NPS Form 10-900 (Oct. 1990)

# **United States Department of the Interior National Park Service**

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

4. NATIONAL PARK SERVICE CERTIFICATION



OMB No. 10024-0018

1. NAME OF PROPERTY	
HISTORIC NAME: US 190 Bridge at the Neches River OTHER NAMES/SITE NUMBER: JP0213-08-074	
2. LOCATION	
CITY OR TOWN: Jasper	NOT FOR PUBLICATION: N/A VICINITY: X ZIP CODE: 75951
3. STATE/FEDERAL AGENCY CERTIFICATION	
As the designated authority under the National Historic Preservation Act, as amended, I he request for determination of eligibility meets the documentation standards for registering Historic Places and meets the procedural and professional requirements set forth in 36 CFI x meetsdoes not meet the National Register criteria. I recommend that this property be x statewidelocally. (See continuation sheet for additional comments.)  Signature of certifying official	g properties in the National Register of R Part 60. In my opinion, the property
State Historic Preservation Officer, Texas Historical Commission	
State or Federal agency and bureau	
In my opinion, the property <u>x</u> meets <u>does</u> not meet the National Register criteria. ( <u>See continuation sheet for additional comments.)</u>	
Signature of commenting or other official	Date
State or Federal agency and bureau	

I hereby certify that this property is:	O Signature of the Keeper	Date of Action
✓ entered in the National Register	wood to the total the	1000
See continuation sheet.		
determined eligible for the National Register		
See continuation sheet.		
determined not eligible for the National Register		
removed from the National Register		
other (explain):		

#### 5. CLASSIFICATION

OWNERSHIP OF PROPERTY: public-State

CATEGORY OF PROPERTY: structure

NUMBER OF RESOURCES WITHIN PROPERTY: CONTRIBUTING NONCONTRIBUTING 0 0 BUILDINGS 0 0 SITES 0 STRUCTURES 1

> 1 0 TOTAL

0 OBJECTS

Number of contributing resources previously listed in the National Register: 0

0

NAME OF RELATED MULTIPLE PROPERTY LISTING: Historic Bridges of Texas, 1866-1945

#### 6. FUNCTION OR USE

**HISTORIC FUNCTIONS:** TRANSPORTATION/road-related (vehicular)

CURRENT FUNCTIONS: TRANSPORTATION/road-related (vehicular)

#### 7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: Other: Parker through truss bridge

MATERIALS: FOUNDATION substructure: concrete piers and bents

N/A WALLS

ROOF

N/A

**OTHER** 

superstructure: steel truss

NARRATIVE DESCRIPTION (see continuation sheets 7-1 through 7-4)

### **National Register of Historic Places Continuation Sheet**

Section	number	7	Page	1

Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

### Description:

The US 190 Bridge at the Neches River consists of two truss spans, a cantilever I-beam unit with suspended span, and 27 I-beam approach spans. The primary truss span is a 240-foot riveted Parker through truss; the secondary span is a riveted camelback through truss span measuring 125 feet in length (see Photograph 2). The bridge, with its 24-foot wide roadway, carries two-way traffic across B.A. Steinhagen Lake on US 190 at the Jasper and Tyler county line. It links Jasper and Woodville, the Jasper and Tyler county seats, and also serves traffic between East Texas and Louisiana (see Figure 1). Located in the Piney Woods region of East Texas, the area's economy is based primarily on the timber and agricultural industries.

Texas Highway Department (THD) engineers developed a special design for the bridge's two truss spans. These truss spans rest on solid concrete piers with pointed ends (cutwaters). The steel I-beam approach spans rest on a series of steel bearing pile bents and four dumbbell piers. The cantilever unit consists of three steel I-beam spans: a center span measuring 90 feet between supports with a 65-foot span on each side. The 90-foot center span is comprised of two 17-foot arms, which cantilever from each of the adjacent spans, and a 56-foot suspended ("drop-in") span supported by the cantilevered arms (see Figure 2). Both the truss spans and the approach spans employ railing made up of 6-inch steel I-beams. On the approach spans, these rails are attached to concrete posts (see Photograph 1).

