STATE OF ARIZONA

HISTORIC

## HISTORIC PROPERTY INVENTORY FORM

INVENTORY

# Side Hill Viaduct

BRIDGE

PROPERTY	<b>IDENTIFICATION</b>

county milepost location city/vicinity USGS quad STRUCTURAL INFO	Navajo 321.02 2.6 mi W Jct SR 73 Carrizo Long Tom Canyon RMATION	inventory number inventory route feature intersected structure owner UTM reference	00145 US 60 Side Hill Arizona Department of Transportation 12.570167.3766597
main span number appr. span number degree of skew main span length structure length roadway width structure width	8 0 0 12.0 97.0 38.0 47.0	main span type appr. span type guardrail type superstructure substructure floor/decking other features	201 6 concrete transverse slab concrete abutments, wingwalls and piers asphalt roadway steel Thrie beam guardrails
HISTORICAL INFOR	RMATION		
construction date project number info source:	1936 FAP 105-D ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahway Department Harry J. Hagen, Globe AZ ca1990 Jersey barrier guardrails installed
NATIONAL REGIST	ER EVALUATION		
		For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form	
inventory score interstate exemptic program comment	52 n _ -	NRHP eligibility NRHP criteria signif. statement	eligible A <u>x</u> B <u>C x</u> well-preserved example of singular structural type

## FORM COMPLETED BY

Clayton B. Fraser, Principal

## SIDE HILL VIADUCT



PHOTO INFORMATION

date of photo.: March 2018

view direction: northeast; northeast photo no.: DSCF5400 DSCF5401

Structure No. 00145

In the late 1920s the Arizona Highway Department began planning for construction of a major highway that would link Globe and Springerville in eastern Arizona. Designated as part of U.S. Highway 60, the Globe-Springerville Highway was initially surveyed in 1930-1931. AHD divided the 130-mile road into a series of shorter sections and began letting contracts for its construction in 1931. The heavy construction progressed northward from Globe, and by 1936 the work had reached beyond Carrizo. There, on a steep hillside that sloped down to Corduroy Creek, highway department engineers encountered an unusual circumstance. In order to carry the highway over one narrow, rocky section of the hill, AHD designed a 97-foot-long reinforced concrete viaduct. Not a bridge in the truest sense, the Side Hill Viaduct increased the available roadway width by extending sideways from the existing hillside. It was comprised of eight relatively short concrete slab spans supported on a banked curve by solid concrete piers on spread footings that stepped down the hillside. As delineated by AHD, the structure would require 116 cubic yards of concrete and over 20,000 pounds of reinforcing steel.

AHD designated the construction of this viaduct—along with 3.2 miles of adjacent roadway—as Federal Aid Project 105-D and late in 1935 awarded the contract for the work to Harry J. Hagen. Under the supervision of AHD resident engineer A.F. Rath, the Globe contractor began work on the road soon thereafter. By May the Hagen crew had completed over half of the construction; by October the project was reported complete. The Side Hill Viaduct has since carried mainline traffic, with the replacement of its original guardrails with steel Thrie beams and later with concrete Jersey barriers as the only significant alteration.

## SIGNIFICANCE STATEMENT

Stretching between Springerville and Ehrenberg, U.S. 60 has historically formed an important east-west route across central Arizona. The highway functioned as a heavily trafficked ancillary route for U.S. 66 across the northern part of the state, and it provided a vital link between the cities in the Salt River Valley—Phoenix, Tempe, Mesa—with the rest of the state. During the 1920s and 1930s the Arizona Highway Department improved the route in a massive multi-part construction effort. As one of the last structures built along the highway's length, the Side Hill Viaduct is significant as an original component of this regionally important route. Although it employed conventional concrete slabs for its individual spans, the structure's configuration on a steep hillside makes it unique among Arizona's bridges.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values represents a type, period or method of construction	HISTORICAL SIGNIFICANCEassociated with significant personsassociated with significant events ofcontributes to historical district	NATIONAL REGISTER CRITERIA         _x       Criterion A         r patterns       Criterion B         _x       Criterion C
NATIONAL REGISTER ELIGIBILITY	AREA OF SIGNIFICANCE: Tra	nsportation; Engineering
individually eligible <u>x</u> yes <u>no</u> no	PERIOD OF SIGNIFICANCE: 1934	6-1978
contributes to district <u>yes x</u> no	THEME(S): Tra	nsportation: Highways



FRASERDESIGN 2018



BRIDGE

# INVENTORY

## Winslow Underpass

PROPERTY IDENTI	FICATION		
county milepost location city/vicinity USGS quad	Navajo 342.10 0.1 mi South of Jct B 40 Winslow Winslow	inventory number inventory route feature intersected structure owner UTM reference	00194 AT&SF Railroad SR 87 Atchison, Topeka & Santa Fe Railroad 12.527586.3875453
STRUCTURAL INFC	RMATION		
main span number appr. span number degree of skew main span length structure length	2 0 25.0 36.0	main span type appr. span type guardrail type superstructure substructure	207 concrete rigid frame concrete abutments, retaining walls and piers
roadway width structure width	0.0 0.0	floor/decking other features	ballasted railroad deck decorative pierced parapet walls and guardrails; curved and corbelled bulkhead brackets; Spanish tile-roofed corner tower
HISTORICAL INFOR	RMATION		
construction date project number info source:	1936 WPGM 107 ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahway Department Tanner Construction Company, Phoenix AZ 1997 stairway/walkway rehabilitated
NATIONAL REGIST	ER EVALUATION		
		For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form	
inventory score interstate exemptio program comment	70 m _ -	NRHP eligibility NRHP criteria signif. statement	listed A _x _ B C _x well-preserved Depression-era grade separation

## FORM COMPLETED BY

Clayton B. Fraser, Principal



### PHOTO INFORMATION

date of photo.: March 2018 view direction: northwest northeast photo no.: DSCF6562 DSCF6566

The Atchison Topeka & Santa Fe Railroad intersected with U.S. Highway 87 in Winslow, creating a considerable bottleneck for vehicular traffic. To alleviate this recurring problem, the Arizona Highway Department undertook construction of a grade separation that would carry the railroad over the highway. In April 1936 AHD opened the bids for the project. Funding for Winslow Underpass—designated as Works Progress Grade Maintenance Project 107—came from an enormous public relief bill passed by Congress in 1935, a portion of which had been earmarked for grade separations. The underpass was engineered late in 1935 by the AHD bridge department as a two-span reinforced concrete rigid frame structure with Mission Style architectural treatment.

