El Paso del Norte: A Cultural Landscape History of the Oñate Crossing on the Camino Real de Tierra Adentro 1598–1983, Ciudad Juárez and El Paso, Texas, U.S.A.

By Rachel Feit, Heather Stettler and Cherise Bell

Principal Investigators:
Deborah Dobson-Brown and Rachel Feit

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AmaTerra ENVIRONMENTAL, INC.

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Cover photo: Hart's Mill ca. 1854 (*source: El Paso Community Foundation*) and Leon Trousset Painting of Ciudad Juárez looking toward El Paso (*source: The Trousset Family Online 2017*)

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Introduction

1.1 El Camino Real de Tierra Adentro

In October 2000, Public Law 106-307, titled *A Bill to amend the National Trails System Act to designate El Camino Real de Tierra Adentro as a National Historic Trail* was signed. With this legislation, the National Park Service recognized the 404-mile long trail segment extending from the Río Grande near El Paso, Texas to San Juan Pueblo in New Mexico as a historic trail known today as *El Camino Real de Tierra Adentro* (herein also referred to as the Camino Real). The route is part of a transnational 1600-mile road stretching from Mexico City to New Mexico that was used for nearly 300 years to facilitate exploration, settlement, trade, natural and mineral resource development, religious conversions, and military operations in Mexico and the United States (US). The Camino Real fostered a cultural exchange that profoundly shaped American and Mexican heritage within the borderlands (**Figure 1-1**). Portions of the trail through Mexico are part of a World Heritage Property listed in 2010. In the US, the trail is commemorated and administered jointly by the National Park Service (NPS) and Bureau of Land Management (BLM), whose administrative mission is to promote public-private partnerships, volunteer opportunities, and projects that encourage the preservation and development of historic sites and trail segments along the route in a way compatible with surrounding land use.

Most of the land traversed by the Camino Real is now under private ownership, though specific associated properties and segments of the road do fall within public lands held by Mexico or the US. In 2011 sections of the Camino Real in New Mexico were listed in the National Register of Historic Places (NRHP) through a Multiple Property Documentation Form (MPDF) under which eleven associated property types are identified: 1) landmarks and landforms, 2) trails/wagon road sections, 3) estancias and ranchos, 4) pueblos, 5) battlefield and engagement sites, 6) fords, ferries, and bridges, 7) encampments/activity areas, 8) parajes, 9) gravesites, 10) churches, and 11) commercial buildings. However, the trail segment in Texas is not included in this National Register MPDF. In both Texas and New Mexico, there are multiple properties that are listed individually in the NRHP. The already listed associated properties in Texas are Hart's Mill and Old Fort Bliss (41EP37) listed as a National Register district, the Franklin Canal (also listed as a district), *Misión de Nuestra Señora de la Purísima Concepción* (known as the Socorro Mission), the *Misión de Corpus Christi de San Antonio de la Ysleta del Sur* (known also as Ysleta del Sur), and the San Elizario Historic District and Presidio Chapel.

1.2 The Oñate Crossing in Context

In 2017, the National Park Service hired AmaTerra to prepare a Cultural Landscape Report (CLR) and Historic Survey Report (HSR) for a segment of the Camino Real in El Paso, Texas and Juárez, Chihuahua, Mexico known as the Oñate Crossing.

Figure 1-1. The El Camino Real de Tierra Adentro.

Originally, the project was intended to serve as a complete CLR to include assessments of integrity, treatment plans, and recommendations for the overall landscape and buildings within the cultural landscape. This was the ford Juan de Oñate y Salazar used to cross the Rio Grande as his caravan made the slow trek from the mines of Mexico to the pueblos of New Mexico near Santa Fe, and it became a central place along the route. The project was to include resources on both sides of the border. However due to funding constraints, the NPS descoped the project and eliminated the HSR for buildings on the Mexico side of the border, as well as the assessments of integrity, treatment plans and recommendations for resources associated with the Oñate Crossing. This project is intended to serve as the first section of a complete Cultural Landscape/Historic Structures Report. Chapters covered include Environmental Setting, Cultural Background and History, and a section on the built environment that describes the physical history of the resources with emphasis on landscape and land use changes over time. Also included in the report is an appendix documenting associated historic buildings on the American side of the border.

Within a few generations of its founding, El Paso del Norte, the pass of the north, became a crucial outpost in New Spain, linking mining settlements south of the Rio Grande with the Native American pueblos and resources north of the river. In 1659 Misión Nuestra Señora de Guadalupe was established along the road, on the south side of the river. Here Fray García de San Francisco y Zúñiga built a church and settlement to convert the Native Americans that regularly forded the river at this location. Under his direction, a ditch (*acequia)* was dug from the river to plant and irrigate crops such as wheat, grapes, and fruit trees. The mission settlement was expanded in 1685 when the Presidio de El Paso del Norte was built to serve as the administrative and military center for the Spanish and christianized Native Americans who fled the 1680 Pueblo Revolt in New Mexico. El Paso del Norte became a strategic place in Spain's northern territories along the Camino Real. It was an administrative center from which the Spanish launched christianizing efforts, military missions, and carried out commerce and trade. It was also an important agricultural center, famed for its wheat fields and wines.

When Zebulon Pike came through El Paso del Norte in 1807, he followed the Camino Real from New Mexico and crossed the Rio Grande at a bridge the Spanish had built at the head of the acequia that watered wheat fields and vineyards in the valley. It was at this same crossing place that one of the first American settlers, Simeon Hart, built a home and flour mill on the east side of the river around 1850. Strategically placed along the road, the mill was powered by water diverted from a Spanish dam on the Rio Grande. Hart's Mill immediately began supplying flour to American military outposts that were established along the newly drawn US-Mexico border and in New Mexico territory. Hart was a former cavalryman who had fought in the Mexican-American war (1846–1848), and in partnership with his father-in-law, a wealthy Mexican mill owner, his business supplying American military posts thrived. He eventually purchased a stage line and operated his own freight hauling company, both of which used the Camino Real to transport people and goods. Hart's *molino* was the center for trade, transportation and hospitality in El Paso del Norte region for many years to come.

Therefore, when the US military sought to re-establish a permanent post on the border in 1878, the Hart's Mill area seemed a natural choice. The property was already well known to the military, having supplied it with wheat for more than twenty-five years. It was strategically placed along the border, at the main road and crossing into Mexico, near Boundary Marker 1, and could be supplied easily with products from El Paso del Norte or the fledgling town of Franklin, which later became known as El Paso. It was also along the planned southern transcontinental railway route: the Atchison, Topeka, and Santa Fe (AT&SF) railroad cut through the Fort Bliss Parade Ground in 1881 with the Southern Pacific not far behind. Fort Bliss at Hart's Mill was occupied from 1879 to 1893, when it moved to Lanoria Mesa on the east side of the Franklin Mountains. That move, along with the 1895 closure of Hart's Mill, represents the end of the strategic significance of the Oñate Crossing.

For its unique historical significance, the Oñate Crossing area is considered a unique cultural landscape along El Camino Real de Tierra Adentro. It encompasses at least seven of the associated property types defined in the New Mexico NRHP MPDF including landmarks and landforms (the narrow pass through the mountains), road sections (eg. Paisano Street), a church (Nuestra Señora de Guadalupe), commercial buildings (Hart's Mill), fords and ferries (the Rio Grande Crossing), a paraje (eg. Ciudad Juárez or Hart's Mill), and encampments/activity areas (Fort Bliss and the Presidio of El Paso del Norte)—although not all of these features are extant or recognizable on the modern landscape. Moreover, this section of the Camino Real, falling outside New Mexico, is not covered under the NRHP MPDF and therefore deserves consideration as a separate historic district.

1.3 Period of Significance and Study Area Boundaries

A 1997 National Historic Trail Feasibility Study conducted prior to listing the Camino Real as a National Historic Trail frames the trail's period of significance as 1598 to 1882, beginning with Oñate's journey from Mexico to the northern territories and ending with the construction of railroads (NPS 1997). However, this study for the Oñate Crossing portion of the trail extends the period of significance another decade, to 1893, to correspond with the relocation of Fort Bliss from the Oñate Crossing to Lanoria Mesa. As will be discussed in greater detail through this report, Fort Bliss plays an important role in this particular cultural and historical landscape and represents a final chapter for the Camino Real and its strategic importance for exploration, settlement, and military operations along the borderlands.

The study limits focus narrowly on the Rio Grande crossing area known as Oñate Crossing, and includes landmarks that defined this place strategically through time. For this study, these landmarks begin in Ciudad Juárez at the Misión Nuestra Señora de Guadalupe, founded in 1659 and end in Texas at Old Fort Bliss which closed its post on the Rio Grande in 1893. Within these limits, associated sites include the trail itself, the mission in Ciudad Juárez, the Presidio de El Paso del Norte, the Acequia Madre, the various dams over the Rio Grande that served as both bridges and water diversions, Hart's Mill and home, and

Old Fort Bliss. In the case of Hart's Mill and Old Fort Bliss, these sites contained multiple associated buildings, some of which are still extant, but many more of which are no longer standing (**Figure 1-2**).

1.4. Project Scope and Methodology

The purpose of the CLR is to document the 300 year cultural history of the Oñate Crossing, along with the evolution of the natural, cultural and built landscape. Additionally, this project seeks to provide preliminary documentation and evaluation of existing conditions, buildings and properties associated with the Oñate Crossing. The document will serve as a planning guide for further preservation efforts, commemorative plans, and landscape treatments for associated sites and places within the Oñate Crossing cultural landscape.

Under direction of NPS, the consultant team included architectural historians, archaeologists, historians, and geographical information system (GIS) specialists. At the beginning of the project the NPS led a stakeholders meeting in El Paso in order to share information with area landowners, historians, students, public agencies, and archives. The two-day event involved both meetings to refine parameters of research, as well as tours of significant landmarks that are important to the cultural landscape of the Oñate Crossing including those in Ciudad Juárez.

Work for the project began in October 2017 and continued through August 2018. Work involved field visits to the project area in December 2017 to document buildings and the existing landscape. Additionally, with direction from project stakeholders, project staff conducted research at libraries and archives in the El Paso area, as well as online, and in Austin. Libraries and archives visited in El Paso included El Paso Public Library, El Paso County Historical Society, El Paso Community Foundation, the C.L. Sonnichsen Special Collections Department and the Centennial Museum of the University of Texas at El Paso, the International Boundary Waters Commission Archives, and the Texas Department of Transportation, El Paso District archives. In Austin, the project team visited the Center for American History, and the Perry Casteñeda Library. Additionally, much information is available online through the National Archives, the Smithsonian Institution, or through Google Books. The team assembled the information into an annotated bibliography that documents sources, archives and relevant information within each source.

For the cultural landscape background and assessment portions of this document, work generally conforms to the professional and regulatory guidance offered in *NPS-28: Cultural Resource Management Guidelines* and *National Register Bulletin 18: How to Evaluate and Nominate Historic Designed Landscapes.* The existing conditions inventory and the site analysis has attempted to address the twelve landscape characteristics discussed in National Register Bulletin 30: *Guidelines for Evaluating and Documenting Rural Historic Landscapes* patterns of spatial organization, response to natural features, land uses and activities, buildings and structures, cluster arrangements, circulation systems, vegetation, small-scale features, views and view sheds, archaeological resources, cultural traditions, and boundary demarcations.

Some of these categories, such as cluster arrangements and small scale features, are not wholly applicable to this cultural landscape for several reasons: 1) it encompasses functionally different built environment resources from many time periods, 2) the cultural landscape of the Oñate Crossing is a modern and fluid construct whose limits and spatial boundaries were never clearly articulated historically, and 3) the current landscape is so heavily altered that concepts such as cluster arrangements and small scale features simply do not apply to an analysis of this particular landscape. The CLR provides documentation of the resources' development over time and a context within which to analyze extant buildings and features.

AmaTerra's GIS specialists developed a GIS database of historic maps and aerial photographs of the project area as a means to locate missing resources, as well as trace land use and landscape changes over time. In the GIS database, historic maps and aerial photographs were orthorectified and referenced to modern base maps. The geodatabase was then used to generate maps and graphics for the report. While in the field, AmaTerra took various landscape photographs and views to compare with historic imagery.

1.5 Summary of Current Land Use and Conditions

The current landscape of the Oñate Crossing is heavily urbanized on both sides of the border. The trail used by ox carts and mule trains 300 years ago to cross the Rio Grande is all but hidden among the network of paved streets, modern dams, channelization efforts, border walls, and other major infrastructure projects. In particular, on the American side of the crossing, the built environment—its historic landscape, buildings, and features—are largely missing, While vestiges of the Oñate Crossing of the sixteenth through nineteenth centuries do still exist, they are heavily obscured by newer buildings, the views completely altered, and land use is radically refocused. In addition to the trail itself, segments of which still exist along paved streets in Ciudad Juárez and El Paso,[1] on the American side, the associated resources include:

- The approximate crossing of the Rio Grande
- The Hart Home (b. 1851-1854)
- Two Old Fort Bliss Officer's Quarters (b. 1879)
- A Fort Bliss Guard House (b. ca. 1879)

The Hart Home, the Officers Quarters, and the Fort Bliss Guard House are privately owned and have been modified to some degree since the early twentieth century. Currently the Hart Home is being partially leased for field office space, while before that it was a Mexican restaurant. Sometime after 1900 a brick porch was added to the front of the house. This was enclosed and a decorative curvilinear parapet was added sometime between 1936

1 Like any historic trail, the Camino Real shifted footprints based on weather conditions and the needs of the travelers along it. The same is true for the actual ford of the river which probably moved up and down about a mile of channel through time. In Ciudad Juárez, the trail generally overlaps with Ugarte and la Presa streets but also to some degree, Avenida de Septiembre is part of that trail. In Texas, the trail route generally overlaps with Paisano Street.

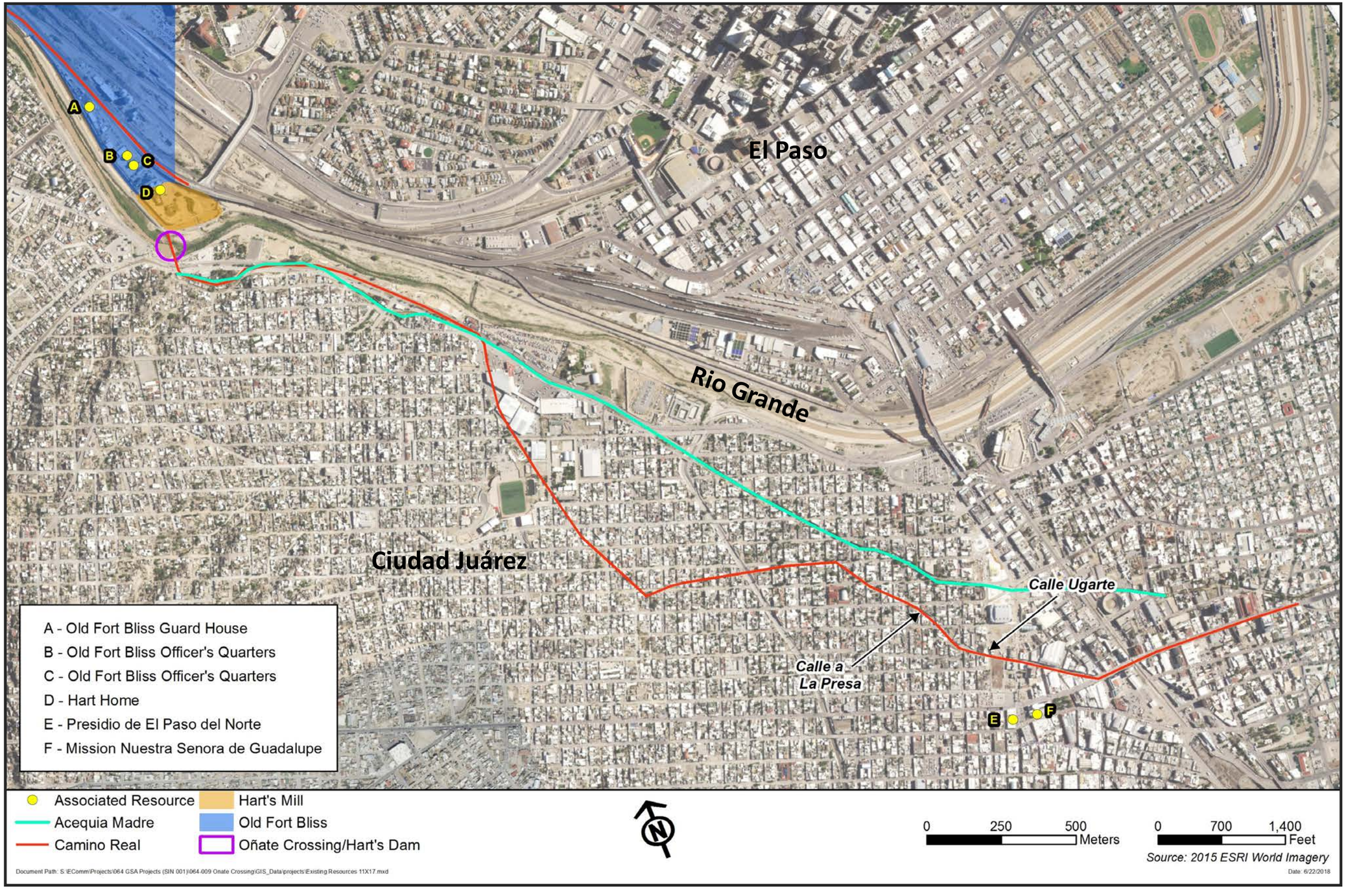

Figure 1-2. Map of study area in El Paso and Ciudad Juárez showing locations of associated resources.

and 1947. Other interior modifications have taken place over time to adapt the building to restaurant use.

The Fort Bliss Officer's Quarters are both currently vacant but were purchased in 2018 by a hotel group with plans to renovate the spaces for a boutique hotel. Prior to vacancy, the Officer's Quarters buildings were apartments. Originally, a one-story, full-width, hipped roof porch covered the first-floor front facades of both buildings. Those have been removed. One of the buildings has additions built onto the rear ell portion of the original structure.

The Fort Bliss Guard House has been extensively remodeled with front and rear shed-roof additions that obscure the original structure. A brick wainscot is wrapped on the east and south facades. Windows and doors have been completely replaced and metal awnings now shade the windows. It is now used as an office for an environmental remediation and demolition contractor.

On the Mexican side of the Rio Grande the existing associated resources include:

- Misión Nuestra Señora de Guadalupe
- Acequia Madre
- Presidio de El Paso del Norte

The 1668 Misión de Guadalupe—considered by many to be probably the most historic building associated with the camino in this region—is currently controlled by the Diocese of Ciudad Juárez which maintains it and keeps it open to the public, although a much larger cathedral building was completed adjacent to it in 1957. That church is also known as Nuestra Señora de Guadalupe. The historic mission retains its original facade, structure, and many of its original features. The carved wood vigas, balustrades, and decorative molding around the sanctuary inside the church are either original or replicate original carved beams. However, the iconic bell tower on the right side of the church facade is an early nineteenth-century addition (Enriquez 1984). The cloisters that extend from the rear of the building are also modern additions.

The Acequia Madre is controlled by Ciudad Juárez. It follows roughly its original route, although it has been straightened in places. Historically the acequia was a earthen ditch, though over time it has been widened or stabilized with masonry and concrete, and a segment of it near its entrance has been sunk underground. Finally, the Presidio de El Paso del Norte is also publicly owned by Ciudad Juárez and is now home to the Municipal Art School. Prior to its current use, the building was the Presidencia Municipal, the seat of city government for Ciudad Juárez. Originally built of plastered adobe with exposed vigas along its exterior faces, the building's current facade of ornamental stone was erected in 1943. At that time a second story was also added.

1.6 A Final Note on Terminology

The Rio Grande runs generally south from its source in Southern Colorado to El Paso. In El Paso, just south of the Oñate Crossing, the river channel turns to a more southeasterly course, which it follows to its delta at the Gulf of Mexico. Consequently, historical sources that describe this area vary as to the naming of the banks of the river. Some refer to east and west banks, while some refer to north and south banks. Within this document, we use both as well. We refer to the American side of the river at or above the Oñate Crossing as the east bank, while the Mexican side is the west bank. However, as the river bends and passes below downtown El Paso it runs on a east-west course for a distance of about five miles before settling into its southeasterly course. From downtown El Paso, we refer to the American side of the border as the north side of the river, while the Mexico side of the border is the south side of the river.

On other notes, the cultural landscape in this report consists of a patchwork of resources tied together by the Oñate Crossing of the Camino Real de Tierra Adentro. When we refer to this cultural landscape in the document, we shorten it to the *Oñate Crossing* or the *Oñate Crossing cultural landscape.* This is meant to include the crossing itself, as well as the various associated resources around it that impart historical significance. Also shortened are the names for the Camino Real de Tierra Adentro and the Misión Nuestra Señora de Guadalupe. These names are typically shortened to *Camino Real and Misión de Guadalupe.*

Chapter 2
The Natural Environment in Context

The Rio Grande is one of the longest rivers in the US and is the major water source for this cultural landscape. Combined with the habitat created along its edges, it forms an abundant source of food and water that has been used by people for millennia.

Trending generally to the southeast, the river passes between two mountain ranges to the northwest of the Hart's Mill and Old Fort Bliss: the Franklin Mountains on the U.S. side of the international border and the Sierra Juárez on the Mexican side of the border (Miller 1991; **Figure 2-1**). As one author eloquently notes, "Geographic factors older than recorded time dictated that El Paso should be a locus for trade and exchange. Here the Rio Grande breaches the Cordilleras from the west to seek passage to the sea far to the southeast" (Strickland 1963:4).

Not far from where the river emerges from the mountain pass, where the terrain flattens and the river meanders, one spot in the river had a solid bed—in marked contrast to the sandy and perilous riverbed elsewhere in the valley. Native Americans habitually used this spot to ford the river long before the Spaniards arrived in the area. The mountain pass and the safe ford of the river combined to make this location a notable landmark for any traveler through the area. This means the area of this cultural landscape was described in several very early historical travel accounts, as well as in later historical documents written by travelers through the area and settlers who made a life there. These sources combine to create a vivid picture of the bountiful resources that once characterized this area. The earliest accounts describe a landscape that was almost entirely unaltered by humans. Although a light trail probably led to the ford of the river, the terrain was unaltered by human activities for agriculture, irrigation, or livestock. The Mansos consistently used the area, and the presence of this tribe that seemed open to conversion was the primary motivation for establishing a mission in the location However, there is no evidence that they established a permanent settlement at this location (although there is evidence of early habitation at the Keystone Dam site a few miles upriver, as well as on the mesa lands west of Sunland Park, a few miles to the northwest). As the Spanish began to occupy the area, they built homes and canals to divert river water to agricultural fields. With time, modifications of the landscape increased in intensity and frequency, primarily to support agriculture, fruit cultivation, housing, transportation routes, and (later) more formal commercial and industrial activities. The modern environment, so completely modified by human activity, is a stark contrast to the environment described in the historical accounts.

2.1 Project Setting

The cultural landscape spans both sides of the Rio Grande and falls southeast of the narrow pass between the Franklin Mountains and the Sierra Juárez, at an altitude of approximately 3,730 feet above mean sea level.

Figure 2-1. View of the Pass through the mountains (from Emory 1857).

Historically, the Rio Grande was a slow-moving river that carried heavy loads of silt. This caused the river to build up its bed making it prone to jumping its banks during flood events and cutting new meanders across its basin. Thus, most of the river basin has deep and extensive deposits of Holocene-age fine sandy loams and clays, or loamy alluvium (and near the Franklin Mountains they become gravelly) (Soil Conservation Service 1971). The sandy soils are what made crossing the Rio Grande difficult and treacherous for much of its length. In some portions of the riverbed, the sandy soils acted as quicksands that could trap a wagon and cause it to sink to the depth of its body (Merlan et al. 2011). The meandering nature of the Rio Grande (before it was dammed and channelized in the twentieth century) meant that routes across and adjacent to the river were constantly changing, and "thus the Camino Real was not a single road, but a braided system of roads" (Merlan et al. 2011:9). The sandy deposits overlie deep alluvial, fluvial, and evaporitic sediments that collect water, forming the Hueco Bolson—the source from which most surface wells draw. The soils in the area of Old Fort Bliss and Hart's Mill today have been substantially altered by human activities as a result of levee construction, relocating and straightening the river channel, and various residential, commercial, and industrial developments (El-Hage and Moulton 1998; Lindemuth 2011).

The area of Oñate Crossing is located in the Chihuahuan Basins and Playas subregion of the Chihuahuan Desert ecoregion (Griffith et al. 2007). The Texas Parks and Wildlife Department classifies the area as the Trans-Pecos Natural Region, Desert Scrub Subregion, which is the northern portion of the Chihuahuan desert (Texas Parks and Wildlife Department 2018).

Today, the climate of El Paso and Ciudad Juárez is an arid to semi-arid desert. Its abundant sunshine and low humidity draw many people to the area, despite the high summer temperatures that are frequently above 90 °F. Temperatures in the El Paso area range from lows of 32 °F in December to highs of 97 °F in June. Precipitation is infrequent and arrives mostly in the form of summer thunderstorms. Precipitation ranges from a historic low of 2.22 inches in 1891 to a historic high of 18.29 inches in 1884. The annual average is about 8.7 inches (National Weather Service 2018a). Because of the aridity, dry and loose soil, and sparse desert vegetation, modern residents sometimes experience dust storms and sandstorms (El-Hage and Moulton 1998).

2.2 Early Spanish Encounters with the Landscape

When Don Juan de Oñate y Salazar first traveled from Santa Bárbara in northern Mexico along the Camino Real with his wagon train toward New Mexico, their arrival at the river was an enormous relief after the struggle to cross the sand dunes to the south. Desperately dehydrated and weary, the people and animals in the caravan were overjoyed to encounter the water. Cottonwoods provided shade, willows at the water's edge created wildlife habitats, and abundant wood allowed the group to have bonfires blazing at night. For a change, food was plentiful and fresh in the form of fish pulled from the river and abundant ducks and geese (Simmons 1991). A captain, legal officer, and chronicler of Oñate's expedition, Pérez de Villagrá, provided a vivid description of their encounter with the Rio Grande:

> Joyfully we tarried 'neath the pleasant shade of the wide spreading trees which grew along the river banks. It seemed to us that these were, indeed, the Elysian fields of happiness, where, forgetting all our past misfortunes, we could lie beneath the shady bowers and rest our tired aching bodies, enjoying those comforts so long denied us. It was with happiness that we saw our gaunt horses browsing in the grassy meadows, enjoying a well-deserved and needed rest. Happy, indeed, were we, as happy as the buzzing bees which flitted from flower to flower, gathering the sweet nectar for their winter's store; as happy as the countless birds of every size and hue which hopped from branch to branch among the leafy bowers, singing their sweetest peans of praise [to] our good Lord, the Father of us all. (Pérez de Villagrá, 1610:Canto XIV)

The first formal Spanish settlement of the area began in 1659 when Fray García de San Francisco y Zúñiga and two other priests established the Misión of Nuestra Señora de Guadalupe in what would become El Paso del Norte (now Ciudad Juárez). From the mission's records, we know the area lacked stands of wood suitable for building the structures planned by the priests, and they had to travel five miles to find wood for the roof supports (Hughes 1914).

The Spanish government continually sought to maintain and solidify its empire, including the provinces of Nueva Vizcaya (which encompassed what is now Chihuahua and Durango in Mexico) and Nuevo México (which encompassed what is now West Texas and

New Mexico). A significant part of its defense against European rivals and hostile Indian groups consisted of establishing and staffing presidios (Long Distance Trails Group 2004). From 1724 to 1728, Colonel Don Pedro de Rivera was appointed by Viceroy Casafuerte to conduct a thorough survey of the presidios throughout Nueva España. Rivera was a careful and detailed chronicler of his travels. He described the approach from the south to El Paso as level, sandy, and difficult. Along the way he observed rosemary, other shrubs, and occasional woods of mesquite and acacias. Rivera visited the presidio in El Paso del Norte, on the south bank of the Rio Grande. In the surrounding area were farms where wheat, corn, vegetables, and grapes were grown—and the wine from those grapes was said to be superior to any in Nueva Vizcaya. Rivera and his party crossed the Rio Grande via canoes, a process that took half a day (Murphy 1937).

Historically, travelers following the Camino Real de Tierra Adentro would have hunted a variety of game animals; the particular species would have changed as the route traveled through different ecozones. Semidesert grasslands would have had abundant pronghorn, coyotes, bobcats, and antelope. Desert scrub environments would have provided mule deer, desert bighorn sheep, and quail. River habitats were the homes of ducks, geese, and wild turkeys, cottontail, and jackrabbits were probably ubiquitous. Common birds included red-tailed hawk, the golden eagle, wild turkey, jays, titmouse, and rock wren. Migratory birds would likely have been sparrows, night-hawks, black-throated gray warblers, swallows, mourning doves, juncos, mountain bluebirds, and robins (Land Distance Trails Group 2004). The populations of almost all species (with the exceptions of rabbits and mule deer) declined as hunting pressure increased and habitat was lost to development (Merlan et al. 2011).

2.3 Early American Encounters and the Landscape during the Period of Significance

The landscape prior to (and during) the period when Simeon Hart lived in the El Paso area was quite different from today's landscape. James O. Pattie traveled through the area in the 1820s (albeit as a prisoner). He described his encounter with the Rio Grande in 1826:

> I know not, whether to call the Passo del Norte, a settlement or a town. It is in fact a kind of continued village, extending eight miles on the river. Fronting this large group of houses, is a nursery of the fruit trees, of almost all countries and climes. It has a length of eight miles and a breadth of nearly three. I was struck with the magnificent vineyards of this place, from which are made great quantities of delicious wine (Pattie 1988:78).

Susan Shelby Magoffin traveled to the El Paso area in 1846 with the trading caravan led by her husband, Samuel Magoffin. She was the sister-in-law of an early settler in the El Paso area, James Wiley Magoffin, who established his settlement of Magoffinsville in 1848. Susan Magoffin kept a journal during her travels and wrote vividly on many topics. She described the winds that characterized the El Paso del Norte area: "It is exceedingly

windy these last few days. . . there is so much dust one cannot even stand at the door or window without having their eyes nearly put out, much less going into the street, where nothing scarcely can be seen but flying sand" (Magoffin 1926:218–219). The windiest months in the El Paso area are April and May, followed by March and June. For March, April, and May, the wind is predominantly out of the west with speeds up to 50 mph and most wind speeds in the 10 to 30 mph range (National Weather Service 2018b). Magoffin also described a house they stayed at during their travels in El Paso del Norte. She wrote of the garden that "fruit trees and grape vines grow in abundance, with here and there a rose bush, a lilly bed. . . the weather is so mild the trees are leaving, and in a little time more there will be fruit" (Magoffin 1926:206).

John Pope traveled through the area in 1854. He noted that in the area around El Paso, the only cultivated lands "are the immediate bottom-lands along the river, which can be conveniently irrigated" (Pope 1854:31). Because the soils—although only 4 or 5 inches deep—were renewed with silt carried in the irrigation water, they were "extremely fertile, and well adapted to the production of all cereal grains" (Pope 1854:32). Pope also commented extensively on the vineyards and the potential for a major wine making industry at El Paso del Norte.

Pope provided important descriptive details about the falls near Hart's Mill and the naming of the area. He wrote that the river has "at one place a perpendicular fall of two or three feet, and this passage has, from the period of its discovery by the Spaniards, been known as El Paso. The Mexican town of that name is about two miles below the debouchure of the river from the mountains" (Pope 1854:32).

In the mid-nineteenth century, William Watts Hart Davis received an appointment as an attorney for the United States. He kept a detailed diary of his time in New Mexico during the mid-1850s, which included traveling to outlying towns to attend to legal cases. This included a trip to El Paso in which Davis described how the Acequia Madre began at a dam "just below the point where the river passes the mountains," ran the length of the valley, and irrigated "gardens, fields, and vineyards" (Davis 1938:215). Like many others before him, Davis wrote enthusiastically in multiple passages about the high quality of the El Paso grapes and wine and claimed that "they are thought to be equal to those imported from Spain and the Mediterranean for table use." (Davis 1938:191–192).

