

PROJECT BACKGROUND

- ▶ **Following the 2015 and 2016 flooding events, up to 100 ft. of river bank along the Brazos River has been lost due to erosion at several locations within the City.**
- ▶ **Due to the recent record flood during Harvey, it is expected that a similar or larger rate of erosion occurred on the river.**
- ▶ **These rates of erosion are significantly higher than what have been experienced on the river in the past 30 years.**
- ▶ **It is important to monitor and assess the loss of river bank and determine how this loss will threat City's infrastructure such as bridges, levees, parks, roads and utilities.**



PROJECT BACKGROUND



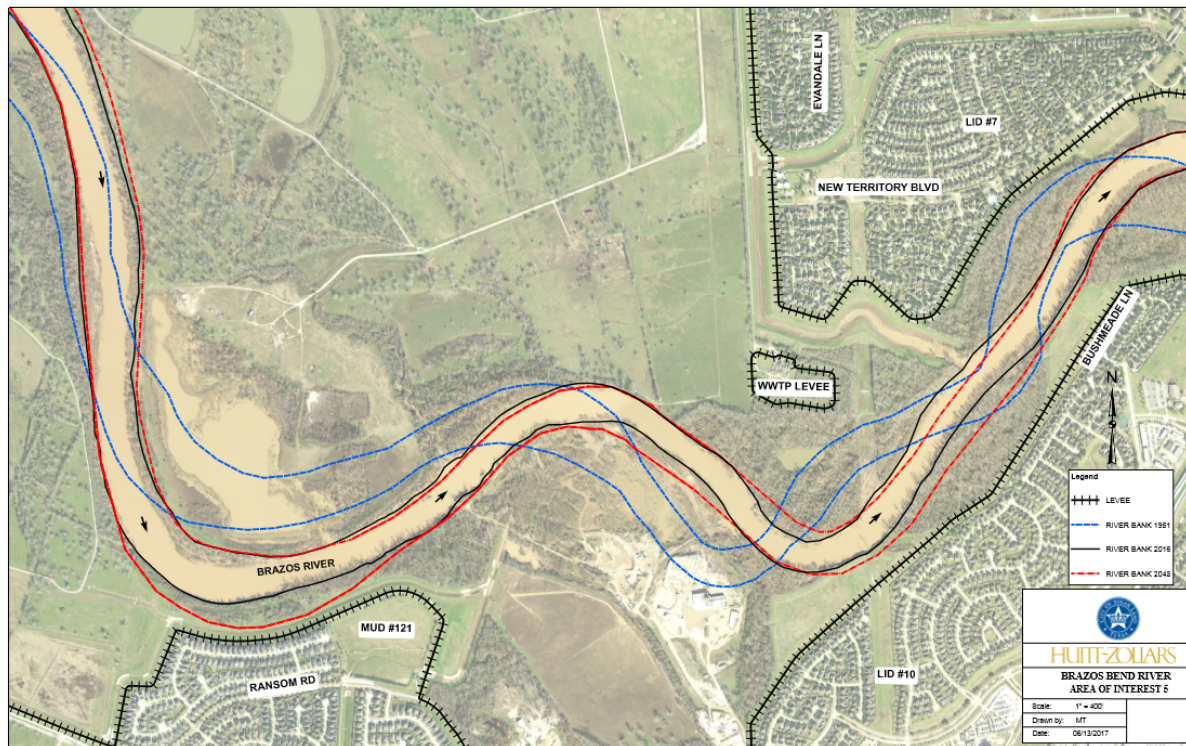
**Brazos River Bridge
Erosion Project**



Rip-Rap protecting the abutment has now begun falling into the river.



