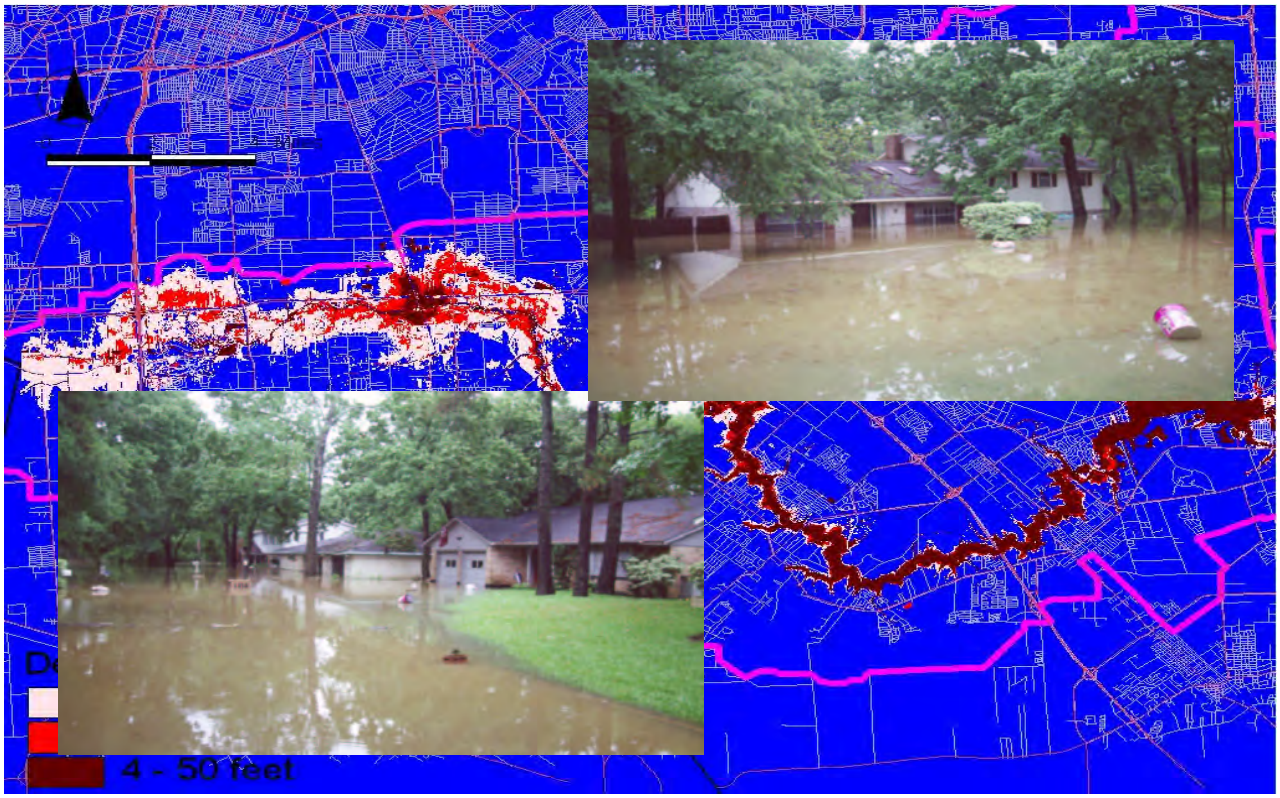
U.S. Army Corps
of Engineers

Galveston District
Southwestern Division

Final
Supplemental Environmental Impact Statement
for the
Clear Creek General Reevaluation Study
Brazoria, Fort Bend, Galveston,
and Harris Counties, Texas



APPENDICES VOLUME III (O–P)

October 2012

Main Report

1.0 Need for Proposed Action
2.0 Alternatives
3.0 Affected Environment
4.0 Environmental Consequences
5.0 Mitigation
6.0 Compliance with Texas Coastal Management Program
7.0 Consistency with State snd Federal Regulations
8.0 Any Adverse Environmental Impacts that Cannot Be Avoided Should the GRP Alternative Be Implemented
9.0 Any Irreversible or Irretrievable Commitments of Resources Involved in the Implementation of the GRP Alternative
10.0 Relationship Between Local Short-Term Uses and Man's Environment and the Maintenance and Rehabilitation of Long-Term Productivity
11.0 Energy and Natural or Depletable Resource Requirements and Conservation Potential of Various Alternatives and Mitigation Measures
12.0 Public Involvement, Review, and Consultation
13.0 List of Preparers
14.0 References
15.0 Glossary
16.0 Index

Appendix Volume I

A Public Involvement
B Clear Creek Watershed Flood Risk Management Habitat Assessments Using Habitat Evaluation Procedures (HEP)

Appendix Volume II

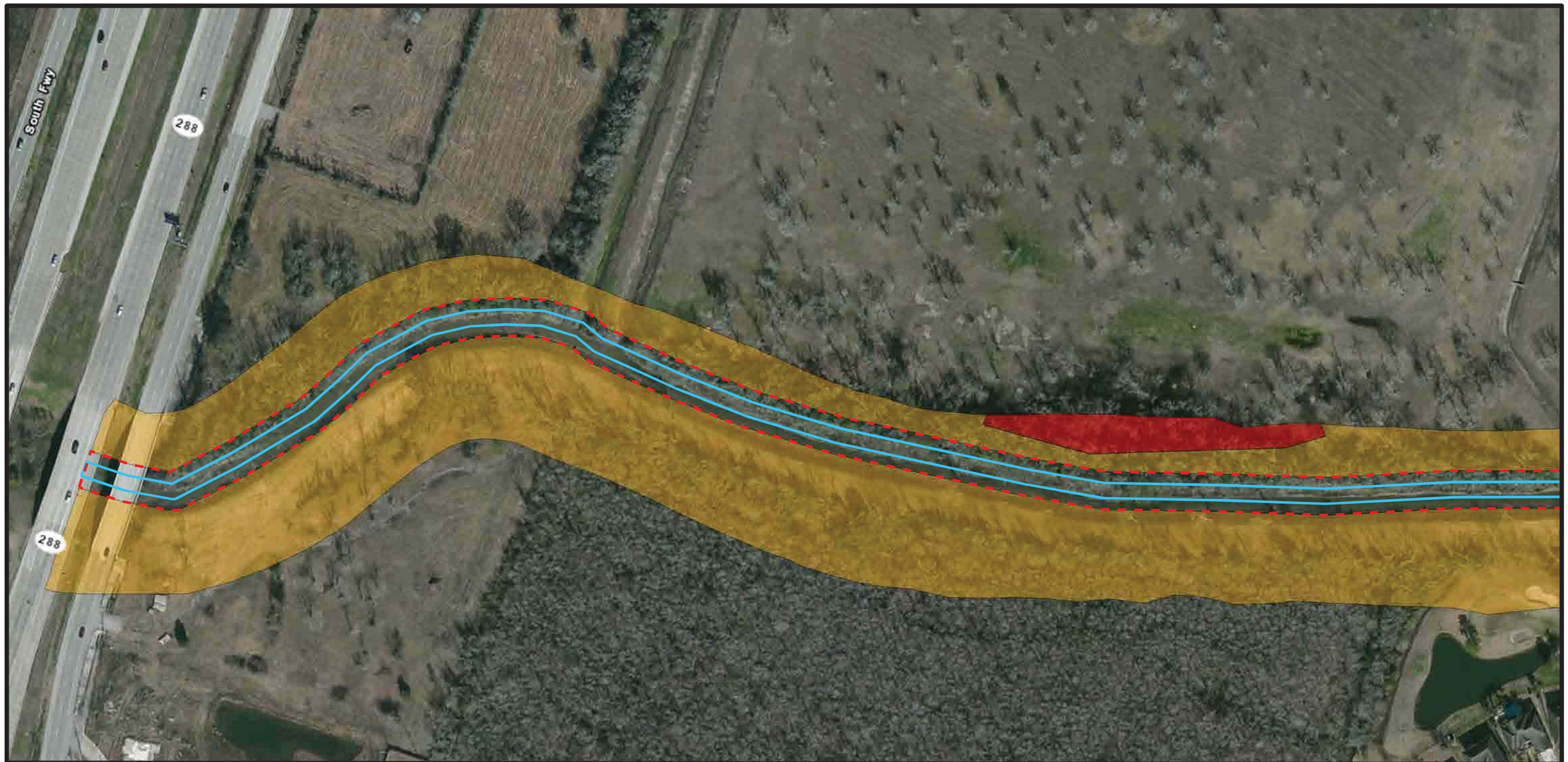
C HTRW and Oil/Gas Wells & Pipelines
D Agency Correspondence
E Biological Assessment
F Cultural Resources
G Socioeconomic and Land Use Baseline
H General Conformity Determination
I Cumulative Impacts Analysis Appendix
J Mitigation Monitoring and Adaptive Management Plan
K Texas Coastal Zone Management Programs Consistency Determination
L 404(b)(1) Analysis
M Record of Decision for 1982 EIS
N Greenhouse Gas Emissions and Climate Change

Appendix Volume III

O Project Area Wetlands
P Project Area Floodplains

Appendix O

Project Area Wetlands



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- Low Flow Corridor
- OHWM Fringe Wetlands
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Appendix O

PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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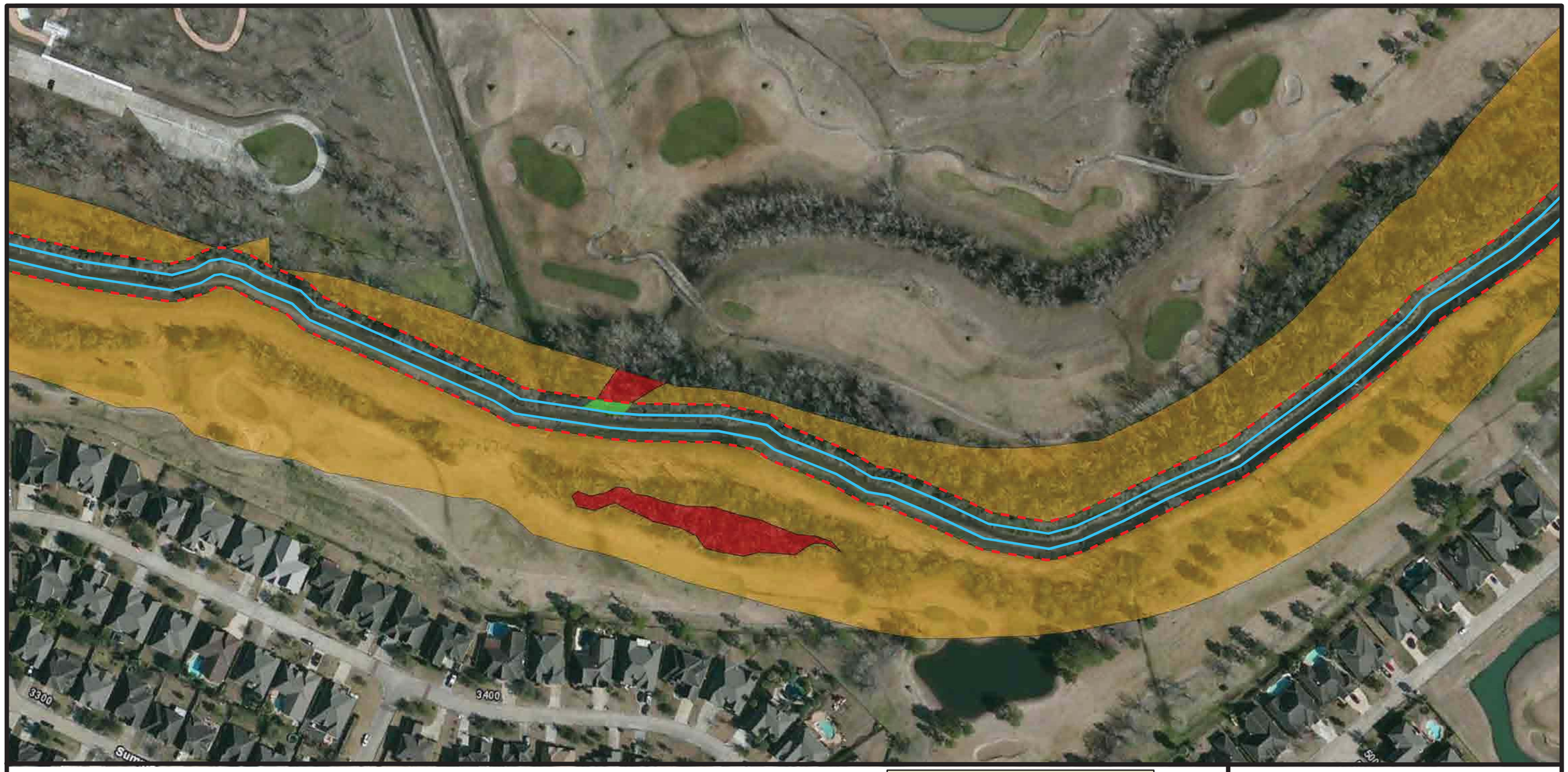
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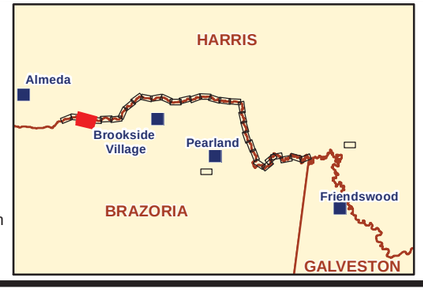
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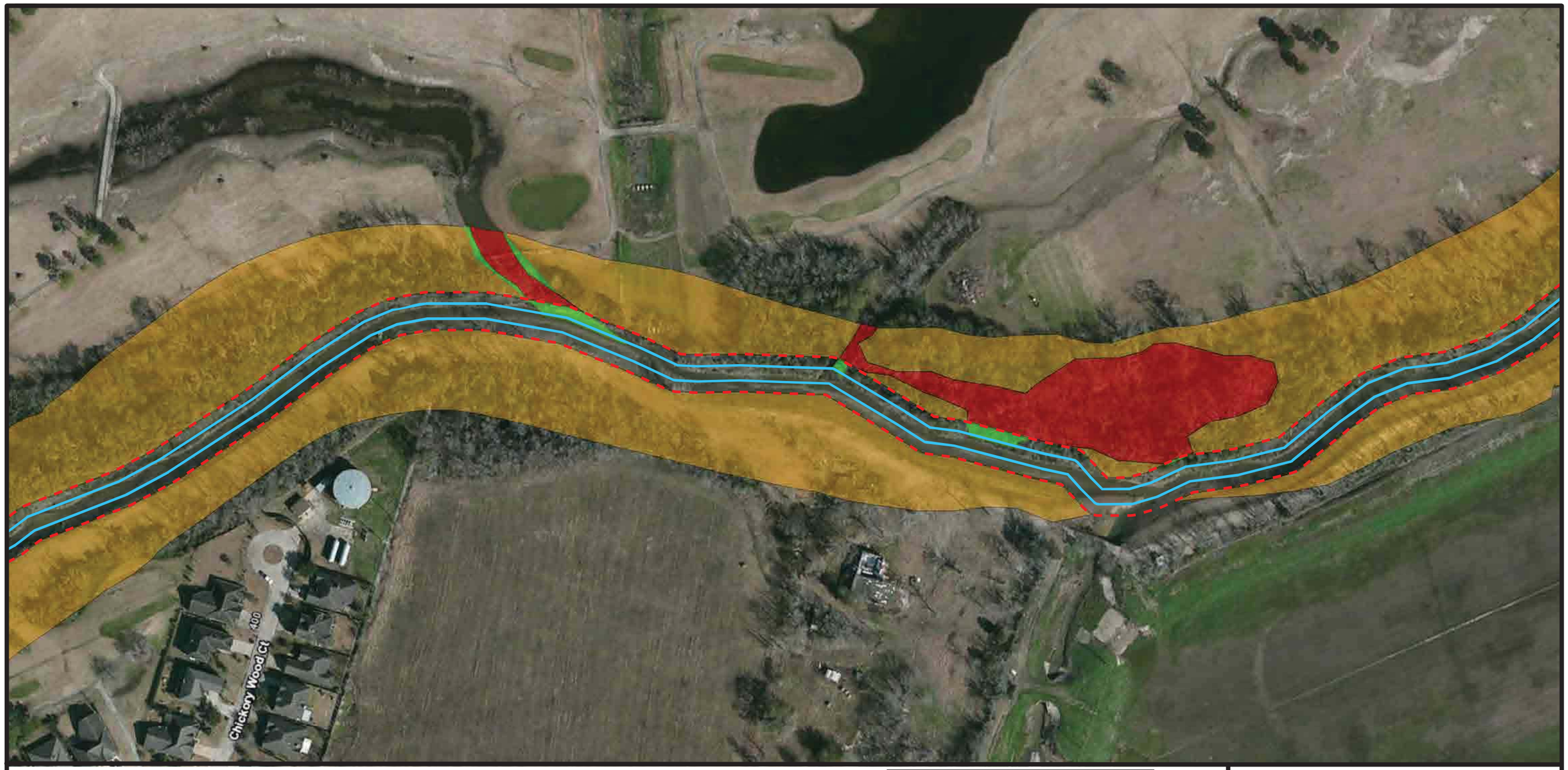
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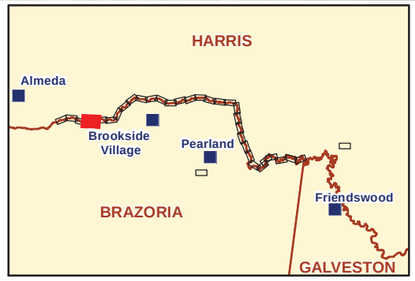
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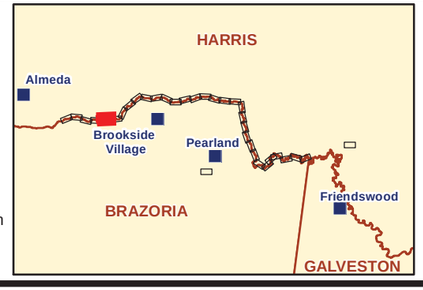
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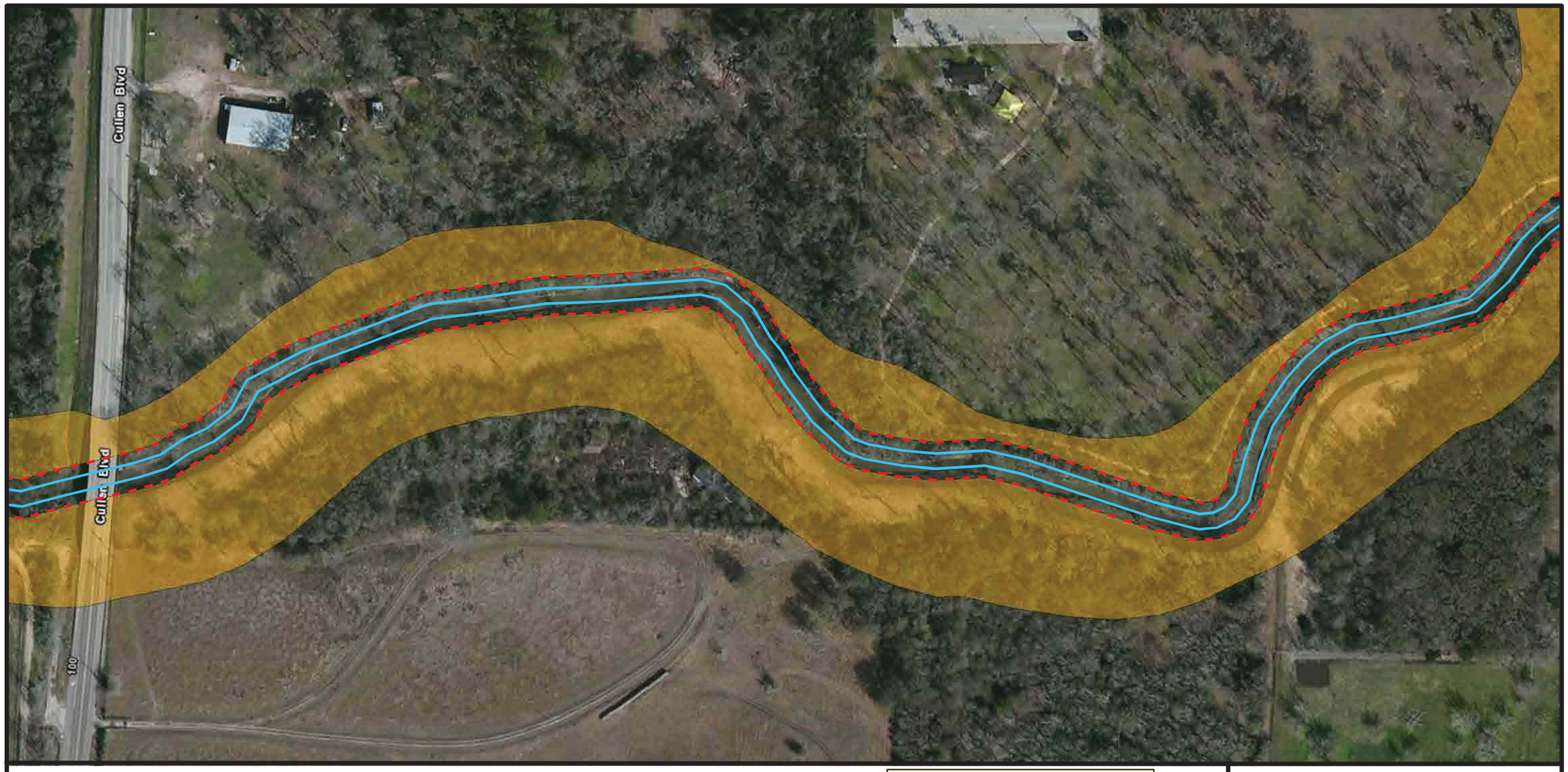
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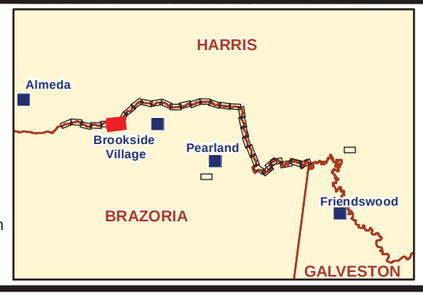
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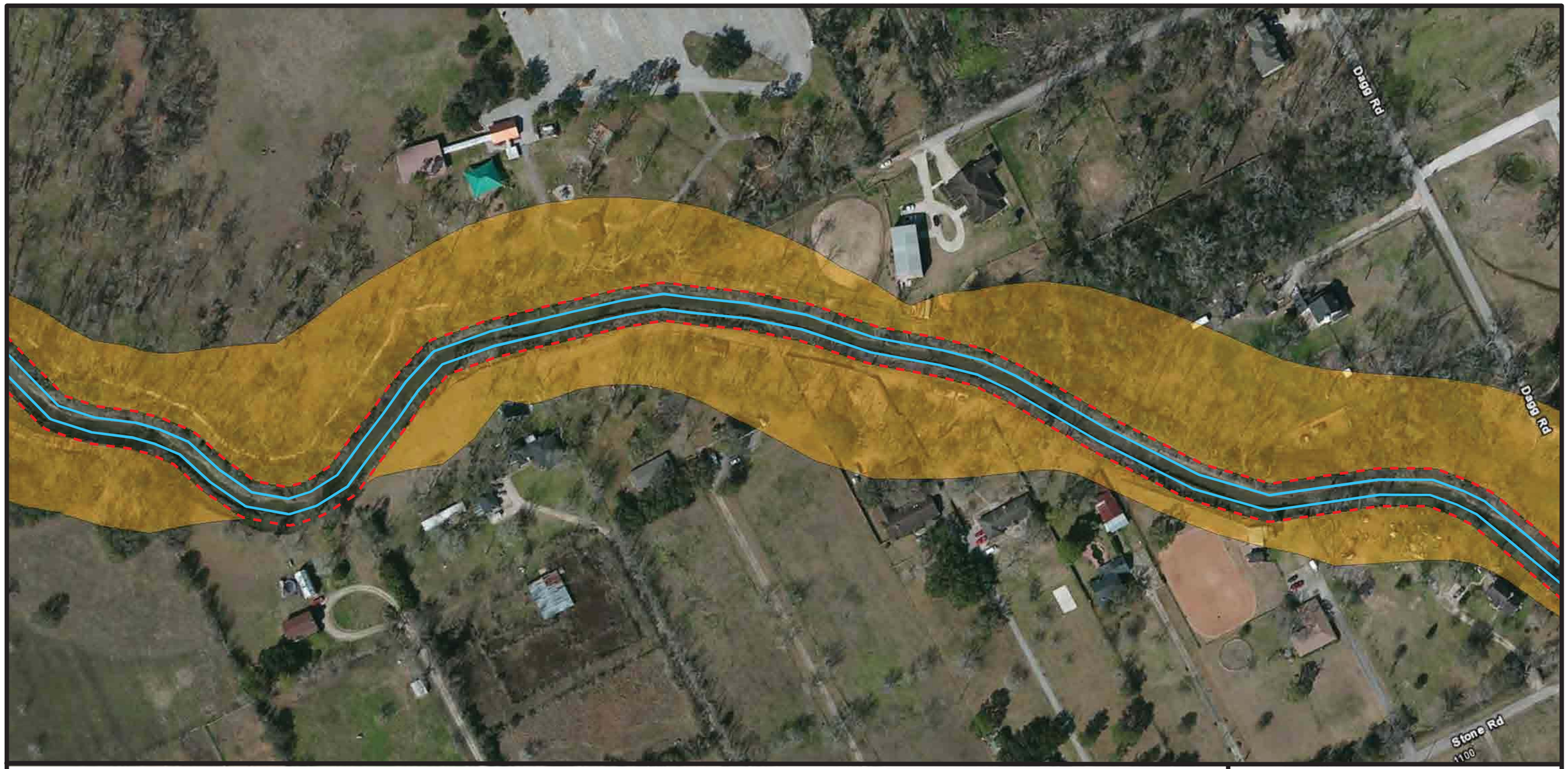
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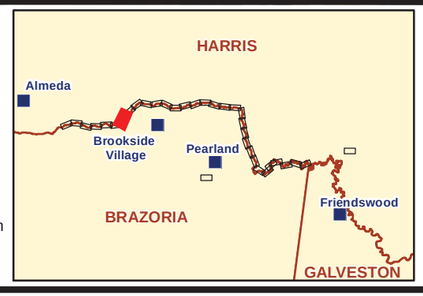
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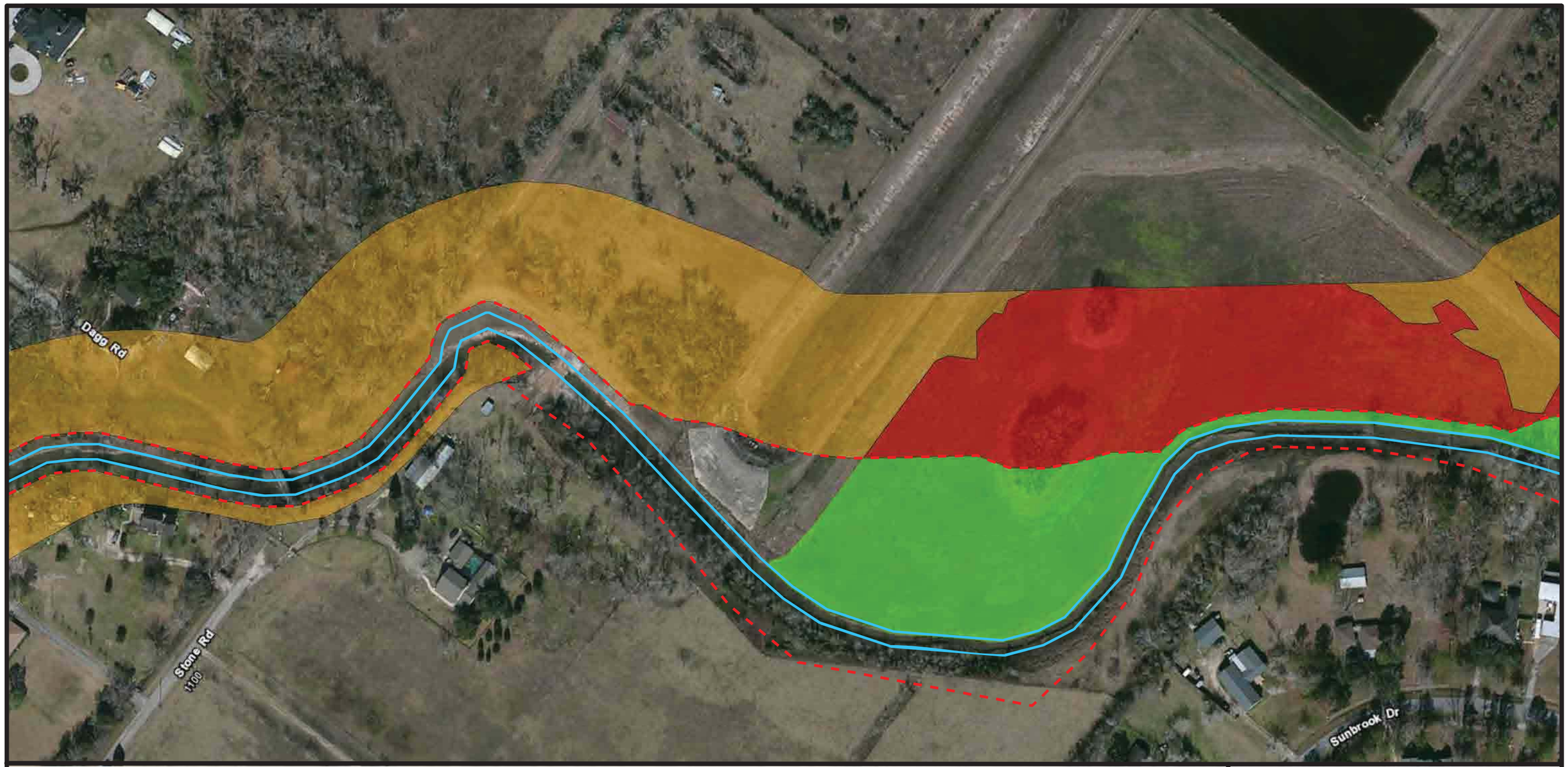
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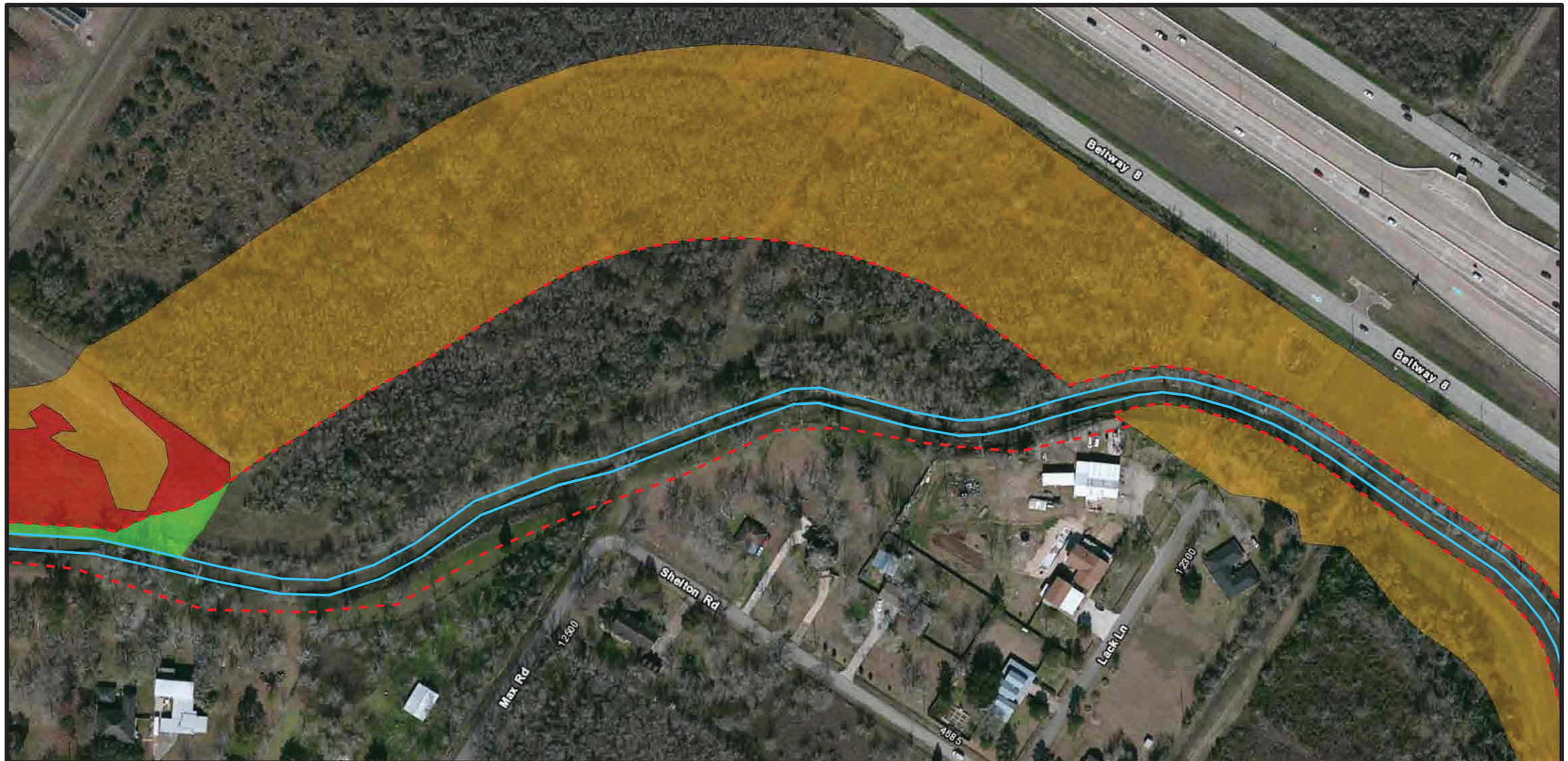
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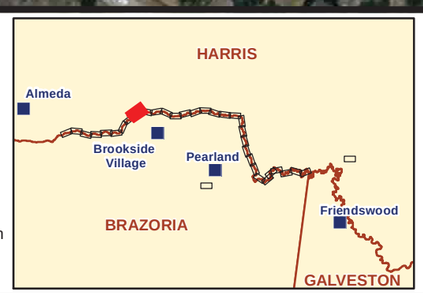
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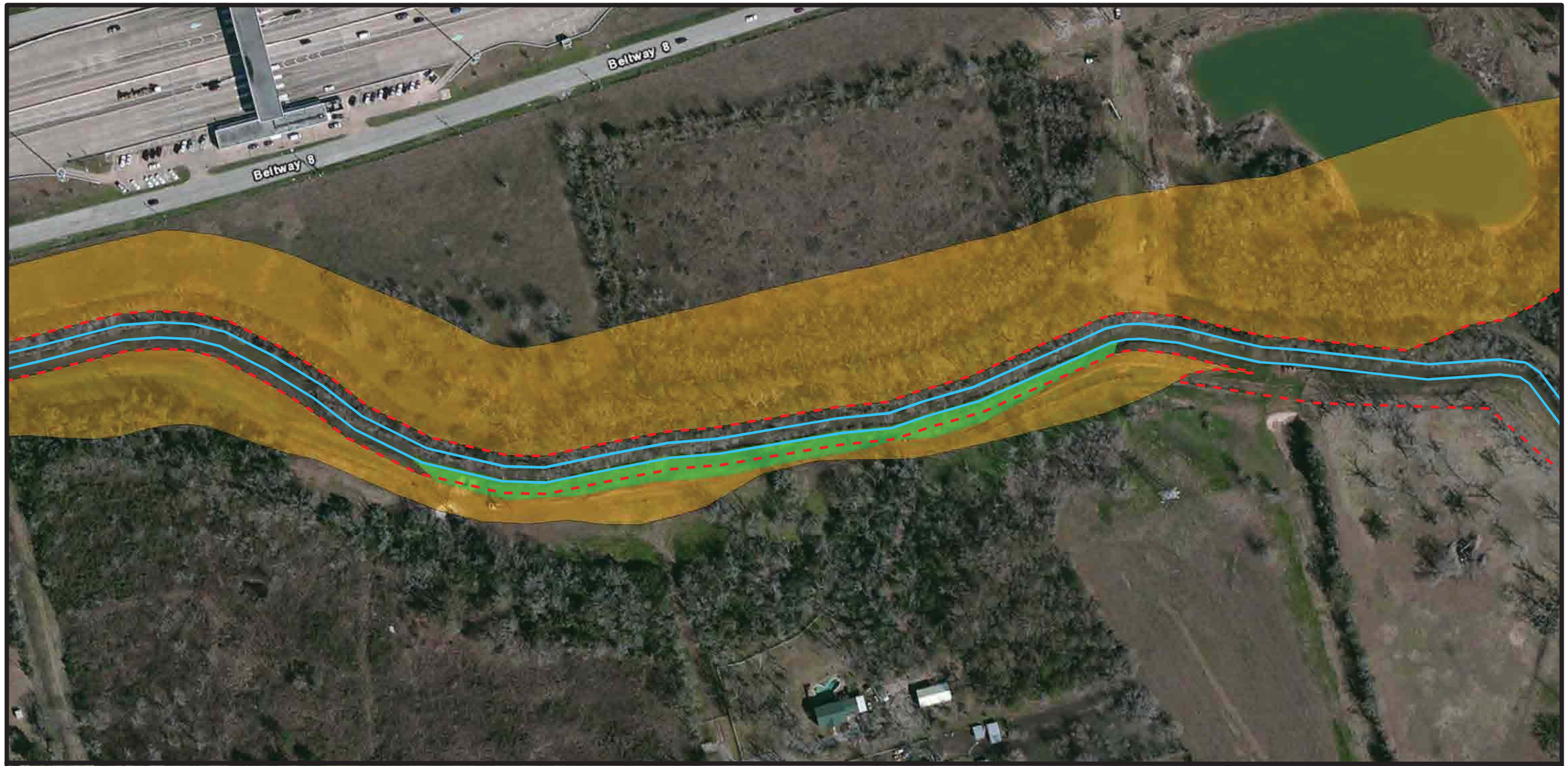
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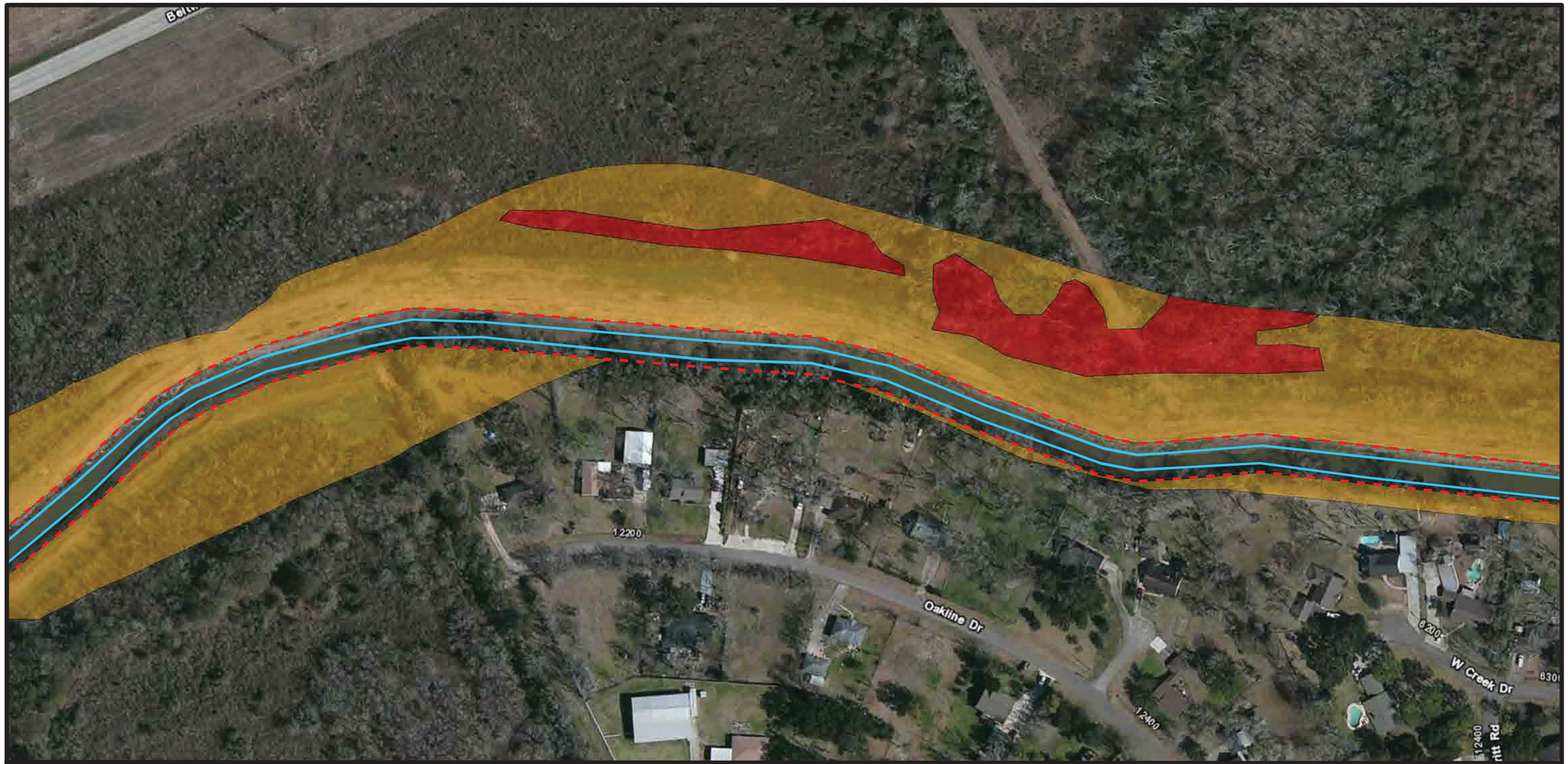
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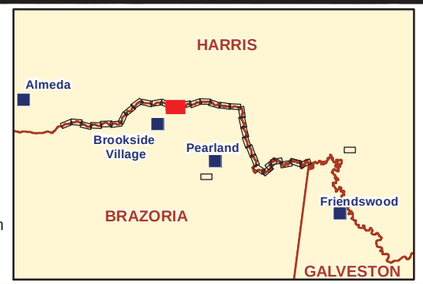
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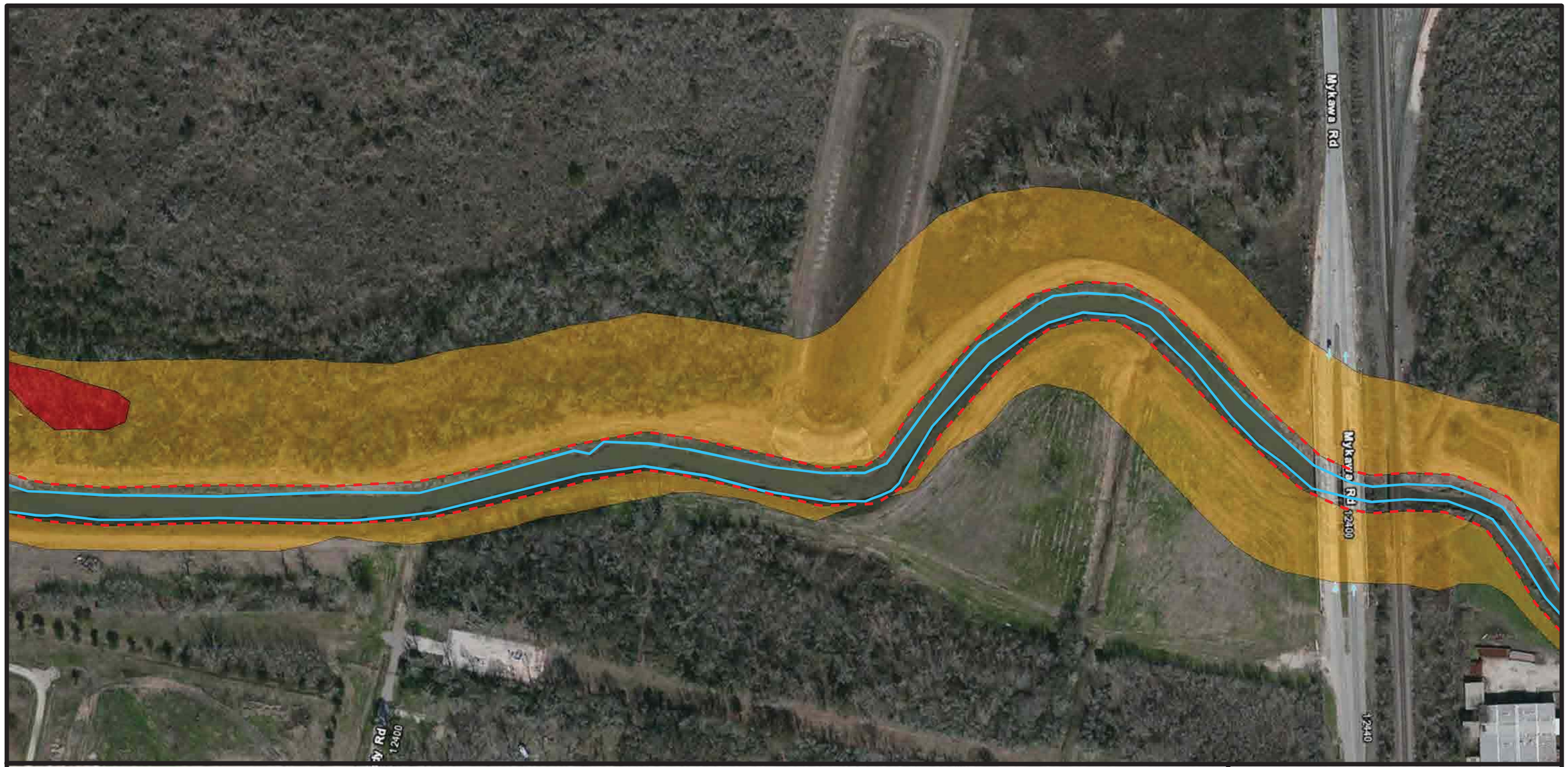
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PROJECT AREA WETLANDS

