

Alan Smart and Sarah Cowles

Borderland: A Line Constructs the Land- scape

The US/Mexico border traverses the North American continent from the Gulf of Mexico to the Pacific Ocean. At 1,952 miles it is the ninth-longest border in the world and the most tightly controlled border of its length. The landscape of US/Mexico borderlands is an exemplary twenty-first century text that reflects, represents, and reveals the conflicting demands and imperatives of the relationships between the two nations and the global economy. In its ideal form, the border is an infinitely thin, abstract line separating two other abstract constructs: the United States and Mexico as modern nation-states. Marking the border requires inscription of the abstract into the real, with all the material and conceptual violence that this entails. The drawing of a line on the landscape, and the enforcement of this line, entails various registers relating to ecology, political economy, culture, laws, and customs.

Over time, political attitudes have changed with regard to migration and trade, leading to a continuous re-writing of both conditions. In 1933, the Rio Grande Rectification Treaty was signed by Mexico and the US, and the Rio Grande was straightened and encased in an open concrete canal. The rectification of the river defined the border by preventing further shifting and avulsions of the riverbed during floods. As the western portion of the border undergoes similar “hardening,”

the friction between the projected line and the landscape through which it passes is amplified. This case is best exemplified by the filling of Smuggler’s Gulch, a canyon used by migrants and drug smugglers near Tijuana. In a massive earthmoving project completed in 2006, Smuggler’s Gulch was filled with nearly two million cubic yards of fill, and then capped with a road and fence. In the early twenty-first century, the large-scale capital investment by the US to increase security resulted in a third wave of reification of the border, in the form of new fences, surveillance systems, modernized ports of entry, and a tripling of the border patrol workforce. Again, the dual regimes of the border landscape—the river and the abstract line—inflect and dictate how this investment is resolved both architecturally and tactically.

Border Policy [Effects On Migration]

In the early 1900s three quarters of the immigration from Mexico to the United States occurred through points along the border in California. In the following decades increased border security and a series of US funded operations resulted in shifting immigration patterns. The 1986 Immigration Reform and Control Act (IRCA) established the border between El Paso and Juárez as the primary point of entry for immigration. In 1993, Operation Hold the Line was put into effect to control and deter the amount of illegal immigrants crossing the border. The Operation was able to decrease the amount of immigration through El Paso by 75%. Following the apparent success of Operation Hold the Line, Operation Gatekeeper was put in effect at the border between San Diego and Tijuana. Enforcement at the border shifts immigration to the more remote and desert regions of Arizona. The harsh conditions of the desert resulted in numerous deaths of immigrants, especially those on foot. Members of Humane Borders, a humanitarian aid organization have installed water stations on key migration routes and published maps in Mexico showing precise locations of migrant

deaths. The effects of policy and regulations at the border are not isolated to the movement of human populations. The resulting ecological impacts have altered the movement of animal populations and have contributed to a transformation of the border landscape. Construction of the border fence threatens populations, which need large tracts of land for their survival, such as jaguars, wolves and owls. In addition, the biodiversity in Mexico is in a state of decline due to the depletion of aquifers, channelization of the Rio Grande and increased agricultural and commercial development.

Desert Passages

The Santa Fe Trail served as a military and commercial highway connecting New Mexico and Missouri through the late 19th century. The trail was used by the US during the Mexican American War, and later during early settlement and development in the southwest. In 1880 the railroad replaced the trail as a major transportation corridor.

El Camino Real runs from Mexico City and the port city of Veracruz to Santa Fe, a distance of over 1,500 miles. For 300 years, El Camino Real was the only road into New Mexico and the Southwest, bringing thousands of settlers from Mexico and Spain into the region. Traffic along El Camino Real began to wane in the mid-1880s with the arrival of the railroad. Interstate highways I-10 and I-25, from El Paso to Santa Fe, is today's El Camino Real, closely following the route of the historic trail - except between Las Cruces and Socorro, I-25 follows the Rio Grande, rather than the 90-mile waterless shortcut through the Jornada del Muerto.

Mapping the Border

These drawings, diagrams and maps are the beginnings of a glossary and grammar of the border-text. They illustrate the linear and nodal, technological and natural, systemic and political elements that comprise and define the idiosyncratic cultural landscape of the borderland. The maps depict the regional and

urban conditions of the borderlands while the landscape sections illustrate the several current manifestations of the physical border, from the exclusionary and militarized to the subversive and atmospheric.



