

FINDING OF NO SIGNIFICANT IMPACT
IMPROVEMENT AND EXTENSION OF A PEDESTRIAN BARRIER
IMMIGRATION AND NATURALIZATION SERVICE
U.S. BORDER PATROL, EL PASO SECTOR

PROJECT HISTORY: Illegal traffic into the United States causes detrimental impacts to natural and cultural resources as well as increase risks to the health and safety of U.S. Border Patrol (USBP) agents and the general public. The remote and isolated region of southeast New Mexico, and the proximity of the Mexican border, has made this area a main artery for smuggling illegal immigrants and controlled substances into the United States. Near constant illegal foot traffic skirting the existing fence occurs in this area by illegal immigrants, which lead to the destruction of sensitive species, fragmentation of landscape, disturbance to wildlife, and government property (i.e. – vehicles, trains, railroad equipment).

Currently, the Immigration and Naturalization Service (INS) is planning to improve and extend a small section of the existing pedestrian fence near Anapra, New Mexico.

PURPOSE AND NEED: In the proposed project area, the lack of adequate physical barriers has allowed illegal immigrants to enter the U.S. undeterred. Because of the nearby road network and railroad route, undocumented aliens, drug smugglers, and thieves can easily escape into the U.S. once they have successfully breached the border. The purpose of this project is to provide an immediate and effective deterrence measure against illegal pedestrian entry into the U.S. Pedestrian fences are an effective method of stopping illegal entry into the United States. Thus, the need of this action is to improve and extend the current pedestrian fence at locations along the international border within the Santa Teresa Station's Area of Operations (AO). This effort is essential in the deterrence of illegal activity and aids the USBP in effective enforcement of the international border. This EA addresses the potential for adverse or beneficial environmental impacts of the proposed improvement and extension of the current pedestrian fence.

PROPOSED ACTION: The proposed action would allow the USBP to replace 0.2 miles of the current chain-link fence with landing mat material and horizontally extend the eastern and western ends of the current fence by 0.17 miles and 0.41, respectively. The eastern terminus of the proposed corridor would be near International Boundary and Water Commission (IBWC) Monument 2B, and the western limit would extend west of IBWC Monument 3 for approximately 0.36 miles.

ALTERNATIVES: Alternatives addressed in the EA include a No Action Alternative and the Preferred Alternative described above. The No Action Alternative would not allow the improvement and extension of the current pedestrian fence. The Preferred Alternative would allow the aforementioned improvement and extension of the current fence. Other alternatives considered but eliminated from further discussion include the implementation of either a bollard style or picket style fence/barrier design.

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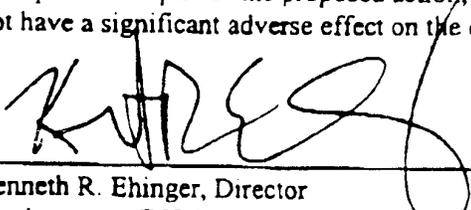
This EA is tiered from two documents: the Joint Task Force Six (JTF-6) EA prepared for the construction of the current pedestrian fence and the Final Supplemental Programmatic Environmental Impact Statement for INS and JTF-6 U.S./Mexico Border. The EA for the proposed action is tiered from these documents in accordance with the President's Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act of 1969, as amended.

ENVIRONMENTAL CONSEQUENCES: No significant adverse effects to the natural or human environment are expected upon implementation of the proposed action. The extension of the pedestrian fence would be placed adjacent to existing border roads; thus, no new road construction or road improvements would be required. Minimal ground disturbance would be required, but would not affect wildlife habitat, cultural resources, soils, or water resources.

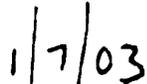
ENVIRONMENTAL DESIGN MEASURES: Environmental design measures will be implemented and supervised by the USBP managers at the Santa Teresa Station. These measures include:

1. Using standard construction procedures to minimize the potential for erosion and sedimentation and control fugitive dust during construction by the implementation of Best Management Practices (BMPs).
2. Proper routine maintenance of all vehicles and equipment would be implemented to ensure efficient operation.
3. Any major fuel spills would be contained immediately by constructing an earthen dike and applying a petroleum absorbent to contain the spill.
4. On-site activities would be restricted to daylight hours on Monday through Saturday, except in emergency situations.

FINDING: Based upon the results of the EA and the environmental design measures to be incorporated as part of the proposed action, it has been concluded that the proposed action would not have a significant adverse effect on the environment.



Kenneth R. Ehinger, Director
Headquarters, INS Headquarters
Facilities and Engineering Division



Date

HQENG Inner Office Routing

Subject: Finding of No Significant Impact (FONSI) for construction of an extension to the Pedestrian Fence at the USBP Santa Teresa Station in Anapra, New Mexico.

Discussion: The current U.S. Border Patrol Santa Teresa station in Anapra, NM has a border that edges the downtown area and the rail road tracks. This area requires protection from vandals, thieves, and migrants that access the railroad when it uses its tracks. This area also permits the easy access of illegals into the Anapra area. The pedestrian fence is a typical landing mat fence type and will provide some protection at this vulnerable area. No anticipated impacts to the environment are foreseen.

The EA also discusses mitigation efforts that will occur during the fence's construction and that it will be implemented and supervised by the USBP managers at the Santa Teresa Station.

Recommendation: HQENG sign the FONSI.

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FINAL
ENVIRONMENTAL ASSESSMENT

**IMMIGRATION AND NATURALIZATION SERVICE
U.S. BORDER PATROL PEDESTRIAN FENCE
ALONG THE INTERNATIONAL BORDER
USBP EL PASO SECTOR, TEXAS**

January 2003

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Abstract

PROPOSED ACTION:	The U.S. Immigration and Naturalization Service (INS) proposes to improve and extend an existing pedestrian (chain-link) fence for the U.S. Border Patrol (USBP) El Paso Sector, near Anapra, New Mexico.
PURPOSE AND NEED FOR THE PROPOSED	The purpose of the proposed improvement to, and extension of, the existing fence is essential in the deterrence of illegal activity and aids the USBP in effective enforcement of the international border. The need for the proposed project is based upon increased illegal activity and limited manpower available to the USBP.
PROPOSED ACTION AND ALTERNATIVES:	The Proposed Action Alternative includes the improvement of 0.2 miles along the eastern end of the existing fence and the horizontal extension of 0.17 miles and 0.41 miles of the current eastern and western ends, respectively. Alternatives considered but eliminated from further consideration include the use of different fencing material such as bollard and picket style fences.
ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION:	The proposed action would involve the excavation and removal of approximately 0.1 cubic yards of soil from each hole where fence poles would be located, but would not significantly affect the existing environment. The footprint of the proposed fence was surveyed for sensitive biological and cultural resources. No significant adverse effects to soils, air quality, water quality, protected species, land use, archaeological or ethnographic resources are expected.
CONCLUSIONS:	No major, long-term, adverse impacts are anticipated to any resources analyzed within this document. Therefore, no further analysis or documentation (i.e., Environmental Impact Statement) is warranted. The INS, in implementing this decision, would employ all practical means necessary to minimize the potential adverse impacts on the local environment.

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LIST OF ACRONYMS

AO	Area of Operation
AQCR	Air Quality Control Region
BISON-M	Biota Information System of New Mexico
BLM	Bureau of Land Management
BMP	Best Management Practices
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
dBA	Decibels
E.O.	Executive Order
EA	Environmental Assessment
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GSRC	Gulf South Research Corporation
IBWC	International Boundary and Water Commission
IIRIA	Illegal Immigration Reform and Immigrant Responsibility Act
INA	Immigration and Nationality Act
INS	Immigration and Naturalization Service
JTF-6	Joint Task Force Six
MMD	Minerals and Mining Division
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historical Preservation Act
NMDGF	New Mexico Department of Game and Fish
NOA	Notice of Availability
NRCS	National Resource Conservation Service
PEIS	Programmatic Environmental Impact Statement
POE	Ports of Entry
PSD	Prevention of Significant Deterioration
ROI	Region of Influence
RVS	Remote Video Surveillance
SHPO	State Historic Preservation Officer
UDA	Undocumented Alien
UPR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WQCC	Water Quality Control Commission
WSA	Wilderness Study Area

1.0 INTRODUCTION

This Environmental Assessment (EA) addresses potential effects, both beneficial and adverse, of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP) proposed project that involves the improvement and extension of a fence within the USBP El Paso Sector Area of Operation (AO). This EA evaluates (1) the conversion of 0.2 miles of existing chain link fence to landing mat fence, and (2) the construction of 0.58 miles of chain link fence attached to the existing fence. This EA is tiered from a Supplemental Environmental Impact Statement (SEIS) and Technical Support Documents that was completed to address cumulative effects of projects undertaken by INS and Joint Task Force Six (JTF-6) (INS 2001). This EA is also tiered from the JTF-6 EA that was prepared for the construction of the original chain-link border fence (USACE 1995).

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ) Regulations for the Implementation of the NEPA, as well as the INS's Procedures for Implementing NEPA (28 CFR 61).

1.1 Background

1.1.1 INS Organization

The INS was originally created in 1890 as the Bureau of Immigration with the responsibility to regulate and control immigration into the United States. The U.S. Congress created the USBP in 1924 to be the law enforcement branch of the INS. The USBP is primarily responsible for the control of immigration into the U.S., as well as the detection, interdiction and apprehension of illegal drug traffickers between the land ports-of-entry (POE). With the increase in illegal drug trafficking, the USBP also has become the leader for drug interdiction between land POEs. Since 1980, an average of 150,000 immigrants have been naturalized every year. At the same time, however, illegal aliens have become a significant issue. Apprehension rates for INS are currently averaging more than 1.5 million illegal aliens throughout the country.

The INS has reported that the U.S.-Mexico border is breached more than any other international border in the world. It is a large, diverse, and difficult boundary to effectively enforce without the use of dedicated tactical infrastructure (fences, lights, roads, cameras, etc.).

Prior to the early 1990s, there was less awareness of southwest border issues and less national attention was given to illegal trans-boundary activity than is currently attributable. As a result, the USBP's growth was nominal, funding for enforcement efforts fell short, and the USBP functioned under severe constraints. Events over the last decade, however, related to illegal immigration and narcotics smuggling have increased the nation's awareness and generated substantial interest in controlling the U.S.-Mexico border. This has resulted in increased funding and staffing, and has also created new opportunities in the development of proactive border control strategies as demonstrated in patrol and enforcement operations throughout the southwest border area (e.g., Operations Gatekeeper, Hold-the-Line, Safeguard, and Rio Grande).