PROJECT BACKGROUND

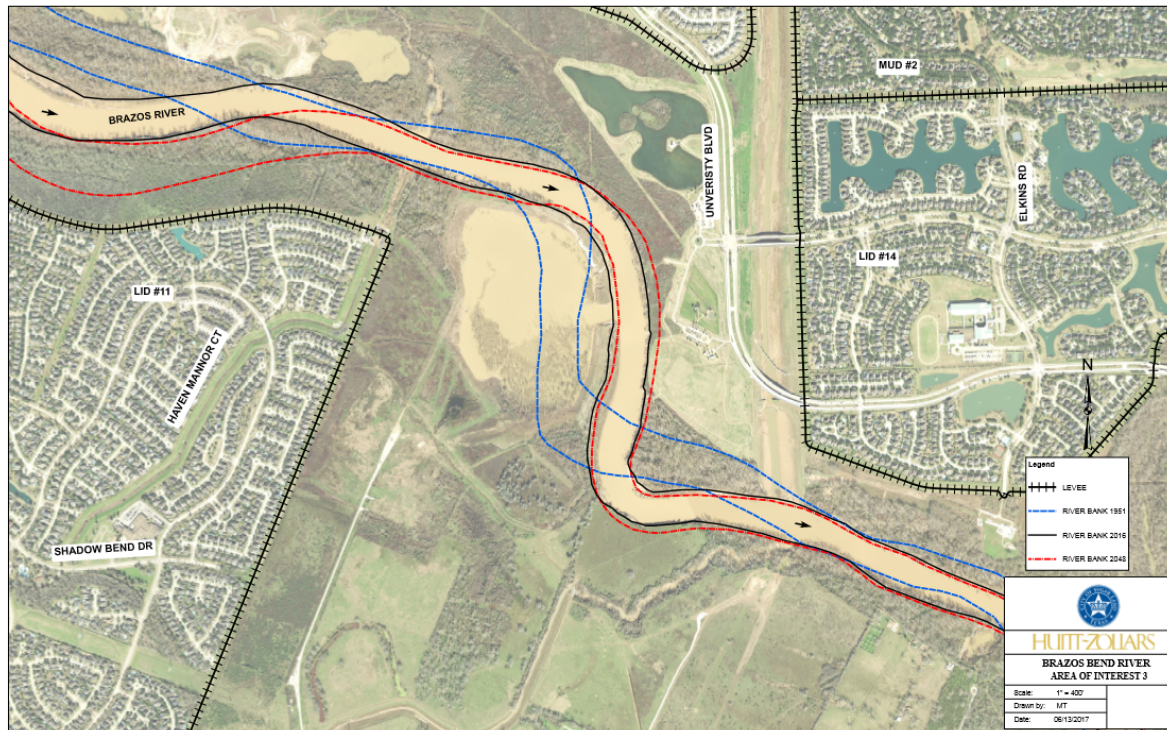


LEGEND

- ++++ Levee
- - - River Bank 1951
- River Bank 2016
- - - River Bank 2048



PROJECT BACKGROUND

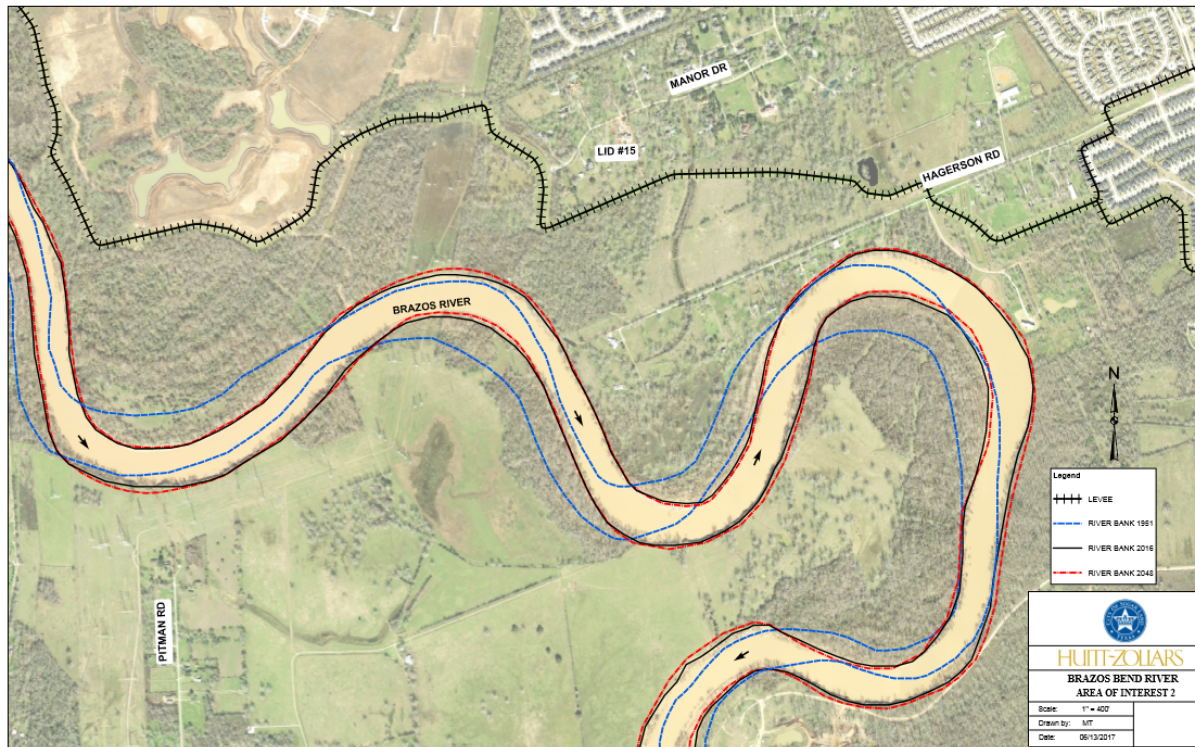


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LEGEND

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WHY IS THIS PROJECT NECESSARY FOR CoSL

- ▶ **Necessary to have a good understanding of the regional and local impact of the Brazos River erosion**
 - **Stability of Levees**
 - **City Parks facilities**
 - **WWTP and other City Infrastructure**
- ▶ **Take proactive approach in partnership with the LIDs and Fort Bend County.**
- ▶ **Supplement information from the Lower Brazos River Floodplain Study.**



WHY IS THIS PROJECT NECESSARY FOR CoSL



Brazos River Erosion at Memorial Park



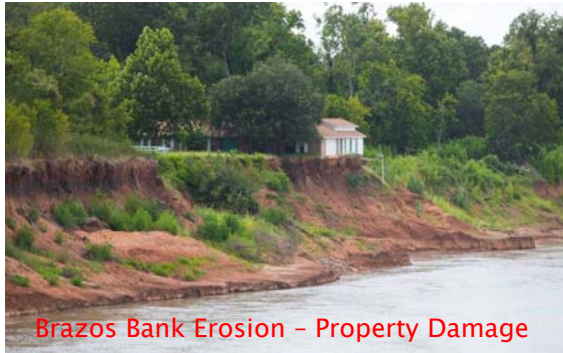
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Brazos River Erosion at Memorial Park



BRAZOS RIVER EROSION IMPACT



Brazos Bank Erosion - Property Damage



Infrastructure Damage



TXDOT US 59 Turn Around



Property Damage



Property Damage



Brazos River Bridge



PROJECT BENEFITS FOR CoSL

- ▶ **The City will use the information from this study to develop a pro-active approach to addressing:**
 - **Better understanding of the river geomorphology within COSL**
