

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section _____ Page _____

=====

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 08000791


Date Listed: 8/21/2008

Green Bridge
Property Name

Dona Ana NM
County State

N/A
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.



Signature of the Keeper

8/21/2008

Date of Action

=====

Amended Items in Nomination:

SHPO Certification:

This will verify the SHPO's certification that this property *meets* the National Register Criteria. [The nomination form certification block was not fully completed at the time of submission.]

Bibliographical References:

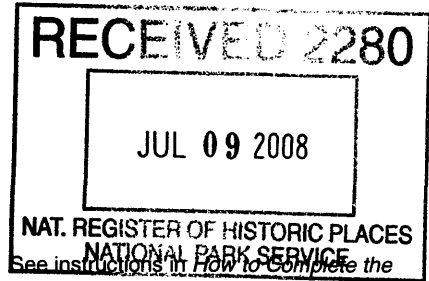
The property was *not* previously determined eligible for listing by the Keeper of the National Register and the previous documentation box in Section 9 should not be checked.

These clarifications were confirmed with the NM SHPO office.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service



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National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. *See instructions in How to Complete the National Register of Historic Places registration Form (National Register Bulletin 16A).* Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Green Bridge
other names/site number Rio Hondo Bridge at Picacho; Bridge 3452; Pecos River Bridge

2. Location

street & number 4100 Dripping Springs Road N/A not for publication
city or town Las Cruces, vicinity of N/A vicinity of
state New Mexico code NM county Doña Ana code 013 zip code 88011-5067

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant. nationally statewide locally. (See continuation sheet for additional comments.)

[Signature] 7 July 2008
Signature of certifying official/Title Date

State or Federal agency and bureau _____

In my opinion, the property meets does not meet the National Register criteria. (See Continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau _____

4. National Park Service Certification

- I hereby certify that the property is:
- entered in the National Register.
 - See continuation sheet
 - determined eligible for the National Register.
 - See continuation sheet
 - determined not eligible for the National Register
 - removed from the National Register.
 - other,
(explain:)

Signature of the Keeper [Signature] Date of Action 8/21/2008

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in count)

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
1	0	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

Historic Highway Bridges of New Mexico, 1850-1965

Number of Contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions

(Enter categories from instructions)

Transportation: Road-Related

Current Functions

(Enter categories from instructions)

Transportation: Road-Related

Transportation: Pedestrian-Related

7. Description

Architectural Classification

(Enter categories from instructions)

Other: Pratt Through Truss

Materials

(Enter categories from instructions)

foundation Concrete

walls Steel

roof N/A

other Timber

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.) See Continuation Sheets 7-5 through 7-7

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations N/A

(Mark "x" in all boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** birthplaces or graves.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property
- G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

Engineering

Period of Significance

1943-44

Significant Dates

1943;1944

Significant Person

(complete if Criterion B is marked)

Cultural Affiliation

N/A

Architect/Builder

Midland Bridge Company, Kansas City, Mo.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.) See Continuation Sheets 8-8 through 8-13

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.) See Continuation Sheet 9-14

Previous documentation on file (NPS): N/A

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- Previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record

Primary location of additional data:

- State Historic Preservation Office
- Other State Agency
- Federal Agency National Park Service
- Local Government
- University
- Other

Name of repository:

New Mexico Farm & Ranch Heritage Museum

Green Bridge

Name of Property

Doña Ana, New Mexico

County and State

10. Geographical Data

Acreage of Property less than one acre

UTM References

(place additional UTM references on a continuation sheet.)

1	<u>13</u>	<u>338040</u>	<u>3574837</u>	3	<u> </u>	<u> </u>	<u> </u>
	Zone	Easting	Northing		Zone	Easting	Northing
2	<u> </u>	<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>
					<input type="checkbox"/>	See continuation sheet	

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

The nominated property is a rectangular parcel measuring 134 feet in length, approximate east to west, and 17 feet in width, approximate north to south. The boundary encompasses the bridge from the extreme limits of the east of deck end to the extreme limits of the west end of deck and is depicted on the accompanying USGS quadrangle map.

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

The boundary has been established to isolate the bridge's superstructure which comprises the historic structure and exclude adjacent areas that are not directly associated with its history.

11. Form Prepared By

name/title	<u>Cameron L. Saffell, Curator of History</u>		
organization	<u>New Mexico Farm & Ranch Heritage Museum</u>	date	<u>February 2008</u>
street & number	<u>4100 Dripping Springs Road</u>	telephone	<u>575-522-4100</u>
city or town	<u>Las Cruces</u>	state	<u>NM</u> zip code <u>88011-5067</u>

Additional Documentation

submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (see enclosed *Dry Tortugas, NM*, USGS quadrangle map).