The contract went to the R.C. Tanner Construction Company for an estimated \$150,000. With several other highway projects then underway, the Phoenix contractor was slow in beginning this structure, and as a result the work dragged through the summer. Tanner recruited heavily from the relief rolls for labor, using about 70,000 man-hours to build the structure. With its long approaches and decorative architecture, the Winslow Underpass was massive, consuming almost 300 cubic yards of concrete and 360,000 pounds of reinforcing steel. Tanner's men completed it in November, and it was formally dedicated before throngs of well-wishers on December 1, 1936. The Winslow Underpass has functioned unaltered since.

#### SIGNIFICANCE STATEMENT

The Winslow 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 Winslow 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 Winslow Underpass displays traditional Mission Style detailing, with its decoratively pierced parapet walls and tile-roofed tower. A prototypical Arizona style, this was the architectural idiom that AHD used for a number of its grade separations, most notably the Stone Avenue Underpass [07987] in Tucson, completed earlier in 1936. A locally important grade separation, the Winslow Underpass represents this noteworthy architectural trend.

TECHNOLOGICAL SIGNIFICANCE	HISTORICAL SIGNIFICANCE	NATIONAL REGISTER CRITERIA
represents the work of a master	associated with significant persons	x Criterion A
possesses high artistic values	_xassociated with significant events or	patterns Criterion B
_x represents a type, period or method of construction	contributes to historical district	_x Criterion C
NATIONAL REGISTER ELIGIBILITY	AREA OF SIGNIFICANCE: Tra	nsportation; Engineering
individually eligible <u>x</u> yes <u>no</u>	period of significance: 1936	6-1978
contributes to district yes no	THEME(S): Tra:	nsportation: Highways



HISTORIC

BRIDGE

# INVENTORY

# Cedar Canyon Bridge

PROPERTY IDENTIF	FICATION		
county milepost location city/vicinity USGS quad STRUCTURAL INFC	Navajo 323.44 5.3 mi E Jct SR 73 Carrizo Long Tom Canyon	inventory number inventory route feature intersected structure owner UTM reference	00215 US 60 Cedar Canyon Arizona Department of Transportation 12.572900.3768946
main span number appr. span number degree of skew main span length structure length roadway width structure width	1 3 0 180.0 283.0 46.0 49.2	main span type appr. span type guardrail type superstructure substructure floor/decking other features	<ul> <li>311</li> <li>402</li> <li>9</li> <li>steel two-hinge girder-ribbed deck arch concrete abutments and arch pedestals concrete deck over steel stringers</li> <li>arch rib: riveted built-up plate girder w/ angle flanges and web stiffeners; post: wide flange; lateral bracing: l angle; floor beam: I-beam; decorative steel pylons and guardrails</li> </ul>
HISTORICAL INFOR	RMATION		
construction date project number info source:	1938 FAP 105-E ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahwav Department Pleasant-Hasler Construction Co., Phoenix AZ 1993 substructure extended to one side and twin bridge moved to this location
NATIONAL REGIST	ER EVALUATION		
		For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form	
inventory score interstate exemptio program comment	40 n _ -	NRHP eligibility NRHP criteria signif. statement	listed A <u>x</u> B <u>C x</u> outstanding example of rare structural type, essentially reconstructed

## FORM COMPLETED BY

Clayton B. Fraser, Principal



date of photo.: May 2018

view direction: southwest north photo no.: DSCF5403 DSCF5407

The Arizona Highway Department initially surveyed the route for U.S. 60—the Globe-Springerville Highway—in 1930-1931. The heavy construction of the highway progressed northward from Globe in sections, and by 1936 the work had reached nearby crossings of Cedar Canyon and Corduroy Creek, some 70 miles northeast of Globe. For these rugged, steep-walled canyons, AHD engineers designed identical steel deck arches similar to the recently completed Salt River Canyon Bridge [00129]. As delineated by the highway department, each bridge featured a two-hinge, riveted steel, girder ribbed deck arch that extended 180 feet between pins. The arch sprang into massive concrete pedestals set on spread footings and was flanked by steel stringer approach spans. The 50-foot-wide concrete deck was bounded on both sides by steel guardrails, with decorative Art Moderne pylons at the four corners. AHD designated them Federal Aid Project 105-E and in August 1936 awarded a construction contract for both bridges to the Pleasant-Hasler Construction Company of Phoenix for \$118,000. The contractors began work immediately on the concrete abutments and arch pedestals and had the bridges 20 percent complete before suspending work for the winter. Using over 200 tons per bridge of superstructural steel fabricated by Bethlehem, Pleasant-Hasler worked slowly the following spring and summer, completing the project in September 1937. The bridges carried mainline traffic for over 50 years, but their relatively narrow width impeded ADOT plans to four-lane the highway at this point. To address this need for extra deck width, ADOT in 1993 moved the superstructure of the Corduroy Creek Bridge beside the Cedar Canyon Bridge and installed it on new concrete arch pedestals. The two structures now function as a single, wide bridge.

