

**NOTICE OF OPEN MEETING OF THE SAN ANTONIO REGIONAL FLOOD  
PLANNING GROUP**

*Region 12*

*04/20/2023*

*3:00 PM*

*TAKE NOTICE that a meeting of the San Antonio Regional Flood Planning Group as established by the Texas Water Development Board will be held on Thursday, April 20, 2023, at 3:00 PM, in-person at the San Antonio River Authority, located at 100 E. Guenther St and virtually at <https://meet.goto.com/405590405>.*

**Agenda:**

1. (3:00 PM) Roll Call
2. Public Comments – limit 3 minutes per person
3. Approval of the Minutes from the Previous San Antonio Regional Flood Planning Group Meeting
4. Communications from the Texas Water Development Board (TWDB)
5. Chair Report
6. Subcommittee Updates
7. Discussion and Appropriate Action Regarding an Amendment to Region 12 Bylaws Article VIII Section 1, Section 2(b), and Section 6 Detailing Terms of Office for Elected Officers and Members-At-Large of the Executive Committee
8. Presentation by Technical Consultants Regarding Tasks 12 Schedule and Progress
9. Regional Liaison Update
10. Public Comments - limit 3 minutes per person
11. Date and Potential Agenda Items for Next Meeting
12. Adjourn

If you wish to provide written comments prior to or after the meeting, please email your comments to [khayes@sariverauthority.org](mailto:khayes@sariverauthority.org) or physically mail them to the attention of Kendall Hayes at San Antonio River Authority, 100 E. Guenther, San Antonio, TX, 78204 and include “Region 12 San Antonio Flood Planning Group Meeting” in the subject line of the email.

Additional information may be obtained from: Kendall Hayes, (210) 302-3641, [khayes@sariverauthority.org](mailto:khayes@sariverauthority.org), San Antonio River Authority, 100 E. Guenther, San Antonio, TX 78204.

**AGENDA ITEM NO.3 – APPROVAL OF THE MINUTES FROM  
THE PREVIOUS SARFPG MEETING**

**Meeting Minutes**  
**San Antonio Regional Flood Planning Group Meeting**  
**Tuesday, February 21, 2023**  
**3:00 PM**  
**San Antonio River Authority**

**Roll Call:**

<u>Voting Member</u>	<u>Interest Category</u>	<u>Present (x) /Absent ( ) / Alternate Present (*)</u>
Brian Yanta	<i>Agricultural interests</i>	
David Wegmann	<i>Counties</i>	X
Derek Boese	<i>River authorities</i>	X
Doris Cooksey	<i>Electric generating utilities</i>	*Summer Johnson
Deborah (Debbie) Reid	<i>Environmental interests</i>	X
Nefi M. Garza	<i>Flood districts</i>	X
Cara C. Tackett	<i>Industries</i>	X
Jeffrey Carroll	<i>Municipalities</i>	X
Robert Reyna	<i>Municipalities</i>	X
John Paul Beasley	<i>Public</i>	
Suzanne B. Scott	<i>Nonprofit</i>	X
Jose Reyes	<i>Small Business</i>	X
David Mauk	<i>Water districts</i>	X

<u>Non-voting Member</u>	<u>Agency</u>	<u>Present(x)/Absent( )/ Alternate Present (*)</u>
Marty Kelly	Texas Parks and Wildlife Department	X
James Blount	Texas Division of Emergency Management	X
Jami McCool	Texas Department of Agriculture	X
Jarod Bowen	Texas State Soil and Water Conservation Board	
Kris Robles	General Land Office	X
Anita Machiavello	Texas Water Development Board (TWDB)	X
Susan Roberts	Texas Commission on Environmental Quality	

**Quorum:**

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **11**

Number required for quorum per current voting positions of 13: **7**

*All meeting materials are available for the public at: <http://www.region12texas.org>.*

#### **AGENDA ITEM NO.1: ROLL CALL**

Ms. Kendall Hayes, San Antonio River Authority, called the role and confirmed a quorum.

#### **AGENDA ITEM NO.2: PUBLIC COMMENT – LIMIT 3 MINUTES PER PERSON**

No public comments.

#### **AGENDA ITEM NO.3: APPROVAL OF THE MINUTES FROM THE PREVIOUS SAN ANTONIO REGIONAL FLOOD PLANNING GROUP MEETING (REGION 12)**

Mr. Garza motioned to approve the minutes. Ms. Reid seconded the motion, motion passed.

#### **AGENDA ITEM NO.4: COMMUNICATIONS FROM THE TEXAS WATER DEVELOPMENT BOARD (TWDB)**

Ms. Anita Machiavello provided an update from TWDB. TWDB sent out a newsletter in December including details on the amendment process and updated conceptual schedule.

#### **AGENDA ITEM NO.5: CHAIR REPORT**

Chair Boese notified the RFPG that there is an upcoming RFP Chair's Call on February 24<sup>th</sup>. He also updated the members on the River Authority's draft floodplain map open houses.

#### **AGENDA ITEM NO.6: SUBCOMITTEE UPDATES**

Chair Boese told the RFPG that the Technical Committee met in February to review Task 12 progress and previewed the projects that the Technical Consultants will present today.

#### **AGENDA ITEM NO.7: DISCUSSION AND APPROPRIATE ACTION REGARDING FILLING THE EXISTING VACANCY FOR THE WATER UTILITIES INTEREST GROUP**

Chair Boese addressed the RFPG and stated that Region 12 received one application for the Water Utilities vacancy. Executive Committee chose to forgo a meeting and recommended filling the vacancy with the nominee. The nominee was Donovan Burton, SAWS, nominated by former RFPG member, Steve Clouse. Mr. Burton introduced himself to the RFPG.

Ms. Tackett motioned to approve Mr. Burton as a SARFPG voting member in the Water Utilities interest group. Ms. Reid seconded the motion, motion passed.



### **AGENDA ITEM NO. 8: ELECTION OF OFFICERS FOR THE 2023 EXECUTIVE COMMITTEE**

Ms. Hayes started this item with a reminder that according to SARFPG Bylaws Article VIII, Sections 1, 2, and 6, officers and executive committee members serve a term of one year and elections must be held at the first meeting of the year.

Members of the RFPG requested an agenda item at the next meeting to reevaluate the terms laid out in these sections of the bylaws.

Ms. Scott motioned to maintain the current slate of officers for the 2023 Executive Committee. Mr. Mauk seconded the motion, motion passed.

### **AGENDA ITEM NO.9: DISCUSSION AND APPROPRIATE ACTION REGARDING TECHNICAL AND OUTREACH COMMITTEE MEMBERSHIP**

Mr. Troy Dorman, Technical Consultant, spoke to the future requirements for the Technical and Outreach Committees through the end of the cycle. Discussion ensued regarding opportunities for public engagement, specifically a press release with the submittal of the amended plan.

Discussion ensued regarding committee membership and the RFPG decided to maintain the current committee membership as it stands through the rest of Cycle I.

### **AGENDA ITEM NO. 10: PRESENTATION BY SAN ANTONIO RIVER AUTHORITY ON DRAFT FLOODPLAIN MAPS**

Ms. Erin Cavazos, River Authority Ecological Engineering Manager, explained the River Authority's position as a Cooperating Technical Partner of FEMA. She presented the methodologies and results of the new draft floodplain maps. Her presentation is available on the Region 12 website at [region12texas.org](https://region12texas.org).

### **AGENDA ITEM NO.11: PRESENTATION BY TECHNICAL CONSULTANTS REGARDING TASKS 11-13 SCHEDULE AND PROGRESS**

Mr. Dorman, Technical Consultant, presented the updated schedule for the RFP Amendment Process as well as the progress on Task 12. The consultant team reviewed two projects from Task 12. Their presentation is available on the Region 12 website.

### **AGENDA ITEM NO.12: REGIONAL LIAISON UPDATE**

No updates.

**AGENDA ITEM NO.13: PUBLIC COMMENTS – LIMIT 3 MINUTES PER PERSON**

No public comments.

