HISTORIC BRIDGE INVENTORY

Casa Grande Underpass

PROPERTY IDENTIFICATION

county	Pinal	inventory number	00143
milepost	177.66	inventory route	Southern Pacific Railroad
location	22.5 mi E Jct I 8	feature intersected	SR 84 EB
city/vicinity	Casa Grande	USGS quadrangle	Casa Grande West
district	81	UTM reference	12.428732.3638210

STRUCTURAL INFORMATION

main span number	1	main span type	107
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	4
main span length	32.0	superstructure	concrete rigid frame
structure length	36.0	substructure	concrete abutments, wingwalls
roadway width	0.0	floor/decking	concrete deck with asphalt overlay
structure width	0.0	other features	concrete guardrails

HISTORICAL INFORMATION

construction date	1935	designer/engineer	Arizona Highway Department
project number	NRS 100-C	builder/contractor	Phoenix-Tempe Stone Co., Phoenix AZ
information source	ADOT bridge records	structure owner	Union Pacific Railroad
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	60	NRHP eligibility	eligible
		NRHP criteria	A ____ B ____ C x
		signif. statement	well-preserved example of Depression-era architectural detailing on grade separation

FORM COMPLETED BY

Clayton B. Fraser, Principal

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Loveland, Colorado 80537
31 October 2004

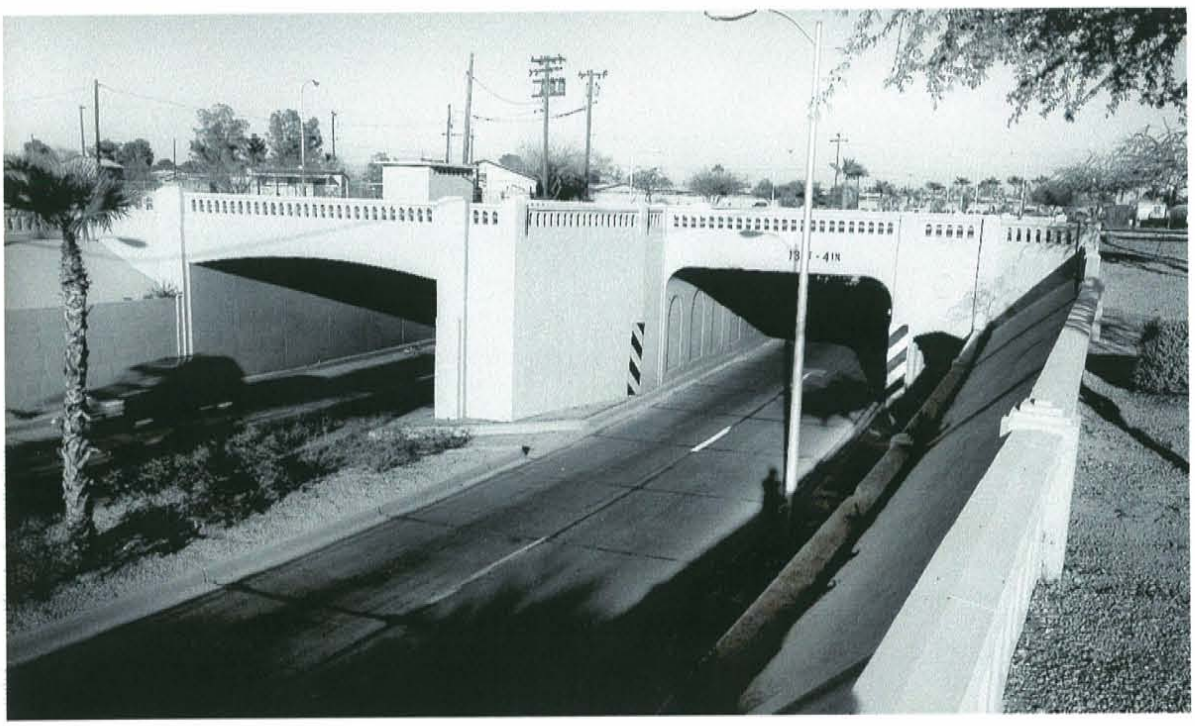


PHOTO INFORMATION

date of photo.: November 2002 view direction: south east photo no.: 02.11.367 02.11.370

CONSTRUCTION HISTORY

When the Southern Pacific Railroad established a station at this location in 1880, it named the stop Casa Grande for the ruins nearby. The ruins were later designated a National Monument, and the town grew slowly in the 1910s and 1920s. The railroad intersected with State 287 near the town center, creating a bottleneck for vehicular traffic. To alleviate this recurring problem, the Arizona Highway Department in the 1930s undertook construction of a grade separation that would carry the railroad over the highway. AHD engineers designed the structure late in 1934. As delineated by the department, the Casa Grande Underpass was configured as a single concrete rigid frame span that extended 32 feet between the concrete abutments over two lanes of road. The underpass featured a classical revival architectural motif, with decorative concrete guardrails with slotted cutouts, corbeled concrete pylons and recessed panels in the sidewalls. The highway department designated the structure's construction as National Recovery Secondary Project 100-C, and on January 11, 1935, the state highway commission awarded the contract to build it to the Phoenix Tempe Stone Company, low bidder at $77,400. The contractor immediately began substructural excavation; by October the Casa Grande Underpass was completed. It functioned in place without alteration until the early 1960s, when the highway department undertook an expansion of the original structure to accommodate a second pair of traffic lanes. In 1962 a second, slightly larger rigid frame span was appended onto the southern end of the 1935 bridge by Western Constructors of Phoenix. The design, proportions and concrete details of the original structure were replicated on the new span. Since the completion of the additional span, the Casa Grande Underpass has since carried SH 84, without further alterations.

SIGNIFICANCE STATEMENT

The Casa Grande Underpass is noteworthy as one of several railroad grade separations in Arizona funded through the New Deal's Hayden-Cartwright Act. Federal relief programs of the mid-1930s broke with past policy by allowing federal funds to be used on urban, as well as rural, highway construction. Much of this money was steered into an extensive nationwide program to eliminate dangerous on-grade railroad crossings. Built in the height of the Great Depression, the Casa Grande Underpass achieved one of its primary goals—providing employment for local workers on relief. Like many other grade separations designed at the time by AHD, this structure employed a distinctive architectural treatment to help integrate into the surrounding urban fabric. The Casa Grande structure displays eclectic classical revival detailing. A locally important grade separation, the Casa Grande Underpass represents this noteworthy architectural trend. The 1963 addition has impacted the bridge's structural integrity, but the work was handled with sensitivity of design and construction craftsmanship, mitigating this impact.

NATIONAL REGISTER EVALUATION

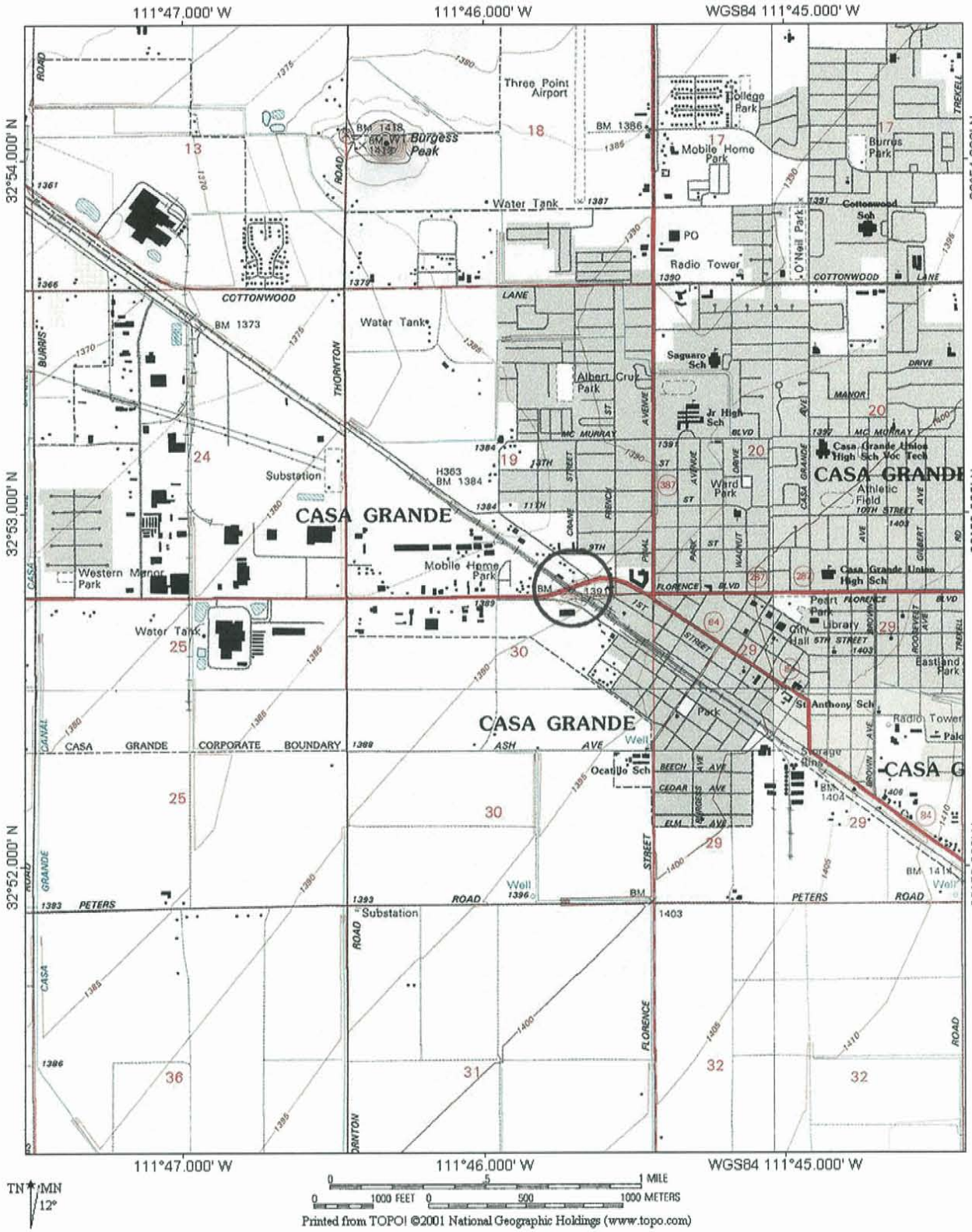
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
___ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
___ Criterion A
___ Criterion B
_x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Engineering
PERIOD OF SIGNIFICANCE: 1935-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Queen Creek Viaduct

PROPERTY IDENTIFICATION

county	Pinal	inventory number	00406
milepost	227.71	inventory route	US 60
location	0.5 mi E Jct SR 177	feature intersected	Queen Creek
city/vicinity	Superior	USGS quadrangle	Superior
district	83	UTM reference	12.491617.3684420

STRUCTURAL INFORMATION

main span number	1	main span type	311
appr. span number	4	appr. span type	302
degree of skew	0	guardrail type	2
main span length	381.0	superstructure	steel two-hinge girder-ribbed deck arch
structure length	577.0	substructure	concrete abutments and piers
roadway width	30.0	floor/decking	concrete deck with asphalt overlay
structure width	34.0	other features	arch rib: riveted steel built-up plate girder w/ able flanges and web stiffeners; post: built-up square section; floor beam: I-beam; Art Moderne concrete pylons; aluminum tubular guardrails

HISTORICAL INFORMATION

construction date	1949	designer/engineer	Arizona Highway Department
project number	F-16(10)	builder/contractor	Fisher Contracting Company, Phoenix AZ
information source	ADOT bridge records	structure owner	Arizona Department of Transportation
alteration date(s)	1972 1992 2000	alterations	various repairs to rails, expansion joints and superstructural steel

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	59	NRHP eligibility	eligible
		NRHP criteria	A x B ____ C x
		signif. statement	outstanding, well-preserved example of rare, long-span structural type

FORM COMPLETED BY

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31 October 2004

PHOTO INFORMATION

date of photo.: November 2002 view direction: southeast west photo no.: 02.11.337 02.11.339

CONSTRUCTION HISTORY

The Queen Creek Bridge carries U.S. Highway 60 over Queen Creek in Pinal County. It was designed by the Arizona Highway Department as part of an extensive realignment of the highway north of Superior, following a higher line (and eliminating the existing Queen Creek concrete arch bridge [**abd.**]) than the existing route built in the 1920s. The new Queen Creek Viaduct is configured as a long-span, two-hinge steel deck arch, with two riveted plate girder arch ribs, each 7½ feet in depth. Extending 380 feet from center to center of the pylons and rising 72 feet from the bearing pins, the central arch is flanked by three shorter steel girder spans on the north and one on the south. The arches bear into cast steel skewbacks bolted to concrete foundations set into solid rock. The 34-foot-wide concrete deck is bounded on both sides by aluminum guardrails with concrete bulkheads.

