

# HABS/HAER INVENTORY

See "HABS/HAER Inventory Guidelines" before filling out this card.

## 1. NAME(S) OF STRUCTURE

Old Trails Bridge (Topock Bridge; Needles Bridge)

## 2. LOCATION

Abandoned U.S. 66 over the Colorado River  
Topock; NW1/4 S2 T15N R21W  
Mohave County, Arizona

## 3. DATE(S) OF CONSTRUCTION

1915-16

## 4. USE (ORIGINAL/CURRENT)

highway bridge / pipeline bridge

## 5. RATING

NRHP eligible: national significance

## 6. CONDITION

excellent

owner: El Paso Natural Gas Company

span number : 1

span length : 592.0'

total length: 832.0'

roadway wdt.: 17.0'

superstructure: riveted steel 3-hinge brace-ribbed through arch w/steel girder approach spans

substructure : concrete abutments, wingwalls and arch pedestals

floor/decking : steel grid walkways

other features: upper arch chord: 2 channels w/ cover plate and double lacing; lower arch chord: 2 channels w/ double webbing; diagonal: 4 angles w/ webbing; arch post: 2 angles w/ webbing; lateral bracing: 2 angles; floor tie: riveted steel plate girder; suspender: round steel rod

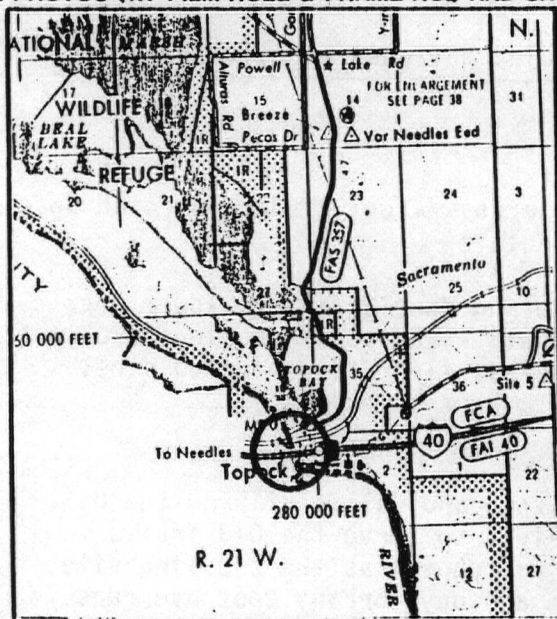
As the Ocean-to-Ocean Bridge (8533) was under construction in 1914, the states of Arizona and California and the U.S. Bureau of Indian Affairs sought to erect another substantial span over the Colorado River to serve the Old Trails Highway further north. Topock, Arizona - halfway between Yuma and the Utah Border - was chosen as the crossing site. Each entity contributed \$25,000, and San Bernadino County agreed to design the bridge and pay for any cost overruns. County surveyor S.A. Sourwine engineered this long-span steel arch. On June 30, 1915, the contract for fabrication and erection was let to the Kansas City Structural Steel Company. Under the direction of company construction superintendent Thomas McCurnin and county construction engineer J.P. Kimmerer, Kansas City poured the footings and erected the arch using a unique cantilever technique in 1915. The bridge was completed on February 20, 1916. The Topock Bridge carried interstate traffic for U.S. 66 until 1947, when traffic was transferred to the nearby Red Rock Bridge. In 1948, its deck was removed to accomodate a natural gas pipeline, which it still carries.

The Topock Bridge is historically significant in the Southwest as a pivotal crossing on the transcontinental Old Trails Highway. Technologically, the structure is nationally significant as an outstanding example of steel arch construction, called by the Engineering Record, "exceptionally daring and successful for work of such magnitude." Taking a cue from the difficulties experienced at Yuma, engineers for Kansas City Steel erected this bridge using a novel cantilever system, in which the bridge halves were assembled on their sides on the ground and hoisted into place using a unique ball-and-socket center hinge. At its completion the longest arch bridge in America, the 360-ton Topock Bridge was also distinguished as the lightest and longest three-hinged arch. The removal of the deck has done little to compromise the bridge, and it remains a landmark in American civil engineering.