### SIGNIFICANCE STATEMENT

Completion of the Cedar Canyon and Corduroy Creek bridges marked the last link in U.S. 60 between Globe and Springerville and one of the last links in the national highway. The structures are thus historically noteworthy as original components of a regionally important Arizona route. The modified Cedar Canyon bridge is technologically significant for its representation of steel arch design by the state highway department. The Salt River Canyon Bridge marked the first time that AHD used the girder-ribbed arch, followed soon thereafter by these two bridges. Other girder-ribbed arches were later built in the state after World War II, as the highway department adopted this as its standard long-span canyon design. The girder-ribbed arch represents a prevailing trend in Arizona and the country toward simplification in the detailing of highway bridges. Visually striking as it spans a picturesque mountain canyon, the Cedar Canyon Bridge is an important example of an uncommon structural type. The subsequent moving of the Corduroy Creek span to this location represents an innovative approach to historic preservation.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values represents a type, period or method of construction	HISTORICAL SIGNIFICANCEassociated with significant personsassociated with significant events or patterncontributes to historical district	NATIONAL REGISTER CRITERIA           x         Criterion A           ns         Criterion B            Criterion C
NATIONAL REGISTER ELIGIBILITY	area of significance: Transpo	rtation; Engineering
individually eligible <u>x</u> yes <u>no</u>	period of significance: 1937-1978	8
contributes to district <u>yes x</u> no	theme(s): Transpo	rtation: Highways



FRASERDESIGN 2018

## HISTORIC PROPERTY INVENTORY FORM



BRIDGE



# Old US 91 Overpass

PROPERTY IDENTIF	ICATION		
county milepost location city/vicinity USGS quad	Mohave 8.61 8.6 mi E of Nevada Littlefield Littlefield	inventory number inventory route feature intersected structure owner	01612 Interstate 15 Old US 91 Arizona Department of Transportation 12,239952,4086818
main span number appr. span number	1 0	main span type appr. span type	506 Single/Spread Box
degree of skew main span length structure length roadway width structure width	19 151.0 153.0 42.0 44.6	guardrail type superstructure substructure floor/decking other features	111 concrete deck
HISTORICAL INFOR	RMATION		
construction date project number info source:	1974 I-15-1(21) ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahwav Department
NATIONAL REGIST	ER EVALUATION		
		For additional inform National Register M	nation, see "Vehicular Bridges in Arizona 1880-1978" Iultiple Property Documentation Form
inventory score interstate exemptio program comment	- n _ X	NRHP eligibility NRHP criteria signif. statement	eligible A B C _ <u>x</u>

## FORM COMPLETED BY

Clayton B. Fraser, Principal





![](_page_13_Picture_3.jpeg)

#### PHOTO INFORMATION

date of photo.: March 2018

view direction: SOUth West

photo no.: DSCF6579 DSCF6586

After World War II the Arizona Highway Department resumed its extensive highway program, improving existing routes across the state and replacing bridges where necessary. Part of this effort entailed the upgrading of a county road that extended southeast of Winslow and replacing the existing truss bridge over Clear Creek with an all-new steel structure. As delineated by the AHD bridge department, the new Clear Creek bridge would be a 130-foot, two-hinged, girder-ribbed deck arch that sprang from concrete pedestals on solid rock. The central three-ribbed arch was approached on both sides by shorter steel stringer spans, the aggregate length of which equaled the length of the earlier truss at 167 feet. With a radius of 148 feet and an arch rise of only 15 feet, the welded steel arch ribs carried a series of wide flange columns, which carried wide flange floor beams and stringers and the 28-foot-wide concrete deck. The highway department designated this project as S 50(2) and on October 26, 1949, let the contract for its construction to Western Constructors of Phoenix. The Western crew first moved the existing truss to one side for use as a construction detour and then began construction on the concrete arch pedestals. The men worked through the winter building this small-scale arch, completing it the following year. Since that time, the Clear Creek Bridge has carried traffic on this secondary state highway, in essentially unaltered condition.

#### SIGNIFICANCE STATEMENT

The Clear Creek Bridge is technologically significant for its structural configuration. Beginning with the Salt River Canyon Bridge [00129] in 1934, AHD built about a dozen girder-ribbed steel arches in the 1930s and 1940s. A much more streamlined structural type than its spandrel-braced predecessors, it represented a prevailing trend in Arizona and the country toward simplification in the detailing of highway bridges. AHD erected three girder ribbed arches in 1949—the Pinto Creek Bridge [00351] in Gila County, the Superior Bridge [00406] in Pinal County and the Clear Creek Bridge. Although this last structure is smaller in scale than the other two, it is nevertheless noteworthy as a well-preserved example of an uncommon structural type. The Clear Creek Bridge is also technologically noteworthy for its welded construction. In the post-war years, as fabrication and welding techniques improved, engineers around the country began experimenting with welded girders in lieu of riveted built-up beams on bridges. Although the advantages to welding appeared clear, the welding on these earliest structures later proved through ultrasonic testing to be prone to fatigue and stress cracking at the weld lines, however, and the use of this type of fabrication was discontinued in favor of bolted connections and splices. In Arizona, relatively few welded bridges were ever built in the postwar years before the structural configuration fell from favor. Designed and built in the late 1940s, the Clear Creek Bridge represents one of the earliest attempts in the state of this innovative, but ultimately flawed, fabrication technique.

TECHNOLOGICAL SIGNIFICANCE	HISTORICAL SIGNIFICANCE	NATIONAL REGISTER CRITERIA
represents the work of a master	associated with significant persons	Criterion A
possesses high artistic values	associated with significant events or patterns	Criterion B
represents a type, period or method of construction	contributes to historical district	Criterion C
NATIONAL REGISTER ELIGIBILITY	area of significance: Engineerin	ıg
individually eligible <u>x</u> yes <u>no</u>	period of significance: 1950-1978	

![](_page_15_Figure_2.jpeg)

STATE OF ARIZONA

HISTORIC

## HISTORIC PROPERTY INVENTORY FORM

INVENTORY

# West Carrizo Bridge

BRIDGE

PROPERTY IDENTIF	FICATION		
county milepost location city/vicinity USGS quad	Navajo 300.75 7.9 mi E Jct SR 77 Carrizo Carrizo Butte	inventory number inventory route feature intersected structure owner UTM reference	02057 Interstate 40; Frontage Road Little Lithodendron Wash Arizona Department of Transportation 12.595880.3872617
STRUCTURAL INFO	RMATION		
main span number appr. span number degree of skew main span length structure length	18 0 0 19.0 343.0	main span type appr. span type guardrail type superstructure substructure	702 7 timber stringer timber pile bent abutments and piers with timber sill plates
roadway width structure width	23.0 24.7	floor/decking other features	timber deck with asphalt overlay timber guardrails and supports; sand barrels (for firefighting) placed on timber platforms mounted on sides of bridge
construction date project number info source:	1932 FAP 83-C Sch. 1 ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahwav Department Canion & Royden, Phoenix AZ 1986 deck and stringers replaced
NATIONAL REGIST	ER EVALUATION		
		For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form	
inventory score interstate exemptio program comment	53 n _ -	NRHP eligibility     listed       NRHP criteria     A _xBC       signif. statement     outstanding multiple-span example of once- common structural type	