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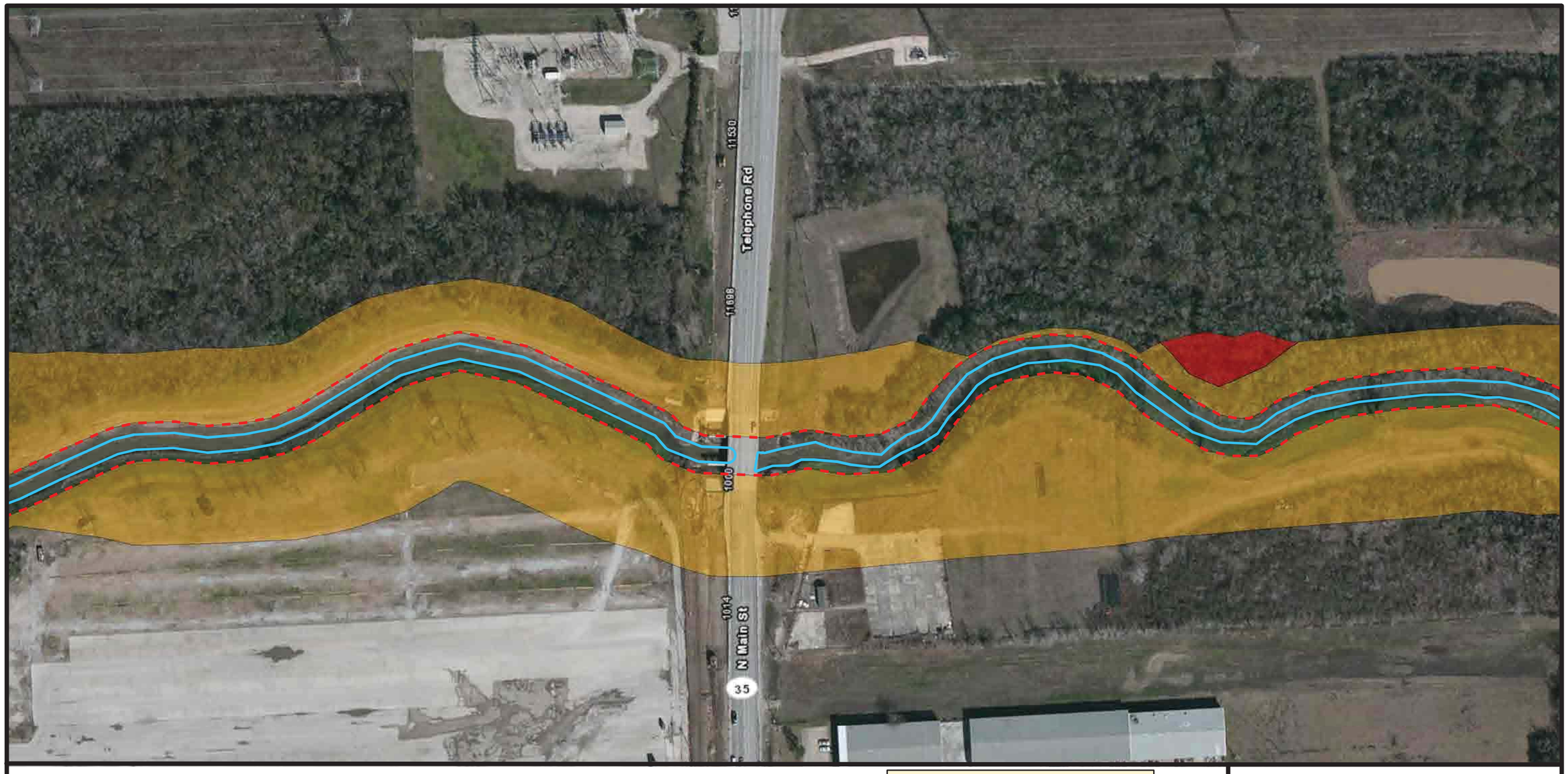
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PROJECT AREA WETLANDS

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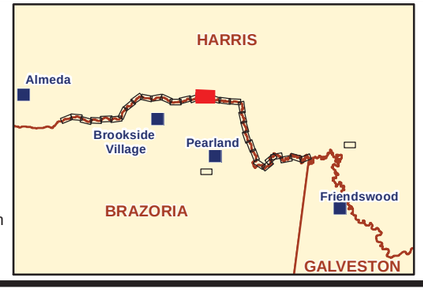
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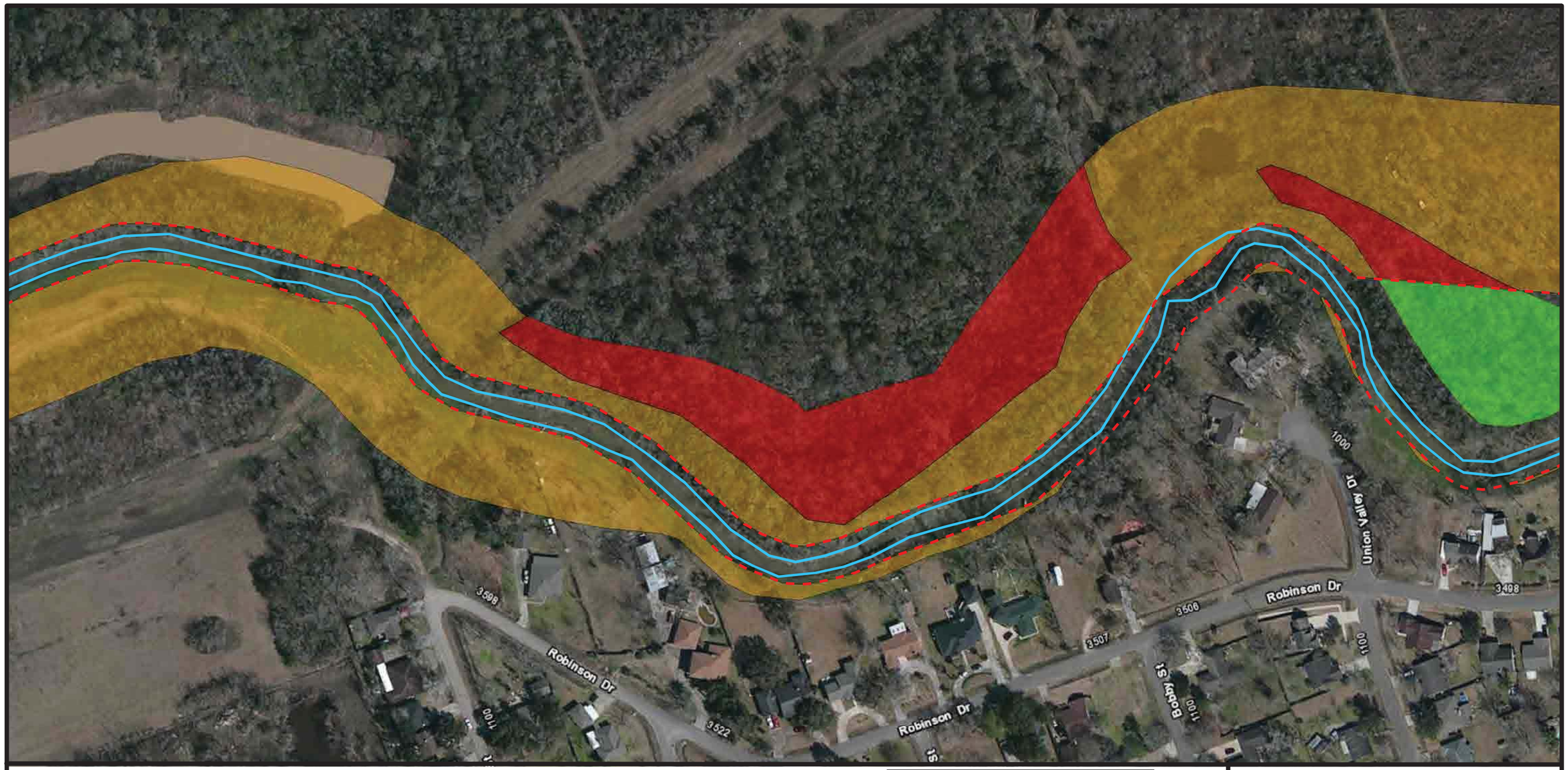
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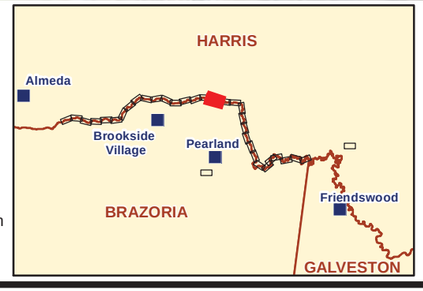
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Miles

0 250 500
Feet

Legend

- Low Flow Corridor
- OHWM Fringe Wetlands
- Compensatory Mitigation Area Wetlands
- Impacted Wetlands
- Avoided Wetlands
- Impact Area

Sources:
Wetlands: spatial data developed from USFWS NWI data, aerial interpretation, and limited field verification
Aerials: Microsoft Corporation, Earthstar Geographics LLC, GeoEye, Harris Corporation, NASA, and DigitalGlobe. *Bing Maps Aerial.* 2010. 1:1920; generated by Atkins staff; using ArcMap. http://www.bing.com/maps (2 May 2012).



Appendix O

PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

Prepared for: USACE	Sheet 17 of 34
Job No.: 100013748	Scale: 1inch = 160 feet
Prepared by: 18827	Date: 5/30/2012

File: N:\Clients\U_Z\USACE\Clear_Crk\100013748\geo\figs\wetlands_mitigation.mxd



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Legend

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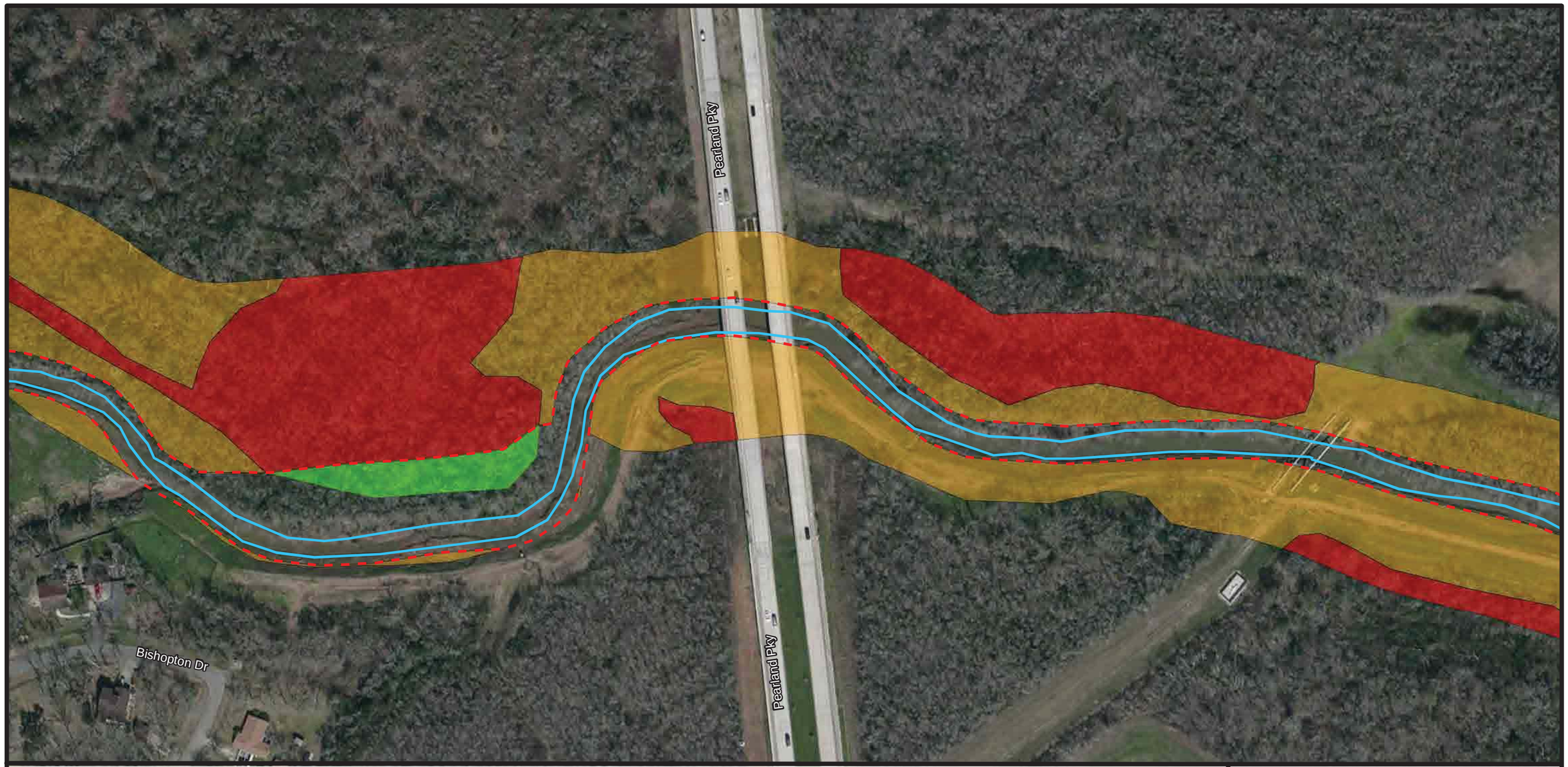
Appendix O

PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

Prepared for: USACE	Sheet 18 of 34
Job No.: 100013748	Scale: 1inch = 160 feet
Prepared by: 18827	Date: 5/30/2012

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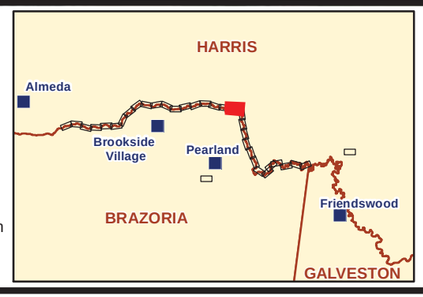
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Legend

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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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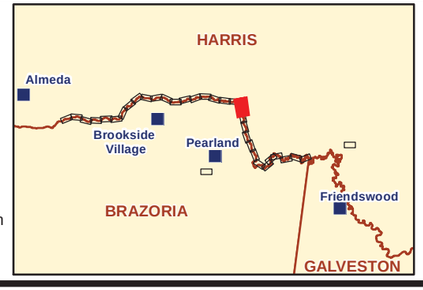
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Legend

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PROJECT AREA WETLANDS

Clear Creek
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Feet

Legend

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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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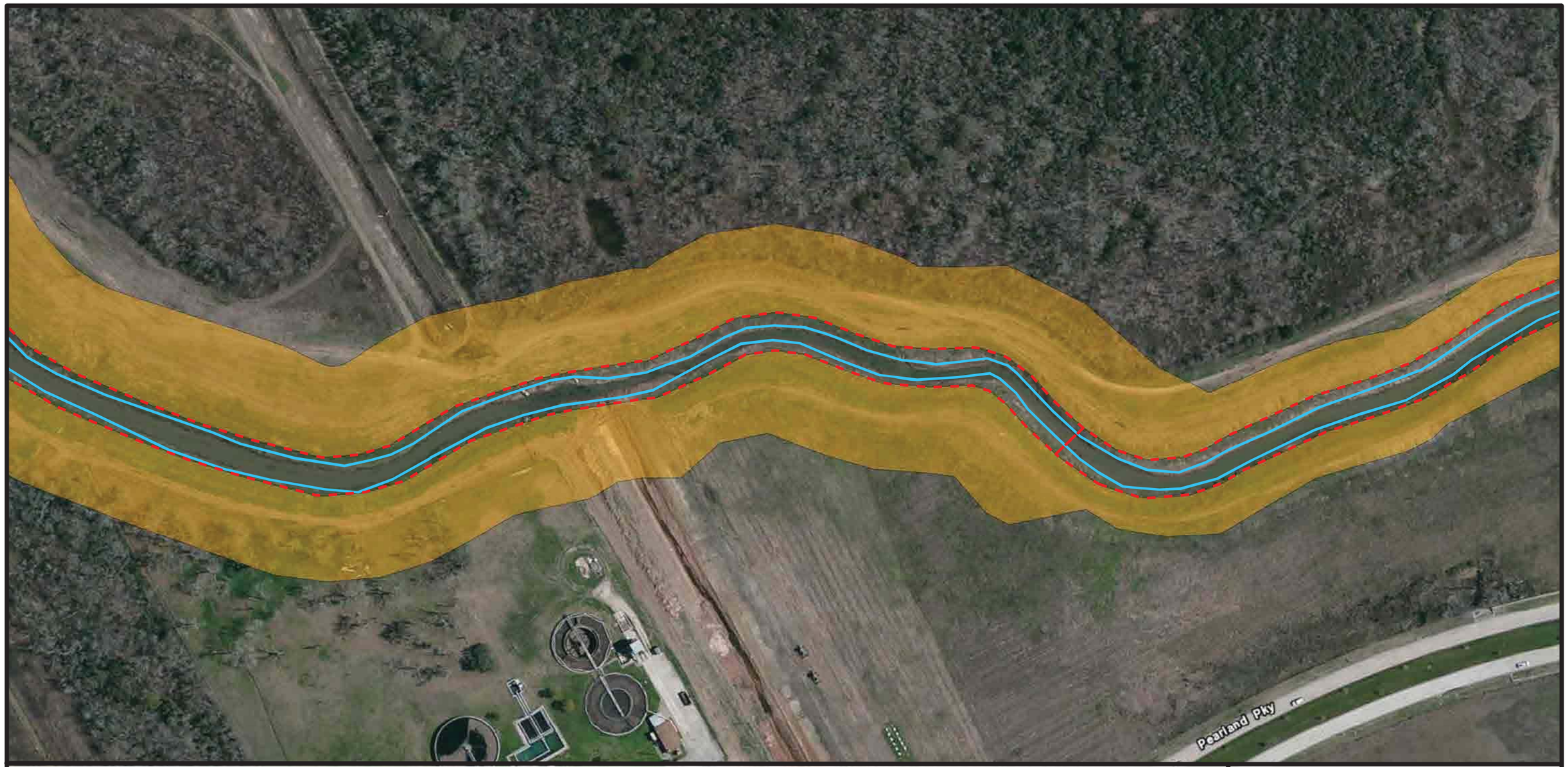
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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

Prepared for: USACE	Sheet 22 of 34
Job No.: 100013748	Scale: 1inch = 160 feet
Prepared by: 18827	Date: 5/30/2012

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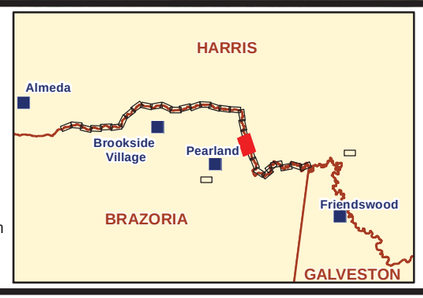
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Miles

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Legend

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PROJECT AREA WETLANDS

Clear Creek
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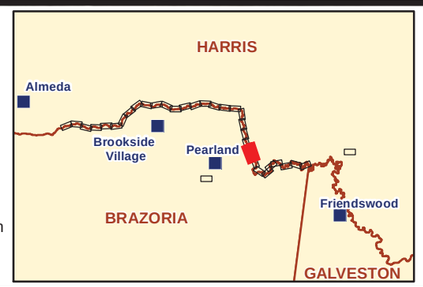
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Legend

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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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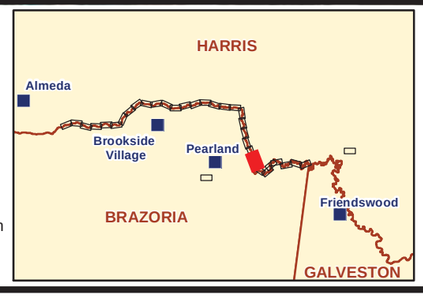
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Legend

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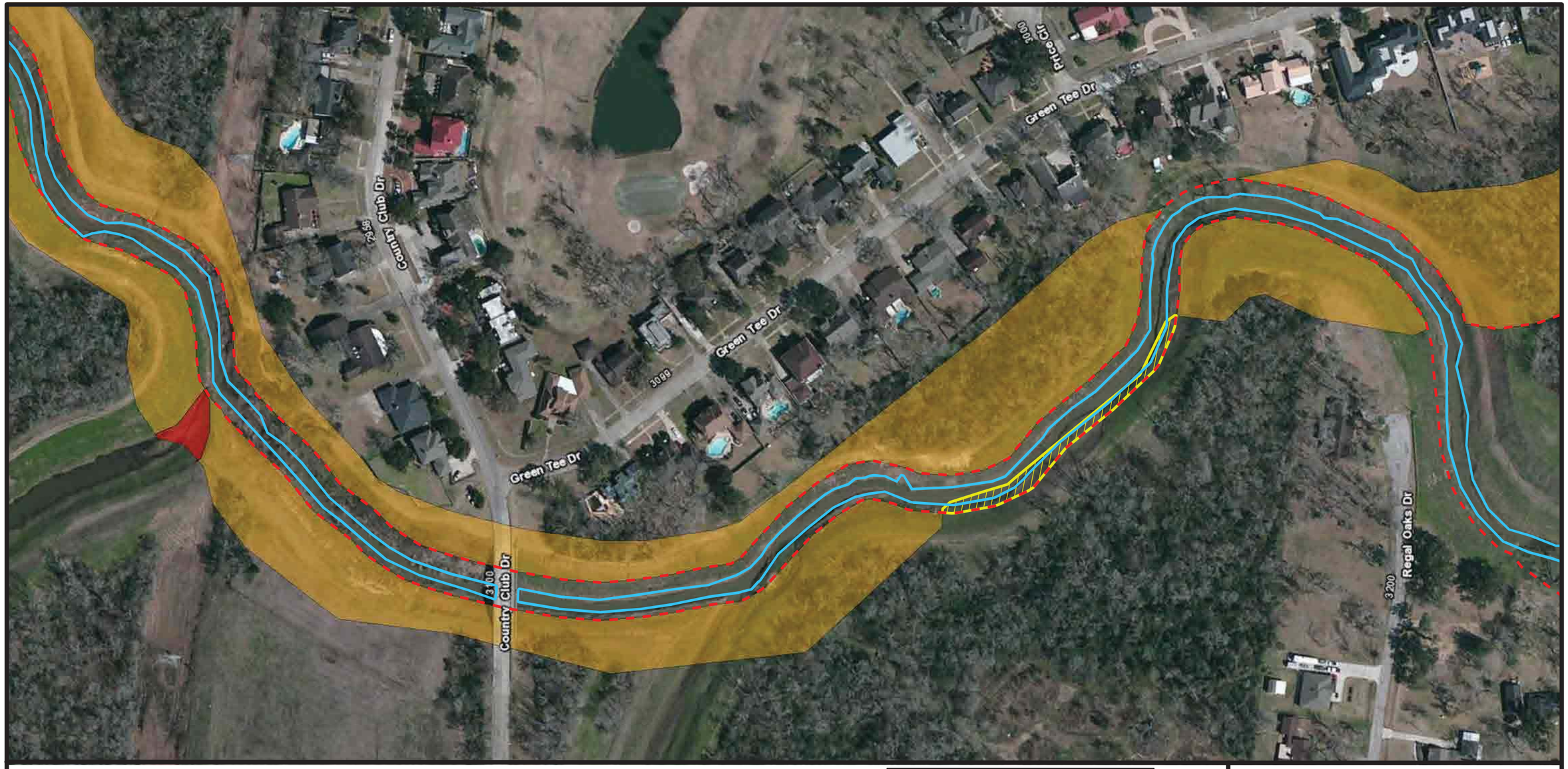
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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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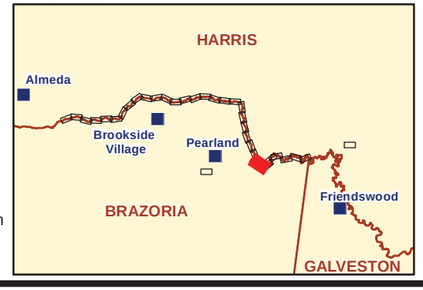
0 0.01 0.02 0.03 0.04 0.05 Miles

0 250 500 Feet

Legend

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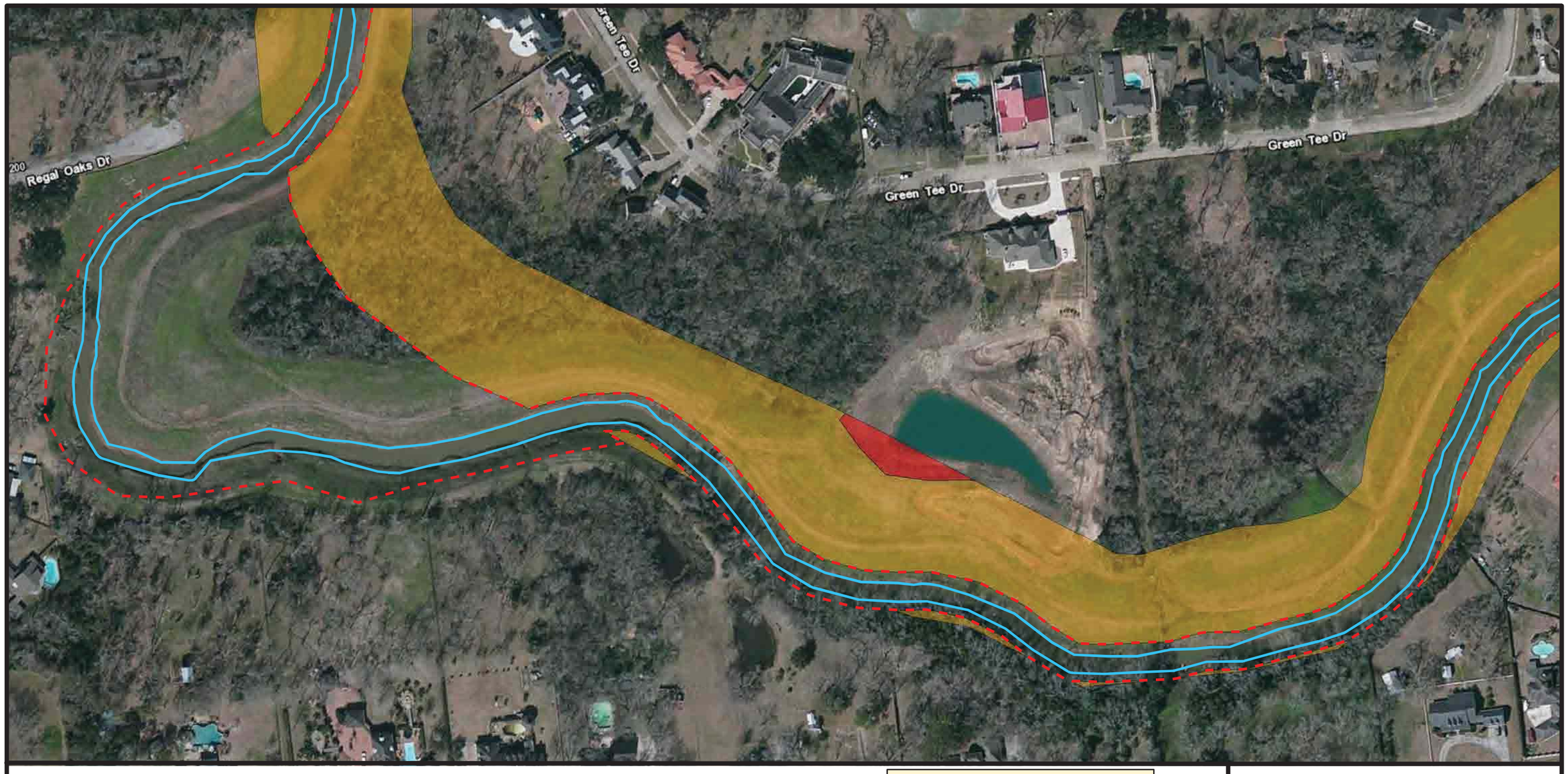
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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Job No.: 100013748	Scale: 1inch = 160 feet
Prepared by: 18827	Date: 5/30/2012

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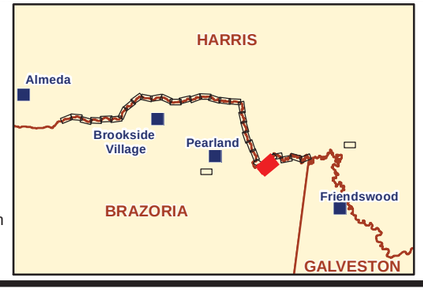
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Legend

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PROJECT AREA WETLANDS

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Legend

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PROJECT AREA WETLANDS

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Prepared by: 18827	Date: 5/30/2012