A **Sketch map** N/A

Photographs (see attached black-and-white photographs).

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO) or FPO for any additional items

Property Owner

(Complete this item at the request of SHPO or FPO.)

name	<u>Director of Real Estate, New Mexico State University</u>		
street & number	<u>MSC 3545, NMSU, PO Box 30001</u>	Telephone	<u>575-646-2807</u>
city or town	<u>Las Cruces</u>	state	<u>NM</u> zip code <u>88003</u>

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20303

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Section number 7 Page 5

Green Bridge
Doña Ana County, New Mexico

Description

The historic Green Bridge spans the Tortugas Arroyo on the campus of the New Mexico Farm and Ranch Heritage Museum, just outside Las Cruces, Doña Ana County, New Mexico. The single-span, steel through-truss bridge is a Pratt design with pinned connections tying together seven 19-foot panel sections for a total length of 134 feet and an overall width of 17 feet. The deck consists of 4"x4" timbers resting on eight steel stringers and six steel crossbeams. The superstructure is supported by reinforced concrete abutments. The bridge retains integrity of design, materials, feeling, and association to communicate its historical significance.

The Green Bridge is located on the campus of the New Mexico Farm and Ranch Heritage Museum, just east of the city limits of Las Cruces on land leased from New Mexico State University. The bridge crosses the Tortugas Arroyo, a dry streambed which passes through the dry Tortugas Dam approximately one mile downstream (Photo 1). The arroyo continues in a southwest direction to empty into the Rio Grande. The bridge spans the arroyo without a skew and provides a connection between the north and south halves of the museum campus.

The bridge consists of a single-span, steel through-truss Pratt design with pinned connections tying together seven 19-foot panel sections for a total length of 134 feet and an overall width of 17 feet (Photo 2). The vertical members are riveted steel lattice beams; rectangular steel bars and steel tie rods (eye bars) with turnbuckles compose the diagonal members. These members are pinned at the top and lower chords (Photo 3). The deck is made of 4"x4" timbers resting on eight steel stringers and six steel crossbeams (Photo 4). Timber felloes line its edge. The railing consists of decorative steel lattice bolted to truss members. The traffic width is 15 feet; the vertical clearance is 16 feet. The bridge is supported by non-original reinforced concrete abutments. An original roller nest assembly is situated at the north end of the structure.

The bridge was originally the middle section of the three-span Pecos River Bridge, constructed in Chaves County in 1902. In 1943 the New Mexico State Highway Department, following an established policy to reuse older truss bridges, dismantled the Pecos River Bridge. The center span was re-erected in 1944 on a small county road over the Rio Hondo, approximately 1.2 miles west of the village of Picacho (Photo 5). There it served local residents and agricultural interests in southeastern Lincoln County until it was taken out of service in 1989 and bypassed with a new structure. In the 1990s the Lincoln County Board of Commissioners donated the bridge to the New Mexico Farm and Ranch Heritage Museum, which oversaw the dismantling, transport, and reassembly of the Green Bridge in 2007.

Listed on the New Mexico State Register of Cultural Properties in 1997, the Green Bridge was fully cleaned and restored during its relocation, with a goal of maintaining the structure's high degree of structural integrity. The previous deck material was deteriorated beyond use and was replaced with similar materials as specified on the 1943 relocations plans (Figure 7-1). The steel components were painted the same

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Green Bridge
Doña Ana County, New Mexico

approximate green color as to when it was relocated in 1944. Several steel components were rusted and deteriorated beyond safe use and were replaced with replicated materials based on the 1943 plans. In its current location, the Green Bridge is a centerpiece for interpreting the role of roads and transportation in farming, ranching, and rural life in New Mexico.