Davis spent some time in the El Paso area and traveled to Magoffinsville, a few miles to the southeast of Hart's Mill. At the time, Fort Bliss was located on Magoffin's property, and officers and troops were quartered in some of Magoffin's buildings. From this excursion, Davis penned a detailed description of the Rio Grande Valley, which merits an extensive quotation:

> Here begins the somewhat celebrated Valley of Paso del Norte, which extends south thirty or forty miles, until the mountains again close down upon the river. . . .The land is fertile, well irrigated, and produces fine crops. It is particularly productive in wheat, and it has been estimated that this narrow strip of land, lying on both sides of the river, would produce, under proper cultivation, enough to

> support a million of inhabitants. The valley would grow the grains and vegetables, while the hills and mountains would supply good pasturage for numerous flocks and herds. The climate is delightful, and even excels that of New Mexico. It is a region of perpetual spring and summer, and most of the tropical fruits and plants flourish as though it was the land of their nativity instead of their having been transplanted from a still more genial clime. The grape, in its variety, grows in great abundance, and vineyards, from which delicious wines are made, are scattered all along down the valley. In writing upon this subject, De Bow, in his Industrial Resources of the South and West, says, 'The most important production of the valley is grapes, from which are annually manufactured not less than *two hundred thousand gallons of perhaps the richest and best wine in the world.* This wine is worth two dollars per gallon, and constitutes the principal revenue of the city. The El Paso wines are superior in richness, and flavor, and pleasantness of taste to any thing in the United States, and I doubt not that they are far superior to the best wines ever produced in the Valley of the Rhine or on the sunny hills of France. Also a great quantity of the grapes of this valley are dried in clusters, and preserved for use during the winter. In this state I regard them *far superior to the best raisins that are imported into the United States.'* Grapes and wines are the most valuable productions of the valley; but next to the cereal grains in point of usefulness may be mentioned the *lechuguilla,* a plant that grows upon the almost barren mountain-sides among the stunted pine and cedar trees. The blades are very fibrous, and, when pounded, washed, and scraped, are manufactured into ropes and many other useful articles (Davis 1938:214, emphasis in the original).

Davis also journeyed to El Paso del Norte. At the time, the population of the town and its surrounding settlements was estimated at 6,000 people. Davis wrote that "the houses are so much interspersed with vineyards, orchards, and cultivated fields, that it presents more the appearance of a succession of plantations than a town" (Davis 1938:215). He continued with his descriptive prose:

> As we rode through the town I was struck with the charming appearance it presented. On every side were vineyards, flower gardens, orchards and shrubbery, loaded with foliage, flowers, and fruit, and little canals carried water along nearly all the streets, and through the gardens and yards, adding to the pleasantness of the scene. Fruit-trees of all kinds, singly and in groves, were growing on every hand. The buildings are ordinary adobe houses, but such was the beauty and picturesqueness of their surroundings that they appeared much more pleasant than mud houses ever seemed before. When to these natural beauties we add nearly every delicacy and luxury that the heart of man can crave, and a climate that rivals that of Italy, it can easily be conceived that, as a place of residence, it is almost an earthly paradise (Davis 1938:216).

William Wallace Mills described the antebellum climate of El Paso as "mild, pleasant and healthful" (Mills 1962:5). The valley was clearly a fertile place, for among his many enterprises, Mills "made large quantities of wine from the El Paso grape, and sold it readily at $5 per gallon, $200 per barrel of forty gallons" (Mills 1962:27).

Historically, the area of Hart's Mill and Old Fort Bliss did not have any springs. The early inhabitants of El Paso del Norte primarily drew on the river for agricultural and domestic water. Wells were also dug for domestic and commercial uses. A sketch of the acequia madre in El Paso drawn for Mills's memoir (**Figure 2-2**) shows large cottonwoods, other trees, and thick vegetation lining the banks of the ditch (Mills 1962:4). These were probably valley cottonwood (*Populus fremonti* var. wislizenii) with an understory of willows (*Salix* spp.) and saltgrass (*Distichis spicata*) (Merlan et al. 2011:8). Canals and ditches on the American side also provided water for domestic use, as well as created small tree-shaded oases (**Figure 2-3**).

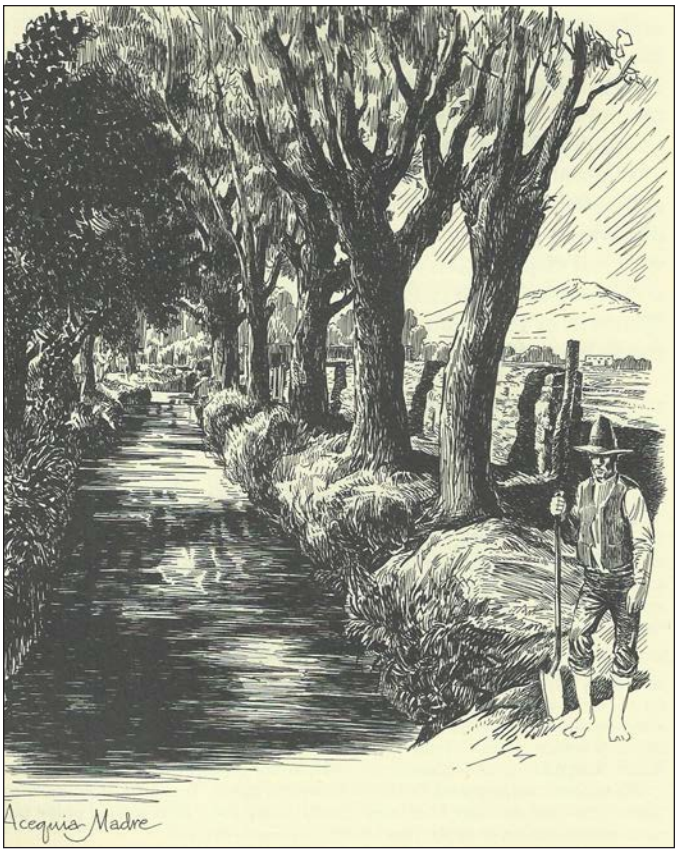

Figure 2-2. The Acequia Madre ca. 1858 (from Mills 1862).

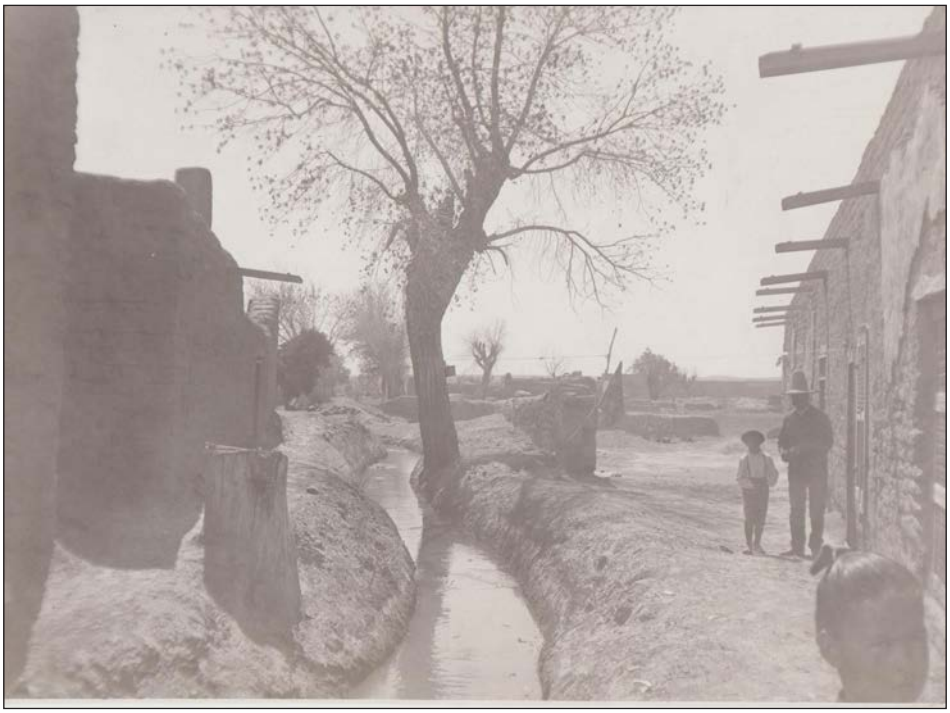

Figure 2-3. A ditch runs through a neighborhood of adobe dwellings in El Paso at the end of the nineteenth century (courtesy of El Paso Community Foundation).

2.4 A Changing Ecosystem

Historically, orchards and vineyards would have been seen in the floodplain of the Rio Grande where Hart's Mill and Old Fort Bliss are located. Extensive fields of cultivated crops, including wheat and corn, would have covered much of the floodplain south and west of the river. By 1920, most of the orchards and vineyards that characterized the El Paso area in its earliest decades had disappeared, replaced by other crops (Mires et al. 1992). Later, at the close of the nineteenth century, after railroads reached El Paso and the Camino Real ceased to be the main transportation route for the region, invasive plants crept into the bosques and began to dominate some portions of the landscape.

The cultural landscape under study is now developed and part of the urban landscape. The vegetation in the area adjacent to the river differs substantially from the plant community experienced by historical travelers to the area. Today, Chihuahuan desert vegetation typical of disturbed urban communities dominates the area: mesquite, yucca, creosote bush, four-wing saltbush, mustard, prickly pear, and snakeweed.

Historically, this plant community would have existed in the drier areas away from the floodplain; they now characterize most of the landscape, including the floodplain. Additionally, noxious weeds have invaded the banks of the Rio Grande where extensive stands of salt cedar, Russian olive, giant cane, Johnson grass, and Russian thistle can be found (Lindemuth 2011; Long Distance Trails Group 2004; McMahan et al. 1981; Merlan et al. 2011). "The highly productive natural wetlands and riparian woodlands once found along the Rio Grande in the El Paso area have virtually disappeared" (El-Hage and Moulton 1998:12).

In today's El Paso region, the nearest examples of vegetation that would have been present in an unaltered Rio Grande River floodplain are the riparian and aquatic vegetation communities in the Franklin Mountains State Park and the Hueco Tanks State Park and Historic Site (El-Hage and Moulton 1998:7).

Decreases in water quantity and quality and changes to stream discharge patterns and channelization have affected fish populations in the Rio Grande. While historical travelers were able to pull great quantities of fish out of the river, modern fish populations are practically non-existent (El-Hage and Moulton 1998).

Today, the City of El Paso draws water for municipal, industrial, and agricultural use from the Rio Grande and from the Hueco-Mesilla Bolsons aquifer:

> Most of the flow of the Rio Grande is diverted for irrigation and municipal uses at the American Canal in Texas and the Acequia-Madre Canal in Mexico before it reaches El Paso. Downstream of El Paso, most of the flow consists of irrigation return flow and treated municipal wastewater from the more than one million persons living in El Paso and neighboring Ciudad Juárez (El-Hage and Moulton 1998:11).

An ever-increasing population has created unsustainable pressure on these water sources and created water quality and quantity issues: a depleted aquifer with a lower groundwater level, changes to the quality of the aquifer water, changes in the flow and quality of water, and increased salinity (El-Hage and Moulton 1998). Groundwater levels have decreased more than 100 feet since the beginning of the twentieth century (Griffith et al. 2007). Depletion of the water sources, combined with increased salinity, will soon have significant deleterious effects on agriculture and human occupation of the area. Population pressure and resource exploitation have combined to transform the landscape into something that would be unrecognizable by the historic travelers through the area.

Chapter 3
El Camino Real de Tierra Adentro History and Context (1580–1893)

With its abundant food and water, the Rio Grande forms a natural conduit for travel and is a major landmark for the region. Native Americans had used the ford across the Rio Grande, the pass through the mountains, and the entire Rio Grande corridor for centuries, perhaps millennia, before the Spanish arrived and followed the path that would eventually become the Camino Real de Tierra Adentro. The river valley was a major landmark for European explorers and Euro-American settlers, and its early influence on regional travel patterns had important consequences for the locations of today's towns, roads, railroads, and water infrastructure throughout the West. While the earliest use of this cultural landscape pre-dates the arrival of the Spanish explorers, and use of the travel corridor has only intensified during modern times, this historical background focuses on the Spanish colonial period, the period during which the Simeon Hart Mill and home were built and used by the Hart family, and the period during which Old Fort Bliss was active between 1879 and 1893 at the Oñate Crossing. Only brief discussions of the earlier and later uses of the area are included.

3.1 Spanish Colonization and American Exploration (1580–1845)

Prior to the colonizing expedition of Don Juan de Oñate, previous Spanish explorers—some authorized, some not—probably crossed the Rio Grande in the El Paso area. The 1581–1582 expedition of Francisco Sánchez de Chamuscado and Fray Augustín, Rodríguez traveled through the El Paso area and called it "a marshy valley. . . suitable for ranches and for the cultivation of anything that might be desired" (Metz 1993:7). This expedition sought to explore missionary opportunities to the north, in what is now New Mexico (Timmons 2018a). The Antonio de Espejo expedition (1582–1583) followed in Chamuscado's tracks and described the local Native American homes as being made of straw (Metz 1993:8). Later in 1591, Juan de Morlete may have returned through El Paso del Norte (what is now Ciudad Juárez) along a route approximating the Camino Real de Tierra Adentro (Lindemuth 2011; Merlan et al. 2011). Finally, Alvar Núñez (Cabeza de Vaca) may also have reached the Rio Grande somewhere near present day El Paso on one of his treks across Texas between 1527 and 1535 (Lindemuth 2011).

3.1.1 Juan de Oñate Expedition

For the cultural landscape area examined here, the most detailed records of the Spanish exploration period are associated with the expedition of Don Juan de Oñate y Salazar.

Oñate was a savvy and connected political figure in the world of New Spain. The son of the lieutenant governor of Nueva Galicia, he had to strategically lean on his friendships and allies and use his own wealth[2] to win the prize he had been seeking for years: the authority to colonize Nuevo México. In 1595, Don Luís de Velasco, the viceroy of Nueva España, granted Oñate the right to colonize and govern the provinces of Nuevo México—a contract with enormous potential for material gain (Metz 1993). He won the title of governor, the rank of captain-general, and the high honor of being designated adelantado. Initially he was confident that his titles and powers would make him a formidable ruler in the new territory (Simmons 1991).

A critical element of Oñate's contract was that it put him directly under the Council of the Indies, the king's chief advisory body, which was located far away in Seville. Oñate would be independent of the viceroy, and he could expect that accountability for his actions would not be an impediment to his success (Simmons 1991).

Oñate's background had prepared him for his moment in the sun. He came from the northern mining city of Zacatecas, a prodigious producer of silver at the time. And the territory of Nuevo México was expected to have fabulous sources of precious metals (Simmons 1991). His origins in Zacatecas served him well logistically—he launched the expedition from Santa Bárbara, a mining town in the Sierra Madre foothills of Chihuahua, México, which would have been the northernmost reaches of the established Spanish empire at the time.

The early period of Oñate's expedition was plagued by political fights and maneuverings that caused delays that were nearly fatal to his quest to conquer Nuevo México. Finally, he was able to embark in earnest. His caravan eventually reached the last major hurdle between them and the Rio Grande—Los Médanos, a sea of sand dunes. The dunes were a serious hindrance to wagons and oxen and required adept management of the wagon train to successfully traverse the area (Bolton 1908; Simmons 1991).

Oñate's caravan finally reached the Rio Grande in 1598: "On April 20 the main part of the caravan reached the great river about twenty-five miles south of El Paso, at a place where the stream was very sluggish and the bed soft and muddy. Here nearly a week was spent until the entire expedition could unite. It had been forced to march in separate detachments in order to secure water" (Hammond 1927:94).

As the wagon train moved up the valley, Oñate sent scouts ahead to look for a suitable place for the heavy wagons to cross the river. For most of its length, a soft and sandy bottom would mean a disastrous river crossing for the caravan. The ford was found,[3] and the crossing could be made safely. Once the ford had been identified, Oñate called a halt while still on the south bank of the river so the group could mark the occasion of the crossing into Nuevo México with the pomp and circumstance suitable to the occasion of

[2] His wealth was initially generated by his father, who discovered or developed the silver deposits in Zacatecas.

[3] The river crossing was most likely readily noticeable because of the Native American trails leading to it; the ford was a landmark known to the local occupants of the region. In all likelihood, local tribes helped the scouts find the ford (Hammond 1927).

entering his new territory (Simmons 1991). All members of the expedition were ordered to don their finest clothes. On April 30, 1598, "the customary elaborate ceremony of taking possession was observed. Not only New Mexico was claimed for God, King Philip and himself, but all the adjoining provinces as well" (Hammond 1927:94).

The caravan received assistance at the river crossing from friendly Native Americans, a tribe he called the Mansos (Hammond 1927; Merlan et al. 2011). "Oñate commented that the trail offered the only acceptable passage northward for his carts for many leagues in either direction" (Simmons 1991:101). Oñate named the ford "El Paso del Rio del Norte," and crossed the river in the vicinity of what would later be Hart's Mill. This established the association of the name "El Paso" with the ford of the river (Metz 1993).

Once in Nuevo México, Oñate endured a great deal of frustration at his inability to find the lucrative mines he had expected. Subsequently, he turned his attentions to finding the supposed waterway connecting the Atlantic and Pacific Oceans. The explorer who found that passageway would have riches beyond compare—and a fantastic military advantage. Unfortunately, Oñate was not successful in that endeavor. Due to his terrible treatment of the inhabitants of Acoma Pueblo as well as of some of his own people, Oñate was recalled from Nuevo México to stand trial. He eventually managed to recoup his reputation after he returned to Spain, where in 1624 King Phillip offered him a post as the chief Inspector of Mines (Milford, et al 1998).

3.1.2 Early Spanish Settlement

As early as 1626, the area that would become El Paso del Norte (now Ciudad Juárez) was identified as a good potential site for a mission by Fray Alonso de Benavides in his report made to Fray Juan de Santander. Benavides described the local Native American group, the Mansos, who lived at the crossing of the Rio Grande, as a group of sometimes peaceful, sometimes hostile, hunter-gatherers who lived in huts of branches. Benavides described the Mansos as open to conversion and interested in being taught by Catholic priests and other religious personnel, and he felt that converting the Mansos could have beneficial effects on other tribes in the area. In his report, Benavides also recommended that placing a mission near the ford (with a small contingent of soldiers) would facilitate safe travel through the area and could potentially open up mining and ranching opportunities (Benavides [1630] 1916). Benavides's report and other documents were sent by Santander to the King of Spain. Eventually, the documents inspired the King to act, and sometime between 1656 and 1659, Fray García de San Francisco y Zúñiga, along with Father Juan Cabal and Father Francisco Pérez, traveled to the area that would later be named El Paso del Norte to convert the Mansos Indians. They were funded with alms collected from the citizens of Nuevo México (Metz 1993).

After establishing a mission amongst the Mansos, García headed back into northern New Mexico.[4] The Mansos were not quite as willing participants in the conversion process as Benavides had led Spanish authorities to believe. They set upon Cabal and Pérez, who had

[4] Probably to the Pueblo of Senecú, where he had founded the Mission of Nuestra Señora del Socorro.

to be rescued and taken back to Nuevo México (Hughes 1914). In spite of this resistance, the ordained members of the Catholic church were relentless optimists, and they returned very shortly. Once again, they were supported by the church and state in Nuevo México; representatives of both institutions allowed missionary families and settlers to accompany García to El Paso del Norte and assist in converting the Mansos. The church also supplied, at various times, cattle, sheep, goats, horses, agricultural equipment, and specialized laborers. This time, the missionaries were successful(Hughes 1914:308–309).

The 1659 trip was also when Fray García, with Father Francisco de Salazar, began work on the foundation of the Misión of Nuestra Señora de Guadalupe in El Paso del Norte. García's records indicate that he built a "little church of branches and mud and a monastery thatched with straw" (Hughes 1914:306). When García was questioned about the large number of cells in the monastery building he was constructing, it is said that he prophesied the pueblo revolt of 1680 and predicted that "the cells would be too few for the number who must dwell in the convent" (Hughes 1914:307). The church was dedicated on December 8, 1659 to the holy Virgin of Guadalupe. By the time of the dedication, García had already celebrated mass in the sanctuary, and he claimed possession of the converted Mansos and Jumano Indians. García did all this "by the authority of my office, as commissary and head of all those of El Rio del Norte above and surrounding" (Hughes 1914:306).

At the same time the mission was being built, the area that would become Ciudad Juárez was settled with Spanish colonists, although the wording in the historical documents is somewhat ambiguous with regard to the specific year they first arrived. References to the first alcalde mayor and captain of war indicate that a civil settlement was present at least by 1660. Further support is provided by the records of the mission itself, in its documentation of marriages, baptisms, and burials (Hughes 1914:311–312). In conjunction with their settlement of the area, the Spanish residents of El Paso del Norte began using irrigation farming and constructed a stick and mud dam on the river (Metz 1993).

The mission was not, however, wildly successful in its overarching goal to convert souls. Interestingly, the mission's records document an unexpectedly diverse mix of local tribal affiliations for those baptized. More than anything, this may be evidence that El Paso del Norte was already a well-established and important gathering place or crossroads for Native Americans. Although the diversity of tribal groups represented may have seemed like a triumph to the missionaries, this artificial grouping of different tribal members would eventually create difficulties for the mission (Hughes 1914).

After several years, the need for a larger, more permanent church became evident. The original timber structures of the mission were soon replaced with plastered adobe buildings that had stone foundations and pine roof beams.[5] The new church was located less than two miles from the Rio Grande on the slope of a rocky wood (Hughes 1914:307–308; Lindemuth 2011). The first foundation stone was laid on April 2, 1662, and the new mission building was probably completed in 1668 (**Figure 3-1**).

[5] The Misión de Guadalupe was restored in 1971 (Metz 1993).

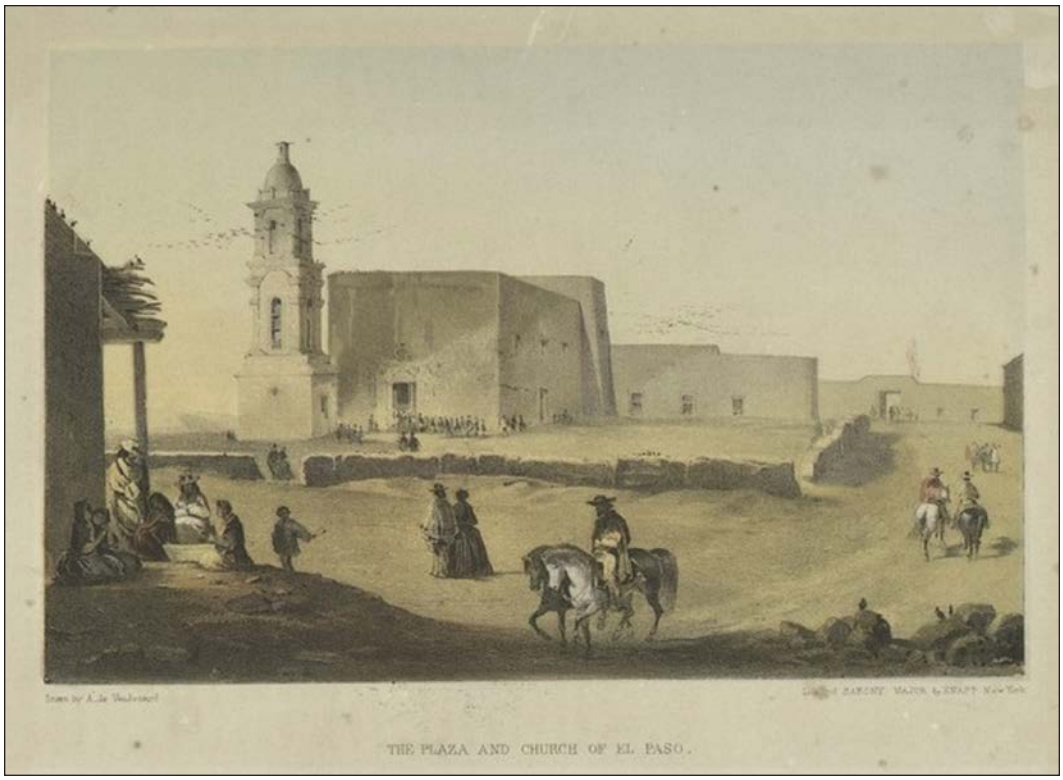

Figure 3-1. An 1852 painting by A. deVaudricourt of the Misión de Guadalupe in El Paso del Norte (source: Wikimedia Commons).

Ultimately, the support provided by the church and state in Nuevo México to the Misión de Guadalupe proved prescient. By the time the Pueblo revolt near Santa Fe occurred in 1680, the mission was thriving and self-supporting. It was therefore able to absorb the flood of more than two thousand Spanish and christianized Native American refugees who fled southward from Santa Fe after the pueblo revolt. In need of a permanent place to camp, they temporarily halted north of the Rio Grande to evaluate potential settlements. The south side of the Rio Grande at El Paso del Norte and its environs was appealing because it had pasturage for their animals, wood sources, and places where people could build temporary huts. Although some of the refugees went to El Paso del Norte, the Spanish government settled most of them in new pueblos strung out over five miles along the Rio Grande south of El Paso del Norte. Spanish refugees mostly settled in San Lorenzo, Tiguas people and some religious officials settled in Ysleta del Sur (originally Santísimo Sacramento), several religious officials settled in San Pedro de Alcántara, and Tantos and Jemez Native Americans settled in Socorro. The failed effort to reconquer New Mexico in 1681 drew on this population of Spanish and Native American refugees. These settlements were rearranged a few years later to try to improve the separation of Spaniards and Native Americans (Bolton 1908; Hughes 1914; Metz 1989). Later, the fortified Hacienda de Tiburcios was founded sometime between 1730 and 1750; this hacienda eventually became the modern day San Elizario (Metz 1989).

Once the refugee group settled around El Paso del Norte, several leaders in the party identified the need for military fortification of the river ford. In 1680, Fray Francisco

de Ayeta, Francisco de Agramontes, and some of Governor Otermín's military advisors independently recommended establishing a military presence in the area. Governor Otermín swiftly decided how to distribute the refugees and troops, and in 1680 was advocating for the establishment of a presidio in the area with fifty soldiers and an armorer. Otermín's recommendation was followed in 1681 with a formal government recommendation to establish a fort in the area to protect the settlers and prevent hostile Native American tribes from traveling to the interior of Nueva Vizcaya; the orders also noted that the location should be carefully selected to maximize its influence and effectiveness. After a change of governors in 1683, with Don Jironza Pétriz de Cruzate supplanting Otermín (who needed a medical leave), Cruzate took charge of building the presidio. Cruzate chose a site near present-day San Elizario, roughly midway between El Paso del Norte and San Lorenzo. San Elizario eventually became the first seat of El Paso County (Hughes 1914).

The occupants of El Paso del Norte and associated pueblos didn't find the security they had been seeking. The church's authority over converted Native American tribal members was always tenuous. Influenced by the pueblo revolt, spurred on by the Apache, and agitated by the commingling of separate Native American tribes within single settlements, general unrest characterized the entire area. Multiple revolts were planned and thwarted, and a few Native Americans were arrested for plotting rebellions. In general, the documents show that "the Indians of the El Paso district were dissatisfied with Spanish rule and ready to return to their ancient mode of life, and that the Christian Indians were making common cause with the heathen tribes of the neighborhood, including the ever-active Apaches" (Hughes 1914:337–338). The subsequent period through 1684 was one of continued conflict between Native American people and the Spanish government and religious leaders (Hughes 1914).

Throughout this time, the refugees from the pueblo revolt were continually petitioning the governor for permission to move somewhere with more suitable resources since the large number of refugees had overwhelmed the carrying capacity of the area. Government dithering ensued—complicated by conflicting claims to jurisdiction by Nueva Vizcaya and Nuevo México—and no action was taken until 1684. In that year the Spanish governor in El Paso del Norte recognized the need to make the settlement more defensible, and he decided to consolidate the presidio and the settlers around the site of Misión de Guadalupe, the settlement nearest the river ford. The presidio was moved to its location in El Paso del Norte sometime before July 6, 1684 (Hughes 1914).

After more communications with Mexico City, the central Spanish government decided that, rather than allow the settlers to move elsewhere, it would support the permanent occupation of El Paso del Norte because of its strategic location for transportation and its influence with converted Native Americans. By 1685, El Paso del Norte was considered the capital of Nuevo México, and it held that status until the reconquest of Nuevo México in 1692 (Hughes 1914). By 1760, the settlement of El Paso del Norte had over 350 Spanish families (Metz 1993).

Over time, the mix of travelers along the Camino Real changed. Initially the caravans mostly included representatives of the Spanish government and Catholic church. But eventually, the trail became the main conduit for trade within the region and connected the far-flung markets of the Spanish empire. The well-known El Paso brandy and wine were only two of the many articles carried along the route (Merlan et al. 2011:29–30).

3.1.3 Early American Travelers and Mexican Land Development

By the late eighteenth century travelers of all sorts were passing through this cultural landscape. With this increase in traffic came improvements to the river crossing:

> The ford on the Camino Real at El Paso del Norte was later the site of the first wagon road bridge in the American Southwest. This bridge was over 500 feet long and 17 feet wide and consisted of a bed of pine logs supported by eight caissons. The bridge was built in 1798, destroyed by floods, and rebuilt in 1800. The bridge was repaired again in 1805 and 1816. At some point it was again destroyed by floods and never rebuilt (Merlan et al. 2011:79–80).

One adventurer, the American Zebulon Montgomery Pike, traveled through the El Paso area sometime in 1807. He described the bridge and the Acequia Madre that was supplying water to the agricultural fields of El Paso del Norte:

> About two miles above the town of Passo del Norte is a bridge over the river, where the road passes to the west side, at which place is a large canal, which takes out an ample supply of water for the purpose of cultivation, which is here carried on in as great perfection as at any place that I visited in the provinces. There is a wall bordering the canal the whole way on both sides, to protect it from the animals; and when it arrives at the village, it is distributed in such a manner that each person has his fields watered in rotation. At this place were as finely cultivated fields of wheat and other small grain as I ever saw. Numerous vineyards, from which were produced the finest wine ever drank in the county, which was celebrated through all the provinces, and was the only wine used on the table of the commanding general.
>
> They cultivate corn, wheat, rye, barley, rice, tobacco, vines and all the common culinary plants cultivated in the same latitude in the United States. They are, however, a century behind us in the art of cultivation. . . . (Pike [1807] 2003: Appendix to Part III, 8–9).

In 1821, Mexico won political independence from Spain, and El Paso del Norte declared its loyalty to Mexico (Metz 1993). During the next two decades trade between Santa Fe and Chihuahua along the Camino Real increased significantly. Timmons estimated that the volume of trade increased from $22,000 worth of goods in 1822 to $100,000 by 1846 (Timmons 1983). Trade was so active that in 1835 Mexico built a customs house on the west side of the river near Hart's Mill to inspect cargos, seize contraband, and collect duties on merchandise coming from the American side of the river. Goods coming from Mexico included wine, soap, rebozos, fruits, leathers, cigars and sugar (Timmons 1983).

During this period, in 1827, the first land grant in the El Paso, Texas area (on the north side of the river) was given to Juan María Ponce de León. Ponce de León was a wealthy merchant from El Paso del Norte (Metz 1993). He received title to approximately 500 acres, began developing a rancho on the land, and cultivated vineyards and wheat (Lindemuth 2011; Metz 1993). It was de León who opened the first mill in the area, on his property on the south side of the riverbank, which remained in operation through the middle of the nineteenth century (**Figure 3-2**).

Figure 3-2. Photograph of the Ponce de León Mill ca. 1890s (courtesy of Joel Guzman).

In 1836, the Republic of Texas declared independence from Mexico and claimed all territory to the Rio Grande. This boundary, however, was never accepted by Mexico. In 1845, Texas was admitted to the American Union, and this sparked the two year Mexican-American war (1846–1848) which ended when US troops captured Mexico City. With the Treaty of Guadalupe Hidalgo in 1848, Mexico ceded its northern territories to the United States and in Texas the border between nations was fixed at the deepest portion of the Rio Grande. The two countries immediately dispatched a joint survey team, the Emory-Salazar Commission, to map and mark the border from California to the Rio Grande. The easternmost point along the border from California to the Rio Grande was established in 1855 and a stone marker, Boundary Marker 1, was erected at that location at the Pass of the North, a few miles north of El Paso (**Figure 3-3**).