**AGENDA ITEM NO.14: DATE AND POTENTIAL AGENDA ITEMS FOR NEXT MEETING**

Technical Committee will meet March 9, 2023, at 1:00 PM. The RFPG will meet April 20, 2023, at 3:00 PM and May 23, 2023, at 3:00 PM.

**AGENDA ITEM NO.15: ADJOURN**

Mr. Wegmann motioned to adjourn. Ms. Tackett seconded the motion, motion passed.

**AGENDA ITEM NO.7 – DISCUSSION AND APPROPRIATE ACTION REGARDING AN AMENDMENT TO REGION 12 BYLAWS ARTICLE VIII SECTION 1, SECTION 2(b), AND SECTION 6 DETAILING TERMS OF OFFICE FOR ELECTED OFFICERS AND MEMBERS-AT-LARGE OF THE EXECUTIVE COMMITTEE**

Includes:

- Region 12 Bylaws Article VIII Text

## ARTICLE VIII. Officers

### Section 1 Officers, Restrictions, and Terms of Office

Voting members of the Region 12 San Antonio RFPG shall select from the voting membership a Chair, Vice Chair, and Secretary to serve as officers. Each officer shall serve a term of one calendar year. However, the terms of the initial officers selected under Section 2 of this Article shall expire when the regular officers take office as provided under this Article. Except as provided under Section 4 of this Article, an officer shall serve until his or her successor takes office. No two voting members representing the same interest shall serve as officers at the same time. Elections shall be held annually, with no restrictions on the number of consecutive terms an individual may serve as an officer other than those that apply because of his or her status as a voting member under these bylaws.

### Section 2 Selection

**(a) Initial Officers.** Within 30 days after the adoption of these bylaws, the voting members shall select initial officers. Nominations shall be made from the floor by voting members. The voting members shall select officers from among the nominees by consensus if possible, but not less than agreement of a majority of the voting members present.

**(b) Regular Officers.** Starting in 2022, regular officers shall be selected at the first meeting of each calendar year after the calendar year in which these bylaws were adopted. Written notice of the meeting to select officers shall be sent to all members of the Region 12 San Antonio RFPG by the current Secretary thirty calendar days prior to the meeting. Nominations shall be made from the floor by voting members. The voting members shall select officers from among the nominees by consensus, but not less than agreement of a majority of the voting members present.

### Section 3 Removal of Officers

Any officer may be removed from office for any of the grounds for removal of voting members set forth under Article V of these bylaws, or for repeated failure to carry out the duties of the office. Removal of an officer shall be decided by a majority vote of the voting members present. Removal of an officer shall be set as an agenda item at the next scheduled meeting upon written request signed by five voting members to the Chair or Secretary. The Chair or Secretary receiving the request shall notify the officer in writing that he or she shall be subject to a removal action at the next scheduled meeting. At the meeting, all discussion and debate with regard to the possible removal shall take place in a closed, executive session, but the final vote on removal shall take place in an open meeting. During the executive session, the presiding officer shall lay out the information that has been received related to the possible removal, and the officer subject to the possible removal action may present evidence refuting or verifying the information presented. If the Chair is the subject of the possible removal action, the Vice-Chair shall preside over the meeting during the agenda item concerning the Chair's removal. The officer subject to the removal action shall not participate in any way in the removal decision, nor shall his or her membership count as part of the total membership for purposes of calculating a majority vote. The notice of the meeting shall be posted in accordance with the Open Meetings Act and shall state that the issue of possibly removing the officer will be on the agenda. Any vacancy caused by the removal shall be filled as provided under Section 4 of this Article. Removing an officer from their office under this section does not remove the member from their voting position on the Region 12 San Antonio RFPG. To remove a voting member from their voting position, the Region 12 San Antonio RFPG must follow to the removal process under Article V, Section 7.

## Section 4 Vacancies of Officers

Whenever an officer vacancy exists because of death, resignation, or removal, the vacancy shall be filled within thirty days of the event causing the vacancy. Nominations shall be made from the floor by voting members. The voting members shall select a replacement officer from among the nominees by a majority vote of the voting members present. The next highest-ranking officer shall serve in the vacant position until a successor takes office, unless the office of the Secretary becomes vacant, in which case the Chair shall appoint a willing voting member to serve as Secretary until the successor to the Secretary takes office. The person selected to fill a vacancy for an officer shall serve for the unexpired term of his or her predecessor in office.

## Section 5 Duties of Each Officer

**(a) Chair.** The Chair shall be the executive officer of the Region 12 San Antonio RFPG. The Chair will preside at all meetings of the Region 12 San Antonio RFPG and perform all duties provided by these bylaws. If the Chair is unable to carry out his/her duties, the Vice Chair shall assume the duties of the Chair.

**(b) Vice Chair.** The Vice Chair shall assist the Chair in the discharge of his/her duties and, in the absence of the Chair, shall assume the Chair's full responsibilities and duties. In the event the Chair is unable to carry out his/her duties, the Vice Chair shall serve as Chair until the Region 12 San Antonio RFPG elects a new Chair under Section 4 of this Article. The Vice-Chair shall perform other duties as assigned by the Chair, or these bylaws.

**(c) Secretary.** The Secretary shall oversee the development of the minutes and attendance of the Region 12 San Antonio RFPG meetings. The minutes and attendance shall be kept as part of the Region 12 San Antonio RFPG official records. The Secretary shall oversee that all notices are properly posted as provided in the bylaws, as required by law, and as required by the Texas Open Meetings Act. The Secretary shall perform other duties as assigned by the Chair or these bylaws. If the both the Chair and Vice Chair are unable to carry out the duties of the Chair, the Secretary shall assume the duties of the Chair.

## Section 6 Executive Committee

The Executive Committee shall be composed of five Region 12 San Antonio RFPG members, including the Chair, Vice Chair, Secretary, and two voting members-at-large. No two voting members representing the same interest shall serve as members of the Executive Committee at the same time. The two members-at-large shall be selected **annually** in the same manner and with the same terms as set forth for the selection of officers under this Article. Members-at-large shall be removed and their vacancies filled in the manner prescribed for officers under this Article.

The Executive Committee shall be responsible for carrying out the duties imposed on it in these bylaws. The voting members of the Region 12 San Antonio RFPG may delegate administrative decisions to the Executive Committee unless provided otherwise in these bylaws.

All meetings of the Executive Committee shall comply with the provisions related to meetings generally as set forth in Article IX of these bylaws.

## Section 7 Designated Alternates

A designated alternate of a member serving as an officer shall not serve in the member's capacity as an officer in lieu of the member. When an officer is absent or otherwise unable to serve, the next highest-ranking officer shall serve for the officer. If no lower ranking offer exists or can serve, then a member designated by the Chair or acting Chair shall serve for the officer.