## FORM COMPLETED BY

Clayton B. Fraser, Principal

![](_page_17_Picture_1.jpeg)

PHOTO INFORMATION

date of photo.: March 2018 view direction: west northwest photo no.: DSCF6687 DSCF6695

The two timber trestle bridges over the branches of Carrizo Wash on U.S. 66 near Goodwater were known to be dangerous in the 1920s. At least nine accidents had occurred on them involving fatalities or serious injuries, and political pressure was mounting as the Arizona Highway Department moved to replace them in 1931. For the eastern bridge, the AHD bridge department delineated a 22-span timber trestle, for the western bridge an 18-span trestle. Both bridges featured identical span lengths and detailing. AHD designed the timber stringer bridges as starkly utilitarian structures, with redwood decks, stringers, pile bent piers and abutments and timber plank retaining walls.

AHD designated the project to build the two structures and 2.8 miles of highway between them as Federal Aid Project 83-C, Schedule 1. In December the agency awarded the contract to Canion and Royden of Phoenix for \$57,157. The contractors began work in January 1932 and finished in June. Both the Carrizo Bridges carried mainline traffic until construction of Interstate 40 immediately north in 1960. The timber bridges were left in place to carry local traffic beside the interstate. Today they are a study in contrasts: the western bridge was extensively rehabilitated in 1986 by ADOT, and the eastern structure [**abd.**], abandoned for years without maintenance, stands in severely deteriorated condition.

#### SIGNIFICANCE STATEMENT

The Arizona Highway Department generally eschewed timber bridges for concrete structures in the 1910s and 1920s, calculating the life of a timber structure as 35 years vs. 100 years for a concrete span. AHD nevertheless did develop standards for timber spans and built numerous small-scale bridges on secondary routes in the 1920s and 1930s. Long, multiple-span timber trestles on primary routes were rare, and the two Carrizo bridges are the only such structures identified in the inventory. They are thus technologically noteworthy as the best examples of timber trestle construction among the vehicular bridges in the state. The two bridges are historically significant as integral links in the National Old Trails Highway—the primary transcontinental route across northern Arizona.

TECHNOLOGICAL SIGNIFICANCE	HISTORICAL SIGNIFICANCEassociated with significant persons	NATIONAL REGISTER CRITERIA
possesses high artistic values represents a type, period or method of construction	<ul> <li> associated with significant events or patterns</li> <li> contributes to historical district</li> </ul>	Criterion B _x Criterion C
NATIONAL REGISTER ELIGIBILITY individually eligible <u>x</u> yes <u>no</u> no contributes to district <u>yes x</u> no	area of significance: Transporte period of significance: 1932-1960 theme(s): Transporte	ation; Engineering ation: Highways

![](_page_19_Figure_2.jpeg)

STATE OF ARIZONA

HISTORIC

## HISTORIC PROPERTY INVENTORY FORM

INVENTORY

# Woodruff Bridge

BRIDGE

PROPERTY IDENTIF	ICATION		
county milepost location city/vicinity USGS quad STRUCTURAL INFC	Navajo 0.00 3.0 mi S of Woodruff Woodruff Tenmile Cedars RMATION	inventory number inventory route feature intersected structure owner UTM reference	08156 Woodruff-Snowflake Road Little Colorado River Navajo County 12.588135.3844560
main span number appr. span number degree of skew main span length structure length roadway width structure width	1 0 0 120.0 121.0 13.2 16.3	main span type appr. span type guardrail type superstructure substructure floor/decking other features	310 6 steel rigid-connected Warren through truss stone masonry abutments and wingwalls timber deck over steel stringers upper chord: 2 channels w/ cover plate and lacing; lower chord: 2 angles w/ batten plates; vertical/diagonal: 2 or 4 angles w/ batten plates; lateral bracing: 1 angle; floor beam: I-beam; steel lattice guardrails
Construction date project number info source:	1917 ADOT bridge records ER EVALUATION	designer/engineer builder/contractor alteration date(s) alterations	American Bridge Company American Bridge Company, Chicago IL 1940 2018 truss moved to this location; bridge rehabilitated
inventory score interstate exemptio program comment	67 n _ -	For additional infor National Register M NRHP eligibility NRHP criteria signif. statement	mation, see "Vehicular Bridges in Arizona 1880-1978" Iultiple Property Documentation Form listed A _x B C _x unique example of structural type, once part of regionally important crossing

## FORM COMPLETED BY

Clayton B. Fraser, Principal

## WOODRUFF BRIDGE

![](_page_21_Picture_2.jpeg)

PHOTO INFORMATION

date of photo.: March 2018 view direction: northwest west photo no.: DSCF6641 DSCF6642

The Lyman Dam at St. Johns collapsed on April 14, 1915, wiping out most of the bridges over the Little Colorado River between St. Johns and Winslow. To finance the enormous reconstruction effort, Navajo County in January 1916 voted a \$63,000 bond issue. The county in June advertised for proposals for seven bridges, including one over the Little Colorado east of Winslow. The next month eight companies responded with competitive designs and bids. For five of the smaller structures (including the St. Joseph Bridge [08157]), the county contracted with the Omaha Structural Steel Works. For the Winslow structure, which was by far the largest of the bridges, the board contracted with Los-Angeles-based Mesmer and Rice, lowest bidder at \$23,800. The U.S. Indian Service paid half of this cost. The American Bridge Company of Chicago used steel rolled by Lackawanna to fabricate the multiple-span truss bridge, shipping the truss components to Arizona by rail. Mesmer and Rice worked on the bridge's substructure until their dismissal by the county after numerous disputes. Omaha Structural Steel Works completed the four-span truss bridge in December 1917 and added a pony truss to one end the following year. The Winslow Bridge carried mainline traffic on U.S. Highway 66. Its narrow width and timber deck eventually formed a bottleneck on the highway, and in 1939 it was replaced with a steel girder structure (since replaced). Navajo County then moved and re-erected one of the trusses to this remote secondary road crossing near the Woodruff Dam. Here it functioned for almost eighty years before its recent rehabilitation (underway when the bridge was documented for this inventory).