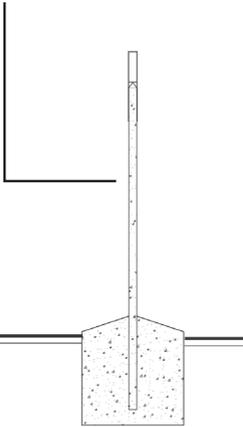
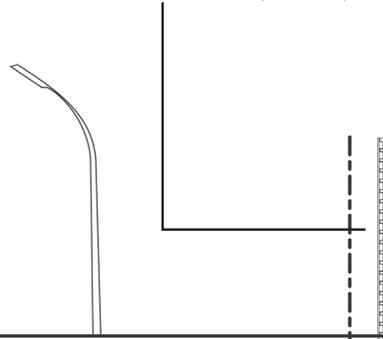
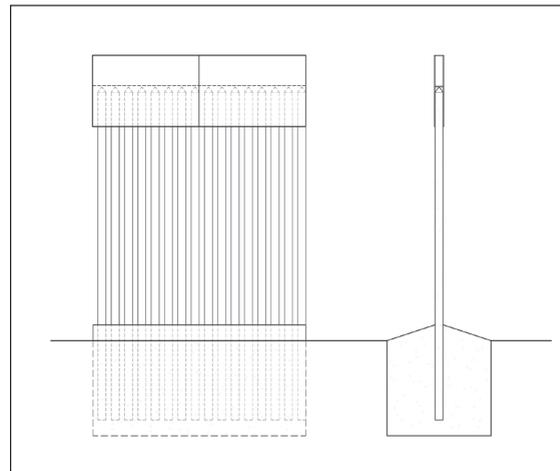
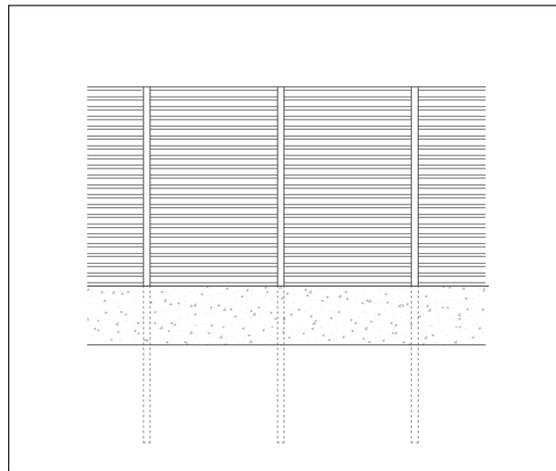
Border Conditions [Fence Typologies]

The United States devotes an unprecedented amount of resources to the built infrastructure of the border. \$1.2 billion has been spent on the most recent round of border fence construction and many estimates project the cost to maintain the fence over the next 25 years could run as high as \$50 billion. Under restructuring that took place after the attack on the World Trade Center, the Immigration and Naturalization Service was dissolved, and border security in the US was placed under the jurisdiction of the Office of Homeland Security. With this change the rhetoric of border enforcement was shifted significantly away from immigration control to one of national security and the global war on terrorism. The infrastructure of border control ranges along the border's length from hardened

zones of multi-layered fences in urban areas to barely marked open sections in sparsely inhabited desert regions. In the open desert vast distances and the harsh environment provide the most formidable deterrent to border crossing. The border is controlled with a combination of material barriers that physically impede movement and "soft" controls of surveillance systems and mobile border patrol units that keep watch over the landscape.

