DATA SHEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES

INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY

RECEIVED NOV 1 1 1975

DATE ENTERED

MAR 1 5 1976

TYPE ALL ENTRIES	COMPLETE APPLICAL	BLE SECTIONS	
IVAIVIE			
HISTORIC			
Paddock Viaduct			
Main Street Bridge			
LOCATION			
STREET & NUMBER			
V		NOT FOR PUBLICATION	
CITY, TOWN		CONGRESSIONAL DISTR	ICT
Fort Worth —	VICINITY OF	COUNTY 12	CODE
Texas	48	Tarrant	430
CLASSIFICATION	40	Tarrant	439
CATEGORY OWNERSHIP	STATUS		ENTUSE
DISTRICT _XPUBLIC	X_OCCUPIED	AGRICULTURE	MUSEUM
BUILDING(S)PRIVATE XSTRUCTURE BOTH	_UNOCCUPIED	COMMERCIAL	PARK
	WORK IN PROGRESS	EDUCATIONAL	PRIVATE RESIDEN
SITE PUBLIC ACQUISITION OBJECT IN PROCESS	ACCESSIBLE	ENTERTAINMENT	RELIGIOUS
	X_YES: RESTRICTED	GOVERNMENT	SCIENTIFIC
BEING CONSIDERED	YES: UNRESTRICTED	INDUSTRIALMILITARY	X_TRANSPORTATION _OTHER:
OWNER OF PROPERTY NAME City of Fort Worth			
STREET & NUMBER			
City Hall		STATE	The last to the la
	VICINITY OF		
Fort Worth —		Texas	
LOCATION OF LEGAL DESCR	CIPTION		
COURTHOUSE,			
REGISTRY OF DEEDS, ETC. Tarrant County	Courthouse		
STREET & NUMBER			7
CITY, TOWN	7	STATE	
Fort Worth		Texas	
REPRESENTATION IN EXIST	ING SURVEYS		
Texas Historic Engir	neering Site Ir	nventory	
Fall, 1974	EEDERAL X	STATECOUNTYLOCAL	
DEPOSITORY FOR		LOCAL	
SURVEY RECORDS Texas Tech Univer	sity		1
CITY, TOWN		STATE	



CONDITION

_XEXCELLENT

__FAIR

__DETERIORATED
__RUINS
__UNEXPOSED

CHECK ONE

_UNALTERED

CHECK ONE

XORIGINAL SITE

__MOVED DATE___

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Fort Worth, in Tarrant County, Texas, is traversed by the Trinity River and some of its branches. As vehicular traffic over an old bridge across the river adjacent to the downtown business district increased in the early twentieth century, residents of the city experienced considerable delays in passing from the center of the city to its northern area. To remedy this situation it was proposed that the Paddock Viaduct cross the Trinity River so that the north bound traffic would connect with Commerce Street and the south bound traffic would connect with Houston Street.

The firm of Brenneke and Fay, Consulting Engineers, of St. Louis was selected by the Commissioners Court of Tarrant County to prepare plans and specifications for the Paddock Viaduct. The Commissioners planned for the future insisting that the bridge require only a minimum of maintenance, and last indefinitely. Therefore, reinforced concrete was selected as the best construction material.

The consulting engineers proposed a viaduct supported by reinforced concrete arches in order to eliminate the need for fakework in the river bed. The reinforced concrete arches are three hinged, ribbed arches having hemispherical, ball and socket, cast steel hinges. It was concluded that for structures over streams subject to variations in water level and with unstable banks, this type of structure would be the safest and most economical type. Upon completion, the Paddock Viaduct is 1752 - ft in length and 99 ft above the Trinity River bed. It consists of: one 225-ft arch span over the stream; two 175-ft arch spans; one 150-ft arch span; one 68-ft 9-inch girder span; two 62-ft, 6 in girder span; seven 50-ft girder spans; and two 25-ft girder spans. The remainder was made up of earth fills encloxed by retaining walls of the semi-gravity type. The roadway was 54-ft wide including two 8-ft walkways. It was wide enough to accomodate four wagons and two streetcars passing abreast.

The Paddock Viaduct consists of concrete slabs carried on longitudinal stringers which are connected to floor beams. The floor beams are, in turn, supported by four longitudinal girders of the girder spans, or by spandrel posts which rest on the four ribs of the arch spans. Sidewalks are supported by cantilever extensions of the floor beams.

Ornamentation was confined to the main lines of the structure, and to the use of paneling and mouldings. Railings were simple in design and easy to construct. Balconies were added to the top of the main piers to finish off the railing in pleasing style.