#### SIGNIFICANCE STATEMENT

The Little Colorado River formed one of the most formidable obstacles to transcontinental traffic across Arizona on the National Old Trails Highway (U.S. 66). The Winslow crossing was one of the most important on the highway's length. Erected by Navajo County as the state highway department was in its formative years, the bridge here was therefore one of the more important vehicular structures in the state. Multiple-span through trusses such as this were unusual in Arizona, and only two remain intact today: the Gillespie Dam Bridge [08021] and the Boulder Creek Bridge [00193], which itself uses trusses salvaged from an earlier structure. Navajo County's salvage of this span from the Winslow Bridge is typical of another trend in the state—the moving of trusses from major arterials to secondary routes. Several trusses in the state were dismantled and re-erected in this fashion. They were erected with the possibility of later moving in mind, and this re-erection does not diminish their structural integrity appreciably. The Woodruff Bridge is technologically significant as the only example In Arizona of this atypical structural type. Although the Warren truss became a standard vehicular configuration in the United States in the 1910s, polygonal-chorded examples are rare. Only one polygonal pony truss (the Chevelon Creek Bridge [08158]) and one polygonal through truss—the Woodruff Bridge—have been identified by the statewide bridge inventory.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values	HISTORICAL SIGNIFICANCE associated with significant persons associated with significant events or patterns	NATIONAL REGISTER CRITERIA          x       Criterion A         Criterion B
_ x represents a type, period or method of construction	contributes to historical district	_x Criterion C
NATIONAL REGISTER ELIGIBILITY individually eligible <u>x</u> yes <u>no</u> no	area of significance: Transporta period of significance: 1917-1978	tion; Engineering
contributes to district yes x no	THEME(S): Transporta	tion: Highways

![](_page_23_Figure_2.jpeg)

STATE OF ARIZONA

## HISTORIC PROPERTY INVENTORY FORM

HISTORIC

BRIDGE

# INVENTORY

# Chevelon Creek Bridge

PROPERTY IDENTIF	FICATION		
county milepost location city/vicinity USGS quad STRUCTURAL INFC	Navajo 0.00 6.64 mi E Jct SR 99 Hibbard Hibbard RMATION	inventory number inventory route feature intersected structure owner UTM reference	08158 Holbrook-Winslow Road Chevelon Creek Navajo County 12.542997.3864625
main span number appr. span number degree of skew main span length structure length roadway width structure width	1 0 0 102.0 103.0 13.3 16.2	main span type appr. span type guardrail type superstructure substructure floor/decking other features	310 6 steel rigid-connected polygonal Warren pony truss concrete abutments and wingwalls concrete deck over steel stringers upper chord: 2 channels w/ cover plate and lacing; lower chord: 2 angles w/ batten plates; vertical: 2 angles w/ lacing; diagonal: 4 angles w/ batten plates; lateral bracing: 1 angle; floor beam: I-beam; steel lattice guardrails
construction date project number info source: NATIONAL REGIST	1913 ADOT bridge records ER EVALUATION	designer/engineer builder/contractor alteration date(s) alterations	Arizona State Engineer Missouri Valley Bridge & Iron Co., Leavenwor
		For additional infor	mation, see "Vehicular Bridges in Arizona 1880-1978"
		National Register M	fultiple Property Documentation Form
inventory score interstate exemptio program comment	94 n _ -	NRHP eligibility NRHP criteria signif. statement	listed A _x _ B C _x one of Arizona's most historically and technologically important vehicular spans
FORM COMPLETED	) BY		

Clayton B. Fraser, Principal

![](_page_25_Picture_1.jpeg)

![](_page_25_Picture_2.jpeg)

#### PHOTO INFORMATION

date of photo.: March 2018

view direction: east northeast

photo no.: DSCF6591 DSCF6605

The deep, rocky canyon over Chevelon Creek cut across the Coconino Plateau east of Winslow, forming a "practically impassible" topographic barrier to the Santa Fe Highway across northern Arizona. In 1912 the newly formed state legislature appropriated \$5,500 from the State Road Fund for construction of a substantial new structure here. State Engineer Lamar Cobb delineated a long-span pony truss that would free-span the canyon, and on October 2, 1912, the state contracted with the Missouri Valley Bridge & Iron Works for the bridge. As stipulated in the contract, Missouri Valley would pour the concrete foundations and design, fabricate and erect the 100-foot truss.

A Missouri Valley crew began construction late in 1912, pouring the seven cubic yards of concrete onto solid rock for the abutments. For this crossing, the Leavenworth-based company delineated a Warren truss, with rigid connections and polygonal upper chords made up of built-up box beams. The deck, a poured-in-place concrete slab over steel stringers, was bounded by concrete curbs and steel lattice guard-rails. In January Cobb approved the truss's design. By the end of June construction was 80 percent complete. The state accepted the completed bridge the following month. Total cost: \$4,985. The Chevelon Creek Bridge carried mainline traffic on the Santa Fe Highway until a realignment sometime between 1917 and 1924 moved the route north of the Little Colorado River. The bridge and adjacent roadway were then relegated to county road status. The Chevelon Creek Bridge has carried sparse local traffic at this remote crossing since. In 2014 the structure was rehabilitated, at which time the concrete deck was replaced and lowered and the superstructure was repainted.