Designed in the spring of 1947 by Arizona Highway Department engineer Ralph Hoffman, the Queen Creek structure was an almost exact duplicate of the Pinto Creek Arch Bridge [**0351**] in Gila County. On April 24, 1948, as work on the Pinto Creek Bridge was underway, AHD let the construction contract for the Queen Creek Viaduct to the Fisher Contracting Company of Phoenix. Work started that summer and continued over the next year. When the foundations were complete, Fisher used a steel superstructure fabricated in Phoenix by the Allison Steel Manufacturing Company for the arch itself. With the arch complete, the concrete deck was laid and guardrails placed. By 1949, the bridge was complete for a cost of $440,574. The Queen Creek Viaduct was immense, consuming some 1.2 million pounds of structural steel, 216,000 pounds of reinforcing steel and almost 4,700 cubic yards of concrete. Since its completion, it has carried mainline traffic on US 60, with only relatively minor repairs.

SIGNIFICANCE STATEMENT

As a pivotal crossing on a regionally important route, the Queen Creek Bridge enjoys a degree of historical significance for its contribution to eastern Arizona transportation. The bridge's relatively late construction limits this significance, however. The structure is technologically important as a well-preserved example of large-scale bridge construction. Arizona erected a number of massive steel arches and cantilevered steel deck trusses in the 1940s and 1950s, most of which are impressively scaled spans placed in dramatic settings. A handful of these remain: the Queen Creek Viaduct in Pinal County and the Pinto Creek Bridge [**0351**] in Gila County representing the arches, and the Guthrie Bridge [**0352**], the Hell Canyon Bridge [**0483**] in Yavapai County, and the Cameron Bridge [**0532**] in Coconino County representing the trusses. These were the state's most striking bridges of post-War period.

NATIONAL REGISTER EVALUATION

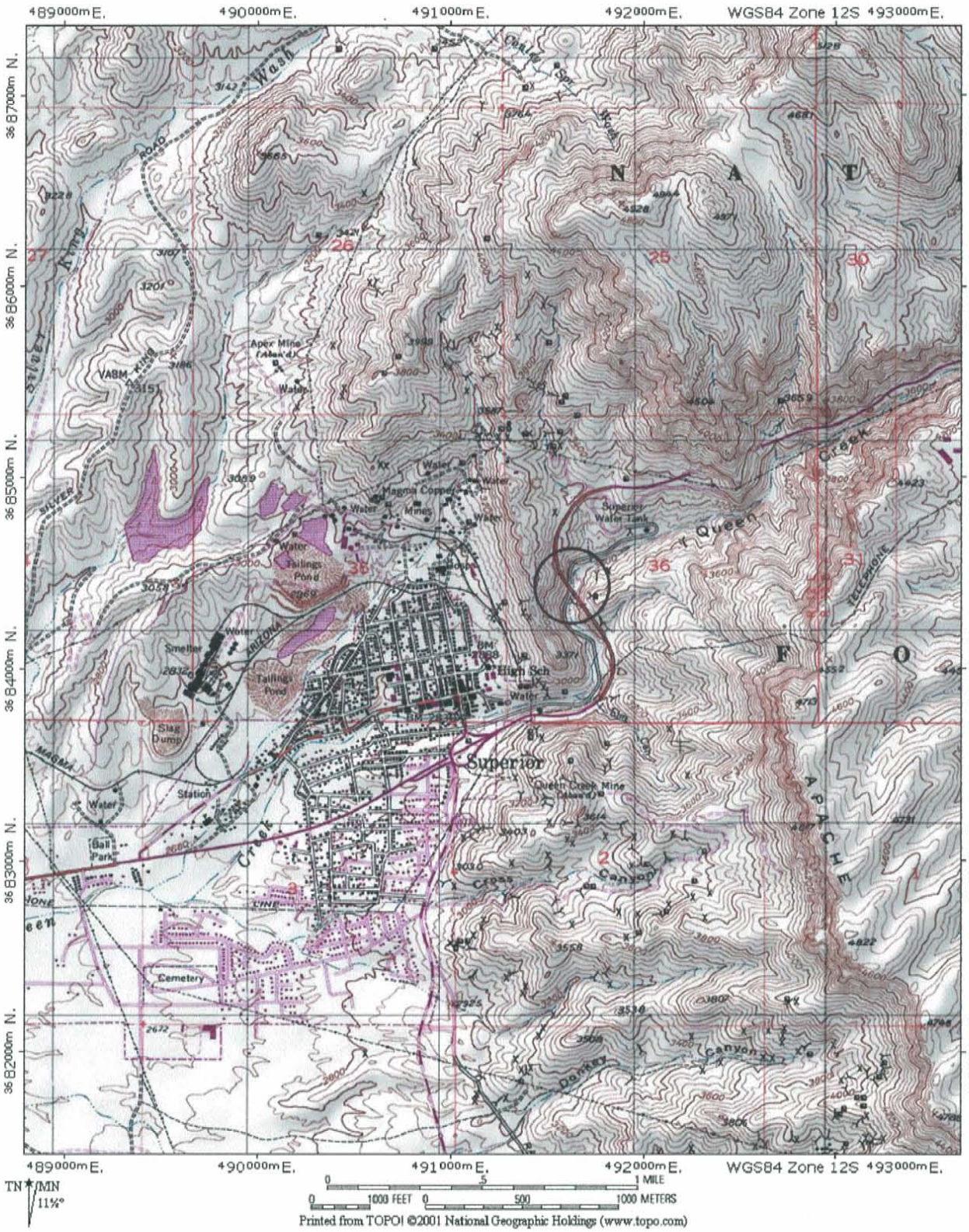
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
___ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
___ Criterion A
___ Criterion B
_x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Engineering
PERIOD OF SIGNIFICANCE: 1949-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Florence Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	00501
milepost	135.54	inventory route	SR 79
location	1.2 mi North Jct SR287	feature intersected	Gila River
city/vicinity	Florence	USGS quadrangle	Florence
district	83	UTM reference	12.464617.3657357

STRUCTURAL INFORMATION

main span number	30	main span type	402
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	6
main span length	51.0	superstructure	steel I-beam stringer
structure length	1507.0	substructure	concrete abutments, wingwalls and piers
roadway width	30.0	floor/decking	concrete deck with asphalt overlay
structure width	35.0	other features	steel baluster guardrails with Thrie beams

HISTORICAL INFORMATION

construction date	1957	designer/engineer	Arizona Highway Department
project number	F-019-1(6)	builder/contractor	Ashton Building Company Inc., Tucson AZ
information source	ADOT bridge records	structure owner	Arizona Department of Transportation
alteration date(s)	1995 2000	alterations	Thrie beams installed over original guardrails; superstructure repaired

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	49	NRHP eligibility	eligible
		NRHP criteria	A x B ____ C ____
		signif. statement	one of the most important river crossings in the state

FORM COMPLETED BY

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31 October 2004

FLORENCE BRIDGE

Structure No.0501

PHOTO INFORMATION

date of photo.: November 2002 view direction: north southwest photo no.: 02.11.350 02.11.351

CONSTRUCTION HISTORY

In 1885 Arizona Territory built its earliest all-metal wagon truss to replace an earlier timber structure at Florence. Spanning the Gila River, the bridge consisted of two 180-foot spans with an extensive trestle over an island and slough. In the wake of repeated damage to this structure, the first bridge undertaken by the newly established Arizona Territorial Engineer was its replacement. In November 1909 Territorial Engineer J.B. Girand designed a multiple-span concrete girder structure for the Florence crossing, which was completed a year later by convict laborers. Despite the new bridge's immense weight, it soon fell prey to the vagaries of the Gila River. Parts of it were carried away with almost every flood, prompting Arizona Senator Marcus Smith in 1916 to call the hapless structure "a monument to the treachery of the river." During the downpour just before Christmas 1914, for instance, the river actually washed away approaches on both sides of the bridge, isolating it in the middle of the roaring channel. The bridge was soon repaired, and repaired again the following year when another flood destroyed about 1,200 feet of embankment on the south end. Arizona Federal Aid Project No. 1, appropriately enough, involved construction of a 750-foot extension on the Florence Bridge after another flood in 1917 damaged it once again.

Over the years the state continued to pour money into the bridge in a futile effort to keep it open. Finally, in the 1950s the Arizona Highway Department moved to replace the bridge entirely. Wider, higher and longer than the 1910 concrete bridge, the new structure would be comprised of thirty 50-foot spans for an overall length of over 1,500 feet. The new Florence Bridge featured a steel I-beam stringer superstructure carried on concrete piers. Standard aluminum guardrails lined the 35-foot-wide concrete deck. AHD contracted with the Ashton Company of Tucson to build the bridge, which was completed in 1957. Since that time, it has functioned in place with relatively minor repairs.

SIGNIFICANCE STATEMENT

In its early years, the Florence Bridge functioned as the only wagon bridge over the Gila River along its length between New Mexico and California. It is thus distinguished as one of the most important early river crossings in Arizona. Its star-crossed history has further distinguished it among Arizona's bridges, and more effort has been spent building and rebuilding this notorious structure than any other bridge in the state. The present bridge here marks at least the fourth iteration at this crossing (not counting the numerous partial replacements). In its individual spans, it is technologically unremarkable, but its 30 spans and 1,500-foot aggregate length ranks it among the longest highway bridges in the state.

NATIONAL REGISTER EVALUATION

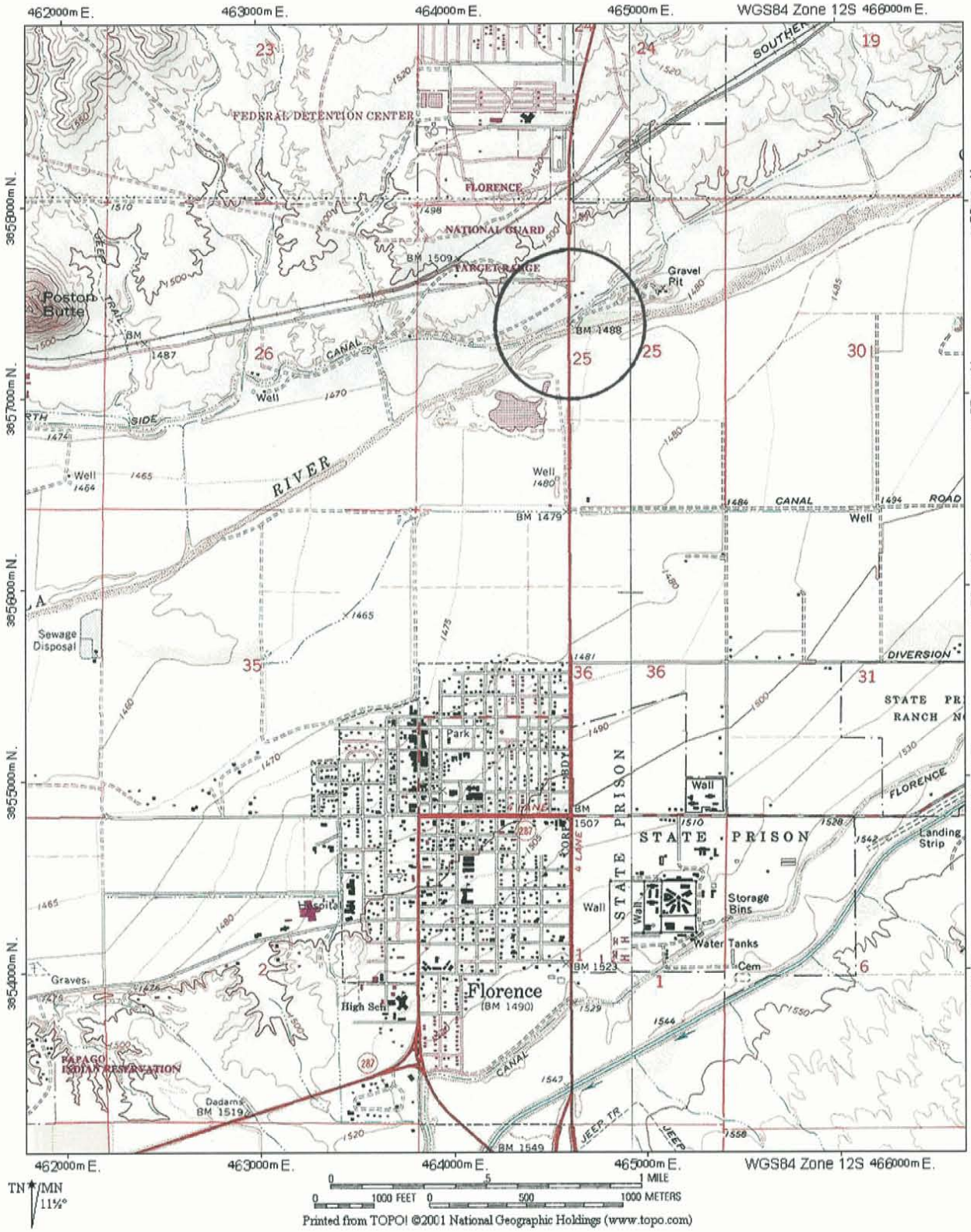
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
___ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
_x_ Criterion A
___ Criterion B
___ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1957-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