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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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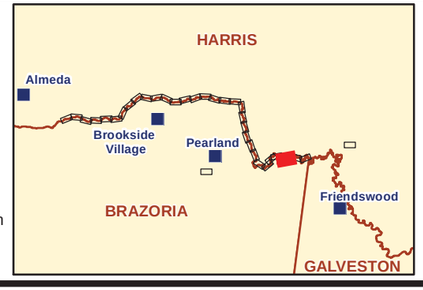
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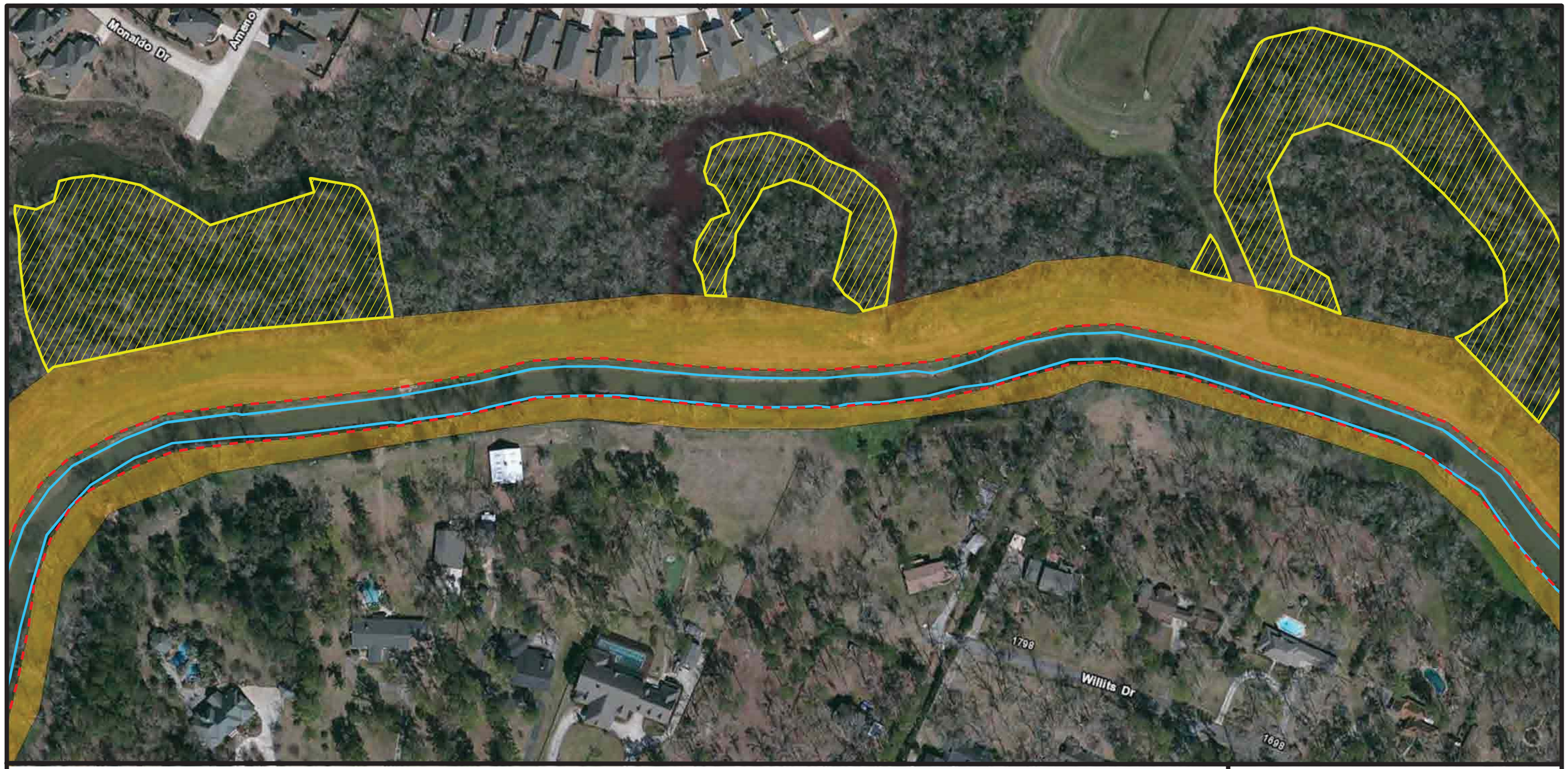
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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Job No.: 100013748	Scale: 1inch = 160 feet
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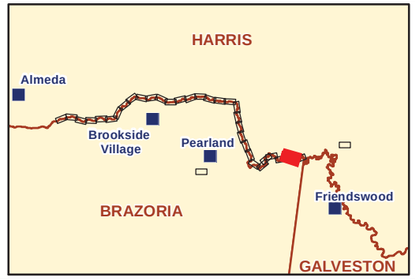
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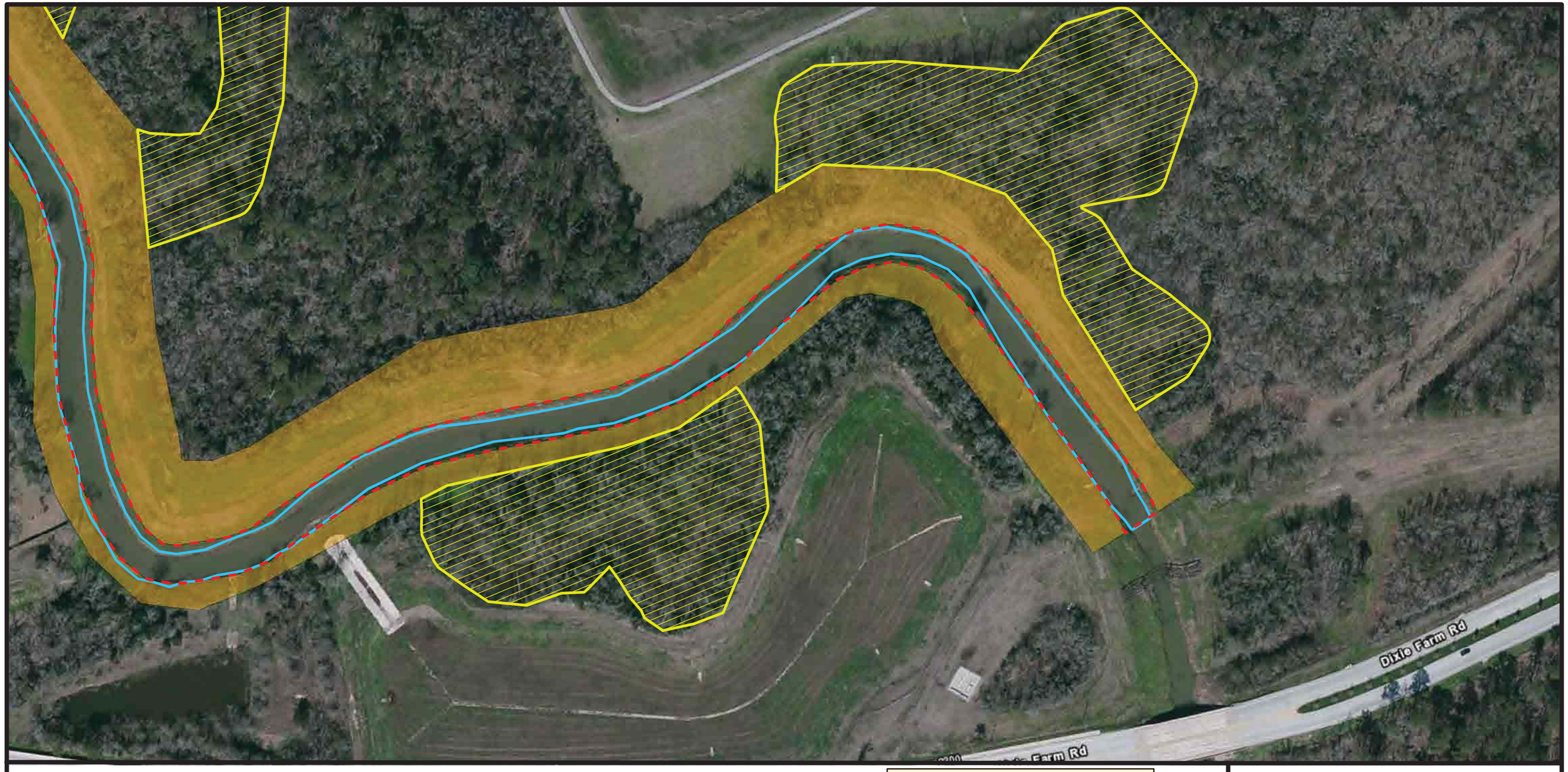
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PROJECT AREA WETLANDS

Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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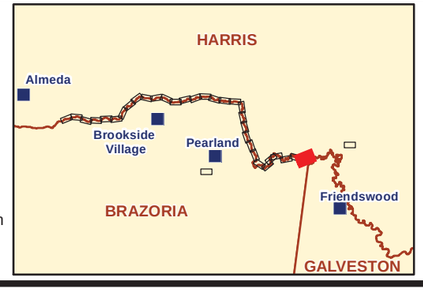
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Legend

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Prepared by: 18827	Date: 5/30/2012

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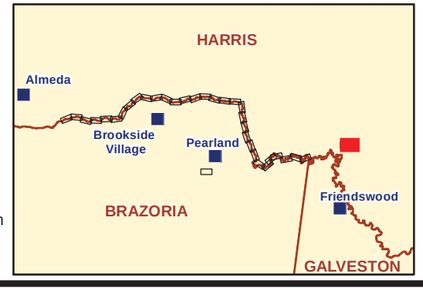
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Legend

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Clear Creek
Flood Risk Management Project

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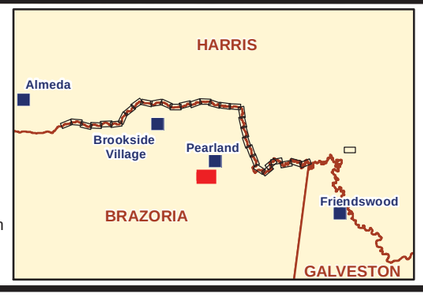
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Miles

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Feet

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PROJECT AREA WETLANDS

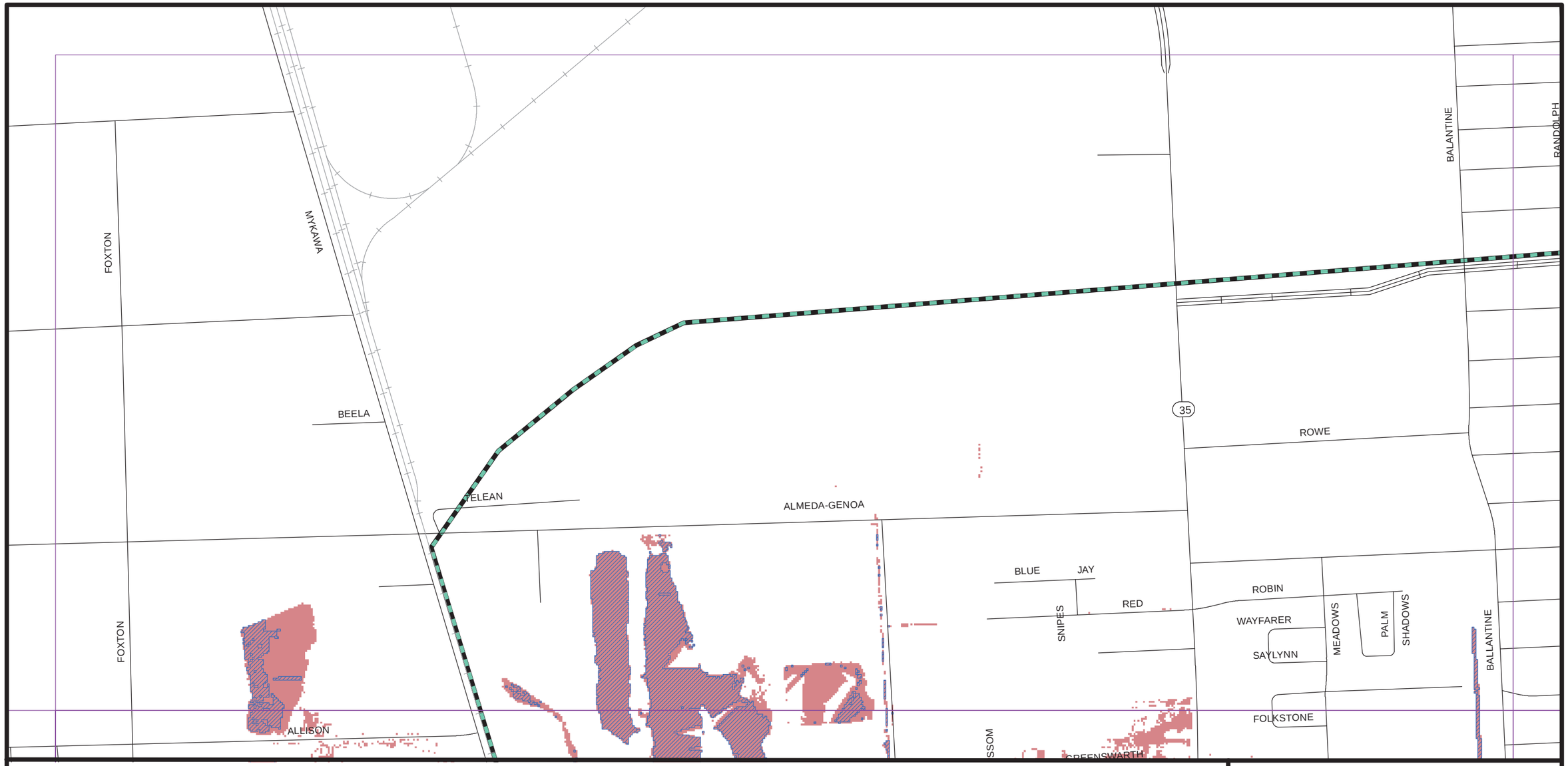
Clear Creek
Flood Risk Management Project

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Prepared by: 18827	Date: 5/30/2012

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Appendix P

Project Area Floodplains



Clear Creek Watershed

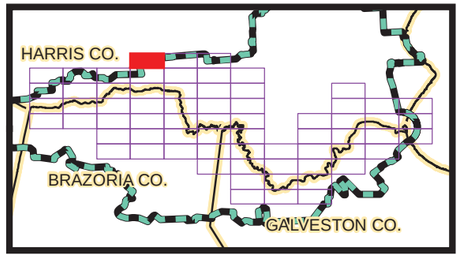
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

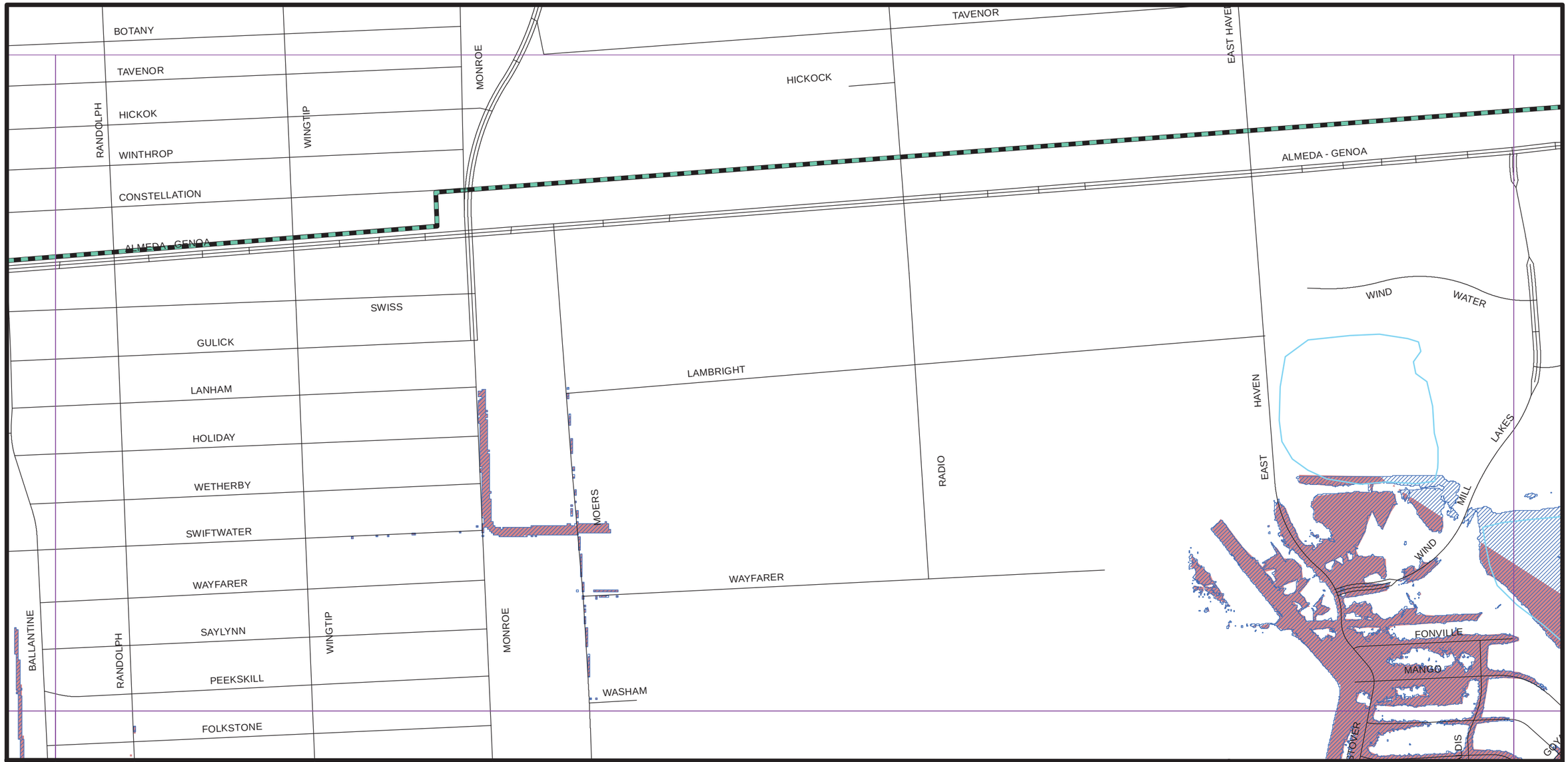
Clear Creek

Flood Risk Management Project

Sheet 1 of 68

Prepared for: USACE	
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Prepared by: 19895	Date: 5/10/2012

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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

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Prepared by: 19895	Date: 5/10/2012

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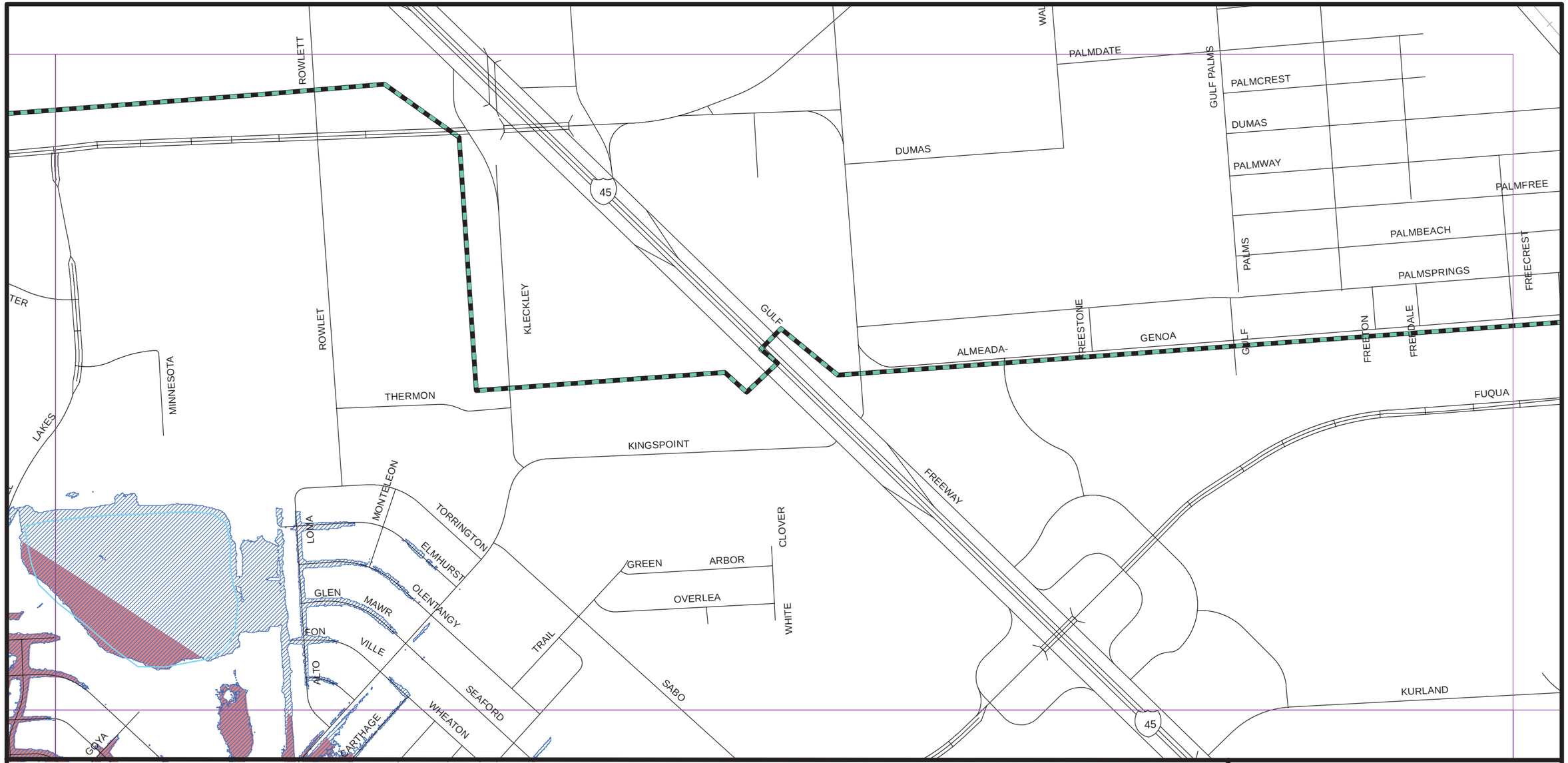


Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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ATIAN

BROOKFIELD

AMBROSE

ALMEDA-

CANTERLANE

CANTERVILLE

VERNAGE

CHISWICK

ADLER

FARADAY

NORTHUMB

CANTERVIEW

BAYSWATER

ELANIE

GENOA

288

NORSHIRE

KARALIS

LEW BRIGGS

McGRATH

CANTERWELL

JANBAR

THISTLE

METER

VAN

SCHURMIER

LABRADOR

MILAN

ELISE

MERIDA

MONARCH

ANDERSON

ALMEDA-SCHOOL

WATERLOO

OHIO

521

521

Clear Creek Watershed

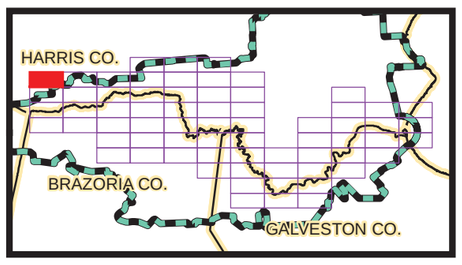
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

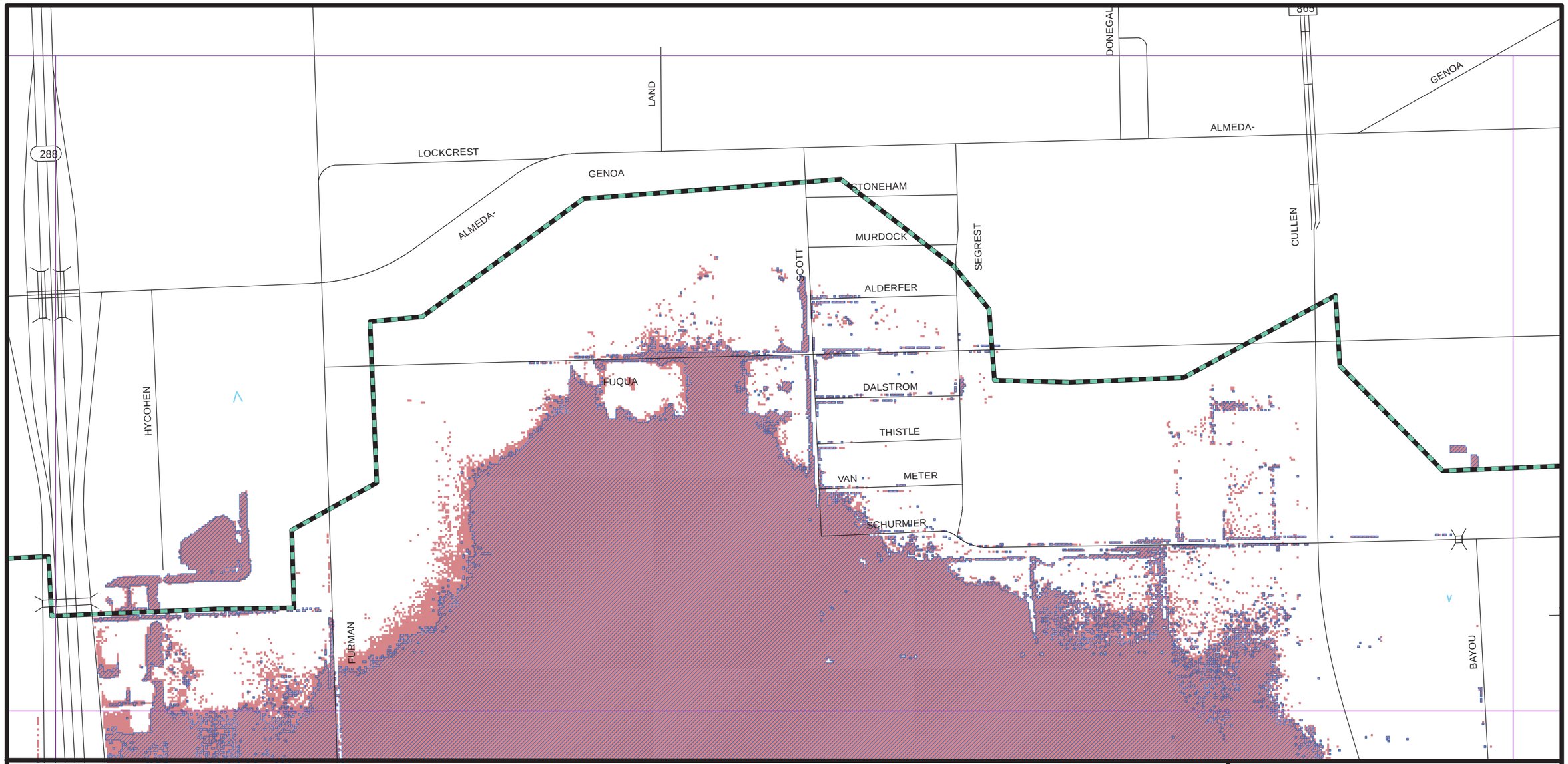
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

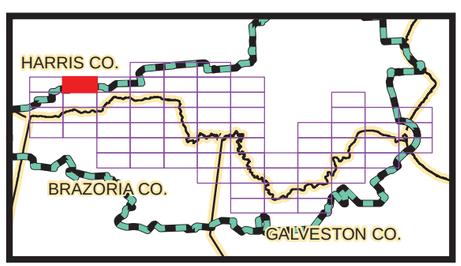
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Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

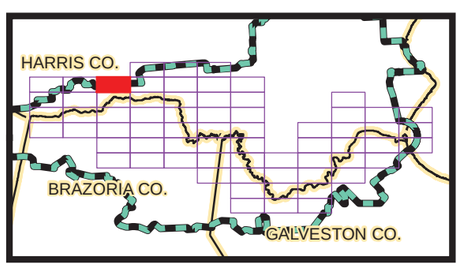
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PEMBROKE
LEA
GLEGARRY
HENDR
ALLISON
STONEHAM
DUNWICK
TRESCON
HERTFORD
MEGGINSON
COTTINGHAM
FUQUA
WAYSIDE
SCHURMIER
JAMIE
BORDER
KAY
BAYOU
MARY

Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

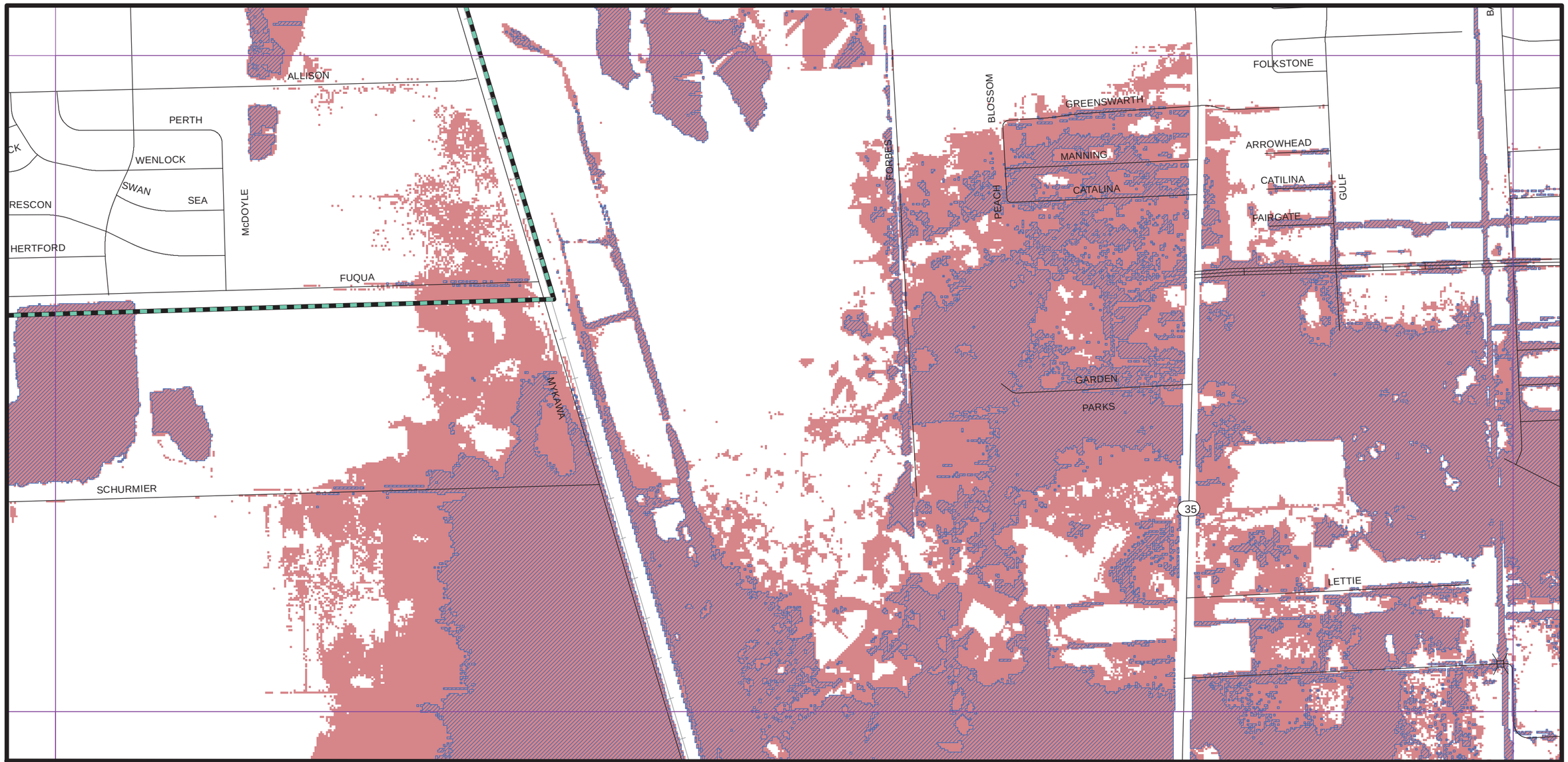
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

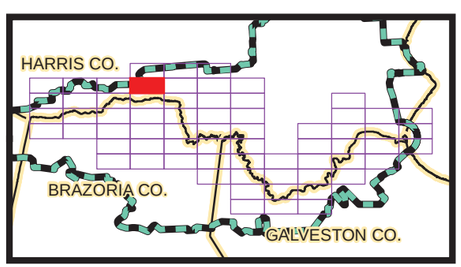
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

Sheet 7 of 68

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Clear Creek Watershed

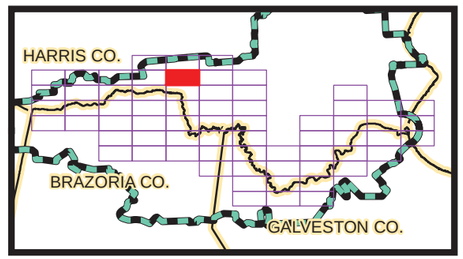
County Boundary

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

Sheet 8 of 68

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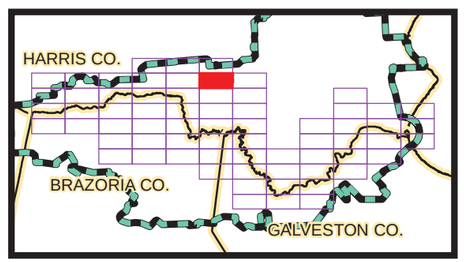
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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

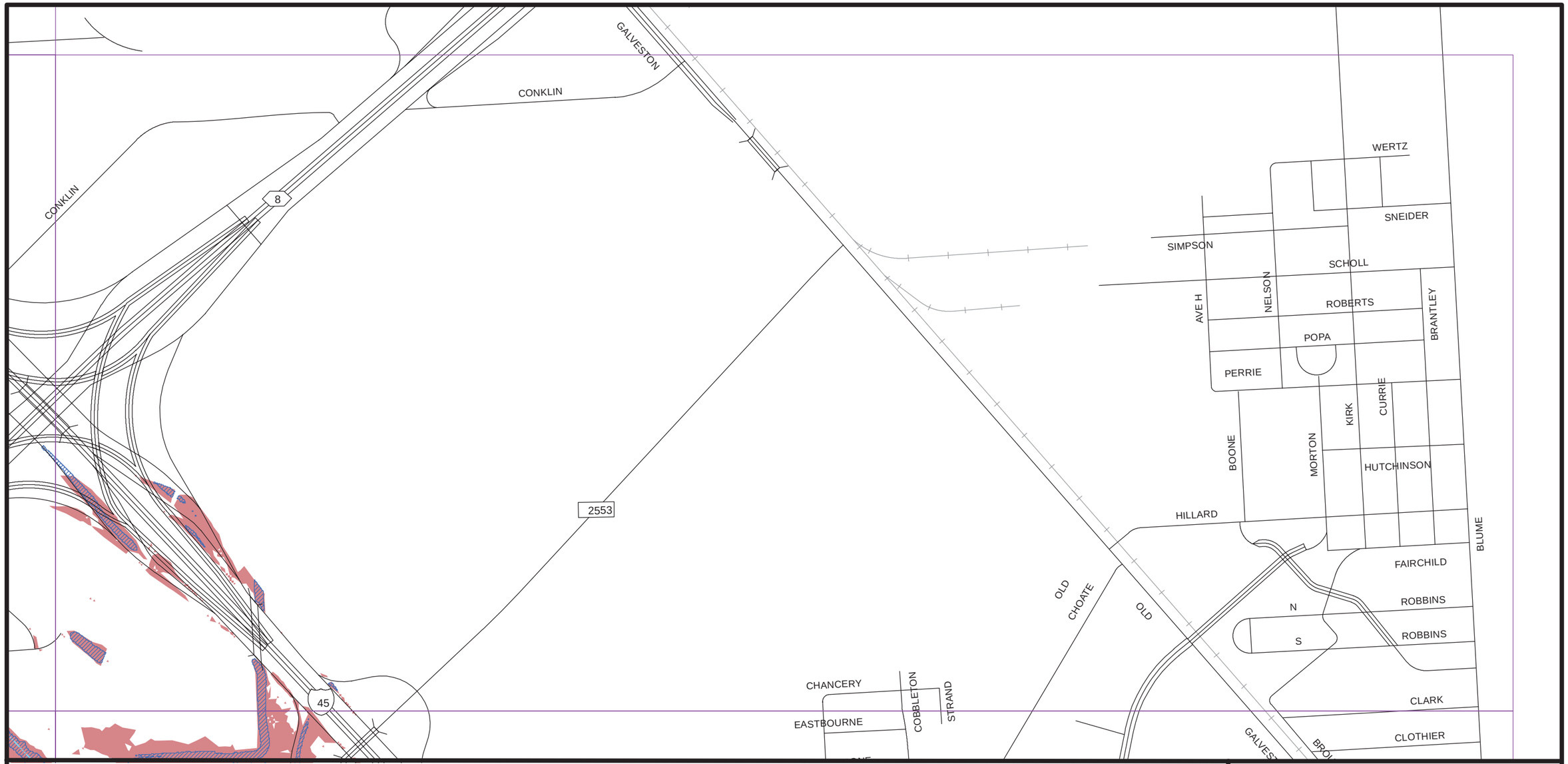
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

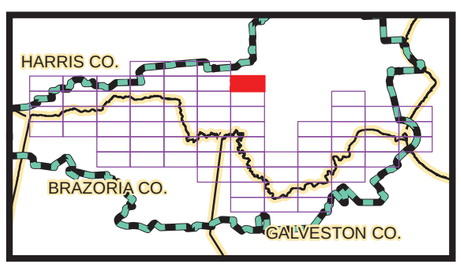
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