## **AGENDA ITEM NO.8 – PRESENTATION BY TECHNICAL CONSULTANTS REGARDING TASK 12 SCHEDULE AND PROGRESS**

Includes:

- List of Updated Task 12 FMXs
- Selection of Three FMX Updates
  - Exemplary LWC Project – Bexar Bowling Way at Cibolo Creek Bridge
  - Exemplary NBS Project – Damage Center 14, Airport Tributary
  - Exemplary FME – Abbott Rd and Graytown Rd at Martinez Creek Study

[A complete update on Task 12 progress to date is available at [region12texas.org](http://region12texas.org) under Resources]

## TABLE OF CONTENTS

Community	Task #12 - FMX Assignment	FMP	FME
Bexar/Guadalupe County line	Bexar Bowling Way at Cibolo Creek Bridge	X	
City of San Antonio	Damage Center 14- Airport Trib	X	
Bexar	Abbott Road and Graytown at Martinez Creek Study		X
Bexar/Guadalupe County line	Ullrich Road at Cibolo Creek	x	
Bexar/Wilson County line	Felix Road at Dry Hollow Creek	x	
Bexar/Atascosa County line	Old Frio City Road at North Prong Creek	x	
Bexar	Abbot Road at Salitrillo Creek (CB-23) AND Abbott Road at Tributary A to Salitrillo Creek	x	
Bexar	Abbott Road at Unnamed Tributary 1 to Salitrillo Creek (CB-25)	x	
Bexar	Freudenburg Road at Tributary B to Salitrillo Creek (CB-24) AND Freudenburg Road at Salitrillo Creek (CB-24)	x	
Bexar	Gass Road at Culebra Creek Tributary D	x	
Wilson County	Repetitive loss properties	x	
City of Floresville	Damage Center 1: Project 1A, 1B, 1C	x	
Bexar/Kendal County line	Boerne Stage Road at Balcones Creek	x	
City of San Antonio	Damage Center 38-Olmos Creek Lower Reach Near Montview	x	
City of San Antonio	Damage Center 40-San Antonio River DS Reach near Roosevelt	x	
City of Shavano Park	Elm Spring	x	
City of Poth	Damage Center 2- Project 2 Road connection from Mosspoint to Sunshine	x	
Kendall/Bexar County line	LWC at Old Fredericksburg Rd and Balcones Creek	x	
City of Shavano Park	De Zavala/ Ripple Creek	x	
Bexar/Comal County line	Specht/Obst Road at Cibolo Creek	x	
Bexar/Kendal County line	Toutant Beauregard at Balcones Creek	x	
Guadalupe	Cibolo Creek Spill Study		x



# 2023 San Antonio Regional Flood Plan Project Summary Sheet

Updated: 4/17/2023

Page 1 of 1

**Project Name:** Bexar Bowling Way at Cibolo Creek Bridge

**FMP ID:** 12XXXXXX

**Project Sponsor:** Bexar County and Guadalupe County

**Project Source:** 2022 Bexar County Drainage Needs

## Cost Information

Category	Cost*
Design	\$1,711,296
Real Estate	\$0
Environmental	\$30,000
Construction	\$11,510,150
<b>Total Cost**</b>	<b>\$13,252,000</b>

\*Costs are using 2020 prices

\*\*Rounded up to the nearest thousand

## Benefit Cost Analysis (BCA)

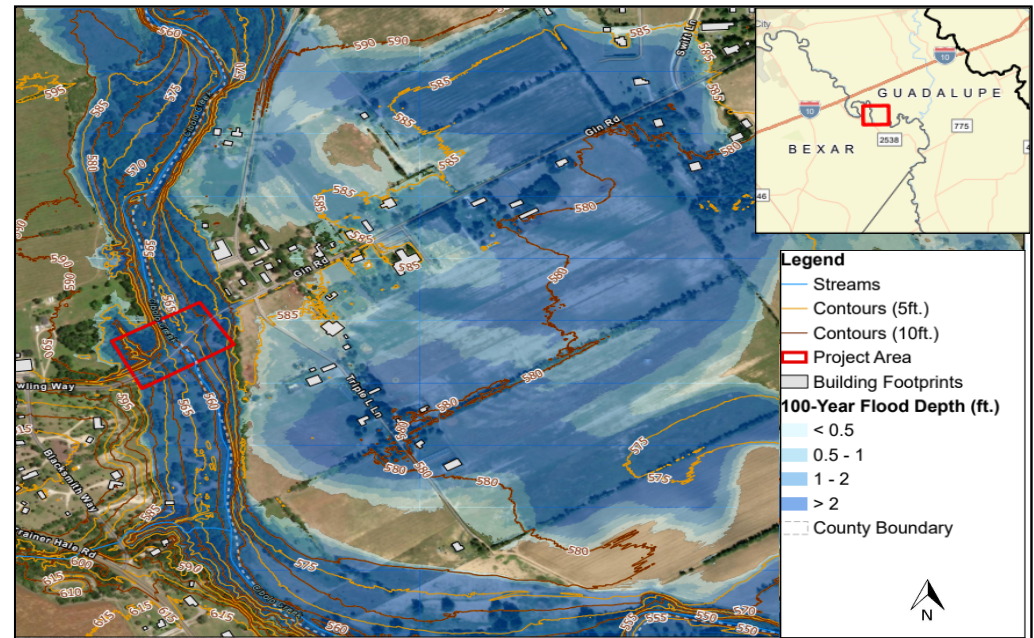
Event Damages	Baseline	Project
10-year storm	\$ 34,370	\$ -
25-year storm	\$ 51,554	\$ -
100-year storm	\$ 68,739	\$ -
<b>Total Benefits</b>	<b>\$ 64,266</b>	
<b>BCA</b>	<b>\$ 0.01</b>	

## Impact Analysis

Post-Project Total Removed	Storm Event		
	10-year	25-year	100-year
Residential	-	-	-
Commercial	-	-	-
Critical	-	-	-
Flooded Road(miles)	0.25	0.25	0.25
Others Note	N/A	N/A	N/A
SVI Score	-	-	-

## LWC Level of Service Existing Vs. Proposed

Condition	Level of Service	100-Yr Depth Over Road (ft)
Existing	< 10-Yr	22ft
Proposed	100-Yr	0



## Project Description:

This project will eliminate overtopping of Bexar Bowling Way and provide conveyance for the 100-year storm event, removing the crossing from the existing conditions 100-year floodplain. Proposed improvements consist of removing the existing culvert and adding a bridge. The existing eight 27" corrugated metal pipes will be replaced with an 800ft bridge with a 25ft high opening. Cibolo Creek is a stream that will require a mussel survey based on requirements by TPWD, an additional \$20K cost was added to account for this.

During the analysis of crossings at Bexar Bowling Way and Ullrich Road at Cibolo Creek, it was determined that a 2D hydraulic study flood study would be needed to evaluate spill flow from the creek. The project is on the border of Bexar and Guadalupe County, these counties will need to coordinate on cost and construction phasing.



## **Amended 2023 San Antonio Regional Flood Plan - Project Narrative**

**Project Name:** Bexar Bowling Way at Cibolo Creek Bridge  
**FMP ID:** 12XXXXXX  
**Project Sponsor:** Bexar County and Guadalupe County  
**Date:** 4/7/2023

### **BACKGROUND INFORMATION:**

As part of the amended 2023 San Antonio Regional Flood Plan (the Plan), Task 12 expands on previously identified FMXs from the Plan dated January 10<sup>th</sup>, 2023. The Bexar Bowling Way at Cibolo Creek Bridge, FME ID 121000163, from the 2022 Bexar County Line LWC Engineering Study was further developed during Task 12. This project is sponsored by Bexar County and Guadalupe County.

The problem area is located on the border of Bexar County and Guadalupe County. Bexar Bowling Way becomes Gin Road north of the Cibolo Creek crossing. Currently there is a low water crossing (LWC) at Bexar Bowling Way composed of eight 27" corrugated metal pipes. The LWC is undersized which results in overtopping during the 10-, 25-, 50-, and 100-Yr storm events. Floodwater overtopping the structure endanger residents attempting to cross and cuts off a main connection route for several businesses, a school, a church, and residential homes.

The Task 12 work that was completed for the Bexar Bowling Way at Cibolo Creek Bridge project was a drainage analysis, cost estimate, impact analysis and a Benefit Cost Analysis (BCA).

### **PROPOSED PROJECT SCOPE**

Refer to the Amended Flood Plan Technical Memo for documented assumptions and methodologies on the drainage analysis and conceptual design.

This project will eliminate overtopping of Bexar Bowling Way and provide conveyance for the 100-year storm event, removing the crossing from the existing conditions 100-year floodplain. Proposed improvements consist of removing the existing culvert and adding a bridge. The existing eight 27" corrugated metal pipes will be replaced with an 800ft bridge with a 25ft high opening. Note that further north of the crossing, Gin Road is still overtopping due to a spill coming from Cibolo Creek 2,250ft upstream of the crossing. It is recommended to have a study further evaluate this spill, more discussion on this in the "Interrelated Projects" section. The project is on the border of Bexar and Guadalupe County, these counties will need to coordinate on cost and construction phasing.