San Tan Canal Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	03164
milepost	0.00	inventory route	Gila River Reservation Road
location	T4S, R6E, S13	feature intersected	San Tan Canal
city/vicinity	Olberg	USGS quadrangle	Sacaton
district	81	UTM reference	12.435905.3661590

STRUCTURAL INFORMATION

main span number	3	main span type	103
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	0
main span length	50.0	superstructure	concrete deck girder
structure length	0.0	substructure	concrete abutments, wingwalls and piers
roadway width	0.0	floor/decking	concrete deck
structure width	0.0	other features	concrete guardrails w/ recessed rectangular panels

HISTORICAL INFORMATION

construction date	1926	designer/engineer	Arizona Highway Department
project number		builder/contractor	state work force
information source	ADOT bridge records	structure owner	US Bureau of Indian Affairs
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	45	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of early concrete bridge construction

FORM COMPLETED BY

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31 October 2004

SAN TAN CANAL BRIDGE

Structure No. 3164

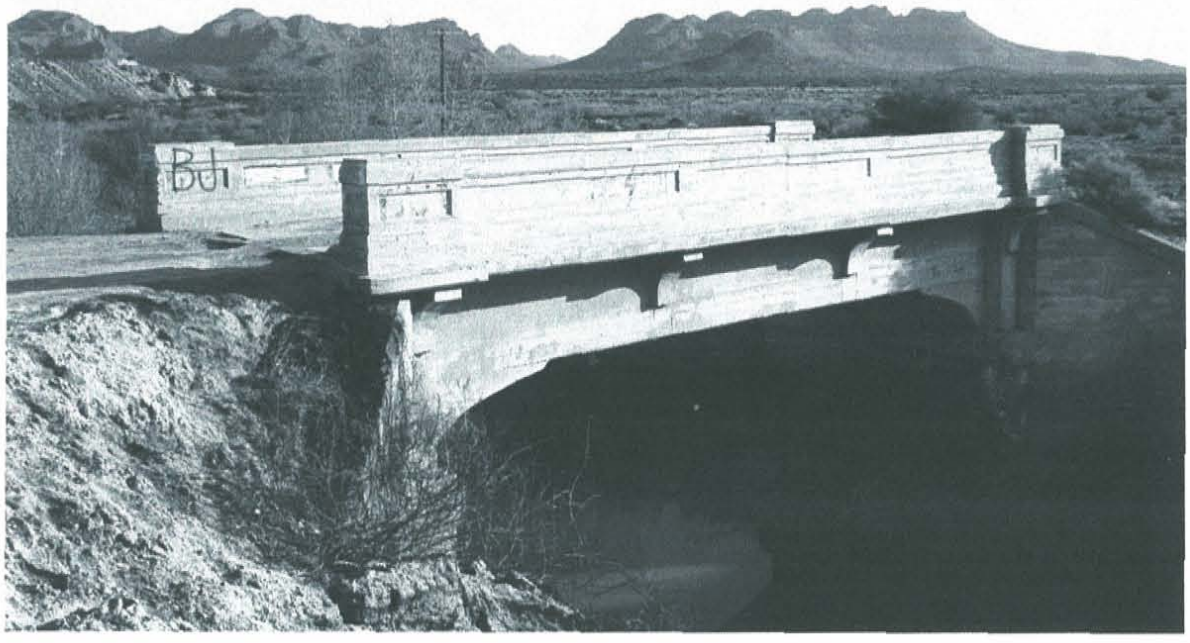


PHOTO INFORMATION

date of photo.: April 2003 view direction: southwest photo no.: 03.04.82

CONSTRUCTION HISTORY

For centuries, the Pima and Maricopa Indians irrigated and farmed the fertile Gila River Valley, until Anglos diverted large quantities of water from the upper river in the late 19th century. To compensate for the loss, Congress in May 1916 authorized the San Carlos Irrigation Project. A major component of the project involved construction of a concrete diversion dam on the Gila River near the Indian village of Sacaton. As delineated by the U.S. Indian Service, the dam would incorporate a multiple-span concrete bridge to carry roadway traffic across the Gila. This bridge was comprised of 25 concrete girder spans, each 50-foot span consisting of four integrally cast girders with curved haunches. While Pinal and Maricopa counties hurried to build roads to connect with the new bridge in 1922, the Irrigation Division of the USIS designed the structure late in 1923. Rather than contract for the dam's construction, USIS instead hired Pima and Papago Indians as day laborers to build the immense structure. The Sacaton Dam Bridge [**3165**]was completed on June 30, 1925.

As the dam and bridge were nearing completion, the Arizona Highway Department delineated a three-span concrete girder at its north end over the San Tan Canal. The San Tan Canal Bridge was detailed as a scaled-down version of the immense structure nearby, with a 37-foot center span flanked by 29-foot approaches. The structure featured relatively shallow cast-in-place girders with angled haunches, spill-through concrete piers and paneled concrete guardrails that cantilevered slightly over the spandrels. To build the non-federal aid project, AHD employed force account laborers . The bridge was completed early in 1926. It carries intermittent local traffic in unaltered condition.

SIGNIFICANCE STATEMENT

"Excellent work has been done on several State Force jobs under Mr. Hasler and Mr. Taylor, foremen," the state highway department reported in 1926. "Three bridges on the Apache Trail. . . and also the three-span R.C. Girder bridge over the San Tan Canal near Sacaton—were built under the direction of Mr. Hasler at a very low unit cost, considering the location and the long haul on materials." The San Tan Canal Bridge is overshadowed in scale by the adjacent Sacaton Dam Bridge [**3165**], but it is technologically noteworthy nonetheless as a well-preserved example of reinforced concrete bridge construction of the 1920s. AHD had used concrete as its material of choice for small-scale bridges since its establishment in the 1910s. Relatively few of the agency's earliest spans have survived with decks and guardrails intact. The San Tan Canal Bridge is one such structure. Built as an adjunct to the Sacaton Dam Bridge, it is historically significant for its integral role in Indian irrigation.

NATIONAL REGISTER EVALUATION

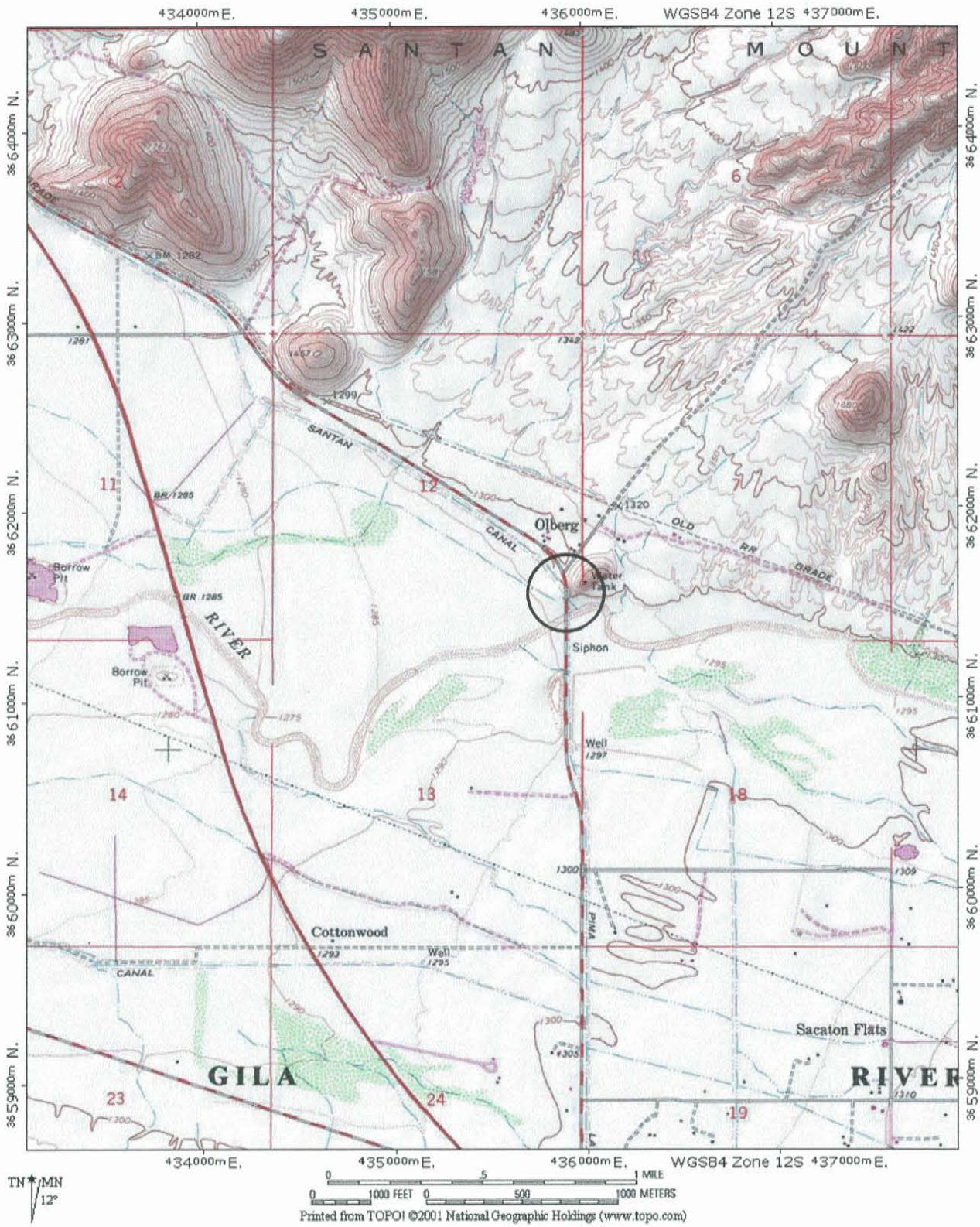
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
_x_ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
_x_ Criterion A
___ Criterion B
_x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1926-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Sacaton Dam Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	03165
milepost	0.00	inventory route	Gila River Reservation Road
location	T4S, R6E, S13	feature intersected	Gila River
city/vicinity	Olberg	USGS quadrangle	Sacaton
district	81	UTM reference	12.435895.3661325

STRUCTURAL INFORMATION

main span number	25	main span type	103
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	0
main span length	50.0	superstructure	concrete deck girder
structure length	0.0	substructure	concrete abutments, wingwalls and piers
roadway width	0.0	floor/decking	concrete deck
structure width	0.0	other features	concrete guardrails w/ recessed rectangular panels; coved concrete brackets; curved girder haunches; diversion dam structures at bridge base

HISTORICAL INFORMATION

construction date	1925	designer/engineer	US Indian Irrigation Service
project number		builder/contractor	Native American work force
information source	ADOT bridge records	structure owner	US Bureau of Indian Affairs
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	77	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	outstanding large-scale concrete bridge; part of important Indian irrigation project

FORM COMPLETED BY

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Loveland, Colorado 80537
31 October 2004