 - **River bank erosion**
 - **Threats to infrastructure within the City**
 - **Increase understanding from the City perspective**
 - **Bring together stakeholders with interests along the river to share its findings and future projected movements of the river**



PROJECT SCOPE

- ▶ **Huitt-Zollars will provide professional services that include:**
 - **Analysis of the Brazos River Erosion and geomorphology (with Texas A&M University)**
 - **Hydraulic and hydrologic model analyses**
 - **Prediction of projected bank erosion based on historical data**
 - **Survey of critical erosion areas within the City**
 - **Risk and Consequences Analysis**
 - **Communications with stakeholders**
 - **Presentation of results to CoSL and Stakeholders**



PROJECT BUDGET AND SCHEDULE

- ▶ **Contract value not to exceed \$125,000**
- ▶ **Project Schedule**

Project Initiation	Nov 2017
Project Completion	Apr 2018
Presentation to City and Stakeholders	May 2018



REQUEST FOR APPROVAL

- ▶ **The Engineering Department recommends the City Council approve a budget amendment appropriating \$125,000 from the Capital Improvement Program's fund balance that was set aside as capacity for Hurricane Harvey related studies and repairs.**
- ▶ **Approve the professional service contract with Huitt-Zollars for an amount of \$125,000.**



QUESTIONS