### **PROPOSED PROJECT SCOPING COST**

Refer to the Amended Flood Plan Technical Memo for documented assumptions and methodologies on project costs.

The estimated the project cost for the Bexar Bowling Way at Cibolo Creek Bridge is \$13,252,000, as calculated using 2020 prices. The cost includes all the required applicable TWDB FMP costs including basic engineering fees, special services such as surveying, environmental, geotech, etc., other costs such as land/easement acquisition and administration, fiscal services, and contingency. See attached Cost Summary for cost breakdown. If there are underground utilities that require adjustments, this may increase depending upon any additional adjustments required. At this time, funding for the project has not been identified or approved. Bexar and Guadalupe Counties will need to coordinate on cost.

## Amended 2023 San Antonio Regional Flood Plan - Project Narrative

**Project Name:** Bexar Bowling Way at Cibolo Creek Bridge  
**FMP ID:** 12XXXXXX  
**Project Sponsor:** Bexar County and Guadalupe County  
**Date:** 4/7/2023

### PROPOSED PROJECT BENEFITS

This project will eliminate overtopping at Bexar Bowling Way and improve the level of service by providing a 100-year conveyance design.

Refer to the Amended Flood Plan Technical Memo for documented BCA assumptions and methodologies.

The 10-, 25-, 100-year benefits that were evaluated for this project include LWC improvements, road flooding reduction, and critical facility access. The resulting benefit cost analysis was 0.01. The Table 1 below summarizes the components calculated in the TWDB BCA Tool. Costs may differ from previously reported cost because they are adjusted to the year of construction, assumed 2025-2026.

**Table 1: TWDB BCA Toolkit**

Input Into BCA Toolkit		
Project Useful Life	30	
Event Damages	Baseline	Project
10 - year storm	\$34,370	\$0
25 - year storm	\$51,554	\$0
100 - year storm	\$68,739	\$0
Total Benefits from BCA Toolkit	\$68,224	
Other Benefits (Not Recreation)	\$0	
Recreation Benefits	-	
Total Costs	\$12,738,927	
Net Benefits	-\$12,670,703	
Net Benefits with Recreation	-\$12,670,703	
<b>Final BCR</b>	<b>0.01</b>	
<b>Final BCR with Recreation</b>	<b>0.01</b>	

## **Amended 2023 San Antonio Regional Flood Plan - Project Narrative**

**Project Name:** Bexar Bowling Way at Cibolo Creek Bridge  
**FMP ID:** 12XXXXXX  
**Project Sponsor:** Bexar County and Guadalupe County  
**Date:** 4/7/2023

### **IMPACT ANALYSIS**

Refer to the Amended Flood Plan Technical Memo for documented assumptions and methodologies the impact analysis.

Existing and proposed conditions were analyzed for impact. The impacts that were evaluated are the water surface elevations (WSE) and velocities +/-2000ft of this project area. The WSE and velocities were compared in the HEC-RAS v5.0.5 model, see attached digital submittal for HEC-RAS Existing vs Proposed Results Comparison Summary. The proposed conditions showed reduced levels with both components. From the RAS results, the total inundated boundary was reduced in proposed conditions. See attached exhibits for existing and proposed project layouts and WSE comparison. Flooded depths over the road were evaluated in the BCA. Reduced impacts show lower flooded depths in proposed conditions. The following Table 2 summarizes the level of service pre- and post-project:

**Table 2: Level of Service Existing Vs. Proposed**

Condition	Level of Service	100-Yr Depth Over Road (ft)
Existing	< 10-Yr	22 ft
Proposed	100-Yr	0 ft

(See full list of LWC impacts in the attached BCA results)

### **PROJECT RISKS**

ROW/Real Estate Acquisition:

No, land acquisition is not required for this project.

Utilities Coordination:

No, currently there are no evident utility conflicts. During the design phase, utility conflicts should be further evaluated.

Permitting/Environmental:

Yes, Cibolo Creek is a stream that will require a mussel survey based on requirements by TPWD. An additional cost of \$20,000 was added to the preliminary environmental assessment to account for the mussel survey.

Stakeholder Coordination:

Due to the road improvements, surrounding community, and adjoining counties there will be various stakeholders involved in the process.

## **Amended 2023 San Antonio Regional Flood Plan - Project Narrative**

**Project Name:** Bexar Bowling Way at Cibolo Creek Bridge  
**FMP ID:** 12XXXXXX  
**Project Sponsor:** Bexar County and Guadalupe County  
**Date:** 4/7/2023

### **MITIGATION OF RISKS**

#### Utility Coordination:

If utility conflicts are found, the utility coordinator will need to closely work with the affected utility companies to ensure timely completion of the proposed project. The project manager and contractor should minimize, as much as feasible, the amount of disruption of services and travel.

#### Permitting/Environmental:

If permits do arise during the design, coordination and permitting process should be started early on to avoid schedule delays.

#### Stakeholder Coordination:

Bexar Bowling Way is the main connection route for several businesses, a church, and residential homes. Road reconstruction will cause traffic disruptions and inconveniences for local residents due to limited alternative access points. Public meetings and flyers will help communicate construction impacts to affected businesses of any service interruption or inconvenience. The businesses near the project limits should be notified several weeks before the construction start date. Construction phasing and traffic control will be an important design component for this project.

### **NATURE BASED SOLUTION (NBS) CONSIDERATION**

The proposed project employs a bridge instead of a low water crossing. Using a bridge benefits the natural ecosystem by allowing more sediment transport, passage of aquatic organisms and does not impound water. The larger opening also allows for natural substrate to cover the culvert bottom to allow for aquatic organism passage.

Landscaping cost (3% of total construction cost) was factored into the total cost for potential channel stabilization and NBS solutions.

### **INTERRELATED PROJECTS**

During the analysis of crossings at Bexar Bowling Way and Ullrich Road at Cibolo Creek, it was determined that a 2D hydraulic study flood study would be needed to evaluate spill flow from the creek. The spill starts 2,500ft upstream of the Bexar Bowling Way Crossing to 2,000ft north of Ullrich Road Crossing.

## 2023 SAN ANTONIO REGIONAL FLOOD PLAN PROJECT COST SUMMARY

Project Name:	Bexar Bowling Way at Cibolo Creek Bridge
Project Sponsor:	Bexar County (near Guadalupe County line)
Firm Developing:	HDR
Date Developed:	4/4/2023
Unit Prices Used:	11/1/2020

### CONSTRUCTION COSTS

- STREET COST	\$8,119,112.15
- TREE PRESERVATION (2%)	\$162,382.24
- LANDSCAPING (3%)	\$243,573.36
- BOND AND INSURANCE (3%)	\$255,752.03
- BARICADES (3%)	\$263,424.59
- MOBILIZATION & PREPARATION OF R.O.W. (11% + 4%)	\$1,278,760.16