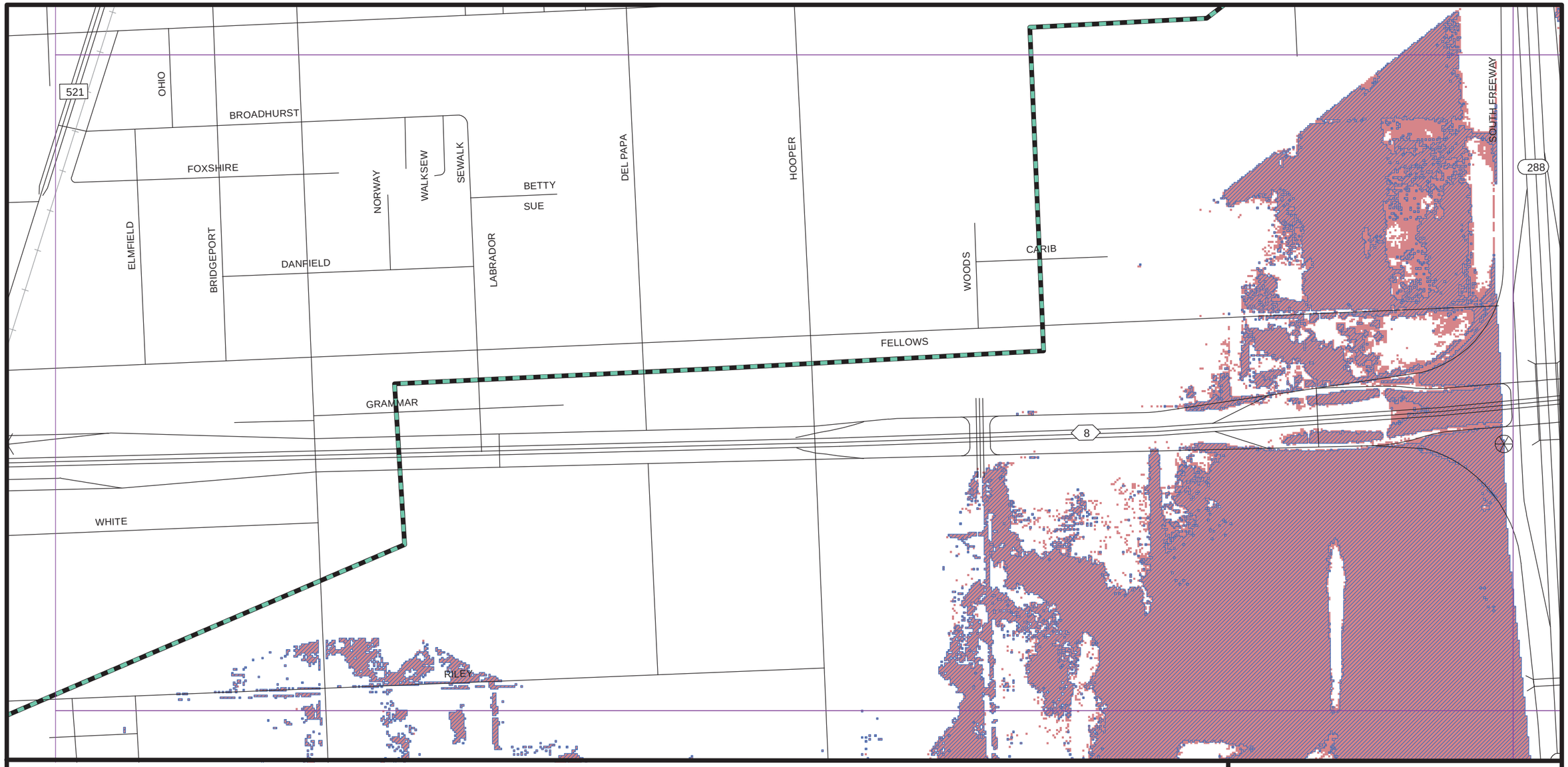
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

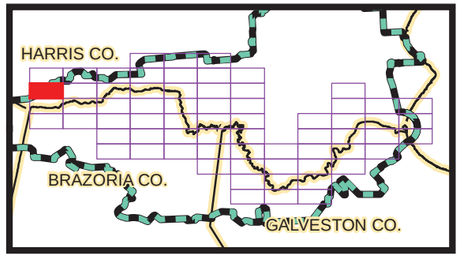
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N
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0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

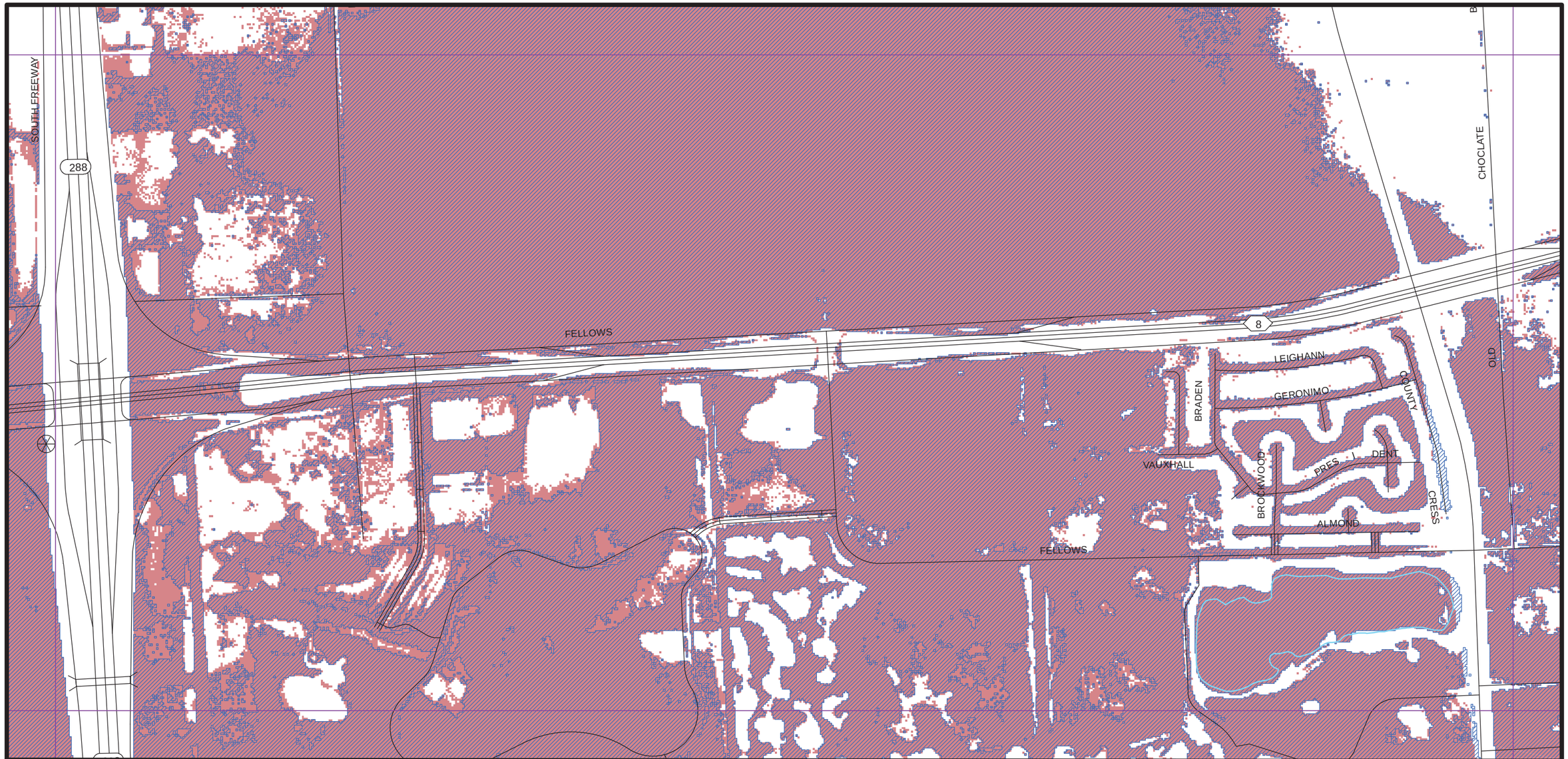
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

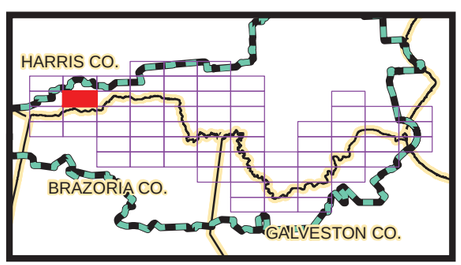
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

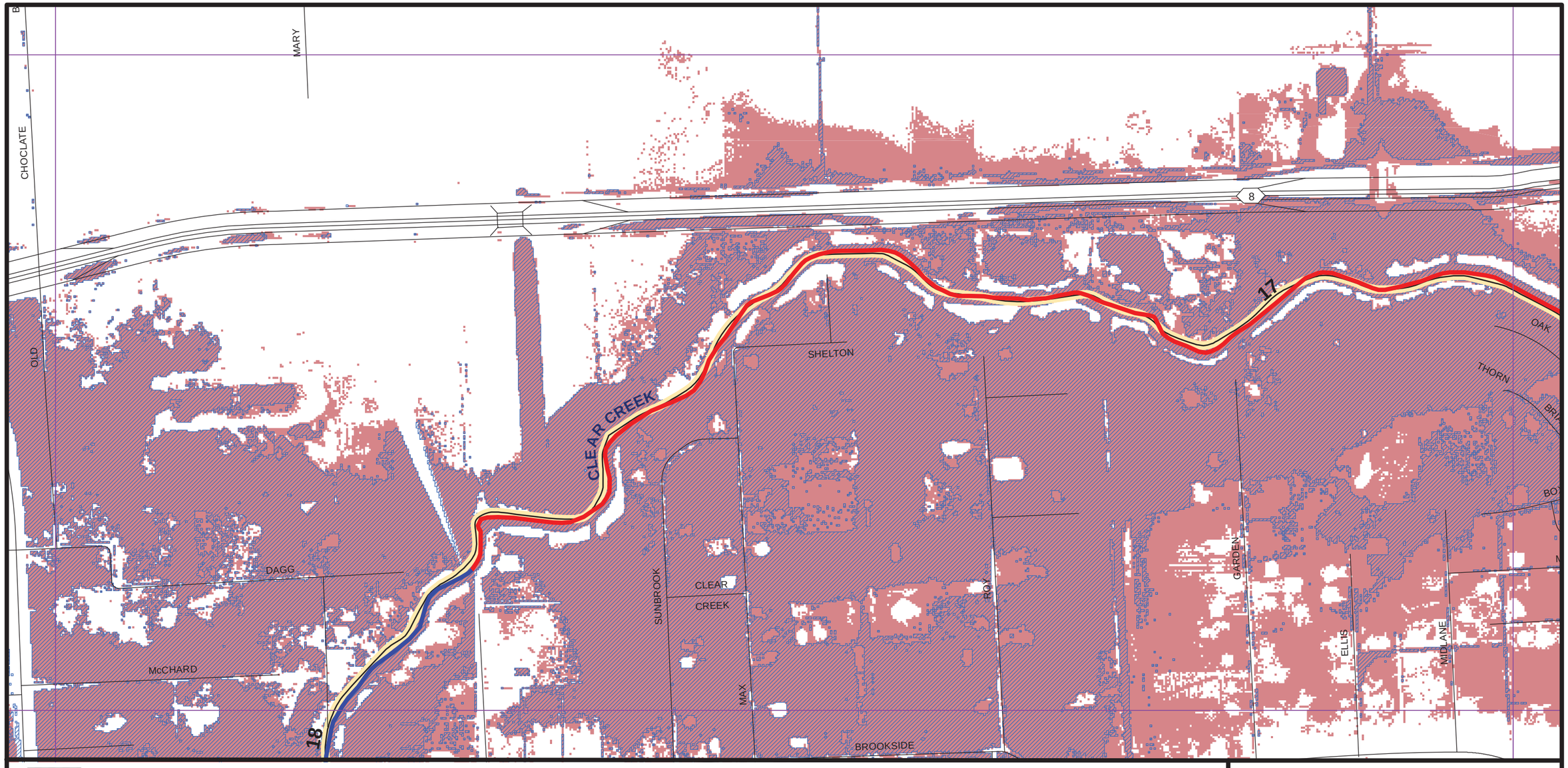
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

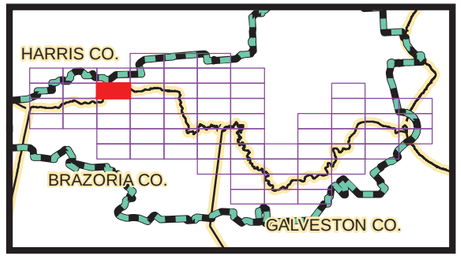
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

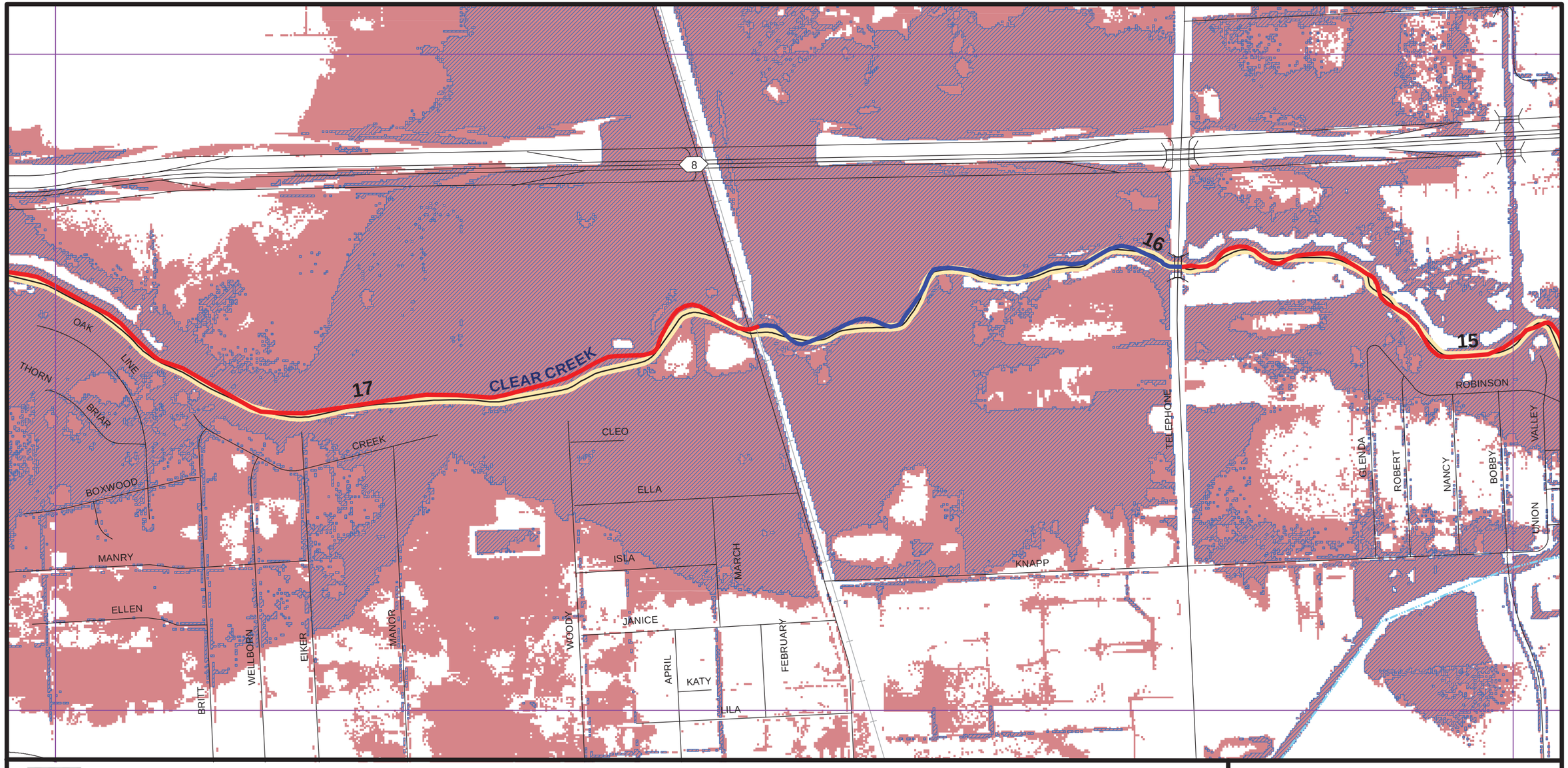
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

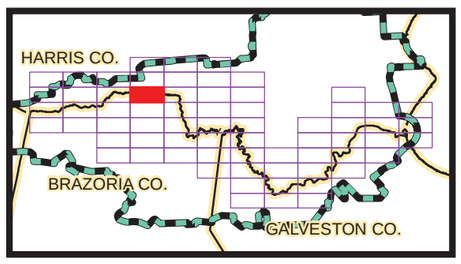
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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HALL

8

KIRKMONT

KIRKLAND

SAGETRAIL

SOUTHBLUFF

SAGE

YORK

KIRKVALE

KIRKWREN

GLENKIRK

15 - CLEAR CREEK

OBINSON

WHEAT

RIDGE

MEADOW

VALLEY

BOBBY

UNION

TRELAWNEY

LETHBRIDGE

BISHOPTON

BURY

GLASTON

Clear Creek Watershed

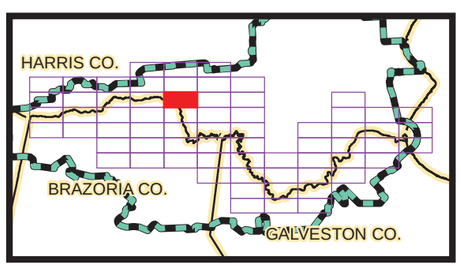
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N

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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

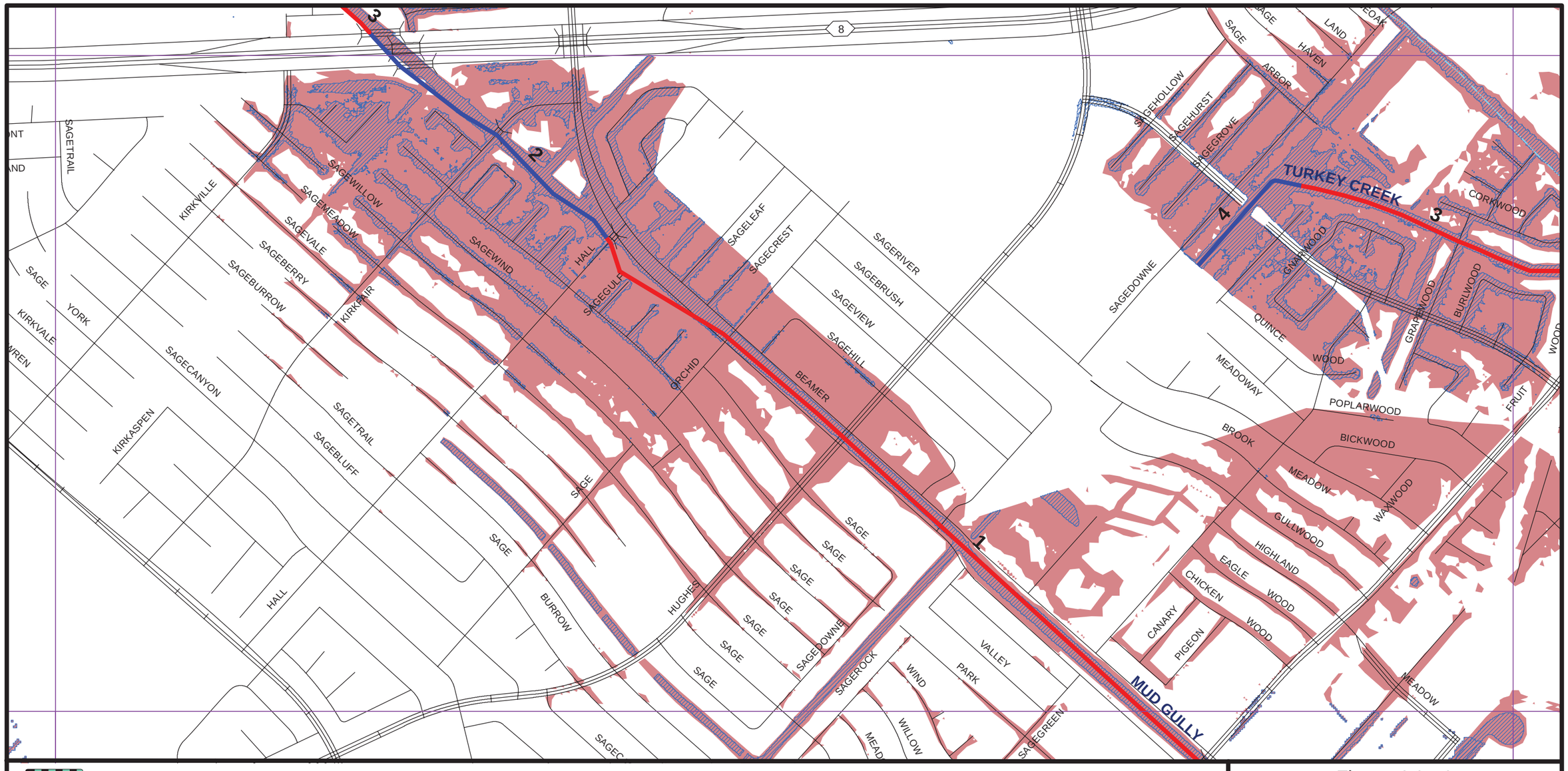
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

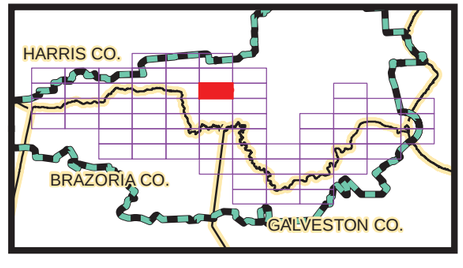
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

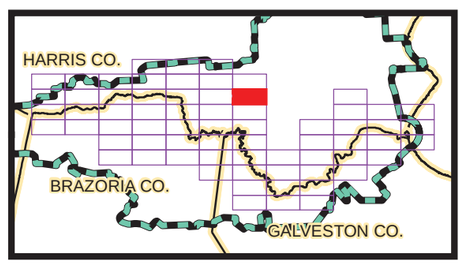
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- Clear Creek Watershed
- County Boundary
- Match Lines
- 1% Chance (100 year) Floodplain - With Project
- 1% Chance (100 year) Floodplain - Without Project
- **5, 4...** Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

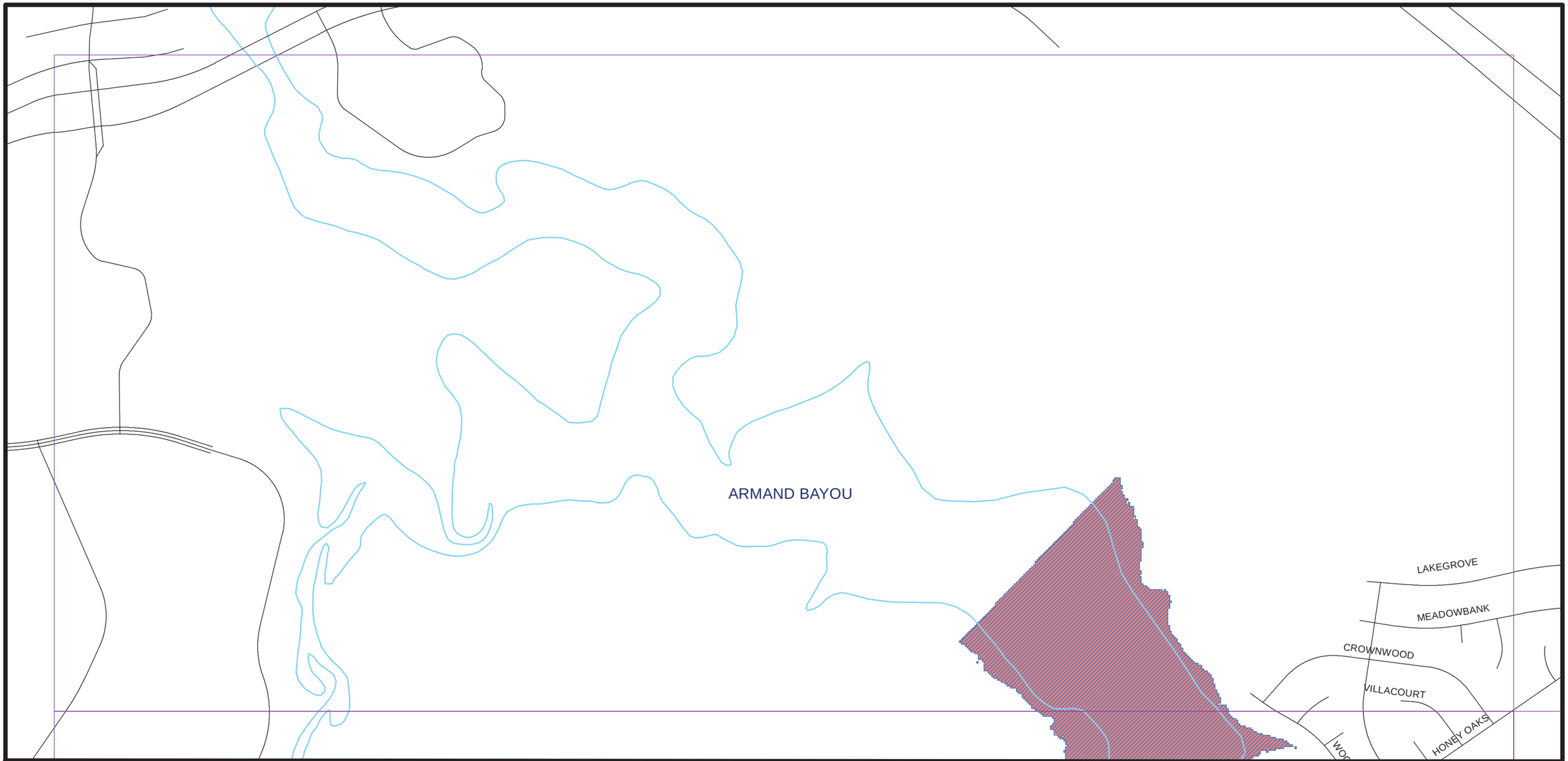
Clear Creek

Flood Risk Management Project

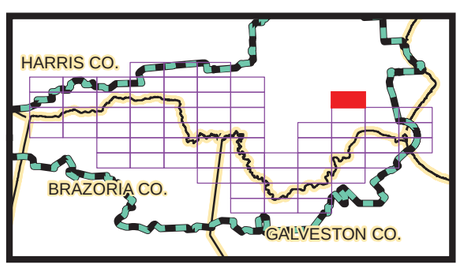
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



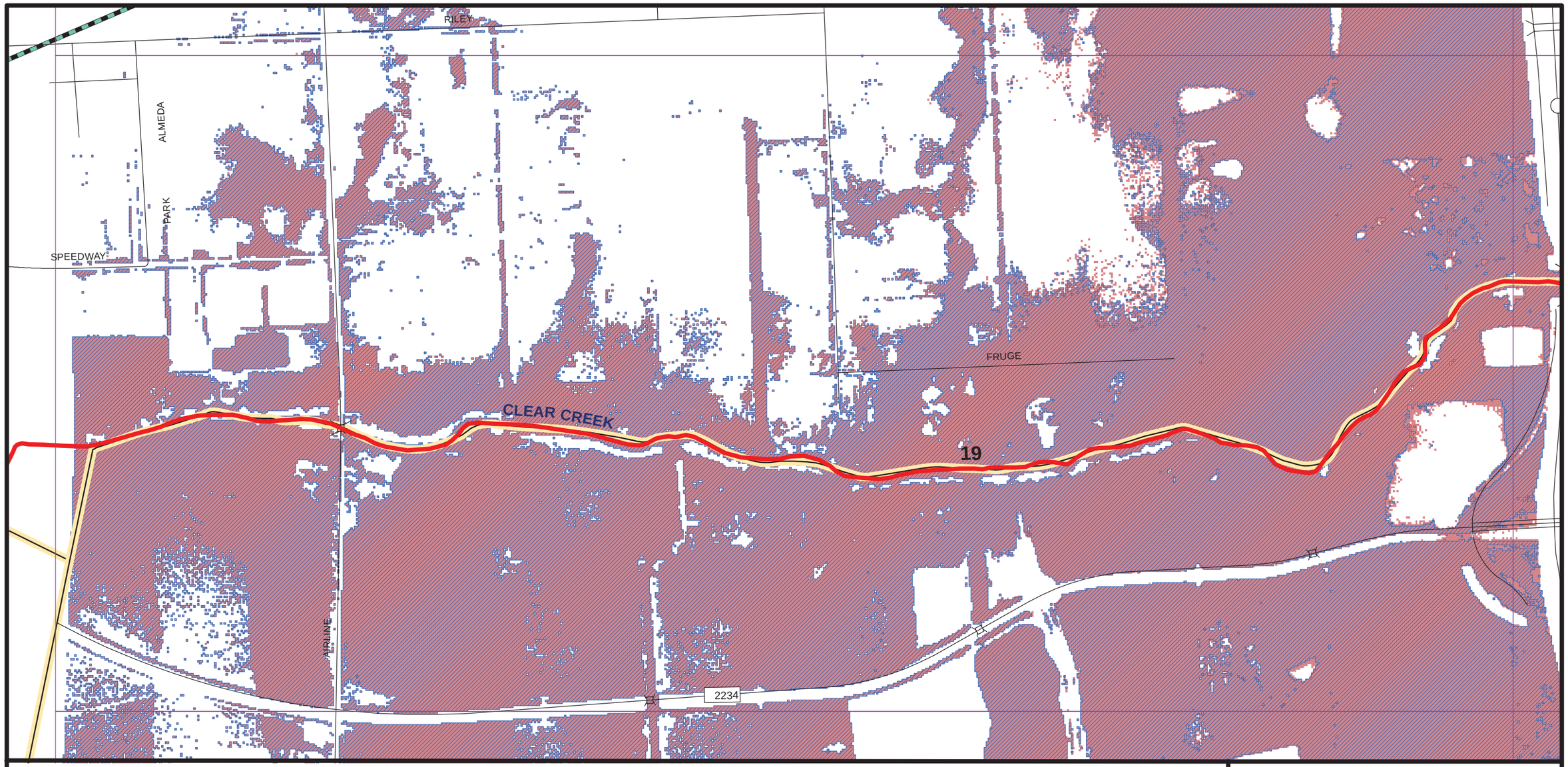
N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1
2020 Floodplain for the No Action and GRP Alternatives
Clear Creek
Flood Risk Management Project
Sheet 18 of 68

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Clear Creek Watershed

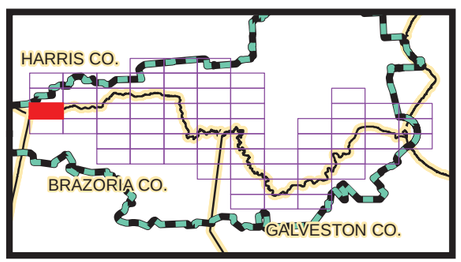
County Boundary

Match Lines

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

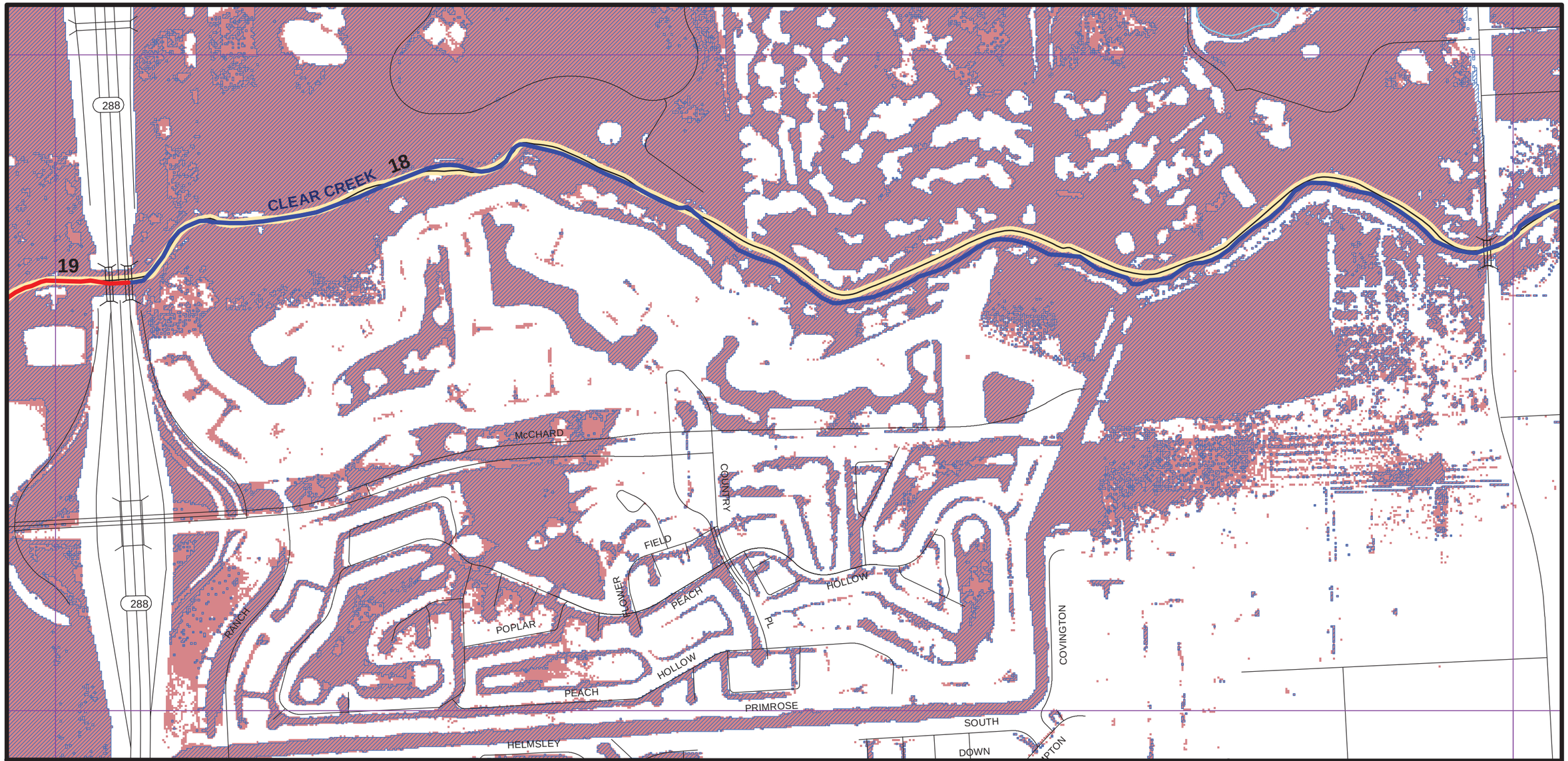
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

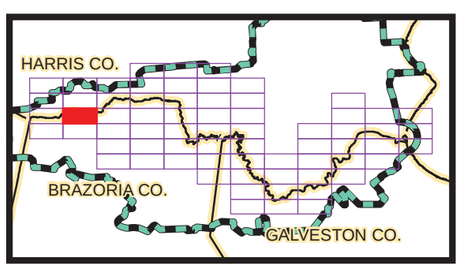
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

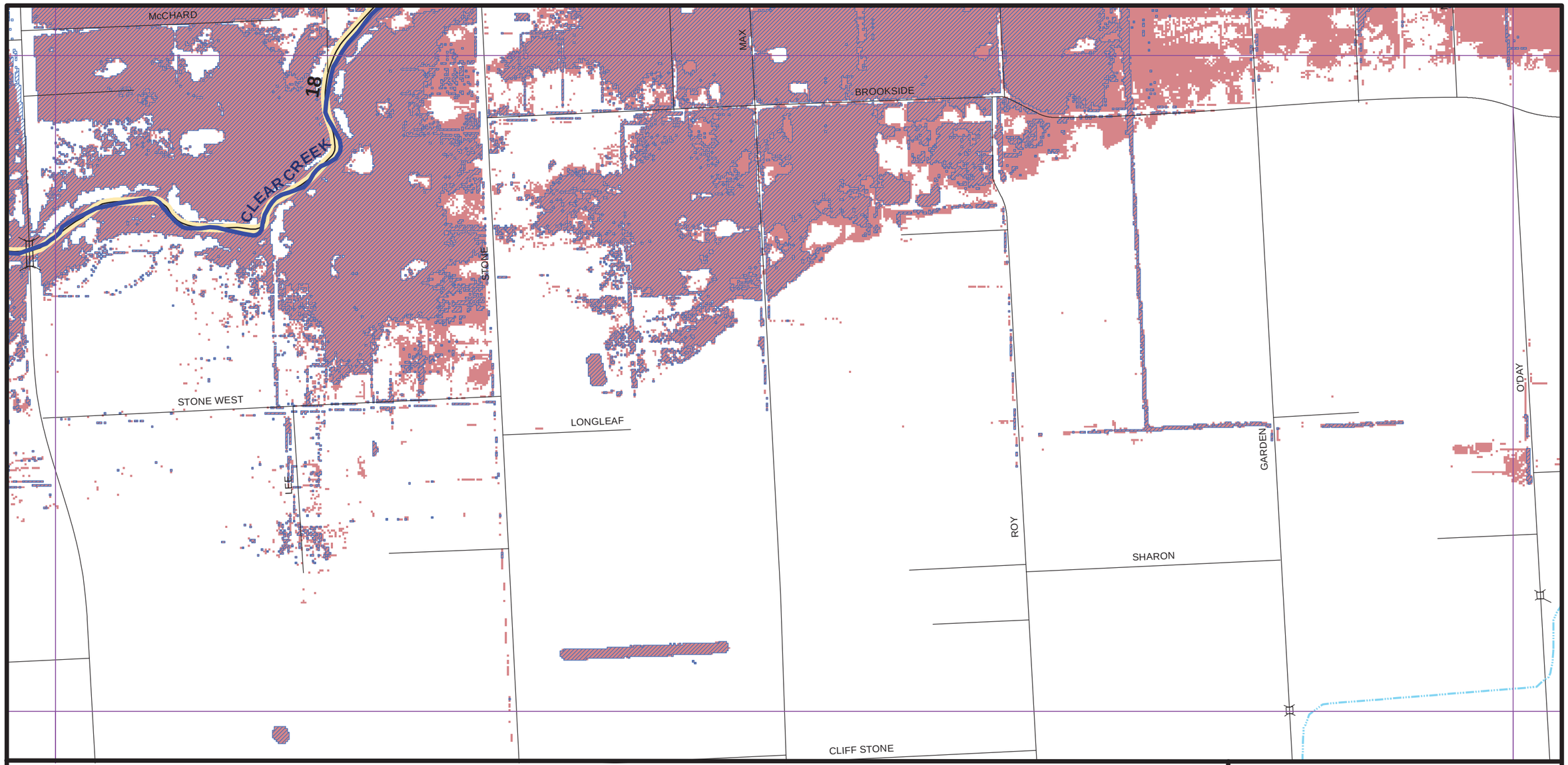
Clear Creek

Flood Risk Management Project

Sheet 20 of 68

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Prepared by: 19895	Date: 5/10/2012