The contract for the construction of the Paddock Viaduct was awarded to the Hannan-Heckley Brothers Construction Company of St. Louis, for a bid price of \$386,141.28. The city of Ft. Worth financed the construction by means of a bond issue.

With the exceptions of removal of street railway tracks in the 1940's and the addition of new curbs, railings, and lighting poles in 1965, the Paddock Viaduct remains essentially as it was upon completion in 1914.

falsework

PERIOD	AF	REAS OF SIGNIFICANCE CH	IECK AND JUSTIFY BELOW	
PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	RELIGION
_1400-1499	_ARCHEOLOGY-HISTORIC	CONSERVATION	_LAW	_SCIENCE
_1500-1599	AGRIGULTURE	ECONOMICS	LITERATURE	SCULPTURE
_1600-1699	ARCHITECTURE	EDUCATION	MILITARY	_SOCIAL/HUMANITARIAN
1700-1799	ART	X_ENGINEERING	MUSIC	THEATER
1800-1899	X_COMMERCE	EXPLORATION/SETTLEMENT	PHILOSOPHY	XTRANSPORTATION
1900-	COMMUNICATIONS	INDUSTRYINVENTION	POLITICS/GOVERNMENT	_OTHER (SPECIFY)

SPECIFIC DATES

1912-14

BUILDER/ARCHITECT Brennke and Fay, Consulting Engrs.

STATEMENT OF SIGNIFICANCE

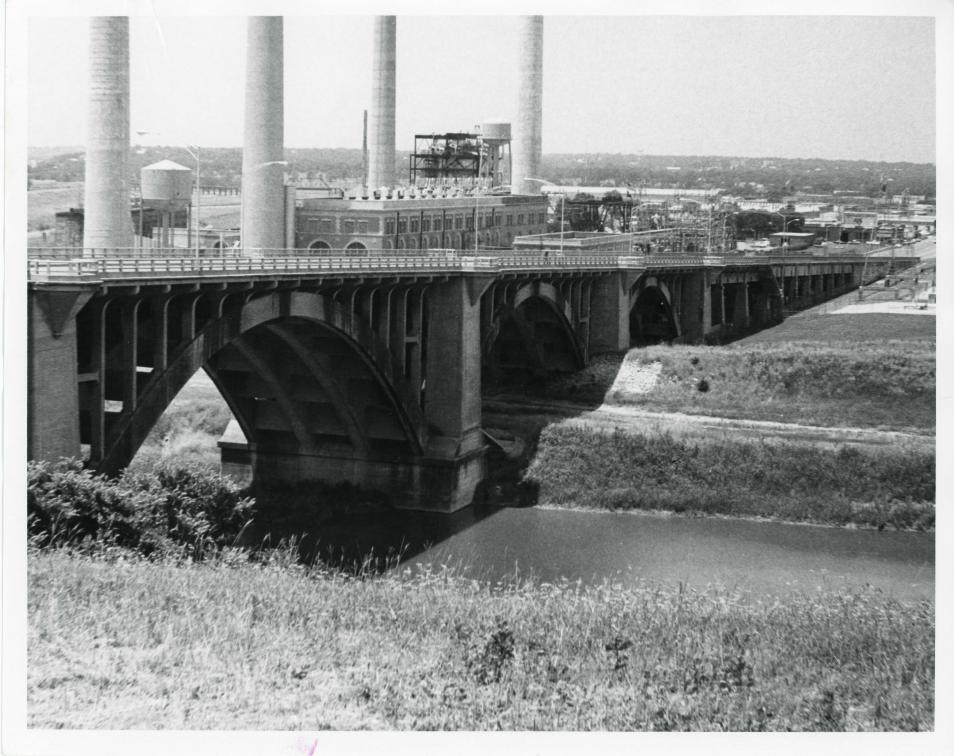
The Paddock Viaduct was the first large bridge erected in the United States in which the self-supporting reinforcement design was employed. In its design the steel reinforcement for the arches supported itself under its own strength while forms were temporarily placed around them and concrete poured within the forms around the steel arches. This design obviated the need for falsework in the stream bed of the Trinity River over which the bridge was built. Although self-supporting reinforcement concrete bridges had been erected in Europe since 1897, the Paddock Viaduct was the first such large structure in the United States.

Since its completion in 1914, the Paddock Viaduct has provided the downtown business district of Fort Worth, Texas, with dependable communication with the northern portions of the city. It remains in excellent condition and has had only superficial alterations on its roadway and sidewalk areas.