From 1941 through 1943, the Gaylord Construction Company built the Neches River bridge under contract to THD. In 1951, the Town Bluff Dam was completed just downstream from the bridge, forming the B.A. Steinhagen Lake. The bridge continued in service over the lake with no major alterations. In 1982, THD contracted a project to replace two vertical members and four struts on the carnelback span. No other major alterations have been performed on this bridge. As such, it retains substantial integrity of design, materials and workmanship. Because the bridge remains in place serving highway traffic, it also retains integrity of location and association. Although the impoundment of the lake has compromised integrity of setting and feeling, the bridge retains substantial integrity overall. Although no projects are currently planned for this bridge, its BRINSAP sufficiency rating as of June 1994 is 34.9, making the bridge eligible for replacement under the federal Highway Bridge Replacement and Rehabilitation Program (HBRRP).

### United States Department of the Interior

National Park Service

### **National Register of Historic Places Continuation Sheet**

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

GENERAL SPECS

TRUSS TYPE:

Parker & camelback through

THD STD. DESIGN:

n/a 2

NO. TRUSS SPANS: TRUSS SPAN LENGTH:

1 @ 240'; 1 @ 125'

ROADWAY WIDTH: DECK WIDTH:

24' 29'

APPROACH SPANS:

20 - 35'0", 5 - 40'0" & 2 - 55'0"

steel I-beam spans;

220' I-beam cantilever unit with suspended span

OVERALL LENGTH:

1601'3"

SPECIAL FEATURES

**BRIDGE PLAQUE:** 

APPROACH RAILING:

OTHER:

none steel/concrete railing

125' camelback through truss span;

3-span cantilever I-beam unit: solid piers with pointed ends

SUPERSTRUCTURE

TRUSS DEPTH:

42'9"

TRUSS PANELS:

10 - 24'0" panels

TOP CHORD & END POSTS: 4 angles w/ web & cover plates BOTTOM CHORD:

2 channels w/ batten plates

VERTICAL POSTS: **DIAGONAL MEMBERS:**  2 channels w/ lattices or I-beam 2 angles w/ batten plates or I-beam

DECK TYPE:

concrete

SUBSTRUCTURE

PIERS/INTERIOR BENTS:

concrete piers and bents

THD STD. DESIGN:

THD STD. DESIGN:

ABUTMENTS/END BENTS:

concrete abutment bents

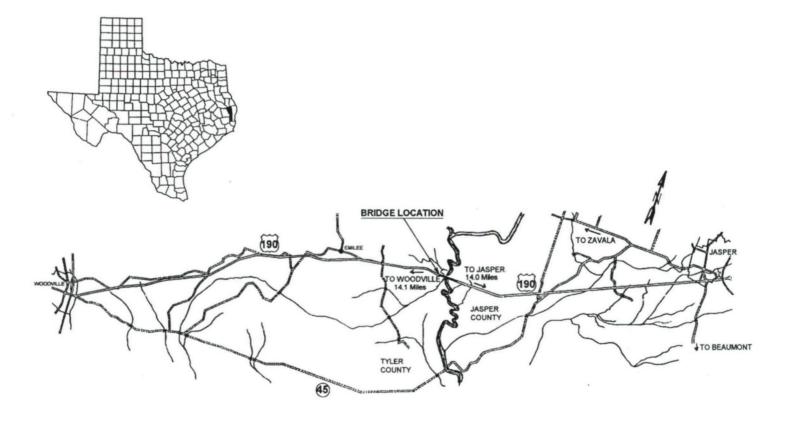
n/a

### National Register of Historic Places Continuation Sheet

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

Figure 1. Map of Jasper and Tyler counties with the location of the Neches River bridge as shown in the 1943 plans.



Source: Texas Highway Department, CSJ 0213-08-010, 1943.

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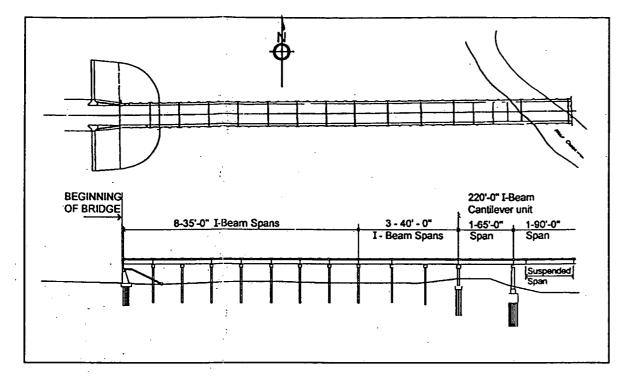
# National Register of Historic Places Continuation Sheet

Historic Bridges of Texas
US 190 Bridge at the Neches River
Jasper and Tyler counties, Texas

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Figure 2. Elevation of the Neches River bridge as shown in the 1943 plans.