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Clear Creek Watershed

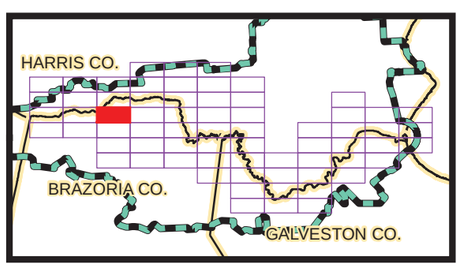
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

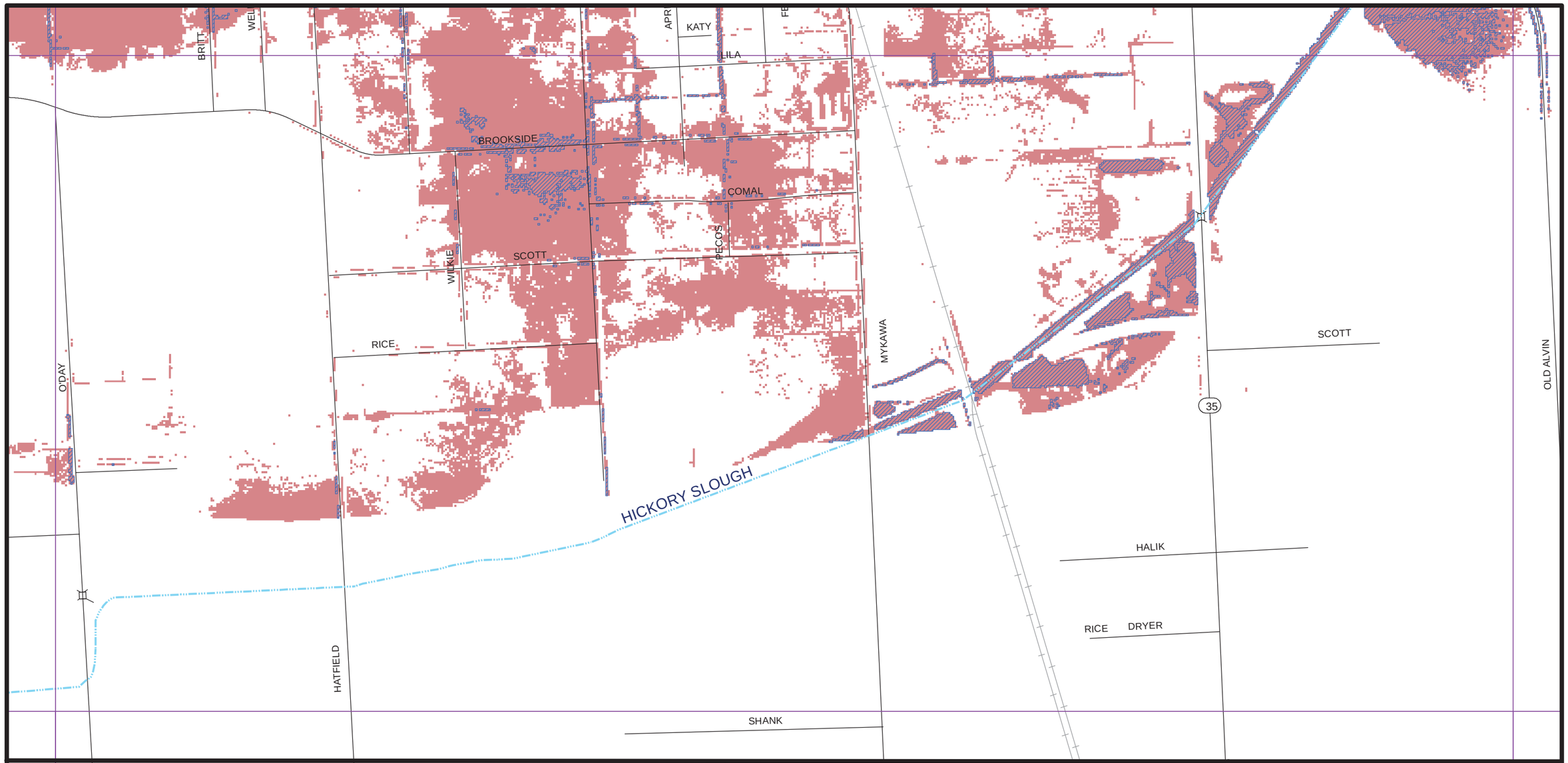
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

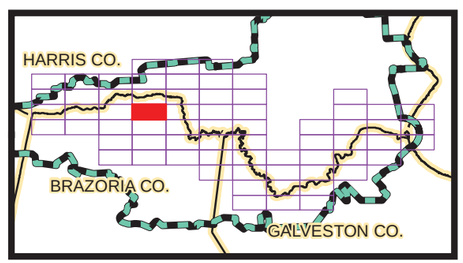
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

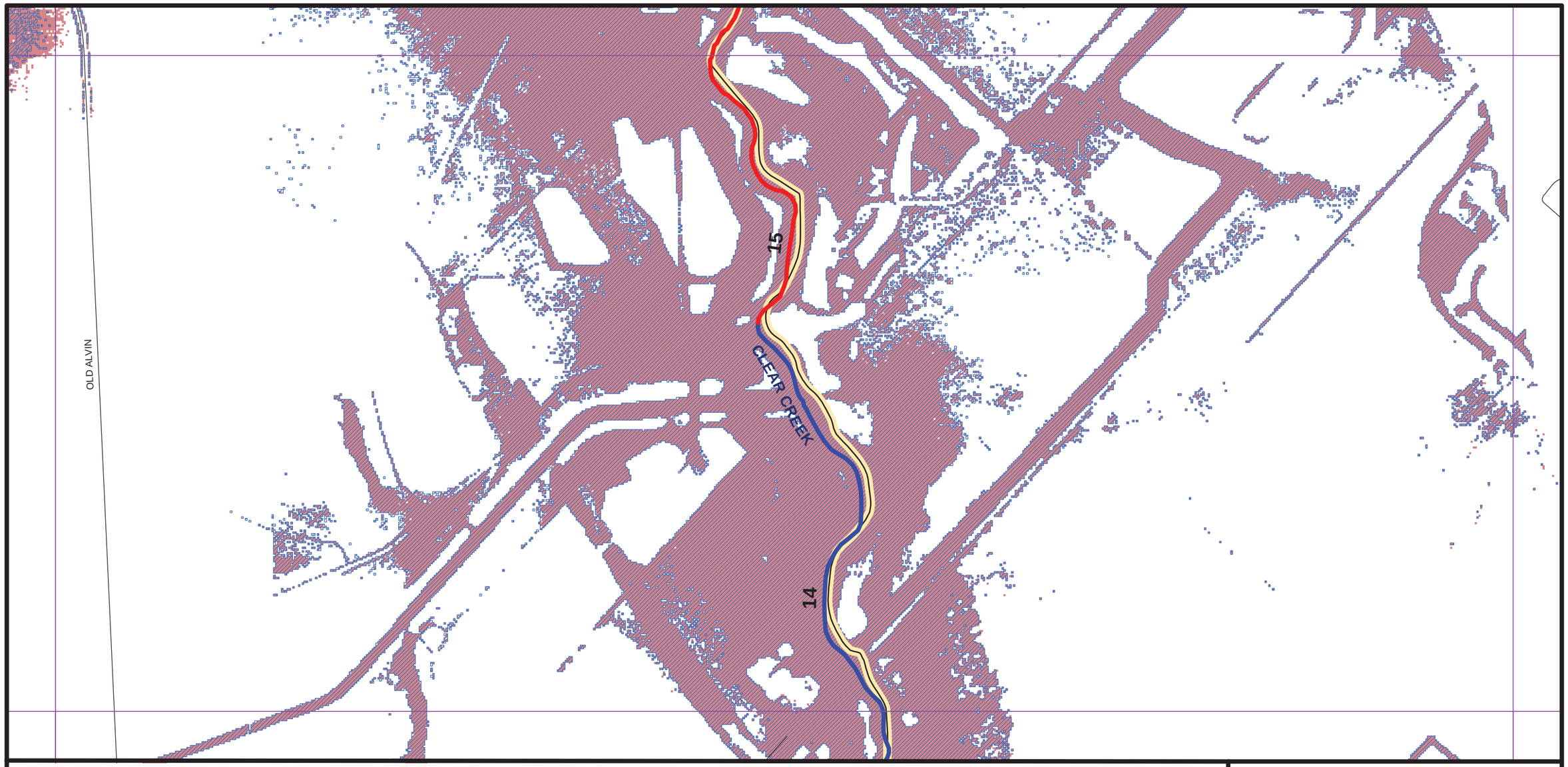
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

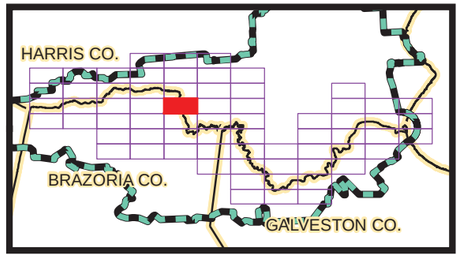
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

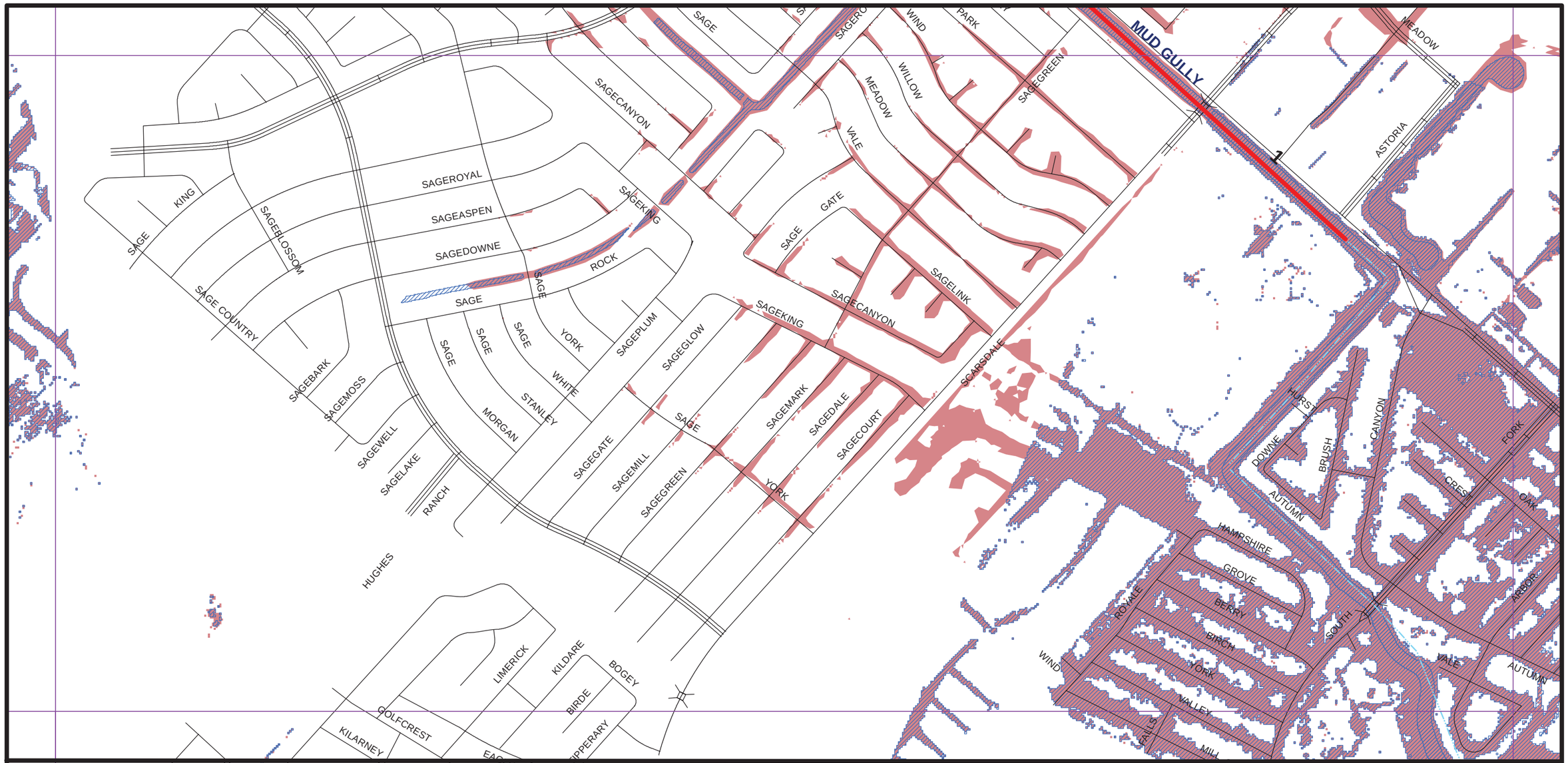
Clear Creek

Flood Risk Management Project

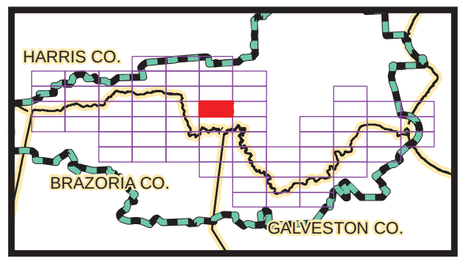
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
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0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

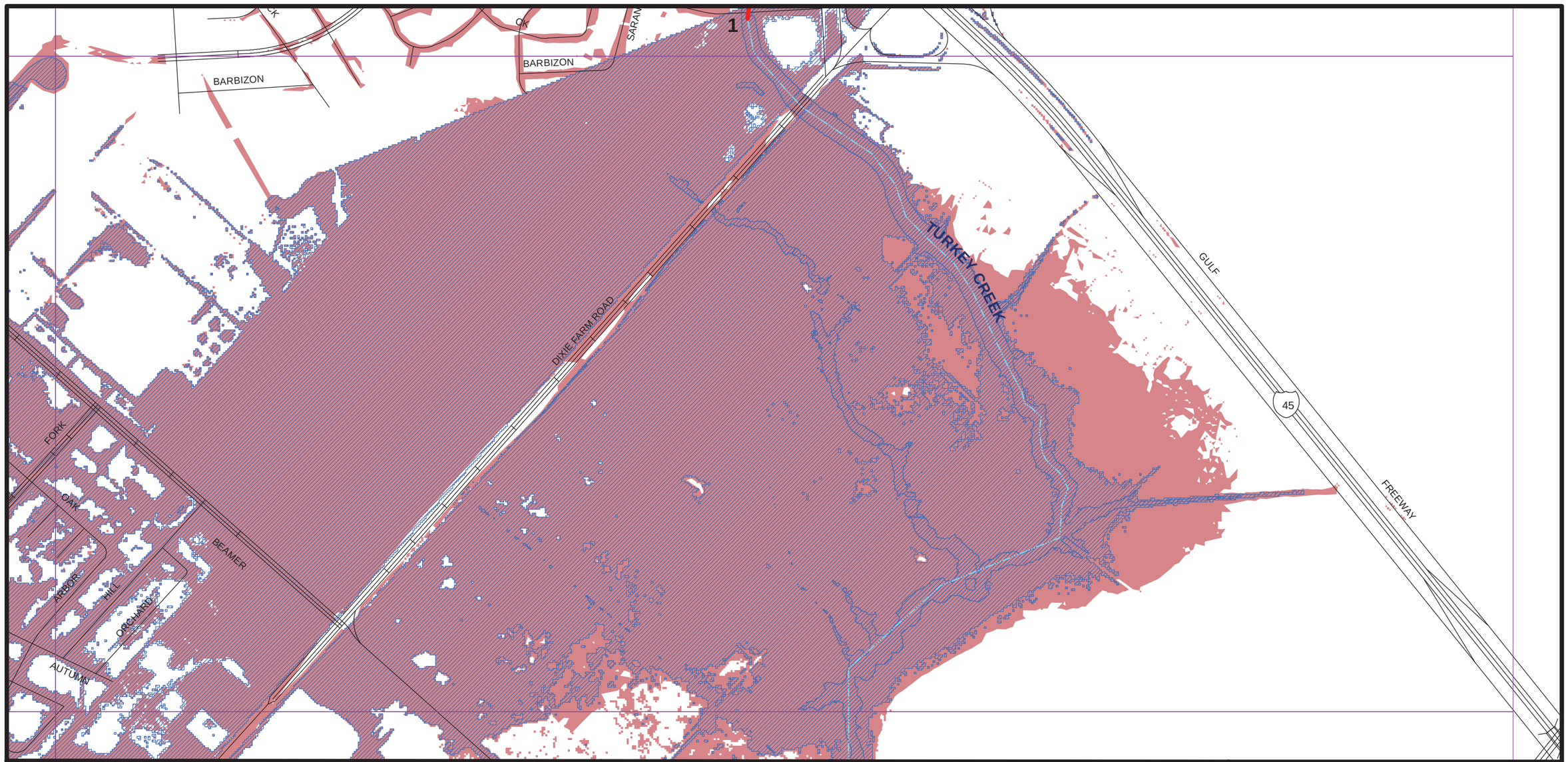
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

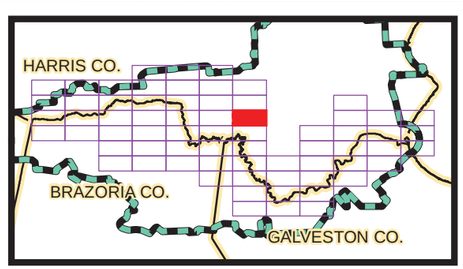
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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

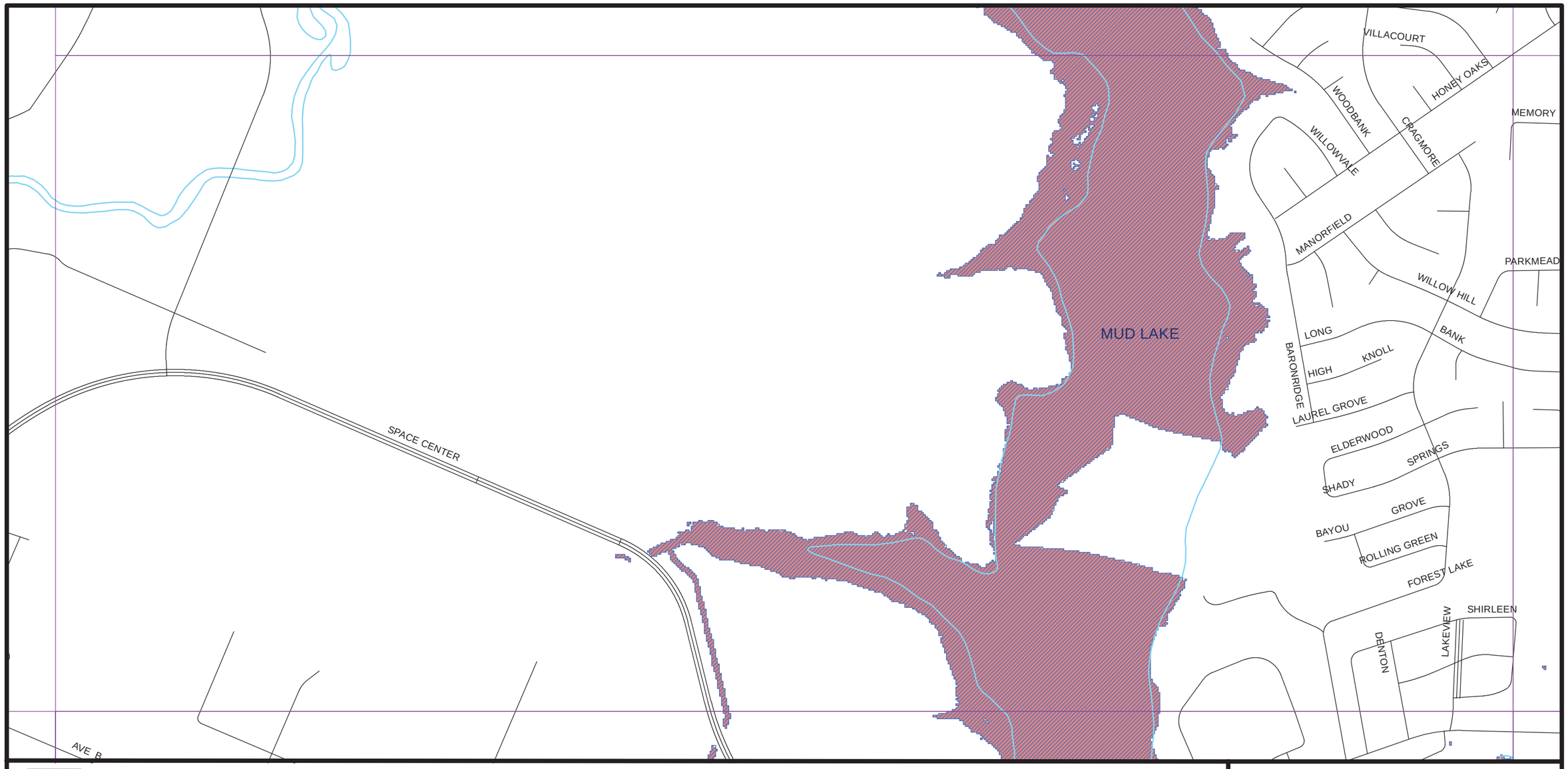
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

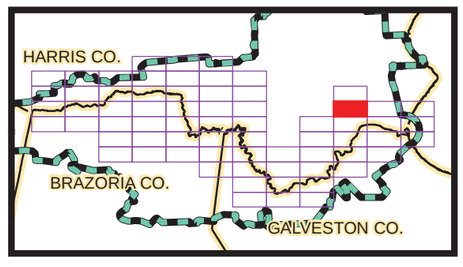
County Boundary

Match Lines

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

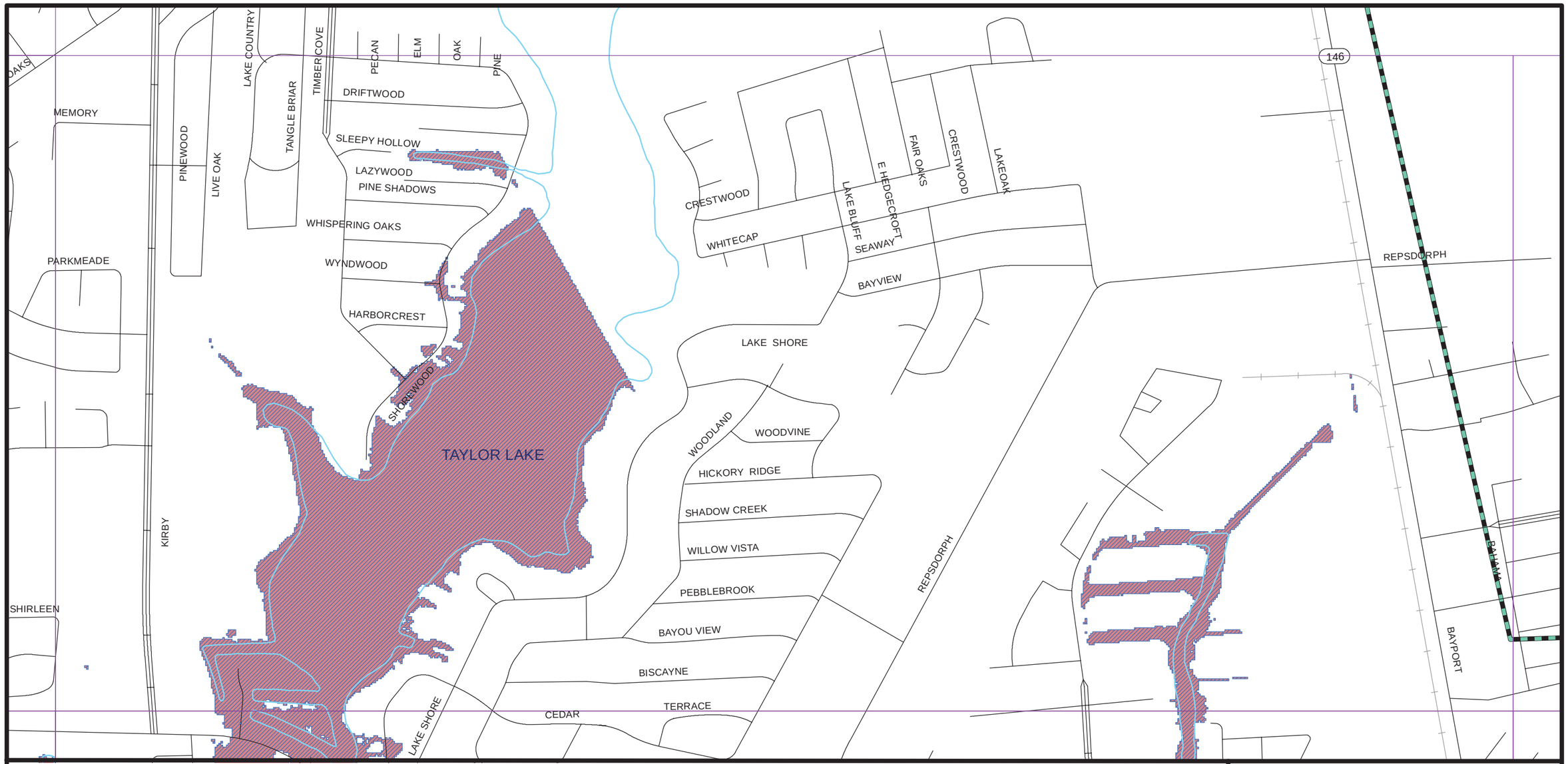
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

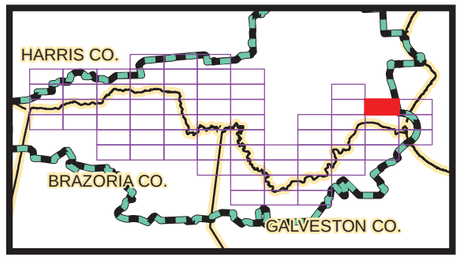
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

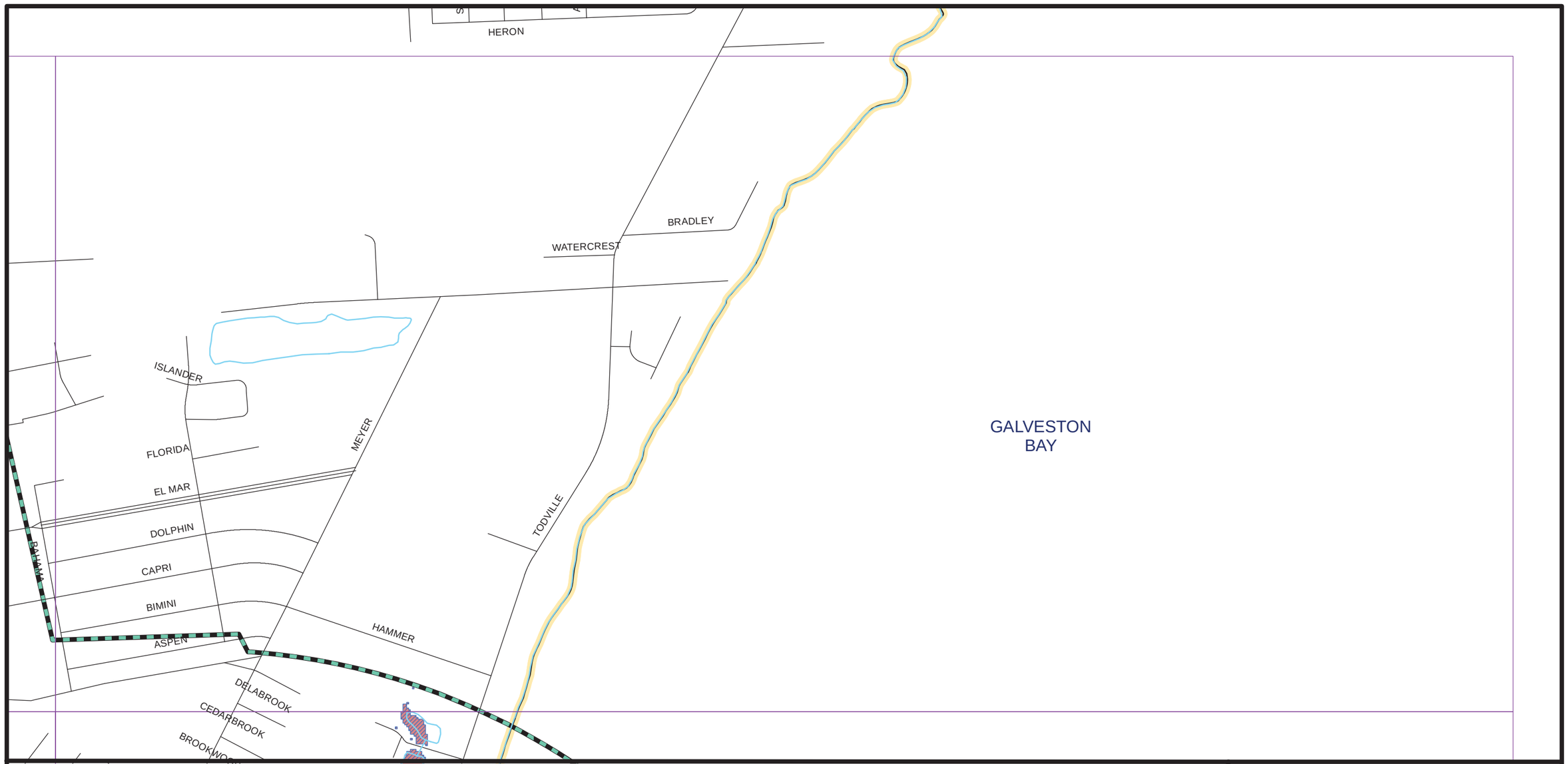
Clear Creek

Flood Risk Management Project

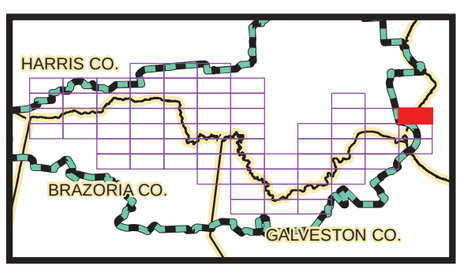
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

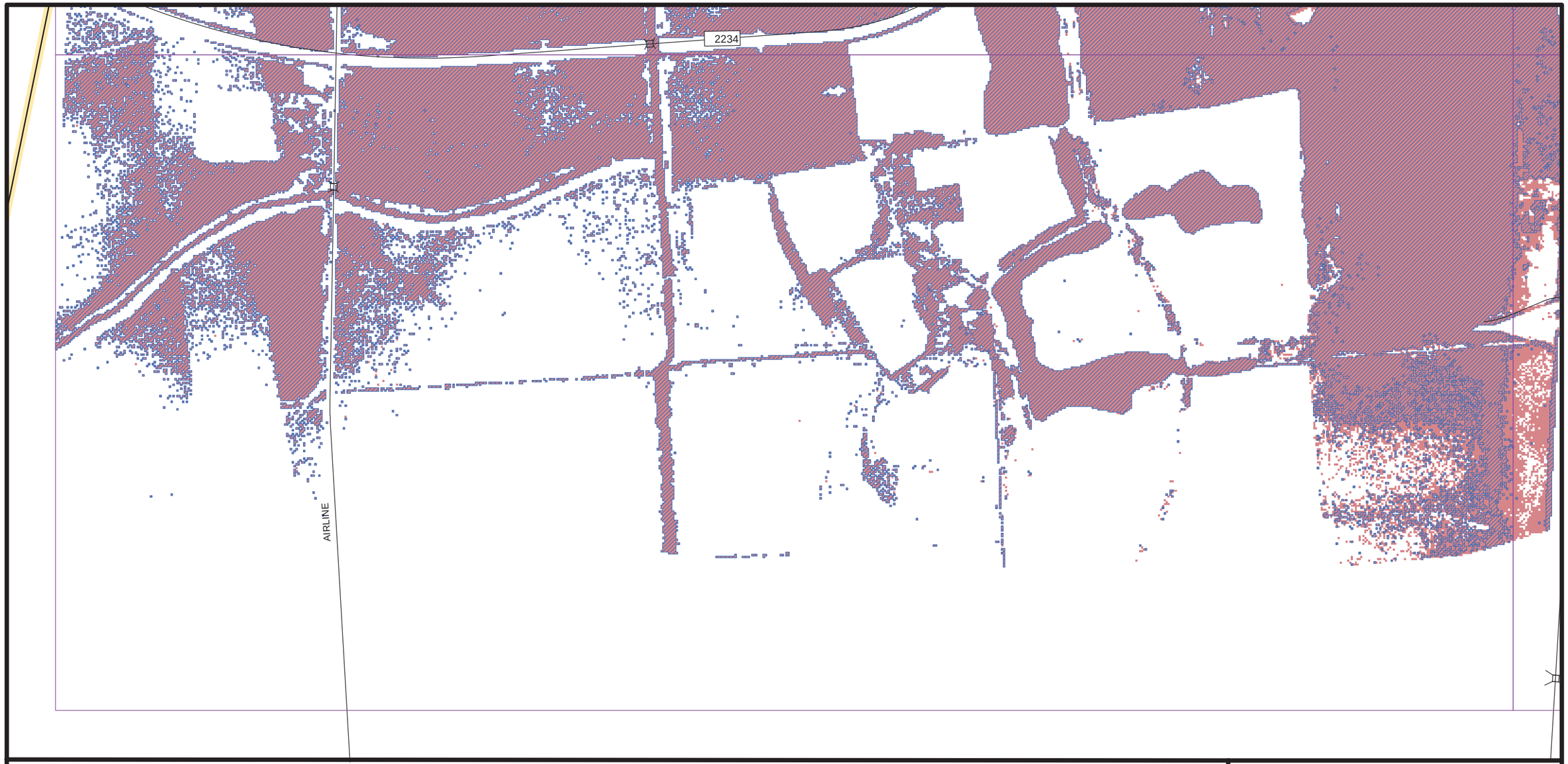
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

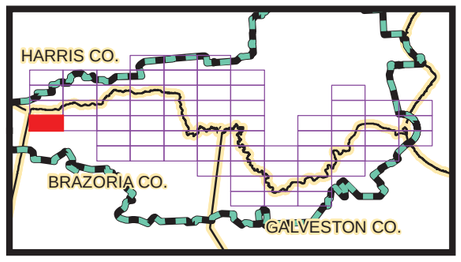
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

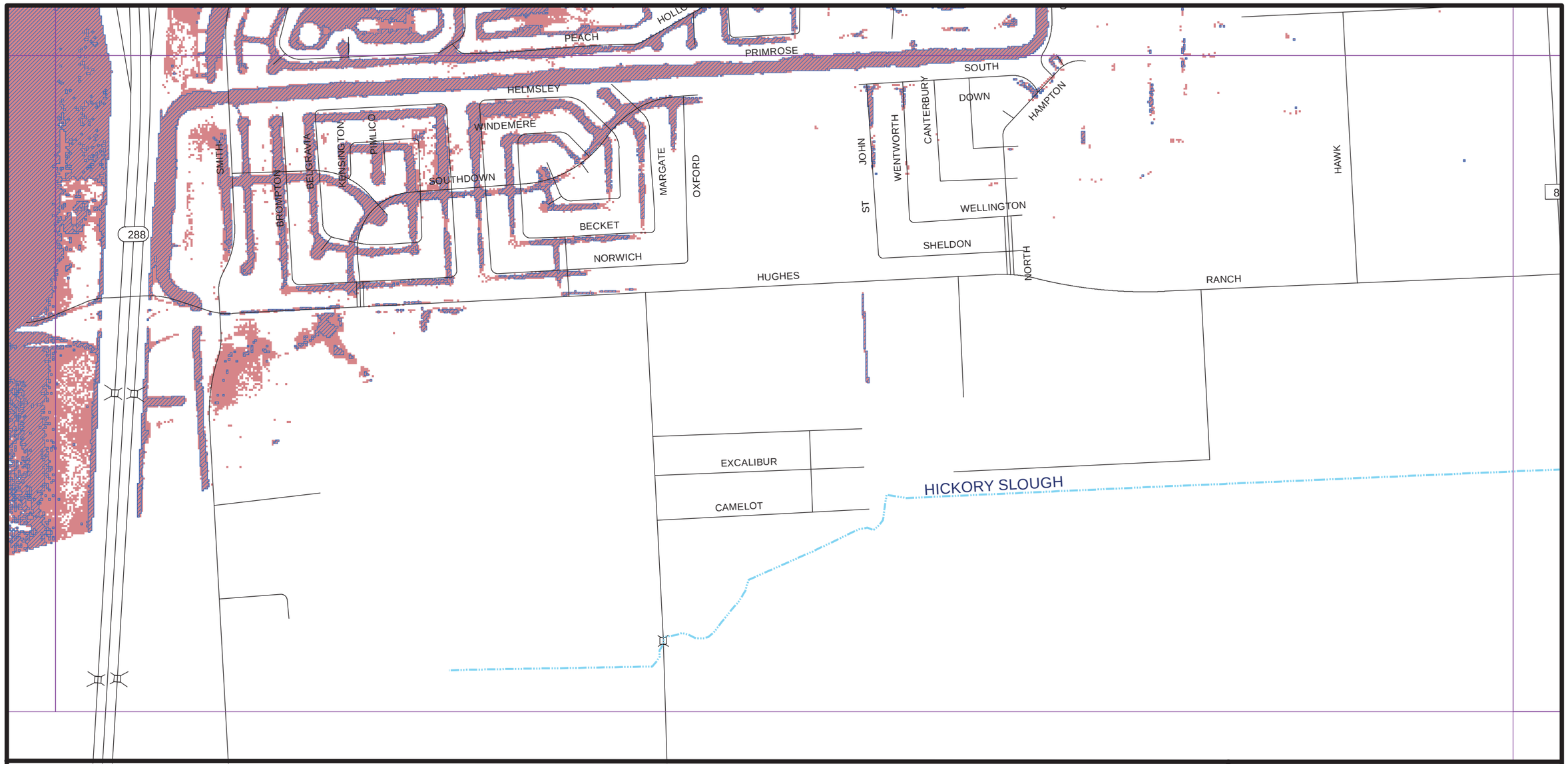
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