After the war, trade between the US and Mexico along the Camino Real continued to be robust. However, Mexico began imposing protectionist tariffs which severely hindered economic growth on the American side of the border. In fact by 1853 exports of American goods to Mexico fell by half of what they had been in previous years (Timmons 1983).

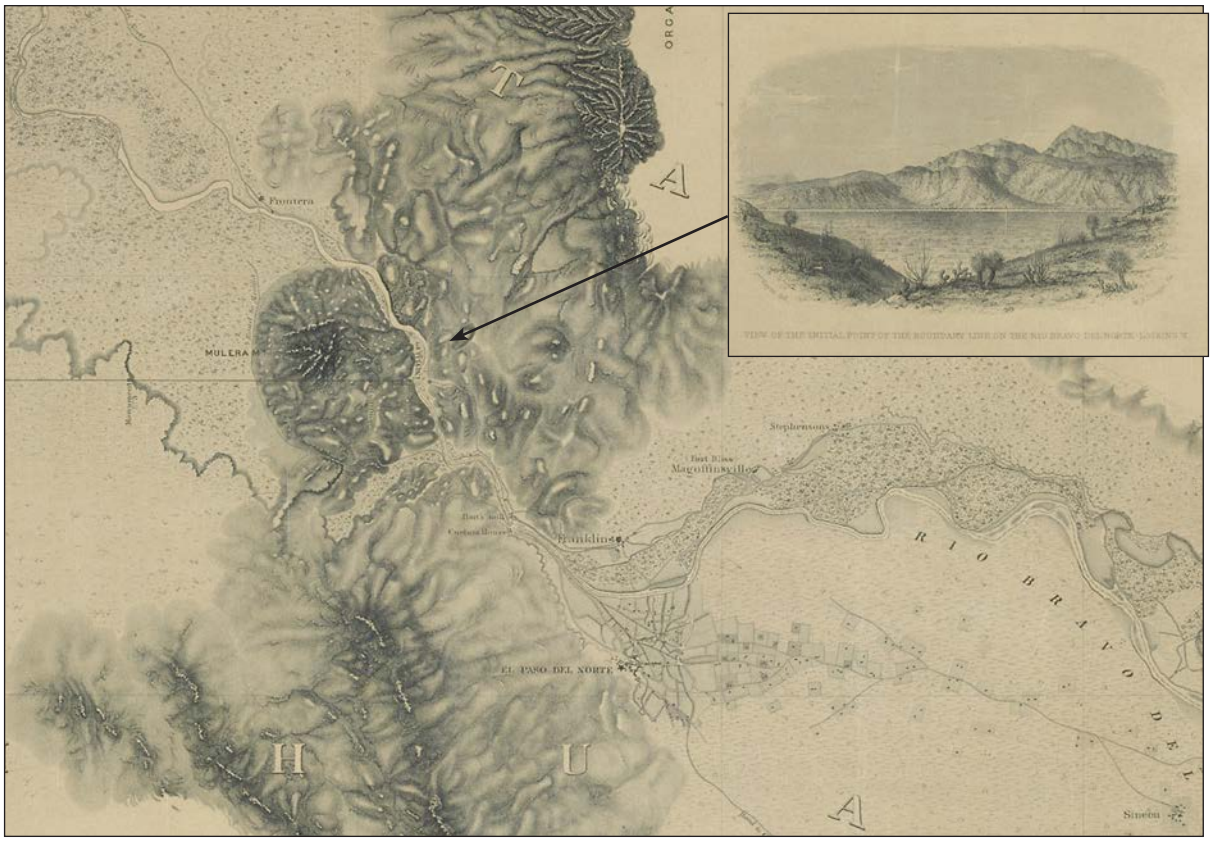

Figure 3-3. The 1853 Emory Survey map shows topography and built environment features such as El Paso del Norte, Hart's Mill, La Frontera, and Magoffinsville. Inset shows view of the Pass at Boundary Marker 1 (source: National Archives and Records online).

One of the first known permanent American settlers in the El Paso area was Frank White, who had arrived in 1848 and built a trading post along the Camino Real called La Frontera a few miles upstream of the Oñate Crossing (see Figure 3-3). He chose his location based on his expectation that north-south trade along the Camino Real would soon resume with the end of the Mexican-American War. However, the increase in trade came from an unexpected source—the vast numbers of people heading to California seeking to make their fortunes in gold. Thus, when the California gold rush began, he was well situated to supply goods and animal teams to those en route to the fabled riches, though the flood of travelers soon outstripped his ability to supply them adequately. In 1849, White was appointed prefect of the lands north and east of the Rio Grande, and he established an American customs house at his ranch to collect duties on goods coming in from Mexico. The US government was slow to formalize this, though, and a customs agent was not officially appointed until 1854 (Timmons 1983, Metz 1989). By that time the customs house had moved closer to the Onate Crossing area and customs were being collected from various locales in Franklin.

3.2 HART'S MILL

El Paso del Norte on the south side of the river remained the main locus of occupation around the ford of the Rio Grande for more than a century and a half—few people were interested in the floodplain on the northeast side of the river. Until the 1840s, it was primarily desert and floodplain. The fabled vineyards and orchards that characterized the south side of the river were still to come for the north bank (Metz 1989, 1993; Strickland 1963). During the Mexican-American War, the Camino Real was used by American troops, and El Paso del Norte area was used as a staging area for troops sent into Chihuahua. Colonel Alexander Doniphan and his troops occupied El Paso del Norte beginning on Christmas Eve of 1846, and this marked the beginning of Mexico's loss of control of the territory east and north of the river.

In 1848, Simeon Hart (b. 1816) arrived in El Paso del Norte with the Missouri Mounted Volunteers; this marked Hart's first experience with the area to which he would later return to live permanently (Strickland 1963). During the Mexican American War, Hart was stationed across from El Paso del Norte before being deployed to Chihuahua, Mexico. He was wounded during the battle of Santa Cruz de Rosales,[6] where he fought with distinction. Hart recuperated at the home of Don Leonardo Siquieros, the owner-operator of a large gristmill in town. There he met and fell in love with the oldest daughter of the family, Jesusita. They married in December 1849 (she was seventeen, he was forty-one) and moved that same month to the American side of the Rio Grande.

While in Santa Cruz de Rosales, Hart must have begun strategizing with his future father-in-law regarding ways to build a milling business in the area of El Paso del Norte, with a particular goal of winning contracts to supply the U.S. Army with flour. Hart wrote to another businessman that he and his father-in-law had spent $25,000 "for machinery, its construction, the growing of the wheat and the purchase of teams, before we can deliver one pound of flour, and which expenditure from the first was made with the view of getting contracts with our Government" (Frazer 1972:221). His maneuvers were successful; within three months of moving to the area where he eventually built his mill, he signed his first contract (in March of 1850) to supply flour to the Army posts at Doña Ana, El Paso, and San Elizario. Although Hart successfully won contracts to supply the Army with flour and other commodities, he was continually dissatisfied with the terms of his contracts and frequently complained about the price per pound, the duration of the contracts, and the number of posts to be supplied—though he was typically paid more than other producers and was often able to expand his existing contracts to supply other posts. Throughout his life, Hart maintained close connections with his father-in-law's mill and drew on flour from Mexico to help him fill his contracts to supply the US Army with flour (Frazer 1972; Strickland 1963).

[6] Santa Cruz de Rosales is now known as Rosales and is about fifty miles southeast of Chihuahua, off the main highway (Frazer 1972:235)

It appears that Hart first squatted on his tract of land along the river; he wasn't issued a patent for the land by the State of Texas until February of 1857 (Strickland 1962b). Hart chose the location for his mill well when he placed it near the falls on the Rio Grande, across from the entrance to El Paso del Norte's Acequia Madre. He was able to supply his mill with water power from an existing Spanish dam located half a mile north of the mill on the Rio Grande. Hart may have used his father-in-law's connections to acquire permission to use water from this dam; that permission may have come with the condition that he contribute to its maintenance and periodic rebuilding, which was regularly needed after floods. This dam had been built roughly 200 years earlier by the early Spanish and Mexican inhabitants of El Paso del Norte. The dam was maintained over the decades by successive inhabitants of El Paso del Norte—an onerous task given the frequent flooding of the Rio Grande. After one of the floods, a joint reconstruction effort was undertaken, and the dam was rebuilt using stone and cement (Crawford et al. 2010; Davis 1938).

A little way downstream from Hart's Mill was the first parcel on the east side of the river occupied by Ponce de León, who operated the only other mill in the area on his property on the south side of the river (White 1923). In 1852, Benjamin Franklin Coons, who was leasing land from the heirs of Ponce de León, became postmaster for the area. He named the mail station "Franklin," after himself. In 1859 the name of the mail station officially changed from Franklin to El Paso (Metz 1993).

Hart sought to establish himself as a leader in the burgeoning community on the north side of the river, and by 1854 he had built a larger mill and his residence on his property. Jesusita Hart was known as a lady of refinement and intelligence (Davis 1938), and the Hart Home was a center of civil and social activities: "Hart hosted parties that sometimes lasted all day and night. . . the mill was also the birthplace of El Paso Pioneer Association, which became El Paso County Historical Society, and the meeting site of El Paso's first Masonic Lodge, No. 130, of which Hart was a charter member" (Crawford et al. 2010:4).

The Hart Home was known as a center of hospitality for travelers with "every luxury and comfort of home" (Davis 1938:213). The size and location of Hart's Mill and home, also known as "El Molino," rapidly made them a useful landmark for travelers (**Figure 3-4**).

The economic significance of Hart's Mill was profound. Even Hart's long-time political enemy, W. W. Mills, called Hart's flour mill "the chief individual industrial enterprise in the valley," and noted that it "ground the entire wheat crop from both sides of the river, and supplied flour to all the people and the military posts" (Mills 1962:6). Hart's Mill could produce up to 100 barrels of flour per day and shipped flour "as far east as San Antonio, south to Rosales, Mexico, and west to Tucson, Arizona" (Carson 2017:36).

Even with his larger mill, Hart continued to draw from his father-in-law's mills in Santa Cruz de Rosales to fulfill his government contracts (Strickland 1963; Timmons 1981). Although the proportion is unknown, it seems that in some years the Santa Cruz mills provided the majority of flour delivered to the army bases (Frazer 1972). "This was particularly true for a time after the flooding Rio Grande swept away his mill dam at

Figure 3-4. Drawing of Hart's Mill from ca. 1854. The building on the left is the mill; the falls can be seen just left of that along the river (courtesy of El Paso Community Foundation).

El Paso in 1856" (Frazer 1972:222). Using his father-in-law's mill to meet the demands of his army contract sometimes created difficulties for Hart after a customs house was established on the American side of the river. Imported flour was supposed to be subjected to customs taxes. But Hart, with the aid of an ally who was the army's chief commissary officer (Colonel John Grayson), was able to get a clause inserted into his 1856 army contract that made his imports from Mexico duty free (Frazer 1972).

In 1856 and 1857, Hart—with crucial assistance from Colonel Grayson—was able to turn his army contracts into a lucrative bonanza. After Grayson signed a special contract for flour from Hart, ostensibly to supply a regiment due to arrive shortly, Hart and Grayson exploited the terms of the contract to create a final price greater than sixteen cents per pound of flour. The maximum amount of flour was delivered under this contract while Hart's original contract, at nine and a half cents per pound, went unfilled (Frazer 1972). Moreover, Hart managed to deliver some of the flour to Fort Bliss under neither of his contracts, and commanded a higher price than that stipulated in his contracts (Bonneville 1858). This led to an investigation by the Secretary of War, led by Colonel Benjamin L. E. Bonneville. Grayson was cleared of any wrongdoing, though the court did find he had been careless and caused the government unnecessary expenses (Bonneville 1858; Frazer 1972).

Although flour was the main commodity supplied by Hart to the Army, he held contracts for other commodities as well. **Table 3-1** presents a sample of known contracts between Hart and the Army. Hart also experimented with operating a mail service between El Paso and Santa Fe and operated a freighting service between El Paso and Albuquerque for a time (Frazer 1972).

Table 3-1. Sample of Known Contracts between Simeon Hart and the Department of the Army.

Date	Item	Price	Quantity	Duration	Supplied To
March 28, 1850	Flour	$.11/lb	Not stated	1 year	Doña Ana, El Paso, and San Elizario
March 1, 1853	Flour	$.10/lb	150,000 lbs	1 year	San Elizario, Santa Bárbara
April 18, 1854	Flour	$.095/lb	160,000 lbs	1 year	Fort Fillmore and post near El Paso
June 1, 1856	Flour	$.125/lb	Not stated	1 year	Camp Lancaster
June 16, 1856	Flour*	$.095/lb	360,000 lbs	1 year	Fort Thone, Fort Fillmore, Fort Bliss
July 23, 1856	Flour	$.125/lb	Not stated	Not stated	Fort Davis
September 16, 1856	Beans	$1.60/bushel†	700 bushels	Not stated	Fort Bliss
July 23, 1856	Flour	$.08†	250,000 lbs	Not stated	Not stated
September 15, 1857	Flour	$.125	Not stated	Not stated	Fort Davis
October 1, 1857	Flour	$.095	360,000 lbs	Not stated	Fort Thorn, Fort Bliss, Fort Fillmore
March 30, 1858	Beans	$3.65/bushel	93 bushels	Not stated	Fort Fillmore
May 15, 1858	Flour Flour Flour	$.095/lb $.095/lb $.125/lb	84,000 lbs 73,8000 lbs 110,000 lbs	Not stated Not stated Not stated	Fort Fillmore Fort Bliss Fort Buchanan
September 15, 1858	Flour	$.125/lb	Not stated	Not stated	Fort Davis
January 1, 1859	Flour	$.11/lb	400,000 lbs	Not stated	Fort Davis
June 28, 1860	Flour	$.13/lb	100,000 lbs	Not stated	Fort Butler
November 3, 1860	Flour Flour Flour	$.185/lb $.16/lb $.205/lb	50,000 lbs 10,000 lbs 75,000 lbs	3 months 3 months 3 months	Fort Craig Fort Fillmore Albuquerque
November 8, 1871	Flour Flour	$.095/lb $.0825/lb	Not stated Not stated	6 months 6 months	Fort Stockton Fort Davis

Source: Timmons 1980.

*Contract notes that contractor may import flour as needed from Mexico to fulfill contract.

†Contract notes that price is for delivery at Santa Cruz, Mexico, and transportation costs are $2.90 per hundred pounds per hundred miles. Also, all export duties will be refunded to Hart.

In 1858, Anson Mills described the location of "Molino" (Hart's Mill):

> Molino has been but recently laid out into lots, but occupying the point at which a railroad must intersect the Rio Grande; and presenting by far the most practicable point for crossing the river within many miles, it bids fair to become a place of much consequence. Franklin, opposite El Paso, is at present occupied by four companies of the 9th infantry, and is almost entirely the property of Mr. James McGoffin, a wealthy and enterprising citizen of El Paso county (Pope 1854:32).

By the time of the 1860 census, Jesusita had given birth to eight children. Six were still living when the census was taken: Leonardo, Antonio, Juan, Carolina, Corina, and Paulina (**Figure 3-5**). Two other daughters had already died; Clara died young and Ignacia died as an infant (Timmons papers 1980).

Figure 3-5. Simeon Hart and his children with superimposed image of Jesusita (from Stickland 1963).

The 1860 census lists the estimated value of Simeon Hart's business enterprises as $250,000, not including his real estate holdings which were valued at $100,000. In fact, his mill was so prominent, the census form listed the location as "Molino" (US Census Bureau 1860a). The Molino area included 49 residents: the Hart family, two millers, two enslaved blacks with their children and grandchildren, and several families of Mexican laborers (Timmons 1981:2). Hart's entry lists 2,000 acres of unimproved property, $1,000 as the cash value of the farm, 5 horses, 140 asses and mules, 12 milk cows, 10 head of cattle, 40 sheep, four swine, $15,000 as the value of the livestock, and two pounds of wool (U.S. Census Bureau 1860b). The population of El Paso at the time of the 1860 census was 428 people (Strickland 1962b).

Hart's fortunes began to change with the Civil War. He was an ardent supporter of the Confederacy and seems to have been the only slaveholder in the area prior to the war (Metz 1989). In 1861, El Paso voted for secession with only two people voting to remain in the Union (Metz 1993). Hart was one of two secessionists appointed as commissioners of Texas; they accepted the surrender of Fort Bliss and provided supplies to the Confederate army. Hart seems to have taken a broad interpretation of his powers; he sent the acting sheriff after a Unionist foe, W. W. Mills, who became his bitter enemy (Strickland 1963). [7]

[7] Mills held a grudge against Hart for sending the sheriff to arrest Mills in 1861 for spying on behalf of the Union. Mills was put in chains and taken in custody to Fort Bliss but escaped a month later. In litigation against Hart, Mills initially obtained a judgment in his favor for $50,000 for false arrest, but after many years of legal wrangling, the judgment was voided and the case closed (Strickland 1962a). As part of this

Eventually, the tide of war turned, and El Paso was occupied by Union forces in 1862. Hart was forced to flee. He moved 50,000 pounds of flour across the Rio Grande, and he and his family remained in San Antonio until Reconstruction (Crawford et al. 2010). In his absence, a Union General invited the Mexican patriot President Benito Juárez to live in Simeon Hart's house, which had been sequestered by the US government, though it seems Juárez declined the offer (Metz 1993; Strickland 1962b). Union troops were billeted at Hart's Mill since Fort Bliss had fallen into disrepair (Strickland 1962d). Upon Hart's pardon by President Andrew Johnson in 1865 and his return to El Paso, Hart had to litigate for years to recover his property from W. W. Mills (Strickland 1963). In order to publicize his side of the fight with Mills (and other El Paso inhabitants), Simeon Hart started the *El Paso Sentinel* with Sherman C. Slade and was the editor and proprietor of the newspaper until his death (Mills 1962; Timmons 2018b). The newspaper ceased publishing after Hart passed away (Cioc-Ortega 2013).

The litigation with Mills exhausted Hart, and even though he ultimately prevailed in court, he died on January 21, 1874, before he was able to spend much time enjoying his victory. Hart died with an estate considerably reduced (though still substantial) from what it had been at its peak in 1861 (Frazer 1972; Strickland 1963; Timmons Papers 1980:census data). Jesusita had preceded him in death by a year (Timmons 1981). A tomb for Hart was constructed on the mill property. His remains (or someone's) were later exhumed to permit construction of the main street viaduct connecting Paisano Drive to downtown El Paso (El Paso Times 1936; Lindemuth 2011).

Hart's oldest son, Juan, took over management of the estate and lived in the Hart home on the property. He was one of the founders of the *El Paso Times* and was prominent and influential in the community until his death in 1918 (Timmons 1981). Juan Hart managed the mill, and for a time the business continued to prosper by supplying flour to Fort Bliss.

Once the railroads arrived in 1881,[8] change came rapidly. The economics of water-powered mills were altered by the increased competition with steam-powered mills. Other infrastructure improvements also came to El Paso—the Southern Pacific Railroad built a railroad bridge across the Rio Grande, and the El Paso Water Company was awarded a franchise to build a canal (Metz 1993). By 1883, five railroads connected to El Paso, and the town had changed dramatically from Simeon Hart's heyday. It was no longer an isolated frontier outpost. The population had grown from a few hundred to several thousand in a multicultural mix that included Anglos, Native Americans, Mexicans, and Chinese, many of whom traveled to El Paso del Norte to work (see **Table 3-2** for population data). The town had many bars, few churches, and a few newspapers (including a couple in Spanish). The town had also gained a bank, a volunteer fire department, and a police force that was reasonably well behaved (Metz 1989).

conflict, Mills claimed he purchased Hart's property at a sheriff's sale as part of the judgment for false imprisonment (Mills 1962:135).

[8] Even after the railroad arrived in El Paso, the southern portion of the Camino Real de Tierra Adentro continued to be significant as the route by which trade goods reached the interior of Mexico (Long Distance Trails Group 2004).

3.3 The American Military Presence and Fort Bliss

As early as 1846, the American military presence along the border and the Camino Real at El Paso del Norte helped forge a town from a few scattered ranches. El Paso's early boosters—Benjamin Franklin Coons, James Magoffin, T. Frank White, Simeon Hart, Juan Maria Ponce de León and others—actively sought and benefited from the economic and physical security the army brought to this crossroads region (Timmons 1983).

Table 3-2. Population Estimates for El Paso del Norte/Ciudad Juárez, Chihuahua, Mexico; El Paso, Texas; and El Paso County.

Year	El Paso del Norte/ Ciudad Juárez	El Paso, Texas	El Paso County
1850	4,000	200	
Mid-1850s	6,000		
1860			428
1880		736	3,845
1890		10,338	15,678
1900	8,218	15,906	24,886
1910	10621	39,279	52,599
1920	19,457	77,560	101,877
1930	39,669	102,421	131,597
1940	48,881	96,810	131,067
1950	122,566	130,485	194,968
1960	252,119	276,687	314,070
1970	424,135	322,261	359,291
1980	567,365	425,259	479,899
1990	789,522	515,342	591,610
2000	1,313,338	566,504	679,622
2010	1,332,131	648,054	800,647

Sources: Center for Interdisciplinary Health Research and Evaluation 2018; Davis 1938; Metz 1993; Peña and Fuentes 2007; U.S. Census Bureau 2018.

Fort Bliss in the El Paso area had several different locations during its early history. Depending on how the various locations are counted, the relevant one for this report was its fourth location. The first iteration of Fort Bliss was established in 1849 in what is now downtown El Paso.[9] After a hiatus during which no troops were stationed in the area, the second iteration was built at Magoffinsville,[10] and it was rebuilt once in this location. While in this location, the installation was officially named Fort Bliss.[11] The third version was built in Concordia on Stephenson's ranch. This was a terrible location; water had to be brought in via wagons

[9] While the fort was at this location, camels were brought to El Paso by Lieutenant Edward Fitzgerald Beale as part of a military experiment to evaluate their use for military reconnaissance and other tasks; the proposal was approved by Congress in 1855. The experiment was discontinued, though escaped camels populated the region and were seen as late as 1902 (Merlan et al. 2011:38–39).

[10] A hacienda and ranch built by James Wiley Magoffin, one of the earliest settlers in the area; he arrived in 1849.

[11] During this period, Mexico experienced internal conflict between Liberals, led by Benito Juárez, and Conservatives, led by Félix Zuloaga. The U.S. chose to recognize the government of Juárez in 1859. During a portion of this conflict, Juárez led the Liberal forces from a base in El Paso del Norte. Although the Liberal forces were ascendant, economic insecurity and growth in the country's foreign debt forced Juárez's government to suspend payments on Mexican debt. This created an opportunity for France, Spain, and Great Britain to intervene in Mexico and attempt to capitalize on the internal Mexican conflict. However, France's ambitions alienated its partners, and although the U.S. stayed neutral on the sidelines for the first few years (while still embroiled in its own Civil War), eventually it began offering covert support to Juárez's government. Strategic miscalculations by France combined with Liberal military victories in Mexico and a post-Civil War U.S. that was once again effective in foreign affairs to create a Liberal victory. Eventually, in 1888, El Paso del Norte changed its name to Ciudad Juárez in honor of the country's heroic leader (Metz 1989; Office of the Historian 2018).

and the area became a quagmire when wet. After the Concordia location, troops were temporarily quartered in rented facilities around Pioneer Plaza; although this location was temporary, it was used for two years before Fort Bliss officially closed in 1877 (Bartlema et al. 1997; Metz 1988). Skirmishes with Native Americans along the border caused the US military to again re-authorize a post in El Paso. However, the old Camp Concordia location was unsuitable, so the military searched for a new location. Finally, in September of 1879, the Army purchased 135 acres of land from Juan Hart (who had inherited the property upon the death of his father in 1874). In the rush to complete the purchase, an error was made by a surveyor. The final survey unintentionally included a portion of the land on which the Hart homestead was located, and the survey line ran through the home. Since neither the military nor the Hart heirs had intended this, the matter was rectified with an updated survey that was ratified by an act of Congress in 1882 (Ivey 1942).

Although the land was purchased in 1879, the tight construction budget meant that the army used soldiers to build the fort. The Old Fort Bliss buildings at Hart's Mill were constructed of masonry, adobe, and wood (**Figure 3-6**). Most of the construction seems to have occurred in 1880, although it went slowly and was still incomplete in 1881 (Bartlema et al. 1997; National Park Service 1972; Strickland 1962d). The location was about three miles west of downtown El Paso and included 3,000 feet along the Rio Grande (Metz 2018). At that time, the fort's only neighboring buildings were Hart's Mill and the Hart Home (Ivey 1942).

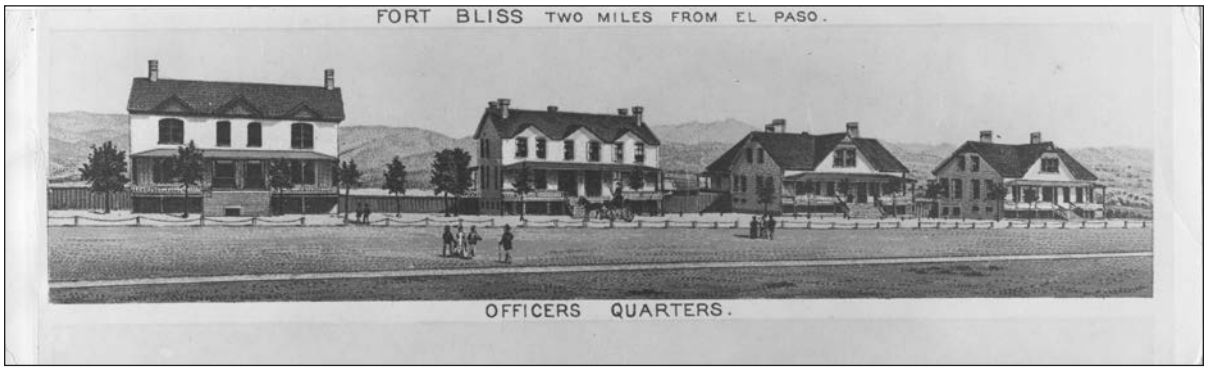

Figure 3-6. ca. 1887 View of the completed Officer's Quarters of Ft Bliss at Harts Mill (courtesy of Non-Commission Officer's Museum, Fort Bliss).

From the Hart's Mill location of Fort Bliss, troops were strategically deployed to some of the last campaigns against Native Americans in the Southwest. This included the Victorio uprising in 1879 and the fight against Geronimo in 1885 and 1886 (National Park Service 1972). Other military units in the region stopped at Fort Bliss en route to or from various battles.

Located so close to the river, Hart's property had several disadvantages: "Mosquitos were thick, the silt never settled out of the water, and many soldiers had dysentery" (Bartlema et al. 1997:3). The negative aspects of the site were compounded when the Atchison, Topeka and Santa Fe Railroad cut directly through the fort's parade grounds in 1881, diminishing

the space for drills and creating a severe safety hazard (Jamieson 1993; Strickland 1962d). Additionally, the Southern Pacific Railroad came through from California to El Paso in May of 1881 and traversed the east side of the post, behind the barracks for the enlisted men (Bartlema et al. 1997; **Figure 3-7**). Some of the inconvenience of the railroad tracks was ameliorated by the fact that the railroads loaded and unloaded passengers and freight directly within the fort itself (Metz 1988). Squeezed between the river, the hills, and the railroad, space at Fort Bliss was tight; housing the four infantry companies exhausted the available space and left no room for depots or warehouses. Fire was a hazard; in May of 1887, a conflagration killed 28 horses and destroyed portions of the post (Jamieson 1993; Metz 1988).

By the early 1880s, American military leaders were exploring the potential for a permanent military post in or near El Paso. The town's border location; access to Texas, New Mexico, and Arizona; and the presence of railroads were key factors influencing the selection of El Paso over alternative locations such as Fort Selden. Another factor was the apparent availability of ample water and land. Local El Paso boosters provided support and pressure to select a permanent site for Fort Bliss in El Paso (Jamieson 1993). The decision to create a permanent fort necessitated Bliss' expansion, prompting the government to authorize funds in 1890 for the purchase of land in northeastern El Paso for a new Fort Bliss—the fort couldn't expand at the Hart's Mill location, constricted as it was between the river and the hills.

The Hart's Mill location of the fort was used until October of 1893, though disposal of the land, gear, and buildings in a series of sales took several years, possibly until 1901 (Bartlema et al. 1997; Ivey 1942; Strickland 1962b, 1962d).

3.4 The End of El Camino Real de Tierra Adentro: The Changing Landscape of Oñate Crossing

Starting with the earliest settlement of El Paso, Texas, the area around the ford of the river had been characterized by the easy flow of goods, people, and commerce in both directions across the Rio Grande. The patterns of trade traced their original pathways back to the Camino Real, and these commercial connections continued during the Mexican Revolution. Thus, the start of the Mexican Revolution in 1910 had a definite influence on the Oñate Crossing. By 1911, revolutionaries were gathering in the Sheldon Hotel in downtown El Paso, and many banks and businesses in Juárez transferred money and assets to El Paso where they had access to the railroads and thus to markets throughout the west. A large portion of the population of Juárez moved to El Paso to escape the revolutionaries, the potential violence, and the potential to be pressed into service by whichever army saw them first (Metz 1989, 1993). The area around El Paso, with its sparsely populated and rugged topography, was used as a place of refuge and a staging area by Francisco Madero, Pancho Villa, and other Mexican revolutionaries (Lindemuth 2011). Francisco Madero's revolutionary headquarters was an unassuming adobe house located just across the river from Smeltertown, just inside the Mexican border, in the shadow of Boundary Marker 1.

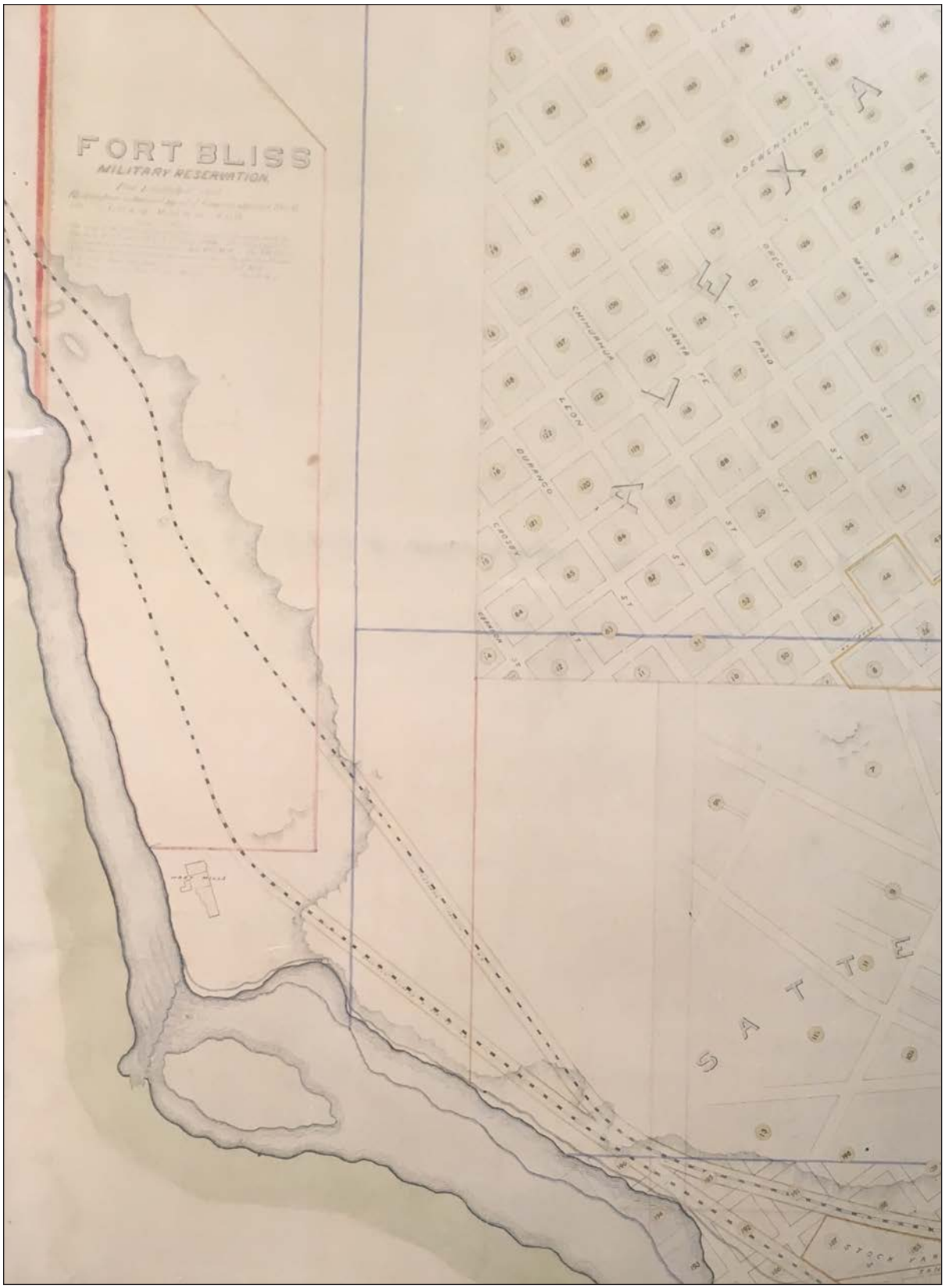

Figure 3-7. Detail from 1889 map of the City of El Paso showing the Fort Bliss Reservation and Hart's Mill (courtesy of Texas General Land Office).