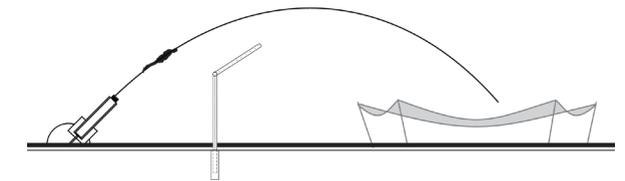
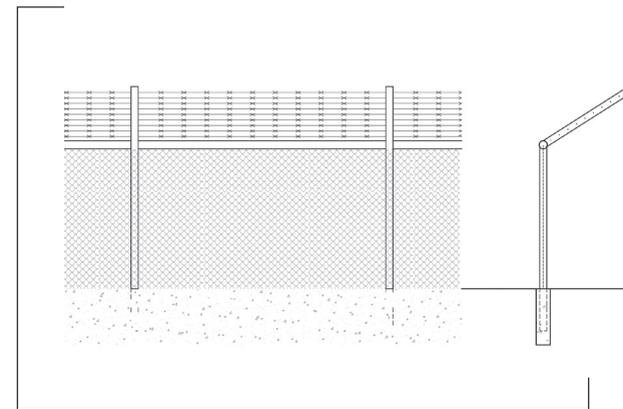
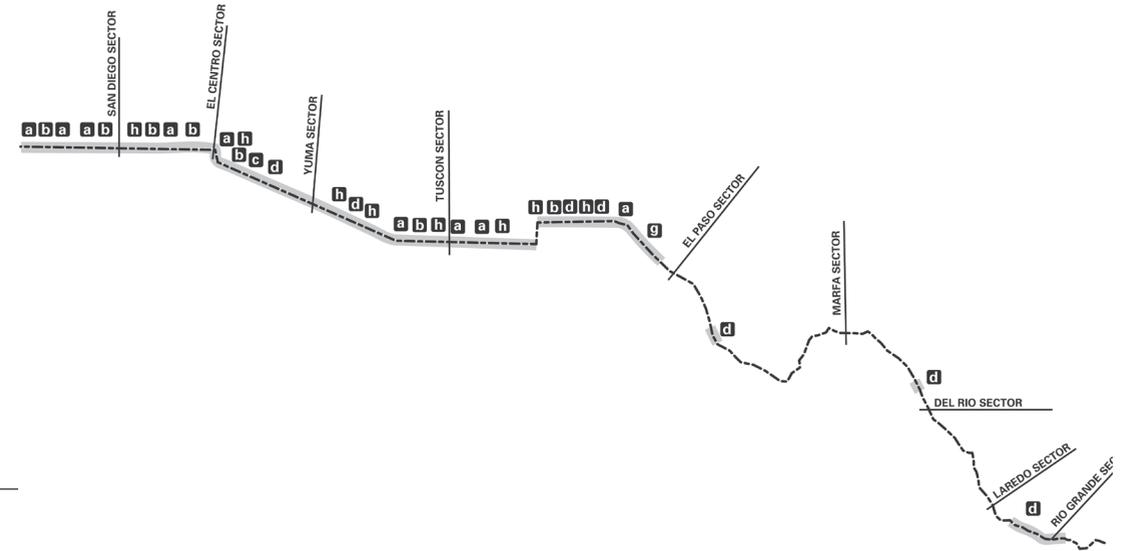
Recycled Gulf War Landing Mat Fence

18 foot steel beam fence

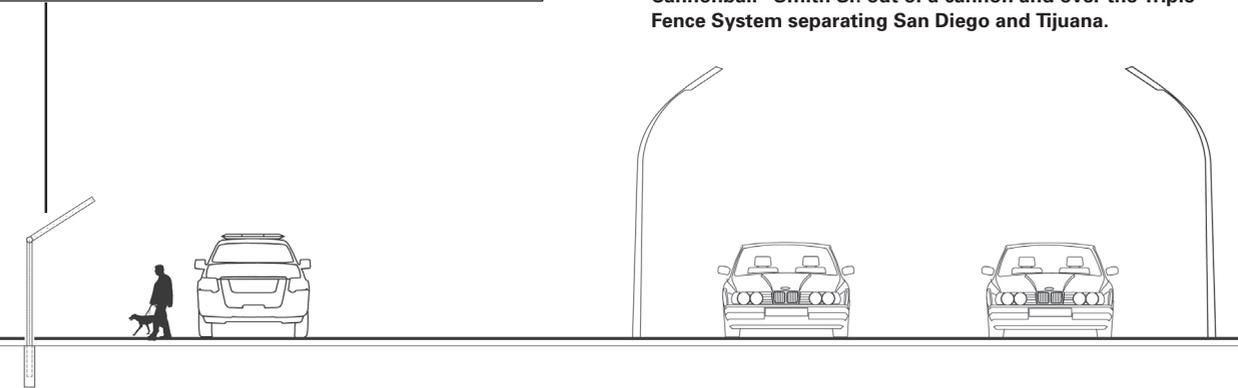


Tijuana/San Diego

To complete the Triple Fence System two new barriers have been added to the aging recycled mat fence. These new fence types are spaced 100 yards apart to create an open land for unobstructed views of smuggling attempts and mobilization parallel to the border.