Since the September 11, 2001 terrorist attack on the United States, the anti-terrorism function of the INS is now an even more increased function of the USBP over what it has been in the past. This increased role requires more vigilance at the POEs and all areas along the borders. All enforcement activities and subsequent infrastructure and technological improvements, such as roads, fencing, remote video surveillance (RVS) systems, and lighting, are a necessary element in securing our borders from illegal entry.

Past enforcement strategies were reactive, and because little emphasis was placed on deterring illegal crossing, it diminished the importance of infrastructure (e.g., lights and fences) along the U.S.-Mexico border. Instead, the USBP's efforts focused primarily on making apprehensions *after* the international boundary was breached. This strategy utilized the "element of surprise" by deploying their limited resources away from the border in concealed positions. However, as illicit trafficking continued to increase, the area that the USBP was required to patrol also increased. The USBP's inability to deter or contain illegal migration resulted in an increase in the geographic footprint, and subsequent environmental impacts, of illegal migration patterns.

During recent years, the USBP has significantly increased its emphasis on deterrence. Deterrence is achieved only when the USBP has the ability to create and convey the immediate, credible, and absolute certainty of detection and apprehension. As such, tactical infrastructure components, such as fences, are a critical element in the current enforcement strategy. Developing trends such as the continued urbanization and industrialization of the immediate border, the recognition of environmental preservation concerns, and the increase of criminal trans-boundary activities (including trafficking in people and drugs, and counter terrorism efforts) continue to pose a border enforcement challenge and compound the need for tactical infrastructure.

1.1.2 Santa Teresa Station

The Santa Teresa's AO is located within Doña Ana and Luna counties, New Mexico, and covers approximately 46 miles of International Border. There are currently 132 agents assigned to the station. The geographical terrain of the area is desert with rolling hills covered with brush thickets and numerous north-south trending washes.

1.1.3 Regulatory Authority

The primary sources of authority granted to officers of the INS are the Immigration and Nationality Act (INA), found in Title 8 of the United States Code (USC), and other statutes relating to the immigration and naturalization of aliens. Secondary sources of authority are administrative regulations implementing those statutes, primarily those found in Title 8 of the Code of Federal Regulations (8 CFR Section 287), judicial decisions, and administrative decisions of the Board of Immigration Appeals. In addition, the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) mandates INS to acquire and/or improve equipment and technology along the border, hire and train new agents for the border region, and develop effective border enforcement strategies.

Subject to constitutional limitations, INS officers may exercise the authority granted to them in the INA. The statutory provisions related to enforcement authority are found in Sections 287(a), 287(b), 287(c), and 287(e) [8 USC § 1357(a,b,c,e)]; Section 235(a) [8 USC § 1225]; Sections 274(b) and 274(c) [8 USC § 1324(b,c)]; Section 274(a) [8 USC § 1324(a)]; and Section 274(c) [8 USC § 1324(c)] of the INA. Other statutory sources of authority are Title 18 of the United States Code (18 USC), which has several provisions that specifically relate to enforcement of the immigration and nationality laws; Title 19 [19

USC § 1401(i)], relating to U.S. Customs Service cross-designation of INS officers; and Title 21 [21 USC § 878], relating to Drug Enforcement Agency cross-designation of INS officers.

1.2 Applicable Environmental Statutes and Regulations

This EA was prepared by the U.S. Army Corps of Engineers (USACE), Fort Worth District, in accordance with, but not limited to the National Environmental Policy Act of 1969 (NEPA); Endangered Species Act (ESA) of 1973, as amended; the National Historical Preservation Act (NHPA) of 1966, as amended; the Archaeological and Historic Preservation Act (AHPA) of 1974, as amended; Executive Order (E.O.) No. 11593, "Protection and Enhancement of the Cultural Environment"; E.O. No. 11988, "Floodplain Management"; E.O. No. 11990, "Protection of Wetlands"; E.O. No. 13007, "Indian Sacred Sites"; E.O. No. 13045, "Protection of Children from Environmental Health Risks"; and E.O. No. 12898 "Federal Actions to Address Environmental Justice." Table 1-1 summarizes the pertinent environmental requirements that guided the development of this EA.

1.3 Purpose and Need

The combination of sound infrastructure (e.g., roads, fences, barriers, and technological components) and adequate resources (e.g., vehicles, field agents, support personnel, etc.) is essential for the effective enforcement of the border strategy and integral to the success of the USBP to gain, maintain, and extend control of the border.

Border fences constructed by the USBP, usually around Ports of Entry (POE), have proven to be an effective deterrent in numerous areas (e.g., San Diego, Naco, Nogales, and Tecate). Barbed wire (7-strand) fences have been the type of fence most commonly constructed along the border. There, fences were constructed by the International Boundary and Water Commission (IBWC) to demarcate the international border. However, the fences provide little, or no, deterrence to illegal foot and vehicle traffic. Numerous styles, including landing mat, bollard, Sandia, and steel picket fences, have been used along the Southwest border. These fences are generally 10-14 feet high and usually constructed within six feet of the U.S.-Mexico border. Fence designs can

Table 1-1
Applicable Environmental Statutes and Regulations

Federal Statutes
Archaeological and Historical Preservation Act of 1974
Clean Air Act of 1955, as amended
Clean Water Act of 1977, as amended
Endangered Species Act of 1973, as amended
Migratory Bird Treaty Act of 1972
National Historic Preservation Act of 1966, as amended
National Environmental Policy Act of 1969, as amended
Watershed Protection and Flood Prevention Act of 1954
Wild and Scenic Rivers Act of 1968, as amended
Farmland Protection Policy Act of 1980
Native American Graves Protection and Repatriation Act of 1990
Executive Orders, Memorandums, etc.
Floodplain Management (E.O. 11988) of 1977
Protection of Wetlands (E.O. 11990) of 1977
Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (E.O. 12898) of 1994
Protection of Children from Environmental Health Risks (E.O. 13045) of 1997
Protection of Migratory Birds & Game Mammals (E.O. 11629) of 2001
Indian Sacred Sites (E.O. 13007) of 1996
Consultation and Coordination with Indian Tribal Governments (E.O. 13175) of 2000
Government-to-Government Relations with Native American Tribal Governments (Presidential Memorandum) of 1994

vary depending upon the presence of other natural or man-made physical barriers, local terrain, and the USBP's enforcement strategy.

As an indirect result of tighter controls in other areas along the border, the number of undocumented aliens (UDA) and smugglers has increased in the Santa Teresa Station AO. Consequently, the USBP is in dire need of obtaining additional deterrent measures, such as physical barriers, to assist in the detection, deterrence and apprehension of persons and vehicles that illegally enter the U.S. In certain areas of the existing fence where repeated breaches are reported, the existing fence has done nothing to impede the continuing influx of UDAs and smugglers. Thus, there is a need to convert 0.2 miles

of existing chain link fence (near the east end) into a landing mat fence. In areas where there are no existing barriers, an increased amount of UDAs have entered the U.S. There is a need to lengthen both the east and west ends of the existing fence to create a structure that would halt or substantially hinder illegal foot traffic in areas that provide easy access routes.

In addition, the Union Pacific Railroad (UPR) is in need of these improvements to decrease the number of criminal acts against trains and UPR agents operating within the project area. A segment of tracks operated by UPR is located within 75 feet of the international border and is often vandalized or obstructed by UDAs. There were a total number of 133 reportable criminal incidents from January 1, 2001 to June 5, 2002, involving a train and/or railroad tracks owned by UPR. According to statistics provided by UPR, there have been 61 train-wrecking incidents, 29 burglaries, 24 incidents dealing with track obstruction, 15 occurrences of rock/projectile-throwing, 18 accounts of signal vandalism, 3 simple assaults, 3 aggravated assaults, and 3 homicides.

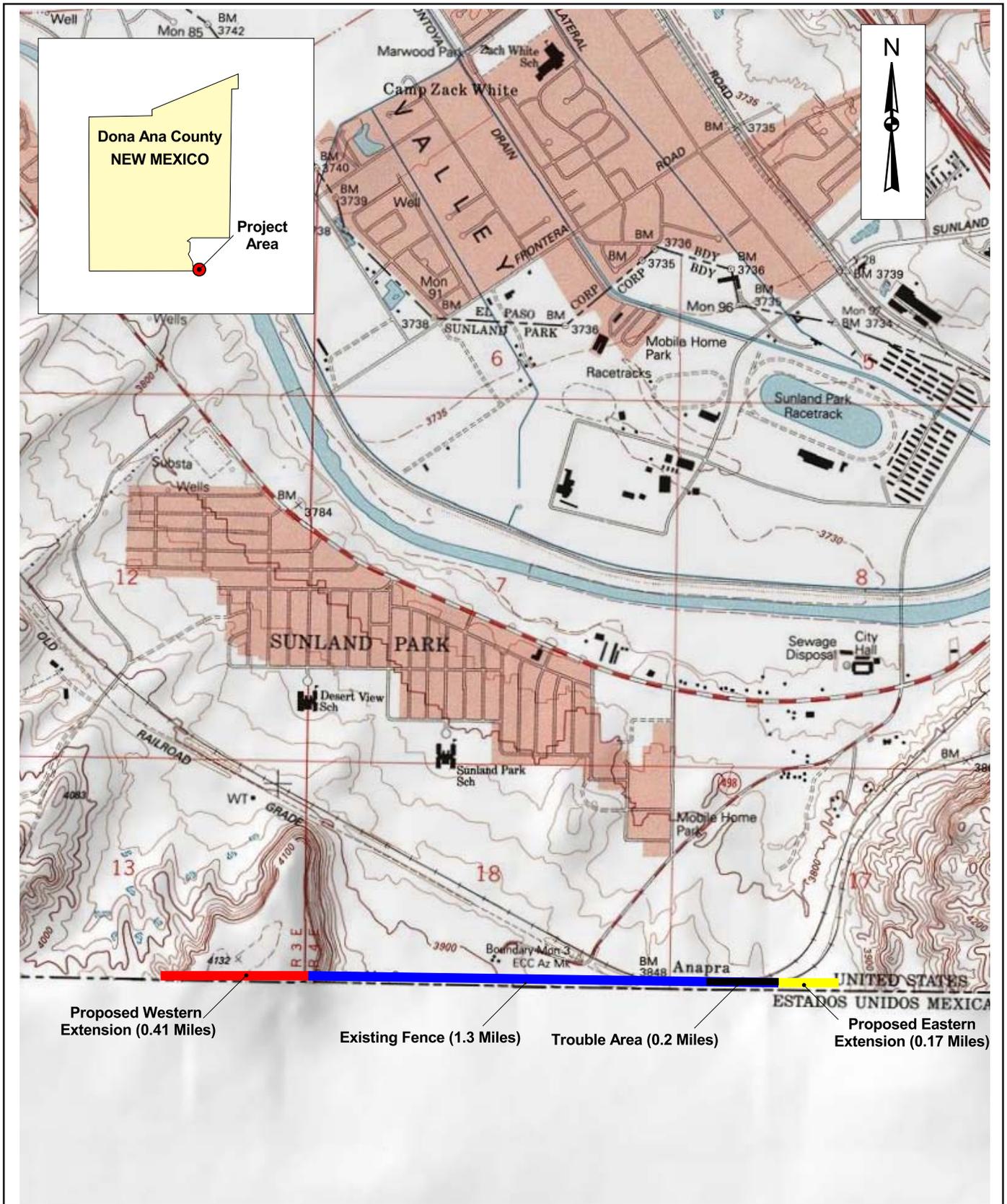
Between March 2000 and April 2002, the USBP reported seven attempted train burglaries, nine train burglaries, one occurrence of damage to a fleet vehicle, and one incident involving a train separation within the project area.