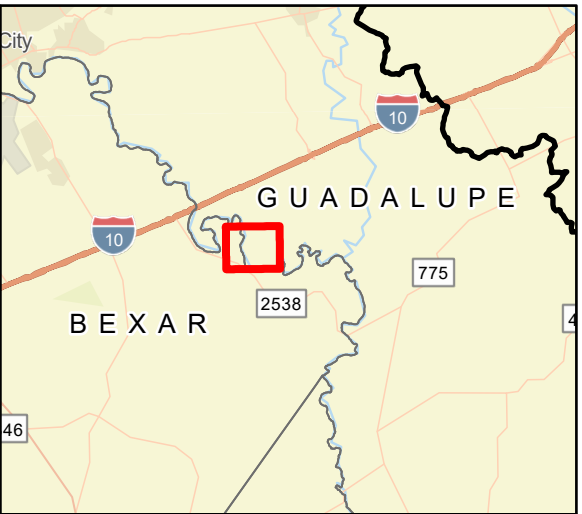
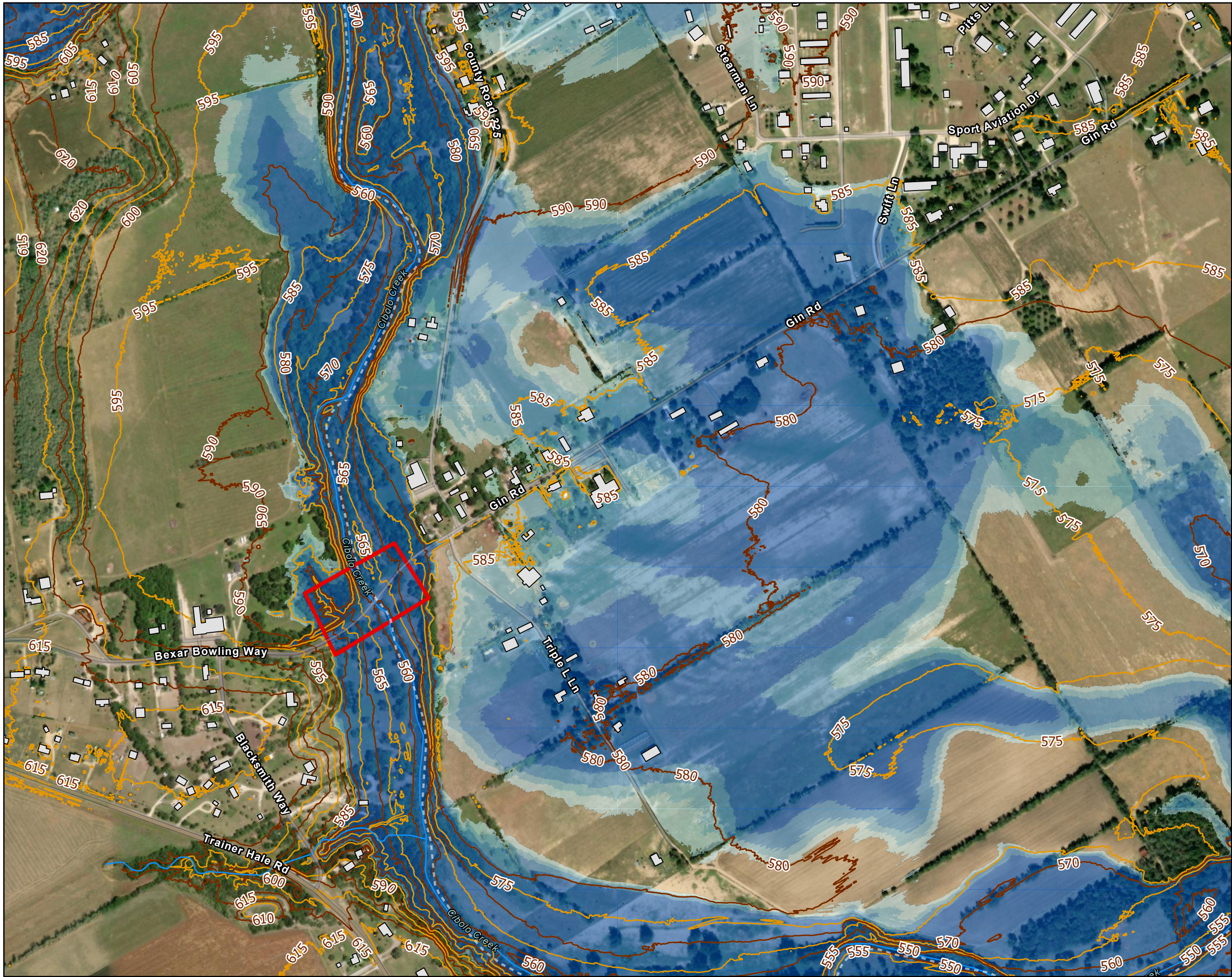
<b>TOTAL CONSTRUCTION COST ESTIMATE</b>	<b>\$10,323,004.54</b>
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ENGINEER FEE (Fee Table plus 5%)	\$1,548,450.68
ENGINEER CONTINGENCY (10%)	\$154,845.07
CONSTRUCTION CONTINGENCY (10%)	\$1,032,300.45
PERMIT REQUIREMENT COSTS	\$8,000.00
ENVIRONMENTAL	\$30,000.00
MATERIAL TESTING (2% Construction Cost - <\$3M, 1.5% - >\$3M)	\$154,845.07

<b>TOTAL PROJECT COST ESTIMATE</b>	<b>\$13,251,445.82</b>
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DESIGN PHASE	\$1,741,295.75
CONSTRUCTION PHASE	\$11,510,150.07





**Legend**

- Streams
- Contours (5ft.)
- Contours (10ft.)
- Project Area
- Building Footprints

**100-Year Flood Depth (ft.)**

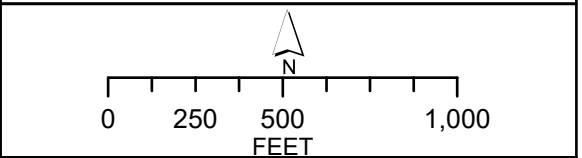
- < 0.5
- 0.5 - 1
- 1 - 2
- > 2

County Boundary

2023 SAN ANTONIO REGIONAL FLOOD PLAN

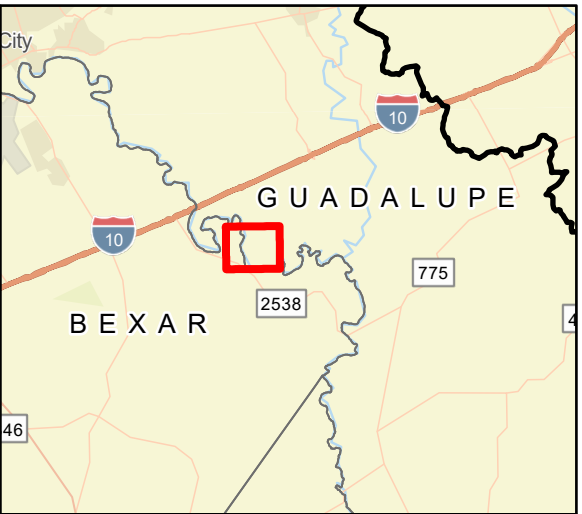
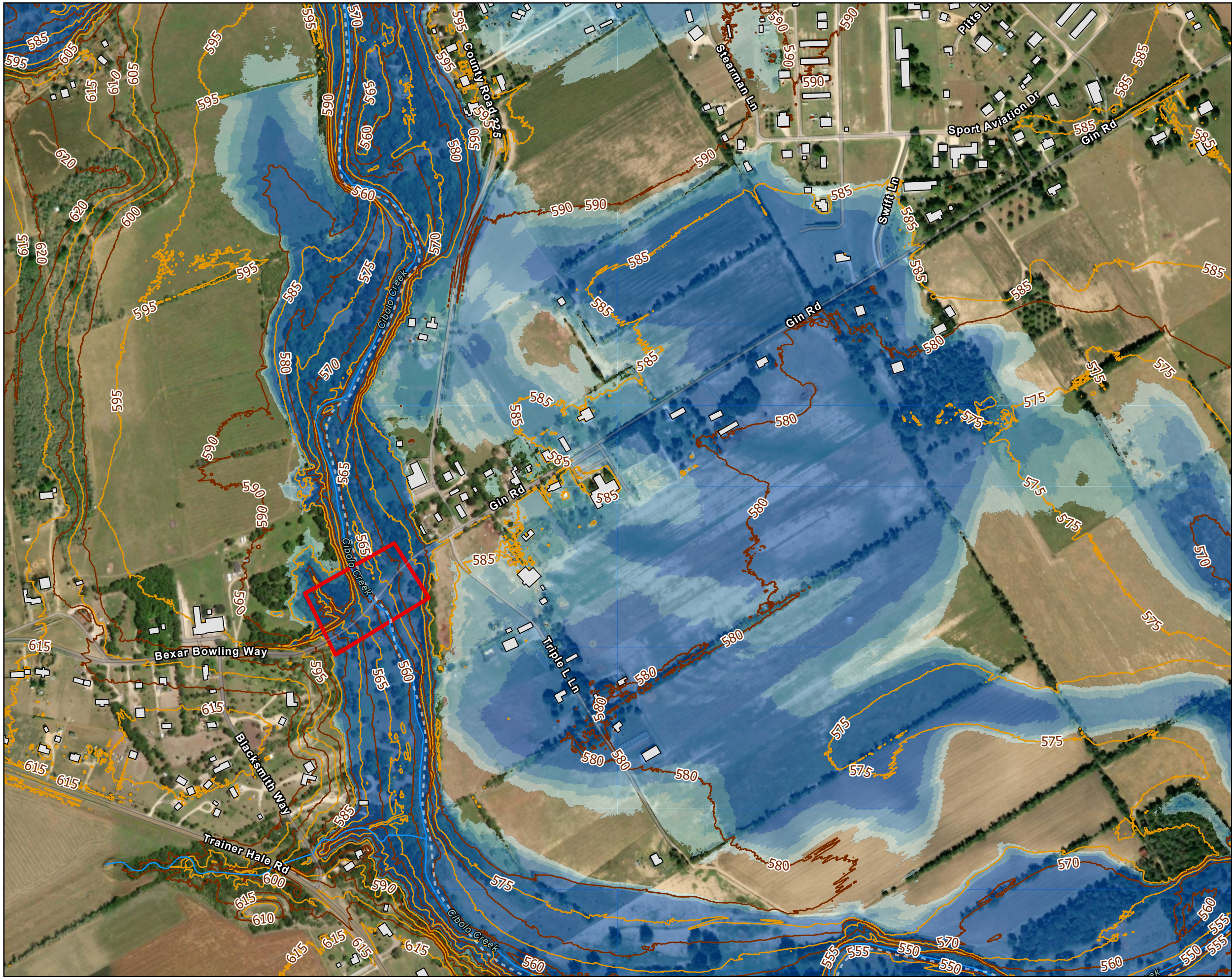
BEXAR BOWLING WAY AT  
CIBOLO CREEK BRIDGE