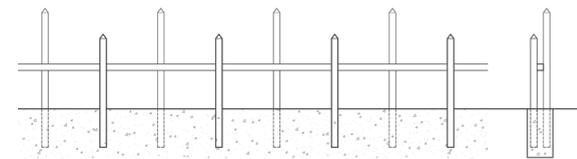
Launching Over
In his 2006 piece *One Flew Over the Void*, Venezuelan artist Javier Tellez shoots stunt man Dave "The Human Cannonball" Smith Sr. out of a cannon and over the Triple Fence System separating San Diego and Tijuana.



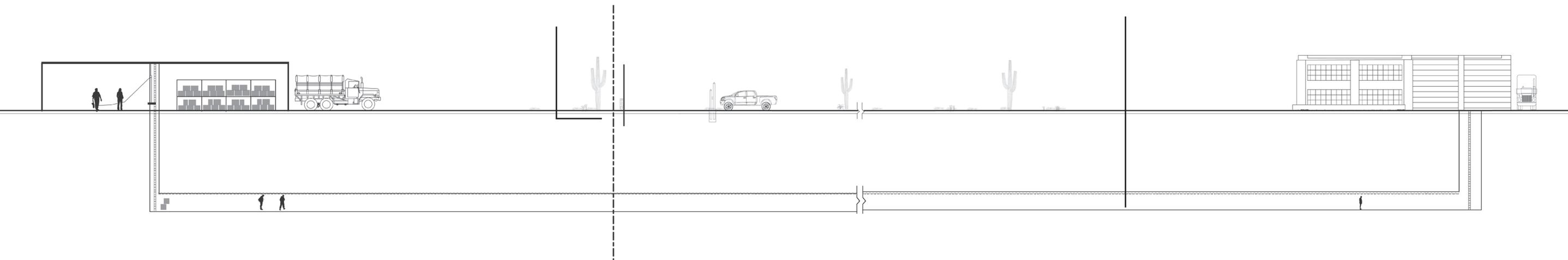
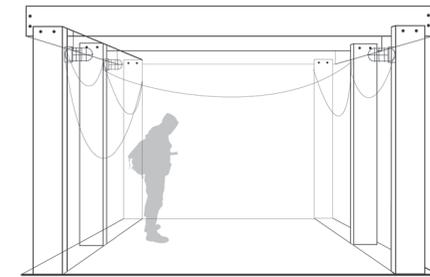
Tunnels

In dense, urban areas such as Tijuana and Nogales where buildings are set close to the border fence, it becomes viable for drug smugglers to simply tunnel under the border. Tunnels have been discovered as deep 80 feet below the ground. Some are fitted with elaborate pulley and gurney systems to facilitate movement, as well as lighting and ventilation systems. In this example from Nogales in a 12x6 foot concrete shaft drops down into the earth beneath a warehouse in Mexico, and resurfaces inside another building in the US. The tunnel is shored along its length in a manner similar to a mineshaft, and provided with lighting and a pulley system for moving contraband.

Straight Rail Vehicle Barrier

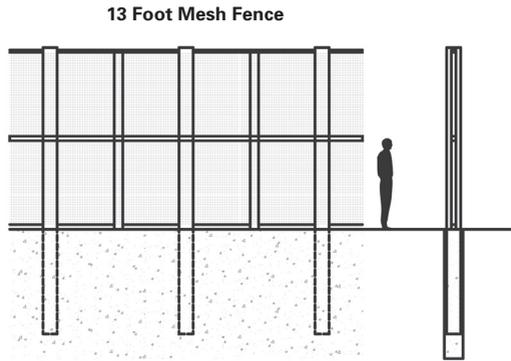


Underground Tunnel



Devil's Highway

Devil's Highway is a 250-mile trail stretching from Caborca in the Mexican state of Sonora, across the US/ Mexico border, through the desert to Yuma, Arizona. The road is followed by migrants trying to enter the US. The heightening of security at urban crossings has resulted in an increased usage of more of remote, more dangerous crossings by illegal migrants. In 2001, 14 men died of dehydration and heat exhaustion while attempting to cross the desert into the US with a coyote (guide). As a result, both the US Border Patrol and the non-profit organization Human Borders have worked to provide water and emergency beacons to aid distressed migrants.