Furthermore, during September 2002, two Federal Bureau of Investigations (FBI) agents were injured while arresting a group of more than a dozen suspected railroad thieves in the Sunland Park - Anapra area. "The agents, who were hospitalized in critical condition, are said to be improving" (El Paso Times 2002).

The primary purpose of this project is to facilitate the USBP's mission to reduce or eliminate smuggling and other criminal acts along the border. Also, the conversion/extension of the fence within the proposed location would reduce the risks to agents' health and safety by deterring illegal entries in this location.

1.4 Location of the Proposed Action

The proposed action is located in Doña Ana County near Sunland Park, New Mexico (Figures 1-1, 1-2) and is approximately 35 miles south of Las Cruces. The proposed



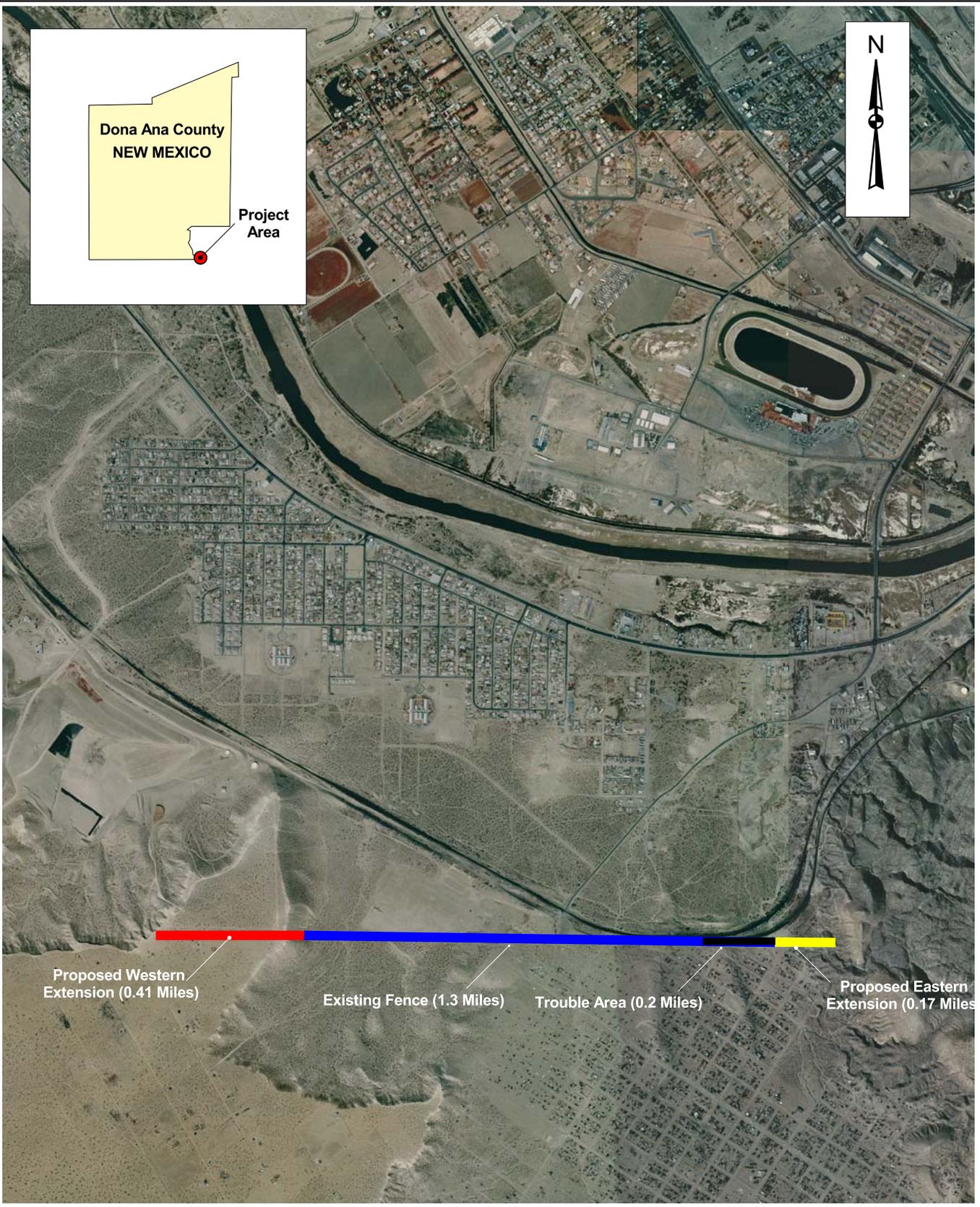
Proposed Project Areas



Figure: 1-1

Date: August 2002

Source: USGS 1:24000 DRG



Proposed Project Areas



Figure: 1-2

Date: August 2002

Source: USGS DOQQ

action would take place just south of Sunland Park near the UPR railroad tracks. The proposed fence extension would begin on the eastern and western portions of the existing fence. The eastern extension would continue for approximately 0.17 miles and would terminate near International Boundary and Water Commission (IBWC) Monument 2B. The western extension would continue for approximately 0.41 miles and would end west of IBWC Monument 3. The section of fence to be converted to landing mat is the eastern 0.2 miles of the existing fence.

1.5 Report Organization

This report is organized into eight major sections including this introduction with the description of the purpose, need, and location of the proposed project. Section 2.0 describes all alternatives considered for the project. Section 3.0 discusses the environmental features potentially affected by the project, while Section 4.0 discusses the environmental consequences for each of the viable alternatives. Mitigation measures are discussed in Section 5.0 and issues regarding public involvement are addressed in Section 6.0. Section 7.0 lists the references used to prepare this report and Section 8.0 presents a list of the persons involved in the preparation of this document. Appendix A includes all written correspondence to date concerning the EA.

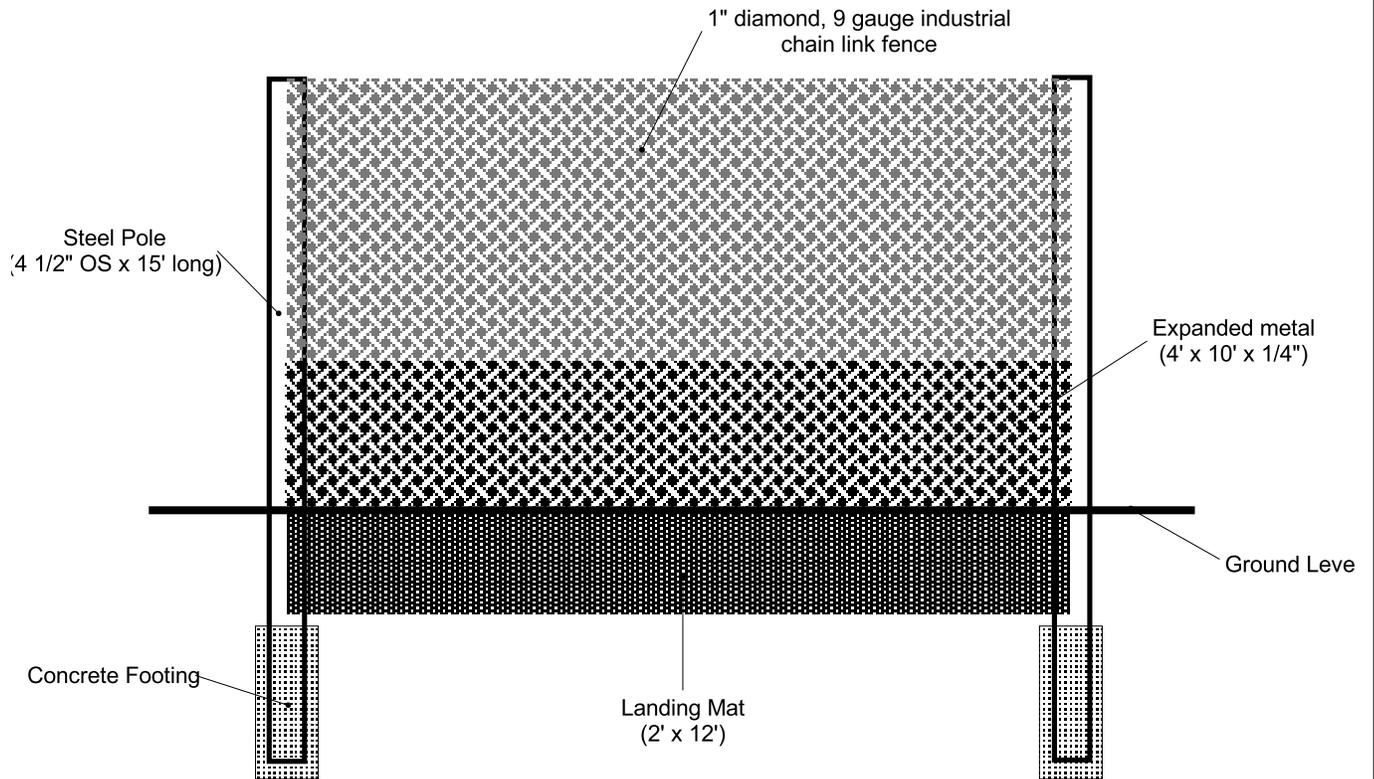
2.0 PROPOSED ACTION AND ALTERNATIVES

The purpose of this section is to describe the alternatives that were considered during the preparation of the EA, relative to their ability to satisfy the purpose and need. Cost and maintenance requirements were also considered in the selection of alternatives. Four alternatives will be addressed: (1) No Action Alternative; (2) Proposed Action Alternative; (3) Conventional Fence Alternative; and (4) Specialty Fence Alternative. Each of these alternatives is discussed below.