The revolutionary rumblings caused the US military to increase the number of troops stationed at Fort Bliss on Lanoria Mesa; eventually 50,000 troops were based there. Fort Bliss, which was supplied by the railroads, served as a supply base when General John J. Pershing pursued Francisco (Pancho) Villa into Mexico after Villa attacked Columbus, New Mexico in 1916 (Metz 2018).

In 1921, the First Cavalry Division at Fort Bliss was activated, and the Eighty-Second Field Artillery Battalion arrived the same year. Over the next few decades, the fort grew to more than one million acres, most of which is in New Mexico (Metz 2018).

The arrival of the railroads in El Paso in the early 1880s, the expansion of Fort Bliss at Lanoria Mesa, and the robust diversification to the economy that these changes brought caused Hart's Mill to lose its competitiveness. After 1881, Simeon Hart's Mill and other business ventures no longer dominated local industry. Hart's Mill ceased operation in 1895 and soon after it began to fall into decay (Timmons 1981). By 1924, portions of the mill's roof had caved in, plaster was falling off, and it was generally unsafe to be inside the building (El Paso Herald 1924). The decrepit mill was still extant as of 1935, though it had been largely forgotten and some El Paso residents thought it had already been razed (El Paso Times 1935a). Eventually, the elements took their toll on Hart's Mill, and by 1936 the mill was a ruin with only three partial walls still standing (**Figure 3-8**).

Juan Hart gave one of the millstones to the Bremme ranch (which was connected to the ranch of his brother-in-law, General Thomas F. Davis) in the Sacramento Mountains, near Cloudcroft, where it functioned as a pulley to generate electric power (El Paso Times 1935b). By 1940, only a few foundation stones from the mill building remained on the lot; the rest of the structure had disappeared, and locals used the lot for softball (El Paso Times 1940).

Several of Simeon Hart's children continued to live in the Hart Home until it was rented out in 1934 (El Paso Times 1936). In 1934, the Hart homestead was turned into a hospital and women's dormitory for the El Paso division of the Texas Transient Bureau. The Hart Home served as the hospital with nearby small houses used for women's apartments. Other areas on the homestead were to be used for vegetable cultivation (El Paso Herald-Post 1934).

After its use as a hospital, the Hart home transitioned back into use as a residence when it was occupied by the J. J. Flores family for a while. Subsequently, Mrs. Virginia Mendez and her daughter and son-in-law (Mr. and Mrs. Alfonso Lopez) bought the property in 1940. They turned the house into a barroom, which eventually became the restaurant known as "La Hacienda Café," which was one of the most popular restaurants in El Paso; it ceased operation years ago (El Paso Times 1940; Timmons 1981). Currently, the Hart Home is listed as a Registered Texas Historic Landmark by the Texas Historical Commission, Atlas Number 5141004699 (Texas Historical Commission 2018b).

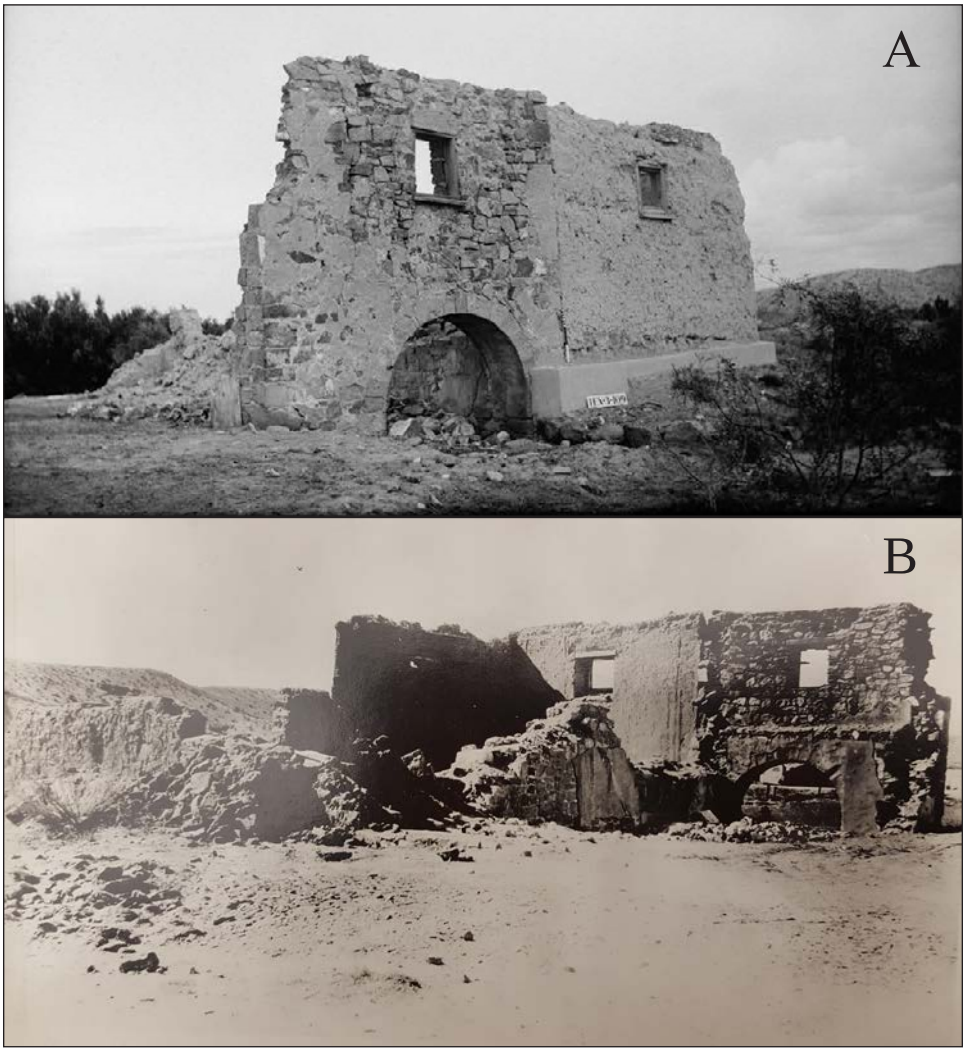

Figure 3-8. Two views of Hart's Mill in Ruins A) looking roughly southwest and B) looking roughly northwest (source: Library of Congress online).

3.4.1 Industry Comes to El Paso

Rail travel replaced the Camino Real as the vital lifeline connecting the region to other parts of the US and Mexico, and this completely transformed the socio-economic and physical landscape of El Paso. The railroads opened up the vast mineral and timber resources of the American Southwest and Northern Mexico to exploitation and use. Copper, coal, lead, zinc, silver, gold, and other ore deposits had been mapped and known for years. The problem faced by mining companies seeking to profit from them was transportation from this remote corner of North America to major markets elsewhere. Railroads solved that problem, and soon El Paso, which was centrally located within this mining region, became a boom town. With the mining boom, another industry came to the Hart's Mill and the Old Fort Bliss area, radically changing its character: smelting.

The first smelter opened in 1887 less than a mile upstream of Hart's Mill. This was the first iteration of what would eventually become the American Smelting and Refining Company (ASARCO). It was first established by Robert Safford Towne as the Towne Smelter (Perales 2008), located in the mountain pass along the river from which it drew its water supply, and in close proximity to multiple railroad lines. The enterprise had financial backing from the Kansas City Smelter and Refining Company (KSARCO) (Smith and Reed 2012). At the time, it was a major employer in the area, behind only Fort Bliss and the railroad, and nobody foresaw the environmental consequences that were to come (Metz 1993). In the smelter's earliest years it drew most of its raw materials from mines in Mexico, continuing the trade patterns originally established with the Camino Real de Tierra Adentro.

In 1899, El Paso (Towne) Smelter merged with other corporations to become ASARCO (**Figure 3-9**). At the time, it had mostly been processing gold and silver ores from Mexico. Two years later, in 1901, ASARCO modified its plant to process low-grade copper ores (Perales 2008; Smith and Reed 2012).

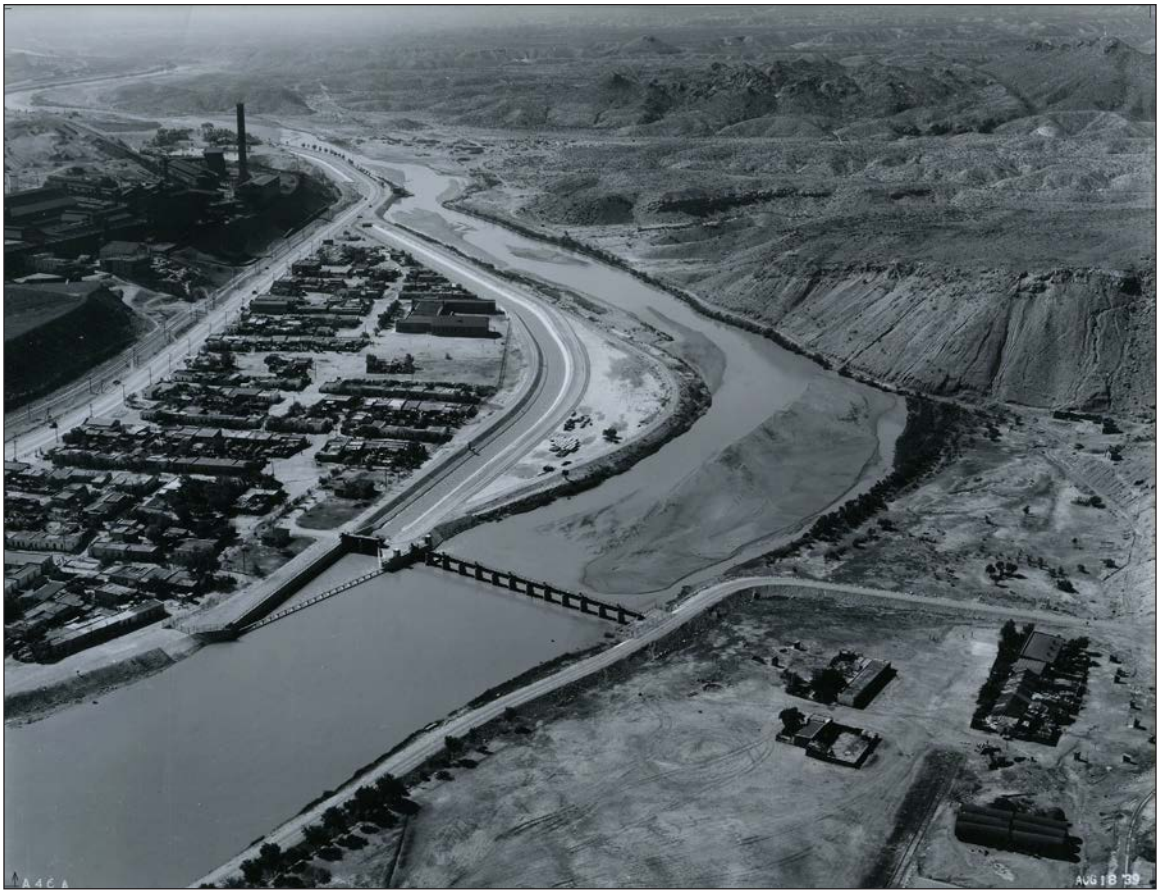

Figure 3-9. 1938 Bird's eye view of the ASARCO plant and Smeltertown looking downstream. Paisano Drive follows the route of the Camino Real on the left side of the photograph (courtesy of IBWC).

As the smelting business of ASARCO grew, neighborhoods sprang up on the west edge of El Paso around the Oñate Crossing to house its employees. This included the neighborhoods of Smeltertown, La Calavera, and Buena Vista. The neighborhood of El Bajo seems to have been north-northwest of the Oñate Crossing cultural landscape:

> Anglo managers and their families lived on company property in Upper Smeltertown, in an area called "Smelter Terrace," while ethnic Mexican workers and their families resided in racially segregated company-owned tenements in a separate "Smelter Hill" or "El Alto." Ethnic Mexican workers also built their homes in Lower Smeltertown or "El Bajo," nestled between the County Road (later renamed Paisano Drive or US Highway 85) and the Rio Grande (Perales 2008).

As the enterprise prospered, the landscape and the citizens of El Paso suffered the ill effects of its toxic emissions, and the residents of Smeltertown bore the brunt of that suffering. ASARCO's public profile changed from that of a lauded and influential employer in El Paso to defendant in a lawsuit brought by the City of El Paso and the State of Texas accusing ASARCO of violating the 1967 Air Safety Code. This was followed by various citations for pollution violations, one of the most alarming of which was the finding that children in the Smeltertown neighborhood had potentially life-threatening levels of lead in their blood. These challenges, along with external market fluctuations, led to financial setbacks for the firm, and the smelter was sold to Grupo México in 1999 (Smith and Reed 2012). The plant has since been dismantled and remediated. However, the topography of natural mountain foothills it originally occupied has been completely transformed.

Meanwhile, the closing of Hart's Mill in 1895 did not mark the end of the grain industry in El Paso. However, it marked a turning point in scale. Situated as it was along two major rail lines, on what was then the outskirts of downtown El Paso, the Old Fort Bliss property was ideally suited to industrial development (**Figure 3-10**). Encouraged by local El Paso business leaders, the Globe Grain and Milling Company, based in California and controlled by W. E. Keller, began building the Globe Mills structures for El Paso Grain & Milling in 1909 on the recently vacated site of Old Fort Bliss. By 1910, the structures were completed. This was Globe's first flour mill outside California. Keller controlled the various Globe industries as a conglomeration of separate companies and often looked for opportunities to serve multiple markets in an area. Because of this strategy, in conjunction with the construction of the Globe Flour Mill, Keller simultaneously built the Globe Ice and Cold Storage Company on a spot adjacent to the mill. Construction of the mill cost $135,000, and construction of the ice facility cost $115,000 (El Paso County Historical Commission 2016).

Globe used the rail lines effectively for both enterprises (flour and ice). With the help of the railroads, Globe Mills produced and shipped flour and ice on much larger scale than Simeon Hart ever managed, bringing in grain from around the country, and shipping out flour just as widely. However, even though Globe Flour was nationally distributed, many El Paso area consumers considered it local, and were loyal to the brand. Globe also established contracts with the railroads to restock the ice on their refrigerated train cars (Smith and Reed 2012).

Figure 3-10. 1954 Bird's eye view of the Globe Mills complex at Old Fort Bliss, facing south. The Officer's Quarters and the Hart Home can be seen on the right side of the photograph (courtesy of TxDOT).

By 1927, other industries had joined Globe in developing the former Fort Bliss property—the Western Cotton Oil Company opened a cottonseed oil mill adjacent to the Globe complex, and the Magnolia Airco Gas Products company had turned the footprint of the old hospital building into an acetylene plant.[12] The formerly remote and tranquil site of Old Fort Bliss soon became an island of industry belching smoke, fumes, noise, and pollution. Globe Mills was purchased by Pillsbury in the 1940s. The property ceased to function as an active flour mill sometime in the 1960s or 1970s.

As El Paso expanded, and highways replaced railroads as the primary mode of transportation and shipping, the industrial complex became marooned between the rapidly expanding Paisano Drive and Interstate (IH) 10 built in 1965. The railroads, which had previously been such an asset, soon combined with highways to hem in the property and make access more difficult. The location made it challenging to repurpose the buildings effectively, and they began falling into disrepair. In 2016, TxDOT purchased the property from the most recent owners, the Rescue Mission, as part of a project to build the Loop 375 extension project, the Border West Expressway (El Paso Times 2016).

[12] It is not certain whether the hospital building itself was repurposed for the acetylene plant or whether the new plant building simply matched the hospital building footprint. Sanborn Fire Insurance maps depict the plant in the exact location and shape of the former hospital building. Sanborns show it as a one-story building, whereas the Fort Bliss hospital was a two-story building.

3.4.2 Channelization and Water Control (1897 to Present)

Prior to the the twentieth century, the Rio Grande was an eminent force for the people who lived near it. Its banks were low and muddy making fording it with goods and supplies a challenge. It was prone to frequent torrential floods that destroyed fields, bridges, dams, and settlements. And it frequently changed courses, making it difficult to maintain an international boundary.

Controlling the river in the El Paso area has been a joint U.S.-Mexico endeavor since before the international boundary was fixed. Prior to the arrival of Simeon Hart, the Rio Grande was dammed and canalized for agricultural irrigation by inhabitants of El Paso del Norte. Simeon Hart was allowed to divert water from this dam to power his mill, which made his entire enterprise possible. The periodic destructive floods of the Rio Grande necessitated regular reconstruction of the dam, and general maintenance was no easy task (**Figure 3-11**).

Driven in large part by the arrival of the railroads, demands for domestic, industrial, and agricultural water increased in conjunction with rapid population growth on both sides of the river. The strains on the water supply were exacerbated by occasional years of drought, which caused great hardships for the farmers. A more efficient water allocation and distribution system was needed, especially to reach farmers in the lower part of El Paso Valley. However, any resolution to such needs was immensely difficult because the Rio Grande was the fundamental source of water for the US and Mexico and the line of demarcation between the two countries. Conflicts over water rights were exacerbated by conflicts over the international boundary. Negotiating any compromise was bound to be an enormous challenge (Metz 1989).

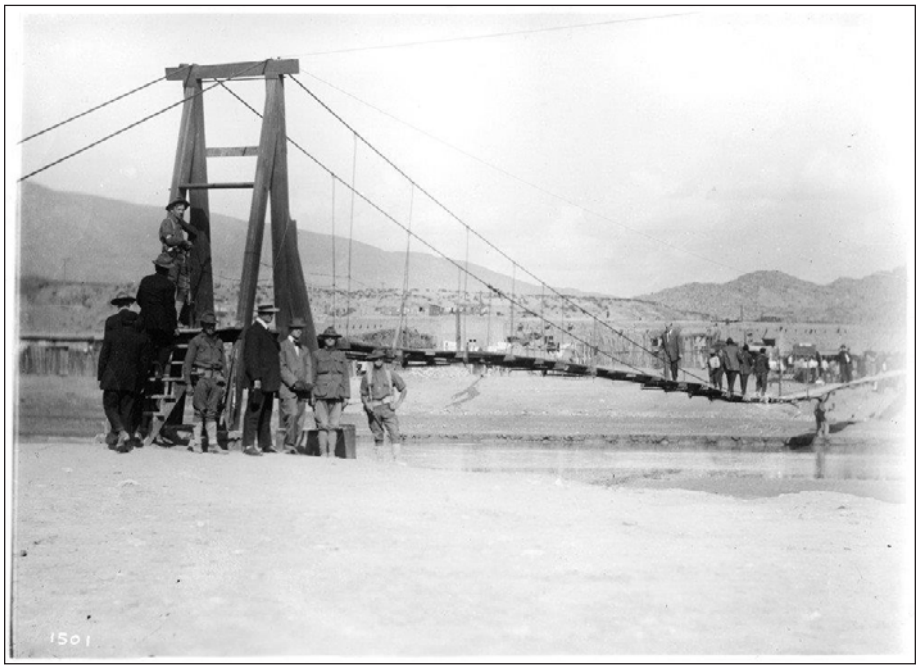

Figure 3-11. A footbridge over the Rio Grande in El Paso at the end of the nineteenth century (courtesy of IBWC).

By 1888, continual changes in the channel of the Rio Grande had become increasingly troublesome. After a great deal of conflict, the US and Mexico jointly established the International Boundary Commission (IBC) on March 1, 1889. The commission was supposed to be temporary and would have jurisdiction over only water rights issues, not the international boundary; however, the commission's charter was extended indefinitely in 1900 and it is considered the direct predecessor of the International Boundary and Water Commission (IBWC; International Boundary & Water Commission 2018) and its Mexican counterpart, the Comisión Internacional de Límites y Aguas (CILA).

Formation of the IBC led to the formation of El Paso Irrigation Company in 1888 or 1889, which marked the beginning of formal US efforts to manage distribution of Rio Grande water. El Paso Irrigation Company was tasked with constructing the Franklin Canal, and it planned to build a wing dam about 200 yards south of Hart's Dam. By September of 1889, El Paso Irrigation Company had acquired right-of-way for the Franklin Canal (Metz 1993).

Construction of the first version of the Franklin Canal began in 1889 and continued through 1891. The head of the canal was near Hart's Mill (Metz 1989). An earthen canal, it was not directly associated with a dam, which meant there was little control over the quantity of water flowing into the canal. Nevertheless, it proved more successful for irrigation on the American side than previous attempts, though water management still proved challenging. In fact, it successfully diverted enough water that it generated protests from Mexico when its Acequia Madre lacked its traditional volume of water (Miller 1991). The need for greater control of the river water was made painfully apparent by the floods of 1897. In that event, dikes crumbled, adobe houses melted, and over 200 families took refuge at Old Fort Bliss at Hart's Mill. The disaster was amplified by a raging dust storm following it (Metz 1993).

The water allocation and control issues created by the Franklin Canal and seasonal variations in the river made it clear that a larger-scale solution was needed—clearly, a dam was needed to control this unpredictable river and ensure water rights were met. New Mexico and Texas were squabbling over where a dam should be built along the Rio Grande when the federal government finally stepped in with the National Reclamation Act of 1902. The Interior Department was given responsibility for implementing the act, and it created the Bureau of Reclamation to administer that responsibility. This new federal agency approached the New Mexico-Texas water conflict with a fresh eye and determined that the best place for the dam was in New Mexico, at Elephant Butte (Metz 1989). The Bureau of Reclamation held the Irrigation Congress in El Paso. Meeting attendees supported the construction of Elephant Butte dam and an equal distribution of Rio Grande water to the U.S. and Mexico (Metz 1993). After high-level negotiations, the Convention of March 1, 1906 between the U.S. and Mexico established an equitable distribution of Rio Grande water between the two countries and gave the IBC authority to meet the jointly agreed upon schedule of allotments. With the treaty came increased

powers the IBC could use to meet its obligations. The IBC used these powers to build a series of diversion dams and canals along the Rio Grande (Metz 1993; Miller 1991).

The IBC built the International Diversion Dam in 1907 to divert water from the Rio Grande into the Franklin Canal and the Acequia Madre (**Figure 3-12**), but this, too, proved unsatisfactory in allocating water to both sides of the border. Between 1914 and in 1916, a major upgrade of the Franklin Canal was completed when a concrete lining was added to several sections of the canal and numerous bridges were built (Miller 1991). With the construction of Elephant Butte dam in New Mexico, which tamed some of the Rio Grande's floods, the river's silt loads increased, and this exacerbated its tendency to meander and continually revise the international boundary. As a result, in 1933, the Rio Grande Rectification Treaty was signed. Its goal was to straighten and tame the Rio Grande to create an unchangeable, agreed-upon border between the U.S. and Mexico and allocate water according to existing treaties.

Figure 3-12. 1934 Photograph of the 1907 International Dam at Hart's Mill (courtesy of IBWC).

This system was expanded in 1938 when the American Diversion Dam and American Canal were built to direct Rio Grande water to the US side of the border, in accordance with the treaty of 1906. The American Canal was built on the east bank of the river beginning upstream from the Hart Home, near Smeltertown, and extending to the Franklin Canal. The construction of the American canal required right-of-way from the Old Fort Bliss and Hart's Mill properties, further transforming the former landscape along the Camino Real.

The new water infrastructure placed the Americans in control of the water allotment to Mexico, in contrast to the prior situation where Mexico diverted their share and then shunted the rest into the Franklin Canal. During that state of affairs, Mexico was often accused of taking more than its fair share of the water (Metz 1989). The system was further modernized in 1940 with a new International Diversion Dam, and since then, the dam has been used only for diverting water to the Mexican side of the border. In 1997, the section of the Franklin Canal from near the Hart Home to the Leon Street Wasteway was completely reconstructed to be a closed underground system, including the headgate near the Hart Home (Smith and Reed 2012).

The effect of all of these improvements has been a major degradation of the historic cultural landscape at the Oñate Crossing. The ford once used by thousands of travelers to cross the Rio Grande is hemmed in by modern infrastructure—fences, roads, railroads, and irrigation structures. The headgates and bridges spanning the canals near the Hart Home are faint echoes of what was once a busy crossing. And although the border crossing between El Paso and Ciudad Juárez remains one of the busiest in the US, its character and location have completely changed from its pre-modern time (**Figure 3-13**).

Figure 3-13. A 2017 Bird's Eye View of the Oñate Crossing, Hart's Mill and Old Fort Bliss area, looking northeast (Courtesy of Brian Kanof). A) International Dam (1941), B) American Canal (1938), C) Hart Home (ca. 1856), D) Officer's Quarters (ca. 1880), E) Guardhouse (ca. 1880), F) Franklin Canal (1889), G) Former Globe Mills and Western Cotton Oil Company buildings.

Chapter 4
The Built Environment of the Oñate Crossing

4.1 Cultural Traditions and Boundaries

The current landscape of the Oñate Crossing barely resembles its historical antecedents. Whereas travelers of the nineteenth century and earlier described a dispersed agricultural settlement strung out along the banks of the Rio Grande, today the Crossing lies at the heart of two expanding cities: El Paso and Ciudad Juárez. Gone are the tree-shaded banks, fruit orchards, the picturesque vineyards, and golden grain fields that made the area seem like a garden of Eden to early travelers. Instead, the predominant characteristics of the El Paso Valley are concrete, highways, and a 16-foot tall border wall, all of which not only block physical circulation from one side of the river to the other, but also severely impair visual connectivity among the resources that make up the Oñate Crossing landscape. Even the sounds of the trail are different. Whereas once travelers along the Camino Real at El Paso del Norte might have heard crowing roosters, the river gurgling over the falls, the sound of cottonwood leaves rustling the breeze, the rhythmic sounds of a turning water wheel, or carriage wheels running over hard-packed earth, today those sounds have given way to the steady hum of highway noise, sirens and sounds of the city. This chapter discusses the spatial organization of resources that make up this cultural landscape in geographic and historic context, and their condition today.

Superficially, the resources that make up the Oñate Crossing cultural landscape in this study are loosely connected. The existing associated resources include the trail itself (est.1598), the Misión de Guadalupe in Ciudad Juárez (built 1659), the Spanish Presidio of El Paso del Norte (ca. 1684), the acequia Madre in Juárez (ca. 1660), the Hart Home (built 1854) two Officer's Quarters (built 1879), and a guard house from Old Fort Bliss (ca. 1879). Their age and function differ widely. What unifies these seemingly disparate resources is the Camino Real de Tierra Adentro, which was the most important transportation route in the borderlands region for nearly three hundred years, serving not just to link villages from Mexico City to Santa Fe but also as a lifeline for exploration, settlement and provisioning of and to surrounding lands. The river and its natural ford through the mountains, named El Paso del Norte, became a central, strategic place for generations, eventually giving rise to the two cities that now reside on either side of the US-Mexico border. The resources that contribute to this cultural landscape served as key place markers for the crossing, each fostering and defining the community around them in their time.

The boundaries for this cultural landscape are demarcated by the landmarks specifically related to the crossing, and include resources in both Mexico and the United States. One of the defining aspects of this particular border locale is its deep-rooted transnational connectedness, best exemplified in the name *El Paso del Norte*, which at various times

has referred to the border crossing itself, as well as the communities on either side. The constantly shifting course of the river itself created a permeable cultural boundary, even after the 1848 Treaty of Guadalupe Hidalgo defined the geographic and political border between the United States and Mexico as the deepest portion of the Rio Grande channel. Indeed the Misiones Socorro and Ysleta del Sur were originally on the south side of the river before a flood in 1829 altered the channel, stranding them on the river's north bank.

Just as built environment resources served communities on both sides of the river, the people who inhabited the border moved back and forth across it with considerable fluidity. Mill owner Simeon Hart married the daughter of a prominent businessman on the Mexico side of the border. Hart's own business relied on wheat grown on both banks of the river. Davis wrote in 1857 that "El Paso [Juárez] is the center of a considerable trade with the northern states of Mexico, Texas and New Mexico" (Davis 1857:383). Up to the 1920s the people who lived in this area saw little distinction between Mexican and American. Indeed, prior to 1890, the population of Ciudad Juárez (still referred to as El Paso del Norte at that time) was much greater than the population on the north side of the river, composed of what several observers characterized as "well-to-do, educated Spaniards." (Sonnichsen 1968). In social circles on both sides of the border, "the fact that one man was a Mexican and the other an American was seldom mentioned and I believe as seldom thought about. Each man was esteemed at his real worth..." (Mills quoted in Sonnichsen 1968:152). Condescension aside, the commentary of more than one American writer makes it clear that business, social life, and institutions relied on frequent cross-border influence and reciprocity. Transnational interactions continued all the way up to the twentieth century. Simeon's Hart's son, Juan, who was a prominent member of the El Paso business and social community, frequently lodged in Juárez when not in his home at Hart's Mill. A smelter opened just north of Hart's Mill in 1887 to process ores mined from both sides of the border, while El Paso grape dealers also brought in produce from Mexican vineyards. Even the Mexican Revolution that took place between 1910 and 1917 was very much a transborder affair, in which the American city of El Paso served as a staging area for revolutionaries, refugees, and reporters alike. It is no accident that Mexican Revolutionary Francisco Madero's provisional governmental headquarters was located at the *Casa de Adobe* across from Smeltertown. It was a key point from which to obtain supplies and munitions from American sympathizers, and to escape the Porfirio Diaz federalist army (**Figure 4-1**).

For this reason, it is conceivable that other resources could be included in this cultural landscape, which is very much a modern construct (**Figure 4-2**). For instance, the Misión Socorro, Ysleta del Sur, the San Elizario Historic District and Presidio Chapel are all resources already associated with the National Park Service's Camino Real de Tierra Adentro National Historic Trail below El Paso. The many canals built by the Spanish and later, Americans and Mexicans, to irrigate their fields in this region, and even the resources associated with the Franklin Canal or the 1938 American Dam and Canal have profoundly influenced agricultural and commercial development from the seventeenth century to the present. Boundary Monument 1, built in 1855, or the *Casa de Adobe* that

Figure 4-1. Americans watching Mexican Revolution from river near Hart's Mill (courtesy of University of Texas El Paso, Special Collections).

served as the governing headquarters for Madero during the Mexican Revolution are also key points for the transnational cultural history of the region.

Other resources that are within the boundaries of the study area (but outside the scope of work) are the extant vernacular buildings on the Mexican side between the river and the mission. While these resources are all important landmarks in the historical and cultural landscape of the area in general, they are not addressed specifically here because they do not relate specifically to the river crossing, its impact on transportation and strategic place-making during the period from 1598 to 1893 in the same way as the contributing resources discussed in this chapter.