10. NAME(S) OF STRUCTURE

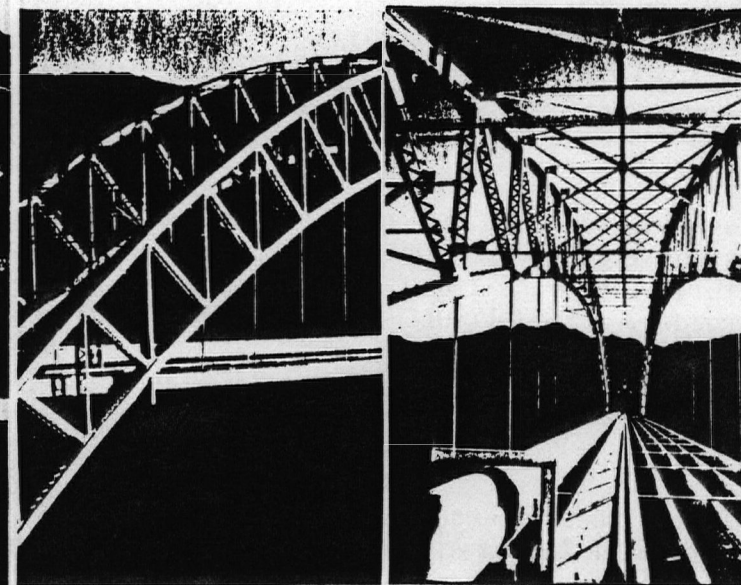
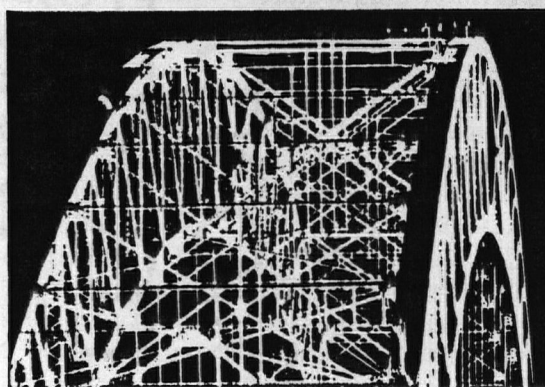
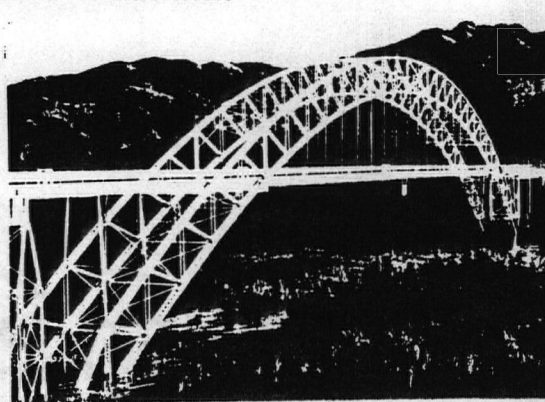
Old Trails Bridge (Topock Bridge; Needles Bridge)

11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM DEPARTMENT OF TRANSPORTATION  
GENERAL HIGHWAY MAP



Don Abbee & Roger Brevoort, "Draft nomination to National Register of Historic Places," n.d.

David Plowden, Bridges: The Spans of North America, (New York: The Viking Press, 1974), page 178.

Field inspection by Clayton Fraser, 9 December 1986.

13. INVENTORIED BY:

Clayton B. Fraser

AFFILIATION

Fraserdesign Loveland Colorado

DATE

1 April 1987



8/17/88

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation Sheet

Section number \_\_\_\_\_ Page \_\_\_\_\_

Multiple Resource Area  
Thematic GroupName Vehicular Bridges in Arizona MPS  
State Apache County and others, ARIZONA

Nomination/Type of Review

Date/Signature

31. Fish Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
32. Gila Bend Overpass Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
33. Hassayampa River Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
34. Lewis and Pranty Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
35. Mormon Flat Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
36. Pine Creek Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
37. Tempe Bridge Substantive Review for Keeper Patrick Andrus 9/30/88  
Attest \_\_\_\_\_
38. Mohave County  
Old Trails Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
39. Sand Hollow Wash Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_
40. Navajo County  
Cedar Canyon Bridge Substantive Review for Keeper Patrick Andrus 9/30/88 SCA  
Attest \_\_\_\_\_



United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation Sheet

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## SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: VariousDate Listed: 9/30/88Various  
Property NameVarious  
CountyArizona  
StateVehicular Bridges in Arizona  
Multiple Name

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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.

for Patrick Andrew  
Signature of the Keeper9/30/88  
Date of Action

## =====

Amended Items in Nomination:

There were several nominations included with this multiple property submission which defined and justified periods of significance extending into the less than fifty year old range to correspond with criterion A significance although the resources' dates of construction actually occurred well over fifty years ago. For all of these bridges, the period of significance should be concluded in 1938 to conform with National Register requirements. The following bridges are included in this category:

Petrified Forest, Querino, Hereford, Douglas Underpass, Dead Indian Canyon, Pumphouse Wash, Walnut Canyon, Fossil Creek, Black River, Salt River, Salt River Canyon, Reppy Avenue, Black Gap, Gila River, Park Avenue, Solomonville Road Overpass, Solomonville Road Overpass (Clifton), Gila Bend Overpass, Hassayampa River, Lewis and Pranty Creek, Mormon Flat, Fish Creek, Pine Creek, Sand Hollow Wash, Old Trails, Corduroy, Cedar Canyon, Holbrook, Jack's Canyon, Little Lithodendron Wash, Lithodendron Wash, St. Joseph, Woodruff, Cienega, Fourth Avenue Underpass, Sixth Avenue Underpass, Stone Avenue Underpass, Alchesay Canyon, Devil's Canyon, Queen Creek (Florence Junction vicinity), Queen Creek (Superior vicinity), Kelvin, Mineral Creek, Sacaton Dam, San Tan Canal, Winkelman, Santa Cruz No. 1, Broadway, Hell Canyon, Little Hell Canyon, Lynx Creek, Verde River, and Walnut Grove. (Period of significance issues discussed with Pat Stein of the AZ SHPO.)