Human Borders

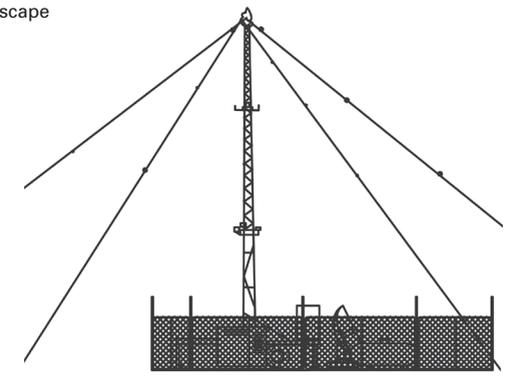
Founded in June 2000 with the intent "to create a humane and just border environment". The organization works to provide humanitarian assistance to those risking their lives and safety crossing the border. Their goals include reducing migrant deaths, changing U.S. policy to return migration safely through ports of entry, helping to provide legal status to undocumented workers already in the US, providing legal work opportunities in the US for migrants, and providing economic relief for US agencies engaged in helping migrants.

Water Station
65 gallon drums containing drinking water and marked with a flag. Established by the nonprofit group Human Borders, the stations are maintained by volunteers and paid for by border communities which realize a savings from the reduced cost of emergency services and migrant deaths.



SBI-NET "Virtual Fence" Towers

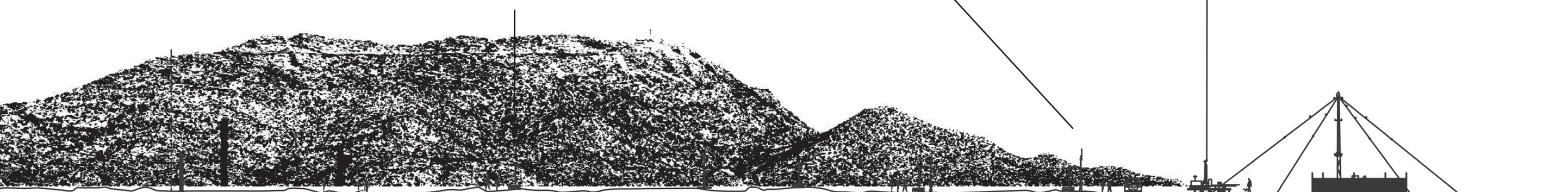
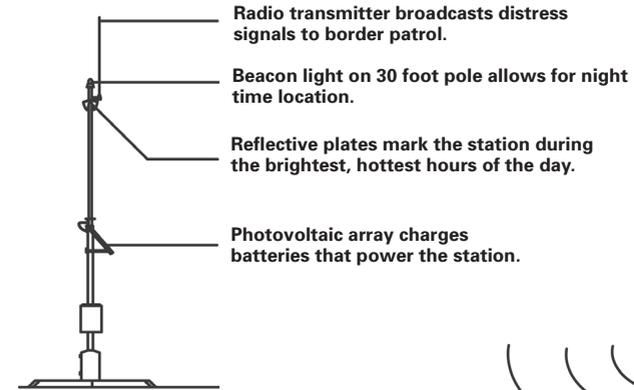
A series of nine towers are installed as part of "Project 28" near the border at Sasabe, Arizona. Towers are set back as far as ten miles from the border and fitted with motion-activated cameras that watch for suspicious activity. Proposals are in place to deploy these towers along both the Mexican and Canadian borders. Currently Boeing has a \$67 million dollar contract to construct these towers for three years, however the entire project is estimated to cost more than \$7.6 billion.



TARS

First deployed by the Air Force for surveillance in 1980, the Tethered Aerostat Radar System was re-purposed by the US Customs Service in 1984 for use along the US/Mexico Border. The system consists of a network of helium filled blimps positioned at elevations of up to 15,000 feet. Each blimp contains a radar unit adapted from those used in the NORAD system during the Cold War to watch for missiles. In TARS the radars are miniaturized and turned downward to detect low flying drug smuggling planes.