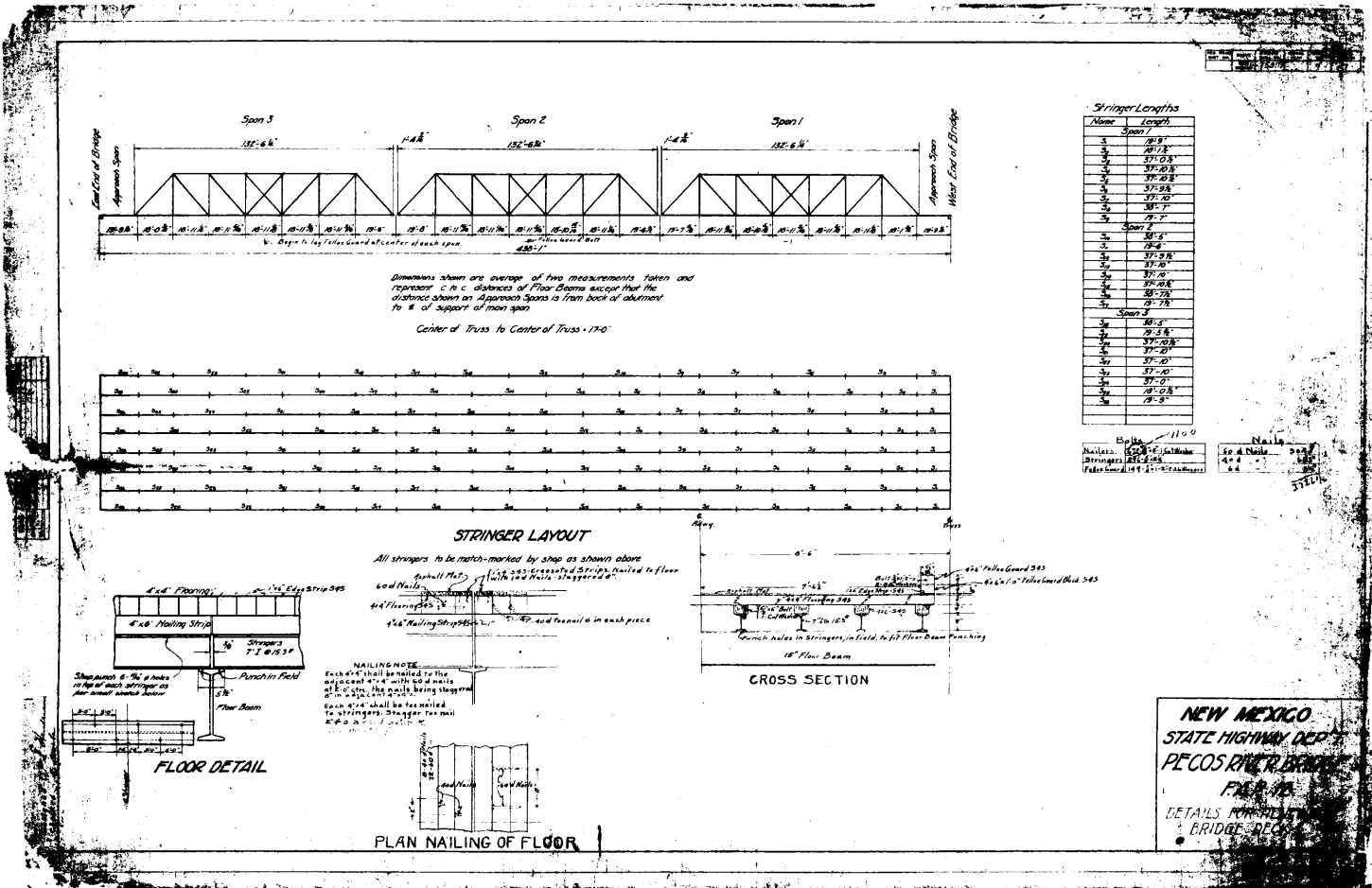
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Green Bridge
Doña Ana County, New Mexico

Figure 7-1: 1943 Plan, Sheet 7, Detail of Deck Replacement



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Green Bridge
Doña Ana County, New Mexico

Significance

Originally constructed in 1902 as part of a three-span highway bridge over the Pecos River, the Green Bridge is significant for representing a trend in the 1930-40s to relocate and reuse steel truss bridges on rural secondary roads. The bridge is significant as the longest Pratt truss with pinned connections bridge in New Mexico. The Green Bridge is eligible under Criterion C, Engineering, meeting the requirements outlined in the *Historic Highway Bridges of New Mexico, 1850-1965* Multiple Property Documentation Form.

Context

The historic Green Bridge typifies the history of steel truss bridges in New Mexico and a subsequent policy by the New Mexico State Highway Department to reuse older structures on secondary roads. In the 1890s and early 1900s local communities and county governments were responsible by Territorial statute for establishing roads and bridges. The first statewide organization to oversee roads and bridges, the Territorial Roads Commission, was not created until 1909, with a more complete highway system authorized after statehood in 1912. Even then most local roads, particularly in rural areas, were the responsibility of a county road supervisor, who was authorized to employ all “able-bodied men” to work on roads annually. The burden of building bridges was often carried by instituting a special tax levy.