SACATON DAM BRIDGE

Structure No. 3165

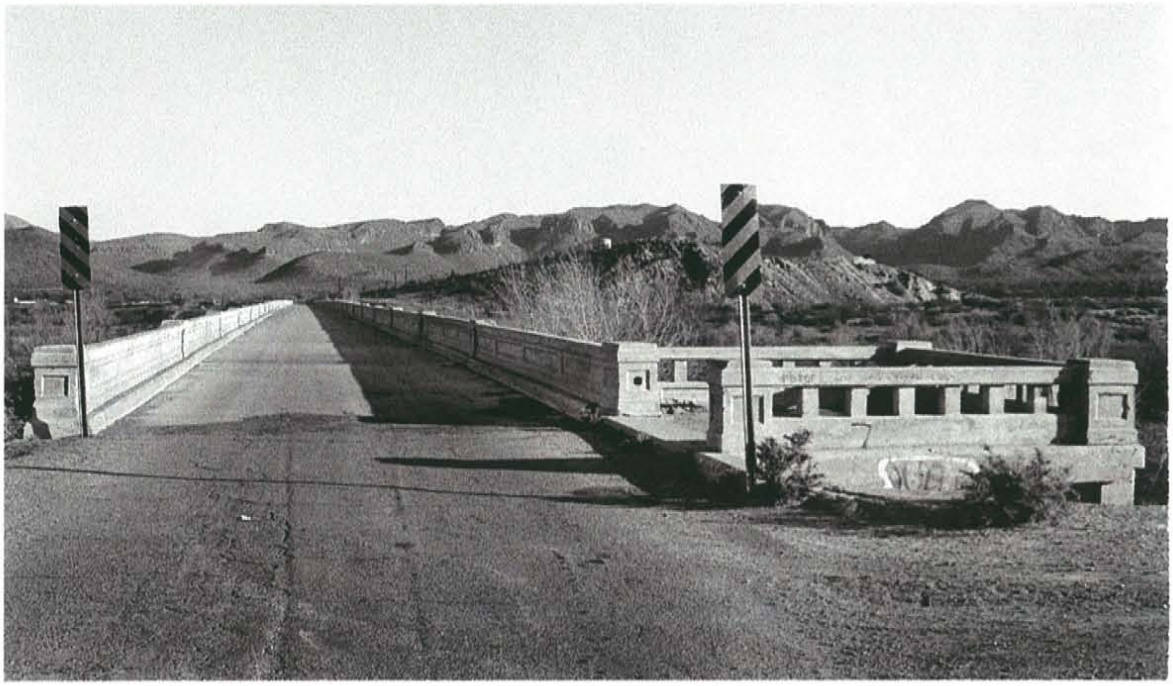


PHOTO INFORMATION

date of photo.: April 2003 view direction: south southwest photo no.: 02.11.84 02.11.85

SACATON DAM BRIDGE

Structure No. 3165

CONSTRUCTION HISTORY

For centuries, the Pima and Maricopa Indians irrigated and farmed the fertile Gila River Valley, until Anglos diverted large quantities of water from the upper river in the late 19th century. To compensate for the loss, Congress in May 1916 authorized the San Carlos Irrigation Project. A major component of the project involved construction of a concrete diversion dam on the Gila River near the Indian village of Sacaton. As delineated by the U.S. Indian Service, the dam would incorporate a multiple-span concrete bridge to carry roadway traffic across the Gila. This bridge was comprised of 25 concrete girder spans, each 50-foot span consisting of four integrally cast girders with curved haunches. These were supported by concrete abutments and piers with angled cutwaters, which stood just downstream from the cushion basin on the dam apron itself. The bridge's 20-foot-wide concrete deck cantilevered slightly over the spandrels on coved brackets. This deck was bounded on both sides by solid concrete guardrails with recessed rectangular panels.

While Pinal and Maricopa counties hurried to build roads to connect with the new bridge in 1922, Charles Washburn, engineer for the Irrigation Division of the USIS, designed the structure late in 1923. Rather than contract for the dam's construction, USIS instead hired Pima and Papago Indians as day laborers to build the immense structure. The Sacaton Dam Bridge was completed on June 30, 1925. As the dam and bridge were nearing completion, the Arizona Highway Department built a three-span concrete girder at its north end over the San Tan Canal [**3164**]. Both structures now carry intermittent traffic in essentially unaltered condition.

SIGNIFICANCE STATEMENT

The Gila River was notorious for its radical shifts in character. It could range from a barely perceptible trickle to violent flood and back within a day's time. With these floods washing over a broad drainage area, engineers were forced to design improbably long bridges to cross the river. Arizona's longest bridges have historically been built over the Gila. In fact, more effort and money was spent building—and maintaining—bridges over the Gila than any other river in the state. Of the five longest vehicular structures in the state in 1927 (Antelope Hill [**abd.**], 1,765 feet; Gillespie Dam [**8021**], 1,660 feet; Tempe, 1,508 feet; Sacaton, 1,486 feet; and Florence [**0501**], 1,430 feet), four spanned the Gila. The Sacaton Dam Bridge is distinguished among these for its relatively good state of preservation. As an integral component of a major effort by the government to facilitate Native American irrigation, the bridge and dam illustrate federal involvement in the region. The diversion dam has deteriorated through disuse, but the bridge remains in good condition. As one of Arizona's longest bridges, the Sacaton Dam Bridge is an important early transportation-related resource.

NATIONAL REGISTER EVALUATION

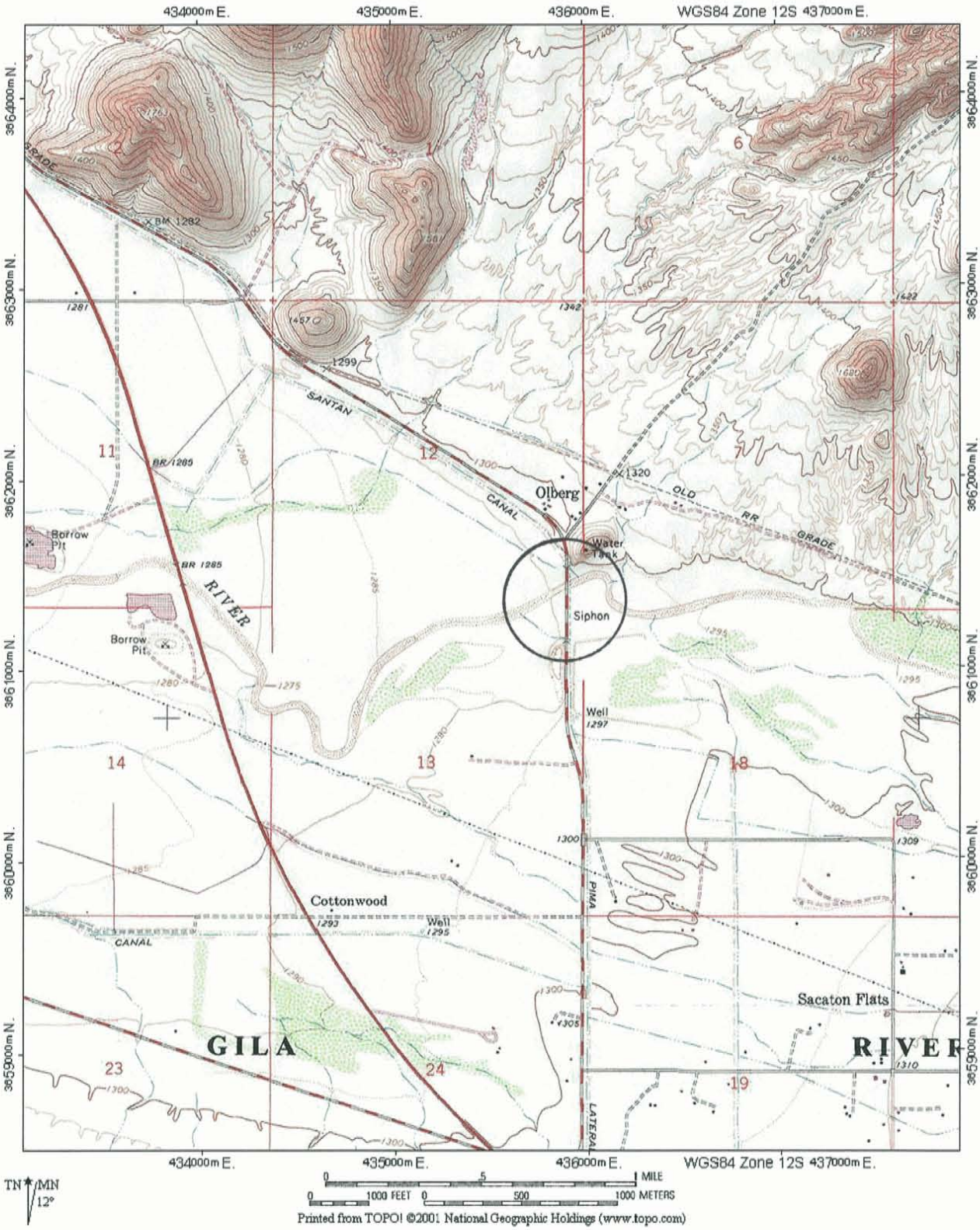
TECHNOLOGICAL SIGNIFICANCE
- ___ represents the work of a master
- ___ possesses high artistic values
- _x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
- ___ associated with significant persons
- _x_ associated with significant events or patterns
- ___ contributes to historical district

NATIONAL REGISTER CRITERIA
- _x_ Criterion A
- ___ Criterion B
- _x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
- individually eligible _x_ yes ___ no
- contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1925-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Queen Creek Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	08440
milepost	0.00	inventory route	Silver King Road
location	2.0 mi North of US 60	feature intersected	Queen Creek
city/vicinity	Florence Junction	USGS quadrangle	Florence Junction
district	81	UTM reference	12.469370.3683243

STRUCTURAL INFORMATION

main span number	1	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	4
main span length	120.0	superstructure	concrete filled spandrel Luten arch
structure length	136.0	substructure	concrete abutments and wingwalls on driven piles
roadway width	19.3	floor/decking	asphalt roadway over earth fill
structure width	22.6	other features	moulded concrete guardrails with paneled concrete bulkheads and precast balusters; plain, tapered cantilever brackets; incised line on arch ring

HISTORICAL INFORMATION

construction date	1920	designer/engineer	R.V. Leeson, Topeka KS
project number	FAP 7-2(B)	builder/contractor	Topeka Bridge & Iron Company, Topeka KS
information source	ADOT bridge records	structure owner	Pinal County
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	70	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of patented structural type, built in regionally important route

FORM COMPLETED BY

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31 October 2004

QUEEN CREEK BRIDGE

Structure No. 8440

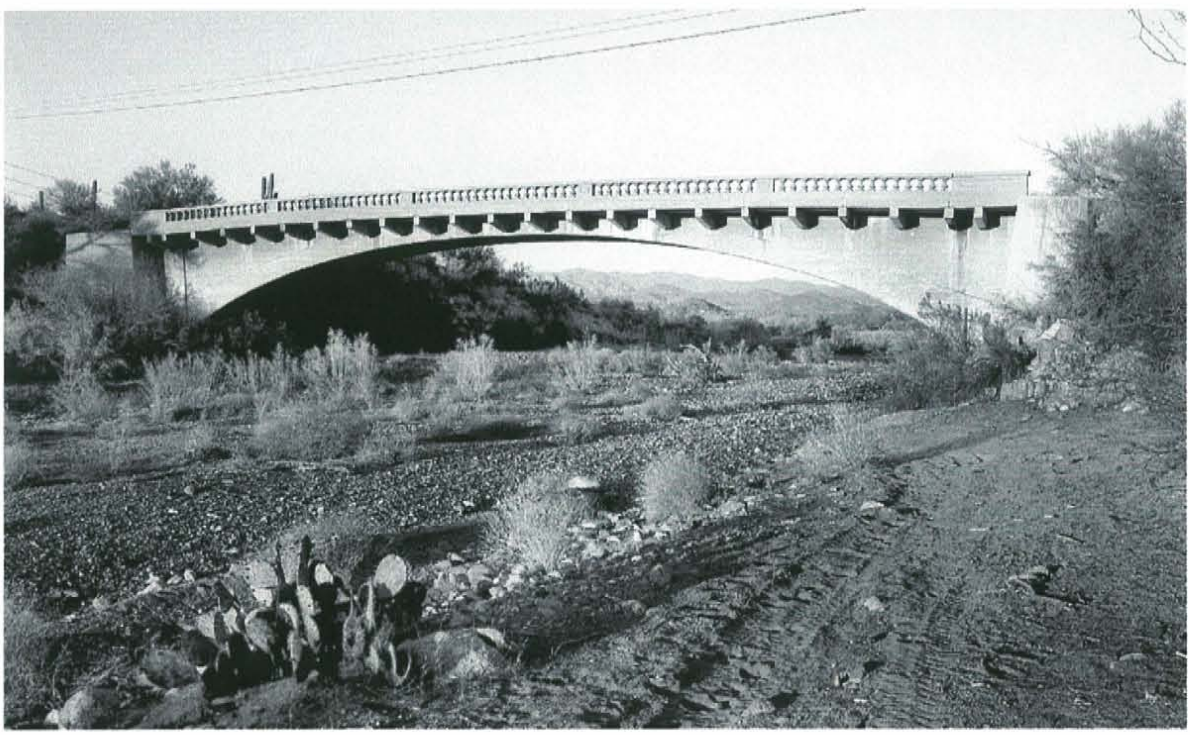


PHOTO INFORMATION

date of photo.: April 2002 view direction: north east photo no.: 02.04.03 02.04.04

CONSTRUCTION HISTORY

In 1917 the Arizona Highway Department began the engineering for the Mesa-Superior Highway in western Pinal County. As one of the first federal aid projects in the state, one 11¾-mile segment of the route near Florence Junction was designated as Federal Aid Project 7, Section 2-B. State forces began work on the grading and small drainage structures of the section in March 1919. The crossings of Queen Creek and its overflow channels north of Florence Junction, however, required more substantial structures, and for these the AHD bridge department delineated two long-span Luten arches like the recently completed Holbrook Bridge in Navajo County [**priv.**]. The proposed overflow channel bridge was later eliminated by raising the highway grade slightly.