4.2 The Resources and their Organization

4.2.1 The Oñate Crossing of the Camino Real de Tierra Adentro

The spatial organization of features and landmarks is tethered to the trail itself, which was originally defined by geographic features. Within the study area, the river, its valley, the hard rock bed at the falls, and the mountains are the principal natural landmarks. The trail blazed by Oñate and his entourage in 1598 began in Santa Barbara and ran directly north through the Chihuahuan desert to the Rio Grande which was at the time the northern border of Spain's charted territory. The Oñate Expedition reached the river near present day San Elizario, where the tired and thirsty company rested for about a week under the "wide spreading trees that grew along the river bank" (Pérez de Villagrá 1610). When they first reached the Rio Grande, some of the men and horses were so parched that they dove headlong into the river and were fatally swept away by the current (Pérez de Villagrá 1610). To continue their journey northward, a better crossing was needed. They followed the river valley and on April 30, 1598, Ascension Day, they celebrated (Hoig

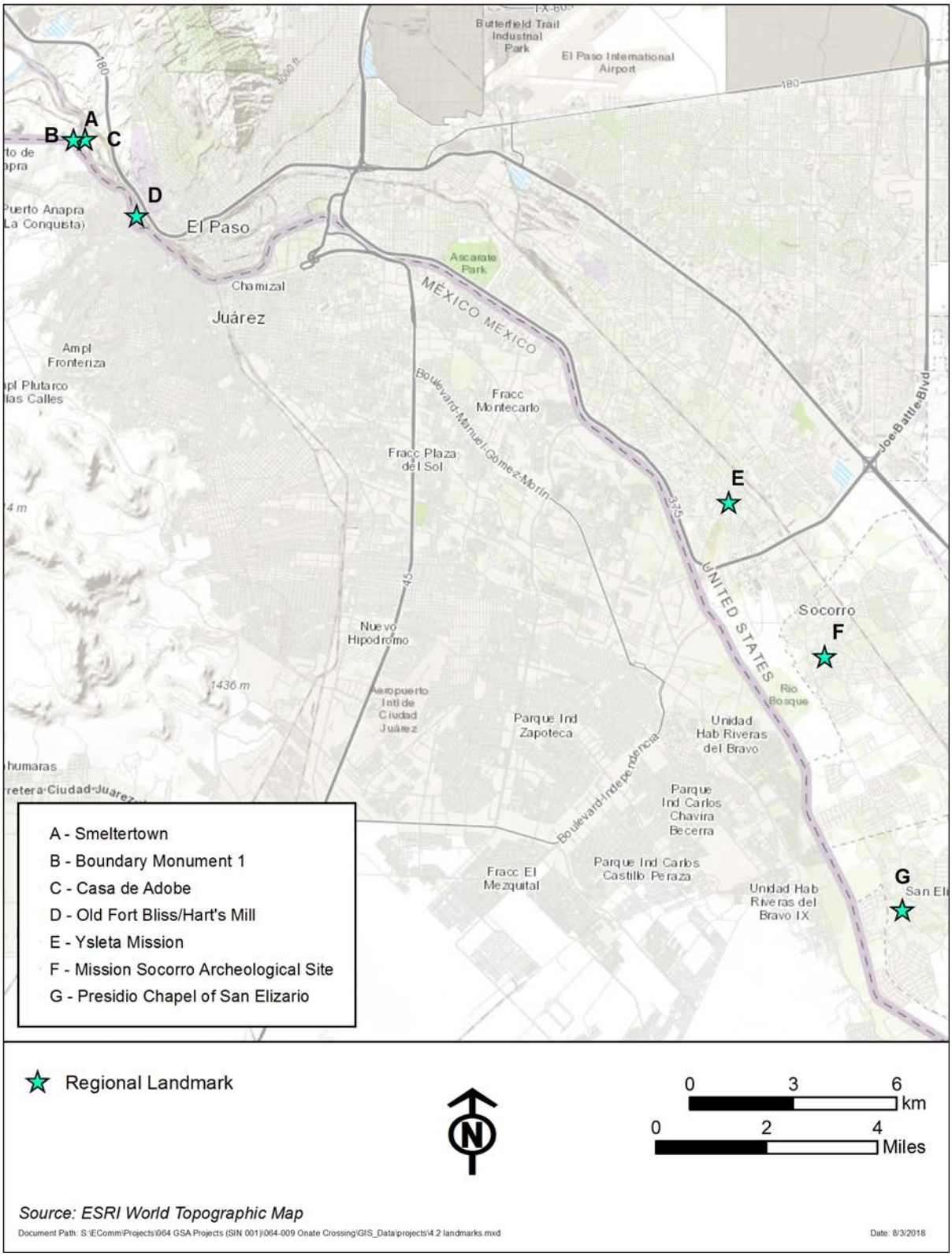

Figure 4-2. Map of important cultural landmarks along the Ciudad Juárez/El Paso Border.

2013). Three days later, the company encountered a group of Mansos, who guided them along the river to some falls that could be forded.

This ford was one frequently used by Native Americans to cross the river, and is what became known as the Oñate Crossing, or El Paso del Norte, where two hundred and fifty years later Simeon Hart built a home and mill (Hammond 1927). After fording the river, Oñate followed the narrow valley flanked by mountains. North of the pass, Oñate kept to the east bank of the river most of the way and followed the river to the pueblos to the north of present day Santa Fe. This route soon became known as the Camino Real de Tierra Adentro. The basic alignment of this road in Ciudad Juárez follows Ugarte and la Presa (Dam) Streets; on the American side, it corresponds to West Paisano Street (**Figure 4-3**). The associated resources of the Oñate Crossing on the Camino Real all follow the road at strategic places associated with that crossing.

4.2.2 Nuestra Señora de Guadalupe

Misión Nuestra Señora de Guadalupe was established in 1659 by Fray García de San Francisco to christianize the Mansos living there at the time, as well as to establish a permanent presence to guard Spain's interests at El Paso del Norte (**Figure 4-4**). The first church was built of built of branches and mud with a roof of straw (Hughes 1914), in the wide, fertile valley on the west bank of the Rio Grande, at the locale near where Oñate first encountered the Mansos who helped them ford the river on his journey northward. The current church was built of rock and adobe, with pine beams obtained from a grove five miles away. The location was chosen because it was originally on a tree shaded slope overlooking the river. The cornerstone of the church was laid in 1662 and the building completed around 1668 (Hughes 1914; Lindemuth 2011). The church was typical of Franciscan architecture of the sixteenth and seventeenth centuries, although its decorative woodwork and a carved decorative arch in front of the altar made it one of the most beautiful in the northern territories. Built on a cruciform plan, it had a single window on the front facade, and a small window overlooking the altar to let light in. Dormitories or cloisters probably extended off the east side of the building forming their own courtyards. (Ochoa Rodriguez n.d) The Misión de Guadalupe's iconic bell tower at the right corner of its facade was not added until the second decade of the nineteenth century (Enriquez 1984). Despite several restoration efforts since the 1890s, no substantial alterations have occured since then. Its interior plan and decorative woodwork is much the same as it was in the seventeenth century (Diocese of Ciudad Juárez 2018). An 1884 descriptions states:

> A grateful coolness, even in the hottest weather, always pervades these churches, owing to the thickness of their walls, whether of stone or adobe. Great beams, ornately carved in lilies and roses, support the tiled roof of this particular structure, which is not so high as some sanctuaries I have seen in Indian pueblos. (Ober 1884: 599).

The carved beams and decorative scrollwork are still evident in the church today (**Figure 4-5**). Misión de Guadalupe became the mother church of the region, a strategic

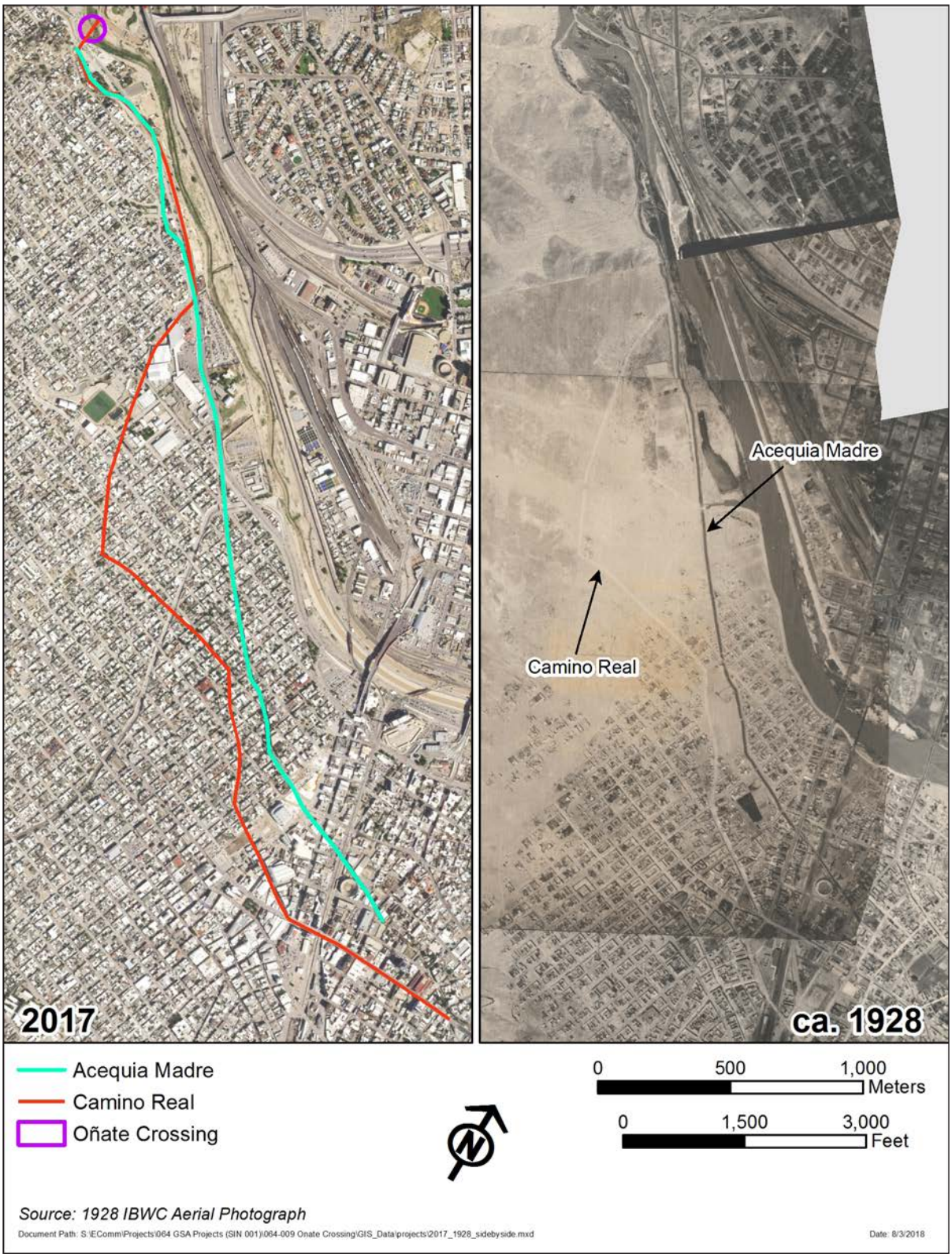

Figure 4-3. Map showing route of Camino Real and comparison with a 1928 aerial photograph (courtesy of IBWC).

Figure 4-4. View of the Misión de Guadalupe (from Ober 1884).

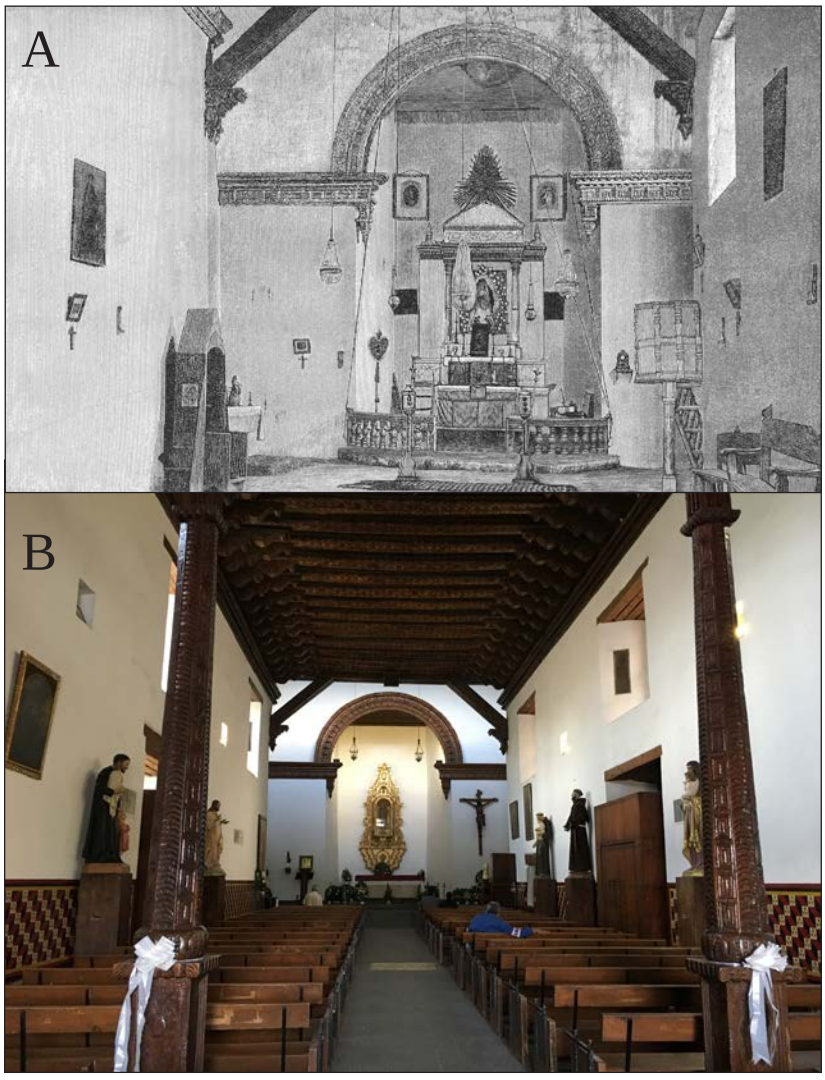

Figure 4-5. A) Interior of the church as it looked in 1884 (from Ober 1884), and B) Interior of the church in 2017.

Figure 4-6. View of the seventeenth-century Nuestra Señora de Guadalupe in its current setting.

base for settlement of the northern territories of New Spain, and the nucleus of the community that grew around it. The Camino Real ran right by the mission, jutting off of one of the four principal streets emanating from the central plaza in front it.

Although the plaza in front of the church has remained, in 1957 a new cathedral was completed next to the original one (**Figure 4-6**).

4.2.3 The Presidio at El Paso del Norte

With the Pueblo Revolt of 1680 in Santa Fe, hundreds of Spanish settlers and Native Americans fled to the relative safety of El Paso del Norte. In 1682 the newly appointed territorial governor, Don Jironza Pétriz de Cruzate relieved Governor Otremín and was tasked with establishing a presidio and a settlement at El Paso. When he arrived in August 1683 he and his men searched both banks of the river for a suitable place to build the new presidio. He encountered difficulties in El Paso del Norte; the flat ground seemed too wet and muddy, while the higher ground was too dry. However, he finally settled on a location about seven leagues southeast of El Paso del Norte, near present day San Elizario (Hughes 1914). However, uprisings among the Manso, Suma and Jano Indians the following year forced Cruzate to relocate the garrison back to El Paso del Norte, where around 1684 the presidio was rebuilt on the northwest side of the church plaza (Chipman 2010). From this secular headquarters, El Paso del Norte grew to become one of the most important settlements in New Mexico territory.

There are few descriptions of the presidio at El Paso del Norte. It is depicted symbolically on Barriero's 1727 map of New Spain, as well as LaFora's 1771 map. But these do not describe the structure in any detail. In 1884 Ober described the presidio north of the mission as a "mud fort," suggesting it was made of plastered adobe (**Figure 4-7**). Joseph de Urrutia's map of 1766 depicts it as rectangular in plan with two interior courtyards divided by a hall. Towers or bastions may have extended from the southeast, southwest and northwest corners (**Figure 4-8**). Urrutia also indicated that the fort was built of adobe (Moorhead 1991).

Figure 4-7. Late nineteenth-century photograph of the presidio (courtesy of Francisco Ochoa Rodriguez).

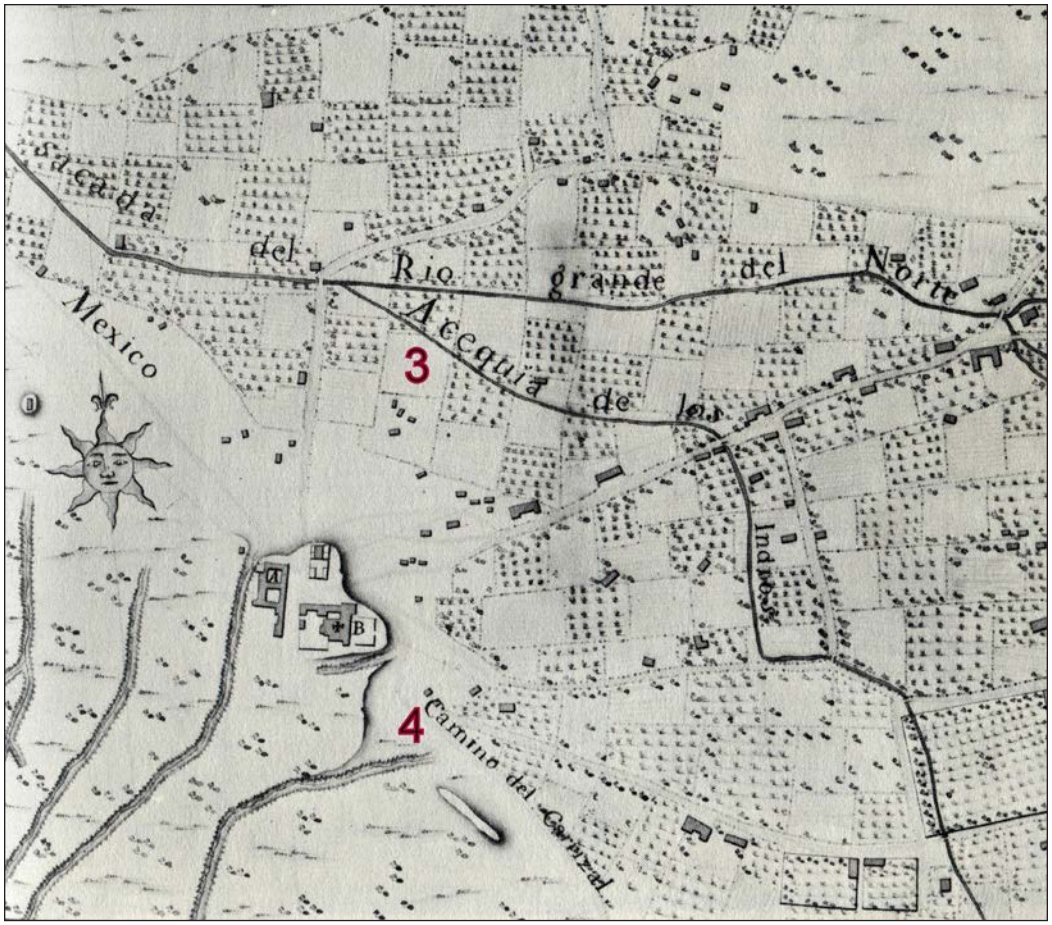

Figure 4-8. Urrutia's map from 1776 showing El Paso del Norte (from Moorhead 1991:151).

The fort can be seen in the background of several pre-1940s views of the Misión de Guadalupe as an adobe facade (**Figure 4-9**).

Figure 4-9. Photographic view of the church in the late nineteenth century with the presidio in the background (source: Mexicoenfotos.com).

By 1928, its configuration had likely changed. An aerial photograph shows the building as a rectangular structure with a central courtyard (**Figure 4-10**). At that time, it was Ciudad Juárez' *Presidencia Municipal*, the city hall, and jail. It was remodeled in 1943 with the addition of a stone facade accented by ornate window and door detailing, along with a second story. Today the building is used as the Juárez Municipal Art College (**Figure 4-11**). Architectural historian Francisco Ochoa believes that the construction and paving of Avenida 16 de Septiembre truncated part of the original presidio (Ochoa, personal communication May 2018).

An El Paso Daily Herald article from 1901 talks about remodeling the jail and extending the street (then known as Comercio) past it, "..the main street of the city Commercial Avenue, ...owing to the location of the old jail has never extended farther westward than to it" (El Paso Daily Herald 1901).

4.2.4 The Acequia Madre and Spanish Dam

The natural falls that Oñate crossed on his route to New Mexico began a little below where the IBWC's American Dam now resides and continued past what is now the International Dam. The Spanish eventually improved the falls with timber, brush and earth to form a dam designed to divert water into an acequia to irrigate the orchards, gardens, fields, and particularly the vineyards that made the region famous (Crawford et al. 2011, Davis 1857). It is not clear when the first dam was built over the river. One source documents that in 1754, the Spanish levied a special tax of four reales on every hundred grapevines grown in the Rio Grande valley to build a diversion dam over the Rio Grande (Meyer 1996). But other sources suggest that the Spanish built the first dams much earlier. Most likely,

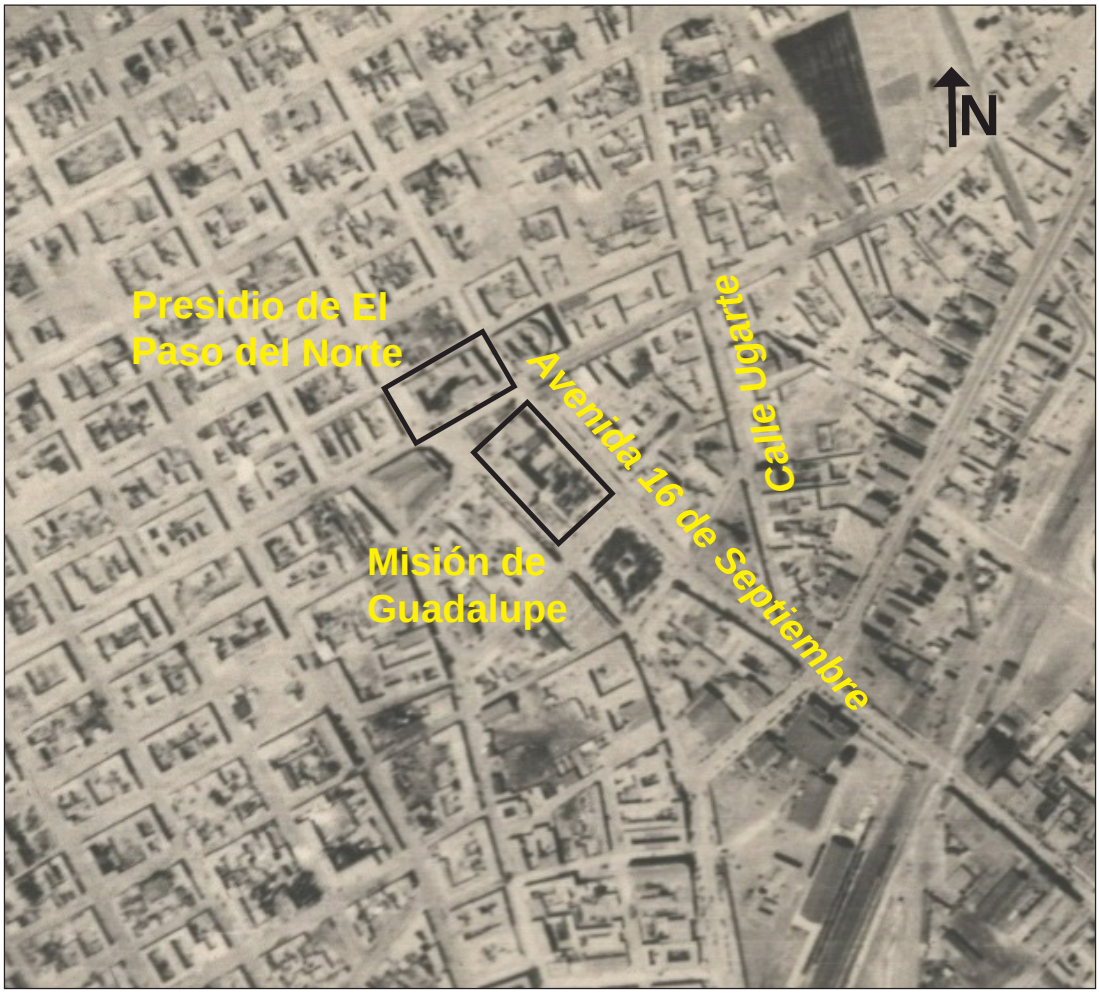

Figure 4-10. Detail from 1928 aerial photo of Ciudad Juárez showing church and presidio (courtesy of IBWC).

dams were built and rebuilt many times over after flood events. Meyer described the process of rebuilding yearly:

> The method of restoring the conduit each year is to make some large round baskets of rather thick rods. When the freshets are over, they put them in the current, filling them with stones and they act as dams and force the water to seek the mouth of the ditch. (Meyer 1996)

Figure 4-11. A 2017 view of the Municipal Art School (formerly the Presidio de El Paso del Norte), facing northwest.

However, well before this time, the residents of El Paso del Norte had built an acequia coming off the river to irrigate their fields. On his 1724–1728 journey through the provinces of New Spain Pedro de Rivera commented on the irrigated fields of El Paso del Norte (Murphy 1937). Construction of the acequia almost certainly corresponds to the founding of the Misión de Guadalupe where "Father Garcia was there attending to the establishment of the a farm, and obliging even the heathen to construct a ditch for it, with great labor, from the Rio del Norte" (Hackett quoted in Ackerly 1996). This system was rebuilt and expanded several times over the next 300 years as part of its general maintenance, and to accommodate the growing population of the region. The dimensions of the Acequia Madre were described as 3–5 yards wide and 2–6 feet deep, with strong banks (Davis 1857:67).

Passing through in 1807, Pike described the crossing and acequia as a "bridge over the river" that diverted water into an irrigation canal watering finely cultivated fields of wheat and grain (Pike 1807). Two decades later, James O. Pattie was similarly impressed with El Paso del Norte's agricultural ingenuity when he wrote, "The wheat fields were equally beautiful, and the wheat of a kind I never saw before, the stalks generally yielding two heads each. The land is exceedingly rich, and its fertility increased by irrigation" (Pattie 1831). The Spanish diversion dam (or dams), was likely about a half-mile upstream of the current International Dam and acequia head, but washed away during river floods (Crawford et al. 2011). The former dam's location is intimated by an 1896 map which depicts an *antiguo canal de la irrigacion de Juárez* extending a little ways north of the current acequia entrance (**Figure 4-12**). The acequia ran down through the river valley between the road and river (**Figure 4-13**). The majority of it is still present today in its original configuration, although portions of it have been stabilized with concrete or stone masonry (**Figure 4-14**).

4.2.5 Hart's Mill, Hart's Dam, and the Hart Home

First built in 1851, Hart's Mill was situated at the same falls Oñate and his expedition crossed more than 250 years earlier (**Figure 4-15**). Having come to the region while serving in the 3rd Regiment of the Missouri Mounted Volunteers during the Mexican-American War, he was wounded in northern Mexico in 1848 and convalesced at the home of the wealthy and powerful Don Leonardo Siqueiros, who owned a mill near Santa Cruz de Rosales. Hart fell in love with Don Leonardo's daughter, Jesusita, and in 1849 they married. Hart recognized that not only was this region an important one for transportation and provisioning along the newly defined border between the United States and Mexico, but that the dam and falls at El Paso del Norte could power a mill to grind grain on a large scale. At that time wheat fields stretched along the river valley for miles.

Passing through in the 1850s, United States District Attorney WWH Davis speculated that the El Paso Valley was so productive, it could potentially grow enough wheat to support a million inhabitants (Davis 1857). A small mill on the Mexican side of the river below the falls, operated by Ponce de León was already supplying the region with milled grain (White 1923).

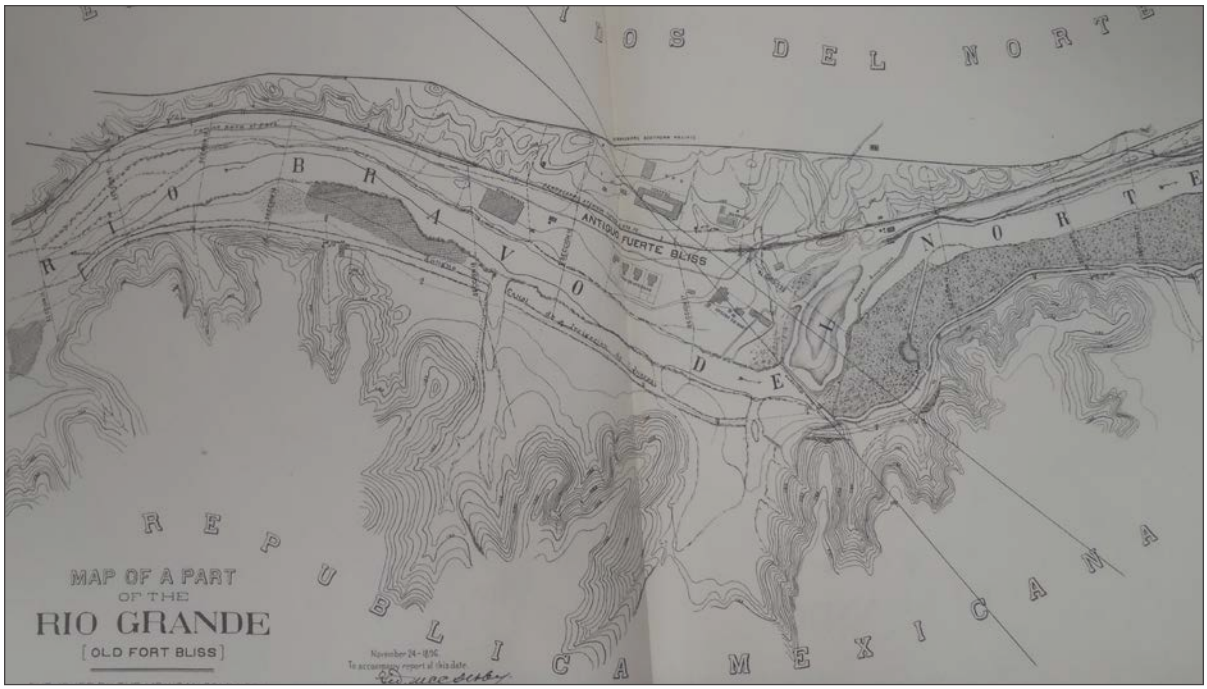

Figure 4-12. A map dated 1896 showing the route of the acequia in Mexico (from 1903 International Boundary Commission publication regarding distribution of Rio Grande waters under the 1884 and 1889 Treaties, map (courtesy of IBWC)).

Figure 4-13. Historical postcard of the acequia in Juárez, date unknown (source: Mexicoenfotos.com).

Figure 4-14. A 2017 photograph of the acequia along Calle Melchor Ocampo, facing northwest.

Figure 4-15. The dam and falls along the river ca. 1890s (courtesy of El Paso Public Library).

Hart's mill would supply the ever-increasing military presence along the newly defined border. In partnership with Don Leonardo, Hart obtained permission from the Mexican government to divert the water from dam which at that time was about a mile upstream from his mill, and secured contracts with the US military to supply milled wheat to military posts at Doña Ana, at Fort Bliss (now downtown El Paso), and at San Elizario. However, within a few years, flooding had washed away the older dam. Using timber, brush and earth, he rebuilt the dam over the falls by his mill, then rebuilt it a few years later with help from the Mexican government using stone and cement (Crawford et al. 2011). In 1907, it was replaced by the International Dam built by Mexico as part of the Convention of 1906, and this was subsequently replaced by the current structure built in 1941.