### SIGNIFICANCE STATEMENT

As an important crossing on the Santa Fe Highway and later U.S. 66, the Chevelon Creek Bridge formed an integral part of one of America's primary transcontinental routes. The bridge is even more important, however, as one of the first highway structures undertaken by the newly formed State of Arizona. The structure was only the second truss replacement undertaken by the state, preceded by the Florence Bridge—since razed—over the Gila River. The Chevelon Creek Bridge was the first truss built by the state, designed, fabricated and erected by a nationally important bridge firm. As such, the bridge more closely resembled the earlier county-built spans than the highway structures to follow. As the oldest and longest pony truss in the inventory, the Chevelon Creek Bridge is one of Arizona's most historically and technologically important spans.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values represents a type, period or method of construction	HISTORICAL SIGNIFICANCE associated with significant per associated with significant eve contributes to historical distric	NAT	TIONAL REGISTER CRITERIA _ Criterion A _ Criterion B _ Criterion C
NATIONAL REGISTER ELIGIBILITY individually eligible <u>x</u> yes <u>no</u> contributes to district <u>yes x</u> no	AREA OF SIGNIFICANCE: PERIOD OF SIGNIFICANCE: THEME(S):	Transportation; 1913-1978 Transportation:	Engineering Highways

![](_page_27_Figure_1.jpeg)

STATE OF ARIZONA

HISTORIC

## HISTORIC PROPERTY INVENTORY FORM

BRIDGE INVENTORY

# East Carrizo Bridge

PROPERTY IDENTIF	FICATION			
county milepost location city/vicinity USGS quad	Navajo 0.00 0.1 mi South of I-40 Adamana Carrizo Butte	inventory number inventory route feature intersected structure owner UTM reference	abd. abd. US 66 Lithodendron Wash abandoned 12.599620.3873430	
STRUCTURAL INFO	RMATION			
main span number appr. span number degree of skew main span length structure length	22 0 0 18.0 420.0	main span type appr. span type guardrail type superstructure substructure	702 0 timber stringer timber pile bent abutments and piers w/ timber sill plates	
roadway width structure width HISTORICAL INFOR	22.7 24.0	floor/decking other features	timber deck with asphalt overlay timber guardrails w/ timber balusters	
construction date project number info source:	1932 FAP 83-C ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona Hiahwav Department Canion & Royden, Phoenix AZ bridge badly deteriorated	
NATIONAL REGIST	ER EVALUATION			
		For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form		
inventory score interstate exemptio program comment	63 n _ -	NRHP eligibility NRHP criteria signif. statement	listed A _x _ B C _x outstanding multiple-span example of once- common structural type, badly deteriorated	

## FORM COMPLETED BY

Clayton B. Fraser, Principal

![](_page_29_Picture_1.jpeg)

PHOTO INFORMATION

date of photo.: March 2018

view direction: west northwest photo no.: DSCF6660 DSCF6670

FRASERDESIGN 2018

The two timber trestle bridges over the branches of Carrizo Wash on U.S. 66 near Goodwater were known to be dangerous in the 1920s. At least nine accidents had occurred on them involving fatalities or serious injuries, and political pressure was mounting as the Arizona Highway Department moved to replace them in 1931. For the eastern bridge, the AHD bridge department delineated a 22-span timber trestle, for the western bridge an 18-span trestle. Both bridges featured identical span lengths and detailing. AHD designed the timber stringer bridges as starkly utilitarian structures, with redwood decks, stringers, pile bent piers and abutments and timber plank retaining walls.

AHD designated the project to build the two structures and 2.8 miles of highway between them as Federal Aid Project 83-C, Schedule 1. In December the agency awarded the contract to Canion and Royden of Phoenix for \$57,157. The contractors began work in January 1932 and finished in June. Both the Carrizo Bridges carried mainline traffic until construction of Interstate 40 immediately north in 1960. The timber bridges were left in place to carry local traffic beside the interstate. Today they are a study in contrasts: the western bridge [**02057**] was extensively rehabilitated in 1986 by ADOT, and the eastern structure, abandoned for years without maintenance, stands in severely deteriorated condition.

#### SIGNIFICANCE STATEMENT

The Arizona Highway Department generally eschewed timber bridges for concrete structures in the 1910s and 1920s, calculating the life of a timber structure as 35 years vs. 100 years for a concrete span. AHD nevertheless did develop standards for timber spans and built numerous small-scale bridges on secondary routes in the 1920s and 1930s. Long, multiple-span timber trestles on primary routes were rare, and the two Carrizo bridges are the only such structures identified in the inventory. They are thus technologically noteworthy as the best examples of timber trestle construction among the vehicular bridges in the state. The two bridges are historically significant as integral links in the National Old Trails Highway—the primary transcontinental route across northern Arizona.

		NATIONAL REGISTER CRITERIA
represents the work of a master possesses high artistic values	<u>associated with significant persons</u> <u>x</u> associated with significant events or patterns	x Criterion A Criterion B
<u>x</u> represents a type, period or method of construction	contributes to historical district	<u>x</u> Criterion C
NATIONAL REGISTER ELIGIBILITY	area of significance: Transport period of significance: 1932-1960	tation; Engineering
contributes to district yes no	THEME(S): Transport	tation: Highways

![](_page_31_Figure_1.jpeg)

![](_page_31_Figure_2.jpeg)

STATE OF ARIZONA

## HISTORIC PROPERTY INVENTORY FORM

HISTORIC

BRIDGE

# INVENTORY

## Holbrook Bridge

PROPERTY IDENTIF	FICATION			
county milepost location city/vicinity USGS quad STRUCTURAL INFC	Navajo 0.00 4.2 mi SE of Holbrook Holbrook Sun Valley RMATION	inventory number inventory route feature intersected structure owner UTM reference	private abd. US 70 Little Colorado River Navajo County 12.581408.3860500	
main span number appr. span number degree of skew main span length structure length roadway width structure width	1 0 0 174.0 190.0 16.0 18.0	main span type appr. span type guardrail type superstructure substructure floor/decking other features	111 0 concrete filled spandrel Luten arch concrete abutments and wingwalls asphalt roadway over earth fill paneled concrete parapet walls; plain tapered cantilever brackets	
HISTORICAL INFOR	RMATION			
construction date project number info source:	1916 ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	r Arizona State Engineer r state work force	
NATIONAL REGIST	ER EVALUATION			
inventory score interstate exemptio program comment	81 n _ -	For additional information, see "Vehicular Bridges in Arizona 1880-1978" National Register Multiple Property Documentation Form NRHP eligibility listed NRHP criteria A <u>x</u> B <u>C x</u> signif. statement well-preserved, long-span Luten arch		

## FORM COMPLETED BY

Clayton B. Fraser, Principal

![](_page_33_Picture_2.jpeg)

![](_page_33_Picture_3.jpeg)

PHOTO INFORMATION

8 view direction: southwest northeast photo no.: DSCF6781 DSCF6785

date of photo.: March 2018

FRASERDESIGN 2018

Without first consulting with the Arizona State Engineer, the Navajo County Board of Supervisors in 1912 contracted with the El Paso Bridge & Iron Company of Texas to erect a 128-foot truss bridge on a county road over the Little Colorado River, three miles southeast of Holbrook. Completed in 1913, the bridge lasted only until April 14, 1915, when the Lyman Dam at St. Johns burst and swept away it and four other metal bridges downstream. "The site [for the Holbrook Bridge] was a poor one and foundations faulty," stated State Engineer Lamar Cobb. He acted immediately to survey a new site 1,000 feet upstream from the original for a suitable replacement structure.