The highway department contracted with the Topeka Bridge & Iron Company of Kansas to build the bridge over the main channel. AHD would supply the cement and steel for just over $4,000; Topeka Bridge would design and build the bridge for $14,000. Topeka engineer R.V. Leeson designed a 120-foot span with a 16-foot arch rise, springing from solid concrete abutments set into a solid rock substrate. The bridge featured a 20-foot-wide cambered deck over earth fill, bounded on both sides by concrete guardrails with cast balusters set between paneled bulkheads. Under the direction of AHD inspector James Bone,, the contractor completed the Queen Creek Bridge on May 6, 1920. The highway was later designated as US 60 and has since been realigned. The bridge now carries local traffic in essentially unaltered condition.

SIGNIFICANCE STATEMENT

Strategically located on the routes between Phoenix and Tucson and Phoenix and Globe, the Mesa-Superior Highway formed a short but pivotal route in central Arizona. The Queen Creek Bridge at Florence Junction provided an important crossing on that route. As such, this structure enjoys a degree of historical significance as an integral link on this regionally important transportation artery. Technologically, the bridge is significant as an exemplary long-span Luten vehicular arch. It is one of thirteen such arches found in Arizona, all of which were associated—either through engineering or construction—with the Topeka Bridge & Iron Company, the western representative of Daniel Luten's Indiana-based National Bridge Company. Designed by Topeka Bridge staff and built by the company itself, the Queen Creek Bridge is thus closely associated with this important bridge firm. It is distinguished as the last Luten arch built on a state road, following such notable structures as the Canyon Padre Bridge [**abd.**], the Canyon Diablo Bridge [**priv.**] and the Gila River Bridge [**8152**]. After this, the highway department designed virtually all of its own structures, without outside help. In unaltered and excellent condition, the bridge typifies an important Arizona bridge building trend.

NATIONAL REGISTER EVALUATION

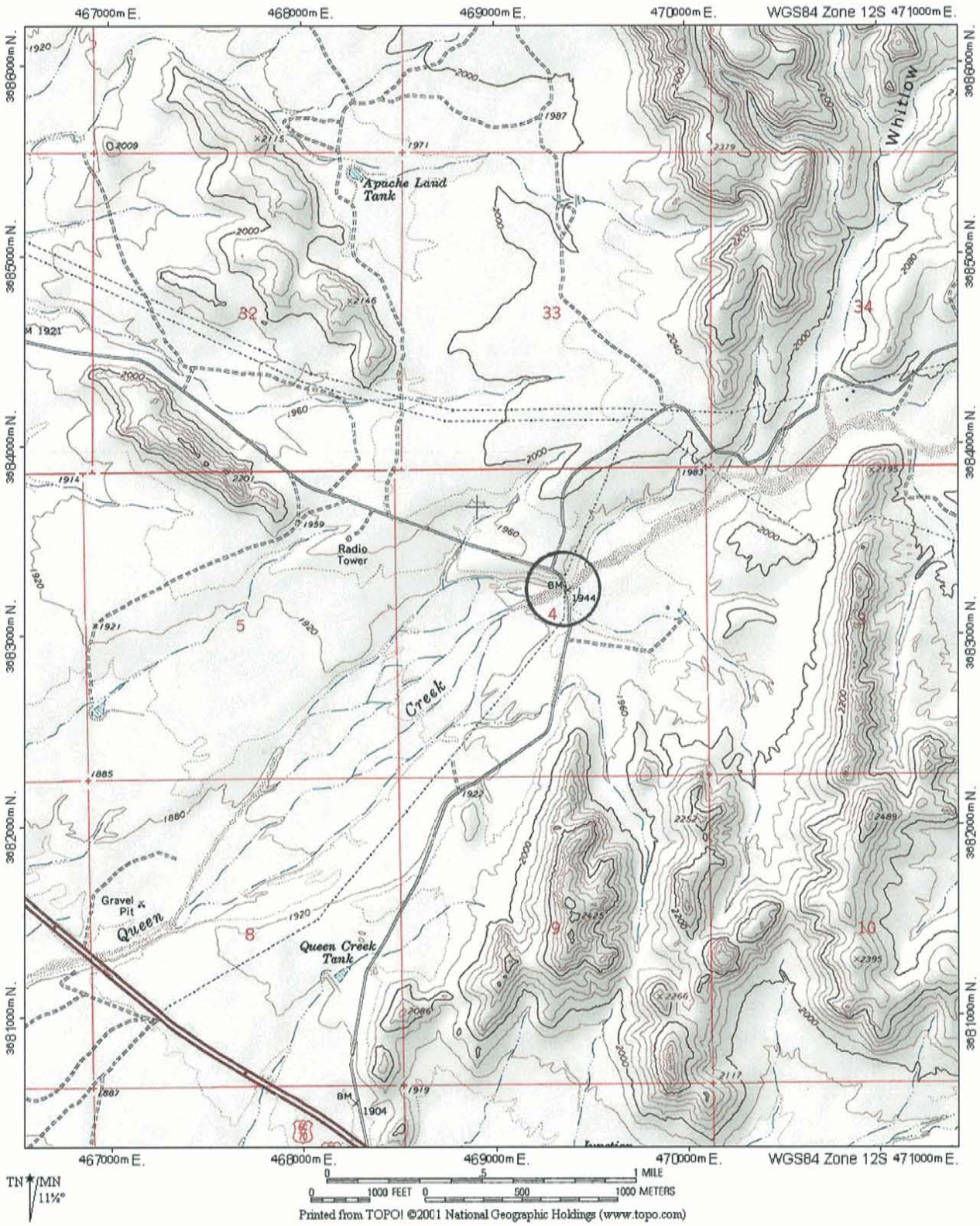
TECHNOLOGICAL SIGNIFICANCE
- ___ represents the work of a master
- ___ possesses high artistic values
- _x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
- ___ associated with significant persons
- _x_ associated with significant events or patterns
- ___ contributes to historical district

NATIONAL REGISTER CRITERIA
- _x_ Criterion A
- ___ Criterion B
- _x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1920-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Kelvin Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	08441
milepost	0.00	inventory route	Florence Kelvin Highway
location	1.3 mi S of SR 177	feature intersected	Gila River
city/vicinity	Kelvin	USGS quadrangle	Kearney
district	81	UTM reference	12.502372.3662692

STRUCTURAL INFORMATION

main span number	4	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	6
main span length	95.0	superstructure	concrete filled spandrel Luten arch
structure length	364.0	substructure	concrete abutments, wingwalls and piers
roadway width	18.3	floor/decking	asphalt roadway over earth fill
structure width	20.3	other features	moulded concrete guardrails with paneled concrete bulkheads and precast balusters; plain, tapered cantilever brackets; incised line on arch ring

HISTORICAL INFORMATION

construction date	1917	designer/engineer	Topeka Bridge & Iron Company, Topeka KS
project number		builder/contractor	Topeka Bridge & Iron Company, Topeka KS
information source	county bridge records	structure owner	Pinal County
alteration date(s)	ca1990	alterations	guardrail replaced with Thrie beam

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	57	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of patented structural type, built in regionally important route

FORM COMPLETED BY

Clayton B. Fraser, Principal

FRASERdesign
420 South County Road 23E
Loveland, Colorado 80537
31 October 2004

PHOTO INFORMATION

date of photo.: April 2002 view direction: south southeast photo no.: 02.04.77 02.04.79

CONSTRUCTION HISTORY

After two years of local agitation, the Pinal County Board of Supervisors finally appropriated $52,000 from a $500,000 bond issue early in 1915 to build two bridges on the Superior-Mammoth Road. The structures would be located over the Gila River in the small towns of Kelvin and Winkelman [**8442**]. (Winkelman is situated on the county line, and Gila County agreed to pay half of the construction cost for a bridge here.) At the advice of Assistant State Engineer T.M. Nichols, the two structures would use multiple-span concrete arches. In August R.V. Leeson, assistant engineer for the National Bridge Company, completed the drawings. As delineated by Leeson, the bridges would be comprised of four spans each—106 foot long for the Winkelman bridge, 95 foot long for Kelvin. They would use the structural type patented by Daniel Luten, with its distinctive horseshoe arch profile. The arches sprang from concrete abutments and massive piers with bull-nosed cutwaters. The 20-foot-wide decks cantilevered from the arch spandrels on concrete brackets. These decks would be flanked by concrete guardrails with moulded balusters and paneled bulkheads. In September 1915 the county's bid solicitation was answered by two Kansas-based bridge companies—the Missouri Valley Bridge & Iron Works and the Topeka Bridge & Iron Company. Unsurprisingly, given the close relationship between National Bridge and Topeka Bridge, Topeka was the low bidder at $43,995 and received the contract to build the Kelvin and Winkelman bridges. To the supervisors' consternation, Topeka intended to build the two structures sequentially rather than simultaneously. The contractor's crew first began the Winkelman Bridge, completing it late in 1916. After a series of delays and excuses, the company finally got underway at Kelvin in March 1917. The bridge was completed in December. Since construction of SH 177, it has carried only local traffic. Its guardrails have been replaced with steel.

SIGNIFICANCE STATEMENT

Although secondary to the Mesa-Florence-Tucson Highway (US 89) as a southern Arizona route, the Superior-Mammoth Road functioned for decades as a locally important route in Pinal County. The Winkelman and Kelvin bridges are historically significant as early remnants of that route. Technologically, the two are important for their representation of an important proprietary structural type used on vehicular spans—the Luten arch. Because of their relatively high construction cost, multiple-span Luten arches were infrequently constructed. Four are known to have been built in Arizona: the Winkelman and Kelvin bridges, a bridge over the Agua Fria River at Marinette in Maricopa County and a bridge over the Verde River at Camp Verde in Yavapai County. The latter two have since been razed, leaving the Winkelman and Kelvin structures as the only multi-span examples among the thirteen remaining Luten arches identified in the state.

NATIONAL REGISTER EVALUATION

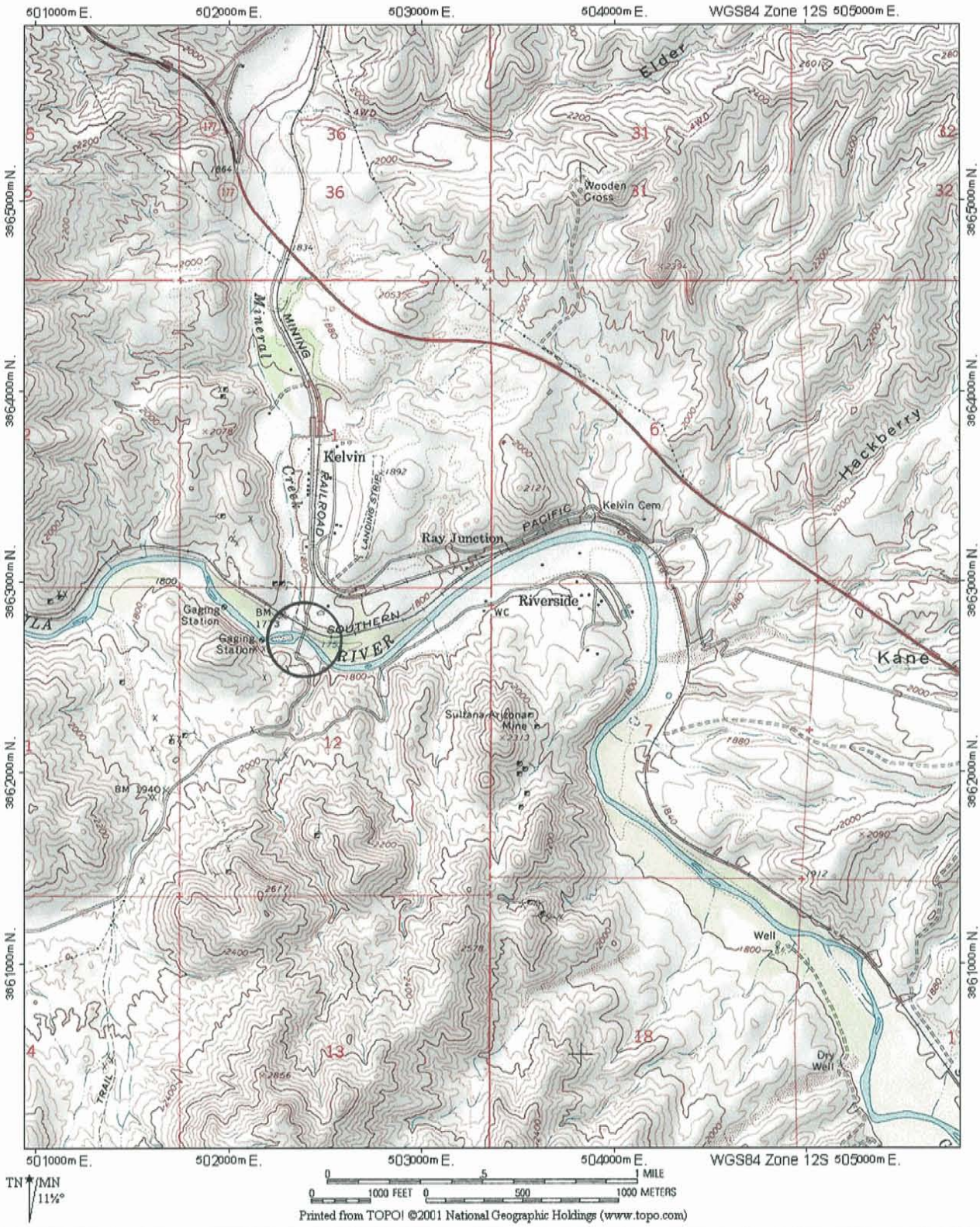
TECHNOLOGICAL SIGNIFICANCE
- ___ represents the work of a master
- ___ possesses high artistic values
- _x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
- ___ associated with significant persons
- _x_ associated with significant events or patterns
- ___ contributes to historical district