The mill was ideally situated not just at a natural falls, but also along the old Camino Real, which by that time was used by the US military to reach forts Fillmore, Thorne and Selden in New Mexico. One part of Hart's Mill was built of three-foot thick adobe walls, with a roof supported by sycamore beams and willow branches (Crawford et al. 2011 **Figure 4-16**). Another part of the mill was built of limestone. Water to the mill came from two canals dug off the river running through an arched opening to the millrace, which in turn diverted the water back to canals emptying into the river (**Figure 4-17**).

At first Simeon and Jesusita lived in a small house called "the rock house." By 1856, Hart replaced this with a grand adobe home, one building of which is still standing today (**Figure 4-18**).The house reportedly had 16–18 rooms, each with its own fireplace (Crawford et al. 2011). Several maps from the 1880s and 1890s show the house with two separate buildings—a main building constructed as a typical u-shaped hacienda, and another L-shaped building coming off it to the south (see Figure 3-6 and **Figure 4-19**). According to 1936 HABS documentation, the main house had eight or nine rooms, a wide center hall and porches.

The only remaining building at Hart's Mill is the main Hart House, which is currently being leased for a field office space. The building has undergone extensive remodeling over time during various periods of use (**Appendix**). A parking lot is at the front and adjacent to the home. The 1934 American canal has truncated the yard behind the home as well as the diversion channel(s) Hart built to power his mill. Meanwhile no above ground traces exist of the mill, the second domestic L-shaped structure, the old "rock home" or any of the yard features built by the Hart family. At the former mill location there is a cluster of three historical markers and a fountain that commemorate the Camino Real, Simeon Hart, and (oddly) James Magoffin. One of them is a 1936 granite historical marker, another is a pink granite marker erected in 1964, and the third is a 1983 metal marker (**Figure 4-20**).

4.2.6 Old Fort Bliss

Nearly thirty years later, in 1878, the United States Army, seeking to re-establish their military foothold along the border decided to re-open a post, Fort Bliss, which had been abandoned a year earlier.

Figure 4-16. Two late nineteenth-century photographs of Hart's Mill: A) from the back facing roughly north, and B) from the front looking northwest (courtesy of El Paso Public Library).

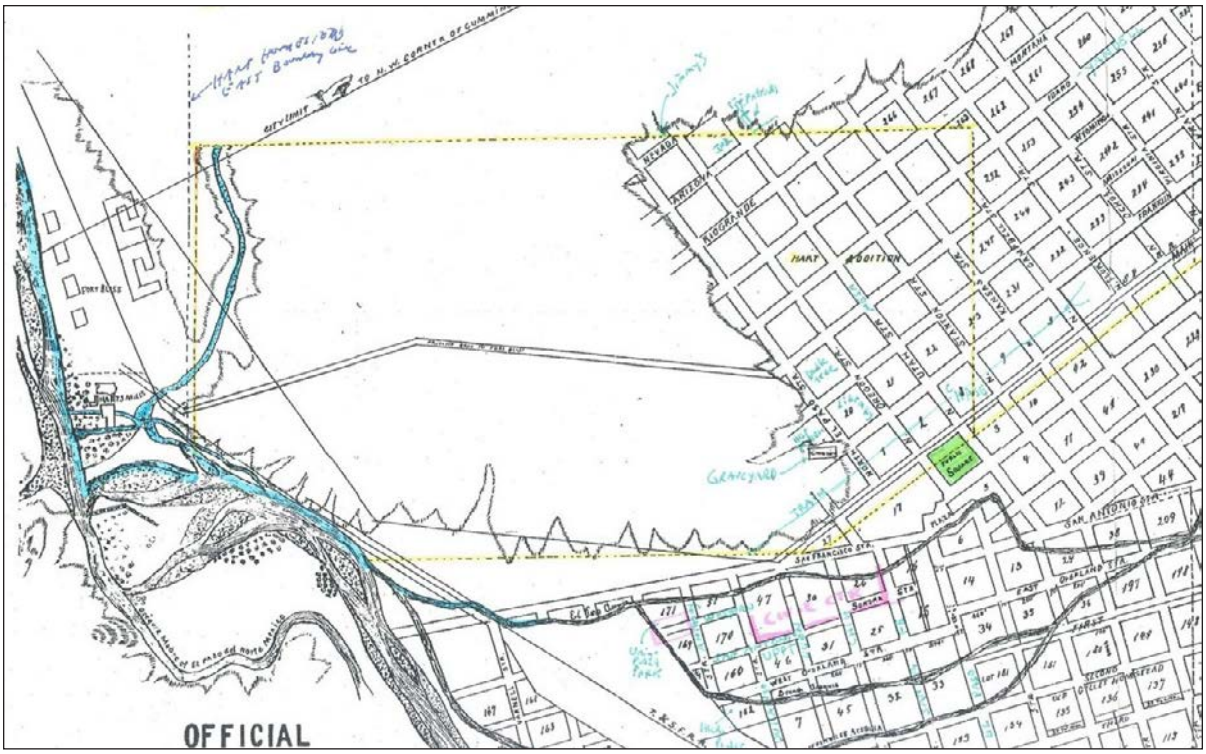

Figure 4-17. Detail from an 1881 El Paso city engineer's map showing water conveyances from the river leading to Hart's Mill (courtesy of El Paso Public Library).

Figure 4-18. Photograph of the Hart Home taken ca. 1900 after a brick front porch was added (courtesy of El Paso Public Library).

Figure 4-19. View of rear buildings at Hart's Mill; the L-shaped building can be seen in the background, while the Officer's Quarters are in the foreground (courtesy of IBWC).

Figure 4-20. View of historical markers at Hart's Mill, facing northwest.

It is no accident that they chose the site of Hart's Mill for their new post. Hart, a former cavalryman, provisioned the army until the Civil War, when he unluckily declared for the Confederates. Consequently, both property and owner were well known to the military.

But the Hart property had another important advantage: it was right along the most important road leading into the New Mexico Territory and to military posts whose role in guarding American frontier settlements against Native American raids was critical at that time. In 1879, commerce and transportation was still carried out by stagecoach, ox and mule teams. However, the military command was surely aware that railroads were being planned and that the projected route of those railways through El Paso followed the Camino Real, through the Hart's Mill area.

Even before the Civil War, planning for railways through El Paso singled out the crossing at Hart's Mill as the most likely spot for a new railway linking both sides of the river (Lindemuth 2011). In 1857 New Mexico Attorney General Davis wrote, "If the proposed Atlantic and Pacific railroad should be constructed through Texas, El Paso will be an important point on the route….The place of crossing is just below the mill of Judge Hart" (Davis 1857:380).

Hart himself died in 1874. The army purchased 135 acres from Hart's son, Juan, adjacent to his home and mill in 1879 and began construction on Fort Bliss with $40,000 appropriated by Congress (Sanger 1933). Soldiers undertook construction and within a year the post had a headquarters, parade ground, barracks for enlisted men, officers quarters, and a separate hospital building of adobe, wood, and stone (Metz 1989; **Figure 4-21**). The officer's quarters were built as two-story structures with walls of double-laid adobe set on a raised cut-stone basement foundation. One-story verandas extended across the width of each building. Roofs were wood-shingled. Meanwhile the enlisted men's barracks were simple, one-story long and narrow adobe structures set on rubble stone foundations. Only the corner blocks were of cut stone (National Park Service 1972). **Figure 4-22**).

Eventually other buildings or features within the fort included a bakery, a magazine, corrals, storage buildings, a guard house, non-commissioned officers quarters, a post-trader's building, and a cemetery (**Figure 4-23**). Of these only two of the Officer's Quarters buildings and the guard house remain.

Within two years, trains from the Southern Pacific and the AT&SF railroads came steaming through the post. The AT&SF railroad roughly followed the route of the old Camino Real through New Mexico's Mesilla Valley and into El Paso. While several historians (Metz 1989, Sanger 1933) have commented that the trains through Fort Bliss were a bane to military operations, particularly as the AT&SF tracks went right through middle of the parade ground, railroads were highly strategic for Fort Bliss. Trains brought soldiers, passengers, and most importantly, supplies and communication to the new post, joining this previously isolated region not just to the the command structures in Washington D.C., but also the rest of the country.

Figure 4-21. Photo of Fort Bliss taken ca. 1885 facing northwest. The hospital building is in the foreground (courtesy of El Paso Public Library).

Figure 4-22. Plans housed at the National Archives for the Fort Bliss Officer's Quarters prepared in 1879 (source: National Archives and Records).

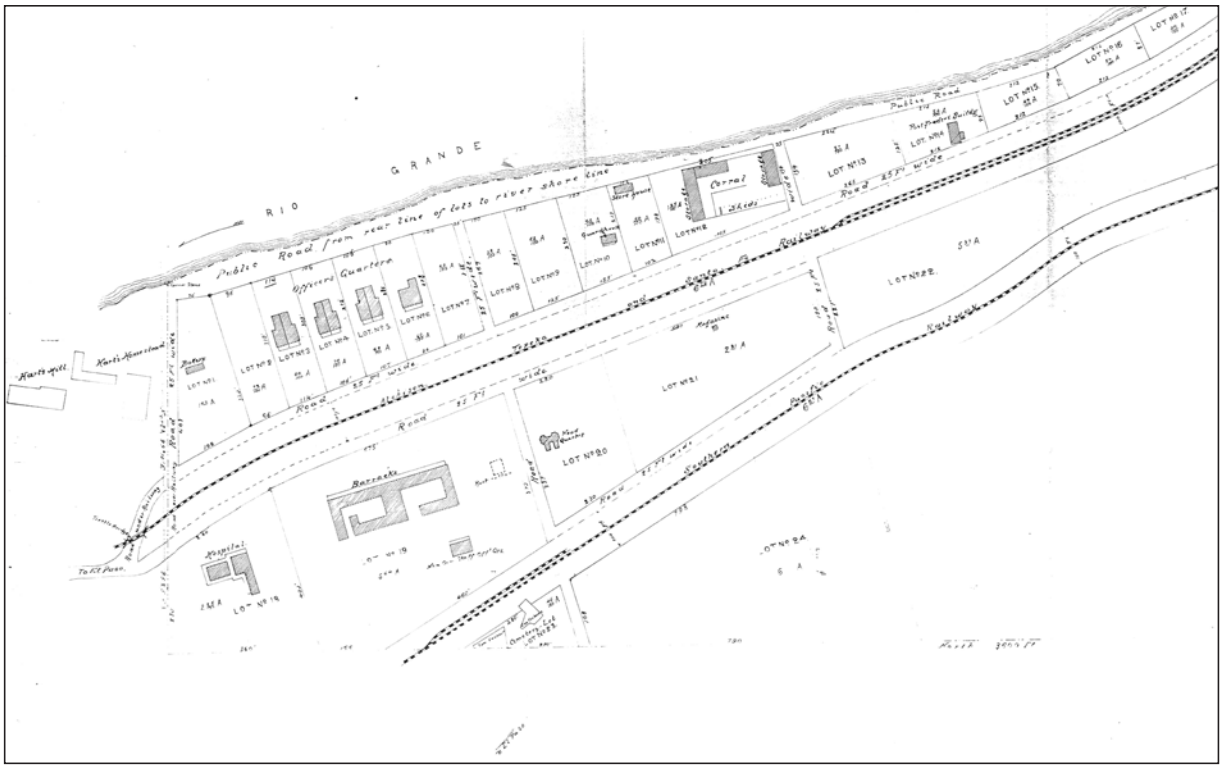

Figure 4-23. Map of Fort Bliss from 1893 after Captain Ruhlen had surveyed and platted it for future sale (courtesy of Fort Bliss).

General Sherman predicted in 1881 that El Paso would become a strategic gateway to Mexico and the rest of the American southwest due to its location along the new transcontinental railways (Jamieson 1993). However, as reliance on Fort Bliss increased along the border, the command soon found that the tracks through the parade ground hindered drills and parades (**Figure 4-24**). When Colonel E. M. Heyl toured the post in 1889, he remarked that space for conducting drills was highly limited due to the danger of passing trains (Jamieson 1993). Meanwhile, the Hart's Mill location itself had other drawbacks. The river was prone to torrential flooding, water pooled along the banks which attracted mosquitos, and the drinking water was silty, causing dysentery in many soldiers (Metz 1989). Finally, the natural geography and built environment around the post constrained expansion, leaving no room for warehouses and supply depots (Jamieson 1993). The recently built smelting operation (1887) prevented expansion to the north, the growing City of El Paso hindered expansion to the south and east, while the river constrained expansion to the west.

By 1887, expansion of the post was supported not only by the military itself but by local citizenry, who recognized the economic and security benefits Fort Bliss brought to the community. A new location was sought. In 1890, Congress authorized the War Department to search for a new site of not less than 1,000 acres for Fort Bliss in El Paso. By June 1892, the site on Lanoria Mesa (Fort Bliss's current location) had been purchased and building was finally underway.

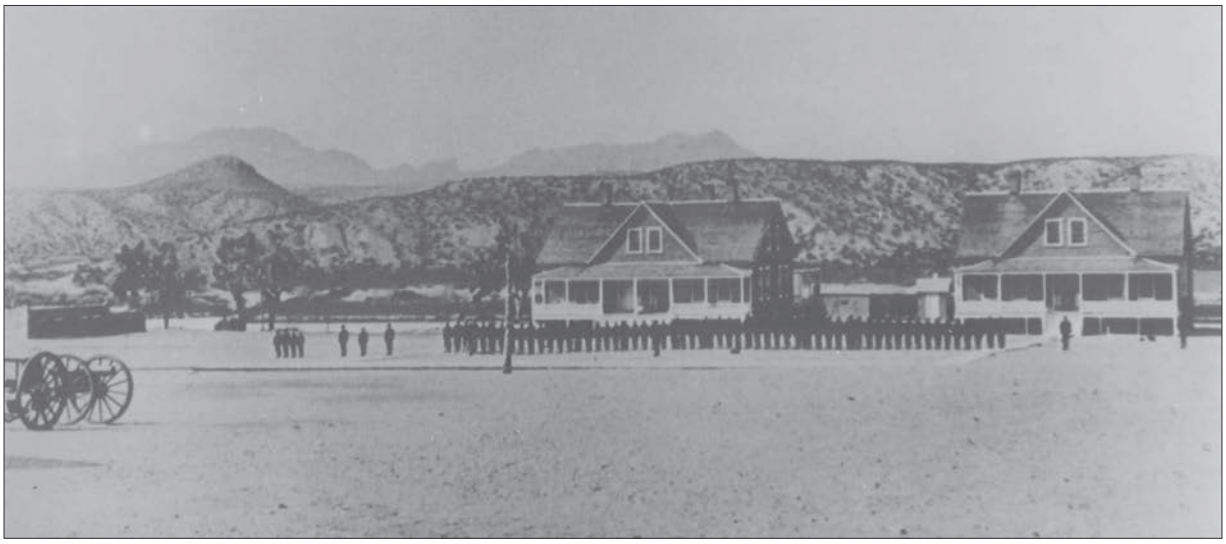

Figure 4-24. Photograph of Fort Bliss before the railroad bisected the parade ground, ca. 1880, facing west (courtesy of Fort Bliss).

A year later, the post was complete; troops began occupying it in late 1893 (Crego 1969). That same year, Old Fort Bliss at Hart's Mill was platted into lots, and sold off to private individuals. Little by little, buildings were repurposed or dismantled.

Today the only above-ground resources that remain are the southernmost two officer's quarters and a guard house (**Appendix**). The rest of Fort Bliss was repurposed for industrial and commercial use over the course of 40 years, so that by 1938, the former army post little resembled its original appearance. Like at Hart's Mill, the 1938 American Canal truncated the rear yards and removed buildings once associated with Old Fort Bliss. In 1965 IH-10 was built along the other edge of Old Fort Bliss and Hart's Mill, creating a formidable physical barrier between the remaining buildings and the rest of the expanding city.

4.3 Missing Resources and Archaeological Resources

The 1893 relocation of Fort Bliss represents the end of the period of significance for the Oñate Crossing of the Camino Real. With Fort Bliss' move, the expansion of railways, and the rise of other industries, the focus of economic and social activity in El Paso shifted away from the Oñate Crossing area and the Camino Real, toward what is now considered to be downtown El Paso. Hart's Mill closed in 1895 and was left to ruin. During the twentieth century, the Camino Real in Texas became the Smelter Road, then it was paved in the 1930s to become Doniphan Drive or US Highway 80, and finally between 1951 and 1954, it became part of the Main Street Viaduct and its name was changed to Paisano Drive. The buildings of Old Fort Bliss, although many were reused in later times, slowly succumbed to age and new industries. Meanwhile, the water control efforts of the IBWC radically transformed the river corridor starting in 1934. As El Paso and Ciudad Juárez have grown, the once picturesque agricultural landscape described by eighteenth- and nineteenth-century travelers has been slowly transformed into a modern urban center.

Missing resources associated with the Oñate Crossing of the Camino Real are many and include portions of the trail itself, the old dams, the northernmost portion of the Acequia Madre, Hart's Mill, half of the Hart Home, and numerous buildings from Old Fort Bliss. Existing resources on the Mexican side include the still extant Misión de Guadalupe, the Acequia Madre and a portion of the old Presidio building, while on the American side the Hart Home and several structures associated with Old Fort Bliss are all that remain.

Sanborn Fire Insurance maps and aerial photographs show the evolution of the built environment over time on the American side. The earliest Sanborn maps to show the Hart's Mill and Old Fort Bliss area date from 1919. They demonstrate that at that time many of the Old Fort Bliss buildings were still standing, including the four officer's quarters buildings, the old corral and stables, a guard house, and possibly a storage building. A 1928 aerial photograph indicates that by that time, the only remaining buildings were the southernmost two officer's quarters buildings, a guardhouse, possibly a storehouse and the old Fort Bliss headquarters office building, the Fort Bliss hospital building (location cut off by 1919 Sanborn), and the Hart Home. By 1954, the only remaining buildings were the Hart Home, the two Officer's Quarters buildings, the guardhouse, and the old hospital building, which was at that time being used for acetylene manufacturing (**Figures 4-25**, **4-26,** and **4-27**).

4.3.1 Archaeological Resources

Given the number of missing resources associated with the Oñate Crossing landscape due to twentieth-century development, it is reasonable to infer that the potential for archaeological resources is high on both sides of the border. By 1936 Hart's Mill was already a ruin when a HABS photograph was taken. That same year, the City of El Paso exhumed the bodies of Juan Hart and Pauline Hart Davis from the family cemetery in front of Hart's Mill and reinterred them in the Evergreen Cemetery. However, the City never located the body of Simeon Hart which was reportedly housed in a mausoleum of onyx and marble (*El Paso Herald Post* 1936). In 1951, when the City of El Paso was widening and extending Paisano street for the Main Street Viaduct, three bodies were found and exhumed. At that time it was speculated that two of the bodies could be of Simeon Hart and his wife, or could be the remains of Fort Bliss military personnel (*El Paso Times* 1952). In later letters exchanged between a member of the Hart family and Major General J. M. Cummings (Simeon Hart's son-in-law), some speculation was made about whether Hart and his wife's bodies had actually been buried in "up the hill in old Survey No. 9." It is not clear whether this refers to a subdivided lot of the the Fort Bliss post, or another survey adjacent to Hart's property which may be where Fort Bliss had their post cemetery, from which bodies were supposedly moved after the post was relocated (Hart Vertical File 1952). The cemetery is located under IH 10 near Schuster Avenue. No formal archaeological studies were ever conducted prior to construction of any of the roadways (Hart Vertical File 1952).

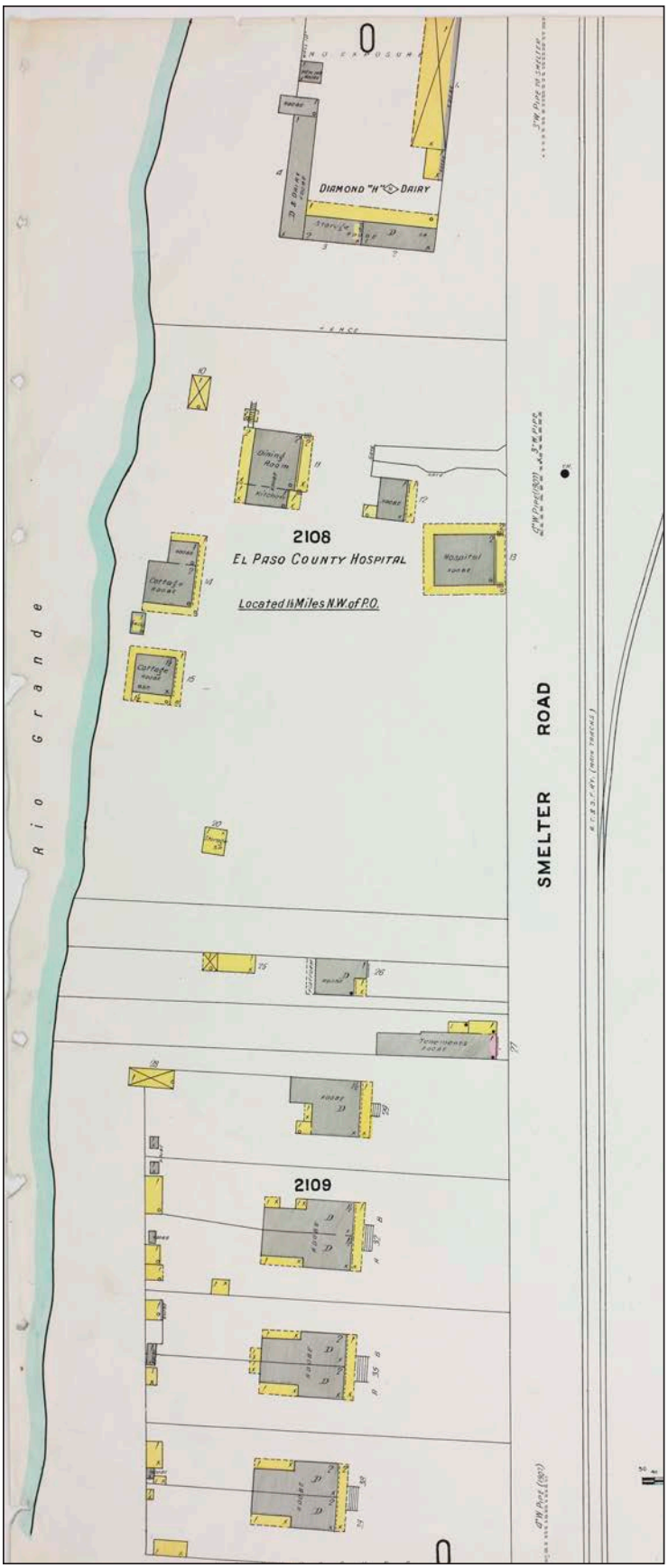

Figure 4-25. A 1919 Sanborn fire insurance map showing a portion of Old Fort Bliss. Smelter Road is the old Camino Real. This view does not include Hart's Mill or the eastern half of the fort (source: Library of Congress).

Figure 4-26. A 1928 aerial photograph showing the Hart's Mill/Old Fort Bliss Area. A) Hart's Mill, B) L-Shaped building of Hart Home, C) Hart Home, D) hospital, E) Officer's Quarters, F) Guardhouse, G) Storage building, H) Corrals, I) the Franklin Canal, J) Acequia Madre (courtesy of IBWC).

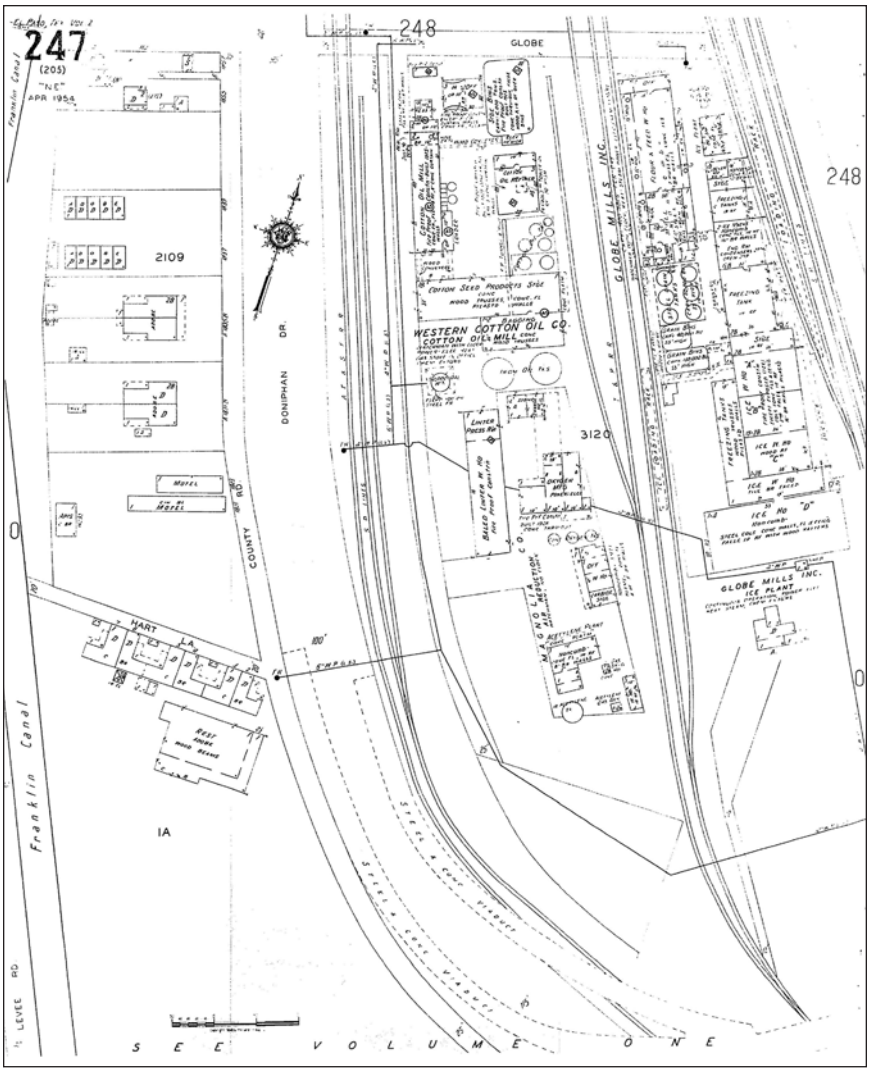

Figure 4-27. A 1954 Sanborn fire insurance map showing remaining buildings at the Old Fort Bliss Hart's Mill area (source: Digital Sanborn Maps online).

More recently, both formal and informal archaeological studies were conducted that documented remains associated with Hart's Mill or Old Fort Bliss. These include a poorly documented study of the Fort Bliss Dump Site conducted by Rex Gerald in which Gerald surface-collected an area located near present day Schuster Street and IH 10 at what would have been the north end of the Old Fort Bliss post. He documented a number of hotel ware plate fragments, porcelain, stoneware, bottles, straps, uniform parts, cutlery, munitions, and other items that he believed were associated with the fort, and these materials are housed at the Fort Bliss curatorial facility (Bartlema et al. 1997). However, none of this material has ever been fully analyzed. His collection may have occurred around the time Old Fort Bliss and the Hart's Mill area was listed in the National Register of Historic places as a district, which took place in 1972. At that time it was also given an archaeological trinomial designation of 41EP37, and correspondence in the National Register nomination suggest that some artifacts were associated with the district (National Park Service 1972). However, no records of any investigations have been located from that time.

A curious aspect of the nomination is that it indicated that the enlisted men's barracks were still extant, and even showed a picture of a building representing the barracks (National Park Service 1972).

A map showing the location of that building was not given in the nomination paperwork, and in fact, it may be an error, as subsequent research suggests that the enlisted men's barracks were demolished before 1927 and replaced by buildings of the Western Cotton Oil complex (see Figures 4-26 and 4-27).

The IBWC has commissioned several studies in advance of projects undertaken along the border. These include a 2011 archaeological survey prior to construction of infrastructure that found buried, scattered materials (Sites 41EP37 and 41EP6782) representing the mid-nineteenth through twentieth centuries at the back of Fort Bliss and Hart's Mill lots adjacent to the American Canal. These were reportedly in disturbed contexts containing cobbles and mixed fill, probably related to the 1938 construction of the American Canal (Lindemuth 2011). A 2014-2015 investigation in advance of a new 48-inch water transmission line along Paisano drive documented a cistern associated with the Hart Home, as well as a building footer and historically stabilized walls of the arroyo below Hart's Mill. The cistern remains in situ because it was not in the path of the waterline (Collett and Graves 2015). Like the 2011 investigation, the 2015 project only explored areas at the back of the Fort Bliss and Hart's Mill lots, near the American Canal.

One project, conducted in advance of the Border Highway West/Loop 375. specifically targeted elements associated with Old Fort Bliss in an empty lot south of the old Globe Mill and successfully located the foundation for the former hospital building (Silberberg and Feit 2014). The foundation of the two-story hospital building was built of double-course cut limestone blocks. Trenches placed next to the foundation documented melted adobe bricks in profile, along with artifacts reflecting the late nineteenth through mid-twentieth centuries. Debris included cut bone, ceramic tableware, solarized and clear glass bottles, and corroded metal hardware. Recorders initially recommended that the hospital building should be considered for further National Register and State Antiquities Landmark eligibility testing but ultimately a compensatory mitigation agreement was reached that allowed construction of the highway to continue with no further work at the Fort Bliss hospital building. The building, recorded as part of Site 41EP37, will be under a drainage basin.

No investigations have ever been conducted elsewhere on the Hart property or at any other areas within Old Fort Bliss. The portion of Fort Bliss surrounding the old parade ground containing the headquarters building, the barracks, the non-commissioned officer's quarters, the magazine, and the cemetery likely have limited potential for archaeological remains, as this area was extensively redeveloped as part of the Globe Mills facility, IH 10 and more recently, Loop 375. However, the area between the American Canal and Paisano Drive still may have great archaeological potential under parking lots and in rear yards, since the buildings that have been constructed in this portion of the old Fort have less impactful footprints. Likewise, portions of the old mill or Hart Home could still be present

in the parking lot and adjacent park housing commemorative monuments to Hart's Mill and the Hart family. In fact, a letter to the the editor at the *El Paso Times* suggested that the Hart's Mill water wheel is buried 15 feet below ground level in the exact spot where it was when the old mill ground its last sack of grain. (*El Paso Times* 1947).

No archaeological work is known to have been conducted in Ciudad Juárez at any of the associated resources there. However, given changes over time in configuration of the ancillary buildings at the Misión de Guadalupe, it is likely that archaeological remains could be present in the courtyard around the church. Likewise, at the Presidio de El Paso del Norte, which was extensively remodeled in 1943 and even earlier than that for road improvements, archaeological remains may be present in the courtyard or along Avenida 16 de Septiembre. In fact, an *El Paso Daily Herald* article from 1901 talks about Spanish guns unearthed while demolishing a portion of the old jail for the extension of Avenida 16 de Septiembre. "The find consisted of seven muskets of antiquated pattern, two heavy guns, such as were known as aquebueses and so heavy that a man could not even support them in the ancient days...portions of two cannon were also unearthed" (*El Paso Daily Herald* 1901). The article goes on to say that the guns were found under the floor of an abandoned wing of the old presidio building.

Finally, the old Molino de Ponce de León, while not directly related to the the Oñate Crossing/Hart's Mill cultural landscape, is another missing resource that could have archaeological remains associated with it. Its exact location is not clear. Existing and missing resources are presented in **Table 4-1** and **Figure 4-28**.

4.4 Vegetation Then and Now

Just as the built environment around Oñate Crossing is barely recognizable from its pre-modern appearance, so too do the native and historic vegetative communities of the Rio Grande Valley differ rather dramatically from the contemporary one. When the Spanish first encountered the Rio Grande valley after a harrowing trek through the sand dunes of northern Mexico they found what seemed to them a paradise of "Elysian fields" and "shady bowers." The low banks of the river formed grassy meadows, where bees flitted from flower to flower (Pérez de Villagrá 1610). The types of native trees Oñate and his expedition encountered along the river banks are mentioned in Spanish and American accounts from the seventeenth through nineteenth centuries. For instance, when Fray García constructed the first church at El Paso del Norte, he used branches, mud and straw. The branches were most likely from willow and cottonwood trees that were once abundant along the perennial streams and waterways of the region (Merlan et al. 2011).