9 MAJOR BIBLIOGRAPHICAL RE	EFERENCES
Fort Worth, Texas." Transactions	ion of Four Reinforced Concrete Vaiducts at of the the American Society of Civil Engineers,
LXXVIII, No 1329 (1915), pp 1206- "Four Concrete Viaducts at Ft. Worth, (December 12, 1912), p. 1097.	Texas." <u>Engineering News</u> , LXVIII, No. 24
"Self Supporting Arch Reinforcement."	Engineering Record, LXX, No. 16, Oct. 17, 1914,
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STATE	CODE
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John E. Moore	5-19-75 DATE
History of Engineering STREET & NUMBER	TELEPHONE
C.E. Dept., Texas Tech Univ.	742-1231 STATE
Lubbock	Texas
12 STATE HISTORIC PRESERVAT	
NATIONAL X	CE OF THIS PROPERTY WITHIN THE STATE IS: STATE LOCAL
hereby nominate this property for inclusion in the	onal Register and per lift that it has been evaluated according to the
criteria and procedures set forth by the National Park Se	ull Jaling
TITLE Texas State Historic r	eservation Officer DATE June 4, 1975
FOR NPS USE ONLY LINEREBY CERTIFY THAT THIS PROPERTY IS NOT LEAD TO THE PROPERTY IS NOT LEAD THE PROPERTY IS NOT LEAD TO THE PROPERTY IS NOT L	JDED IN THE NATIONAL REGISTER DATE 3/1/6
DIRECTOR OFFICE OF ARCHEOLOGY AND HIS TO	RIC PRESERVATION DATE 3-14-74
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Maps/_	OK 11.12.75
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PROPERTY OF THE NATIONAL REGISTER

NPS Number 3/15/76
Title: Paddock Viaduet
Journant Country, Terfas
LOC. Looking NW across viadust shawing may
arer over Trenty Rever Veen from across
Silewach balconis on Judge,

Form No. 10-301a

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES PROPERTY PHOTOGRAPH FORM

FOR NPS USE ONLY

NOV 1 1 1975

RECEIVED

DATE ENTERED

MAR 1 5 1976

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS

TYPE ALL ENTRIES ENCLOSE WITH PHOTOGRAPH

1 NAME

HISTORIC

Paddock Viaduct

AND/OR COMMON

Main Street Bridge

2 LOCATION

CITY, TOWN

Fort Worth

_VICINITY OF

COUNTY

STATE

Tarrant

Texas

3 PHOTO REFERENCE

PHOTO CREDIT

DATE OF PHOTO

History of Engineering Program, Texas Tech University

June 1973

NEGATIVE FILED AT

History of Engineering Program, Texas Tech University

4 IDENTIFICATION

Looking northwest along the side of the Paddock Viaduct showing the main arch over the Trinity River. View is from the high ground across the street from the Tarrant County Courthouse. Note the sidewalk balconies over the main piers of the bridge.

IN 14



PROPERTY OF THE NATIONAL REGISTER

NPS Number 3/15/76
Title: Paddock Wladut
Tourant County, Texas
Loc. Looking S from Nand of readout
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Tarrent County Court hame 2 of 5

Form No. 10-301a (Pev 10-7)

> UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES PROPERTY PHOTOGRAPH FORM

FOR NPS USE ONLY MAR 1 5 1976

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS TYPE ALL ENTRIES ENCLOSE WITH PHOTOGRAPH

NAME

HISTORIC

Paddock Viaduct

AND/OR COMMON Main Street Bridge

LOCATION

CITY, TOWN Fort Worth

fixtures:

VICINITY OF

COUNTY Tarrant.

DATE ENTERED

STATE Texas

PHOTO NO.