Responding to a local petition for a bridge tax levy in 1899, the Chaves County Board of Commissioners called for bids to construct a permanent steel truss bridge over the Pecos River approximately eight miles east of Roswell. The site selected was just below the confluence of the Rio Hondo into the Pecos River (Figure 8-1).

Commissioners selected a Pratt through-truss design submitted by the Midland Bridge Company. Used first for timber bridges, the design was adapted to steel construction and favored for the light weight of its members, ease of assembly, and low cost as compared to other truss designs. The design was also particularly simple to ship, assemble, and if ever desired, disassembled and relocated. Chaves County subsequently ordered several more bridges of the same type for other river crossings over the next 25 years.

Once construction was completed in July 1902, the Pecos River Bridge carried a primary transportation route from Roswell to farms, ranches, and oil fields across New Mexico’s Southeastern Plains. This route was subsequently designated as part of the U.S. highway system in 1926.

By the late 1930s the New Mexico State Highway Department had instituted a program to replace older bridges on its main highways, thus removing some of the earliest and most fragile wood and truss bridges from the system. At the same time, several New Deal-funded federal projects aimed to improve the state’s secondary and farm-to-market roads. The New Mexico State Highway Department frequently recycled older truss bridges that were in good condition for use on secondary roads—a practice it continued until approximately 1950.

The Pecos River Bridge was bypassed with a new road alignment three miles to the north in 1939 as the result of flood damage to several sections of highway approaching the bridge. With diminished use the State Highway Commission proposed in 1943 to dismantle the 1902 structure and recycle at least one span.

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Green Bridge
Doña Ana County, New Mexico

According to recorded markings on the bridge and re-erection plans prepared that year, the components of the middle span of the Pecos River Bridge were transported and reassembled across the Rio Hondo on a small county road approximately 1.2 miles west of the village of Picacho (Figure 8-2).

This road, near the intersection with the main highway through the Hondo Valley, served local residents and ranchers in Southeastern Lincoln County with a reliable crossing over the Rio Hondo; a river which experienced periodic floods. The narrower and more tightly defined course of the Rio Hondo justified the use of only one span. The bridge at Picacho was approximately 133 feet long, retaining the members and railing from the original 1902 structure. It was painted with a red base primer and green graphite paint, giving local residents the basis for calling it the "Green Bridge."

The bridge led a quiet life at its new location. Residents recall it being used by ranchers and eighteen wheelers to move cattle and sheep to and from grazing areas in the region. There were also intermittent farming activities in the area, including alfalfa and apple production. A major flood in the mid-1960s rose high enough to cover the deck with several inches of water.¹

The Green Bridge was first identified as a historic structure in a survey ordered by the State Highway and Transportation Department in the early 1990s. According to the New Mexico Historic Bridge Survey (Rae, King, and Abbe 1987), the structure was noteworthy as: 1) the oldest of four Pratt through-truss bridges with pinned connections; 2) the longest Pratt through-truss with pinned connections; 3) the oldest steel truss bridge; 4) the second oldest highway bridge of any type; and 5) the oldest and highest rated of its type in the survey. The authors recommended historical designation and preservation of the structure. The New Mexico Historic Preservation Division subsequently listed the Rio Hondo Bridge at Picacho on the State Register of Cultural Properties.

The Green Bridge continued in operation until 1989 when it was bypassed with a new concrete span constructed 45 feet west of the older span. Some of the larger trees and vegetation closest to the river were substantially cut back in order to install riprap on both sides of the river. In the 1990s the Lincoln County Board of Commissioners offered to donate the structure to the New Mexico Farm and Ranch Heritage Museum. Several years of planning and documentation occurred before actual physical work began. Museum staff completed Historic American Engineering Record Level III documentation for the bridge, which included the discovery and reprinting of the 1943 plans.

The construction documents for the 2007 relocation and restoration effort emphasized accuracy and authenticity in every detail, basing much of the work on the 1943-44 plans and specifications. The bridge was fully cleaned and restored to its original standards. Where necessary, steel components which had rusted and deteriorated beyond safe use were replaced with replicated components.

¹ Floating debris, including a large propane tank, lodged in the superstructure, caused minor damage, as did the occasional vehicle that struck the guard railing.

