

The background image shows a wide canal with a concrete bridge spanning across it. In the background, a large, multi-story brick building with a grid-like facade is visible. The sky is clear and blue. The foreground is a grassy bank.

HDR's Houston-Based Team brings

- Resilient Flood Reduction **Expertise**

- Accountability**

- Proven** Federal Project Delivery

- Award-Winning** Urban Designs

North Canal High Flow Diversion Channel Hazard Mitigation Grant Program Project

July 22, 2020





1935 Downtown Houston



2017 Hurricane Harvey, IH 45



2017 Hurricane Harvey, IH 45



Houston is taking action to improve flood resilience and maximize federal funding

HDR's team
provides the
local expertise
and **depth of**
resources
required to
successfully
deliver your
North Canal High
Flow Diversion
Channel project



HDR's highly skilled and local team brings proven solutions and accessibility

Jeff Mitchell, PE

Project Director, North Canal Team Leader

Derek St. John, PE, CFM

Yale/Heights Team Leader



Dave Weston

Vice President
Gulf Coast Area Manager



Jeremy Cook

Grant Coordination



Raj Tanwani, PE

South Canal Team Leader



**Veronica Weaver-Rivers,
PE, CFM, PMP**

Project Controls Delivery Coordinator



Christine Magers, CWB

Environmental/Regulatory
Delivery Coordinator



Steve Dean, PE, CFM

Shared Design Services
Coordinator



Tom Wendorf, PE

Federal Funding | Accounting for
Reimbursement



Trina McGuire-Collier

Stakeholder Outreach
Delivery Coordinator



Emily Woodell
Strategic Communication



Benny McAllister,
RPLS, LSLs
Channel Bathymetry



Jeremy Blevins, PE, CFM
Hydraulics & Hydrology Delivery
Coordinator

1

This is a complex project in a densely developed area. The City expects to encounter roadblocks and face challenges in this project and will need to adapt. Outline what you see as the largest challenges in this project, including but not limited to technical challenges, stakeholder issues, and community concerns. How will you deal with change management and conflict management? Discuss how you and your team will handle stakeholder input and community engagement.

2

Has your team identified opportunities for compressing the timeline for the project? If so, describe how the City and partners could take advantage of those opportunities in order to shorten the timeline. Your SOQ indicated that you are ready to mobilize quickly; elaborate on how much preparation and due diligence you have completed to date and how that will allow for a quick mobilization.

3

The City has contracted with a firm to provide grant administration, including preparing the FEMA HMGP Phase II application utilizing design phase outputs. Describe in more detail the role of the compliance staff on your team. Include the specific items that the compliance staff will contribute.

4

This project will require extensive surveying of water boundaries to inform design and determine necessary right-of-way acquisition. Can you describe your experience with water boundary surveying? Please note specific challenges and how those challenges were addressed.

5

Elaborate on the Prime's experience with and knowledge of the local area.

6

Your SOQ mentions the utilization of HAZUS. FEMA Region VI has questioned the use of the HAZUS methodology. Have you used alternative methodologies in other projects? How will you adapt to Region VI requirements regarding HAZUS?

7

With the scale and timeline associated with this project, it is anticipated that there will be times where 100% dedicated staff will be required. While your Project Manager/Team Leader is dedicated at 100%, the Environmental Lead/Regulatory Delivery Coordinator is dedicated at 25%. It is expected the environmental and regulatory work for this project will be a critical path item. With the dedication rate of your Environmental Lead/Regulatory Delivery Coordinator at 25%, how will you manage competing priorities?

CITY OF HOUSTON

RFQ #2023-000001

July 15, 2023

J&B Consulting, LLC
10000 Katy Road, Suite 100
Houston, TX 77054
Email: jpb@jandbconsulting.com

Subject: City of Houston Federal Evaluation Committee Request for Virtual Oral Presentation

RFQ: Request for Qualifications (RFQ) #2023-000001 - North Central High Flood Protection Channel Hazard Mitigation Grant Program Project

Dear Mr. Mitchell:

The City of Houston Flood Protection Committee for RFQ #2023-000001 is currently reviewing all responses to the RFQ. As a result of this review, the committee will be selecting a firm to provide grant administration for the project. The committee will be selecting a firm to provide grant administration for the project. The committee will be selecting a firm to provide grant administration for the project.

