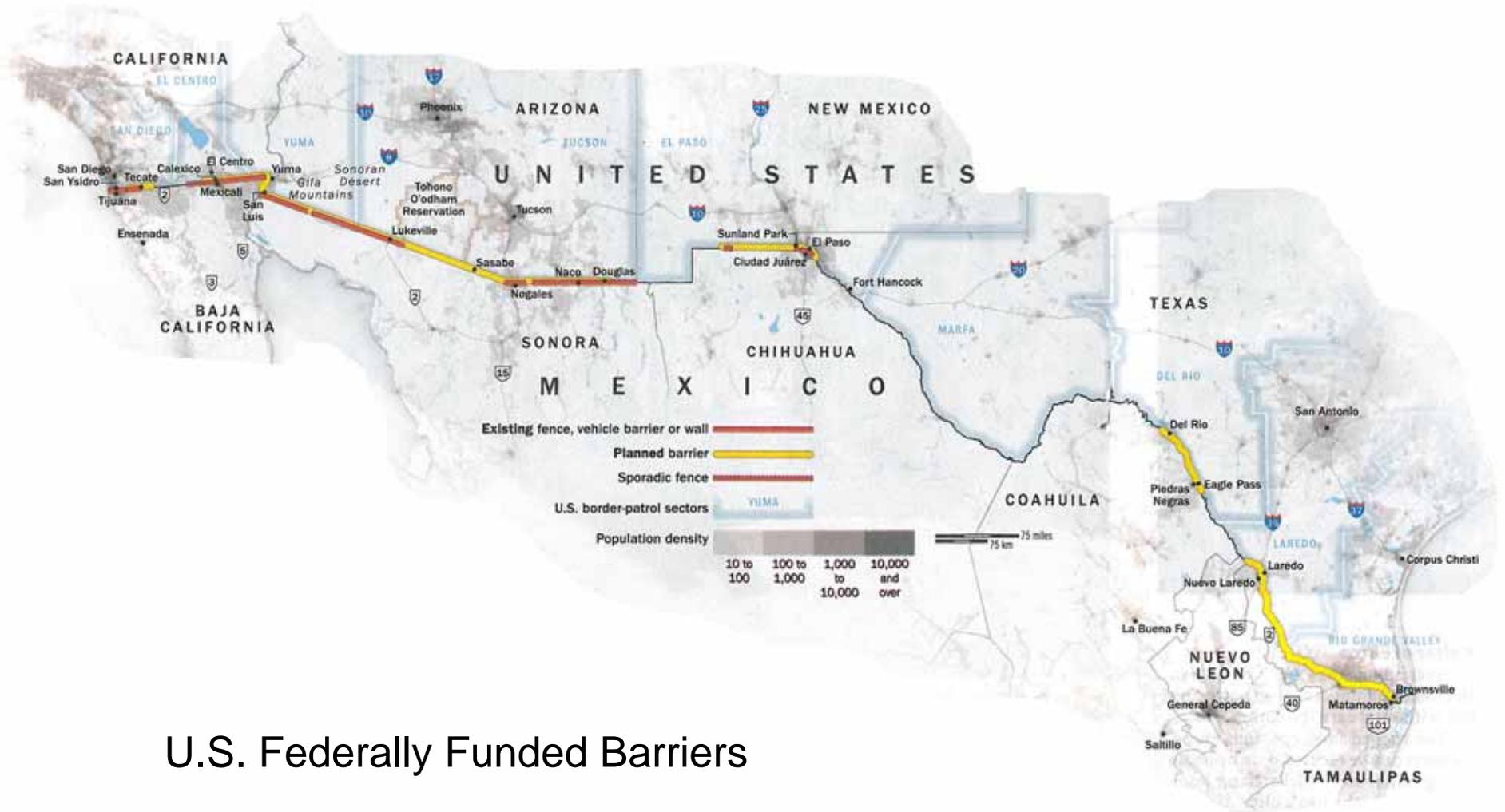


**Length of U.S.-Mexico Land and Water Boundary,
by State (in miles)**

State (from east to west)	Border Length (including along the Rio Grande)
Texas	1,241.0
Arizona (including 19.1 miles along the Colorado River)	372.5
New Mexico	179.5
California	140.4
Total	1,933.4

**Source: U.S. Geological Survey and CRS phone consultation
with USGA library.**

Note: The border area in the United States consists of four states.