That summer, with the consultation of bridge engineer Daniel Luten, Cobb's office designed a long-span Luten arch for the replacement structure. A state work force began excavating for the foundations of the new bridge on September 1, 1915, and work continued without incident until a flash flood washed the centering timbers away on January 19. The men resumed work soon after, rebuilding the centering and eventually completing the bridge in March 1916. Total cost: \$18,892. The Holbrook arch bridge carried mainline traffic until its replacement in 1975. Since then it has carried a private ranch road in deteriorating condition.

### SIGNIFICANCE STATEMENT

The Lyman Dam disaster graphically demonstrated the impermanence of steel bridges to Arizona engineers. "The [replacement] bridge is the first concrete structure of any size near Holbrook," stated Cobb, "and the people generally are highly pleased with the substantial manner of construction, as well as the beauty of the bridge." Though not on the transcontinental Old Trails Highway, the Holbrook Bridge functioned as a regionally important crossing of the Little Colorado River for decades until its replacement in 1975. Technologically, the 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 himself, the Holbrook Bridge is thus closely associated with this nationally important bridge company. Promotional literature published by the National Bridge Company indicates that this is the longest concrete arch ever built in America using Luten's patented technology. In unaltered condition, the Holbrook Bridge is thus one of Arizona's most important early vehicular spans.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values represents a type, period or method of construction	HISTORICAL SIGNIFICANCEassociated with significant personsassociated with significant events or pattercontributes to historical district	NATIONAL REGISTER CRITERIA         x       Criterion A         erns       Criterion B         Criterion C
NATIONAL REGISTER ELIGIBILITY	area of significance: Transp	ortation; Engineering
individually eligible <u>x</u> yes <u>no</u>	period of significance: 1916-19	75
contributes to district <u>yes x</u> no	theme(s): Transp	ortation: Highways

![](_page_35_Figure_2.jpeg)

## HISTORIC PROPERTY INVENTORY FORM

![](_page_36_Picture_2.jpeg)

BRIDGE

# INVENTORY

# Jacks Canyon Bridge

PROPERTY IDENTIF	FICATION			
county milepost location city/vicinity USGS quad	Navajo 0.00 4.5 mi South of Winslow Winslow Clear Creek Reservoi	inventory number inventory route feature intersected structure owner UTM reference	abd. abd. S99 Jacks Canyon Navajo County 12.531623.3870378	
STRUCTURAL INFO	RMATION			
main span number appr. span number degree of skew main span length	1 0 0 30 0	main span type appr. span type guardrail type superstructure	101 O concrete rail top slab	
structure length roadway width structure width	44.0 16.2 18.0	substructure floor/decking other features	concrete abutments and wingwalls concrete deck steel pipe guardrails (removed) w/ concrete curbs	
HISTORICAL INFOR	RMATION			
construction date project number info source:	1913 ADOT bridge records	designer/engineer builder/contractor alteration date(s) alterations	Arizona State Engineer state work force ca1980 guardrails removed	
NATIONAL REGIST	ER EVALUATION			
		For additional inform National Register N	mation, see "Vehicular Bridges in Arizona 1880-1978" Iultiple Property Documentation Form	
inventory score interstate exemptio program comment	81 n _ -	NRHP eligibility NRHP criteria signif. statement	listed A B C well-preserved example of early AHD concrete bridge design	

## FORM COMPLETED BY

Clayton B. Fraser, Principal

![](_page_37_Picture_2.jpeg)

PHOTO INFORMATION

date of photo.: March 2018

view direction: southeast west photo no.: DSCF6571 DSCF6577

The Santa Fe Highway across northern Arizona crossed rugged Jacks Canyon about 4½ miles southwest of Winslow in Navajo County. Named after Jack "Dishrag" DeSchradt, the narrow canyon was steep and rocky and presented a serious obstacle to the major east-west highway. In 1913 Navajo County contacted Arizona State Engineer Lamar Cobb with a request for a vehicular bridge at this location. After visiting the site, Cobb designed this modestly scaled, single-span, reinforced concrete slab to carry the route. That year force account laborers on the state payroll constructed the bridge under the direction of Assistant Engineer B.M. Atwood for a cost of \$1,163. The plank formwork was crude, the design simple and unarticulated, and the guardrails were threaded steel pipes—indicative of the early construction by an unskilled work crew. The Jacks Canyon Bridge carried mainline vehicular traffic—first on the Santa Fe Highway, later as part of State Highway 99—until its abandonment. (The present bridge that replaced the 1913 structure was built in 1968.) The steel guardrails have since been removed and the concrete deck and approaches have deteriorated to an extent, but the Jacks Canyon Bridge remains otherwise intact.

### SIGNIFICANCE STATEMENT

Alternately known as the Santa Fe Highway (in Arizona) and the National Old Trails Highway (its national designation), this transcontinental route has served historically as the principal east-west artery across northern Arizona. Only the Ocean-to-Ocean Highway, which passed through Yuma, Phoenix and Safford, carried more traffic in the state during the 1910s and 1920s. The Jacks Canyon Bridge formed a minor but integral link in the road during Arizona's early state period and is historically significant as the earliest structure in Arizona remaining from the original route.