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Green Bridge
Doña Ana County, New Mexico

At the Museum the Green Bridge is a centerpiece in the interpretation of the importance of roads and transportation in farming, ranching, and rural life in New Mexico. The bridge is interpreted as an example of early steel truss design and it how represents the State Highway Department's policy to reuse truss spans on smaller secondary roads. No longer primarily a vehicular bridge, the Green Bridge serves also as the principal pedestrian connector across the Tortugas Arroyo, allowing visitors to access barns, fields, outbuildings, and exterior exhibits of the museum's "South 20."

Discussion of Criterion Consideration B

The Green Bridge meets eligibility under Criterion C, Engineering, applying Criteria Consideration B as a moved property eligible for its architectural (engineering) value. The bridge retains a high degree of integrity of original design, materials, feeling, and association during the period of significance, with few alterations other than a change of location and setting.

Although the Green Bridge has been relocated twice since its original construction, it retains its integrity as a single-span bridge during the period of significance. In its most recent move, only a few structural elements that had been deteriorated beyond use were replaced with identical components.

The practice of dismantling truss spans and rebuilding them at new sites in New Mexico is well documented in the 1987 survey. In the survey, one-third of the identified eligible truss bridges and one-half of the eligible through-truss bridges were relocated at least once.

When it was first built, the Pecos River Bridge was intended to connect the Roswell with farms, ranches, and oil areas on the Eastern Plains of New Mexico. Likewise, after its relocation to Picacho, the bridge served local farmers and ranchers in Southeastern Lincoln County. This linkage is retained in its present setting, where the bridge is interpreted for its historic association with transportation and agriculture in New Mexico.

The aspects of location and setting have been most changed. The bridge was originally constructed to provide the first reliable crossing over the Pecos River. The setting consisted of a wide floodplain where the Rio Hondo empties into the Pecos River. The site was rural and vegetation sparse (Figure 8-1). The approaches to the bridge were built up well above the floodplain.

These characteristics changed when the State Highway Department moved the center span of the Pecos River Bridge to Picacho in 1943-44. As before, the site was an important crossing, this time over the Rio Hondo. The Hondo Valley is smaller and more compact than the Pecos floodplain, and includes more native vegetation of larger trees and shrubs.

The 2007 relocation to the Farm and Ranch Heritage Museum campus reflects some of the aspects of location and setting from previous locations. The Green Bridge again crosses a channel that is prone to flood. While the Picacho site could be described as a typical small river valley, the museum site has more in common with the rural Pecos River setting, with minimal vegetation and large open areas. Because of a differential in elevation of land south of the arroyo, as compared to the north, the south approach is a long,

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Green Bridge
Doña Ana County, New Mexico

built up area similar to that found near Roswell. While the setting of the Green Bridge has changed at each new location, the other aspects of integrity have been retained during its period of significance.

The Green Bridge has comparable characteristics to its historical settings and remains compatible with the property's significance under Criteria Consideration B. Through retention of design, materials, feeling, and association, the restored bridge communicates its significance under Criterion C and the historic uses that inform its eligibility.

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Green Bridge
Doña Ana County, New Mexico

Figure 8-1: Pecos River Bridge, no date (Paul E. Larkam Collection, NMSU Archives & Special Collections)