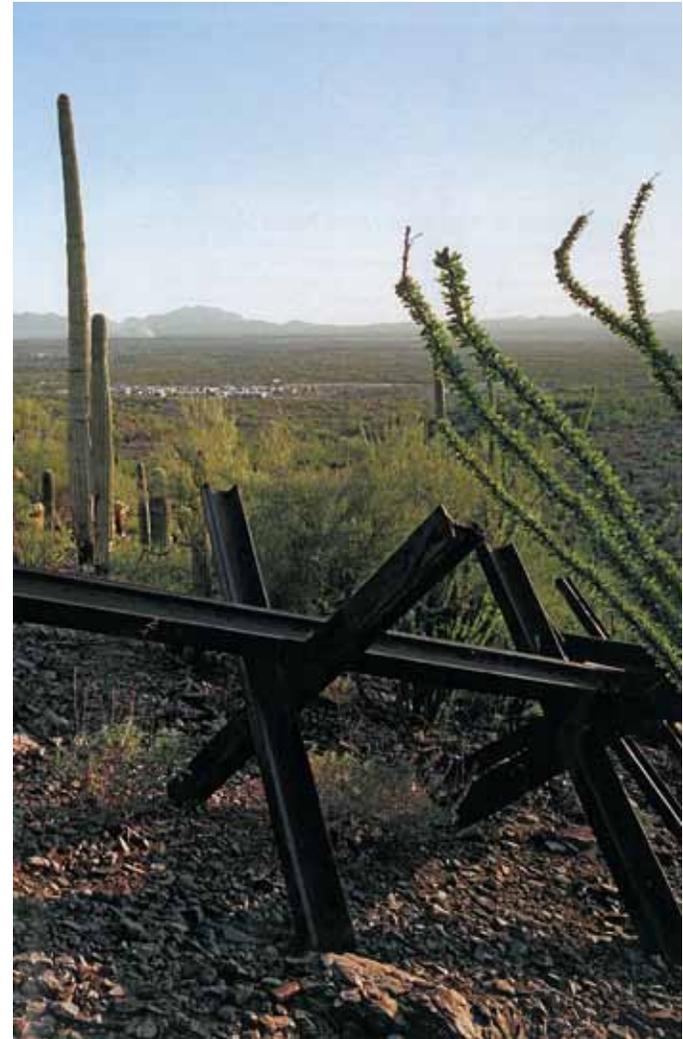


U.S. Federally Funded Barriers

Many Different Styles of Fences Have
Been Financed by the Federal
Government.