By the time construction for the permanent church was underway in 1662, however, there was no suitable timber available for it. This is likely because logs of sufficient length, straightness, and durability could not be harvested from the native cottonwoods along the river. García instead found pine trees for the roof beans, obtained from a grove approximately five miles away, most certainly at a higher elevation in the mountains.

Table 4-1. Existing and Missing Resources.

Map ID	Resource name	Year Built	Approx. Year abandoned/ demolished	Secondary or later use	Current Environment
1	Camino Real de Tierra Adentro	1598	Portions extant	Calles Ugarte and la Presa, Paisano Drive	Paved
2	Misión Nuestra Señora de Guadalupe	1622–1668	Extant	n/a	Larger Nuestra Señora de Guadalupe cathedral completed adjacent to it in 1957 as well as other improvements
3	Acequia Madre	1660	Extant	n/a	Portions sunk underground, straightened, paved with masonry or concrete
4	Spanish Dam(s)/ Hart Dam	Ca. 1659–1850s	1907	Probably rebuilt and moved many times/Rebuilt as International Dam in 1907	No traces of earlier dams remain. Current International Dam is concrete.
5	Presidio de El Paso del Norte	1685	Portions extant	Extensively remodeled in 1943 for the Presidencia Municipal de Ciudad Juárez.	Ciudad Juárez Municipal Art College
6	Molino de Ponce de Leon	After 1821	unknown	n/a	Urban streets and housing
7	Hart's Mill	1851/1856	1895	none	Parking lot and park with commemorative monuments
8	Hart House 2nd building	1856	Demolished after 1937	unknown	Parking Lot and La Hacienda outdoor courtyard.
9	Hart House main building	1856	Extant	La Hacienda Restaurant/Offices	Vacant. Registered as Site 41EP37 in 1972.
10	Old Hart Rock House	1851	1958	unknown	Location unknown. Possibly under parking lot or park next Hart Home.
11	Fort Bliss Officer Quarters	Ca. 1880	2 buildings still extant; 2 buildings demo'd between 1919 and 1927	Formerly apartments. Now abandoned.	Face Paisano Street, with border wall behind them. Registered as Site 41EP37 in 1972.
12	Fort Bliss Headquarters building	Ca. 1880	1896-19	None.	Now under construction as part of Loop 375. Registered as Site 41EP37 in 1972.
13	Fort Bliss Hospital	Ca. 1880	After 1954	Acetylene Plant	Now under construction as part of Loop 375. Registered as Site 41EP37 in 1972.
14	Fort Bliss bakery	Ca. 1880	1896-1919	Tourist camp built on site	Registered as Site 41EP37 in 1972. Now a playground.
15	Fort Bliss cemetery	Ca. 1880	Abandoned 1893	none	Currently under 1H-10 highway at Registered as Site 41EP37 in 1972.
16	Fort Bliss corrals	Ca. 1880	1919-1927	Used as Diamond "H" Dairy ca. 1919	Registered as Site 41EP37 in 1972.
17	Fort Bliss storage buildings	Ca. 1880	1919-1927	Used as El Paso County Hospital ca. 1919	Registered as Site 41EP37 in 1972.
18	Fort Bliss magazine	Ca. 1880	1896-1919	None.	Now under construction as part of Loop 375. Registered as Site 41EP37 in 1972.

Map ID	Resource name	Year Built	Approx. Year abandoned/ demolished	Secondary or later use	Current Environment
19	Fort Bliss guard house	Ca. 1880	Extant	Used as El Paso County Hospital ca. 1919	Commercial building
20	Fort Bliss non-commissioned officer's quarters	Ca. 1880	1896-1919	None. Site became Western Cotton Oil Company by 1927	Now under construction as part of Loop 375
21	Fort Bliss Post-Trader's Building	Ca. 1880	1896-1919	none	Possibly still standing in 1950 as 2003 W.Paisano. Now storage yard.
22	Fort Bliss Enlisted Barracks	Ca. 1880	1896-1919	None. Site became Western Cotton Oil Company by 1927	Now under construction as part of Loop 375

The roof of Hart's Mill, built almost two hundred years later, reportedly incorporated sycamore logs and willow branches, and presumably these too were harvested locally. Emory's 1857 description of El Paso del Norte noted that cottonwood logs were typically used for the roof beams of most houses which "resemble very much the ruins of the houses described in the oases of Syria" (Emory 1857:92).

Despite Pérez de Villagrá's elegiac 1610 evocation of Elysian fields around El Paso del Norte, aside from the trees and saltgrass growing along the river banks, other types of native vegetation were less paradisiacal. Ober's 1884 description of the El Paso valley offers a detailed discussion of native vegetation in the pre-twentieth-century period.

> Vegetation is sparse, except in the mountains and on the borders of the streams, where also good timber is said to be abundant. The climate is temperate on the uplands, and, though snow falls a foot or two in depth on the mountains, extreme heat is sometimes experienced in the valleys. A peculiarity of the desert region of Chihuahua,—which also applies to the barren tracts of contiguous Texas and New Mexico, as well as Arizona,—is that nearly all the vegetation is supplied with thorns or spines. First come the endless variety of cacti; these are seen from the tiny plant not larger than the finger to the giant *petahaya*, raising its tall stem to the height of fifty feet. Then follow the mesquit (from the Aztec word *mezquitl*), the tornilla, the fouquiera, the agaves and yuccas, all armed with spikes (Ober 1884:603)

Outside of the low sandy floodplain of the Rio Grande, plant life was and still is largely scrub-like, characterized mostly by mesquite, yucca, creosote bush, four-wing saltbush, mustard, prickly pear, and snakeweed (Lindemuth 2011).

By the end of the seventeenth century, however, the Spanish had already altered the El Paso valley through settlement, irrigation and agriculture. Most of the accounts from both Spanish and English sources talk in great detail about the orchards, wheat and grain fields, and most importantly the vineyards that stretched along the river valley for miles. In 1726, Pedro de Rivera wrote that the wines from El Paso del Norte were superior to the best wines anywhere in New Spain. One hundred years later, Pattie observed that the Rio Grande was:

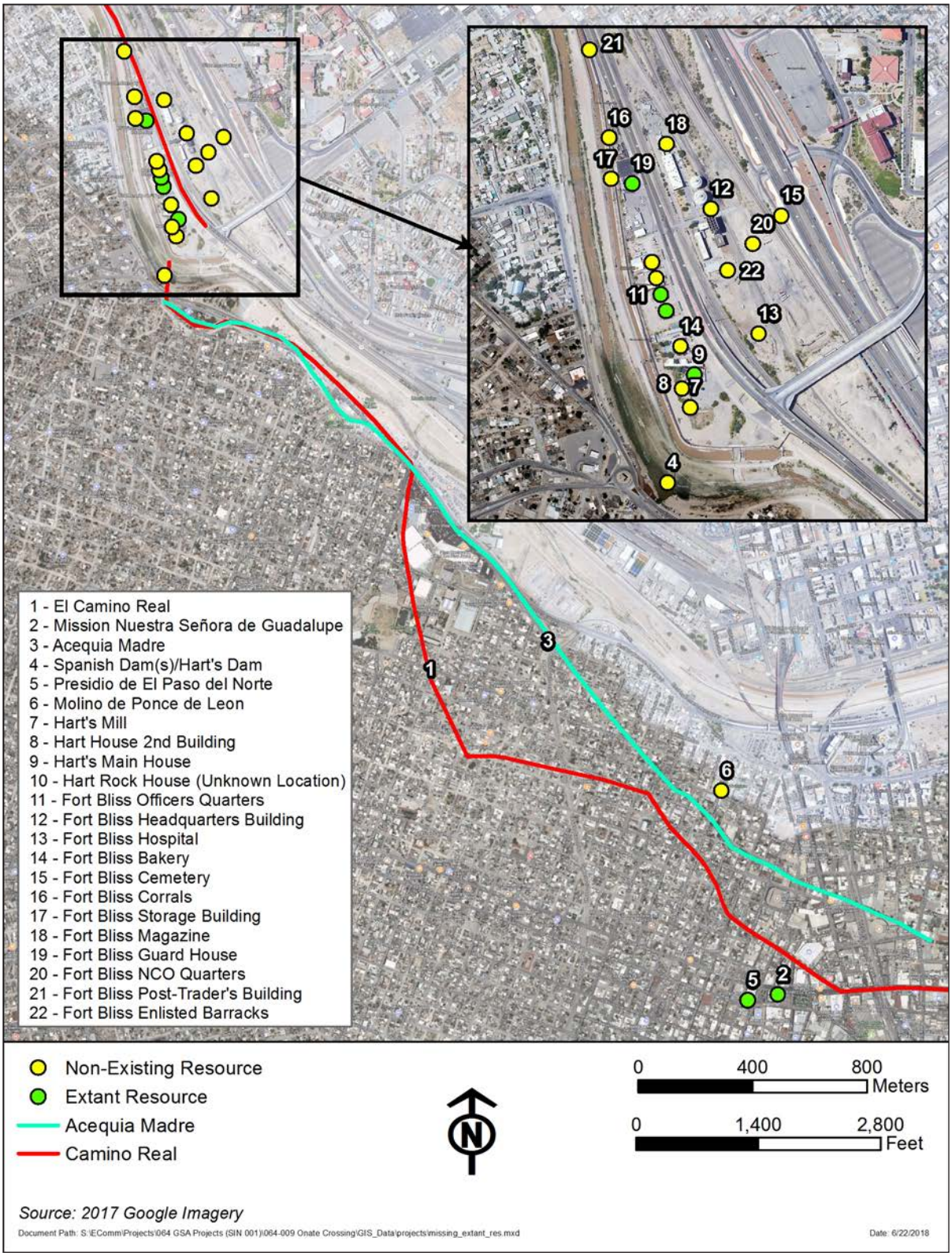

Figure 4-28. Map showing existing and missing resources associated with the Oñate Crossing cultural landscape.

> a nursery of the fruit trees of almost all countries and climes. It has a length of eight miles and a breadth of nearly three. I was struck with the magnificent vineyards of this place, from which are made great quantities of delicious wine (Pattie 1831:112).

Emory and Pope both remarked on the wines of El Paso del Norte, writing that the region's vineyards and wines were by far its most valuable commodity. Pope described the wines of El Paso as resembling those of Madeira, "and it is much to be doubted whether this portion of New Mexico and Texas is at all surpassed in the quality of its grapes, even by that favored island" (Pope 1859:33). Emory's assessment of the wines of El Paso del Norte was much the same, although he also noted that "the culture of the grape and its product of wine, would be much increased but for the difficulty in procuring vessels in which to place it for transportation. There is no wood in that whole region from which casks can be manufactured…(Emory 1857:91)." Although shade trees were common in the El Paso valley along the river, the lack of straight, strong timber for building was noted by more than one visitor to this region.

Grapes were not the region's only agricultural commodity. By the nineteenth century wheat fields and fruit orchards gave both sides of the river a romantic aura. Upon first reaching Franklin Ranch in present day El Paso, Anson Mills remarked that the town consisted of "some hundred and fifty acres in cultivation in beautiful grape, apple, apricot, pear and peach orchards, watermelons, grain, wheat and corn, it seemed more beautiful, especially when under the shade of the large cottonwood trees along the acequias" (Mills 1918:51-52). In describing El Paso del Norte Ober wrote:

> A population of above fifteen thousand supports itself upon the products of the valley, and the wheat, pears, peaches, onions, and apples of the cooler portions of the mountain range. But with the exception of the fruit trees, and the willows and poplars of the river-banks, the chaparral is about the only vegetation of the region. The exquisite climate, at a level of nearly four thousand feet above the sea, and these environs of cultivated land, contrasting forcibly in their vivid green with the gray alluvial hills, and rocky mountain crests, impart to the place a charm peculiar to all the scenery of Northern Mexico, which has something Levantic, or of a North African character. Its gardens and vineyards, and its slow-running acequias, meandering through narrow streets and adobe walls, give to Paso del Norte an aspect different from other frontier towns, as if a fragment of Southern Mexico had been transported here across the intervening deserts (Ober 1884:600).

Photographs and paintings from the late nineteenth and early twentieth centuries offer glimpses of the former vegetation of the Oñate Crossing landscape. Cottonwoods and willow trees fronted the river banks and grew quite tall along the Acequia Madre (**Figures 4-29 and 4-30**). Regrettably no photographs exist of the vineyards, orchards and wheat fields that made the region so famous. These were strung along the river banks and canals outside the town centers. However, an aerial photograph made in the 1950s does clearly depict the farm plots strung along the Acequia Madre on the Mexico side of the border (**Figure 4-31**).

Figure 4-29. Early twentieth-century photograph of the Acequia Madre shaded by tall cottonwoods (source: Portal to Texas History).

Figure 4-30. Nineteenth-century León Trousset painting of Ciudad Juárez at the Acequia Madre looking north toward El Paso. Note the denuded cottonwood trees and the man chopping branches from one tree in the foreground (source: the Trousset family online 2017).

Figure 4-31. A 1955 bird's eye aerial photo looking southeast along the Rio Grande. Agricultural fields of Mexico and Texas can be seen at the top of the photograph and along the Acequia Madre. The Hart's Mill area is at the bottom (courtesy of TxDOT).

The town center of El Paso del Norte (Juárez), however, was relatively barren in terms of plant life, at least at the end of the nineteenth century. Most drawings and photographs show the Misión de Guadalupe on a bare, packed earth embankment surrounded by a stone retaining wall, with the only vegetation being young trees surrounding the plaza in front of it (**Figures 4-32**).

The area around Hart's Mill was still relatively lush through the end of the nineteenth century, shaded by cottonwoods and willows (**Figure 4-33**), while the mill was supposedly "bowered in mission grapes, for which the valley was famed at the time" (Newton 1935). In 1918 an obituary for Juan Hart described native trees and grasses around the house, "making the great wide front porch a cool shady spot" (Hart Vertical file 1918). The yard behind the house likely had an orchard or garden. Outside the floodplain, however, vegetation was patchy, characterized mostly by creosote, prickly pear and dessert grasses (**Figure 4-34**). A nineteenth-century view of the Officer's Quarters at Fort Bliss shows a line of newly planted cottonwood trees along the old Camino Real road, implying a hopeful effort was made at landscape beautification using native trees (**Figure 4-35**).

Figure 4-32. León Trousset painting of the mission (source: the Trousset Family online 2017).

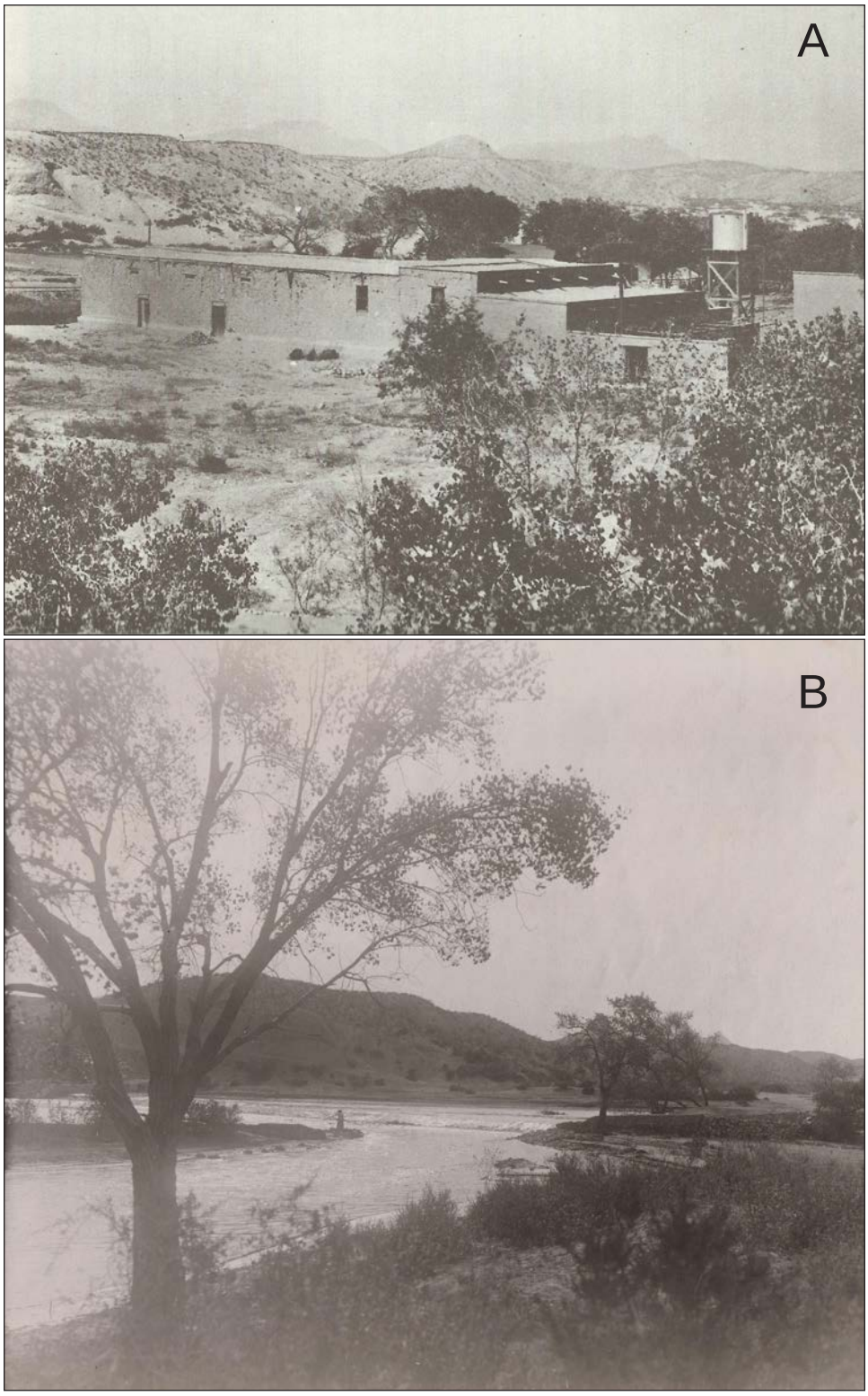

Figure 4-33. Two images showing vegetation around Hart's Mill in the late nineteenth century. A) a view of Hart's Mill showing trees along the river bank, facing southeast (source: Strickland 1963), B) Cottonwoods and scrub line the riverbanks at the falls at Hart's Mill, facing northwest (courtesy of El Paso Community Foundation).

Figure 4-34. View of soldiers at Fort Bliss crossing an arroyo. Photograph probably taken near Lanoria Mesa. The scrub vegetation in this image is typical of flora outside the Rio Grande floodplain (courtesy of El Paso Public Library).

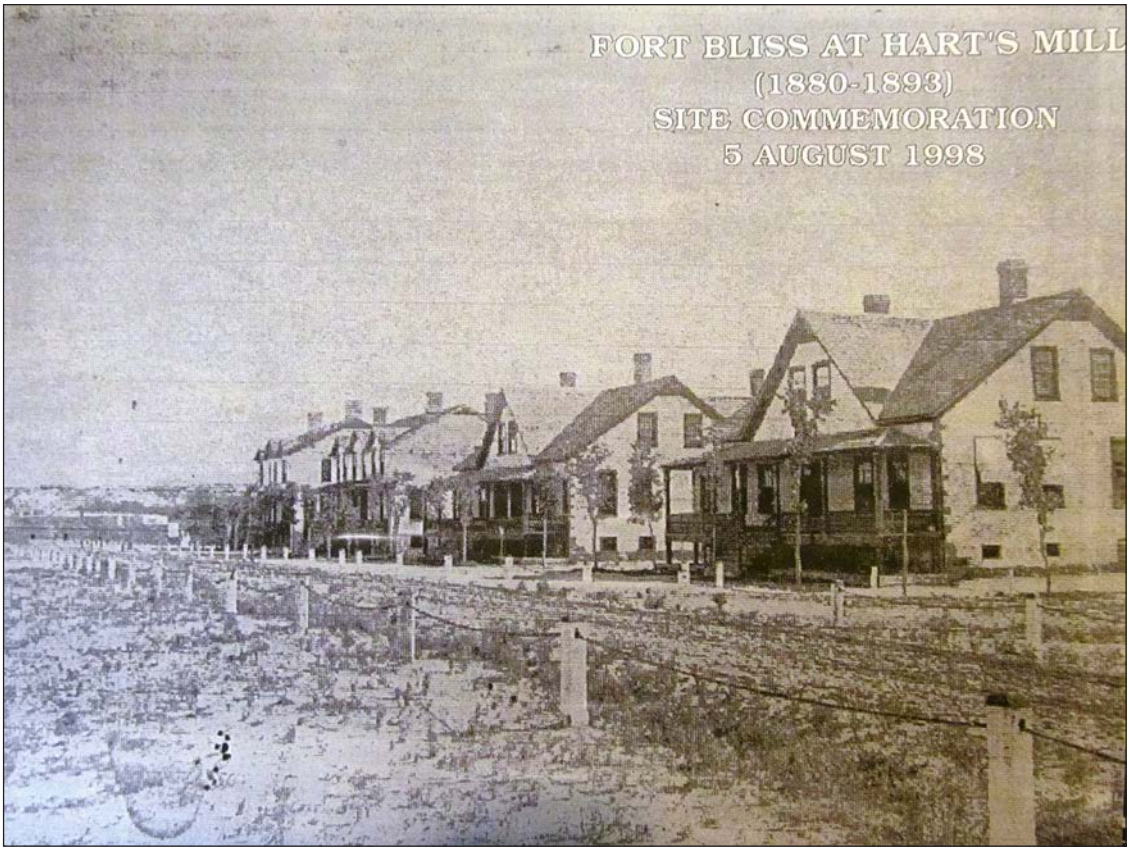

Figure 4-35. Officer's Quarters at Old Fort Bliss with a hopeful line of newly planted trees in front of them (courtesy of Gary Williams).

Current vegetation within the study area belies the quaint gardens, orchards, and grape arbors of former times. The Fort Bliss Officer's Quarters and Hart Home are virtually stripped of any sort of targeted effort at landscaping, save for a lone retama tree outside the Hart Home (**Figure 4-36**). Closer to the river, a few cottonwood trees remain, along with mesquite, snakeweed, giant cane, Johnson grass, Russian thistle, and scrubby retama trees (**Figure 4-37**). Meanwhile in the plaza in front of Misión de Guadalupe, the trees planted a century ago have matured, creating a shady public square, where previously the landscape was dusty packed earth. Along the Acequia Madre, trees still line portions of it, although most plants appear to be invasive or opportunistic species (**Figure 4-38**).

Historically, the Rio Grande gave travelers within this cultural landscape desperately needed food and water and a safe place to cross the river. While the Rio Grande still provides water for residential, commercial, industrial, and agricultural uses, its ability to meet the needs of the modern population is stretched to capacity.

Urbanization throughout the river corridor has eliminated or diminished many of the habitat types (and associated plants and animals) that created the abundant resources used by historical travelers, and natural diversity has declined significantly in the area. A growing population, industrialization, and a changing climate are putting pressure on this fragile environment, creating an uncertain future for the landscape in which Hart's Mill, Old Fort Bliss, and the Camino Real de Tierra Adentro are situated.

4.5 Views, View Sheds, and Circulation Systems

One of the most remarkable transformations of the Oñate Crossing landscape in the twentieth century relates to the view shed. When the associated built environment resources were constructed, the views from them to the road, and more importantly the crossing at El Paso del Norte were unobstructed. A 1918 newspaper article described the view from the Hart Home:

> From the rear, the river and Mexico may be seen well and "amigos" of the old men remembered the days when swifty travelling revolutionary parties could be seen charging toward Juárez or sneaking slowly toward the city (Hart Vertical File 1918).

Today, views are completely obscured by the radical changes that have accompanied urban expansion, flood control, and border protection (**Figure 4-39**). Specifically, elevated highways, works of the IBWC, the border fence, and night-time floodlights, plus dense urban development have impaired the visual connectivity of resources. Whereas once the crossing was fluid, today it is both visually and physically obstructed. This is best exemplified at Hart's Mill, where not only the elevated IH 10, Yandell Street ramp, but also the new Loop 375 have virtually dwarfed the once prominent historic landmarks comprising the former Hart Home and Fort Bliss Officer's Quarters. Behind them, much of the original river bank has been modified for the American Canal, and a metal border wall blocks views and access to the river (**Figures 4-40** and **4-41**).

Figure 4-36. Sparse vegetation outside the Hart Home.

Figure 4-37. Vegetation along the Rio Grande near Hart's Mill.

Figure 4-38. Modern photograph of the Acequia Madre showing surrounding vegetation.

Figure 4-39. View from the former location of Hart's Mill, looking southwest toward the Rio Grande.

On the Mexico side, at Misión de Guadalupe, twentieth-century changes have altered views to the church. Historical images and photographs suggest that the plaza in front of the church was largely open and devoid of any vegetation during most of the the nineteenth century.

Sometime in the late nineteenth century, trees were planted around the central plaza as part of a beautification effort. Those trees have now matured and obscure the views from the street to the seventeenth-century church. But more profoundly, until the end of the nineteenth century, the Misión de Guadalupe stood prominently in front of its plaza. However, with the completion of the new much larger cathedral in 1957, the views have altered dramatically. The old seventeenth-century mission was once a prominent landmark and one of the tallest structures of the city; today it is no longer a focal point on the plaza because the adjacent newer church commands the viewshed (**Figure 4-42**).

Circulation, too, is radically altered. It could be argued that the cultural landscape of the Oñate Crossing is all about circulation and transportation. This is the aspect of this particular landscape that has suffered the most. The first explorers along the Camino Real traveled by caravan, on foot, and with horses, mules or oxen that pulled supply carts. This trail from Mexico City to San Juan Pueblo in New Mexico is aligned southeast to northwest and the path is not one route but a series of braided routes that shifted to meet the needs of weather, traffic, and historical circumstance. However, the Oñate Crossing at El Paso del Norte became codified early on because this was one of the few spots where large caravans could safely ford the river. Eventually local dams and foot bridges aided travelers in crossing the river near El Paso del Norte, but caravans, pack animals, and wheeled vehicles still relied on the shallow rocky river bottom to cross.

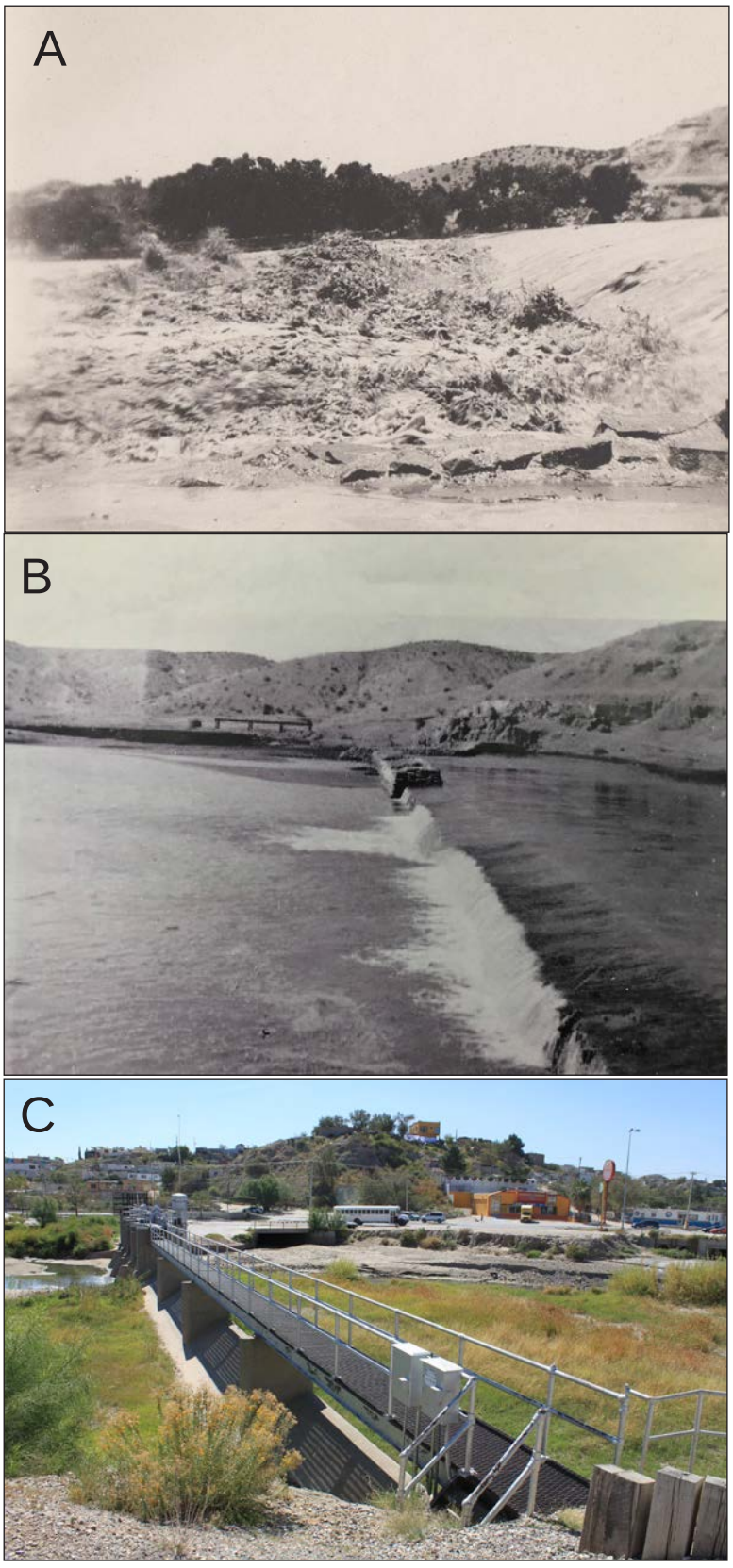

Figure 4-40. Three views of the dam over the Rio Grande at the Oñate Crossing, facing southwest. A) a ca. 1900 view of the river during a period of high water (courtesy of El Paso Community Foundation), B) 1934 view of the 1907 International Dam (courtesy of IBWC), and C) 2017 view of the International Dam as it looks today.

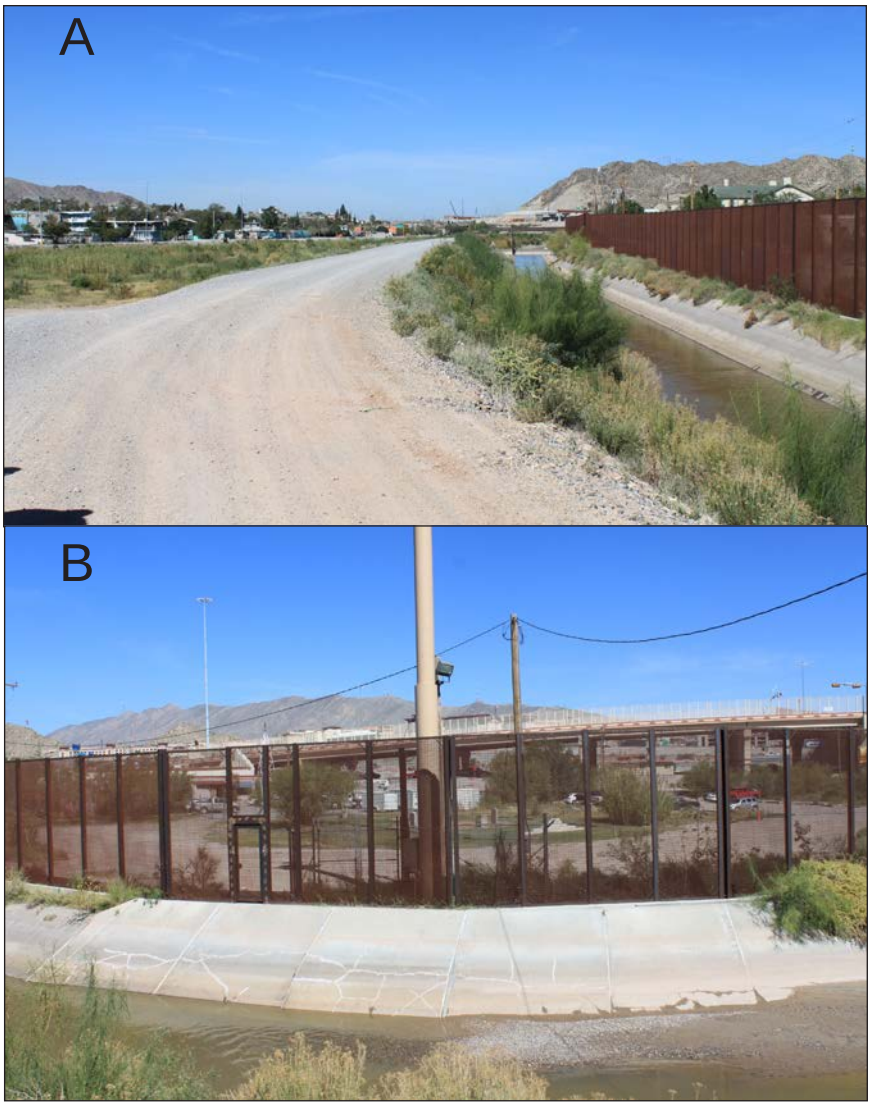

Figure 4-41. Two views from the Oñate Crossing. A) from the access road along the American Canal, looking north, and B) from the American canal looking northeast.