Please include the following information in your response:

1. This is a complex project in a densely developed area. The City expects to encounter roadblocks and face challenges in this project and will need to adapt. Outline what you see as the largest challenges in this project, including but not limited to technical challenges, stakeholder issues, and community concerns. How will you deal with change management and conflict management? Discuss how you and your team will handle stakeholder input and community engagement.
2. Has your team identified opportunities for compressing the timeline for the project? If so, describe how the City and partners could take advantage of those opportunities in order to shorten the timeline. Your SOQ indicated that you are ready to mobilize quickly; elaborate on how much preparation and due diligence you have completed to date and how that will allow for a quick mobilization.
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6. Your SOQ mentions the utilization of HAZUS. FEMA Region VI has questioned the use of the HAZUS methodology. Have you used alternative methodologies in other projects? How will you adapt to Region VI requirements regarding HAZUS?
7. With the scale and timeline associated with this project, it is anticipated that there will be times where 100% dedicated staff will be required. While your Project Manager/Team Leader is dedicated at 100%, the Environmental Lead/Regulatory Delivery Coordinator is dedicated at 25%. It is expected the environmental and regulatory work for this project will be a critical path item. With the dedication rate of your Environmental Lead/Regulatory Delivery Coordinator at 25%, how will you manage competing priorities?

If you have any questions or need additional information, please contact: Barbara Fisher at (281) 952-9728. Thank you for your interest in doing business with the City of Houston.

Signature:

City of Houston
Chief Procurement Officer

City of Houston
RFQ #2023-000001

Project Information:

Project Name: North Central High Flood Protection Channel Hazard Mitigation Grant Program Project

Project Location: North Central High Flood Protection Channel

Project Start Date: 08/01/2023

Project End Date: 07/31/2024

Project Manager: J&B Consulting, LLC

Project Team Lead: J&B Consulting, LLC


Project Team Members: J&B Consulting, LLC

Project Team Contact: J&B Consulting, LLC



This is a complex project in a densely developed area. The City expects to encounter roadblocks and face challenges in this project and will need to adapt. Outline what you see as the largest challenges in this project, including but not limited to technical challenges, stakeholder issues, and community concerns. How will you deal with change management and conflict management? Discuss how you and your team will handle stakeholder input and community engagement.

Three Primary Project Locations

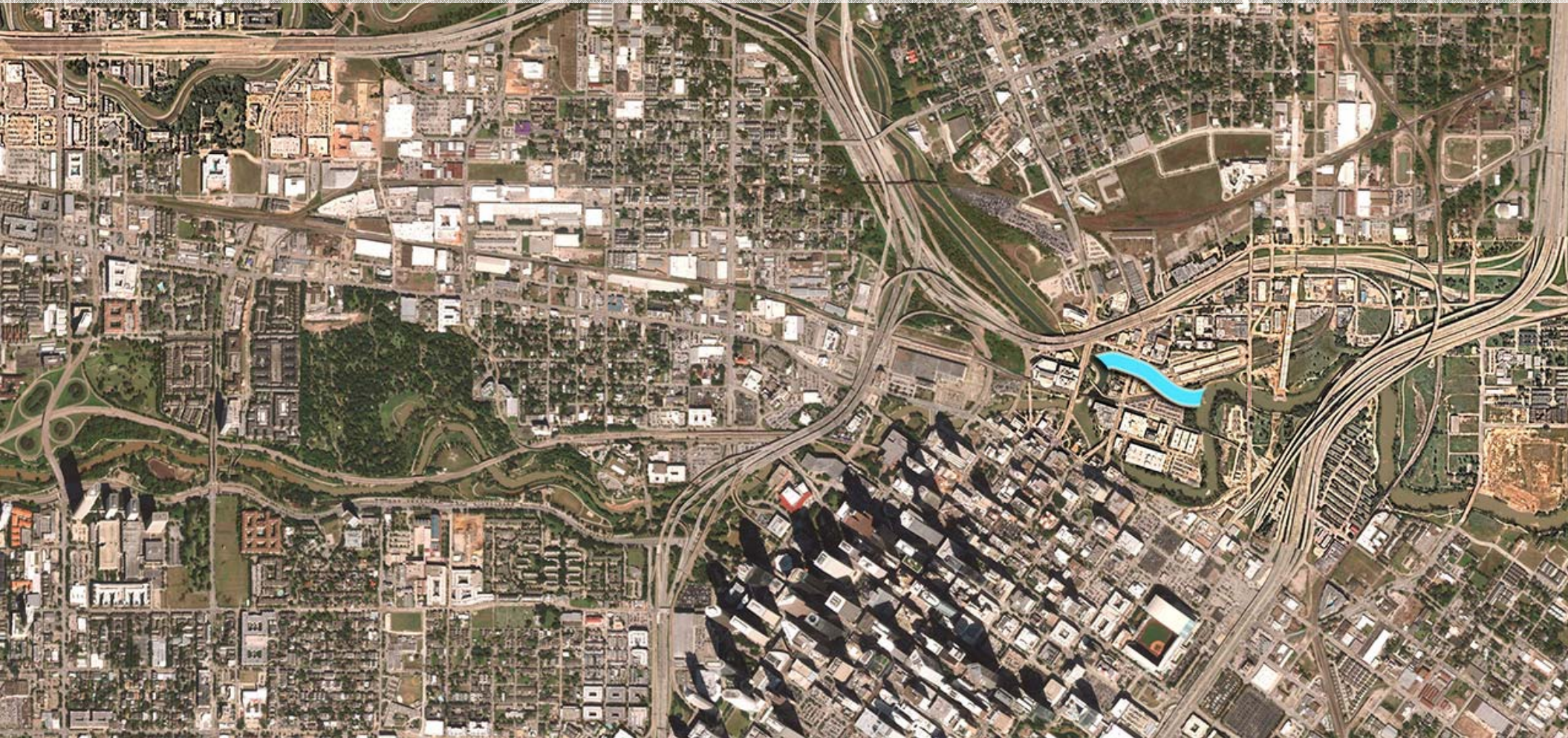
An aerial photograph of a city area, likely Chicago, showing a dense urban grid, a large highway interchange (I-55/I-90), and a river. Three specific areas are highlighted with blue overlays: the Yale/Heights Bridges Area in the upper left, the North Canal Channel Diversion in the center right, and the South Canal Channel Diversion/Detention Area in the lower right. Labels with leader lines point to each of these areas.