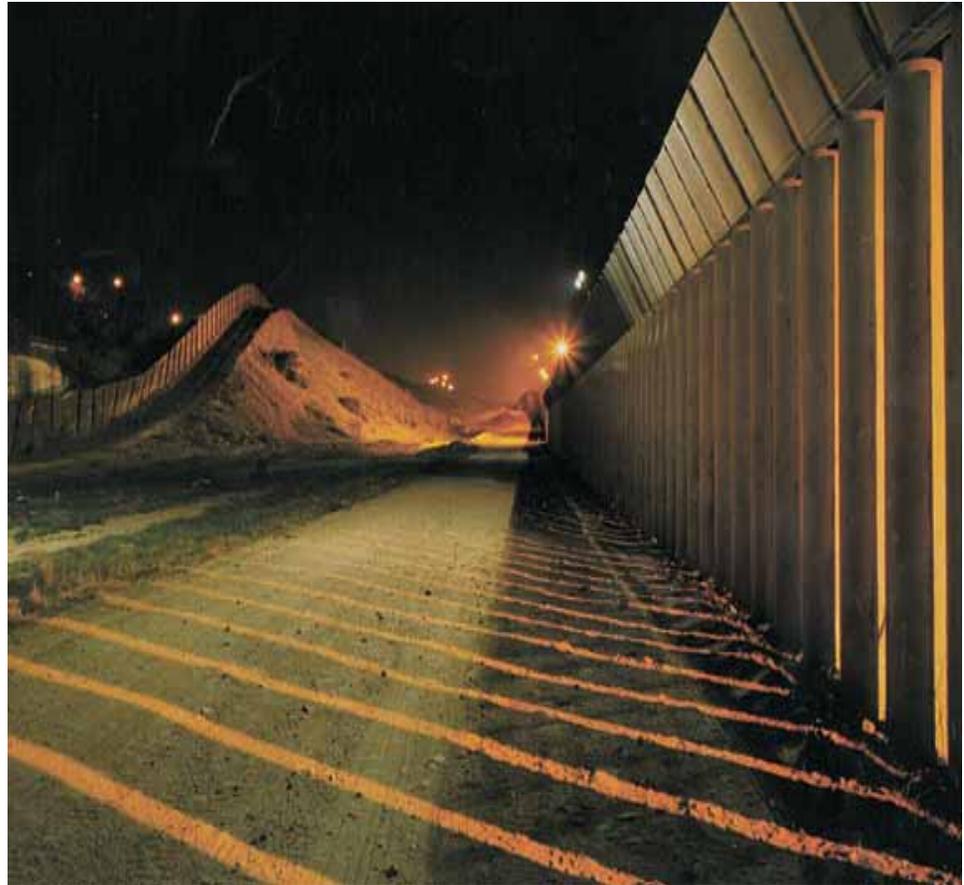
Barricade Fence Vehicle Barrier

Location: Cactus National Monument,
Arizona



Modified Metal No-Climb
Barrier mounted on top of
concrete bollards.

Location: San Ysidro, CA



World War II Landing Mats Fence

Location: Andrade, California



Steel Bollard Vehicle Barrier

Location: San Luis, Arizona

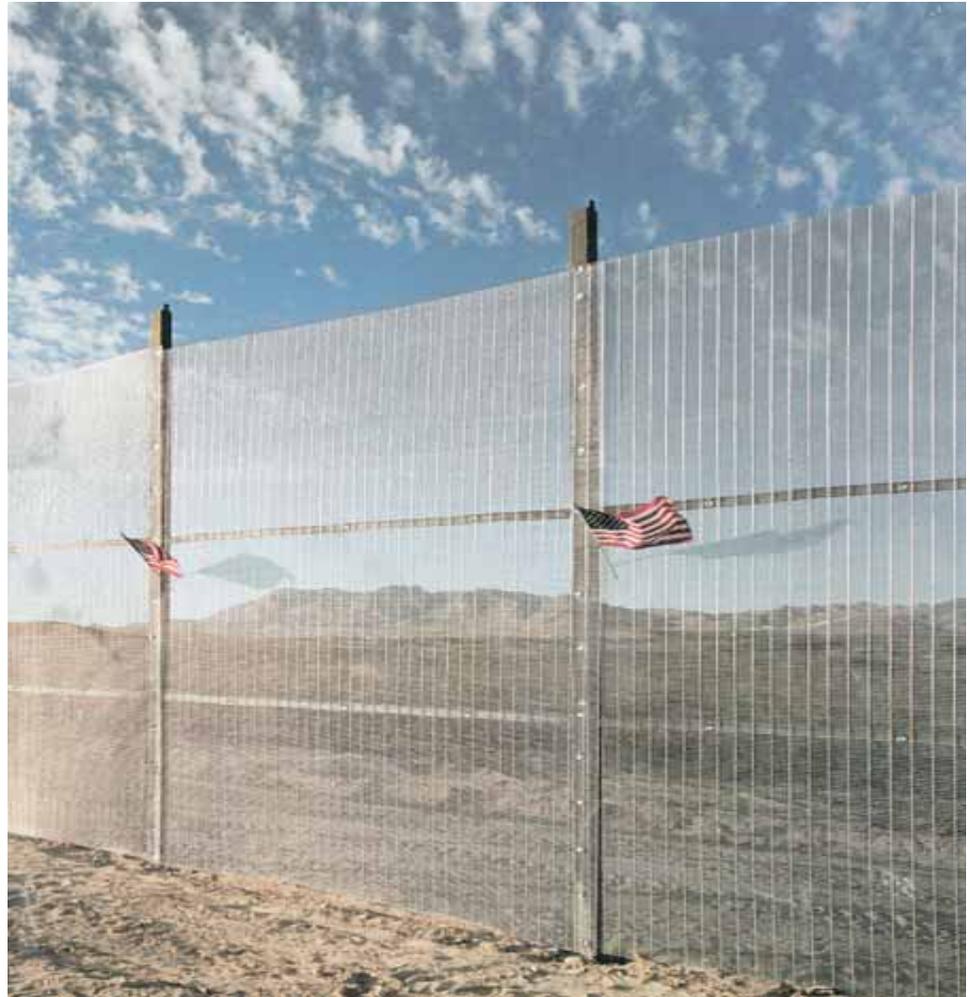
Since the barrier does not block or deny foot traffic, the road on the U.S. side is smoothed so agents can see the tracks of illegal entry.