In the 1850s and 1860s, Hart used mule teams to deliver flour, and horses and coaches to transport mail and people in an out of Mexico. As late as the 19-teens residents of El Paso and Ciudad Juárez crossed the river on foot and horseback using this natural ford to move people and supplies for the Mexican Revolution across national border lines.

This centuries-old circulation system began to collapse starting with major efforts to control irrigation and flooding in the Rincon, Mesilla and El Paso Valleys. Elephant Butte Dam, constructed in New Mexico in 1916, altered hydrology of the Rio Grande, but even more relevant for the El Paso Valley, the IBWC's American Dam (upstream from Hart's Mill) and the American Canal of the 1930s drastically changed river flow, biotic communities, and the physical landscape around the river. Although annual flooding was no longer a common occurrence, as it had been up to the end of the nineteenth century, the freely flowing waters of the Rio Grande slowed to a lazy stream.

Figure 4-42. Comparison views of the Misión de Guadalupe and plaza. A) ca. 1880s view of the church (source: Palace of the Governors Photo Archives), and B) 2017 view of the church. Note that the 1957 church and mature trees now obscure the view to the church from Avenida 16 de Septiembre.

The once rocky bed of the river at the Oñate Crossing is now clogged with mud and silt. Pollution from nearby Smeltertown, fertilized agricultural fields, and urban sprawl have further contributed to the decline of the once plentiful fish and animal life that made the river corridor their habitat.

Twentieth-century urbanization and national border politics have also left their mark on the trail itself. While portions of the Camino Real through Ciudad Juárez do remain along Ugarte and la Presa Streets through downtown (**Figure 4-43**) , the modern street grid beyond the city center does not align cleanly with the former transportation route. The crossing itself at Hart's Mill is impeded by locked gates and border fences (**Figure 4-44**).

Figure 4-43. Comparison views of Calle Ugarte: A) a late nineteenth century view down Calle Ugarte (courtesy of Francisco Ochoa Rodriguez), and B) a view from 2017 at roughly the same location.

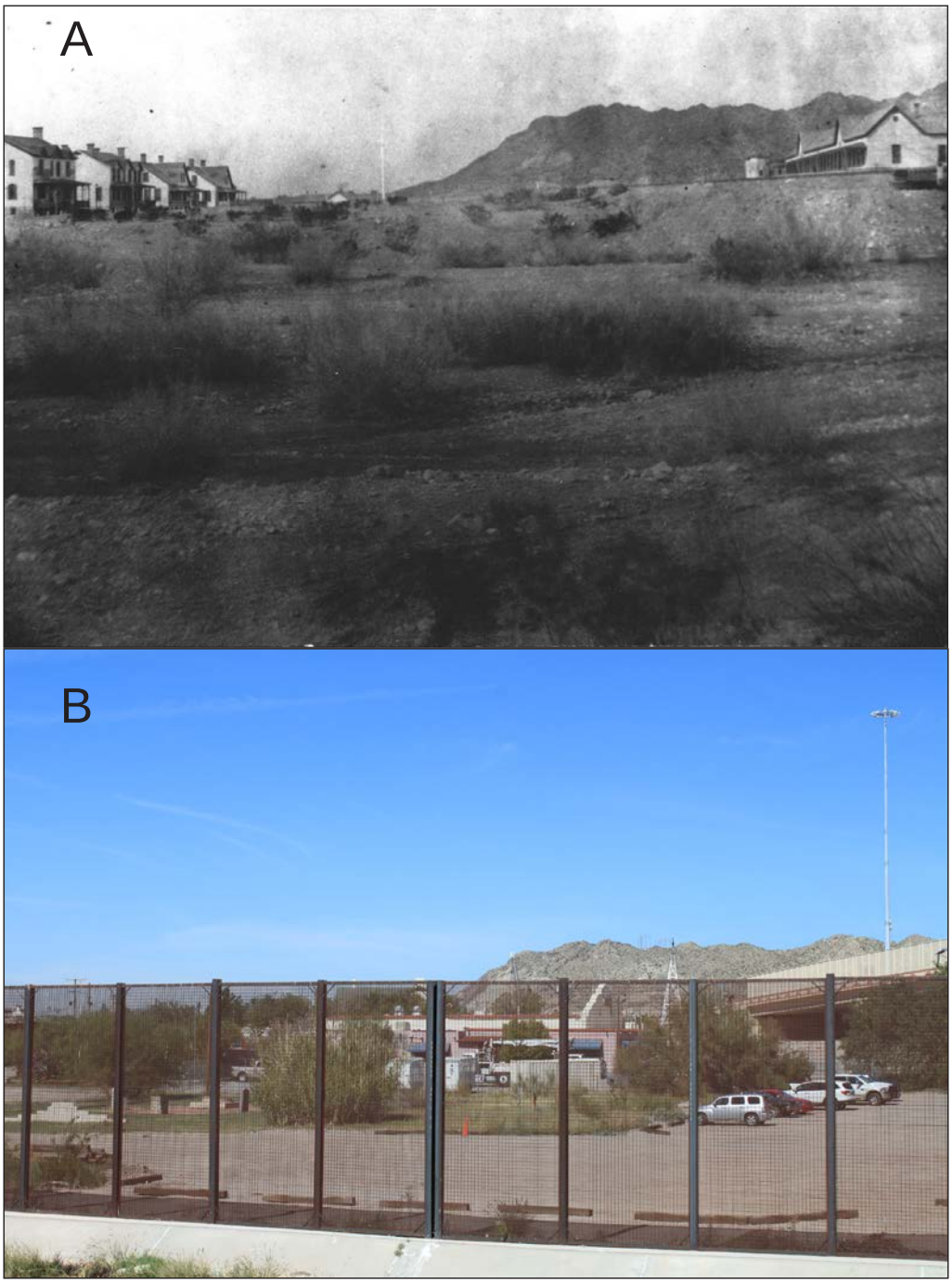

Figure 4-44. Comparison views from Hart's Mill looking northeast toward the Franklin Mountains: A) ca. 1890s view (courtesy of University of Texas El Paso, Special Collections), and B) 2017 view.

On the American side Paisano street still follows the old Camino Real, but the surface street in front of Hart's Mill is more of a driveway and no longer connects to downtown El Paso, dead-ending in front of the former Hart property. Drivers along Paisano Street are now channeled onto an urban arterial and the elevated Yandell Street ramp that pass by Hart's Mill and the buildings of Old Fort Bliss, but do not actually access them. In fact, to get to the buildings belonging to Hart's Mill and Old Fort Bliss by car from downtown El Paso (it is almost impossible to get there on foot without considerable bodily danger) requires a series of complex u-turns and intersection negotiations that are very difficult to understand without intimate prior knowledge of the street system. In effect, the historic landmarks comprising Hart's Mill and Old Fort Bliss have been stranded in a warren of highways, ramps, and barriers (**Figure 4-45**) It is this crucial connectivity that has been reduced to the point of obliteration (**Figure 4-46**).

Figure 4-45. View from the former Hart's Mill looking toward the Yandell Street Bridge that splits the Oñate Crossing landscape on the American side and cuts off access to the remaining features from elsewhere in El Paso.

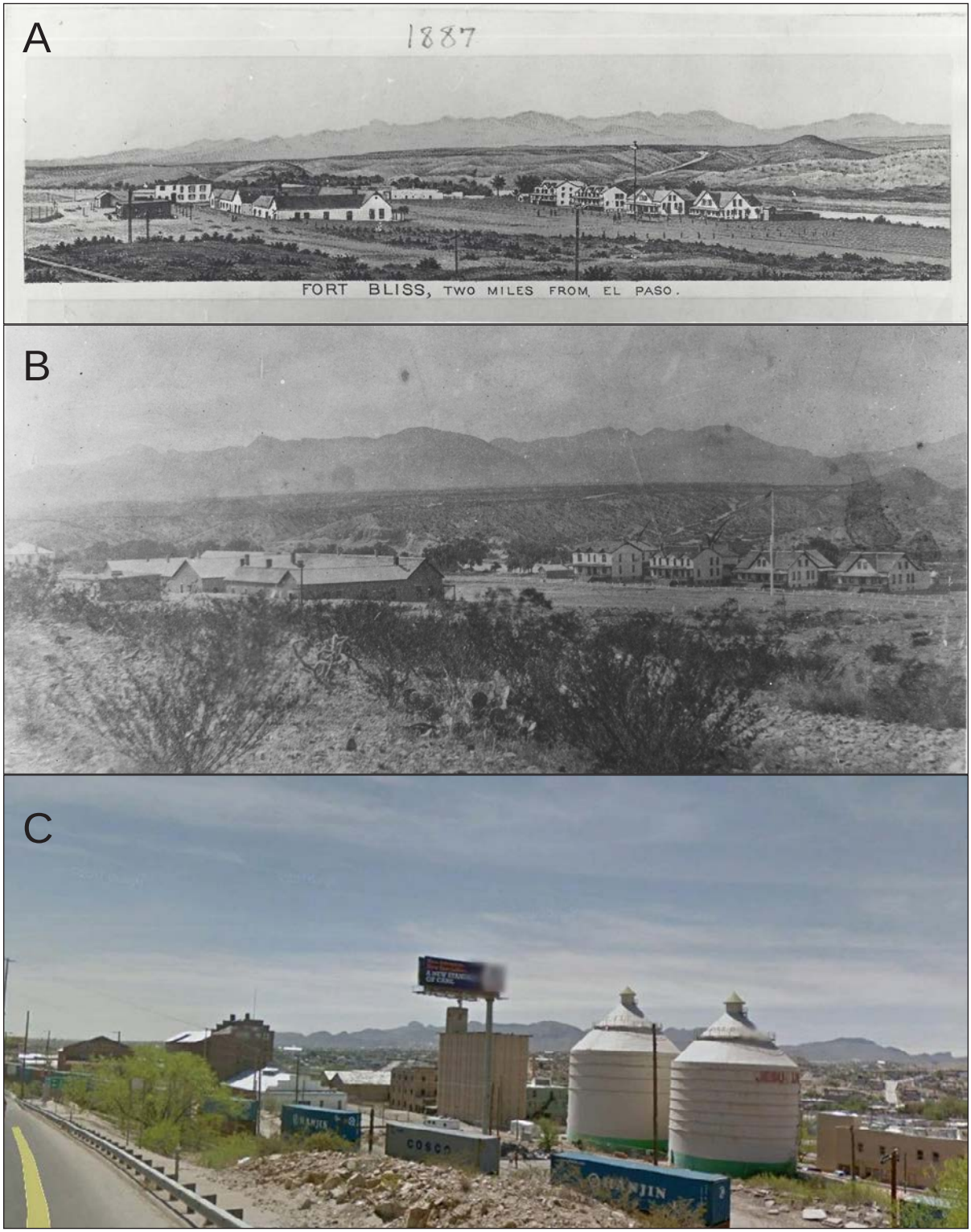

Figure 4-46. Comparison views of Old Fort Bliss looking southwest. A) 1887 postcard of Old Fort Bliss, B) late nineteenth-century photograph of the fort (A and B courtesy of Fort Bliss Non-Commissioned Officer's Museum), and C) ca. 2015 Google Earth street view taken from IH-10 exit ramp. The Globe Mills buildings in the foreground have since been demolished.

References

Ackerly, Neal W.

1999 *Controlling Water on the Border: The American Canal System, International Boundary and Water Commission, El Paso, Texas*. Prepared by Human Systems Research, Inc. Prepared for the International Boundary and Water Commission, United States Section, El Paso, Texas.

1966 *A Review of the Historic Significance of and Management Recommendations for Preserving New Mexico's Acequia Systems*. Dos Rios Consulting, Santa Fe.

Bartlema, Lauri, Carla Newman, and Cynthia Roldan

1991 *Old Fort Bliss at Hart's Mill*. Unpublished manuscript on File at the Centennial Museum, University of Texas, El Paso.

Benavides, Alonso de

1916 (1630) *Memorial de Fray Alonso de Benavides*, translated by Mrs. Edward E. Ayer, annotated by Frederick Webb Hodge and Charles Fletcher Lummis. Plano Litho Printing Co., Chicago.

Bolton, Herbert Eugene

1908 *Spanish Exploration in the Southwest: 1542–1706*. Barnes & Noble, New York.

Bonneville, Colonel L. E.

1858 General Orders, No. 10. Headquarters Department of New Mexico, Santa Fe, November 5, 1858.

Carson, Charlene Ochsner

2017 *Gristmills of Central Texas*. Arcadia Publishing, Charleston, South Carolina.

Center for Interdisciplinary Health Research and Evaluation

2018 Demographic Data Juárez City and County. University of Texas, El Paso, College of Health Sciences, Center for Interdisciplinary Health Research and Evaluation, https://www.utep.edu/chs/cihre/demographics/juarez-city-and-county.html, accessed May, 2018.

Chipman, Donald

2010 *Spanish Texas 1519–1821* (revised edition). University of Texas Press, Austin.

Cioc-Ortega, Mark

2013 "Was Simeon Hart El Paso's First Blogger?" August 1, 2013, http://newspapertree.com/articles/2013/08/01/was-simeon-hart-el-pasos-first-blogger, accessed April, 2014.

Collett, Russell and Graves, Adam

2015 *Paisano Drive 48-Inch Transmission Waterline Archeological Monitoring El Paso County, Texas. Archeological Monitoring Summary Report.* Prepared for El Paso Water Utilities Public Service Board. Arcadis, Austin.

Crawford, Cadyn, Luis Gavan, Amanda Rodriguez, and Dakota Scheller

2010 Simeon Hart Pioneered Local industry. In *EPCC Borderlands*, (2010–2011), pp. 4, 13.

Crowder, David

2017 "City closes Old Fort Bliss." November 3, 2013, *El Paso Inc.* http://www.elpasoinc.com/news/local_news/city-closes-old-fort-bliss/article_3ab18836-449f-11e3-89ab-001a4bcf6878.html, accessed December 20, 2017.

Crego, Arthur Van Voorhis

1969 *City on the Mesa. The New Fort Bliss. 1890-1895.* Unpublished manuscript on file at the C.L. Sonnichsen Special Collections Department, University of Texas at El Paso Library, El Paso.

Davis, William Watts Hart

1857 *El Gringo, or, New Mexico & Her People*. The Rydal Press, Santa Fe.

Diocese of Ciudad Juarez

2018 Misión de Guadalupe de Los Indios Mansos del Paso del Norte http://www.diocesisdeciudadjuarez.org/historia/parroquias/mision/, accessed June 2018.

El-Hage, Albert, and Daniel W. Moulton

1998 *Evaluation of Selected Natural Resources in El Paso County, Texas*. PGMA Study: El Paso County, April 1998. Prepared by the Resource Protection Division, Water Resources Team, Texas Parks and Wildlife Department.

El Paso County Historical Commission

2016 Globe Mills, El Paso, Texas, Erected 106 Years Ago in 1910, Soon to Be Demolished for Freeway Expansion. El Paso County Historical Commission, January 18, 2016, http://elpasocountyhistory.com/globe-mills-el-paso-texas-erected-106-years-ago-in-1910-soon-to-be-demolished-for-freeway-expansion/, accessed May, 2018.

El Paso (Daily) Herald

1901a "Change in Plan of New Juarez Jail." Friday May 24, 1901. P. 6, c. 3.

1901b "Interesting Find in Old Juarez Jail: Ancient Firearms, Including Two Spanish Aquebuses and Parts of Canon." Friday May 24, 1901. P. 6, c. 4.

1914 "Pioneers Plan to Let Babies Become Members: Movement to Build Pioneers' Home Started; Members Give Liberally." May 11, 1914.

1918 "Native Food for Pioneers' Annual Feast: Oldtimers Meet to Exchange Reminiscences; Membership Dwindling." July 22, 1918

1924 "Old Pioneer Days, When Hospitality Reigned, as Shown in Hart's Mill." August 1, 1924.

El Paso Herald-Post

1934 "Old Hart Home Made Hospital for Transients." June 20, 1934.

El Paso Times

1935a "Hart's Mill May Be Restored As Civic Beautification Project." May 27, 1935.

1935b "Hart's Mill Wheel Is Still in Use." August 30, 1935.

1935c "Mrs. E. M. Newton Gives History of Old Hart's Mill, A Landmark." May 26, 1935.

1936 "Wind, Rain Gradually Removing Ruins of Hart's Mill." May 23, 1936.

1936a "Delays Efforts To Find Body of E.P. Pioneer." June 11, 1936 p2 c2;

1936b "Believes Body Of Hart Buried Near Old Mill." June 9, 1936, p12 c5.

1940 "Hart Homestead, Landmark of E.P., Becomes Barroom." August 11, 1940.

1947 "The Old Waterwheel." October 30, 1947.

1952 "Everyday Events. " January 8, 1952, p4.

2016 "Globe Mills building coming down for highway." January 20, 2016, https://www.elpasotimes.com/story/news/local/el-paso/2016/01/20/elpaso-historic-buildings-demolition-txdot-highway/79029384/, accessed May, 2018.

Emory, William M.

1857 *Report on the United States and Mexican Boundary Survey, Made Under the Direction of the Secretary of the Interior.* A.O.P. Nicholson Printer, Washington, D.C.

Enriquez, Mons. Carlos

1984 *Historia de la Misión de Nuestra Señora de Guadalupe, Su Templo, Sus Cambios.* Lux, Ciudad Juárez

Frazer, Robert W.

1972 Purveyors of Flour to the Army: department of New Mexico, 1849–1861. *New Mexico Historical Review* 47:213–238.

Griffith, Glenn, Sandy Bryce, James Omernik, and Anne Rogers

2007 *Ecoregions of Texas*. Texas Commission on Environmental Quality. ftp://ftp.epa.gov/wed/ecoregions/tx/TXeco_Jan08_v8_Cmprsd.pdf (report), accessed May, 2018.

Hammond, George P.

1927 Don Juan de Oñate and the Founding of New Mexico: A New Investigation into the Early History of New Mexico in the Light of a Mass of New Materials Recently Obtained from the

Archivo General de Indias, Seville, Spain. *Historical Society of New Mexico* vol. II, October. El Palacio Press, Santa Fe.

Hart, Simeon Vertical File

1918 "Captain Juan S. Hart Dies Suddenly at Ranch Home is New Mexico Mountains." Typed copy of obituary submitted to the El Paso Morning Times, July 16. 1918. On file at the El Paso Public Library, El Paso.

1952 Letters from Major. J.M. Cummings to 'Enrique' dated January, 27, February 12, March 5, and March 31, 1952. On file at the El Paso Public Library, El Paso.

House, Nicholas P.

2014 Susan Shelby Magoffin at the Pass of the North. *Chronicles of the Trail: Journal of El Camino Real de Tierra Adentro Trail Association* 10(1):27–38.

Hoig, Stan

2013 *Came Men on Horses: The Conquistador Expeditions of Francisco Vásquez de Coronado and Don Juan de Oñate.* University Colorado Press, Boulder and London.

Hudnall, Ken, and Connie Wang

2003 *Spirits of the Border: The History and Mystery of Ft. Bliss, Texas*. Omega Press, El Paso.

Hughes, Anne E.

1914 The Beginnings of Spanish Settlement in the El Paso District. *University of California Publications in History* 1(3):295–392.

International Boundary & Water Commission

2018 History of the International Boundary and Water Commission. International Boundary & Water Commission, United States and Mexico, United States Section, https://www.ibwc.gov/About_Us/history.html, accessed May, 2018.

Ivey, Rosalie

1942 A History of Fort Bliss. Master's thesis, Graduate School of History. Manuscript on file at the C.L. Sonnichsen Special Collections Department of the University of Texas Library, El Paso.

Jamieson, Perry

1993 *A Survey History of Fort Bliss: 1890–1940*. Historic and Natural Resources Report No. 5, Cultural Resources Management Program, Directorate of Environment, United States Army Air Defense Artillery Center, Fort Bliss, El Paso.

Lindemuth, John

2011 *Final Report: Cultural Resources Survey for the Construction, Operation, and Maintenance of Tactical Infrastructure, K1B Segment, U.S. Border Patrol, El Paso Sector, El Paso Station, El Paso County, Texas*. November 2011. Prepared for the U.S. Army Corps of Engineers, Fort Worth District, Prepared by Gulf South Research Corporation.

Long Distance Trails Group

2004 *El Camino Real de Tierra Adentro National Historic Trail: Comprehensive Management Plan/Final Environmental Impact Statement*. Prepared by Long Distance Trails Group—Santa Fe, National Park Service and New Mexico State Office, Bureau of Land Management. Submitted to National Park Service, Bureau of Land Management, U.S. Department of the Interior, Santa Fe.

McMahan, Craig A., Roy G. Frye, and Kirby L. Brown

1984 *The Vegetation Types of Texas Including Cropland*. Texas Parks and Wildlife Department, Wildlife Division, Austin.

Magoffin, Susan Shelby

1926 *Down the Santa Fé Trail and into Mexico; the Diary of Susan Shelby Magoffin, 1846–1847*, edited by Stella M. Drumm. Yale University Press, New Haven.

Merlan, Thomas, Michael P. Marshall, and John Roney

2011 National Register of Historic Places Multiple Property Documentation Form: Camino Real in New Mexico, AD 1598–1881. NRHP Reference Number 64501104, NM State Register #1952, date accepted April 8, 2011. Prepared by Merian Associates LLC, Santa Fe. Submitted to the U.S. Department of the Interior, National Park Service.

Metz, Leon C.

1988 *Desert Army: Fort Bliss on the Texas Border*. Mangan Books, El Paso.

1989 *Border: The U.S.-Mexico Line*. Mangan Books, El Paso.

1993 *El Paso Chronicles: A Record of Historical Events in El Paso, Texas*. Mangan Books, El Paso.

2018 Fort Bliss. In *Handbook of Texas Online*, accessed May, 2018, http://www.tshaonline.org/handbook/online/articles/qbf03.

Meyer, Michael

1996 *Water the in the Hispanic Southwest: A Social and Legal History (1550–1850)*. University of Arizona Press, Tucson.

Mills, Anson

1918 *My Story*, edited by C. H. Claudy. Published by the Author, Press of Byron S. Adams, Washington, D. C.

Mills, William Wallace

1962 *Forty Years at El Paso: 1858–1898*, edited by Rex W. Strickland. Carl Hertzog, El Paso.

Mires, Peter B., Howard C. Higgins, Matthew H. Bilsbarrow, and Pat O'Neill

1992 *Archaeological Services for Rio Grande American Canal Extension, El Paso County, Texas: Class I Overview and Research Design*. Prepared for the International Boundary and Water Commission, prepared by Mariah Associates, Inc., EL Paso.

Montes, Aaron

2017 "Investors move on Oñate site: Trio wants to preserve historic crossing." October 9, 2017, *El Paso Inc.*, http://www.elpasoinc.com/news/local_news/investors-move-on-o-ate-site/article_7169ff2c-ac40-11e7-8676-87d9961cc0ee.html, accessed May, 2018.

2018 "El Paso entrepreneurs buy Onate site: Trio plans to invest 'a tremendous amount'." January 29, 2018, *El Paso Inc.*, http://www.elpasoinc.com/news/local_news/el-paso-entrepreneurs-buy-o-ate-site/article_d0908b7a-046e-11e8-b130-337a7f07b3b6.html, accessed June, 2018.

Moorhead, Max

1991 *The Presidio: Bastion of the Spanish Borderlands*. University of Oklahoma Press, Norman and London.

Murphy, Retta

1937 The Journey of Pedro de Rivera, 1724–1728: Introductory Note. *The Southwestern Historical Quarterly*, Vol. XLI(2):125–141.

National Park Service

1972 *Old Fort Bliss, 1878-1893 and site of Hart's Mill. National Register of Historic Places Nomination Form.* Bell, Wayne and Gary Hume. Texas Historical Commission. https://atlas.thc.state.tx.us

1991 Franklin Canal. National Register of Historic Places Registration Form. Prepared by the U.S. Bureau of Reclamation, November 16, 1991. Submitted to the U.S. Department of the Interior, National Park Service, accepted February, 1992.

National Weather Service

2018a El Paso Climate Data and Information, https://www.weather.gov/epz/climatedataforelpaso, accessed May, 2018.

2018b El Paso Wind Rose Data, https://www.weather.gov/epz/elpwindrosedata, accessed June, 2018.

Ober, Frederick Albion

1884 *Travels in Mexico and Life Among the Mexicans.* J. Dewing and Company, San Francisco, online at https://en.wikisource.org/wiki/Travels_in_Mexico_and_life_among_the_Mexicans, accessed May, 2018.

Ochoa Rodriguez, Francisco

N.d. El pueblo de adobe: la arquitectura de la Villa de Guadalupe del Paso Río Grande del Norte entre los siglos XVII-XIX. Unpublished paper provided by the author.

Office of the Historian

2018 French Intervention in Mexico and the American Civil War, 1862–1867. U.S. Department of State, Office of the Historian, https://history.state.gov/milestones/1861-1865/french-intervention, accessed May, 2018.

Pattie, James O.

1988 *Personal Narrative of James O. Pattie*. Edited by Richard Batman. Mountain Press Publishing Company, Missoula.

Pérez de Villagrá, Gaspar

1610 *Historia de la Nueva México, 1610*. Edited and translated by Miguel Encinias, Alfred Rodriguez, and Joseph P. Sánchez. University of New Mexico Press, Albuquerque.

Peña, Sergio, and César M. Fuentes

2007 Land Use Changes in Ciudad Juárez, Chihuahua: A Systems Dynamic Model. *Estudios Fronterizos* 8(16), versión on-line, http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0187-69612007000200003, accessed May, 2018.

Perales, Monica

2008 Fighting to Stay in Smeltertown: Lead Contamination and Environmental Justice in a Mexican American Community. *The Western Historical Quarterly* 39(1), http://www.historycooperative.org/journals/whq/39.1/perales.html, accessed June 13, 2008, presented online in association with the History cooperative, http://www.historycooperative.org, accessed May, 2018.

Pike, Zebulon Montgomery.

1807 *An Account of Expeditions to the Sources of the Mississippi, and through the Western Parts of Louisiana, to the Sources of the Arkansaw, Kans, La Platte, and Pierre Jaun, Rivers* [sic]. Wisconsin Historical Society Digital Library and Archives, www.americanjourneys.org/aj-143/ accessed May, 2018.

Pope, John

1854 *Explorations and Surveys for a Railroad Route from the Mississippi River to the Pacific Ocean, War Department: Report of Exploration of a Route the Thirty-Second Parallel of North Latitude,*

from the Red River to the Rio Grande. U.S. War Department. Making of America Books, https://quod.lib.umich.edu/cgi/t/text/text-idx?c=moa&idno=AFK4383.0002.004 , accessed May, 2018.

Sanger, Donald Bridgeman

1933 *The Story of Old Fort Bliss.* Self Published, El Paso.

Silberberg, Amy, and Rachel Feit

2014 *Intensive Archeological Survey of a Proposed Drainage Basin Along Loop 375/Border Highway west.* Submitted to Texas Department of Transportation. Antiquities Permit No. 6329. Technical Report No. 77 Stell Environmental and AmaTerra Environmental, Austin.

Simmons, Marc

1991 *The Last Conquistador: Juan de Oñate and the Settling of the Far Southwest*. University of Oklahoma Press, Norman.

Smith, C. Lynn, and Beth Reed

2012 *FINAL Non-Archeological Historic-Age Resources Reconnaissance-level Survey Report; Spur 1966: US 85 (West Paisano Drive) to Schuster Avenue*. August, 2012, revised October 2012. Prepared for the Texas Department of Transportation, El Paso District, Prepared by HNTB Corporation, Austin.

Soil Conservation Service

1971 *Soil Survey: El Paso County Texas*. U.S. Department of Agriculture, Soil Conservation Service in cooperation with Texas Agricultural Experiment Station. Issued November 1971.

Sonnichsen, C.L.

1968 *Pass of the North: Four Centuries on the Rio Grande. Volume 1, 1529–1917.* Texas Western Press, El Paso.

Strickland, Rex W.

1962a Introduction. In *Forty Years at El Paso: 1858–1898*, edited by Rex W. Strickland, pp. i–xxii. Carl Hertzog, El Paso.

1962b Notes. In *Forty Years at El Paso: 1858–1898*, edited by Rex W. Strickland, pp. i–xxii. Carl Hertzog, El Paso.

1962c Appendix I: Biographical Sketches of Ante-Bellum Residents of El Paso. In *Forty Years at El Paso: 1858–1898*, edited by Rex W. Strickland, pp. i–xxii. Carl Hertzog, El Paso.

1962d Appendix II: Fort Bliss. In *Forty Years at El Paso: 1858–1898*, edited by Rex W. Strickland, pp. i–xxii. Carl Hertzog, El Paso.

1963 Six Who Came to El Paso: Pioneers of the 1840's, *Southwestern Studies*, I(3):1–48.

Texas Historical Commission

2018a Old Fort Bliss. Atlas Number 5141003730. Texas Historic Sites Atlas, https://atlas.thc.state.tx.us/, accessed May, 2018.

2018b Details for Simeon Hart Residence, Site of Hart's Mill (El Molino). Atlas Number 5141004699. Texas Historic Sites Atlas, https://atlas.thc.state.tx.us/, accessed May, 2018.

Texas Parks and Wildlife Department

2018 Texas Ecoregions. Texas Parks and Wildlife Department, https://tpwd.texas.gov/education/hunter-education/online-course/wildlife-conservation/texas-ecoregions, accessed May, 2018.

Timmons, W. H.

1980 Papers of W. H. Timmons. "Letter from George C. Chalou to W.H. Timmons." On file at C.L. Sonnichsen Special Collections Department, University of Texas, El Paso.

1983 American in El Paso: The Formative Years (1848-1854). *Southwestern Historical Quarterly,* Vol. 87, Issue 1. pp.1-36.

1981 The Simeon Hart Residence—Site of Hart's Mill (El Molino). In *Simeon Hart Residence Site of Hart's Mill (El Molino)*, Texas Historical Commission, Official Texas Historical Marker documentation, June 10, 1981.

2018a Rodriguez-Sanchez Expedition. In *Handbook of Texas Online*, accessed May, 2018, https://tshaonline.org/handbook/online/articles/upr01.

2018b Hart, Simeon. In *Handbook of Texas Online*, accessed May 16, 2018, http://www.tshaonline.org/handbook/online/articles/fhaak.

U.S. Census Bureau

1860a 1860 United States Federal Census for Molino, County of El Paso, Texas. June, 1860. U.S. Census Bureau.

1860b Schedule 4—Production of Agriculture in Concordia in the County of El Paso in the Post Office El Paso, State of Texas. June, 1860.

2018 QuickFacts. U.S. Census Bureau online data tool, https://www.census.gov/quickfacts/fact/table/US/POP010210, accessed May, 2018.

White, Owen P.

1923 *Out of the Desert: the Historical Romance of El Paso*. The McMath Company, El Paso.