Rescue Beacon



1 Day Walk: 20 km/12.4 MI
1 Humane Borders water station, no border patrol rescue beacons

2 Days Walk: 40km/ 24.85 MI
7 Humane Borders water stations, 1 border patrol rescue beacon.

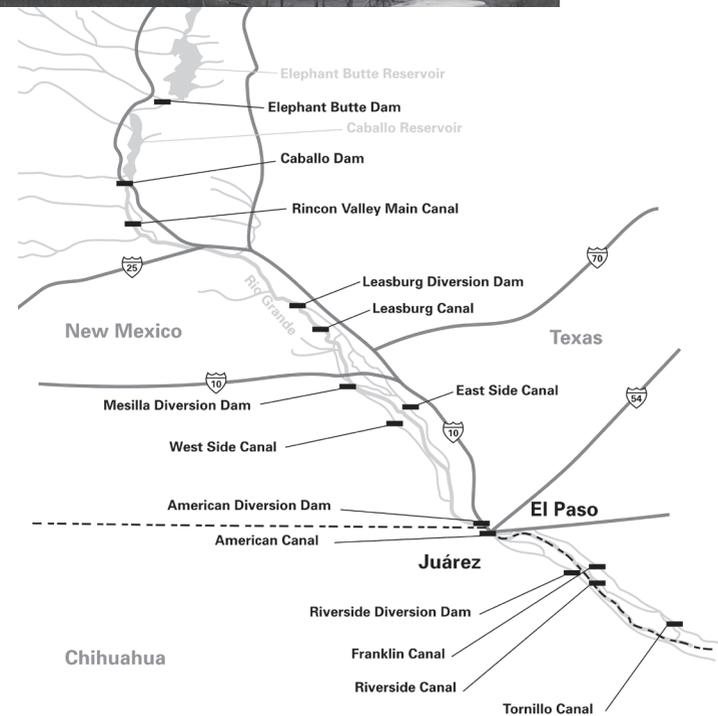
3 Days Walk: 60km/ 37.28 MI
1 Humane Borders water station, 4 border patrol rescue beacons.

Pickup
Migrants are picked up by prearranged rides out of the desert. They leave behind water bottles and other provisions they used to make their passage.



Rio Grande/El Paso

The Chamizal dispute from the early 1900s through the 1960s acted as precedent for how changes in the river's path could legally change both resident's citizenship and the country's border in a single flood. Starting in the 1960s the Rio Grande was emptied and channelized. The water from the Rio Grande remains in the US Franklin Canal for use in El Paso and to irrigate cotton fields and orchards in the US.



Surveillance Tower

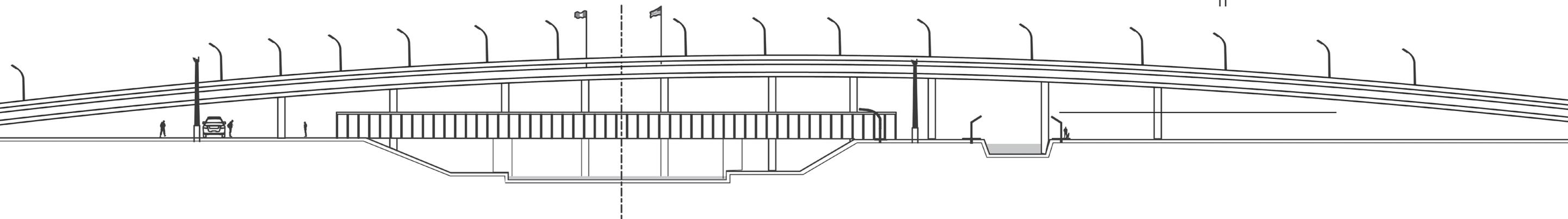
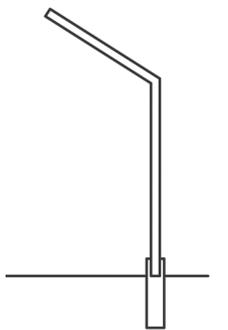
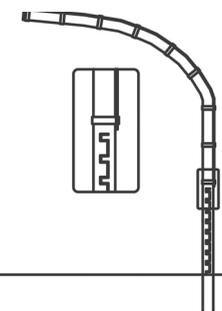
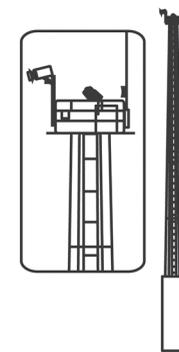
Towers are typically set back ten feet from the border fence. They house cameras, radar, wireless data access points, and a tower security system. In addition to the surveillance gathered from the tower, mobile data can be sent to Border Patrol

First Defence®

Adapted from a design used in many detention centers, this fence's curved surface and small gauge mesh hampers climbing by deforming under the climber's weight and becoming more difficult to scale.