2.1 Proposed Action Alternative

The Preferred Alternative is to convert approximately 0.2 miles of chain link fence to a landing mat fence near the eastern edge of the existing fence. In addition, the Preferred Alternative would extend the eastern portion of the existing fence approximately 0.17 miles and the western portion approximately 0.41 miles. The eastern extension would terminate approximately 370 feet east of the IWBC Monument 2B, while the western extension would end approximately 0.34 miles west of the IWBC Monument 3. An existing border road is adjacent to and parallel with the existing fence and proposed construction location. These border roads would be used during the conversion of the chain link fence to a landing mat fence and during the construction (extension) of the new fence.

The construction of the new fence would be constructed of galvanized, 1-inch diamond, 9 gauge industrial chain-link material top section and an expanded metal (4' x 10' x ¼") diamond cut (1" x 3¼") bottom section welded to 4.5-inch outside diameter (OD), schedule 40 well casing (poles) anchored in the ground at a depth of approximately 3 feet in concrete (Figure 2-1). In areas where access roads are available, a farm tractor with an auger implement would be used to dig the holes for the fence poles. In the event that access is limited, an auger machine would be manually operated to dig the holes. Cement trucks, including pump trucks, would be utilized to provide concrete to fill the holes around the posts where access is not a problem. If concrete cannot be pumped by truck to the holes, the concrete would be manually mixed and poured. All current access roads would be utilized and graded slightly to ensure mobility of equipment. Construction of new roads is not anticipated or proposed.



Typical Fence Section



Figure: 2-1

Date: October 2002

Source: GSRC 2002

The section of fence to be converted would consist of replacing the existing 0.2 miles of chain-link material (trouble area) with surplus steel landing mat material. The landing mat material (2' wide x 12' long) would be welded directly to the existing poles and placed from 2 feet below grade to the top of the existing poles.

The USBP would be responsible for acquiring the surplus landing mat material for that portion of the fence that would be converted and providing protection to the construction team assembled by UPR.

The construction of the fence extension would involve the deployment of Army National Guard, and/or Active/Reserve units provided through JTF-6. All fencing materials for the proposed extensions would be purchased through local vendors.

This entire border segment would continue to be patrolled by the USBP, although it is anticipated that fence construction would decrease the amount of criminal activity that occurs within this location.

2.2 No Action Alternative

The No Action Alternative would require the existing fence to function as a means of deterrence. Although no significant adverse impacts would occur if implemented, the No Action Alternative would not satisfy the purpose and need of the USBP. The No Action Alternative would not increase USBP effectiveness and would not reduce smuggling, trafficking, and criminal acts against UPR and USBP agents operating in this location. Also, the number of agents required to patrol this area may increase.

2.3 Alternatives Considered But Eliminated

Other types of fences/fence designs were considered during the preparation of this EA. However, since they did not satisfy the purpose and need to provide a substantial deterrence to illegal foot traffic, were too costly or time consuming to install or maintain, the following alternative designs were eliminated from further consideration.

2.3.1 Conventional Fence Alternative

Fence material must be of sufficient strength to resist cutting and must be inexpensive to permit use across the entire segment without becoming economically unfeasible. Alternate fence materials, such as wood or other conventional materials, lack the strength necessary to resist penetration by smugglers and are often expensive. Utilizing a fence that can be easily cut or destroyed would not aid the USBP in controlling illegal entry at the border. Furthermore, the environmental impacts from construction of these types of fences would be somewhat less to those produced by the construction of heavy duty chain link or landing mat panel fence. These designs were eliminated from further consideration. Additionally, landing mat panel fences would require less maintenance and have fewer maintenance impacts.

2.3.2 Specialty Fence Alternative

Two different styles of specialty fence were considered, as described in the following paragraphs.



Photograph 2-1. Bollard style fence

The bollard fence consists of a double row of 10- to 15-foot high steel pipe poles, approximately six inches in diameter, placed on 8.5-inch centers. The pipes would be filled with concrete for added strength and security. The two rows are offset, such that the gaps between the poles are filled by the poles of the other row. A concrete footer is required to anchor poles approximately 20 inches wide and three feet deep. This

type of fence is normally only used in areas with flowing water that would damage other types of fences. It is the most expensive (\$220,000 per mile) to construct, maintain and also produces the greatest environmental impact during construction. Therefore, this type of fence was eliminated from further consideration for this project area.



Photograph 2-2. Picket style fence

Decorative picket style fences have been used for aesthetic reasons rather than structural or cost

effectiveness. This fence has only been used in an urban setting due to the high cost of construction and the relative low durability of this design. Environmental impacts resulting from construction of this type of fence would be similar to those of the Preferred Alternative, but due to the high cost of construction (\$130,000 per mile), low durability, and the possibility that a new road may need to be constructed, this design was eliminated from further consideration.

2.4 Summary of Alternatives

Two alternatives, the No Action Alternative and the Proposed Action Alternative, will be carried forward for analysis. A summary matrix (Table 2-1) shows how each of the alternatives satisfies the purpose and need. Table 2-2 presents a summary matrix of the impacts from each of the alternatives and how they affect the environmental resources in the Region of Influence (ROI).

Table 2-1. Alternative Matrix

Requirements	No Action Alternative	Proposed Action Alternative	Bollard Style Fence	Picket Style Fence
Reduce illegal drug smuggling and alien activity	No	Yes	Partial	Partial
Reduce criminal acts against UPR property and equipment	No	Yes	Yes	Yes
Reduce risks to health and safety of USBP agents	No	Yes	Yes	Yes
Reduce vehicle and maintenance costs	No	Yes	Partial	Partial
Economically Feasible	Yes	Yes	No	No

Source: GSRC 2002.

Table 2-2. Summary Matrix of Potential Impacts

Affected Environment	No Action Alternative	Proposed Action Alternative
Land Use	No direct or indirect impacts.	No effect on current land use.
Soils and Prime Farmlands	No direct impacts. Indirect impacts would continue from illegal traffic and consequent enforcement activities.	Existing soils within the fence corridor would be permanently impacted. Indirect beneficial impacts would include the reduced amount of erosion caused by illegal foot traffic.
Vegetation Communities	No direct impacts. Illegal traffic would indirectly impact sparse vegetation communities.	Due to the sparse nature of the terrain and limited footprint area, impacts to vegetation communities would be insignificant.
Fish and Wildlife Resources	No direct impacts. Illegal traffic would continue to damage vegetation thereby causing synergistic impacts to wildlife.	Temporary direct impacts associated with the construction of the fence (barrier to wildlife movement). Indirect beneficial impacts include the reduction of dust, sedimentation, and habitat trampling from illegal traffic.
Unique and Sensitive Areas	No direct or indirect impacts.	No adverse effects.
Protected Species and Critical Habitat	No direct or indirect impacts.	No direct or indirect impacts.
Cultural Resources	No direct or indirect impacts. Indirect impacts could occur to known or unknown cultural sites due to continued illegal foot traffic.	No effect on cultural resources.

Table 2-2 continued

Affected Environment	No Action Alternative	Proposed Action Alternative
Air Quality	No direct impacts. Indirect impacts could occur from continued patrol activities.	Short-term degradation of local air quality is expected during the construction of the fence; however, impacts are considered insignificant.
Water Resources	No direct impacts. Indirect impacts from erosion and sedimentation.	No direct impacts to water resources within the fence corridor. Indirect beneficial impacts include decreased erosion and sedimentation.
Socioeconomics	No direct impacts. Indirect impacts could occur from societal costs due to illegal immigration and drug trafficking.	Indirect benefits would occur from the effectiveness of the USBP and UPR in the reduction of illegal aliens, drug smuggling, and criminal activity.
Environmental Justice and Protection of the Children	No direct impacts to environmental justice or protection of children. Indirect impacts to protection of the children would result from illegal drug trafficking and its associated criminal activity continuing to create an unsafe environment for children.	No impacts to environmental justice. Beneficial impacts would include the protection of children from the reduction of illegal immigration, drug trafficking, and other crimes within the area thereby creating a safer living environment on both sides of the border.
Noise	No direct or indirect impacts.	Temporary direct impacts from the increased amount of ambient noise, but impacts would be insignificant.
Aesthetics	No direct impacts. Indirect impacts would continue from increased footpaths and trash left behind by illegal entrants.	No further degradation of aesthetics would occur.

Source: GSRC 2002.

3.0 AFFECTED ENVIRONMENT

This section of the EA describes the current conditions within the proposed project area.

3.1 Land Use

The total area of Doña Ana County is 3,807 square miles. The 2001 census population for Doña Ana County was 176,790 (U.S. Census Bureau 2001). Annual population growth in this area has exhibited an increase of 1.2 percent per year since 2000, which is above the rate of growth of New Mexico for the same time period. The city nearest to the proposed project area is Sunland Park, which has an estimated 2000 population of 13,309.

New Mexico has five national forests managed by the U.S. Forest Service (USFS). No national forests are located within Doña Ana County. Seven wildlife refuges are located in New Mexico, including one in Doña Ana County. However, this refuge (San Andres National Wildlife Refuge) is located approximately 80 miles northeast of Sunland Park.

3.2 Soils and Prime Farmland

3.2.1 Geology/Soils

The project area is within the Basin and Range geological/physiographic province. This province includes a large portion of western United States and is characterized by block-faulted ranges separated by broad intermontane basins. Modern river valleys are relatively narrow and cut into basin fill or older underlying rock. The dominant modern river in this part of New Mexico is the Rio Grande, which generally crosses the state from north to south roughly through the center of Doña Ana County. Geologically, the corridor predominantly consists of sandy flood deposits. The gently northward sloping terrain appears to represent alluvial fans emanating from higher elevations to the south. However, the vast majority of soil deposition is actually the result of Rio Grande flooding episodes. Trenches and borrow areas observed reveal relatively thick, stratified sand and clay lenses typical of the river flood plain. With the exception of the extreme eastern end of the corridor where parent rock materials of Sierra de Cristo Rey lie exposed, little gravel or rubble occur within the study area.