Welded Wire Fence

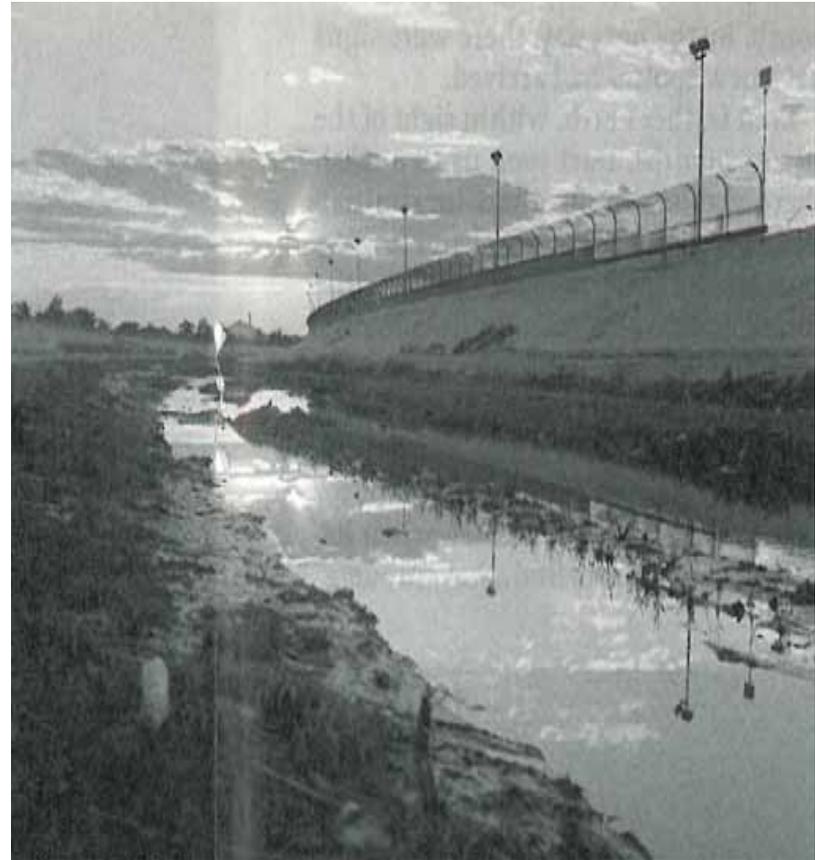
This one (1) mile fence was built on a local rancher's land by a private group.

Location: Naco,
Arizona



Concrete Wall Fence with
Modified Metal No-Climb
Barrier on top of the wall.
Photo from Juarez, Mexico
side of the border.

Location: El Paso, and
Rio Grande Valley,
Texas



Steel Panel Fence

Location: Sunland Park, NM



NO FENCE

Location: Fort Hancock, Texas

Border identified only by
vegetation along an irrigation
canal.



Welded Wire Mesh Fence

Not all materials,
systems and heights
make successful border
barriers.

Some barriers are easier
to cut, climb or crawl
under than the two
systems illustrated
herein.

Location: Columbus, NM



Installed 2009

The above barrier installed at San Luis, Arizona and the barrier installed in the San Diego Sector are both effective in preventing illegal entry.

The San Diego barrier is better adapted to rough terrain.

The San Diego Sector barrier is a more cost effective solution.

Installed 2007