NATIONAL REGISTER CRITERIA
- _x_ Criterion A
- ___ Criterion B
- _x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1917-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Winkelman Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	08442
milepost	0.00	inventory route	Pedestrian Walkway
location	0.2 mi S SR 177	feature intersected	Gila River
city/vicinity	Winkelman	USGS quadrangle	Winkelman
district	81	UTM reference	12.521260.3649666

STRUCTURAL INFORMATION

main span number	4	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	
main span length	106.0	superstructure	concrete filled spandrel Luten arch
structure length	419.0	substructure	concrete abutments, wingwalls and piers
roadway width	18.0	floor/decking	asphalt roadway over earth fill
structure width	20.0	other features	moulded concrete guardrails with paneled concrete bulkheads and precast balusters; plain, tapered cantilever brackets; incised line on arch ring

HISTORICAL INFORMATION

construction date	1916	designer/engineer	Topeka Bridge & Iron Company, Topeka KS
project number		builder/contractor	Topeka Bridge & Iron Company, Topeka KS
information source	county bridge records	structure owner	Pinal County
alteration date(s)	ca1995	alterations	bridge restored

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	62	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of patented structural type, built in regionally important route

FORM COMPLETED BY

Clayton B. Fraser, Principal

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420 South County Road 23E
Loveland, Colorado 80537
31 October 2004

PHOTO INFORMATION

date of photo.: April 2002 view direction: south southwest photo no.: 02.04.93 02.04.96

CONSTRUCTION HISTORY

After two years of local agitation, the Pinal County Board of Supervisors finally appropriated $52,000 from a $500,000 bond issue early in 1915 to build two bridges on the Superior-Mammoth Road. The structures would be located over the Gila River in the small towns of Kelvin and Winkelman. (Winkelman is situated on the county line, and Gila County agreed to pay half of the construction cost for a bridge here.) At the advice of Assistant State Engineer T.M. Nichols, the two structures would use multiple-span concrete arches. In August R.V. Leeson, assistant engineer for the National Bridge Company, completed the drawings. As delineated by Leeson, the bridges would be comprised of four spans each—106 foot long for the Winkelman bridge, 95 foot long for Kelvin [**8441**]. They would use the structural type patented by Daniel Luten, with its distinctive horseshoe arch profile. The arches sprang from concrete abutments and massive piers with bull-nosed cutwaters. The 20-foot-wide decks cantilevered from the arch spandrels on concrete brackets. These decks would be flanked by concrete guardrails with moulded balusters and paneled bulkheads.

In September 1915 the county's bid solicitation was answered by two Kansas-based bridge companies—the Missouri Valley Bridge & Iron Works and the Topeka Bridge & Iron Company. Unsurprisingly, given the close relationship between National Bridge and Topeka Bridge, Topeka was the low bidder at $43,995 and received the contract to build the Kelvin and Winkelman bridges. The contractors began work soon thereafter on the substructure of the Winkelman Bridge and, despite delays caused by flooding on the Gila, completed the structure late in November 1916. Since construction of SH 177, it has carried only local traffic. In 1999 the Winkelman Bridge was restored, with the replication of the original guardrails and now is a pedestrian-only structure.

SIGNIFICANCE STATEMENT

Although secondary to the Mesa-Florence-Tucson Highway (US 89) as a southern Arizona route, the Superior-Mammoth Road functioned for decades as a locally important route in Pinal County. The Winkelman and Kelvin bridges are historically significant as early remnants of that route. Technologically, the two are important for their representation of an important proprietary structural type used on vehicular spans—the Luten arch. Because of their relatively high construction cost, multiple-span Luten arches were infrequently constructed. Four are known to have been built in Arizona: the Winkelman and Kelvin bridges, a bridge over the Agua Fria River at Marinette in Maricopa County and a bridge over the Verde River at Camp Verde in Yavapai County. The latter two have since been razed, leaving the Winkelman and Kelvin structures as the only multi-span examples among the thirteen remaining Luten arches identified in the state.

NATIONAL REGISTER EVALUATION

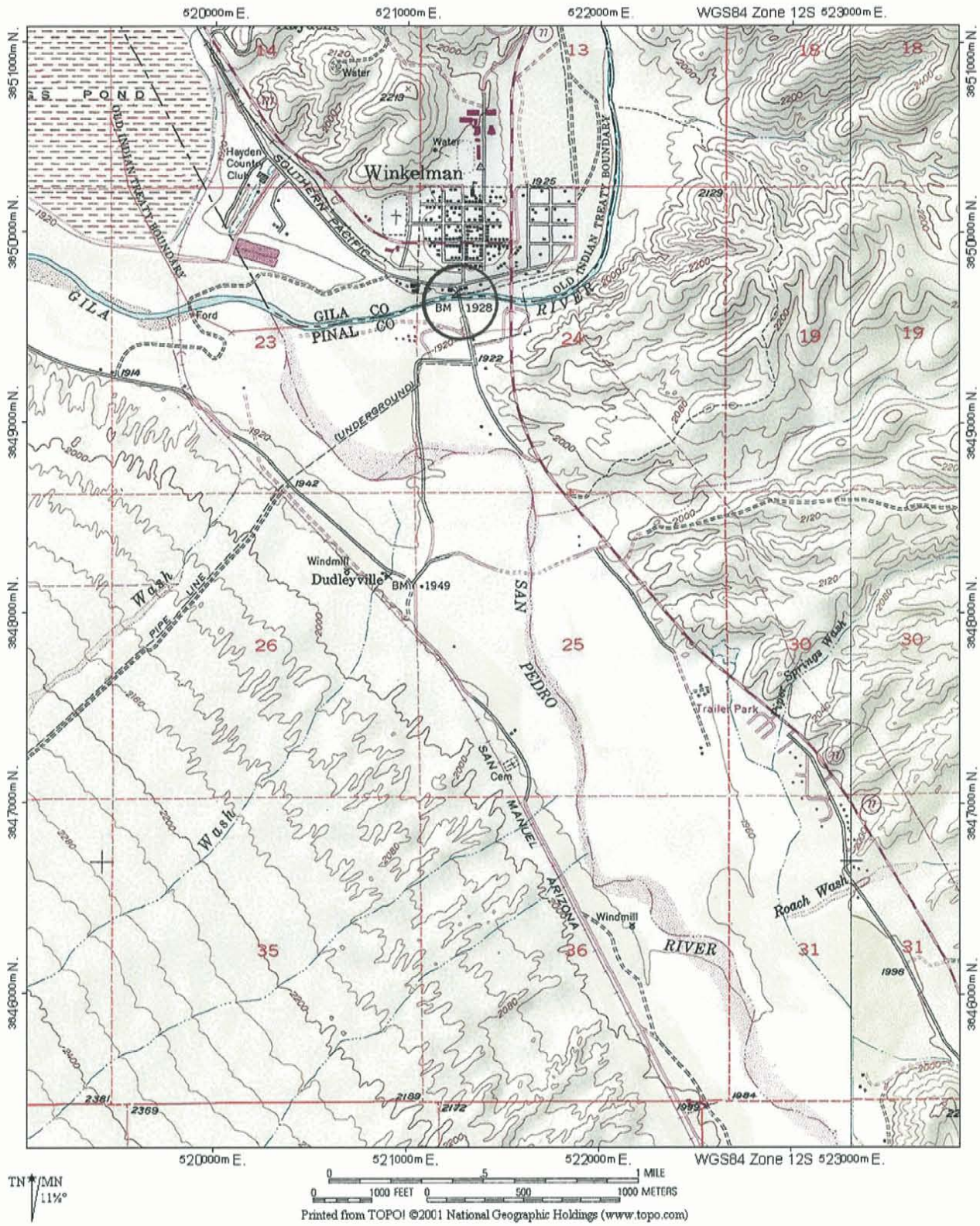
TECHNOLOGICAL SIGNIFICANCE
- ___ represents the work of a master
- ___ possesses high artistic values
- _x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
- ___ associated with significant persons
- _x_ associated with significant events or patterns
- ___ contributes to historical district

NATIONAL REGISTER CRITERIA
- _x_ Criterion A
- ___ Criterion B
- _x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
- individually eligible _x_ yes ___ no
- contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1916-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Devils Canyon Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	abd.
milepost	0.00	inventory route	abd. US 60
location	4.7 mi NE of Superior	feature intersected	Devils Canyon
city/vicinity	Superior	USGS quadrangle	Superior
district	83	UTM reference	12.496960.3687460

STRUCTURAL INFORMATION

main span number	1	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	0
main span length	65.0	superstructure	concrete filled spandrel arch
structure length	108.0	substructure	concrete abutments and wingwalls on spread footings
roadway width	20.0	floor/decking	asphalt roadway over earth fill
structure width	22.0	other features	paneled concrete parapet walls w/ steel pipe guardrails; incised line on concrete arch ring

HISTORICAL INFORMATION

construction date	1922	designer/engineer	Arizona Highway Department
project number	FAP 16	builder/contractor	state work force
information source	ADOT bridge records	structure owner	Pinal County
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	61	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of early AHD concrete bridge design

FORM COMPLETED BY

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31 October 2004

DEVILS CANYON BRIDGE

Structure No.: abandoned

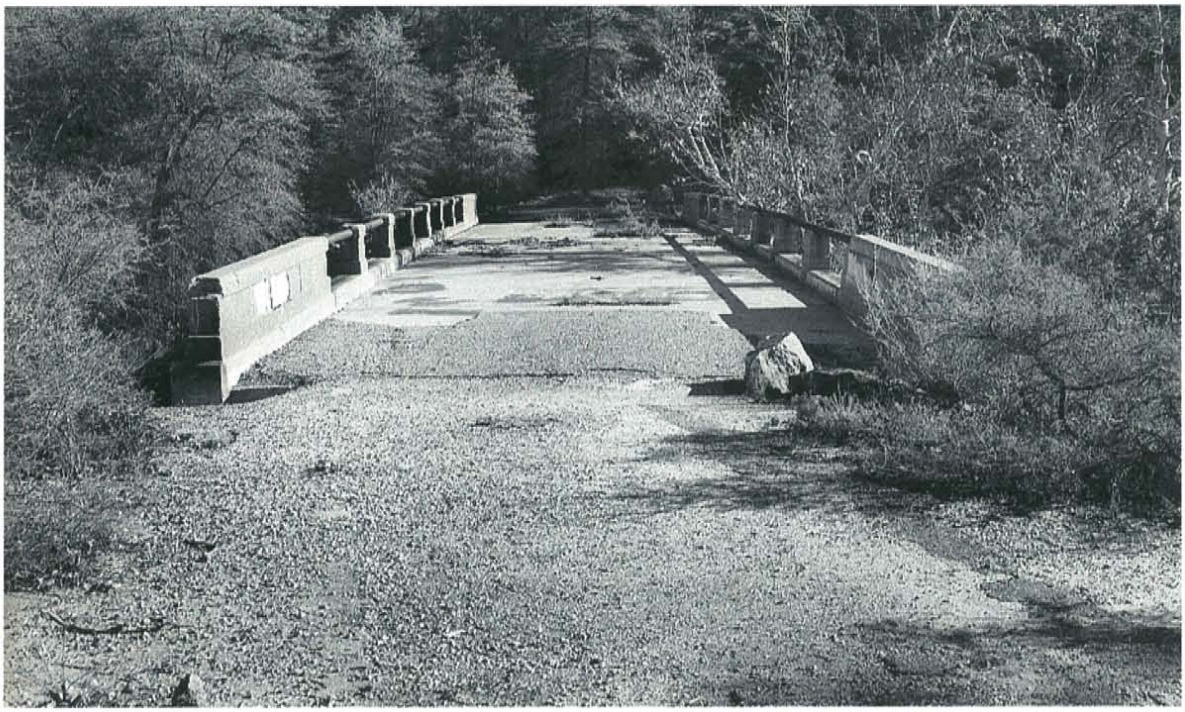


PHOTO INFORMATION

date of photo.: November 2002 view direction: north southwest photo no.: 02.11.334 02.11.335

CONSTRUCTION HISTORY

Work on the Miami-Superior Highway in Gila and Pinal counties in the 1910s and 1920s involved some of the most difficult highway construction ever undertaken by the Arizona Highway Department. The heaviest portion of the work under Federal Aid Project 16 consisted of 1¾ miles of road blasted through rugged Queen Creek Canyon. Designated as Section C, it was completed in 1921 at a cost of approximately $300,000. In addition to numerous small drainage structures, the project included construction of substantial concrete arch bridges over Queen Creek [**abd.**] and Devils Canyon north of Superior. The AHD bridge department engineered the Devils Canyon Bridge in October 1921 as a medium-span, filled spandrel arch, with moderate barrel rise, a 20-foot-wide roadway that cantilevered over the arch on both sides, a corbeled arch ring and steel pipe guardrails with paneled concrete parapets.