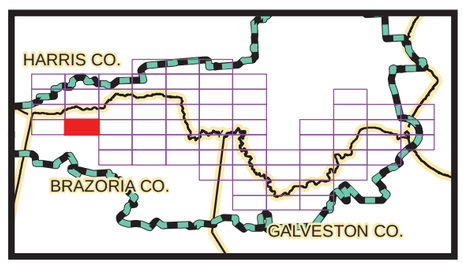
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

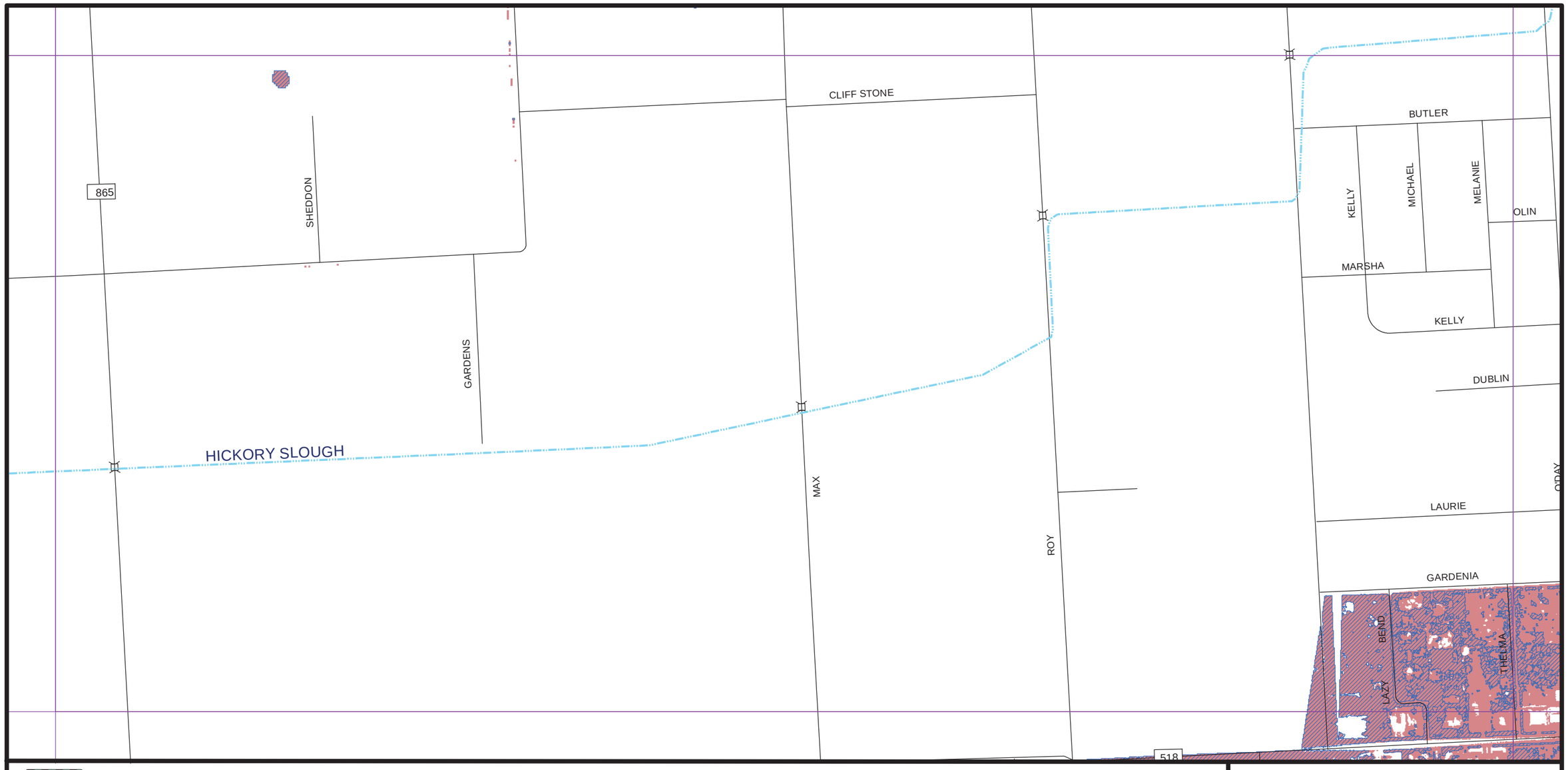
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

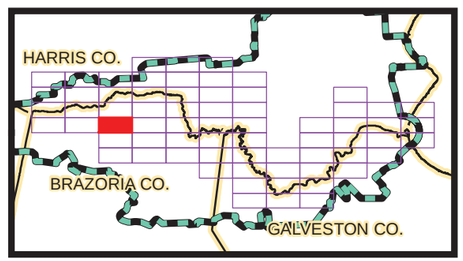
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

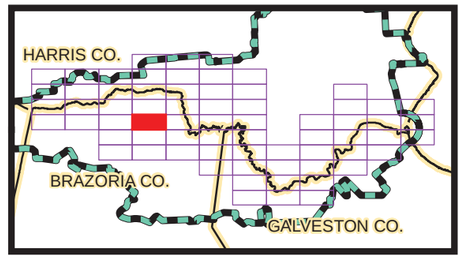
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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CHERYL
LINWOOD
PLUM
BRIAR
LINWOOD OAKS
YUPON
PILGRIMS
POINT
GREEN
HERITAGE
GREEN
MEADOW
BARRY GREEN
THREE
SISTERS
LEE
FARMERS
FIELD
LEE
JAMES
ST
TOWER
BRIDGE
LONDON
WATERLOO
LADY
LESLIE
ALEXANDER
WESTMINSTER
JACQUELYN
SHELA
BYRON
MALON
RANDALL
518
PEAR
ALNUT
HEED
BROADWAY
CHURCHILL
CLEAR CREEK
14
CAVAN
COUNTRY
GREEN
13

Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach

HARRIS CO.
BRAZORIA CO.
GALVESTON CO.

N
W
E
S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

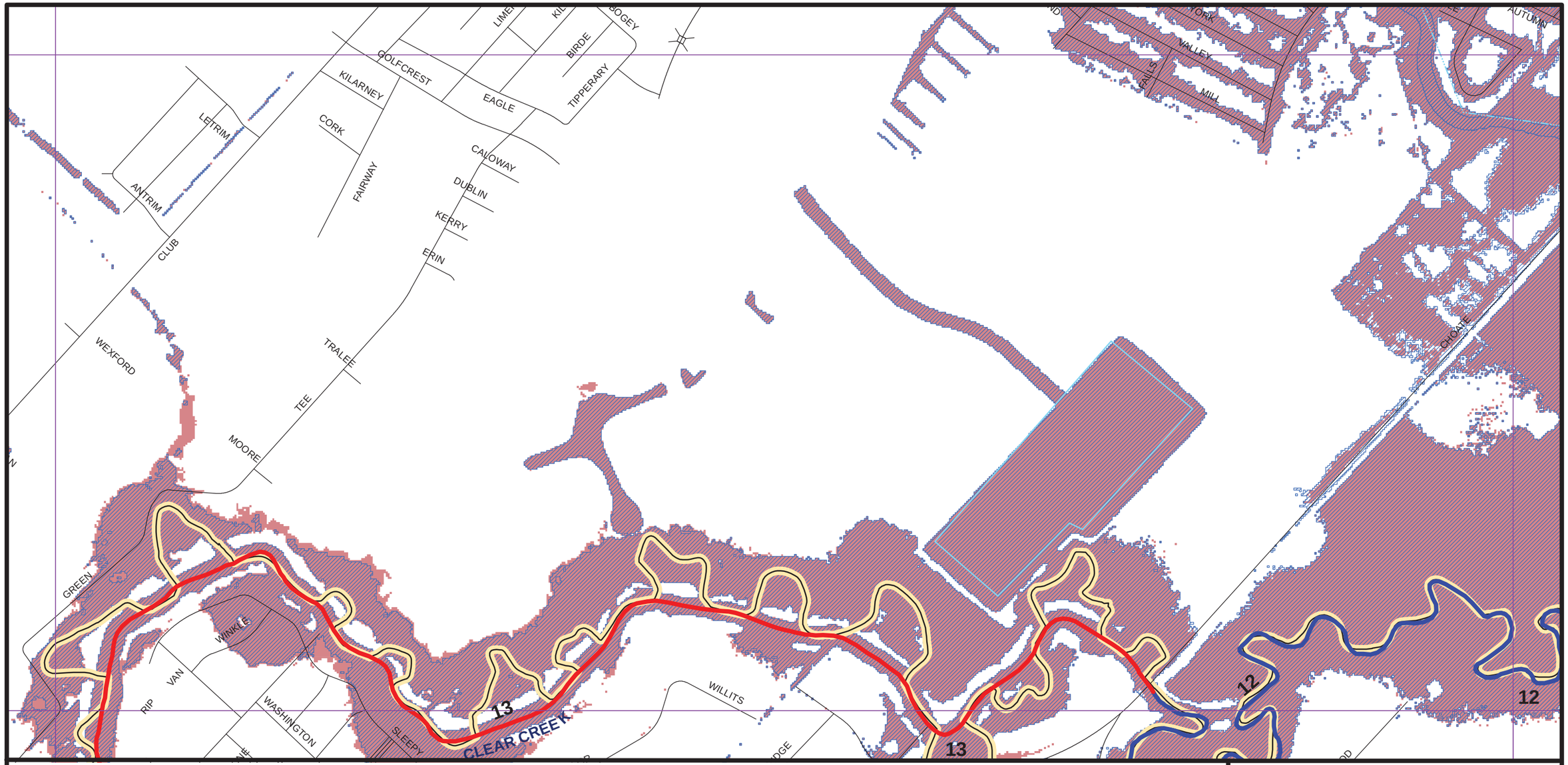
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

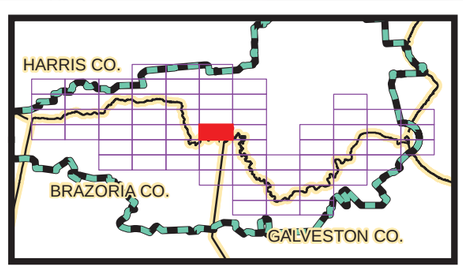
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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AUTUMN

BEAMER

2351

12

CLEAR CREEK

11

12

Clear Creek Watershed

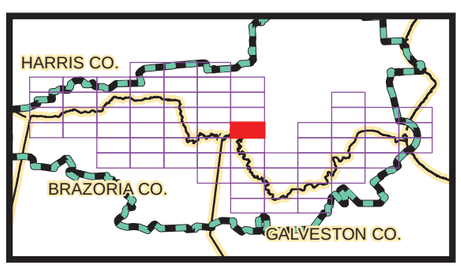
County Boundary

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5, 4... Economic Damage Reach



N
W E
S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

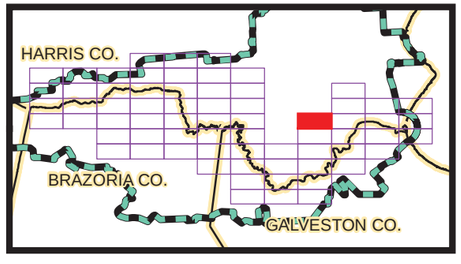
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N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

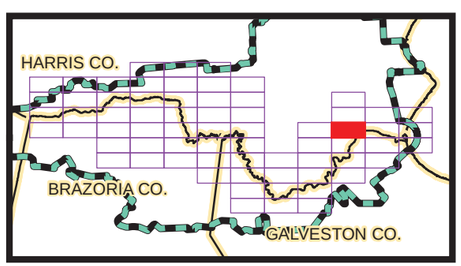
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
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E
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0 800 1,600 2,400 Feet

Figure 4.1 - 1

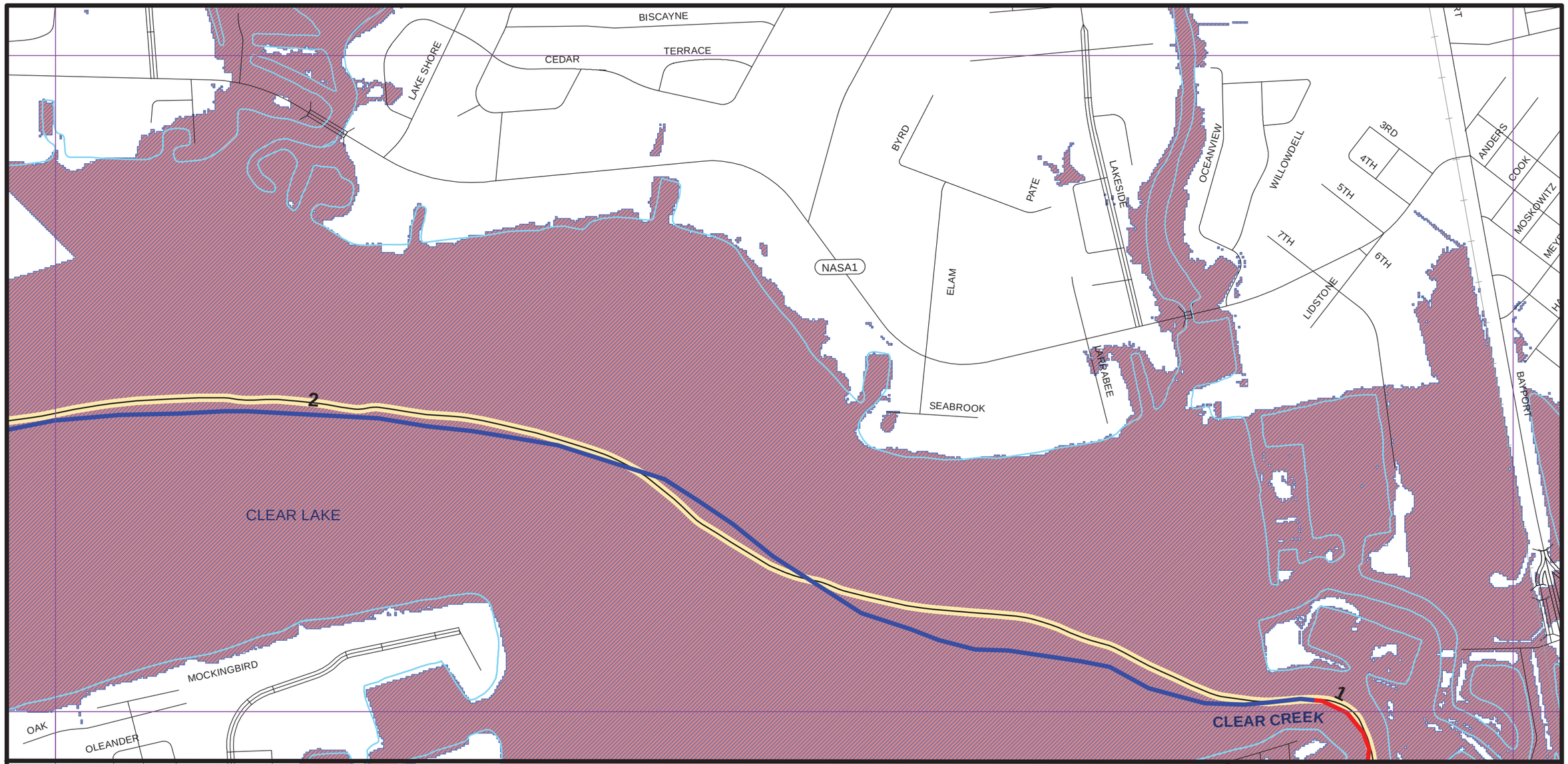
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

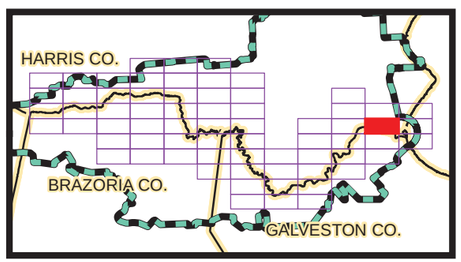
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
W E
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0 800 1,600 2,400 Feet

Figure 4.1 - 1

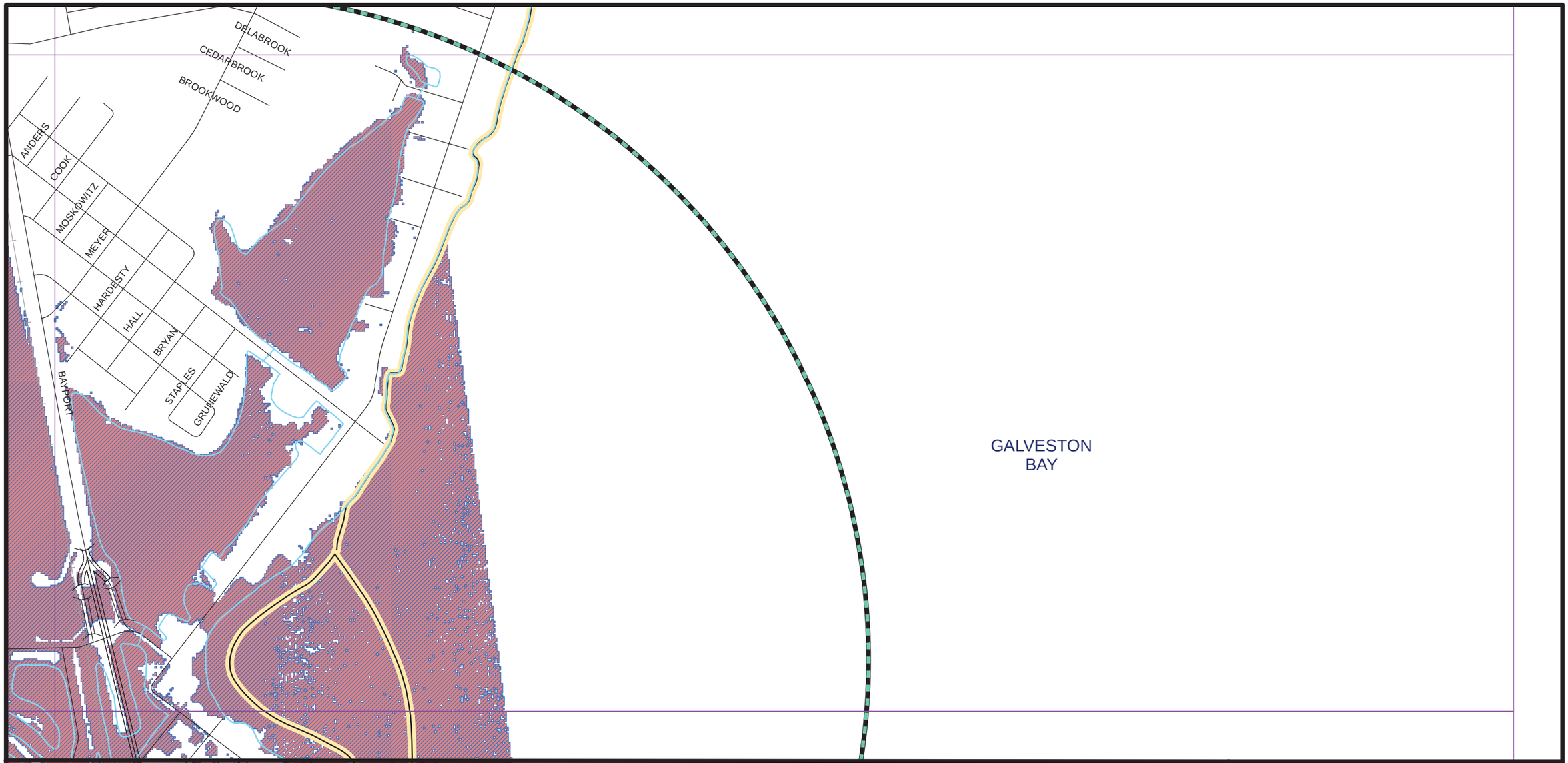
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

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Clear Creek Watershed

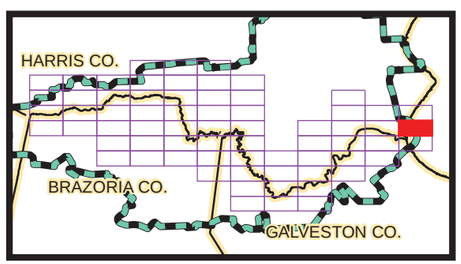
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N
W E
S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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Prepared for: USACE	
Job No.: 100013748	Scale: 1 inch = 800 feet
Prepared by: 19895	Date: 5/10/2012

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Clear Creek Watershed

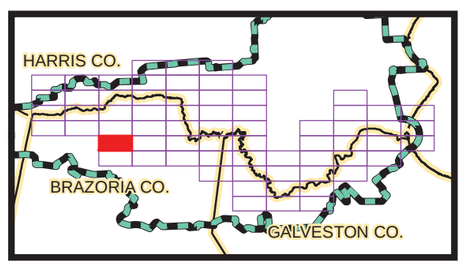
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

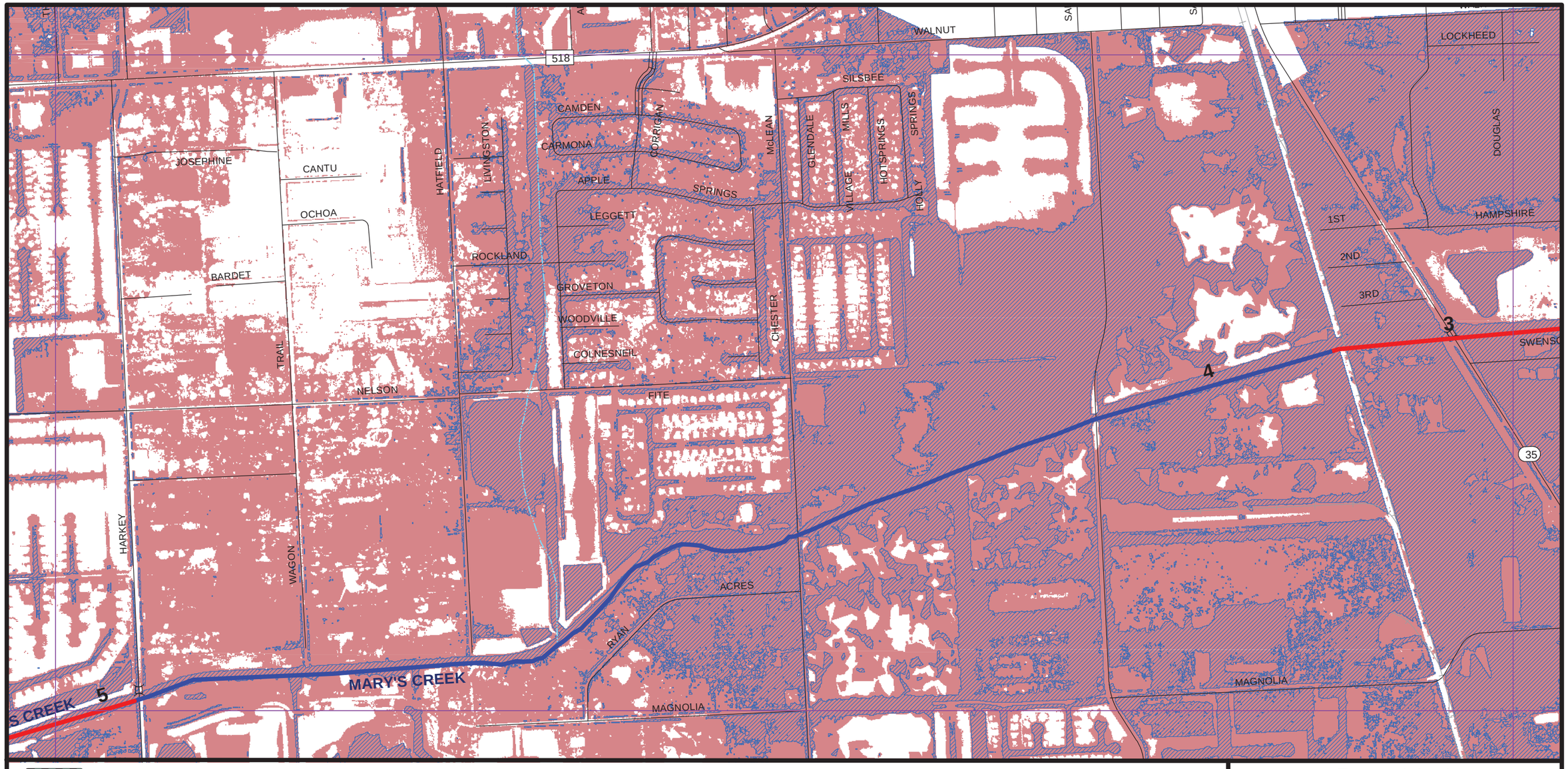
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

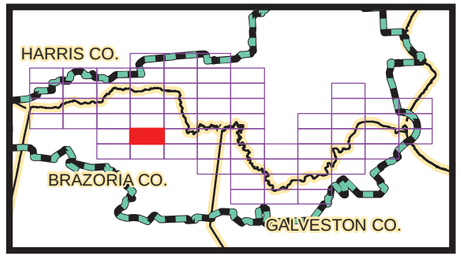
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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

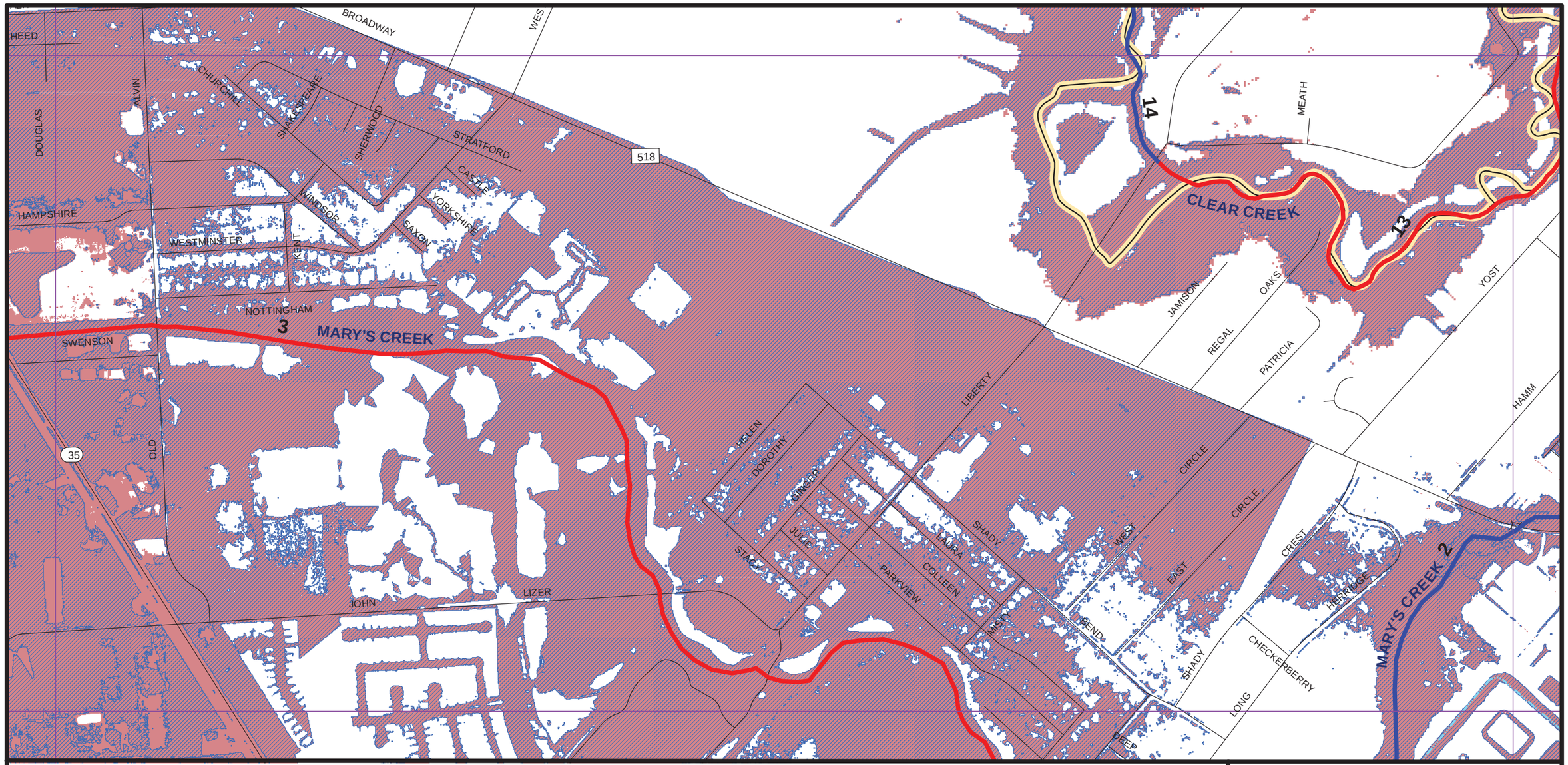
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

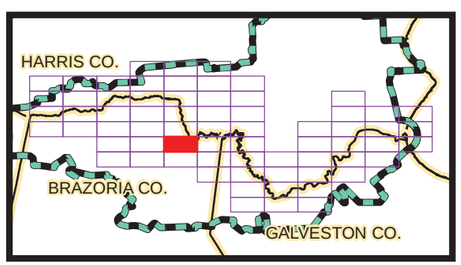
County Boundary

Match Lines

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N
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S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

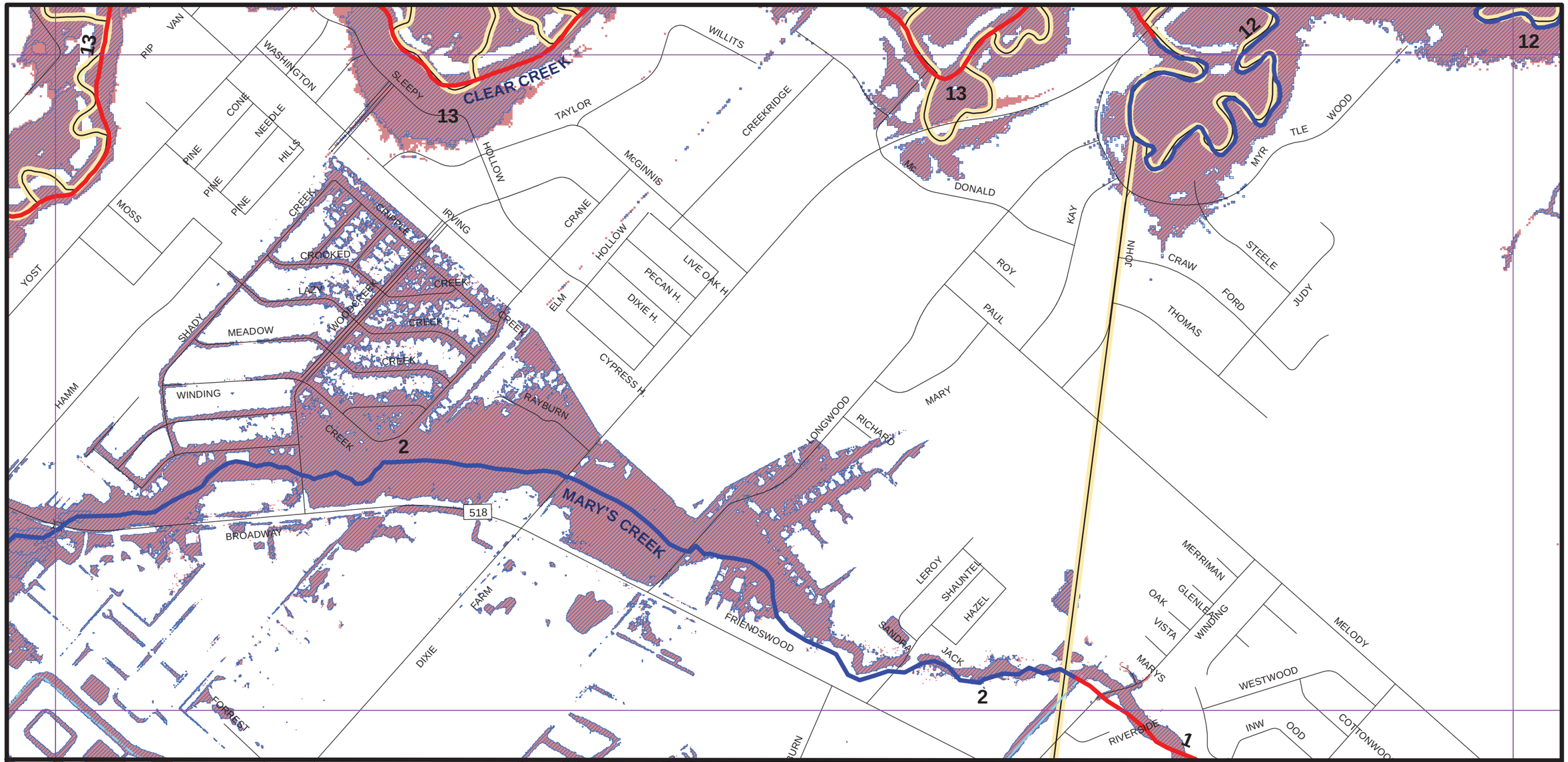
Clear Creek

Flood Risk Management Project

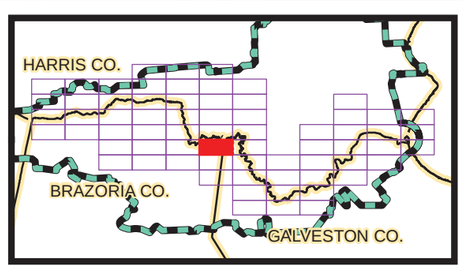
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Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
W E
S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

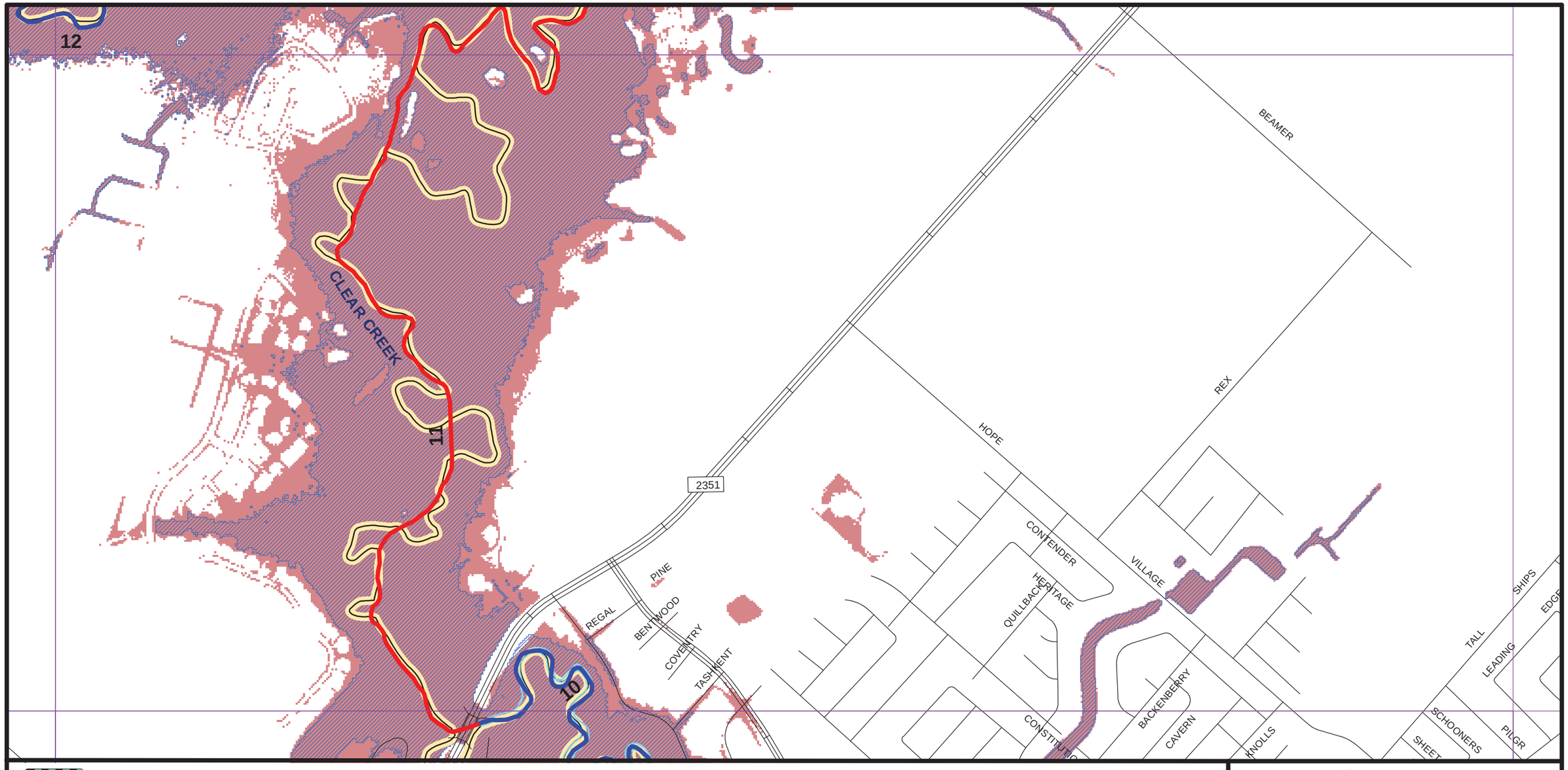
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