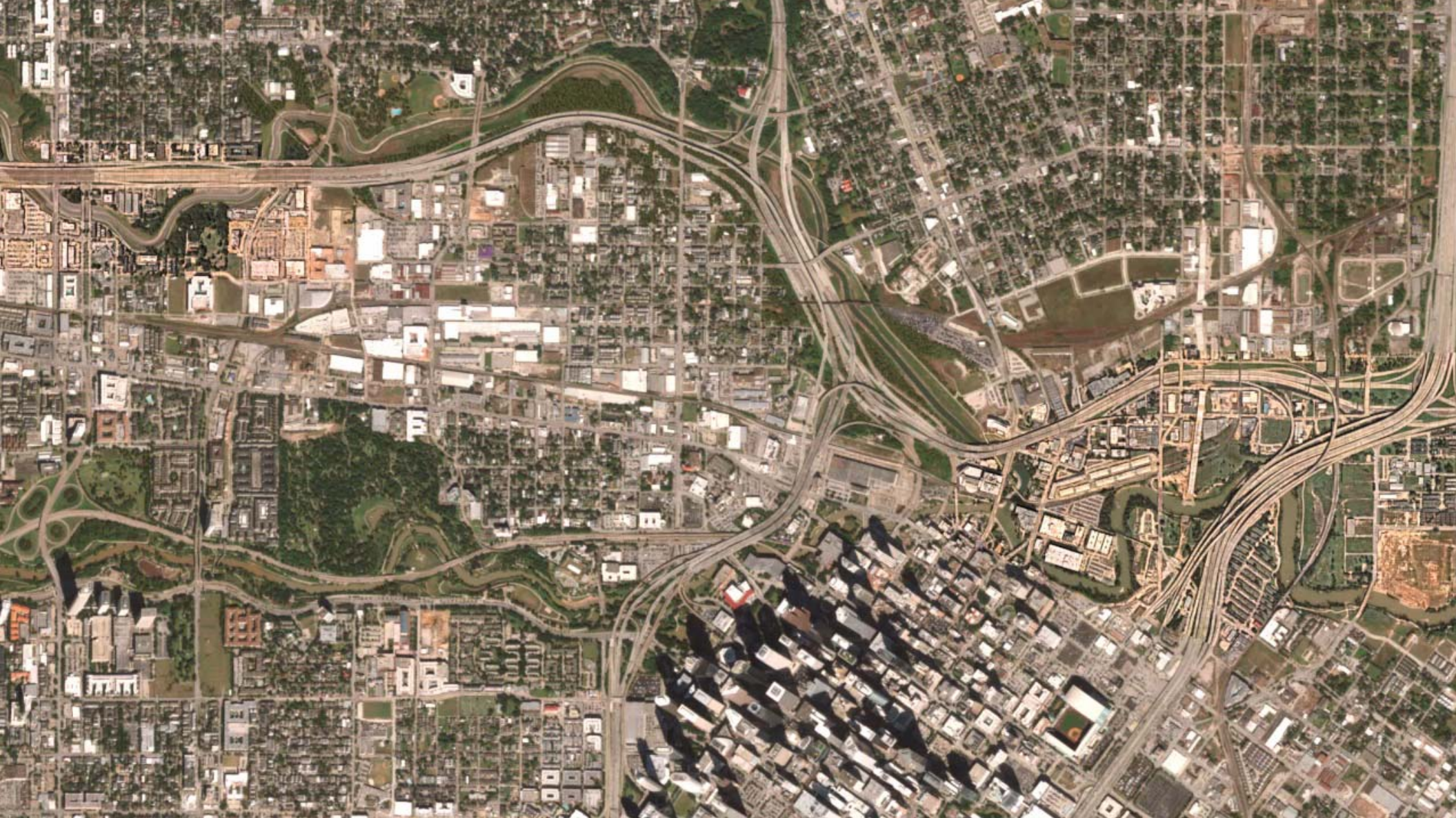
**Yale / Heights
Bridges Area**

**North Canal
Channel Diversion**

**South Canal Channel
Diversion/Detention Area**

North Canal Channel Diversion Area