Under the supervision of AHD Resident Engineer H.B. Wright, a force account labor crew constructed the Devils Canyon Bridge in 1921-1922 for a total cost of $23,780. Three years later the bridge and adjacent roadway were designated US Highway 60. They carried mainline traffic until the route was realigned in 1941. Since then the Devils Canyon Bridge has stood abandoned in place in a small park beside US 60. It is in deteriorating but unaltered condition.

SIGNIFICANCE STATEMENT

The Devils Canyon Bridge is historically significant as a major part of one of the state's most important early highway projects. For 20 years it functioned as an integral link on a regionally important route. Additionally, this structure is technologically important as an early example of a statewide bridge design trend. The Arizona Highway Department used three basic concrete arch configurations in the 1910s and 1920s—the Luten arch, open spandrel arch and what it termed the "common arch", or segmental, filled spandrel design. Long-span representatives of the former were engineered by their inventor Daniel Luten or his assistants. The latter two were designed in-house by AHD bridge engineers for medium- and long-span applications. The Devils Canyon Bridge is noteworthy as the oldest such AHD-designed common arch remaining in Arizona. It was followed soon by other similar AHD spans, among them the Lynx Creek Bridge [**8256**], Verde River Bridge [**8236**] and Fossil Creek Bridge [**3215**], all featuring similar Luten-like reinforcing, span lengths and concrete detailing.

NATIONAL REGISTER EVALUATION

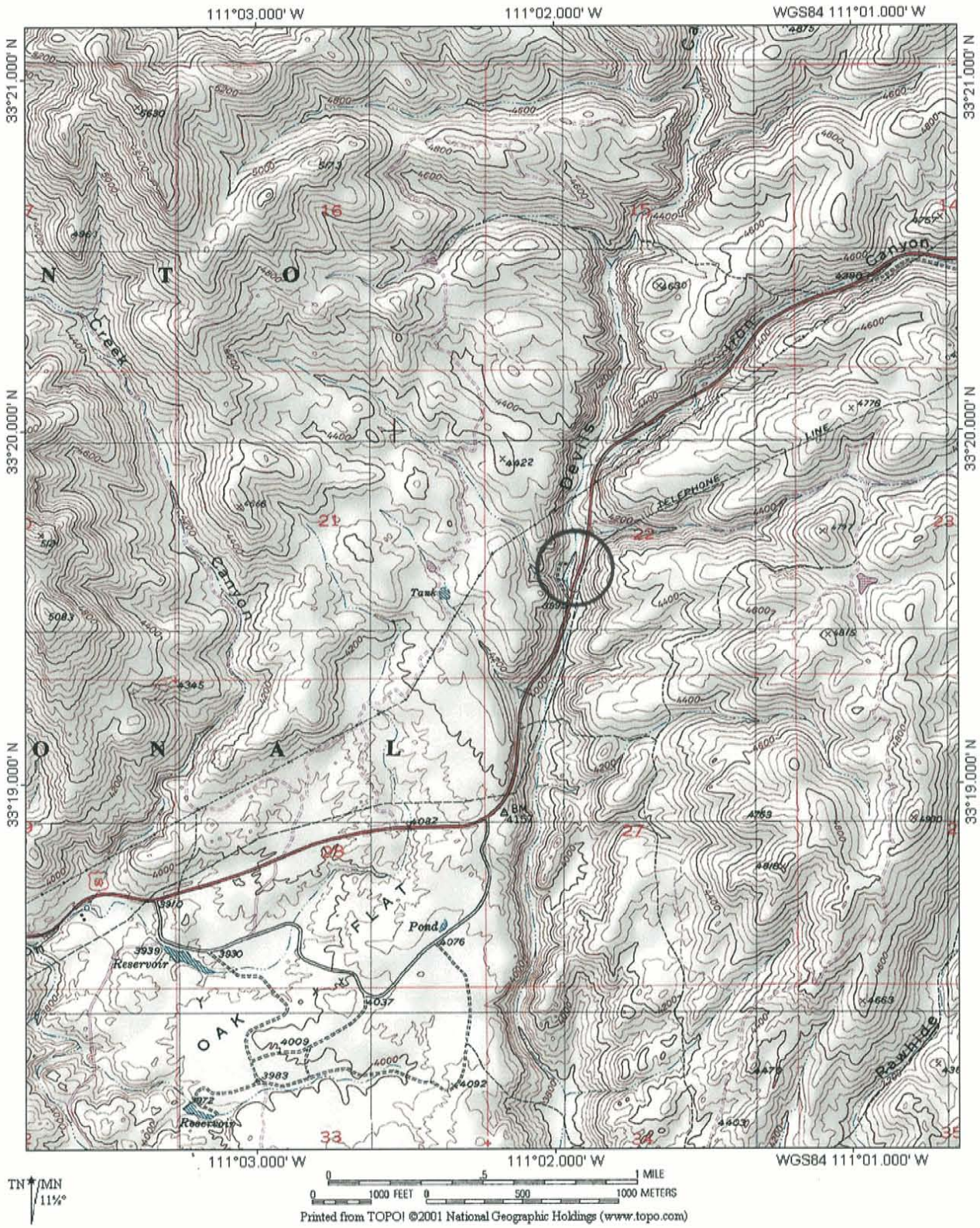
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
_x_ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
_x_ Criterion A
___ Criterion B
_x_ Criterion C

NATIONAL REGISTER ELIGIBILITY:
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1922-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Mineral Creek Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	abd.
milepost	0.00	inventory route	abd. US 77
location	0.1 mi East US 77	feature intersected	Mineral Creek
city/vicinity	Kelvin	USGS quadrangle	Kelvin
district	81	UTM reference	12.502230.3664857

STRUCTURAL INFORMATION

main span number	1	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	0
main span length	125.0	superstructure	concrete filled spandrel Luten arch
structure length	150.0	substructure	concrete abutments and wingwalls
roadway width	18.0	floor/decking	asphalt roadway over earth fill
structure width	20.0	other features	moulded concrete guardrails w/ paneled concrete parapet walls; incised line on concrete arch ring

HISTORICAL INFORMATION

construction date	1923 ca	designer/engineer	Topeka Bridge & Iron Co., Topeka KS
project number		builder/contractor	Topeka Bridge & Iron Company, Topeka KS
information source	ADOT bridge records	structure owner	Pinal County
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	55	NRHP eligibility	listed
		NRHP criteria	A ____ B ____ C x
		signif. statement	well-preserved example of early proprietary bridge type

FORM COMPLETED BY

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31 October 2004

MINERAL CREEK BRIDGE

Structure No.: abandoned

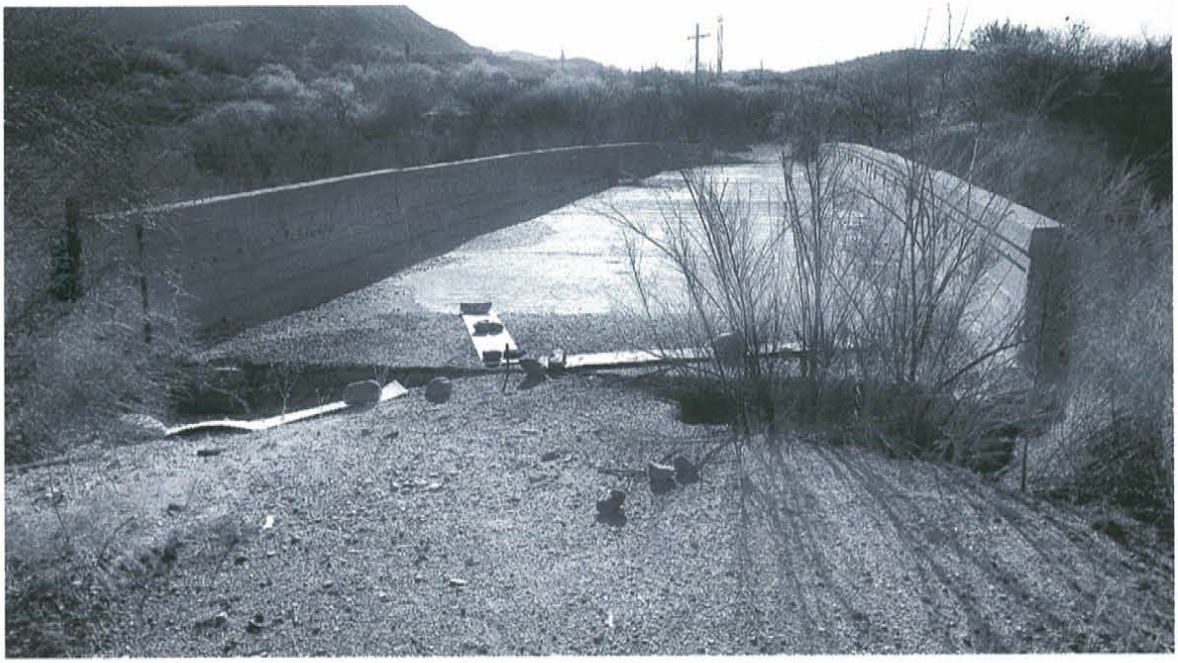


PHOTO INFORMATION

date of photo.: April 2002 view direction: east south photo no.: 02.04.81 02.04.86

CONSTRUCTION HISTORY

This single-span concrete arch bridge is located on an abandoned alignment of State Highway 177, over Mineral Creek just outside of the town of Kelvin, in Pinal County. The structure is configured as a 125-foot-span, reinforced concrete Luten arch that springs from concrete abutments set in solid rock substrate. The 20-foot-wide, cambered deck is flanked on both sides by solid concrete guardrails with recessed rectangular panels. The Mineral Creek Bridge has historically formed a minor crossing on the Superior-Winkelman Road in Pinal County. Although the exact date of its construction is unknown, historic maps and physical evidence on the bridge suggest that it was constructed ca. 1923 by the Topeka Bridge & Iron Company of Kansas. The bridge carried mainline traffic until its replacement with a new parallel structure in 1962. It has since been abandoned in place, in essentially unaltered condition.

SIGNIFICANCE STATEMENT

The Mineral Creek Bridge is significant as an exemplary long-span example of a proprietary concrete arch design. It and twelve other Luten arches in Arizona were directly associated—either through engineering or construction— with the Topeka Bridge & Iron Company, the western representative of Daniel B. Luten's Indiana-based National Bridge Company. Patterned after an arch reinforcing scheme developed by Austrian engineer Josef Melan, Luten's filled spandrel arch was the most widely built of the proprietary arch types in America. Designed by Luten, the Mineral Creek Bridge is thus closely associated with this nationally important bridge company. It is the only one of the thirteen Luten arches identified in the inventory that is not definitively dateable. It is a typical, though unclearly documented, example of a structural type that is important to early Arizona bridge building history.