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Clear Creek Watershed

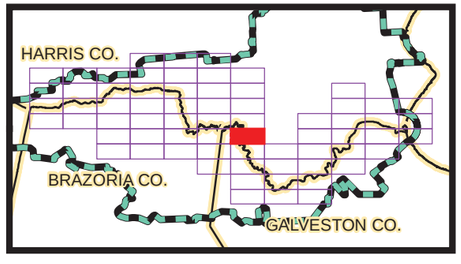
County Boundary

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

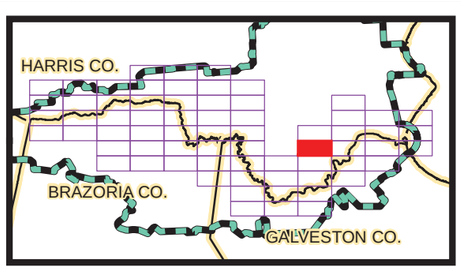
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SEAMASTER
SEAWOLF
VOY
RAM
ADA
PINES
SILVER
BONANZA
TITAN
HERCULES
FEATHER CRAFT
AREA
BAY
ORCHARD
BLOSSOM
TRAVIS
COLE
SPACE PARK
NASSAU
BASILAN
BAY
KINGS LYNN
KINGSROW
ANNE
WHITEHALL
NASA1

Clear Creek Watershed
County Boundary
Match Lines
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1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



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0 800 1,600 2,400 Feet

Figure 4.1 - 1

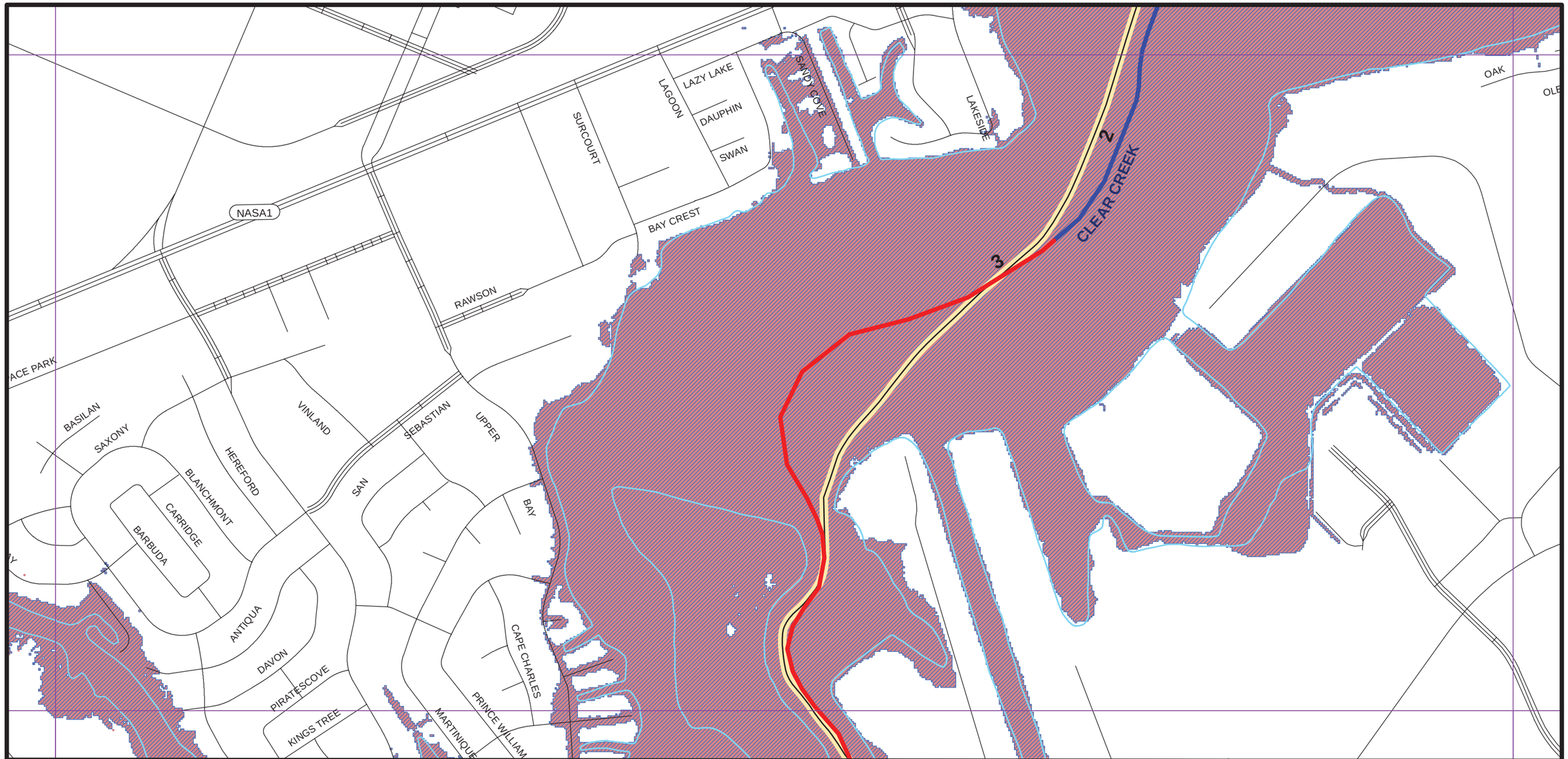
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

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Clear Creek Watershed

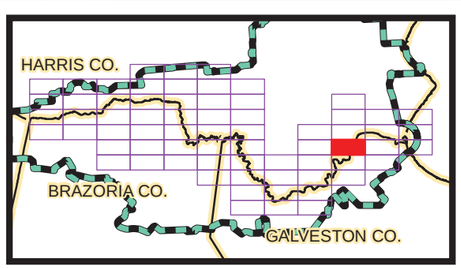
County Boundary

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5, 4... Economic Damage Reach



N
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0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

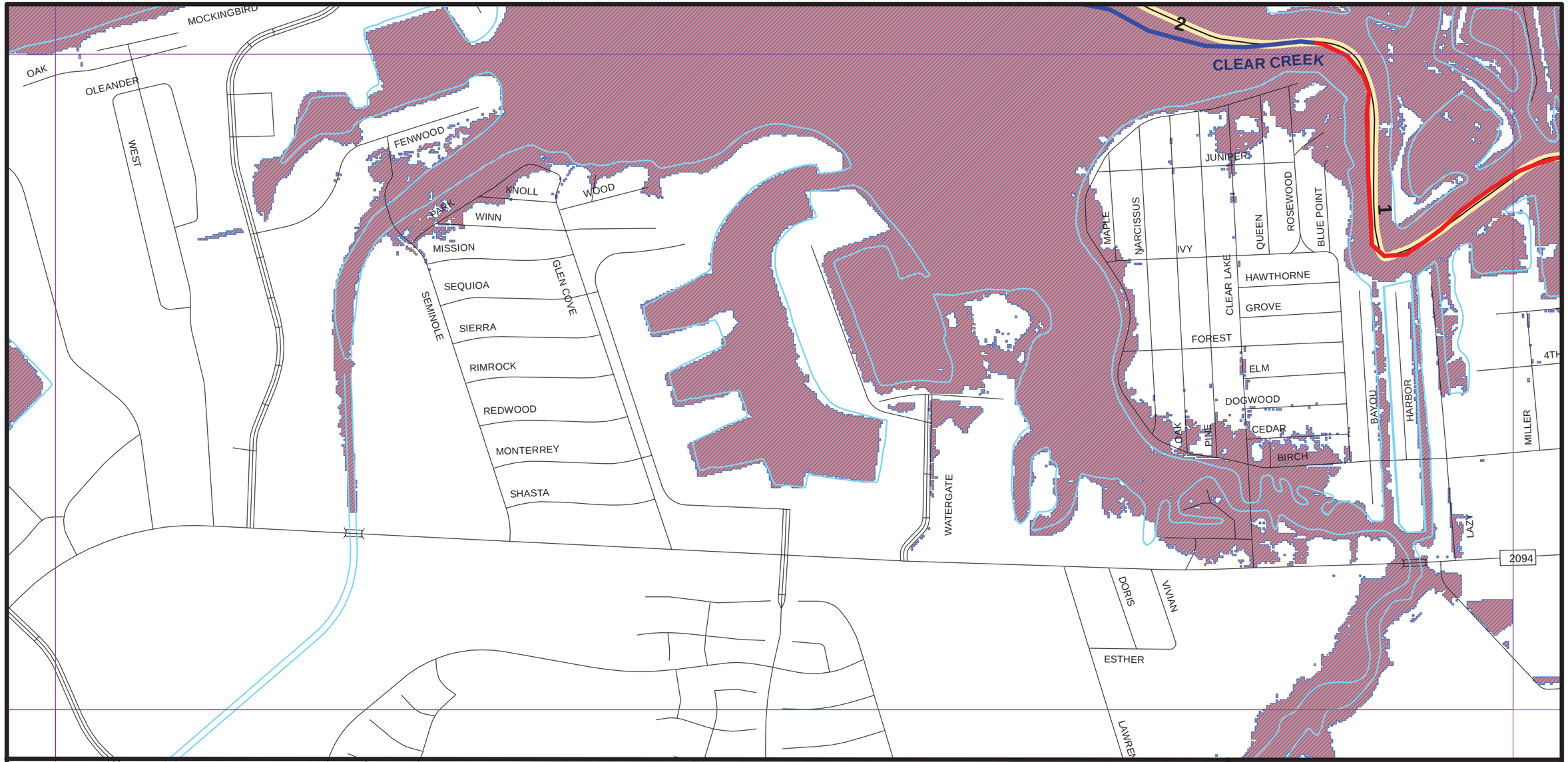
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

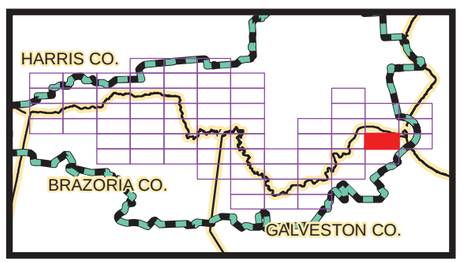
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

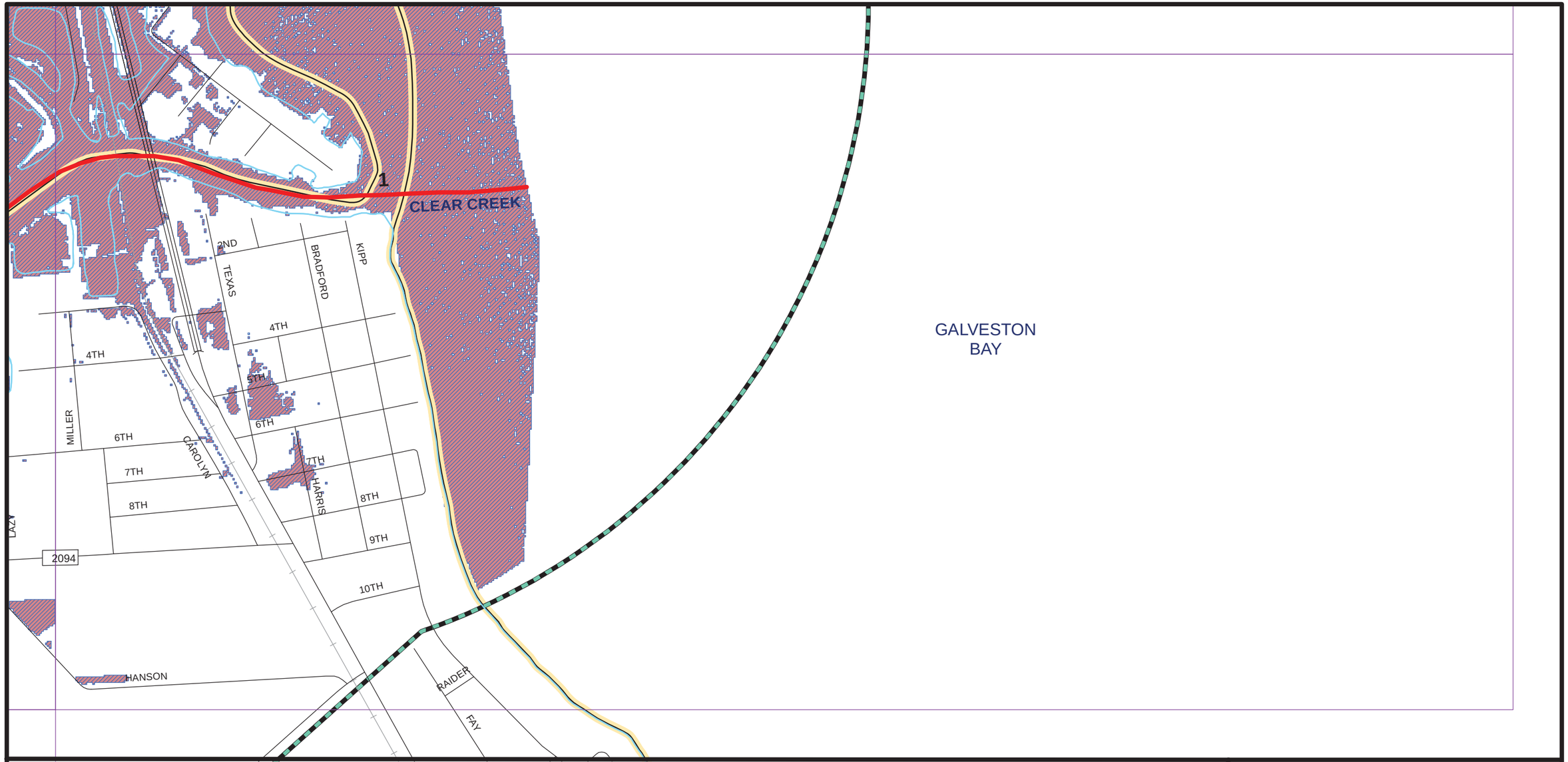
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

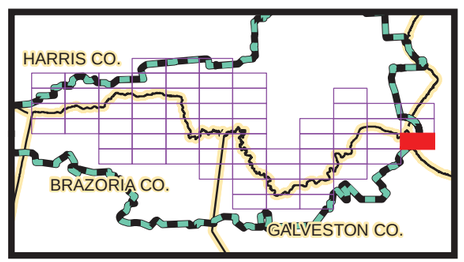
County Boundary

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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

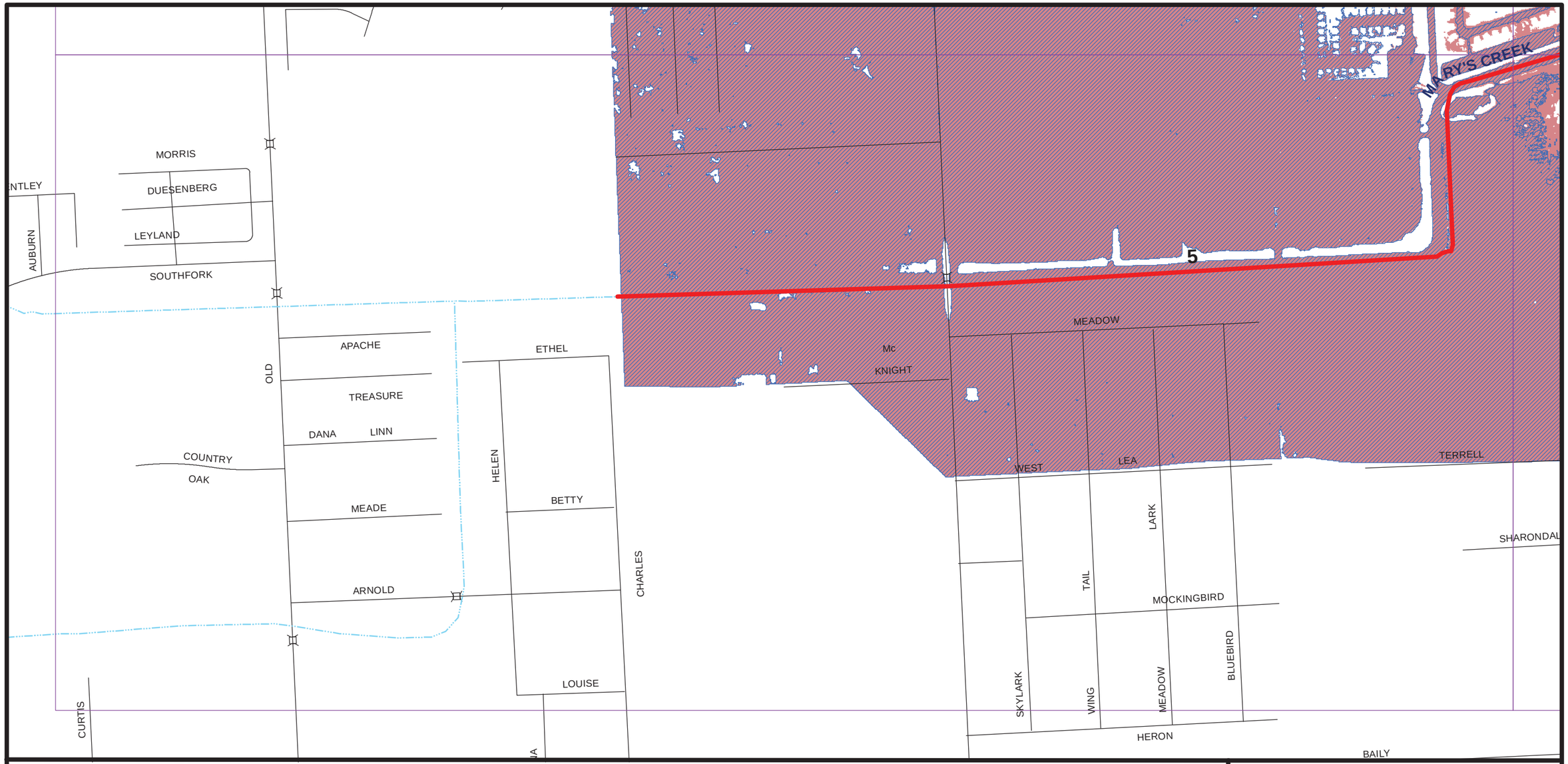
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Flood Risk Management Project

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Clear Creek Watershed

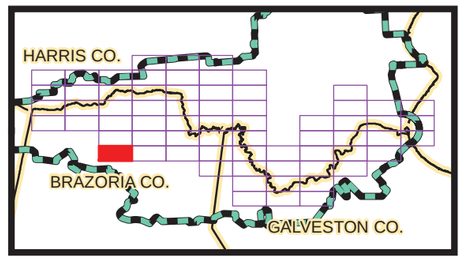
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

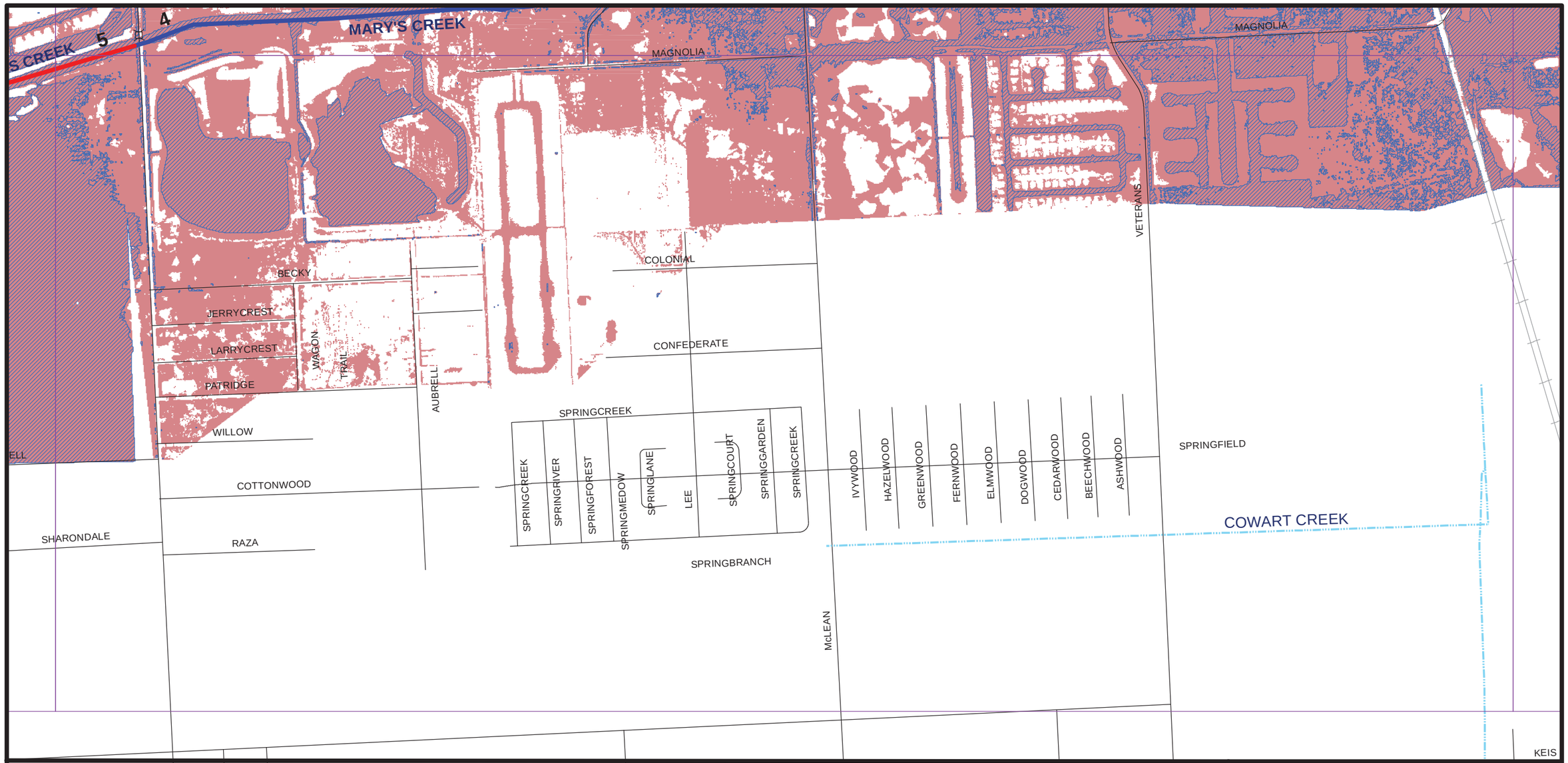
Clear Creek

Flood Risk Management Project

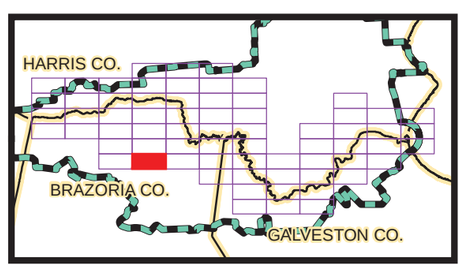
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- Clear Creek Watershed
- County Boundary
- Match Lines
- 1% Chance (100 year) Floodplain - With Project
- 1% Chance (100 year) Floodplain - Without Project
- **5, 4...** Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

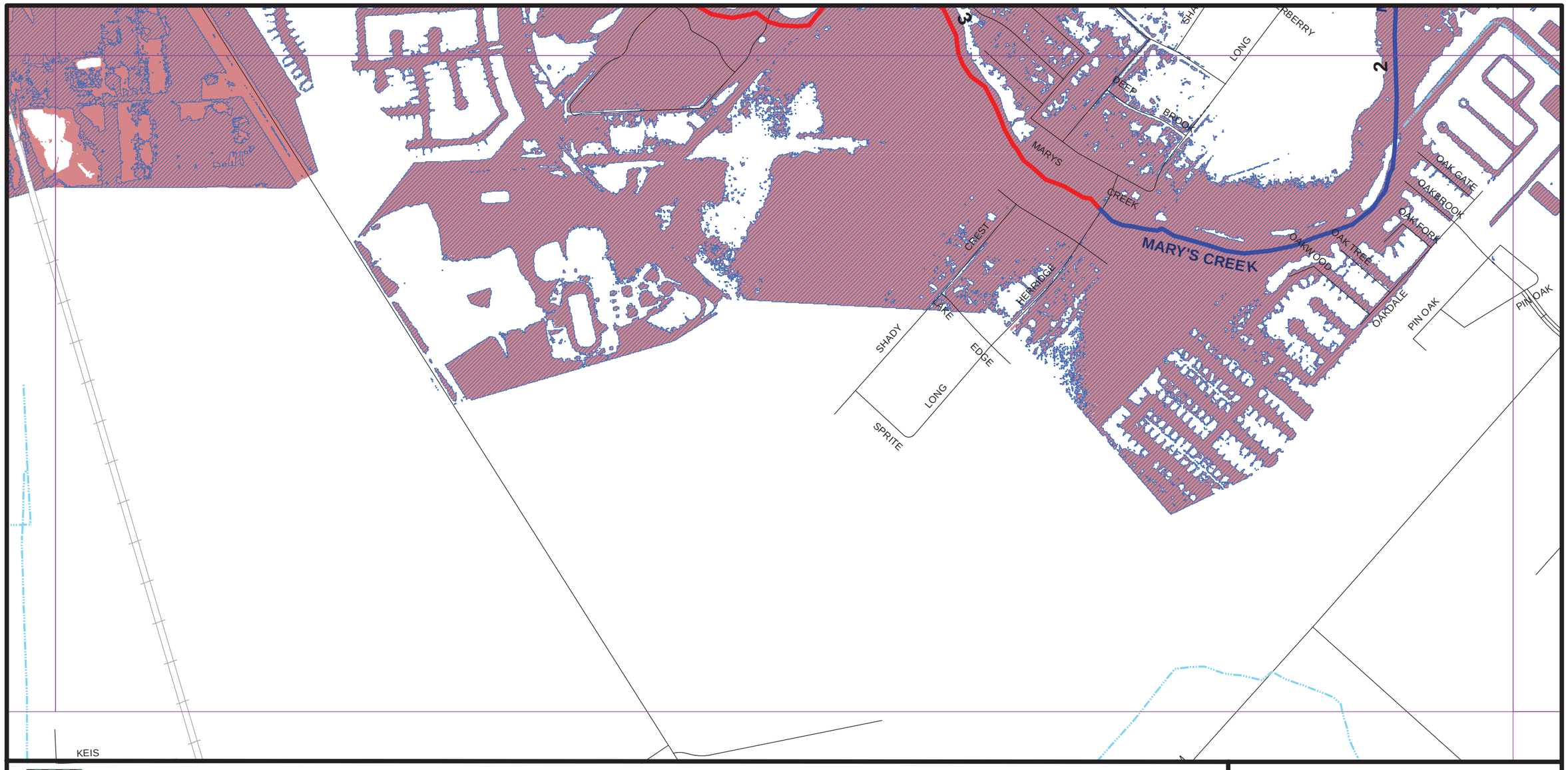
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

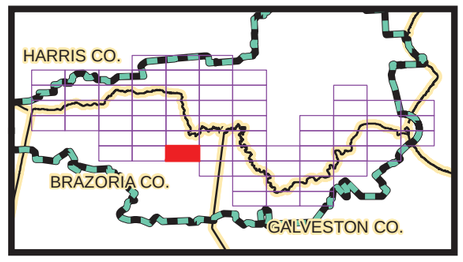
County Boundary

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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

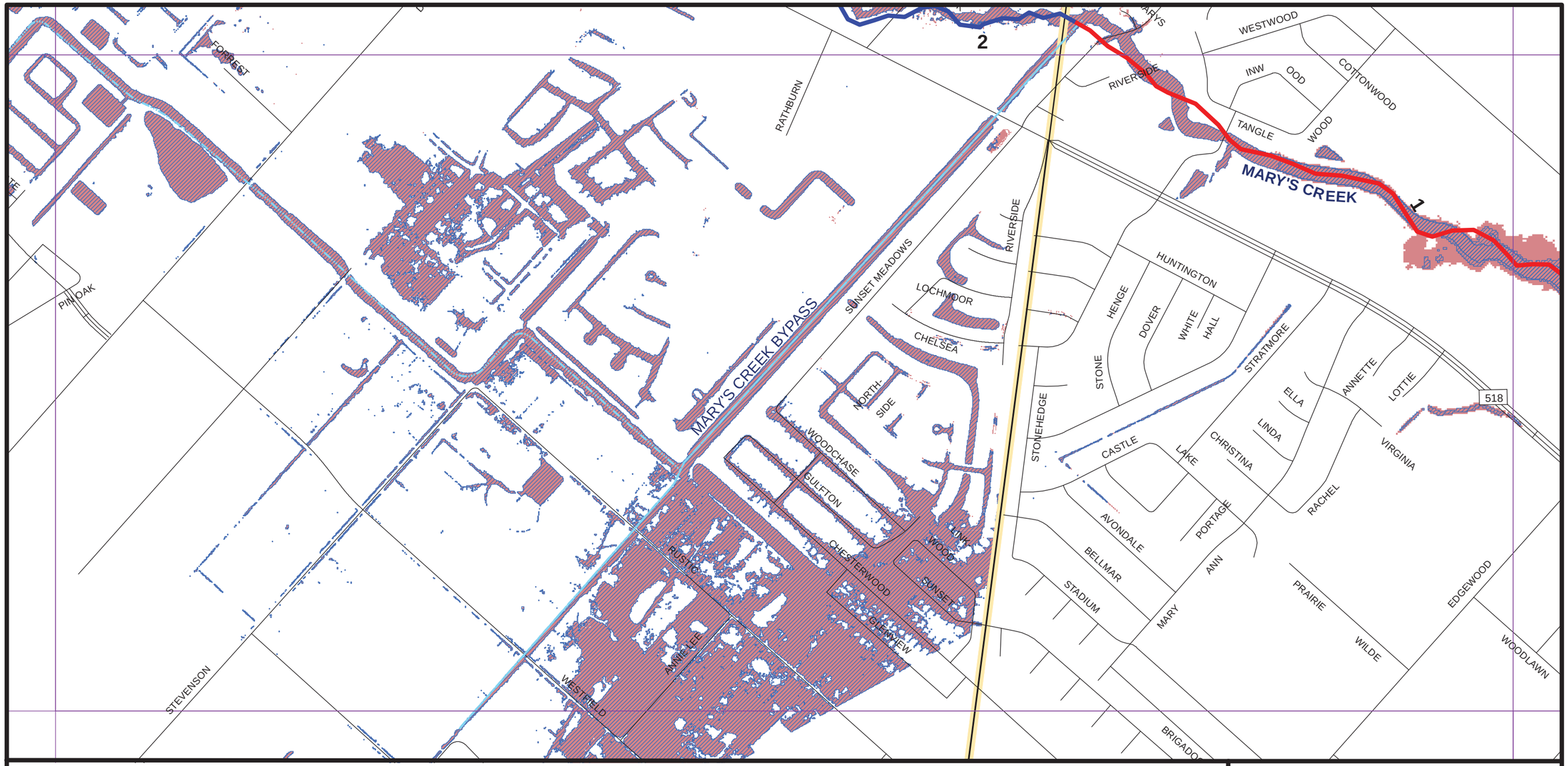
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

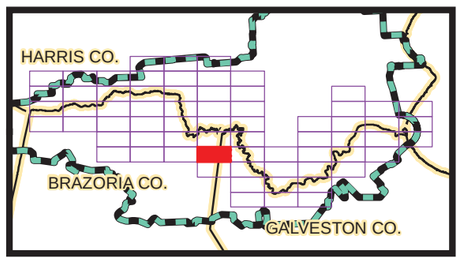
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5, 4... Economic Damage Reach



N

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0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

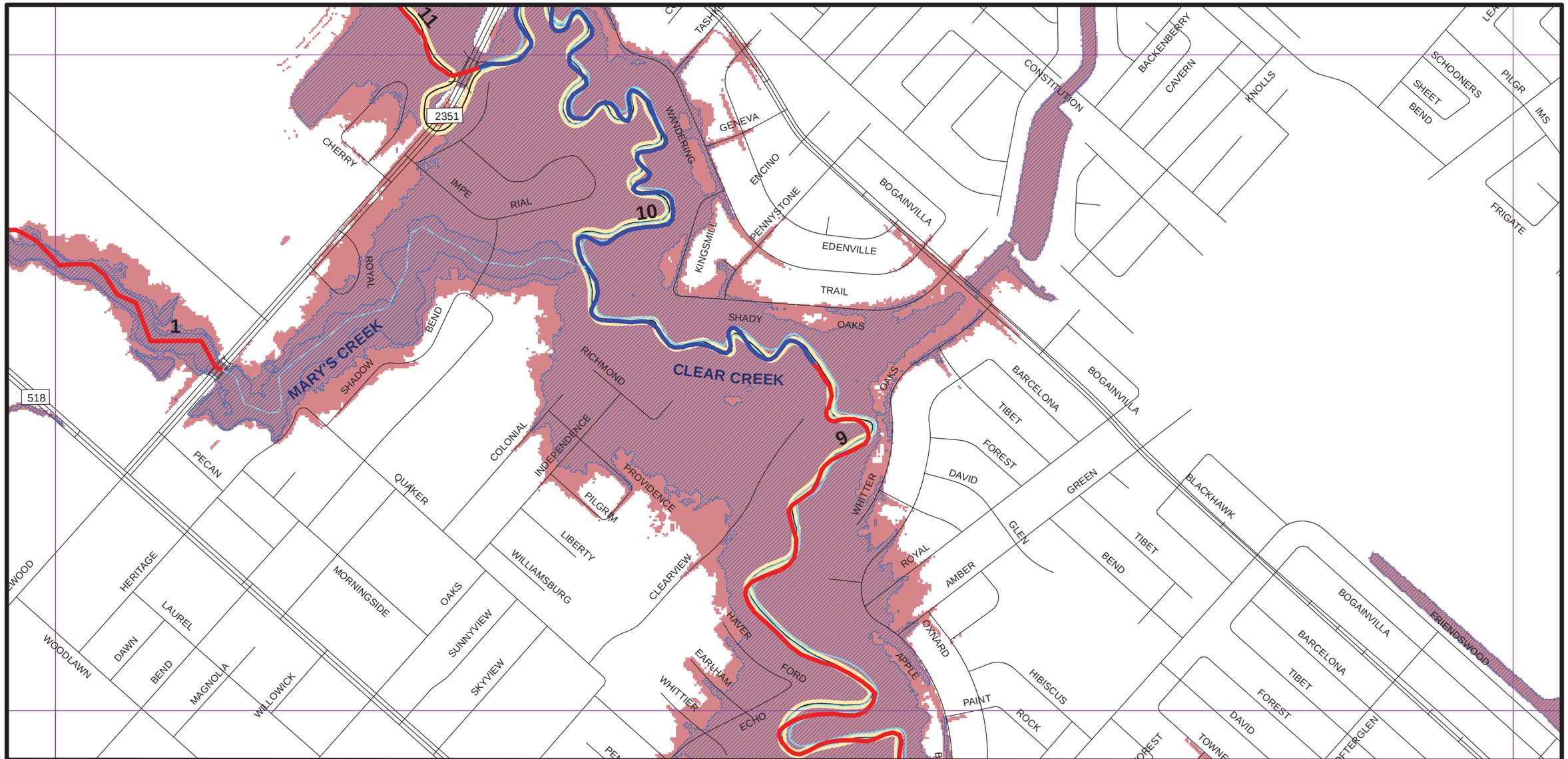
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Flood Risk Management Project

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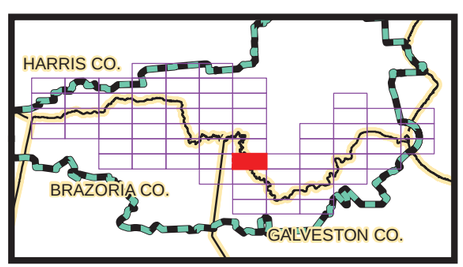
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5, 4... Economic Damage Reach



N W E S

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Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

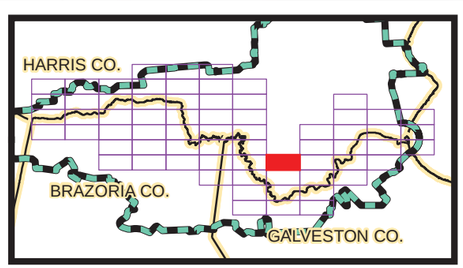
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- Clear Creek Watershed
- County Boundary
- Match Lines
- 1% Chance (100 year) Floodplain - With Project
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- **5, 4...** Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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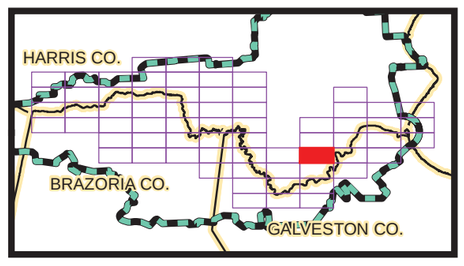
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N