The bridge is technologically important as the earliest and longest example in the inventory of an unusual structural subtype—the rail top slab. Using railroad rails spaced at 24" o.c. as reinforcing, the rail top slab is termed structurally as a one-way slab, in that it acted only one way in flexure under load. This one-way flexure tended to limit the bridges to short-span applications. Only two other bridges in the state—the Old Trails Wash Bridge [**08594**] in Mohave County and the Black Gap Bridge [**08534**] in Greenlee County, built in 1917 and 1921, respectively— are known to use this structural configuration. Though relatively modest in size and appearance and somewhat diminished physically by the removal of its guardrails, the Jacks Canyon Bridge is an important representative of early bridge construction in Arizona.

		ΝΑΤ	
		NAT	
represents the work of a master	associated with significant per	sons <u>x</u>	Criterion A
possesses high artistic values	<u>x</u> associated with significant eve	ents or patterns	Criterion B
represents a type, period or method of construction	contributes to historical distric	t <u>x</u>	_ Criterion C
NATIONAL REGISTER ELIGIBILITY	AREA OF SIGNIFICANCE:	Transportation;	Engineering
individually eligible <u>x</u> yes <u>no</u>	PERIOD OF SIGNIFICANCE:	1913-1968	
contributes to district yesx no	THEME(S):	Transportation:	Highways

![](_page_39_Figure_2.jpeg)

## STATE OF ARIZONA

## HISTORIC PROPERTY INVENTORY FORM

![](_page_40_Picture_2.jpeg)

BRIDGE

# INVENTORY

# Woodruff Bridge

PROPERTY IDENTIF	FICATION			
county milepost location city/vicinity USGS quad STRUCTURAL INFO	Navajo 0.00 Woodruff Woodruff Woodruff RMATION	inventory number inventory route feature intersected structure owner UTM reference	abd. abd. town road Little Colorado River Navajo County 12.587450.3849418	
main span number appr. span number degree of skew main span length structure length roadway width structure width	1 0 0 75.0 130.0 12.3 15.0	main span type appr. span type guardrail type superstructure substructure floor/decking other features	310 0 steel rigid-connected Pratt pony truss stone masonry abutments and wingwalls timber deck and timber wearing planks upper chord: 2 built-up channels w/ cover plat and double lacing; lower chord: 2 rectangular eyebars; vertical: 2 channels w/ lacing; diagonal: 4 rectangular eyebars; lateral bracing: 1 angle; steel lattice guardrails	
construction date project number info source: NATIONAL REGIST	1918 ADOT bridge records ER EVALUATION	designer/engineer builder/contractor alteration date(s) alterations	Omaha Structural Steel Works, Omaha NE Omaha Structural Steel Works, Omaha NE 1937 truss moved to this location	
inventory score interstate exemptio program comment	59 n _ -	For additional inform National Register M NRHP eligibility NRHP criteria signif. statement	mation, see "Vehicular Bridges in Arizona 1880-1978" Aultiple Property Documentation Form eligible <u>A_xBC_x</u> remnant of once-important multiple-span truss bridge	

## FORM COMPLETED BY

Clayton B. Fraser, Principal

![](_page_41_Picture_2.jpeg)

PHOTO INFORMATION

date of photo.: March 2018

view direction: east southwest photo no.: DSCF6624 DSCF6630

FRASERDESIGN 2018

The Lyman Dam at St. Johns collapsed on April 14, 1915, wiping out most of the bridges over the Little Colorado River between St. Johns and Winslow. To finance the enormous reconstruction effort, Navajo County in January 1916 voted a \$63,000 bond issue. The county board of supervisors in June advertised for proposals for seven bridges, including one over the Little Colorado east of Winslow. The next month eight companies responded with competitive designs and bids. For five of the smaller structures, the county contracted with the Omaha Structural Steel Works. For the Winslow structure, which was by far the largest of the bridges, the board contracted with Los-Angeles-based Mesmer and Rice, lowest bidder at \$23,800. The U.S. Indian Service paid half of this cost. The American Bridge Company of Chicago used steel rolled by Lackawanna to fabricate the multiple-span truss bridge, shipping the truss components to Arizona by rail. Mesmer and Rice worked on the bridge's substructure until their dismissal by the county after numerous disputes. Omaha Structural Steel Works completed the four-span truss bridge in December 1917. In 1918 the county contracted with Omaha Steel to add a pony truss approach span on one end of the bridge. The contractors erected this medium-span, rigid-connected Pratt truss that year. When the Arizona Highway Department replaced the Winslow Bridge in 1939, Navajo County salvaged and re-erected this pony truss over stone masonry abutments in the small town of Woodruff. It carried local traffic until it too was replaced in 1975. The Woodruff Bridge now carries a pipeline and pedestrian traffic.

#### SIGNIFICANCE STATEMENT

The Little Colorado River formed one of the most formidable obstacles to transcontinental traffic across Arizona on the Old Trails Highway (U.S. 66). The Winslow crossing was one of the most important on the highway's length. Erected by Navajo County as the state highway department was in its formative years, the bridge here was therefore one of the more important vehicular structures in the state. Multiple-span through trusses such as this were unusual in Arizona, and only two remain intact today: the Gillespie Dam Bridge [08021] and the Boulder Creek Bridge [00193], which itself uses trusses salvaged from an earlier structure. Navajo County's salvage of this span from the Winslow Bridge is typical of another trend in the state—the moving of trusses from major arterials to secondary routes. Several trusses in the state have been dismantled and re-erected in this fashion. Trusses were often erected with the possibility of later moving in mind, and this re-erection does not diminish their structural integrity appreciably. The Woodruff Bridge is technologically noteworthy as a well-preserved example—one of three in Arizona—of what was once a standard structural type, the riveted Pratt pony truss.

TECHNOLOGICAL SIGNIFICANCE represents the work of a master possesses high artistic values represents a type, period or method of construction	HISTORICAL SIGNIFICANCE associated with significant persons associated with significant events or p contributes to historical district	NATIONAL REGISTER CRITERIA         x       Criterion A         batterns       Criterion B         Criterion C
NATIONAL REGISTER ELIGIBILITY         individually eligible       x       yes       no         contributes to district       yes       x       no	area of significance: Tran Period of significance: 1918- Theme(s): Tran	sportation; Engineering 1975 sportation: Highways

![](_page_43_Figure_2.jpeg)