The surface topography is predominantly undulating sand hills or ridges, with approximately 60 feet of total elevation range.

Five soil associations were found within the study area (Table 3-1). These soils generally consist of loamy to gravelly sand or sandy loam, are deep, and excessively drained (USDA 1977). Descriptions of soil series found on the project area follow.

Bluepoint Series

Soils in this series are loamy sands that are deep, somewhat excessively drained, calcareous, moderately alkaline, and occur on fans, terraces, and ridges modified by winds. Slopes vary from one to 40 percent. These soils are similar to Arizo, Brazito, Pintura, Canutio, Caliza, and Yturbide soils. Gravel content ranges from zero to 15 percent.

Caliza Series

Soils in this series are gravelly sandy soils that are deep, well drained, moderately alkaline, strongly calcareous, and occur in gravelly alluvium on fans or river deposits. Slopes are 15 to 40 percent. These soils are similar to Arizo, Bluepoint, Canutio, and Yturbide soils. Gravel content ranges from 35 to 70 percent.

Table 3-1. Major Soil Associations Found Within the Project Area

Association	Slope (%)	Soil Type	Wildlife Value*	Erodibility	
				Wind*	Water*
Bluepoint	1-15	Loamy sand	L	S	L
Bluepoint-Caliza-Yturbide	1-40	Loamy sand-sandy loam-loamy sand	L	L	L
Pajarito-Pintura	0-5	Loamy fine sand	L	S	M
Rock outcrop-Torriorthents	15-99	Gravelly loam	L	M-H	M-H
* L - Low M - Moderate H - High S - Severe					

Source: USDA 1977.

Pajarito Series

Soils in this series are fine sandy soils that are deep, well drained, moderately calcareous, moderately alkaline, and occur on fans below margins of piedmonts and on piedmonts. Slopes vary from zero to three percent. These soils are similar to Onite, Pintura, and Mimbres soils. This soil does not contain any gravel.

Pintura Series

Soils in this series are fine sands that are deep, somewhat excessively drained, noncalcareous, mildly alkaline, and occur on broad fans. Slopes range from one to five percent. These soils are similar to Bluepoint, Brazito, and Yturbide soils and do not contain any gravel.

Tooriorthents

These soils are shallow to deep, well drained, and occur on hills and dry mountains. Slopes are 15 to 80 percent. The soil material is gravelly, cobbly, and stony with coarse to fine alluvium and colluvium.

Yturbide Series

Soils in this series are loamy sands to gravelly loamy sands that are deep, excessively drained, moderately calcareous, moderately alkaline, and occur in alluvium along terminal fans or arroyos and old river deposits. Slopes are one to five percent. These soils are similar to Arizo, Bluepoint, Caliza, and Canutio soils. Gravel content ranges from 15 to 35 percent.

There are no prime or unique farmlands located within the project area (USDA 1979).

3.3 Vegetation

The proposed construction site is in a sand dune-mesquite vegetation community. Characteristic vegetation includes mesquite (*Prosopis glandulosa*), saltbush (*Atriplex canescens*), yucca (*Yucca* spp.), sandsage (*Artemisia filifolia*), and creosote bush (*Larrea tridentata*). Vegetation density of the project area is low, five to 10 percent, with most of the area 'being almost void of vegetative cover. Presence of additional species,

such as ocotillo (*Fouqueria splendens*), tarbush (*Flourensia cernua*), Texas rainbow cactus (*Echinocereus dasyacanthus*), and prickly pear (*Optunia violacea*), increases with elevation on the ridge slopes. During a recent field survey, much of this vegetation was found to be disturbed by foot and vehicle traffic.

3.4 Wildlife Communities

3.4.1 Birds

Bird fauna of the project area is typical of the desert environment and associated habitats. Common species include scaled quail (*Callipepla squamata*), mourning dove (*Zenaida macroura*), ground dove (*Columbina passerina*), roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles actaipennis*), pyrrhuloxia (*Cardinalis sinuatus*), cactus wren (*Campylorhynchus brunneicapillus*), crissal thrasher (*Toxostoma crissale*), black-throated sparrow (*Amphispiza bilineata*), horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), turkey vulture (*Cathartes aura*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), and northern harrier (*Circus cyaneus*). The spring migration of birds through southwestern U.S. occurs during March through May. The only birds identified in the project area during a recent survey were mourning dove and blackthroated sparrow.

3.4.2 Mammals

Non-game mammals, mostly small rodents, comprise a large basis of the food supply for carnivorous mammals and raptors. Common rodents include spotted ground and rock squirrels (*Spermophilus spilosoma* and *S. variegatus*), plains and desert pocket mice (*Perognathus flavescens* and *P. penicillatus*), kangaroo rats (*Dipodomys* spp.), and several other species of mice (*Peromyscus* spp.), Blacktail jackrabbits (*Lepus californicus*) are also commonly found near the project site. However, sparse vegetation and generally poor habitat of the project area support few mammals. During a recent field survey of the project area, blacktail jackrabbits and cottontails (*Sylvilagus floridanus*) were the only mammals observed.

3.4.3 Reptiles

Reptiles are the most abundant and diverse group of vertebrate animals in the area

surrounding the site of proposed construction. Characteristic lizards include greater earless (*Cophosaurus texanus*), round-tail horned (*Phrynosoma modestum*), whiptails (*Cnemidophorus* spp.), and spiny (*Sceloporus* spp.). Common snakes of the area include whipsnakes (*Masticophis taenatus*), coachwhips (*M. flagellum testaceus*), ratsnakes (*Elaphe* spp.), and rattlesnakes (*Crotalus atrox*, *C. molussus*, and *C. viridis*). No reptiles were observed in the project area during a recent field survey.

3.5 Unique or Sensitive Areas

There are no unique or sensitive areas located within the project area.

3.6 Protected Species and Critical Habitat

The Endangered Species Act (ESA) [16 U.S.C. 1531 et. seq.] of 1973, as amended, was enacted to provide a program for the preservation of endangered and threatened species and to provide protection for the ecosystems upon which these species depend for their survival. All Federal agencies are required to implement protection programs for designated species and to use their authorities to further the purposes of the act. Responsibility for the identification of a threatened or endangered species and development of any potential recovery plan lies with the Secretary of the Interior and the Secretary of Commerce.

The USFWS is the primary agency responsible for implementing the ESA, and is responsible for birds, terrestrials, and freshwater species. The USFWS responsibilities under the ESA include: (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

An endangered species is a species in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species are those that have been formally submitted to Congress for official listing as threatened or endangered. Species may be considered endangered or threatened when

any of the five following criteria occurs: (1) current/imminent destruction, modification, or curtailment of their habitat or range; (2) overuse of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; and (5) other natural or human-induced factors affect continued existence.

In addition, the USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which the USFWS has sufficient information to support proposals to list as endangered or threatened under ESA. However, proposed rules have not yet been issued because such actions are precluded at present by other listing activity.

The ESA also calls for the conservation of what is termed Critical Habitat - the areas of land, water, and air space that an endangered species needs for survival. Critical habitat also includes such things as food and water, breeding sites, cover or shelter, and sufficient habitat area to provide for normal population growth and behavior. One of the primary threats to many species is the destruction or modification of essential habitat by uncontrolled land and water development.

3.6.1 Federal Species

Seven Federally endangered, threatened, proposed threatened, and candidate species occur within Doña Ana County (USFWS 2001). One species is listed as threatened, five as endangered, and one as candidate (Table 3-2).

No evidence of Federally listed threatened or endangered species were found within the specific project corridor during the site visit in March 2002.

3.6.2 Critical Habitat

There is no designated critical habitat for any protected species within the project area.

3.6.3 State Species

The New Mexico Department of Game and Fish has developed a Biota Information System of New Mexico (BISON-M) as a means of compiling flora and fauna species whose occurrence in New Mexico is or may be in jeopardy, or with known or perceived

**Table 3-2
Federally and State Listed Threatened, Endangered and Candidate Species
Potentially Occurring within Doña Ana County, New Mexico**

Common Name	Scientific Name	Federal Status	State Status
Mammals			
Spotted bat	<i>Euderma maculatum</i>	--	T
Organ Mountains Colorado chipmunk	<i>Tamias quadrivittatus australis</i>	--	T
Desert bighorn sheep	<i>Ovis canadensis mexicana</i>	--	E
Birds			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	T
Least tern	<i>Sterna antillarum</i>	E	E
Mexican spotted owl	<i>Strix occidentalis lucida</i>	E	--
Northern Aplomado falcon	<i>Falco femoralis septentrionalis</i>	E	E
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E	E
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	C	--
Neotropic cormorant	<i>Phalacrocorax brasilianus</i>		T
Common black-hawk	<i>Buteogallus anthracinus anthracinus</i>	--	T
American peregrine falcon	<i>Falco peregrinus anatum</i>	--	T
Whooping crane	<i>Grus americana</i>	--	E
Common ground-dove	<i>Columbina passerina pallescens</i>	--	E
Bell's vireo	<i>Vireo bellii</i>	--	T
Gray vireo	<i>Viero vicinior</i>		T
Baird's sparrow	<i>Ammodramus bairdii</i>	--	T
Varied bunting	<i>Passerina versicolor</i>	--	T
Plants			
Sneed pincushion cactus	<i>Coryphantha sneedii</i> var. <i>sneedii</i>	E	E
Organ Mountain pincushion cactus	<i>Escobaria organensis</i>	--	E
Dune pricklypear	<i>Opuntia arenaria</i>	--	E
Night-blooming cereus	<i>Peniocereus greggii</i> var. <i>greggii</i>	--	E
Mescalero milkwort	<i>Polygala rimulicola</i> var. <i>mescalorum</i>	--	E
Molluscs			
Doña Ana talusnail	<i>Sonorella todseni</i>	--	T
Legend: T – Threatened E – Endangered C – Candidate			

Sources: USFWS 2001, NMDGF 2000.

threats or population declines. BISON was developed for biologists by the New Mexico Department of Game & Fish and the Fish & Wildlife Information Exchange (Conservation Management Institute, VA Tech, Blacksburg, VA). Other contributing agencies include the US Bureau of Land Management, US Forest Service, US Fish and Wildlife Service, US Bureau of Reclamation, USACE, New Mexico State Land Office, and New Mexico Natural Heritage Program (NMDGF 2000).