EXISTING CONDITIONS



APRIL 2023





**Legend**

- Streams
- Contours (5ft.)
- Contours (10ft.)
- Project Area
- Building Footprints

**100-Year Flood Depth (ft.)**

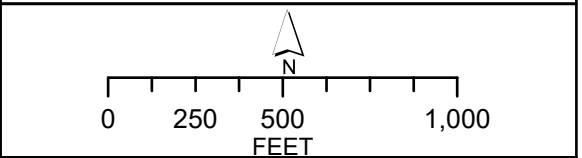
- < 0.5
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County Boundary

2023 SAN ANTONIO REGIONAL FLOOD PLAN

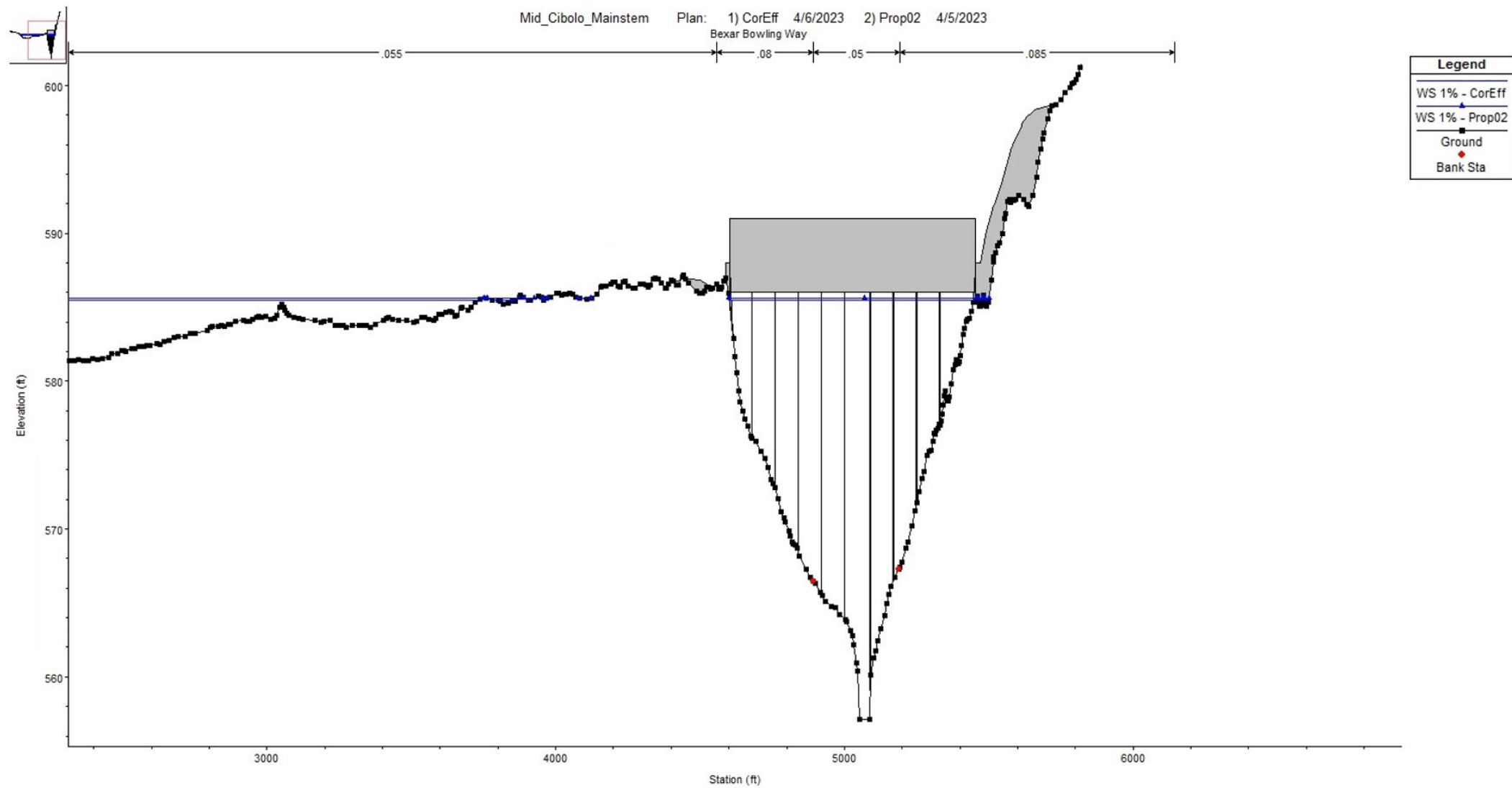
BEXAR BOWLING WAY AT  
CIBOLO CREEK BRIDGE

PROPOSED CONDITIONS



APRIL 2023









# 2023 San Antonio Regional Flood Plan

## Project Summary Sheet

Updated: 4/13/2023

Page 1 of 1

**Project Name:** Damage Center 14 - Airport Tributary

**FMP ID:** -----

**Project Sponsor:** City of San Antonio

**Project Source:** Upper San Antonio River Master Plan (San Antonio River Authority)

Cost Information	Original Project	Nature Based Solution
Category	Cost*	Cost*
Design	\$250,000	\$550,000
Real Estate	\$22,350,750	\$22,350,750
Environmental	\$0	\$0
Construction	\$3,207,831	\$4,669,271
<b>Total Cost**</b>	<b>\$25,809,000</b>	<b>\$27,571,000</b>