NATIONAL REGISTER EVALUATION

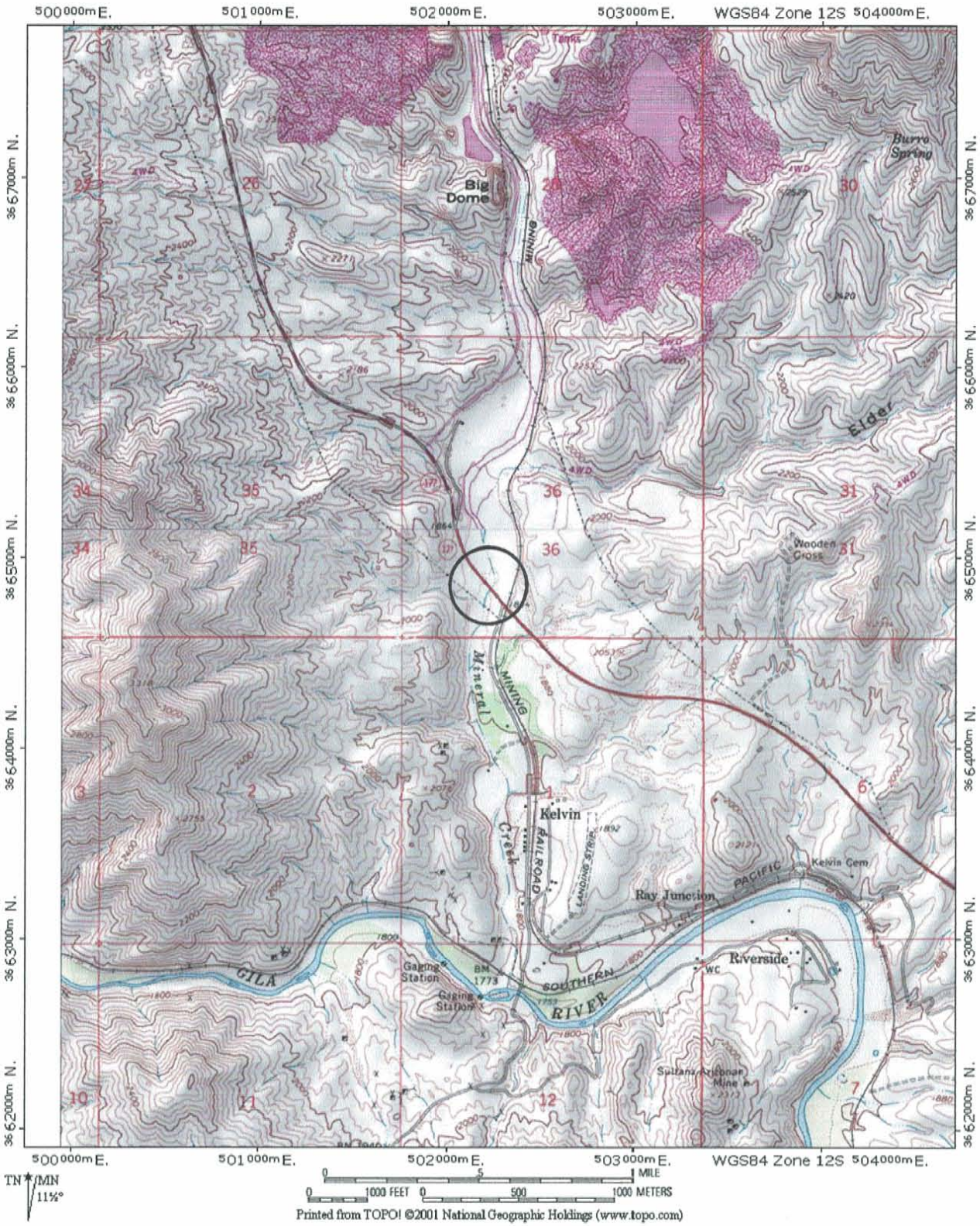
TECHNOLOGICAL SIGNIFICANCE
___ represents the work of a master
___ possesses high artistic values
_x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
___ associated with significant persons
___ associated with significant events or patterns
___ contributes to historical district

NATIONAL REGISTER CRITERIA
___ Criterion A
___ Criterion B
_x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
individually eligible _x_ yes ___ no
contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Engineering
PERIOD OF SIGNIFICANCE: 1923-1964
THEME(S): Transportation: Highways



Location Map

HISTORIC BRIDGE INVENTORY

Queen Creek Bridge

PROPERTY IDENTIFICATION

county	Pinal	inventory number	abd.
milepost	0.00	inventory route	abd. US 60
location	0.6 mi East of Superior	feature intersected	Queen Creek
city/vicinity	Superior	USGS quadrangle	Superior
district	83	UTM reference	12.491700.3684158

STRUCTURAL INFORMATION

main span number	1	main span type	111
appr. span number	0	appr. span type	
degree of skew	0	guardrail type	0
main span length	125.0	superstructure	concrete two-rib open spandrel arch
structure length	190.0	substructure	concrete abutments and wingwalls
roadway width	21.7	floor/decking	concrete deck
structure width	25.0	other features	steel pipe guardrails with paneled concrete bulkheads

HISTORICAL INFORMATION

construction date	1921	designer/engineer	Arizona Highway Department
project number	FAP 16	builder/contractor	state work force
information source	ADOT bridge records	structure owner	Pinal County
alteration date(s)		alterations	

NATIONAL REGISTER EVALUATION

For additional information, see "Vehicular Bridges in Arizona 1880-1964" National Register Multiple Property Documentation Form

inventory score	83	NRHP eligibility	listed
		NRHP criteria	A x B ____ C x
		signif. statement	well-preserved example of early AHD concrete bridge design

FORM COMPLETED BY

Clayton B. Fraser, Principal

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420 South County Road 23E
Loveland, Colorado 80537
31 October 2004

QUEEN CREEK BRIDGE

Structure No.: abandoned

PHOTO INFORMATION

date of photo.: November 2002 view direction: northeast southeast photo no.: 02.11.342 02.11.343

CONSTRUCTION HISTORY

Work on the Miami-Superior Highway in Gila and Pinal counties in the 1910s and 1920s involved some of the most difficult highway construction undertaken to date by the Arizona Highway Department. The heaviest portion of the work under Federal Aid Project 16 consisted of 1¾ miles of road blasted through rugged Queen Creek Canyon. Designated as Section C, it was completed in 1921 at a cost of approximately $300,000. In addition to numerous small drainage structures, the project included construction of substantial concrete arch bridges over Devils Canyon and Queen Creek at the mouth of the canyon north of Superior. The AHD bridge department engineered the Queen Creek Bridge in January 1920 as a long-span, open spandrel arch. The 125-foot-long structure featured two tapered concrete ribs that sprang from concrete abutments, a moderate barrel rise, 22-foot-wide roadway that cantilevered slightly over the arch on both sides, and steel pipe guardrails with paneled concrete parapets.

Under the supervision of AHD Resident Engineer H.B. Wright, a force account labor crew constructed the Queen Creek Bridge in 1920-1921 for a total cost of $30,118. Four years later the bridge and adjacent roadway were designated part of U.S. Highway 60. They carried mainline traffic until the route was realigned in 1949. Since then the Queen Creek Bridge has stood abandoned in place in unaltered condition.

SIGNIFICANCE STATEMENT

In 1919-1920 the AHD bridge department engineered three almost identical open spandrel concrete arches for Arizona highways: the Queen Creek Bridge and bridges over Cienega Canyon [**8293**] in Pima County and Hell Canyon [**abd.**] in Yavapai County. The design of the Hell Canyon Bridge [**abd.**] was later changed to a five-span concrete girder with arched beams, but the Queen Creek and Cienega arches were constructed as originally designed in 1920-1921. Both have survived unaltered. The highway department soon turned to other, more efficient designs for its long-span bridges and, as a result, the open spandrel configuration was used on only one other major structure—the Mill Avenue Bridge [**9954**], completed over the Salt River in Tempe in 1931. Today only four such long-span arches remain in place in the state, of which the Queen Creek Bridge is the oldest. It is historically significant as a major part of one of the state's most important early highway projects. For almost 30 years it functioned as an integral link on a regionally important route.

NATIONAL REGISTER EVALUATION

TECHNOLOGICAL SIGNIFICANCE
- ___ represents the work of a master
- ___ possesses high artistic values
- _x_ represents a type, period or method of construction

HISTORICAL SIGNIFICANCE
- ___ associated with significant persons
- _x_ associated with significant events or patterns
- ___ contributes to historical district

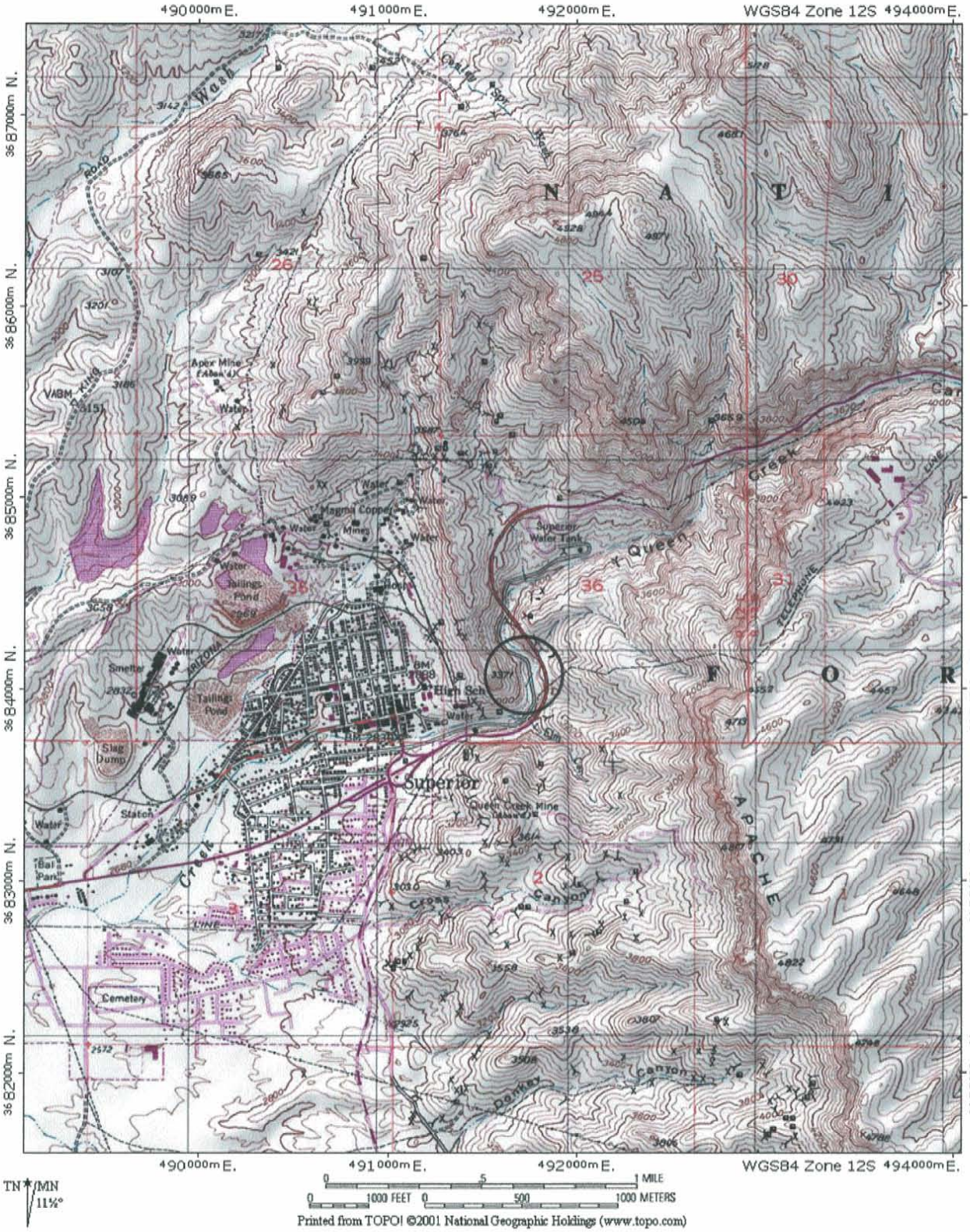
NATIONAL REGISTER CRITERIA
- _x_ Criterion A
- ___ Criterion B
- _x_ Criterion C

NATIONAL REGISTER ELIGIBILITY
- individually eligible _x_ yes ___ no
- contributes to district ___ yes _x_ no

AREA OF SIGNIFICANCE: Transportation; Engineering
PERIOD OF SIGNIFICANCE: 1921-1964
THEME(S): Transportation: Highways

QUEEN CREEK BRIDGE

Structure No.: abandoned



Location Map