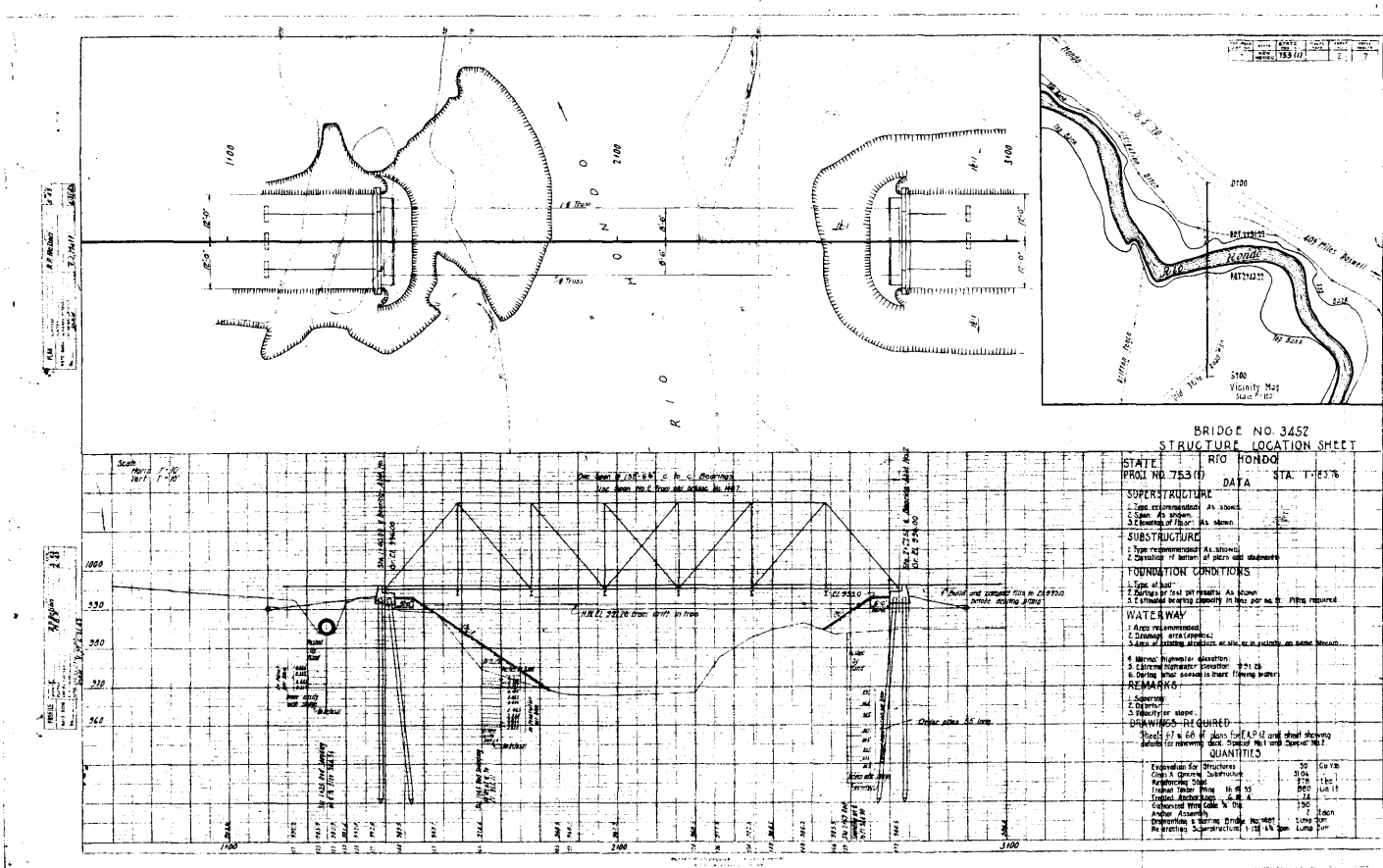
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Green Bridge
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Figure 8-2: 1943 Plan, Sheet 2, Structure Location Sheet



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Green Bridge
Doña Ana County, New Mexico

Bibliography

Historic Green Bridge Research Collection. New Mexico Farm and Ranch Heritage Museum Institutional Archive, Las Cruces, N.M.

Kammer, David. *Historic Highway Bridges of New Mexico: An Historic Context on New Mexico's Highway Bridges*. Santa Fe: New Mexico State Highway and Transportation Department, 1996.

_____. *Highway Bridge Construction in New Mexico, 1850-196*. Multiple Property Documentation Form prepared for the New Mexico Historic Preservation Division, 1996.

Rae, Steven R., Joseph E. King, and Donald R. Abbe. *New Mexico Historic Bridge Survey*. Santa Fe: New Mexico State Highway and Transportation Department, 1987.

Saffell, Cameron L. "Rio Hondo Bridge at Picacho (The Green Bridge)." Las Cruces: New Mexico Farm & Ranch Heritage Museum, 2002.

"Spanning the High Desert: The Historic Highway Bridges of New Mexico." Brochure, New Mexico State Highway and Transportation Department, 1998.

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Green Bridge
Doña Ana County, New Mexico

Photographic Log

The following information pertains to all photographs unless otherwise noted:

Green Bridge

Doña Ana County, New Mexico

Photographer: Cameron Saffel

Photographs taken: March 2008

Location of negatives: New Mexico Farm and Ranch Heritage Museum Institutional Archives

Photo 1 of 5

Setting

Camera facing southwest

Photo 2 of 5

South elevation

Camera facing northeast

Photo 3 of 5

Connector assembly

Camera facing northeast

Photo 4 of 5

Deck and canopy

Camera facing northwest

Photo 5 of 5

Rio Hondo location

Camera facing northeast

Photographer: Van Citters Historic Preservation

Photographs taken: 2002