\*Costs using September 2020 prices

\*\*Rounded up to the nearest thousand

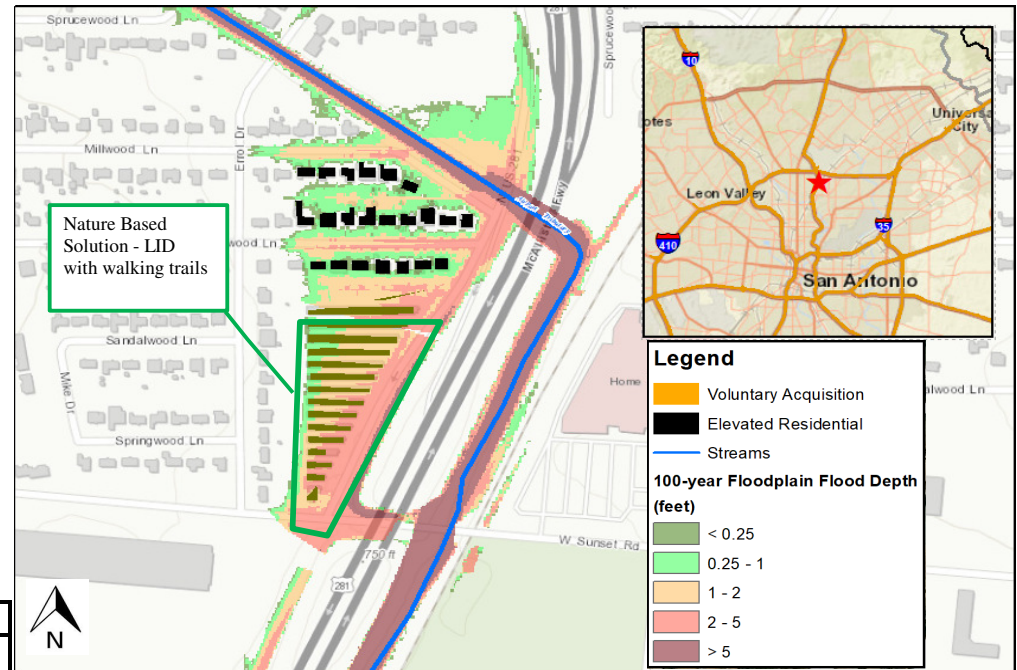
### Benefit Cost Analysis (BCA)

	Original Project		Nature Based Solution	
Event Damages	Baseline	Project	Baseline	Project
100-year storm	\$ 9,355,000	-	\$ 9,335,000	-
<b>Total Benefits</b>	<b>\$ 11,448,437</b>	<b>-</b>	<b>\$ 12,366,592</b>	<b>-</b>
<b>BCA</b>	<b>0.5</b>		<b>0.5</b>	

### Impact Analysis

Post-Project Total Removed	Storm Event		
	25-year	50-year	100-year
Residential	-	-	22
Commercial	-	15*	15*
Flooded Roads (miles)	-	-	-
Critical	-	-	-
Others Note	N/A	N/A	N/A
SVI Score	-		

\* 15 buildings located on one property



### Project Description:

Damage Center 14 – Airport Tributary is bound by Loop 410 on the north side and by US 281 on the east and south side. Originally identified in the Upper San Antonio River Master plan, the Damage Center was inundated between Loop 410 and Chulie Road, which is solely of commercial properties, and downstream of Chulie Road, which is primarily residential areas. This damage center was re-evaluated based on changes to the floodplain mapping throughout Bexar County. Original analysis for this damage center included lateral detention versus voluntary acquisition. Channelization and culvert upgrades were deemed impractical due to space constraints. Given the decrease of the floodplain size and the previous studies conclusion that detention was not the most cost-effective alternative, voluntary acquisition was reviewed. The reduction of floodplain size and depth in the new hydrologic and hydraulic modeling offers an opportunity for elevating the residential structures, a more cost-effective alternative to voluntary acquisitions. The commercial property is still recommended for voluntary property acquisitions. This project includes the a cost estimate and BCA based on the original project and an additional nature based solution, which proposes turning the 4 acre commercial property into a community space with walking trails and low impact development.

## **Amended 2023 San Antonio Regional Flood Plan - Project Narrative**

**Project Name:** Damage Center 14 – Airport Tributary

**FMP ID:** -----

**Project Sponsor:** City of San Antonio

**Date:** 3/21/2023

### **BACKGROUND INFORMATION:**

As part of the amended 2023 San Antonio Regional Flood Plan (the Plan), Task 12 expands on previously identified FMEs from the Plan dated January 10<sup>th</sup>, 2023. Damage Center 40-San Antonio River DS Reach near Roosevelt, FME ID 121000086, from the City of San Antonio was expanded on during Task 12. The sponsor for this project is City of San Antonio.

Damage Center 14 – Airport Tributary is bound by Loop 410 on the north side and by US 281 on the east and south side. Originally identified in the Upper San Antonio River Master Plan, the Damage Center was inundated by the 100-year event between Loop 410 and Chulie Road, which is solely commercial properties, and downstream of Chulie Road, which is primarily residential areas. Updated mapping has decreased the number of flooded properties, but acquisition and elevating opportunity still exist downstream of Millwood Lane.

The work completed for the Damage Center 14-Airport Tributary project was updates to the flood impacts, cost estimate, and Benefit Cost Analysis (BCA) to the previously completed study by San Antonio River Authority.

### **PROPOSED PROJECT SCOPE**

This damage center was re-evaluated based on changes to the floodplain mapping throughout Bexar County. Original analysis for this damage center included lateral detention versus voluntary acquisition. Channelization and culvert upgrades were deemed impractical due to space constraints. Given the decrease of the floodplain size and the previous study's conclusion that detention was not the most cost-effective alternative, voluntary acquisition was reviewed. The reduction of floodplain size and depth in the new hydrologic and hydraulic modeling offers an opportunity for elevating the residential structures, a more cost-effective alternative to voluntary acquisitions. The commercial property is still recommended for voluntary property acquisitions and would provide the opportunity to convert the parcel into an amenity for the entire community.

### **PROPOSED PROJECT SCOPING COST**

Refer to the Regional Flood Plan Cost Estimate for documented assumptions and methodologies on project costs. Floodproofing and elevating costs were based off information from the U.S. Army Corp of Engineers publication *Raising and Moving Slab-on-Grade House with Slab Attached*.

The estimated project costs for Damage Center 14 – Airport Tributary for voluntary acquisition and elevating is \$20,208,000, was calculated using 2020 prices. The cost includes all the required applicable TWDB FMP costs including basic engineering fees, special services such as surveying, environmental, geotech, etc., other costs such as land/easement acquisition and administration, fiscal services, and contingency. See attached Cost Summary for cost breakdown. If there are underground utilities that require adjustments, this may increase costs depending upon any additional adjustments required. At this time, funding for the project has not been identified or approved.

## Amended 2023 San Antonio Regional Flood Plan - Project Narrative

**Project Name:** Damage Center 14 – Airport Tributary  
**FME ID:** 121000086  
**Project Sponsor:** City of San Antonio  
**Date:** 3/21/2023

### PROPOSED PROJECT BENEFITS

This project will remove residential structures from the floodplain through elevation. The commercial property recommended for voluntary property acquisition would provide the opportunity to convert the parcel into an amenity for the entire community.

Refer to the Amended Flood Plan Technical Memo for documented assumptions and methodologies on benefit cost analysis.

The benefits that were evaluated for this project are, residential buildings, commercial buildings, and recreational. The resulting benefit cost analysis was 0.3. The Table 1 below summarizes the components calculated in the TWDB BCA Tool.

**Table 1: TWDB BCA Toolkit**

Input Into BCA Toolkit		
Project Useful Life	30	
Event Damages	Baseline	Project
10 - year storm	\$0	\$0
50 - year storm	\$1,885,677	\$0
100 - year storm	\$5,429,195	\$0
Total Benefits from BCA Toolkit	\$4,833,000	
Other Benefits (Not Recreation)	\$0	
Recreation Benefits	\$39,531	
Total Costs	\$18,340,206	
Net Benefits	-\$13,507,206	
Net Benefits with Recreation	-\$13,467,675	
Final BCR	0.3	
Final BCR with Recreation	0.3	

### IMPACT ANALYSIS

Refer to the Amended Flood Plan Technical Memo for documented assumptions and methodologies on impact analysis. See Exhibit 1 for recommended acquisitions and elevated structures.

