

GENERAL BRIDGE INFORMATION

District:	Waco	Structure ID:	091100051902005	Facility Carried:	SH 174
County:	Hill	Location:	5.8 MI W OF FM 933	Feature Crossed:	BRAZOS RIVER

Criterion A:	Criterion C:	National Register Eligibility:
<i>Criterion A Significance:</i>	<i>Criterion C Significance:</i>	Eligible
	Uncommon bridge type (8)	
<i>Criterion A Integrity:</i>	Work of a master (4)	National Register Determination Date:
Design/Materials/Workmanship:		2009

Location:	<i>Criterion C Integrity:</i>
	Design/Materials/Workmanship:

Feeling/Setting/Association:	
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	Location:		
Criterion A significance points	0	Feeling/Setting/Association:	
Criterion A integrity points:	0		
Criterion A total points:	0	Criterion C significance points:	12
		Criterion C integrity points:	0
		Criterion C total points:	12

Significance: This bridge is eligible for the National Register under Criterion C as it represents rarity of type, illustrating an important variation in design or method of construction. It also retains the historic integrity necessary to convey its engineering significance.

This bridge is also a work of an important engineer, designer, fabricator, or builder with national or state importance.

This bridge is recommended not eligible for the National Register under Criterion A as it does not have a direct and significant association with an important historic transportation system, program, or policy identified through contextual research.

Significance Notes: The SH 174 bridge at the Brazos River is a twelve-span structure, with a three-span riveted continuous deck truss unit as its main spans and continuous steel I-beam units as approach spans. The bridge, constructed in 1950, crosses the Brazos River at Kimball's Bend in the upper reaches of Lake Whitney. It has a total structure length of 1,294 feet and a maximum span length of 201 feet. The bridge is significant as an example of a continuous deck truss, an uncommon bridge type during the 1945-1965 period. Due to their expense and complexity, continuous truss designs were employed only when exceptionally long span lengths were required and were rarely constructed during the 1945-1965 period. The bridge is also significant as an important work of a master engineer, designer, fabricator, or builder. The bridge's 602-foot-long continuous truss unit was designed by Texas Highway Department senior design engineer James R. Graves, recognized as an innovative Texas bridge designer of the period. Graves was particularly noted for his work with early prestressed concrete bridges. He designed the FM 237 at Coleto Creek bridge in 1956, which was the Texas Highway Department's first prestressed, pretensioned concrete beam bridge and the first bridge in the United States to use neoprene bearing pads. Graves also developed the Texas Highway Department's first set of prestressed concrete beam standards in 1956. While Graves is better known for his groundbreaking prestressed concrete work, his design of the SH 174 bridge's continuous truss unit makes clear his skill in a variety of bridge types. The bridge underwent a rehabilitation project in 1987, which included joint and floorbeam repairs. A 2007 emergency repair project replaced bolts on bearing shoes and repaired two floorbeam caps. However, these repairs do not result in changes to the qualities that define the bridge's overall historic character and do not diminish its ability to convey its engineering significance. The SH 174 bridge at the Brazos River is therefore eligible for listing in the National Register of Historic Places under Criterion C in the area of Engineering at the state level of significance. The bridge is recommended not eligible for the National Register under Criterion A (Events) at the state level of significance, as it does not have a direct and significant association with an important historic transportation system, program, or policy identified through contextual research.

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Oblique view



Detail view