There was no evidence or observations of any state-listed flora or fauna within the project area during the March 2002 visit.

3.7 Cultural Resources

Section 106 of the NHPA requires the INS to identify and assess the effects of its actions on cultural resources. Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activities considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. The INS must consult with appropriate state and local officials, Native American Indians, and members of the public and consider their views and concerns about historic preservation issues when making final project decisions. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the Advisory Council on Historic Preservation. Revised regulations, "Protection of Historic Properties" (36 CFR Part 800), and became effective January 11, 2001.

A recent cultural resource survey was conducted in August 2002 along the entire corridor of the proposed project. The survey recorded one new site (LA 137119) and one documented isolated occurrence within the project area; however, neither of the sites are considered potentially eligible for inclusion to the National Register of Historic Places (NRHP) (Higgins *et al.* 2002).

3.8 Air Quality

The State of New Mexico has adopted National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) as the state's air quality criteria. However, New Mexico's standards for

sulfur dioxide (SO₂), carbon monoxide (CO), and nitrogen dioxide (NO₂) are more strict than the national standards, and New Mexico has adopted standards for total suspended particulates (TSP) and photochemical oxidants (Table 3-3).

Table 3-3. New Mexico Ambient Air Quality Standards

Pollutant	Standard Value
Total Suspended Particulates	
24-hour average	150µg/m ³
7-day average	110µg/m ³
30-day average	90 µg/m ³
Annual geometric mean	60 µg/m ³
Sulfur Dioxide (SO₂)	
24-hour average	0.10 ppm
Annual arithmetic average	0.02 ppm
Hydrogen Sulfide (HS)	
1-hour average*	0.10 ppm
Total Reduced Sulfur	
½-hour average	0.003 ppm
Carbon Monoxide (CO)	
8-hour average	8.7 ppm
1-hour average	13.1 ppm
Nitrogen Dioxide (NO₂)	
24-hour average	0.10 ppm
Annual arithmetic average	0.05 ppm
Note: * not to be exceeded more than once per year µg/m ³ – micrograms per cubic meter ppm – parts per million	

Source: NMED 1996.

Primary standards are established to protect public health while secondary standards provide protection for the public's welfare including wildlife, climate, recreation, transportation, and economic values. Regulations in the Clean Air Act Prevention of Significant Deterioration (PSD) provisions (40 CFR Part 52 - P18 of Air Quality) were enacted in order to maintain or improve existing air quality in all Intrastate Air Quality Control Regions (AQCR) and National Rural and Wilderness Areas by creating various classifications using existing NAAQS pollutants. These classifications relate to the available increment above an established baseline concentration of a pollutant within which some increase will be allowed; Class I is most restrictive. The PSD provisions were designed to ensure that areas with air quality much better than the NAAQS would

not be allowed to degrade to standard levels but would be allowed some limited degradation to accommodate development within an area.

Class I areas are areas where visibility is important as designated under the Clean Air Act Amendments (CAAA) of 1977 (40 CFR Part 81, Subpart D) by the Administrator of U.S. Environmental Protection Agency (USEPA), in consultation with the Secretary of the Interior. Emphasis in Federal and state air quality management and planning is placed on protecting these areas from air quality degradation. There are no mandatory Federal Class I areas within Doña Ana County.

According to the United States Environmental Protection Agency (USEPA), a portion of Doña Ana County is designated as a nonattainment area. Sunland Park is classified as a nonattainment area due to the amount of ozone emissions (USEPA 2001).

There are a number of anthropogenic sources of air contaminants that affect air quality of the proposed construction site. These include industrial emissions, mobile emissions, area emissions, dust resulting from wind erosion of agriculturally disturbed lands, and pollutants transported into the construction area on winds blowing from major urban/industrial areas.

Pollutants from nearby El Paso and Juarez can have an additional impact on the air quality of the project area. Many residences in Juarez burn non-conventional fuels such as wood scraps, cardboard, and tires to provide warmth in winter. Estimates of area source pollutants for El Paso-Juarez alone, near 400,000 tons per year, range much higher than others found throughout New Mexico and Texas. Therefore, air quality conditions at the project area, although acceptable, are heavily deteriorated.

3.9 Water Resources

The New Mexico Water Quality Control Commission (WQCC) regulates water quality statewide and regularly collects water quality data from 18 U.S. Geological Survey sites each year. However, no streams, lakes or monitoring stations are located within the proposed project area.

The Rio Grande Basin supplies most of the useful groundwater for the project area. This aquifer is a basin-fill system that consists of alluvial and terrace deposits. This aquifer is highly vulnerable. Potential groundwater contamination sources for the proposed construction site are concentrations of municipal waste water and industrial waste from non-municipal site sources. Most of the associated contamination is natural and synthetic organic compounds from commercial and industrial sites, petroleum products from service stations, railroad spills, and leaking underground storage tanks.

3.9.1 Waters of the U.S. and Wetlands

According to observations in the field and information obtained from the NRCS soil survey for Doña Ana County, no potential jurisdictional waters of the United States, or wetlands, are located within the project corridor. The proposed project is not located within the 100-year or 500-year floodplain.

3.10 Socioeconomics

The Region of Influence (ROI) for the proposed renovation of a border fence along a 1.8-mile segment of the New Mexico-Mexico border includes Doña Ana County. The socioeconomic characteristics to be addressed include current population estimates, income and employment figures, and number of housing units.

3.10.1 Population

The 2000 population for Doña Ana County was 174,682 (U.S. Census Bureau 2000). Annual population growth in this area has exhibited an increase of 1.2 percent per year since 2000, which is above the rate of growth of New Mexico for the same time period. The city nearest to the proposed project area is Sunland Park, which had an estimated 2000 population of 13,309.

3.10.2 Employment and Income

As of January 2002, the average unemployment rate was 8.4 percent in Las Cruces, New Mexico (U.S. Dept. of Labor 2002).

As of 2000, total employment in Doña Ana County was 66,516 with the leading employment sectors being government, services and retail trade. Total earnings were

the largest in government, services, and retail trade sectors of the county. Total personal income was \$3 million, with a per capita personal income of \$17,321. The per capita income was significantly below the national average of \$30,271. This was consistent with figures that show 26 percent of persons in Doña Ana County being below poverty level (U.S. Dept. of Commerce 2000).

3.10.3 Housing

The total number of housing units estimated to be in Sunland Park in 2000 was 3,617. The housing market can be described as a tight market as demonstrated by a low vacancy rate. Vacancy rate in 2000 was 4.6 percent for Doña Ana, which is significantly higher than the state's average of 2.4 (U.S. Dept. of Commerce 2000).

3.11 Noise and Safety

The three common classifications of noise are: (1) general audible noise that is heard by humans; (2) special noise, such as sonic booms and artillery blasts that can have a sound pressure of shock component; and (3) noise-induced vibration also typically caused by sonic booms and artillery blasts involving noise levels that can cause physical movement (i.e., vibration) and even possible damage to natural and man-made structures such as buildings and cultural resource structures. Most noise sources will fall within the audible noise classification because of the rural nature of the majority of the study area.

Audible noise typically is measured in A-weighted sound pressure levels expressed in decibels (dBA). The A-scale de-emphasizes the low and high frequency portions of the sound spectrum and provides a good approximation of the response of the average human ear. On the A-scale, zero dBA represents the average least perceptible sound (gentle breathing) and 140 dBA represents the intensity at which the eardrum may rupture (jet engine at open throttle) (National Research Council 1977).

Normal rural noise levels in the study area are not expected to be more than that characterized by rural noise levels; however, higher ambient noise levels occur near the more occupied areas.

3.12 Hazardous Material and Wastes

During the survey of the proposed construction site, notes were made of any potential liabilities on or near the site. There was no waste observed during this survey that could be classified as hazardous along the proposed project area. However, partially covered household wastes were noted along the west end of the proposed fence.

4.0 ENVIRONMENTAL CONSEQUENCES

This section of the EA addresses potential impacts to the affected environment within the project area for the No Action and Preferred Alternatives outlined in Section 2.0.

4.1 Land Use

4.1.1 Proposed Action Alternative

No changes to land use in this area would occur from implementing this alternative. The project corridor is currently used as a border enforcement zone and would continue to be used as such. Fencing would be installed along the existing roadways.

4.1.2 No Action Alternative

Implementation of the No Action Alternative would not affect current land use within the project area.

4.2 Soils and Prime Farmland

4.2.1 Proposed Action Alternative

Construction activities addressed under this alternative would occur in proximity to the border road, where soils are already considered disturbed. The only ground disturbance expected would be during the installation of support poles. The holes would be about eight inches in diameter and backfilled with concrete. Erosion control best management practices would be incorporated into the construction plan. Since no prime farmland soils are found within the project area, no impacts are anticipated.

4.2.2 No Action Alternative

Implementation of the No Action Alternative would eliminate potential direct disturbances to soils from further construction activities. Regardless of the alternative selected, existing erosion problems would continue, since the USBP and UPR would continue to use the roads for patrol activities.

There are no prime farmlands found within the project area; therefore, implementation of the No Action Alternative would have no effect.

4.3 Vegetation

4.3.1 Proposed Action Alternative

This alternative would produce negligible additional impacts to vegetation and should substantially reduce secondary impacts to vegetation from illegal entry within the project area. Mesquite and creosotebush are important in reducing erosion of the dry sandy soil. Stabilized dunes provide important habitat for burrowing animals and other wildlife. Vegetation communities (mesquite and creosotebush) in the area surrounding the proposed project area could be impacted by construction activities. The most important factor for consideration is intensity of use. Vehicles or USBP/UPR agents on foot may destroy vegetation directly by crushing or trampling, and indirectly by soil compaction or erosion. However, there would be minimal direct destruction of vegetation with the implementation of the proposed fence. Extensive wood-cutting occurs by residences of Anapra and Mexico on both sides of the border. By implementing the proposed action, the amount of brush cutting on the U.S. side would decrease.

Indirect effects could occur to the vegetation beyond the project area by UDAs attempting to avoid the fenced corridor. The magnitude of these effects cannot be determined at the present, since the routes selected by UDAs and smugglers are at their discretion and out of the control of the USBP.

4.3.2 No Action Alternative

Implementation of the No Action Alternative would eliminate the potential for direct disturbances to vegetation from further construction activities. However, the existing road right-of-way where all fence construction would occur is already devoid of vegetation due to patrol activities and disturbances caused by the maintenance of the railroad.