There are no impacts to the floodplain as this project does not alter the existing conditions in the floodplain.

## **Amended 2023 San Antonio Regional Flood Plan - Project Narrative**

**Project Name:** Damage Center 14 – Airport Tributary  
**FME ID:** 121000086  
**Project Sponsor:** City of San Antonio  
**Date:** 3/21/2023

**Table 2: Total Impacted Structures per Storm Frequency**

Storm (Year)	Existing	Proposed	Difference
100	37	0	-37

### **PROJECT RISKS**

#### ROW/Real Estate Acquisition:

Yes, land acquisition is suggested for the commercial Storage facility. In addition, property owner coordination will be required, as this project involves elevating residential structures.

#### Utilities Coordination:

Utility coordination could be required for homes to be elevated.

#### Permitting/Environmental:

Only local permitting will be required for elevating structures.

#### Stakeholder coordination:

Property owners are the only stakeholders for this project. Elevating or floodproofing would require permission from the property owners.

### **MITIGATION OF RISKS**

#### Utility Coordination:

Coordination should occur early with utilities to determine level of effort to accommodate elevating structures.

#### Stakeholder Coordination/Permitting:

Coordination and permitting process should be started early on with property owners to avoid schedule delays. Accommodations will have to be considered for property owners when the buildings might be inaccessible.

### **NATURE BASED SOLUTION CONSIDERATION**

Acquisition of the commercial storage facility would provide 4 acres of open space that could be utilized as a community gathering space and offers potential for low impact development and green infrastructure, such as bioswales, extended detention, or vegetated swales.

### **INTERRELATED PROJECTS**

This project does not require any interrelated projects to be completed before this project can be constructed.

## 2023 SAN ANTONIO REGIONAL FLOOD PLAN PROJECT COST SUMMARY

Project Name:	Old Frio City Road at North Prong Creek LWC Improvements
Project Sponsor:	Bexar County
Firm Developing:	HDR
Date Developed:	3/3/2023
Unit Prices Used:	11/1/2020

### CONSTRUCTION COSTS

- DRAINAGE COST	\$223,739.50
- MOBILIZATION & PREPARATION OF R.O.W. (11% + 4%)	\$33,560.93

<b>TOTAL CONSTRUCTION COST ESTIMATE</b>	<b>\$257,300.43</b>
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CONSULTANT FEE (Fee Table plus 5%)	\$51,460.09
CONTINGENCY (10%)	\$5,146.01
CONSTRUCTION CONTINGENCY (10%)	\$25,730.04
RIGHT-OF-WAY (LAND ACQUISITION)	\$22,348,250.00
RIGHT-OF-WAY SURVEY	\$2,500.00
ENVIRONMENTAL	\$0.00

<b>TOTAL PROJECT COST ESTIMATE</b>	<b>\$22,690,386.56</b>
------------------------------------	------------------------

DESIGN PHASE	\$22,407,356.09
CONSTRUCTION PHASE	\$298,018.78



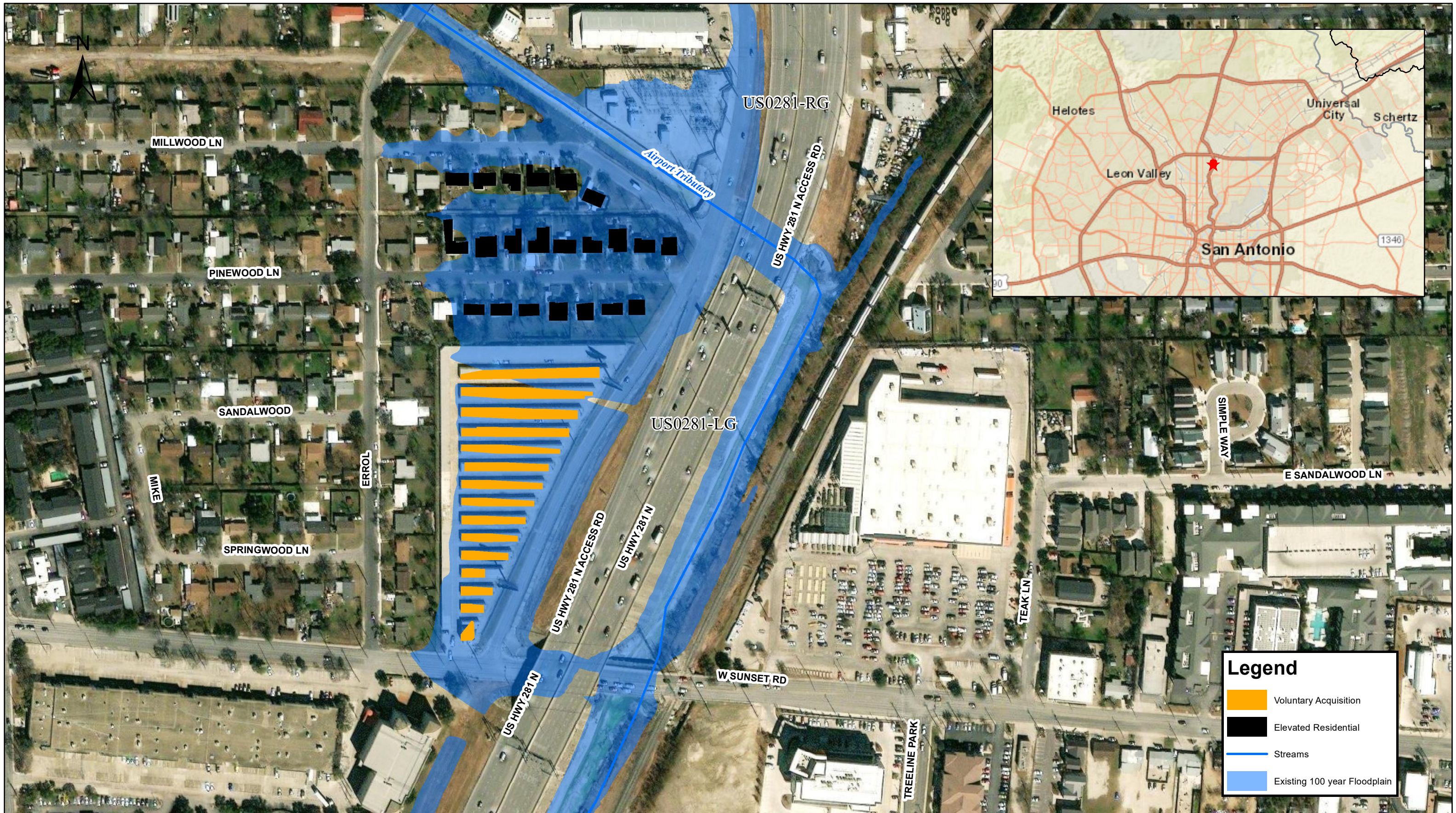


Exhibit 1 - Damage Center 14: Airport Tributary  
Existing 100 year Floodplain and Impacted Structures





# 2023 San Antonio Regional Flood Plan Project Summary Sheet

Updated: 4/17/2023

Page 1 of 1

**Project Name:** Abbott Road and Graytown Road at Martinez Creek Study

**FME ID:** 12XXXXXX

**Project Sponsor:** Bexar County

**Project Source:** 2022 Bexar County Drainage Needs

**Study Type:** Project Planning

**Project Cost:** \$ 300,000  
(2020 Prices)

## Project Description:

During the analysis of crossings Abbott Road and Graytown Road at Martinez Creek, it was determined that a 2D hydraulic study flood study would be needed to evaluate alternatives to remove these roads from overtopping. Priority should be placed on this study due to the recent flood-related death that occurred on Graytown Road in 2021.

The project cost was developed using FME Planning Cost Estimates found in section 5.2.1.1 of the San Antonio Regional Flood Plan for Project Planning.