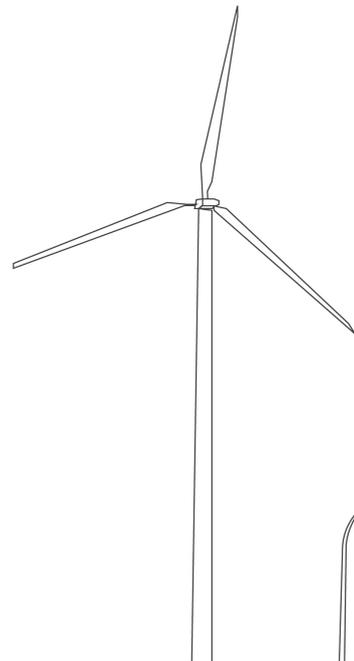
Sandia Fence

This angled; two-section fence is intended to prevent climbing by forcing would-be climbers to hang from the fence



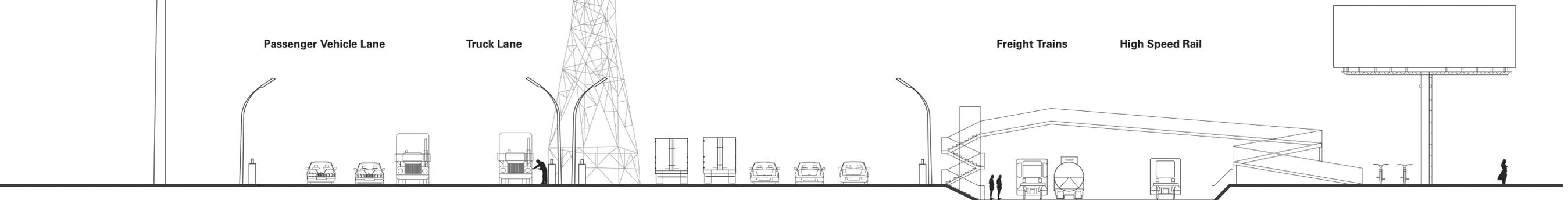
Inland Ports

The proposed North American Supercorridor extends from the port of Lázaro Cárdenas in Mexico, through Kansas City, Missouri, and up to the Canadian border north of Duluth, Minnesota. The North American Supercorridor, or NAFTA Superhighway, would enable goods from Asia and the Far East to enter North America through the Mexican ports such as Lázaro Cárdenas. The plan's backers: transportation and logistics brokers, retailers, and manufacturers, argue that the NAFTA Superhighway would reduce strain on union-controlled transportation facilities at American ports. Customs protocols include pre-screening of shipments at departure ports in Asia to clear Mexican customs in Lázaro Cárdenas. Once at the port of arrival, shipments would pass through multiple X-ray and gamma ray scans before being loaded onto trucks and rail for transportation to the "inland port" of Kansas City. Truck locations would be monitored using the Intelligent Transportation Systems (ITS) and GPS from the border to the Kansas City's inland "Smartport." Further distribution would then occur in Kansas City. Aside from reducing the flow of goods through Los Angeles and Long Beach, shipments along the NAFTA superhighway would not have to stop or be transferred at the border, thus dramatically reducing delays due to border bottlenecks. American environmental groups, Longshoremen, Stevedores and Teamsters all oppose plans for this infrastructural realignment.



Passenger Vehicle Lane

Truck Lane



Freight Trains

High Speed Rail



Smuggler's Gulch

A canyon known as "Smuggler's Gulch" once ran across the border near Tijuana and San Diego, providing a natural connection between the US and Mexico. Despite its rugged terrain, the passage was used extensively for drug trafficking and illegal border c prevented effective fencing of the canyon. In 2005, the Real ID Act gave the Department of Homeland Security authority to waive environmental laws for national security reasons, enabling the radical and expensive (\$96 million) transformation of Smuggler's Gulch. Nearly 1.7 million cubic yards of dirt were cut from nearby hills and carted in 35,000 truckloads to fill in the Gulch. Once the landscape was modified to conform to requirements of border control, a new secondary, tight mesh fencing was erected on top of the fill.