Impacts to vegetation outside the project corridor from illegal entrants would continue to occur. Indirect effects have occurred to vegetation by illegal entrants diverting around fences or away from areas that are heavily patrolled. Improvements in the infrastructure and increases in patrol activities have resulted in some illegal entrants redirecting their efforts into more remote areas. Increases in illegal foot traffic would continue to result in damage to vegetation.

4.4 Wildlife

4.4.1 Proposed Action Alternative

No additional direct impacts to wildlife resources are expected from the conversion or expansion of the existing fence since both sides of the existing fence are developed. No additional wildlife habitat would be altered. Additionally, wildlife communities would be spared from constant disturbance resulting from continuous illegal foot traffic in these isolated areas. However, the fence would create a barrier to wildlife movement, especially for larger mammals and herpetiles. The magnitude of this impact cannot be quantified at the present. However, there are no wildlife populations in the project corridor that are sensitive to potentially slight reductions in genetic variability. Therefore, impeding some local wildlife movement in this area is not considered significant.

4.4.2 No Action Alternative

The No Action Alternative would not allow the improvements to, and the extension of, the existing fence. Larger mammals and herpetiles would benefit from the No Action Alternative since the proposed fence design can impede movement by such species. However, fences have also afforded protection to some wildlife species and other sensitive resources by reducing habitat disturbances caused by UDA activities. Fences significantly reduce illegal entries and, indirectly, reduce the amount of foot traffic within wildlife communities on the U.S. side of the border.

4.5 Unique or Sensitive Areas

There are no areas classified as unique natural areas found within the proposed project area.

4.6 Protected Species and Critical Habitat

4.6.1 Proposed Action Alternative

No listed threatened or endangered species or their designated critical habitats are known to occur within the proposed project area. Thus, the proposed activities within the project area would not be expected to adversely affect protected species or critical habitats. No

Federally listed species were found in the project area during the survey conducted in March 2002.

4.6.2 No Action Alternative

The No Action Alternative would have no effect on protected species or critical habitats.

4.7 Cultural Resources

4.7.1 Proposed Action Alternative

The Proposed Action Alternative would not adversely affect the known site (LA 137119) because of the minimal amount of material found in the proposed corridor of the fence and due to the fact that the new site lacks subsurface deposits. However, should previously unknown cultural resources be found during construction, it is recommended that all work cease until a qualified archaeologist evaluates the source. Potential unidentified cultural resource sites located out of the project area may be protected from disturbance by preventing illegal foot traffic from UDAs trampling through surrounding areas.

4.7.2 No Action Alternative

The No Action Alternative would not result in any direct effects to cultural resources. However, as illegal traffic and the consequent enforcement actions continue, indirect effects to known and undiscovered sites could be incurred.

4.8 Air Quality

4.8.1 Proposed Action Alternative

Air quality impacts from construction and maintenance activities of fences include emissions due to fuel combustion from heavy equipment, and fugitive dust due to travel through the construction area. Due to the limited duration of construction and current deteriorated state of the air quality at the proposed construction site, the short-term addition of pollutants from construction activities would only minimally impact the area. Thus, the proposed action would not violate local air quality standards. All impacts would be temporary in nature.

4.8.2 No Action Alternative

The No Action Alternative would eliminate all potential emission sources associated with the proposed construction activities. No further impacts, beneficial or adverse, are expected to occur under the No Action Alternative.

4.9 Water Resources

4.9.1 Proposed Action Alternative

The preferred alternative would not be expected to adversely affect any water resources in the project corridor. Currently, one draw is located within the fence footprint, but the fence contains vertical grating attached at the bottom that restricts some water flow. In the areas where the proposed fence corridor traverses an area of natural water flow (i.e. a draw or wash), a fence design using vertical grating within the drainage basin would be implemented to allow surface and natural water flow.

4.9.2 No Action Alternative

No impacts to water resources would be expected upon implementation of this alternative.

4.10 Socioeconomics

4.10.1 Proposed Action Alternative

The proposed activities would not have impacts on the local employment or income. Equipment and materials used would be government-owned and would not be purchased in the local community. Although workers may spend a portion of their incomes in the local community, the duration of the project would not be long enough for their spending to have significant impacts.

Proposed construction would not induce a permanent in-migration of people nor would there be additional permanent employees; therefore, there would be no increase in demand for housing in the ROI.

4.10.2 No-Action Alternative

The No Action Alternative would require labor from the USBP maintenance staff, resulting in no increases to population in the project vicinity. Materials and other project expenditures for the construction activities would not be obtained through merchants in the local community.

4.10.3 Environmental Justice

Executive Order 12898 of February 11, 1994, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" require each Federal agency to identify and address, as appropriate, disproportionate adverse effects of its proposed actions on minority populations and low-income communities.

The racial mix of Doña Ana County is about 68 percent Caucasians, and less than one-third (25 percent) of the entire county population claim to be of Hispanic origin. The proposed projects would not displace residences or commercial structures along the project corridor. Therefore, disproportionate effects to minority populations would not be expected.

Doña Ana County has about 27 percent of its total population living at or below poverty levels. The 2000 per capita personal income was estimated to be about \$17,300, which was significantly below the national average of \$30,271. The location of the proposed action is in the extreme southern portion of the county and near to low-income neighborhoods. However, no disproportionate adverse effects to low-income populations would be expected from the implementation of any of the alternatives.

On the other hand, implementation of the Preferred Alternative would enhance the probability of success for the USBP and UPR. This increased success in controlling illegal drug activity and the increasing flow of UDAs into the Sunland Park/Anapra area would benefit all populations, regardless of income, nationality or ethnicity. In addition, construction activities would have short term, but positive impacts on local economies from sales of construction materials, other project expenditures, and temporary employment. Long-term positive impacts would occur on local, regional and national levels by the reduction of illegal immigrants and drug trafficking and the associated social costs.

In addition, neither of the viable alternatives is expected to generate disproportionately high environmental health and safety risks to children as specified by Executive Order 13045, "Protection of Children from Environmental Health Risks." This Executive Order was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults.

4.11 Noise

4.11.1 Proposed Action Alternative

If this alternative were selected, construction activities would occur near Sunland Park, New Mexico. Equipment, such as welding machines and trucks, would cause temporary increases in noise levels. The magnitude of these effects would depend upon the time of year, proximity to sensitive receptors (e.g., schools, hospitals, churches, and residences), climatic conditions, type and number equipment pieces, and terrain. Based on past similar activities, the construction would occur only during daylight hours, thus reducing the day-night average sound level and the chances of causing annoyances. No blasting would be expected.

Animals, particularly domesticated species, would be expected to quickly habituate to construction noise. Wildlife may at first be startled and flee the construction area; however, wildlife species, too, have demonstrated rapid habituation, even to loud and sudden noises which cause panic responses. Bowles (1997) reported that habituation could occur with fewer than five exposures. Several other recent studies (Workman et al. 1992; Weisenberger et al. 1996) have indicated that wildlife habituate through repeated exposure without long-term discernible negative effects. Ambient noise levels would return upon completion of the proposed projects with no long-term, significant adverse impacts. Therefore, no significant adverse effects would be expected.

4.11.2 No Action Alternative

Implementation of the No Action Alternative would result in no additional INS or USBP-related construction activities, and, thus, no increases in ambient noise levels.

4.12 Cumulative Effects

This section of the EA addresses the cumulative impacts associated with the proposed conversion activities and other projects/programs that are planned for the region.

4.12.1 No Action Alternative

Approximately seven acres of wildlife habitat within the project area have been impacted by fence construction, new road construction, road improvements, and current activities. Over half of the proposed fence corridor has been heavily impacted due to construction and maintenance of the UPR, which has contributed an estimated 0.5 mile of disturbance along the eastern half of the project area.

However, wildlife populations in the area were not significantly impacted by habitat loss due to the linear nature of the clearing for road construction, upgrade, fencing, and more importantly, due to the highly degraded and disturbed nature of the of the project site. In general, these impacts did not result in a significant reduction in the number of animals whose home range is within or adjacent to the project area, and no change in the overall species composition of the area occurred due to these projects.

Wildlife movement in the project area has been impacted by the infrastructure construction and maintenance since the construction of the railroad and the fence. The greatest effect to movement of small animals generally happens when a disturbance such as road grading, dozing, or fence construction occurs. Mobile animals escaped to areas of similar habitat, while other slow or sedentary animals such as reptiles, amphibians, and small mammals were potentially lost. This displacement and/or reduction in the number of animals did not significantly impact animal communities due to the presence of similar habitat adjacent to the project corridor. Larger terrestrial wildlife movements in the construction and maintenance areas were not affected due to the short duration of time for construction activities at each site.

Roads and fences resulted in other indirect impacts. Improved roads increased the speed at which vehicles travel and increased traffic as well. Higher vehicular speeds decreased the response time for wildlife to avoid the vehicles, thus, potentially increased the number of accidental wildlife deaths. Fences serve as a barrier to wildlife species;

the magnitude of this effect depends upon the fence design and location. The existing fence does not significantly impede wildlife movement or remove/alter significant amounts of wildlife habitat. Small rodents and motile animals can simply pass through the fence, while birds can fly around or above the fence. Larger motile animals are affected the most because larger animals are forced to circumvent the fence.

The No Action Alternative would result in no additional direct effects to the area's resources. No threatened or endangered species or critical habitat would be affected, nor would there be any adverse effects on cultural resources sites or historic structures that are listed or potentially eligible for listing on the NRHP. Likewise, no additional direct impacts to air quality, water resources, soils, and socioeconomic conditions would occur under this alternative.

Long-term indirect cumulative effects have occurred and would continue to occur to the area's natural habitats. However, these effects, both beneficial and adverse, are difficult, if not impossible, to quantify. Reductions in habitat have undoubtedly created inter- and intra-species competition for available food and shelter and, eventually, slight reductions in some wildlife populations.

Positive cumulative benefits have resulted from INS activities as well. Additional knowledge regarding threatened or endangered species' locations, distribution, and life requisites has been obtained through surveys and monitoring efforts associated with INS construction projects. Erosion has been alleviated along some roads, and fences have precluded illegal foot and vehicular traffic through environmentally sensitive areas.

Positive cumulative benefits have resulted regarding the knowledge of cultural resources by the INS. Cultural resource destruction or degradation could decrease due to the known locations of cultural resources.