W E

S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

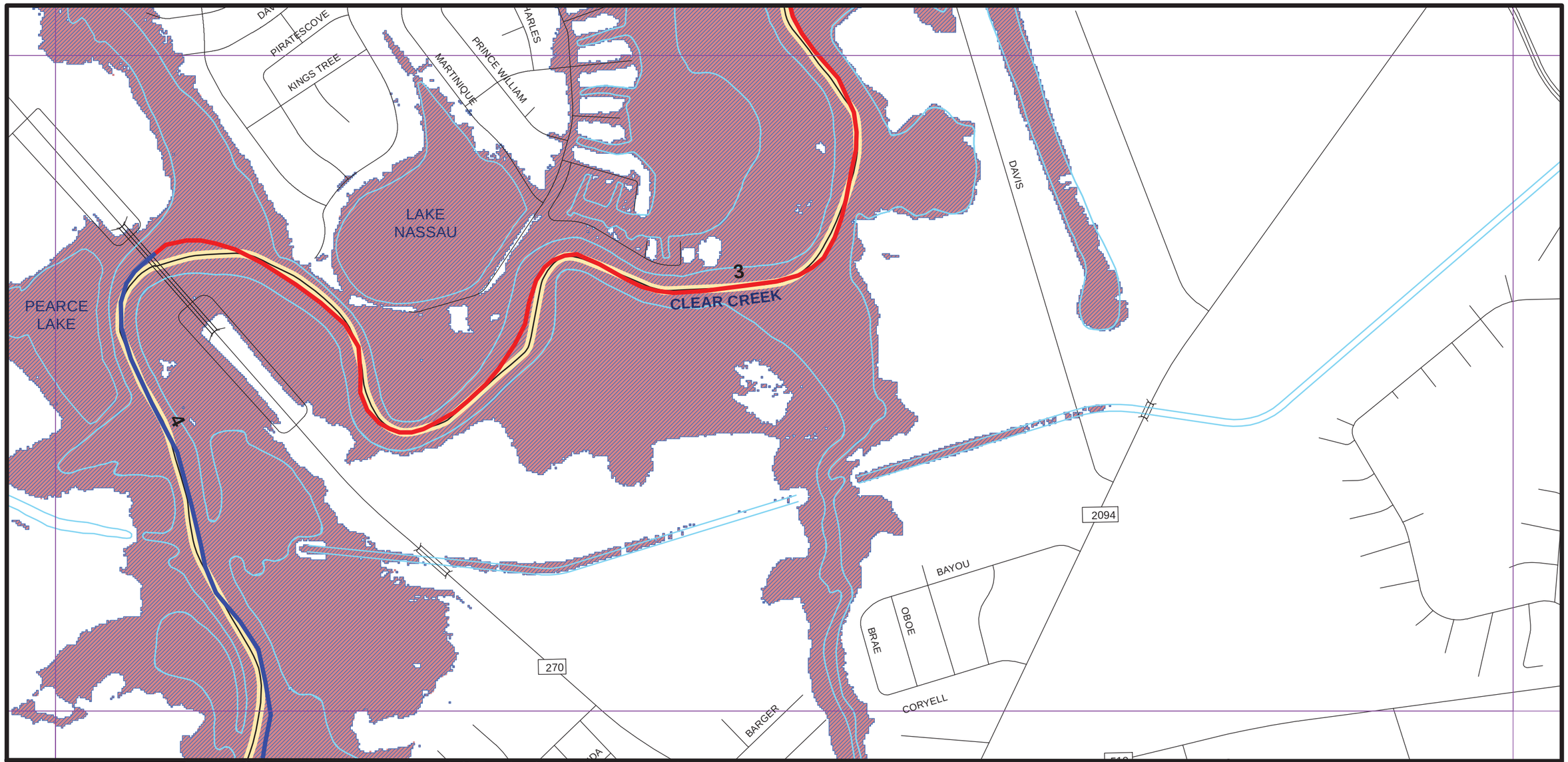
Clear Creek

Flood Risk Management Project

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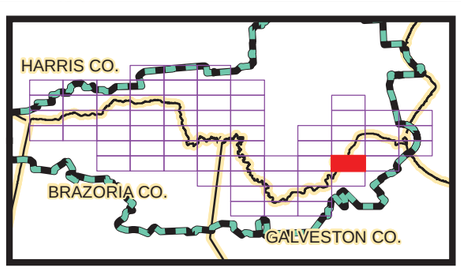
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

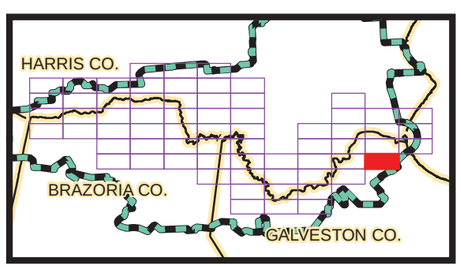
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

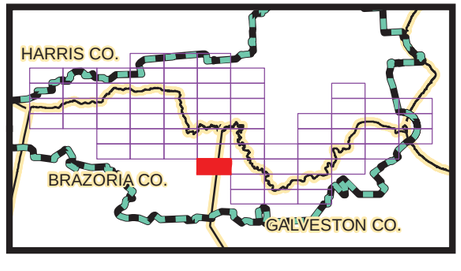
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Prepared for: USACE	
Job No.: 100013748	Scale: 1 inch = 800 feet
Prepared by: 19895	Date: 5/10/2012

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STEVENSON
WEST FIELD
HASTINGS FRIENDSWOOD
MEADOW
BROWN
WEST FRIENDSWOOD
QUINN
CLOVER
RIDGE
CHESTER
BRIGADOON
GARDEN
SHADOW
SUNSET
2351
HOLLOW
PINE
RUSTIC
CREEK
TALL
COWARDS
LEAF
BROWN
WEST FRIENDSWOOD
QUINN

Clear Creek Watershed
County Boundary
Match Lines
1% Chance (100 year) Floodplain - With Project
1% Chance (100 year) Floodplain - Without Project
5, 4... Economic Damage Reach



N
W
E
S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

Sheet 58 of 68

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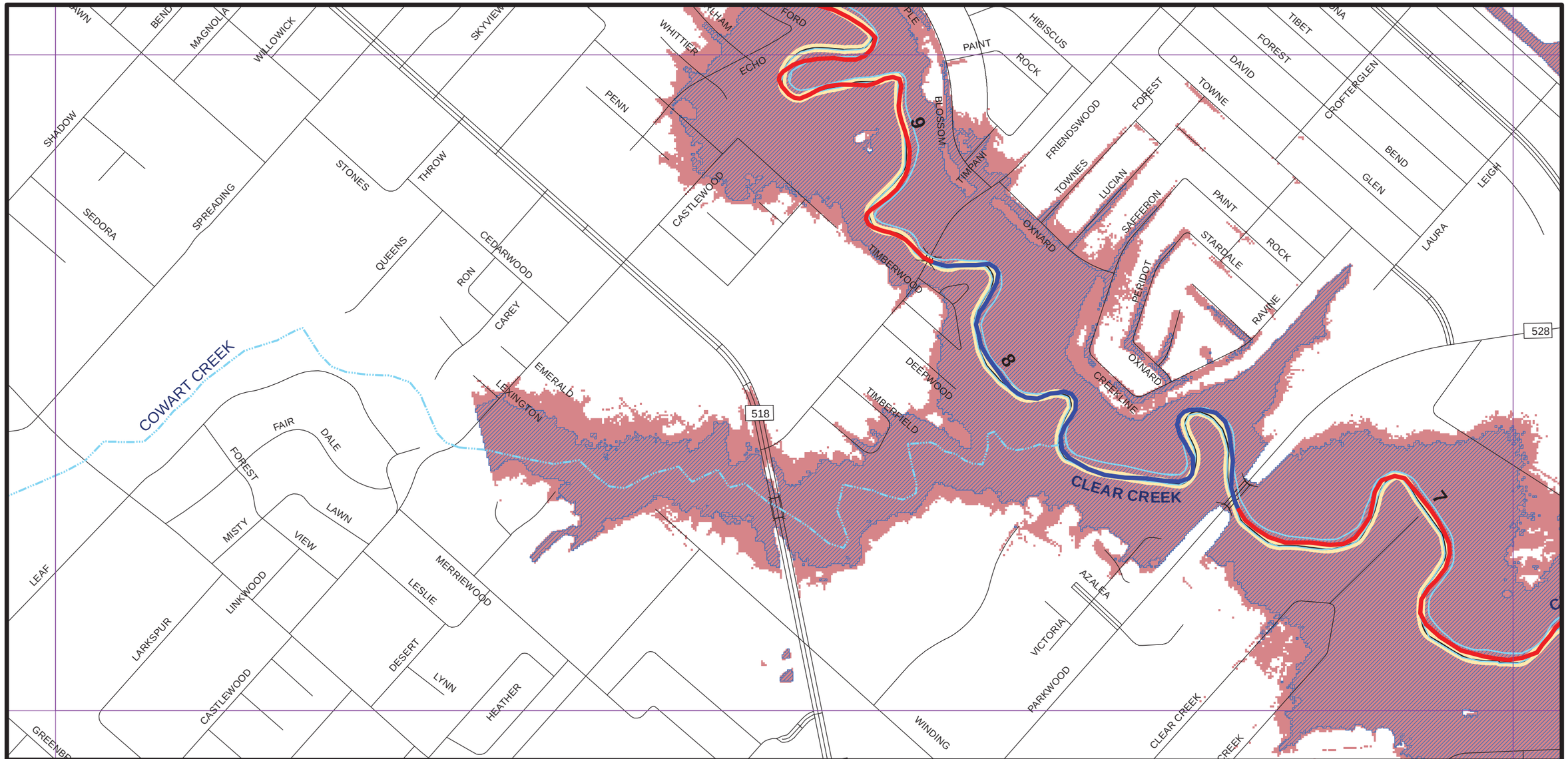


Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

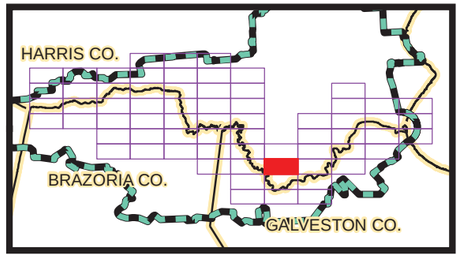
County Boundary

Match Lines

1% Chance (100 year) Floodplain - With Project

1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

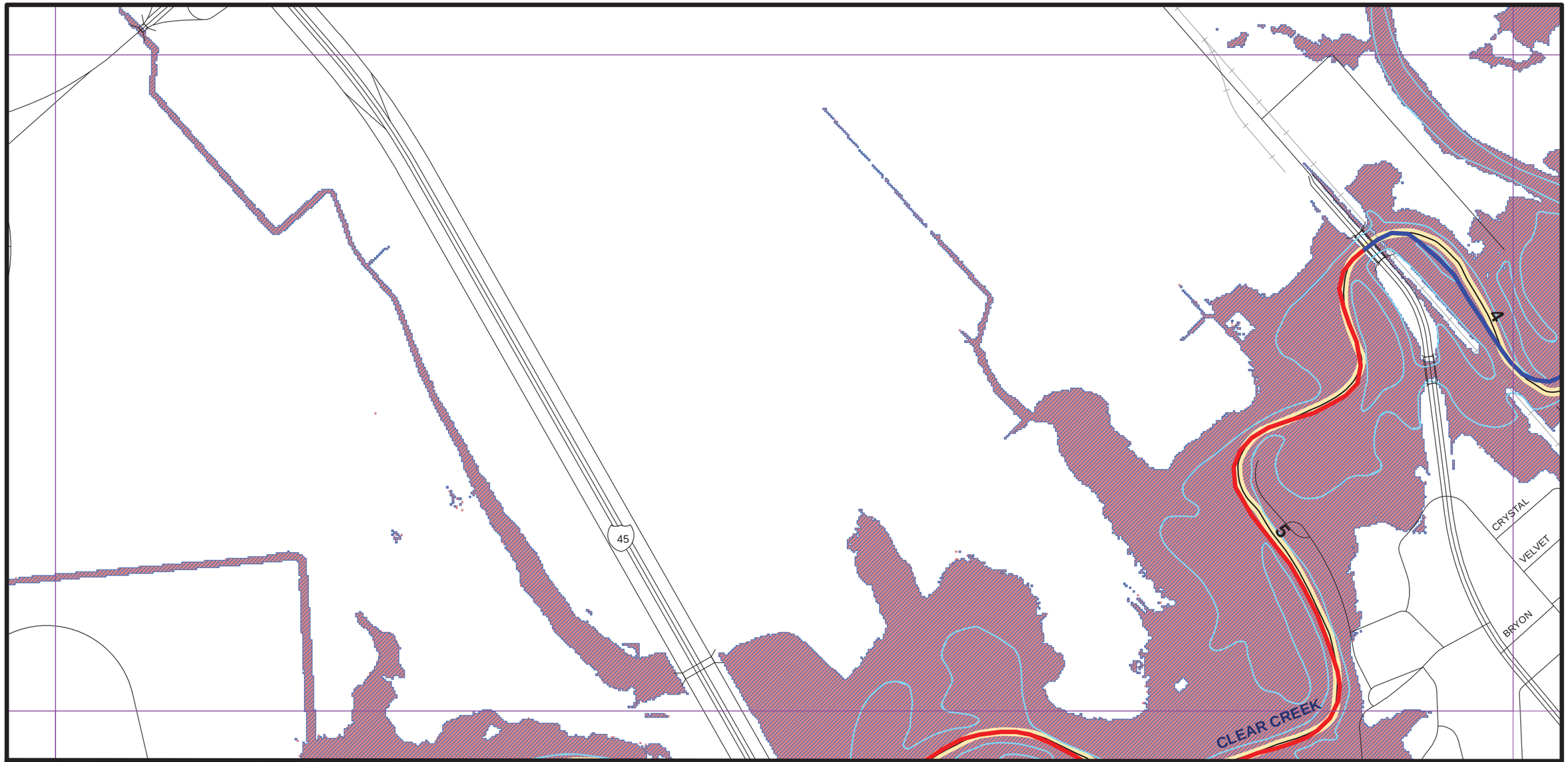
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

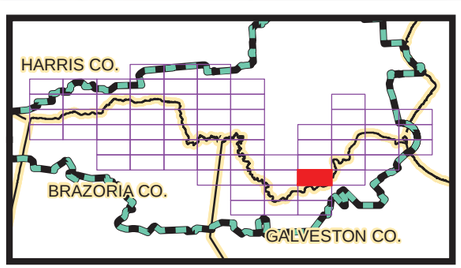
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

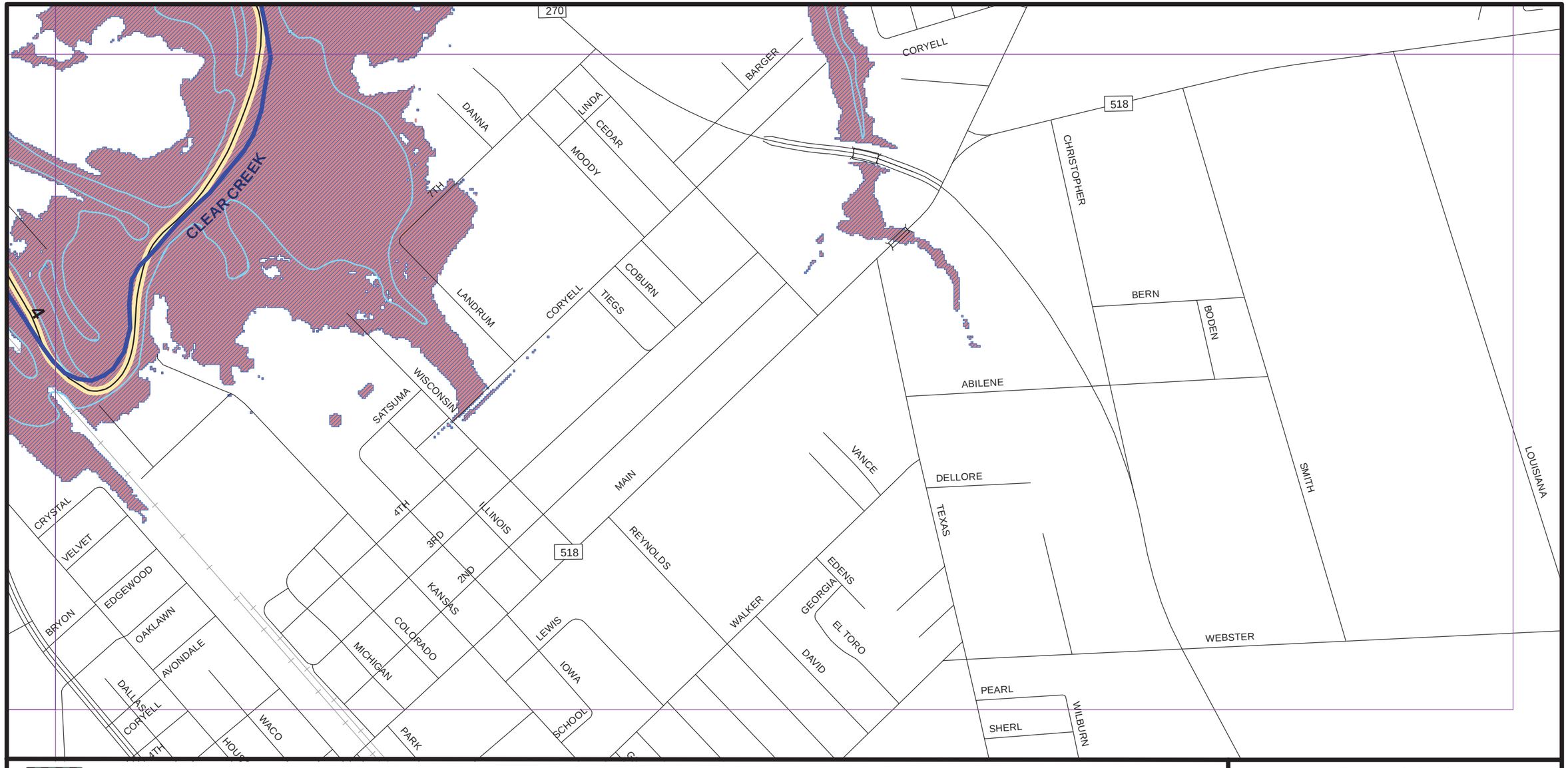
Clear Creek

Flood Risk Management Project

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Clear Creek Watershed

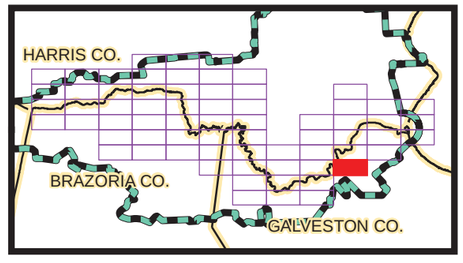
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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

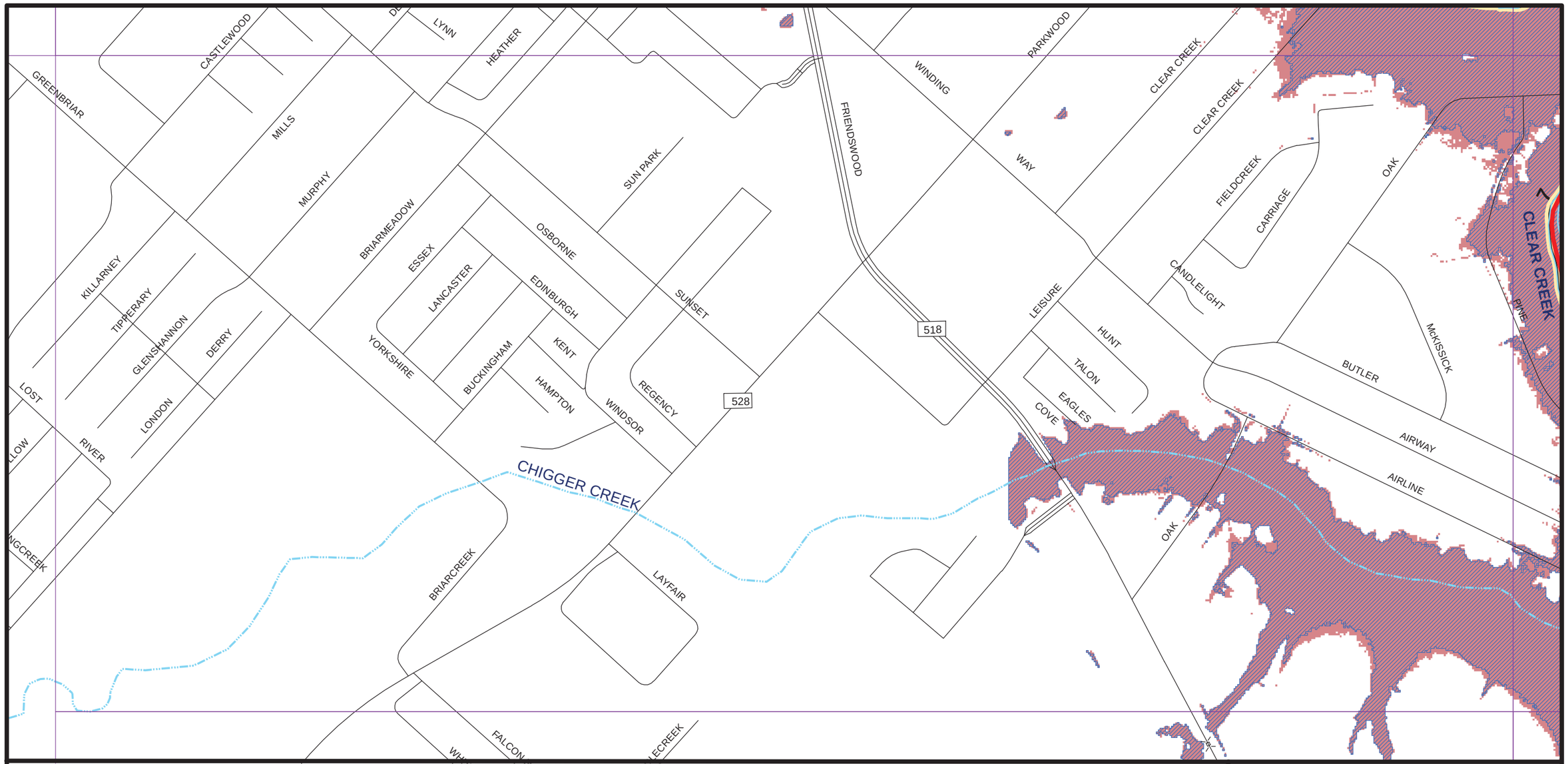
Clear Creek

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Clear Creek Watershed

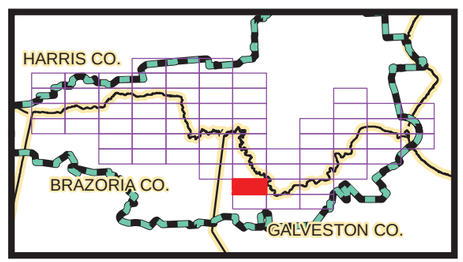
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5, 4... Economic Damage Reach



N W E S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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CLEAR CREEK

PINE

GRISSOM

SHADY

PALOMINO

PALOMINO

CLEAR CREEK

6

7

Clear Creek Watershed

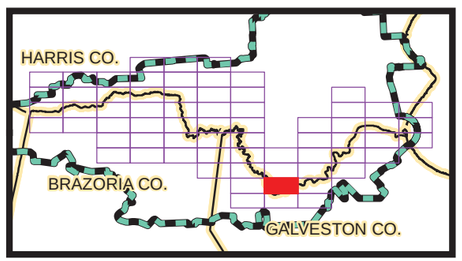
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5, 4... Economic Damage Reach



N

W E

S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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CLEAR CREEK

5

6

45

518

W MAIN

Mc KIBBEN

WAKEFIELD

LEAGUE

SHADOW

SUNSET

OAKWOOD

ENGLEWOOD

DRIFTWOOD

PECAN

BUTLER

HIGHLAND

DOWNING

BRISTOL

NOTTINGHAM

WESLEYS

HIGHLANDS

AMBER

LANDING

LANDING

JACKSON

HAMPTON

MEADE

LEES

SUNSET

FAIRFIELD

BULL RUN

STONEWALL

Clear Creek Watershed

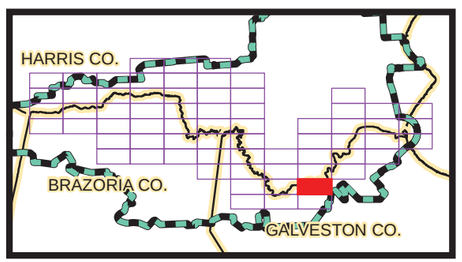
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1% Chance (100 year) Floodplain - Without Project

5, 4... Economic Damage Reach



N

W E

S

0 800 1,600 2,400 Feet

Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

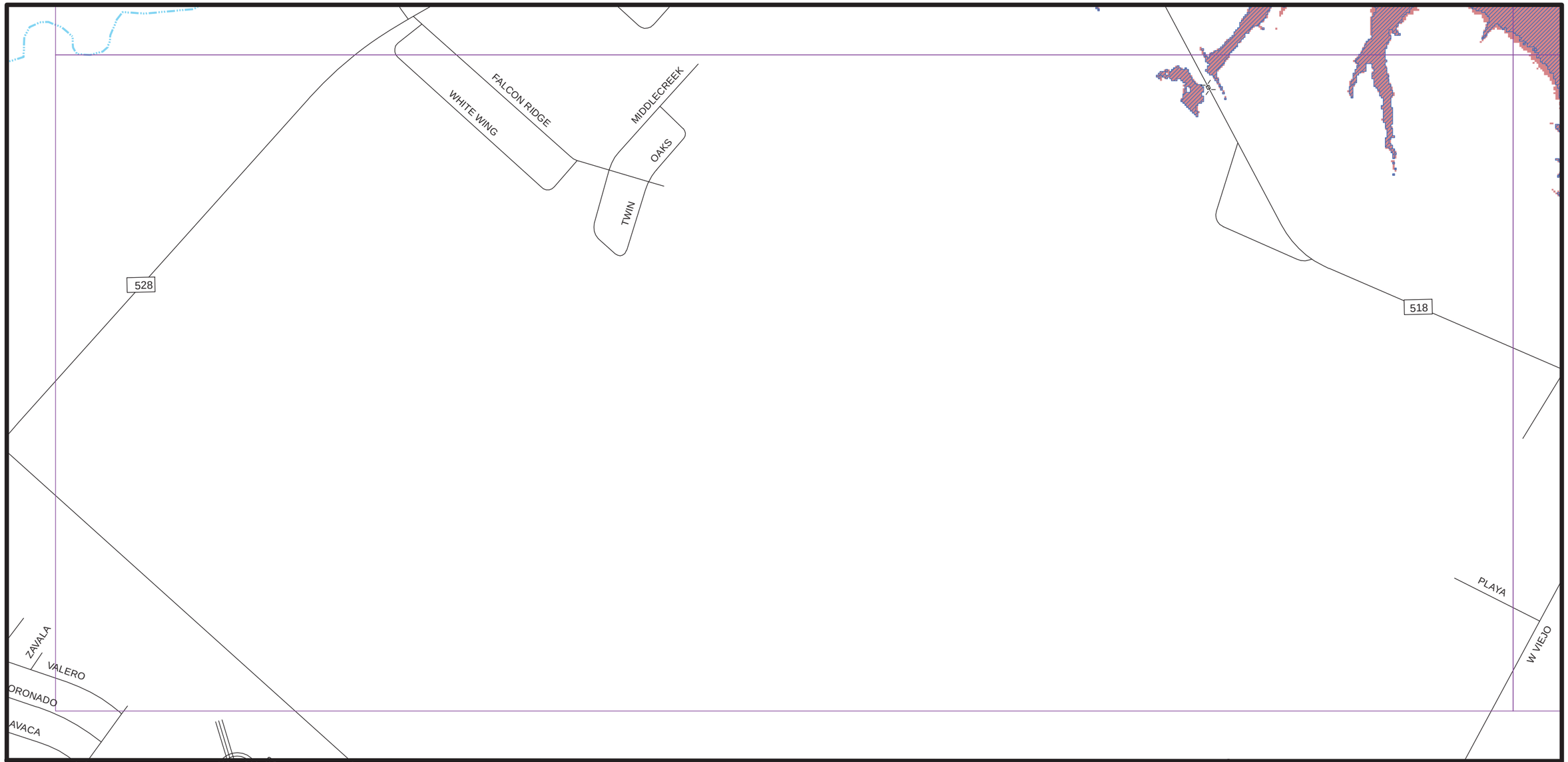
Clear Creek

Flood Risk Management Project

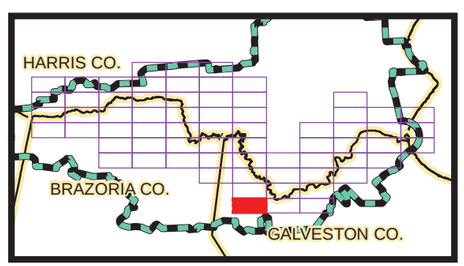
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Clear Creek Watershed
County Boundary
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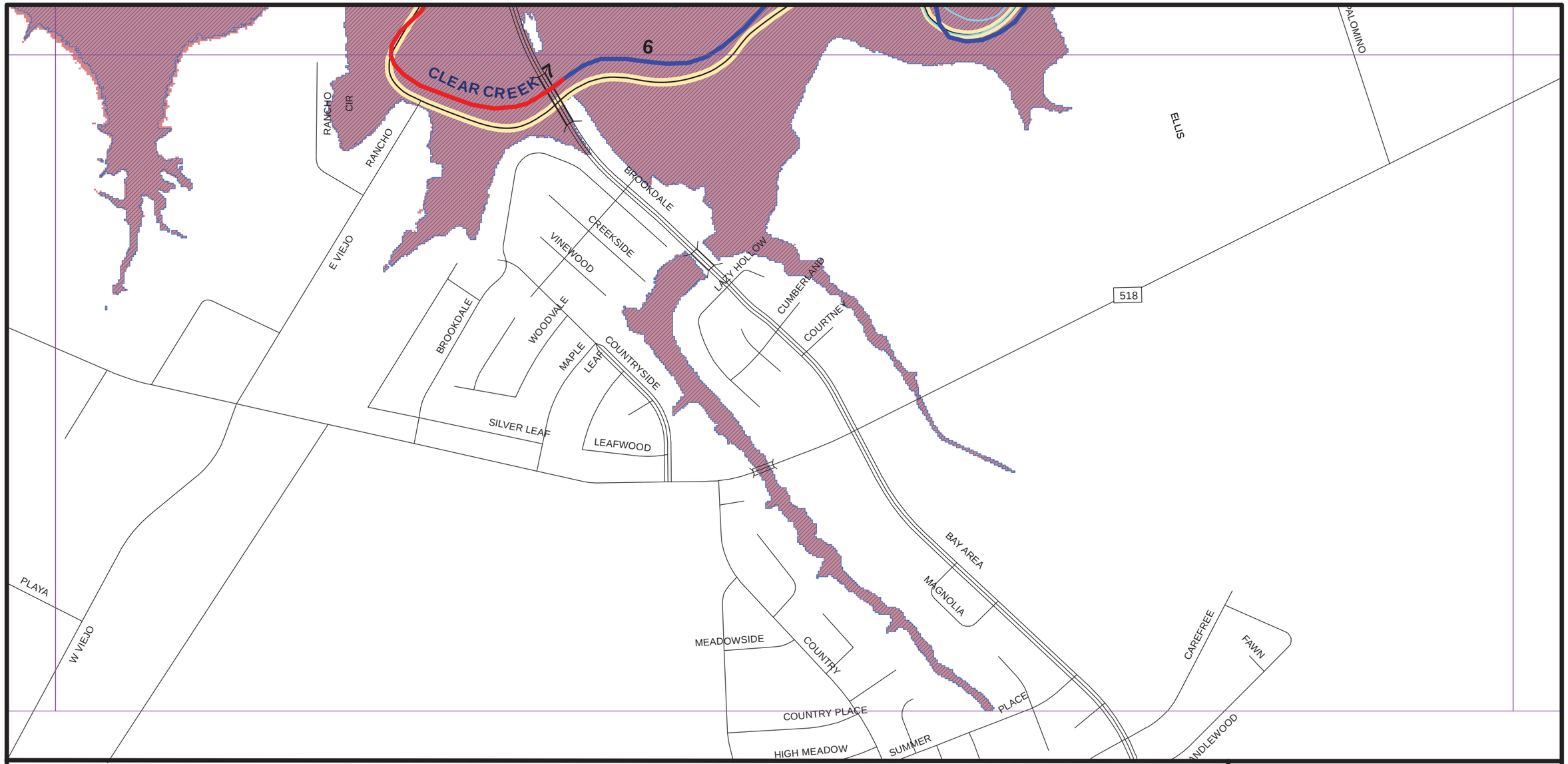
2020 Floodplain for the No Action and GRP Alternatives

Clear Creek
Flood Risk Management Project

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- Clear Creek Watershed
- County Boundary
- Match Lines
- 1% Chance (100 year) Floodplain - With Project
- 1% Chance (100 year) Floodplain - Without Project
- **5, 4...** Economic Damage Reach

Figure 4.1 - 1

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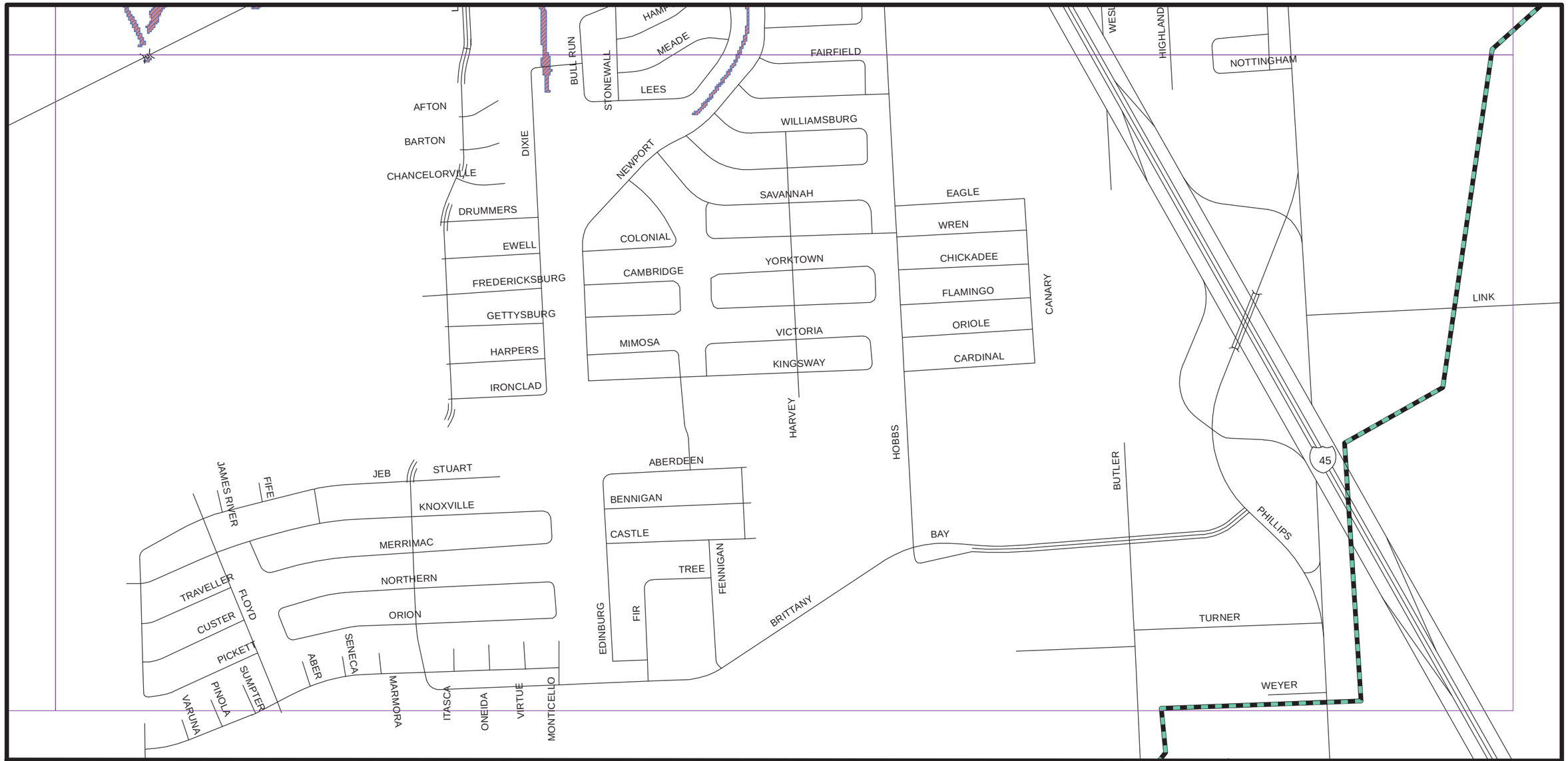
Clear Creek

Flood Risk Management Project

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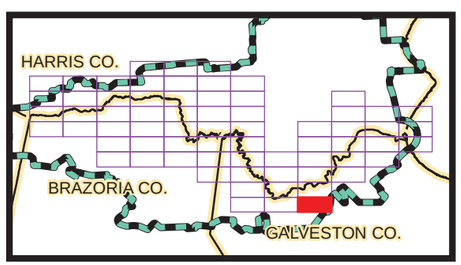
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Figure 4.1 - 1

2020 Floodplain for the No Action and GRP Alternatives

Clear Creek

Flood Risk Management Project

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