PHOTO REFERENCE

PHOTO CREDIT

DATE OF PHOTO Histort of Engineering Program, Texas Tech University June 1973

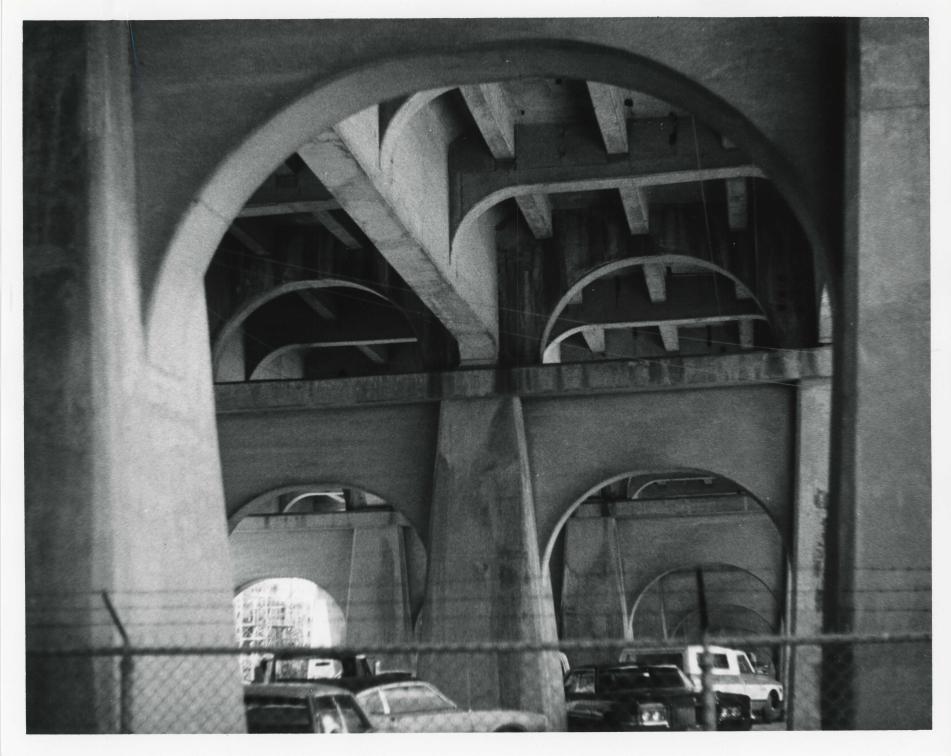
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History of Engineering Program, Texas Tech University

IDENTIFICATION

DESCRIBE VIEW DIRECTION FTC IF DISTRICT, GIVE BUILDING NAME & STREET

Looking south from north end of the Paddock Viaduct along roadway toward the central business district of Fort Worth. The large building at the end of the bridge is the Tarrant County Courthouse. Curbs, railing, and street lamps are recent additions to the bridge, replacing earlier such



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Form No. 10-301a (Pev 10-74)

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AND/OR COMMON

Main Street Bridge

LOCATION

CITY, TOWN Fort Worth

VICINITY OF

COUNTY

STATE

Tarrant Texas

PHOTO REFERENCE

PHOTO CREDIT

DATE OF PHOTO

DATE ENTERED

History of Engineering Program, Texas Tech University

June 1973

NEGATIVE FILED AT

History of Engineering Program, Texas Tech University

IDENTIFICATION

DESCRIBE VIEW, DIRECTION, ETC. IF DISTRICT, GIVE BUILDING NAME & STREET

Looking south to concrete superstructure of Paddock Viaduct in an area of 50-foot girders north of the Trinity River.

PHOTO NO.



PROPERTY	07	Time	MATONAL	RECTER
		, ,	THE REAL PROPERTY.	

NPS Number 3/5/76

Title: Paddock Vraduit

Tarrant County, Tevas

Loc. Looking south southerest along the.

side of Paddock at ground level

near with end

Form No. 10-301a (Rev. 10-7)