4.12.2 Preferred Alternative

Implementation of this alternative would have similar effects as the No Action Alternative. Ground disturbances would be minimal due to the existing conditions of the soils within the proposed fence corridor. The primary cumulative effect that would occur under the Preferred Alternative, as opposed to the No Action Alternative, would be the

barrier to wildlife movement. No provisions have been made for small mammal passageways through the fence except that small mammals could travel through the vertical grating that is connected to the fence where natural drains occur. Construction activities would result in temporary emissions, but they would be short-term in nature and would not be expected to add significantly to the cumulative effects.

Indirect effects could occur to the vegetation beyond the project area by UDAs attempting to avoid the fenced corridor. The USBP would patrol areas beyond the fence to apprehend UDAs, consequently reducing any indirect effects to vegetation from illegal traffic trying to skirt around the fence. The magnitude of these effects cannot be determined at the present since the routes selected by UDAs and smugglers are at their discretion and out of the control of the USBP.

Past Projects

Past projects that have occurred within or near the project area include:

- The construction of the existing pedestrian fence near Anapra, New Mexico.

Future Projects

Proposed future projects from the INS and USBP in the project area include:

- 6 remote video surveillance sites in the El Paso Station AO
- 5 remote video surveillance sites in the Ysleta Station AO
- Installation of vehicle barriers (approximately 1 mile in length) near Noria in the Santa Teresa AO

5.0 ENVIRONMENTAL DESIGN CONSIDERATIONS/MITIGATION

This section describes the measures that may be implemented to eliminate/mitigate potential significant adverse impacts of the proposed construction activities. These measures and guidelines may be incorporated as part of the proposed action. During construction of the fence, construction crews will maintain a minimum construction width to avoid impacting a large area. Following construction, areas surrounding the fence will be allowed to revegetate to reduce erosion. Existing roads will be utilized when available, rather than building new roads and further impacting the project area. In the event that new roads need to be built, supplemental EAs will be required.

Proper and routine maintenance of all vehicles, generators, and other equipment would be implemented to ensure that air emissions are within the design standards of the piece of equipment. Where practicable, drop lines from local electrical systems would be used as a substitute for generators.

Project-related emissions would be minimized by the implementation of Best Management Practices (BMPs) in the form of a truck watering program for project area dirt surfaces, construction curtailed in winds exceeding 25 miles per hour, efficient utilization of equipment to minimize the amount of time engines are left idling, and upkeep of construction equipment to ensure that engines are properly tuned. Any necessary air quality operating permits are the responsibility of the contractor.

Any major fuel spill will be contained by immediately constructing an earthen dike and applying a petroleum absorbent (i.e., granular, pillow, sock, etc.) to absorb and contain the spill. In addition, any major spill will be reported immediately to appropriate federal and state agencies. A hazardous materials site assessment will be conducted after a spill in order to identify potential problems additional clean-up procedures will be put into place if warranted. This will include disposal of the absorbent in accordance with all Federal and state regulations.

The responsible office and official who is supervising this project effort is:

U.S. Border Patrol
Sector Headquarters
ATTN: ACPA Paul Beeson
8901 Montana Avenue
El Paso, TX 79925

6.0 PUBLIC INVOLVEMENT

6.1 Agency Coordination

This chapter discusses consultation and coordination that have occurred and will during preparation of the draft and final versions of this document. This would include contacts that are made during the development of the proposed action and writing of the EA. Formal and informal coordination will be conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (USEPA)
- Natural Resource Conservation Service (NRCS)
- Bureau of Land Management (BLM)
- New Mexico State Historic Preservation Office (SHPO)
- New Mexico Department of Transportation (NMDOT)
- New Mexico Department of Game and Fish (NMGFD)
- New Mexico Environmental Department (NMED)
- New Mexico Department of Agriculture

6.2 Public Review

The draft EA was made available for public review for a period of 30 days, and the Notice of Availability (NOA) was published in the local newspaper. Proof of publication is included in Appendix A of this document. A summary of the comments received and the responses to the comments are presented in the following section.

The final EA will be released to the public and a NOA will be published in the local newspaper. Exhibit 6-1 is a copy of the NOA that will be published for the final EA.

**Exhibit 6-1
Notice of Availability**

**NOTICE OF AVAILABILITY
ENVIRONMENTAL ASSESSMENT
For The
Improvement/Construction of a Pedestrian Fence
Doña Ana County, New Mexico**

The public is hereby notified of the availability of the final Environmental Assessment (EA) for the improvement and construction of a pedestrian fence along the U.S./Mexico Border near Anapra, Doña Ana County, New Mexico. This EA addresses the improvements to 0.2 miles of fence and construction of 0.58 miles of pedestrian fence along the international border. The final EA will be available for review at the El Paso Public Library, 501 N. Oregon Street, El Paso, Texas 79901.

6.3 Comments and Responses

The following sections address the comments received during the public review of the draft EA.

6.3.1 Mescalero Apache Tribe

Comment: The Mescalero Apache Tribe determined that the proposed improvement and extension of the existing pedestrian fence will not affect any objects, sites, or locations important to our traditional culture or religion.

6.3.2 Ysleta del Sur Pueblo Tribe

Comment 1: The cultural resource survey is incomplete and inaccurate because it makes no mention of the migration of the Tigua Indian Tribe to the El Paso area during the Pueblo revolt of 1680.

Response: The cultural resource survey will be amended to include the migration of the Tigua Indian Tribe to the El Paso area during the Pueblo revolt.

Comment 2: Please provide to the tribe a complete description of site LA 137119 referred to under paragraph 4.7.1 of the EA.

Response: A complete description of the aforementioned site will be provided.

7.0 REFERENCES

- Bowles, A.E. Effects of Recreational Noise on Wildlife: An Update. Hubbs-Sea World Research Institute, San Diego, CA. 1997.
- El Paso Times; Valdez, Diana Washington. Borderland – FBI Agents aren't the only victims of border area. September 16, 2002.
- Higgins, Howard C. *et al.* Cultural Resource Survey of Proposed Border Fence Improvements, Doña Ana County, New Mexico. September 2002.
- Immigration and Naturalization Service. Final Supplemental Programmatic Environmental Impact Statement – Proposed JTF-6 Support Services to INS. 2001.
- National Research Council. 1977. Guidelines for Preparing Environmental Impact Statements on Noise. Prepared by the Committee on Hearing, Bioacoustics, and Biomechanics, Assembly of Behavior and Social Sciences. Office of Naval Research, Contract No. N00014. Washington D.C.
- New Mexico Energy, Minerals, and Natural Resources Department. New Mexico's Natural Resources – Data and Statistics for 2000. 2001.
- New Mexico Environmental Department. 1996. Internet website:
http://www.nmenv.state.nm.us/NMED_reggs?aqb_reggs.html
- New Mexico Department of Game and Fish (NMDGF). 2002. Internet website:
<http://fwie.fw.vt.edu/states/nm.htm>
- New Mexico Department of Game and Fish. Threatened and Endangered Species of New Mexico, Biennial Review and Recommendations. September 2000.
- U.S. Army Corps of Engineers. Final Environmental Assessment - Fence Construction Supporting U.S. Border Patrol El Paso Sector. March 1995.
- U.S. Census Bureau. Geographical Comparison Table. 2000.
<http://www.census.gov/census2000/states/nm.html>
- U.S. Census Bureau. Housing Vacancies and Homeownership Annual Statistics: 2001.
<http://census.gov/hhes/www/housing/hvs/annual01/ann01t4.html>
- U.S. Census Bureau. 2001. State and County Quick Facts Internet website:
<http://quickfacts.census.gov/qfd/states/35/35013.html>
- U.S. Department of Agriculture – Soil Conservation Service map (1979) provided by Mr. Bob Pelegrine, Las Cruces Soil Conservation Field Station.
- U.S. Department of Agriculture, Soil Conservation Service. Soil Survey of Doña Ana County Area, New Mexico. 1977.

- U.S. Department of Commerce – Bureau of Economic Analysis. Regional Accounts Data website. 2000. <http://www.bea.doc.gov/bea/regional/reis/>
- U.S. Department of Labor – Bureau of Labor Statistics website. 2002. <http://data.bls.gov/cgi-bin/surveymost>
- U.S. Environmental Protection Agency. Summary Population Exposure Report, June 8, 2001. www.epa.gov/airs/nonattn.html
- U.S. Fish and Wildlife Service. 2001. Internet website:
<http://southwest.fws.gov/refuges/newmex/sanand.html>
- Workman, G.W., T.D. Bunch, J.W. Call, F.C. Evans, L.S. Neilson, and E.M. Rawlings. 1992. Sonic boom and other disturbance impacts on pronghorn antelope. Report submitted to Hill Air Force Base, Utah. Utah State University, Logan, Utah. 67pp.
- Weisenberger, M.E., P.R. Krausman, M.C. Wallace, D.W. DeYoung, and O.E. Maughan. 1996. Effects of simulated jet aircraft noise on heart rate and behavior of desert ungulates. *Journal of Wildlife Management*, 80(1):52-61.

8.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this Environmental Assessment.

NAME	AGENCY/ORGANIZATION	DISCIPLINE/EXPERTISE	EXPERIENCE	ROLE IN PREPARING EA
Brady Turk	Gulf South Research Corporation	Wildlife/Biology	7 years related studies and NEPA experience	Project manager, agency coordinator and field surveys
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	22 years EA/EIS studies	Field survey/EA review
Kate Roussel	Gulf South Research Corporation	Forestry/Wildlife	2 years in NEPA and related studies	Field survey
David Alford	Gulf South Research Corporation	GIS/graphics	3 years GIS/graphics experience	GIS/graphics
Charles McGregor	USACE, Ft. Worth District	Chemistry	5 years technical review of NEPA documents	Technical manager, EA review and coordination
Patience Patterson, RPA	USACE, Ft. Worth District	Archaeology	29 years Professional Archaeologist/Cultural Resources Manager	EA review and coordination
Kevin Feeney	INS, HQ	Environmental	30+ years environmental analysis	EA Review

APPENDIX A
CORRESPONDENCE

APPENDIX B
PHOTOGRAPHS



Photograph 1. Eastern end of existing barrier fence, looking west; UPR railroad tracks



Photograph 2. Western end of existing barrier fence, looking east



Photograph 3. Typical terrain/vegetation in project area; Monument 2B in the distance



Photograph 4. Typical terrain/vegetation near proposed west end of barrier fence