Source: Texas Highway Department, CSJ 0213-08-010, 1943.



5" x 6" H Rail with Conc. Posts

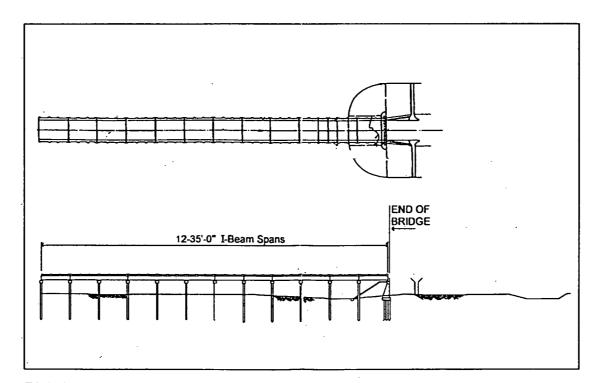
1-240'-0" Truss Span

1-125'-0" Truss Span

PLAN SHEET 1 OF 3

PLAN SHEET 2 OF 3

TOTAL LENGTH OF BRIDGE = 1601'



PLAN SHEET 3 OF 3

### 8. STATEMENT OF SIGNIFICANCE

APPLICABLE NATIONAL REGISTER CRITERIA
A PROPERTY IS ASSOCIATED WITH EVENTS THAT HAVE MADE A SIGNIFICANT CONTRIBUTION TO THE BROAD PATTERNS OF OUR HISTORY.  B PROPERTY IS ASSOCIATED WITH THE LIVES OF PERSONS SIGNIFICANT IN OUR PAST.  X C PROPERTY EMBODIES THE DISTINCTIVE CHARACTERISTICS OF A TYPE, PERIOD, OR METHOD OF CONSTRUCTION OR REPRESENTS THE WORK OF A MASTER, OR POSSESSES HIGH ARTISTIC VALUE, OR REPRESENTS A SIGNIFICANT AND DISTINGUISHABLE ENTITY WHOSE COMPONENTS LACK INDIVIDUAL DISTINCTION.  D PROPERTY HAS YIELDED, OR IS LIKELY TO YIELD, INFORMATION IMPORTANT IN PREHISTORY OR HISTORY.
Criteria Considerations: N/A
AREAS OF SIGNIFICANCE: Engineering
Period of Significance: 1941-1943
SIGNIFICANT DATES: 1941-1943
SIGNIFICANT PERSON: N/A
CULTURAL AFFILIATION: N/A
ARCHITECT/BUILDER: Designer: Texas Highway Department Fabricator: Virginia Bridge Company of Roanoke, Virginia Builder: Gaylord Construction Company of Houston, Texas
NARRATIVE STATEMENT OF SIGNIFICANCE (see continuation sheets 8-5 through 8-8)
9. MAJOR BIBLIOGRAPHIC REFERENCES
BIBLIOGRAPHY (see continuation sheet 9-9)  PREVIOUS DOCUMENTATION ON FILE (NPS): N/A  preliminary determination of individual listing (36 CFR 67) has been requested.  previously listed in the National Register  previously determined eligible by the National Register  designated a National Historic Landmark  recorded by Historic American Buildings Survey #  recorded by Historic American Engineering Record #  PRIMARY LOCATION OF ADDITIONAL DATA:  X State historic preservation office (Texas Historical Commission)  X Other state agency (Texas Department of Transportation)  Federal agency  Local government  University  Other Specify Repository:

### **National Register of Historic Places Continuation Sheet**

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

#### Statement of Significance:

The US 190 Bridge at the Neches River was constructed from 1940 to 1943. As a custom-designed truss bridge employing an I-beam cantilever unit, the bridge is significant under Criterion C for "employing technically complex, advanced or innovative designs or construction methods." The bridge's camelback through truss span, as well as the cantilever unit, are unusual features and make the bridge additionally significant for rarity. As such, the bridge meets National Register Criterion C in the area of Engineering at a state level of significance.

The Neches River bridge was built on US 190, former State Highway (SH) 45. SH 45, also known as the East and West Texas Highway, linked Newton, Jasper, Woodville, Livingston, Huntsville and Bryan. By 1937, the route was designated SH 45/US 190, and by 1942 the original SH 45 designation had been dropped.

THD built the Neches River bridge as part of a continuing effort to complete US 190 (formerly SH 45) for service between Central Texas and Louisiana. Related THD projects covered grading and drainage structures for a relocated portion of US 190 between Woodville, in Tyler County, and a point in Jasper County 1.6 miles east of the county line. From 1939 to 1942, two separate projects covered the construction of one relief structure on the west side of the truss bridge and two relief structures on its east side. The Neches River bridge replaced the Town Bluff Toll Ferry, one of the last remaining toll ferries in the state. Throughout the 1930s, THD made eliminating toll ferries, either by eliminating the toll or replacing them with bridges, a high priority. The 1937 Burr's Ferry Bridge on SH 45 at the Louisiana state line was an earlier THD effort to eliminate toll ferries along the route (refer to nomination of Burr's Ferry Bridge, NW0214-04-005, NRHP 1995). The US 190 Bridge at the Neches River was the last of three bridges built to replace ferries on the Neches.

In April 1939 and again in July 1940, THD conducted site inspections with engineers from the Bureau of Public Roads (BPR). After the second inspection, engineers from both agencies agreed to change the truss lengths called for in the preliminary design. By replacing the two 190-foot spans with a 240-foot and 125-foot truss span, they could avoid positioning a pier in the center of the river and thereby allow a greater clear waterway opening. The relative ease of constructing piers closer to the river banks would partially offset the increased material costs. In order to provide greater vertical clearance above the high-water level, THD engineers designed a three-span I-beam cantilever unit. Such units employ relatively shallow I-beam members, so that the level of "low steel" is as high as possible above the water. In addition, solid piers with "lenticular nosing" (pointed ends) were used to help avoid drift accumulation. Only four examples of truss bridges using this pier type survive in Texas. Because test holes revealed that sand was present for 90 feet below grade, the engineers designed steel piling foundations for the caisson piers supporting the truss spans and for the concrete bents supporting the approach spans.

The bridge design also called for two 1½-foot sidewalks and a 24-foot roadway. This width corresponded to the roadway width of drainage structures being constructed on adjacent sections of US 190. BPR initially suggested that, because of the relative difficulty of widening a truss bridge, the Neches River

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

bridge should have a 26-foot roadway width. However, THD engineers decided not to increase the roadway width.

Rather than use a standard design, THD bridge engineers specially designed the bridge's two riveted truss spans. Nine other Parker truss bridges specially designed by THD survive today. The bridges 30 approach spans provide a lengthy approach of 1,230 feet, one of the longest series of approach spans for a truss bridge in Texas. Other unusual features include the cantilever unit with suspended span and the camelback through truss span. The Neches River bridge is the only documented Texas highway truss bridge incorporating a concrete cantilever unit. It is also the last surviving camelback through truss span designed by the Texas highway department and one of only seven structures with camelback through spans remaining in the state.

By the summer of 1940, related projects for roadway grading and relief structures on sections of US 190 adjacent to the bridge were well under way. In his September 11 letter to State Highway Engineer D.C. Greer, the district engineer in Beaumont urged that bridge plans be expedited:

We are very anxious to secure information as to the status of the plans for the bridge over the Neches River on U.S. Highway 190 between Woodville and Jasper. The [roadway] approaches to the river bottom in Jasper and Tyler Counties are very near completion. . . Our investment in these two approaches, including the road from Woodville to the river, now approximates \$452,000.00, but this work will be of negative value to the traveling public until the river bridge is built. We anticipate that we will have considerable criticism if the bridge is not placed under construction immediately. . . .

It is the desire and recommendation of this office that these plans be completed and the contract let [awarded] at the earliest possible date. Will you please inform us when the bridge plans will be completed.

During the fall of 1940, THD engineers completed plans for the bridge and submitted them to the Public Roads Administration (PRA), which had by this time superseded BPR. On December 2, 1940, PRA authorized the plans, specifications, and estimate (PS&E) for the bridge. The project agreement included a provision whereby THD would be required to surface the roadway at a future date. PRA allotted the project \$265,000 from the 1941 Regular Federal Aid Program.

The Texas Highway Commission opened bids on December 20, 1940. In addition to the bridge project, the contract included two small projects for 0.3 miles of roadway grading immediately adjacent to the bridge. After reviewing the six bids received, the commission awarded the contract to the low bidder, the Gaylord Construction Company of Houston. The bid of just under \$240,000 was substantially under THD's preliminary estimate of \$262,350. The Virginia Bridge Company of Roanoke was subcontracted to fabricate the steel truss spans. Construction began on February 1, 1941. The THD resident engineer in Beaumont supervised the construction which engineers from THD and BPR periodically inspected.

### **National Register of Historic Places Continuation Sheet**

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Historic Bridges of Texas
US 190 Bridge at the Neches River
Jasper and Tyler counties, Texas

The Neches River bridge was planned and constructed in the shadow of World War II. The October 1940 *Texas Parade* reported:

"Every resource is being strained to bring into being, arm, equip and train the largest peacetime army in the history of the United States. Industry is bringing to bear all its inventive genius and organizing ability to produce the thousands of things that are essential to a well-equipped army. Steel mills are working overtime to produce the metal needed by the armories for forging the guns, both large and small, needed by the expanded army.

Materials shortages affected the construction of the Neches River bridge, as evidenced in the January 30, 1941, letter from the Virginia Bridge Company to Greer:

We have been favored by the Gaylord Construction Company with their order for the structural steel for the two truss spans only, for the Neches River bridge between Jasper and Tyler Counties, consisting of 1-125' and 1-240' truss spans. Due to the present condition of the rolling mills, we wish to order the mill material immediately from the design drawings. We know of course, that the specifications say that we do this at our own risk pending approval of shop detail drawings, but if no major changes are contemplated in these two spans, we think it advisable for all concerned to place our mill order now.

In 1941, PRA began implementing federal mandates to conserve construction materials and prioritize projects with respect to their contribution to national defense. The February 1942 issue of *Texas Parade* reported that "to save critical materials needed in defense, the Highway Department has abandoned placement of bronze identification plates on bridges and major drainage structures." The August 8, 1942, Bridge Construction Inspection Report noted that a field change had been executed to eliminate name plates on the Neches River bridge.

The Neches River bridge was completed on February 6, 1943, at a cost of just over \$275,000, including the 0.3 miles of approach roadway grading. The bridge dedication was held on February 12, 1943. The invitation read:

The third and Final Bridge (sic) on the old State Highway 45 that extended from Burr's Ferry on the Sabine River to Roan's Prairie in Grimes County has been completed. Most of this route is now U.S. 190.

Due to the necessity of devoting our time and energies to War Work, it is not deemed proper or fitting to stage an elaborate celebration at this time, but we do want our friends along this highway to meet and say "HOWDY" to each other and express our appreciation to those who have rendered such splendid service in the completion of this program.

The invitation went on to list the relevant transportation officials and the Highway 45 Association directors.

### **National Register of Historic Places Continuation Sheet**

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

From 1947 to 1951, the U.S. Army Corps of Engineers constructed the Town Bluff Dam four miles downstream from the bridge. The impounded river formed the B.A. Steinhagen Lake. With only minor improvements to the bridge's approach roadway embankments, the bridge continued in service over the lake in combination with the two relief structures built from 1940 to 1941 under a separate contract.

### **National Register of Historic Places Continuation Sheet**

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Historic Bridges of Texas US 190 Bridge at the Neches River Jasper and Tyler counties, Texas

#### Bibliography:

- Texas Highway Department. Administrative Circular No. 6-42, January 26, 1942, located at TxDOT headquarters in Austin.
- Texas Highway Department. General Information on Texas Highways. Austin: Von Boeckmann-Jones, 1919.
- Texas Highway Department. Plans of Proposed State Highway Improvement. Control-Section-Job No. 0213-08-010, located at TxDOT headquarters in Austin.
- Texas Highway Department. Project Correspondence Files. Control-Section-Job No. 0213-08-010, located at TxDOT headquarters in Austin.

Texas Highway Department. Texas Highway Department, 1927-1937. Austin, n.p.

### Verbal Boundary Description:

The nomination boundaries encompass the complete structure, US 190 Bridge at the Neches River, including the approach spans and approach railing, as well as the ground upon which the structure stands.

#### Boundary Justification:

The boundary includes all components historically associated with the property.

#### Location:

The US 190 Bridge at the Neches River is located in both Jasper (241) and Tyler (457) counties.

### 10. GEOGRAPHICAL DATA ACREAGE OF PROPERTY: less than one acre Zone Easting Northing Zone Easting Northing UTM REFERENCES 1 15 385440 3413760 3 see continuation sheet) **VERBAL BOUNDARY DESCRIPTION** (see continuation sheet 10-9) **BOUNDARY JUSTIFICATION** (see continuation sheet 10-9) 11. FORM PREPARED BY NAME/TITLE: text by Regina A. Lauderdale graphics by Pat St. George Texas Historical Commission/ DATE: September 1996 **ORGANIZATION:** Texas Department of Transportation Texas Historical Commission TELEPHONE: 512/463-6094 STREET & NUMBER: P.O. Box 12276 Austin STATE: TX **ZIP CODE:** 78711 CITY OR TOWN: ADDITIONAL DOCUMENTATION CONTINUATION SHEETS MAPS **PHOTOGRAPHS** ADDITIONAL ITEMS PROPERTY OWNER

NAME Texas Department of Transportation

STREET & NUMBER 125 East 11th Street

TELEPHONE 512/416-2606

CITY OR TOWN Austin STATE TX **ZIP CODE 78701** 

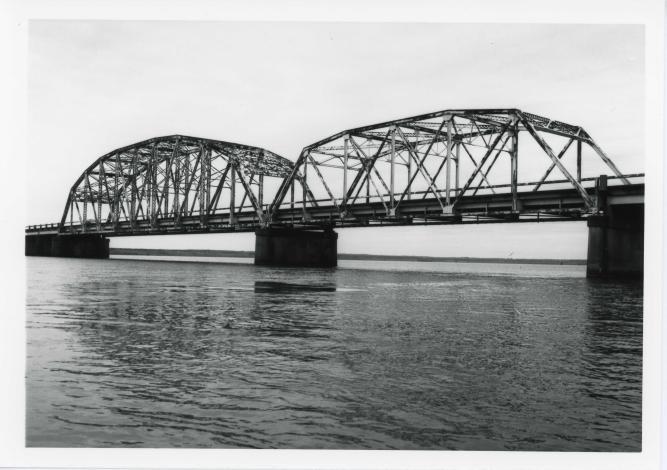
## UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

### NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION
PROPERTY US 190 Bridge at the Neches River NAME:
MULTIPLE Historic Bridges of Texas MPS NAME:
STATE & COUNTY: TEXAS, Jasper
DATE RECEIVED: 9/09/96 DATE OF PENDING LIST: 9/24/96 DATE OF 16TH DAY: 10/10/96 DATE OF 45TH DAY: 10/24/9
REFERENCE NUMBER: 96001121
NOMINATOR: STATE
REASONS FOR REVIEW:
APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL:
COMMENT WAIVER: N
$\sqrt{\text{ACCEPT}}$ RETURN REJECT 10.10-96 DATE
ABSTRACT/SUMMARY COMMENTS:
RECOM./CRITERIA
REVIEWER DISCIPLINE
TELEPHONE DATE
DOCUMENTATION see attached comments Y/N see attached SLR Y/N



SITE NO. JP0213-08-074
US 190 BRIDGE AT NECHES RIVER
HISTORIC BRIDGES OF TEXAS
JASPER CO., TEXAS
PHOTOGRAPH 1 OF 2



SITE NO. TPO213-08-074
US 190 BRIDGE AT NECHES RIVER
HISTORIC BRIDGES OF TEXAS
TASPER CO., TEXAS
PHOTOGRAPH 2 OF 2