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AND/OR COMMON

Main Street Viaduct

2 LOCATION

CITY, TOWN

_VICINITY OF

COUNTY

STATE

Fort Worth

Tarrant

Texas

3 PHOTO REFERENCE

PHOTO CREDIT

DATE OF PHOTO

History of Engineering Program

June 1973

History of Engineering Program, Texas Tech University

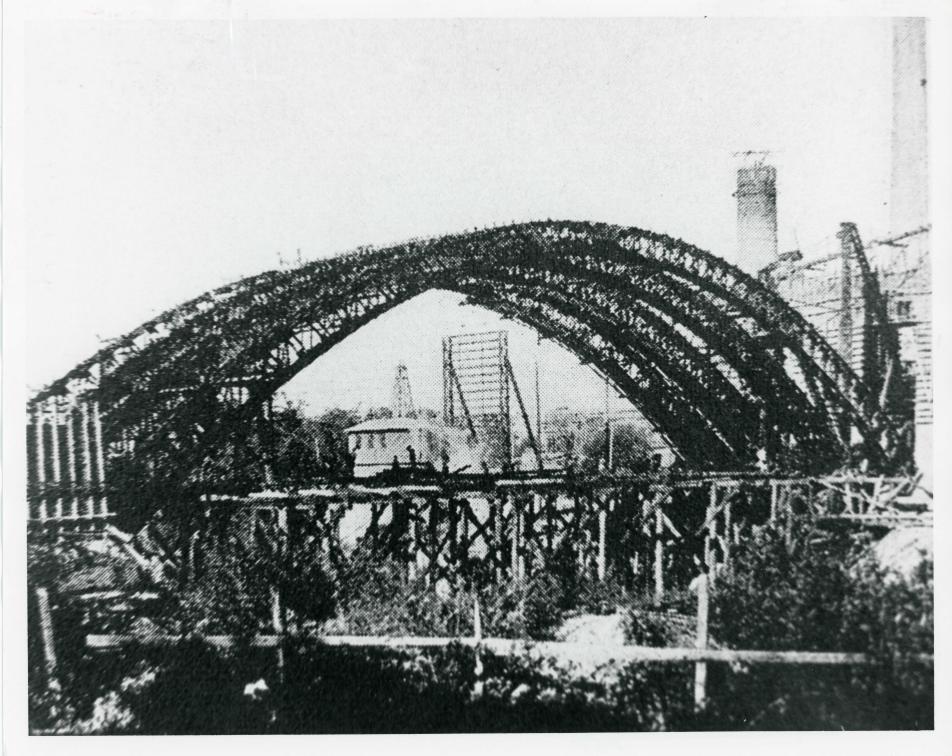
IDENTIFICATION

DESCRIBE VIEW, DIRECTION, ETC. IF DISTRICT, GIVE BUILDING NAME & STREET

Looking south southwest along the side of the Paddock at ground level near the north end.

РНОТО NO.

4 45



PROPERTY OF THE NATIONAL REGISTER

NrS Number 3/15/76
Title: Laddock Vraduct
Tarrant County, Terlas
Loc. Completed self-supporting steel peinforce
went for a concrete arch spen across the
Trenety River during Construction Circa 1913

Form No. 10-301a

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1 NAME

HISTORIC

Paddock Viaduct

AND/OR COMMON

Main Street Bridge

2 LOCATION

CITY, TOWN

__VICINITY OF

COUNTY Tarrant

DATE OF PHOTO

STATE Texas

PHOTO REFERENCE

S. C. Bowen, Transactions of the American Society of the American Society of the American Society of Civil Engineers, LXXVIII (1915).

History of Engineering Program, Texas Tech University

4 IDENTIFICATION

Completed self-supporting steel reinforcement for a concrete arch span across the Trinity River during construction circa 1913. From Transactions of the American Society of Civil Engineers, LXXVIII (1915).

circa **1**913

PHOTO NO. 5 45

Form No. 10-301 (Rev 10-74)

> UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES PROPERTY MAP FORM

FOR NPS USE ONLY

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DATE ENTERED

MAR 1 5 1976

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS TYPE ALL ENTRIES -- ENCLOSE WITH MAP

NAME

HISTORIC

Paddock Viaduct

AND/OR COMMON

Main Street Bridge

LOCATION

CITY, TOWN Fort Worth

VICINITY OF

COUNTYTarrant

STATE Texas

3 MAP REFERENCE

SOURCE USGS Haltom City Texas quad

SCALE

1:24000

DATE

1955

REQUIREMENTS

TO BE INCLUDED ON ALL MAPS

- 1. PROPERTY BOUNDARIES
- 2. NORTH ARROW
- 3. UTM REFERENCES

ENTRIES IN THE NATIONAL REGISTER

STATE TEXAS

Date Entered MAR 1 5 1976

Name

Paddock Viaduct

Medina Dam

Location

Fort Worth Tarrant County

Castroville vicinity Medina County

Also Notified

Hon. John G. Tower Hon. Lloyd M. Bentsen Hon. James C. Wright, Jr. Hon. Abraham Kazen, Jr.

Regional Director, Southwest Region State Historic Preservation Officer Mr. Truett Latimer Executive Director, Texas Historical Commission P.O. Box 12276, Capitol Station Austin, Texas 78711

	L REGI		DATA	OSI	EET	XP
Paddock Viaduct	② 01	THER NAMES:		3		Py code:
SLOCKTION street & number	Fort Worth	vicinity of	state Tarr	county	Southwest	_
OWNER PRIVATE STATE MUNICIPAL COUNTY OM	ULTIPLE FEDERAL(agency name)	- 10		ADMINISTRATOR	:	
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@functions	(a)	dates of initial construction:	1912-19/4		ETHNIC GROUP ASSOCIATION	100
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reviewers initials 8T date 2/9/18