## DISTRIBUTION:

National Register property file

Nominating Authority (without nomination attachment)



UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES  
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Old Trails Bridge  
NAME:

MULTIPLE Vehicular Bridges in Arizona MPS  
NAME:

STATE & COUNTY: ARIZONA, Mohave

DATE RECEIVED: 8/17/88

DATE OF PENDING LIST: 8/30/88

DATE OF 16TH DAY: 9/15/88

DATE OF 45TH DAY: 10/01/88

DATE OF WEEKLY LIST:

REFERENCE NUMBER: 88001676

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: Y LANDSCAPE: N LESS THAN 50 YEARS: Y  
OTHER: N PDIL: N PERIOD: Y PROGRAM UNAPPROVED: N  
REQUEST: N SAMPLE: Y SLR DRAFT: N

COMMENT WAIVER: N

☒ ACCEPT ☐ RETURN ☐ REJECT 9/30/88 DATE

ABSTRACT/SUMMARY COMMENTS:



ABSTRACT/SUMMARY COMMENTS (CONTINUED FROM PREVIOUS SIDE)

*Nomination justifies significance under AEC. SLR* Decision: Accept - A/C  
*form completed to resolve period of significance issue.* Date: 9/20/88  
Signature: Noble  
Title: Historian

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

CLASSIFICATION

\_\_\_\_count \_\_\_\_resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

\_\_\_\_historic \_\_\_\_current

DESCRIPTION

\_\_\_\_architectural classification \_\_\_\_materials \_\_\_\_descriptive text

SIGNIFICANCE

\_\_\_\_criteria \_\_\_\_criteria considerations \_\_\_\_areas of sig.  
\_\_\_\_periods of sig. \_\_\_\_significant dates \_\_\_\_cultural affl.  
\_\_\_\_sig. person \_\_\_\_architect/builder \_\_\_\_sig. statement

BIBLIOGRAPHY

GEOGRAPHICAL DATA

\_\_\_\_acreage \_\_\_\_verbal boundary description  
\_\_\_\_UTMs \_\_\_\_boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

\_\_\_\_sketch maps \_\_\_\_USGS maps \_\_\_\_photographs \_\_\_\_presentation

OTHER COMMENTS

Questions concerning the nomination may be directed to

Signed \_\_\_\_\_ Date \_\_\_\_\_ Phone \_\_\_\_\_







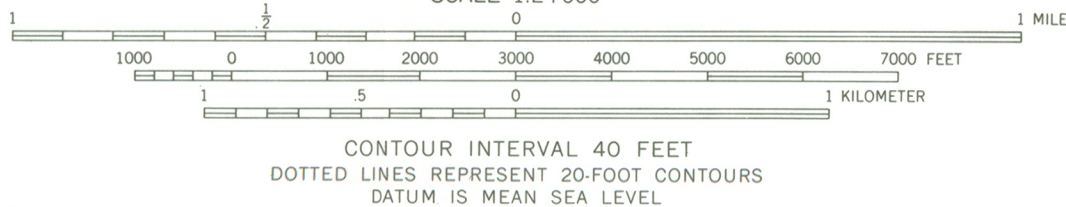
66) OLD TRAIL'S BRIDGE (ARIZONA VEHICULAR BRIDGE)







Mapped, edited, and published by the Geological Survey  
Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial  
photographs taken 1969. Field checked 1970  
Polyconic projection. 1927 North American datum  
10,000-foot grids based on Arizona coordinate system, west zone  
and California coordinate system, zone 5  
1000-meter Universal Transverse Mercator grid ticks,  
zone 11, shown in blue  
Fine red dashed lines indicate selected fence lines  
Certain land lines are omitted because of insufficient data



ROAD CLASSIFICATION  
Primary highway, hard surface ——— Light-duty road, hard or improved surface ———  
Secondary highway, hard surface ——— Unimproved road ———  
Interstate Route U.S. Route State Route

TOPOCK, ARIZ.—CALIF.  
NW 1/4 TOPOCK 15' QUADRANGLE  
N3437.5—W11422.5/7.5

1970

AMS 3153 III NW—SERIES V898

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D.C. 20422  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST