



# Historic Bridge Adoption Information Packet

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Bexar County

Old Seguin Rd at Salado Creek

May 6, 2019

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## Announcement

The Texas Department of Transportation (TxDOT) is offering the historic bridge detailed below for adoption and reuse according to federal transportation and historic preservation laws. The bridge is located in Bexar County, on Old Seguin Rd at Salado Creek.

Letters of interest and/or reuse proposals will be accepted until 5:00 p.m. on August 31, 2019.

Interested parties may request additional information, indicate an interest, or submit a reuse proposal by contacting:

Gina Salazar-Dounson  
TxDOT San Antonio District  
4615 NW Loop 410  
San Antonio, TX 78229-0928  
Phone Number: 210-615-6105  
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View facing north, showing narrow bridge width in relation to crossing vehicle.

## Bridge Location

- County: Bexar
- Highway or Facility: Old Seguin Rd
- Feature Crossed: Salado Creek
- GIS Locational Information <https://arcg.is/KDO5y>

## Bridge Information

- Bridge Owner: Bexar County
- Main-span Type: Concrete Box Culvert
- Main-span Length: 51 feet
- Roadway Width: 18 feet
- Year Built: 1920
- Builder: Unknown, City of San Antonio (current Owner)

## Bridge Condition and Load Rating

The September 2017 bridge inspection report appraised the structure's deck geometry as "basically intolerable requiring a high priority of replacement."

**Unsafe railing:** The existing structure has a low-profile concrete curb railing about 12 inches in height, which does not meet current TxDOT design standards. TxDOT's Bridge Railing Manual specifies a minimum railing height of 27 inches for vehicular traffic and 42 inches for pedestrian traffic. For any 2R resurfacing or 3R roadway rehabilitation project, existing railing that does not meet the minimum rail height and does not comply with the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH), National Cooperative Highway Research Program (NCHRP) Report 230, or NCHRP Report 350 must be upgraded to comply with MASH or NCHRP Report 350. Bridges with design speeds of 45 miles per hour and below must have railings that meet Test Level (TL)-2 crash test criteria or greater.

**Unshielded railing ends:** The concrete curb railing terminates without end treatment or approach guard fence. The Bridge Railing Manual states "all ends of bridge railings must be protected with the appropriate metal beam guard fence and end treatment per the Roadway Design Manual." The Old Seguin Road at Salado Creek bridge-class culvert does not qualify for exceptions to this general rule. No guard fence is present on the northeast or southwest approaches, increasing the potential for vehicle collision with the curb rail and rollover into the creek channel.

**Channel erosion/scour:** Salado Creek channel banks at Old Seguin Road exhibit moderate erosion. Channel bed scour is also present, with the structure's bottom slab toewall exposed to a depth of as much as 3.5 feet at the upstream (northwest) toewall and as much as 2.5 feet at the downstream (southeast) toewall. The exposed toewalls extend to bedrock.

**Concrete deterioration:** The bottom slab, abutments and intermediate walls, and headwalls/wingwalls all exhibit deterioration or initial disintegration. Conditions include moderate scaling, cracking, and spalling, with exposed reinforcing steel evident in some locations. In some cases, the spalling has exposed reinforcing steel. The top slab exhibits moderate to major deterioration, with moderate scaling, spalling,

and 1/8-inch-wide cracks. Reinforcing steel is exposed to a depth of up to 3 inches on the bottom of the top slab in culvert barrels.

Overtopping/flash flood hazard: Salado Creek is highly subject to flash flooding due to the geology and topography of northern Bexar County. The watershed area that drains to Salado Creek at Old Seguin Road is 167.46 square miles. The existing bridge-class culvert has a hydraulic capacity of 391 cubic feet per second (cfs). It is routinely overtopped during heavy rain events. The 50% Annual Exceedance Probability (AEP) - in lay terms often called a "2-year flood event" - is estimated to be 3,455 cubic feet per second (cfs) at the structure's location, overtopping the existing structure with water levels about 5 feet above its deck. The 10% AEP/10-year flood event is estimated to be 18,717 cfs. This overtopping results in frequent closure of Old Seguin Road at this location. The September 2017 bridge inspection report appraised the waterway adequacy as "basically intolerable requiring high priority of replacement."

However, given the severity and magnitude of the flash flooding along Salado Creek, overtopping is nearly unavoidable with any feasible project alternative given the vertical profile of the Old Seguin Road roadway approaches. Reconstructing the Old Seguin Road approaches to allow for sufficient bridge elevation to reduce overtopping would result in floodplain impacts, particularly to areas upstream of the bridge.

The bridge-class culvert is classified as deficient with a current sufficiency rating (SR) of 70.7 out of 100 in September 2017. Structurally deficient and functionally obsolete bridges with an SR of 80 or less are eligible for replacement or rehabilitation using federal funding under TxDOT's Highway Bridge Program. The bridge-class culvert is load posted at 24,000 pounds axle/tandem.

## **Historical Significance of the Bridge**

This structure carries Old Seguin Road (sometimes signed as Seguin Road) over Salado Creek, in the City of San Antonio, Bexar County, Texas. The structure is a low-water, bridge-class, concrete box culvert and was designed to be overtopped during high water flows. The bridge-class culvert is owned by the City of San Antonio. It was constructed in 1920 on what was then the main route between San Antonio and Seguin, designated as State Highway (SH) 3. This segment of roadway was designated as part of the Old Spanish Trail (OST) route by a private auto trail association in the 1920s and 1930s. The roadway reverted to a local street in the mid-1930s. The Old Seguin Road Bridge at Salado Creek, was previously determined eligible under Criterion A for Transportation at the local level of significance (Resource 001 from September 2014 Historic Resources Survey Report (HRSR) for I-35 Northeast San Antonio Expansion Project, CSJ 0016-05-111, etc.).

Based on the aforementioned 2014 HRSR, in January 2015, TxDOT determined the Old Seguin Road at Salado Creek bridge-class culvert individually eligible for listing in the National Register of Historic Places (NRHP), under NRHP Criterion A in the area of Transportation at the local level of significance. The Texas State Historic Preservation Officer (SHPO) concurred with the determination of eligibility. The bridge-class culvert is significant as a component of the OST with this section connecting Seguin and San Antonio. There are some repairs to the concrete bridge curb railing, but the repairs match the original design and do not notably diminish integrity of materials or workmanship. The bridge-class culvert retains its integrity of location, design, feeling, and association with the OST. Its integrity of setting is compromised by the proximity of IH 35.

## **TxDOT Estimated Work Items and Costs**

Costs to remove the bridge are estimated by TxDOT Bridge Engineers based on TxDOT expenditures for similar items on other bridges. All prospective owners should have access to a Structural Engineer to assist in determining the appropriate work to be completed as well as appropriate estimates. Costs may vary outside the TxDOT system.

Any other construction costs associated with relocation of bridge should be provided by prospective owners' professional consultants.

• Remove Bridge:	\$10,000
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<b>Total Costs</b>	<b>\$10,000</b>
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## Bridge Photographs



View facing north, showing concrete deterioration on southeast railing, headwall, and culvert barrels.



View facing southeast, showing Cibolo Creek downstream channel. IH 35 in background.