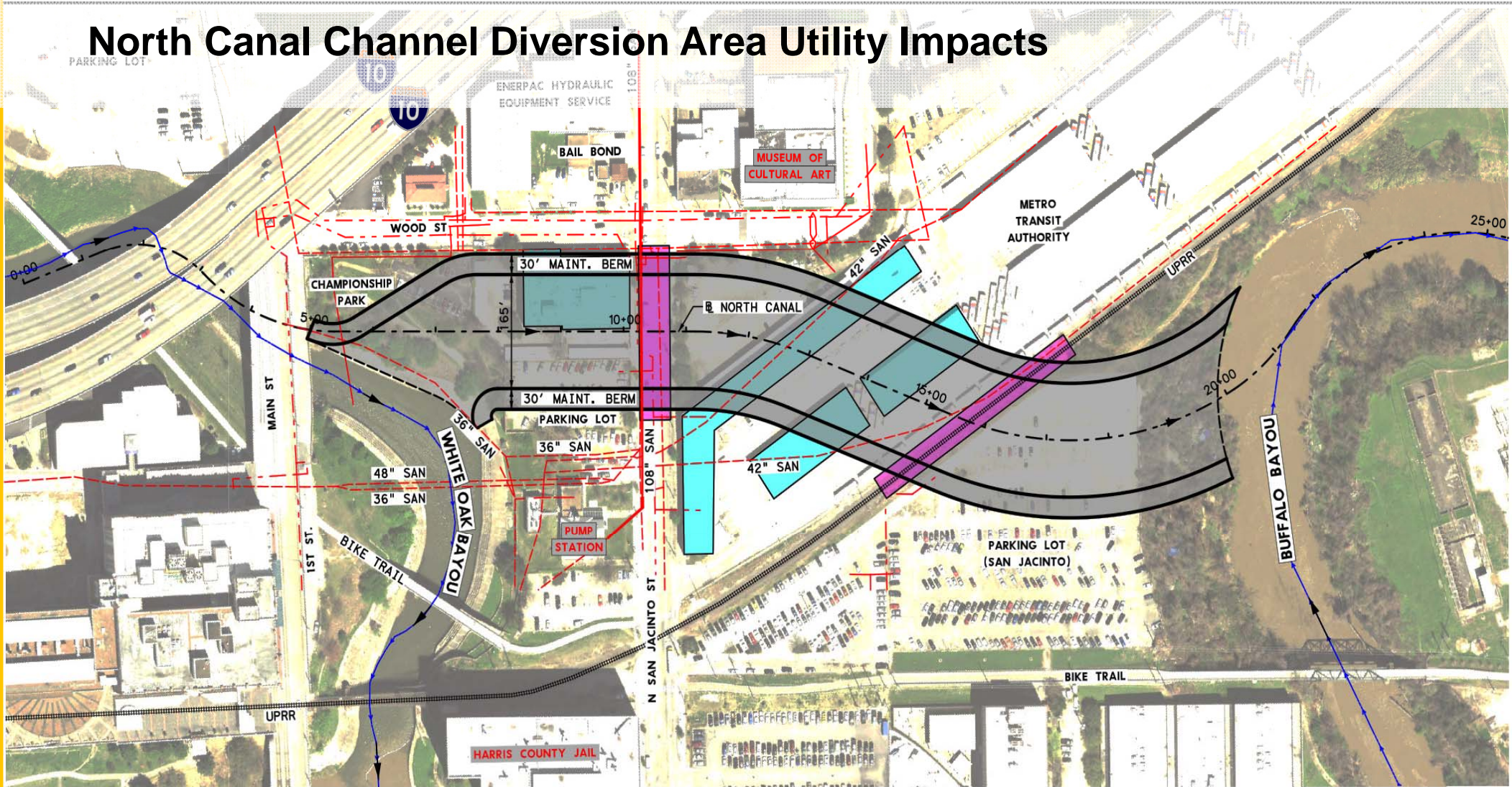




Property Impacts in the North Canal Channel Diversion Area



North Canal Channel Diversion Area Utility Impacts



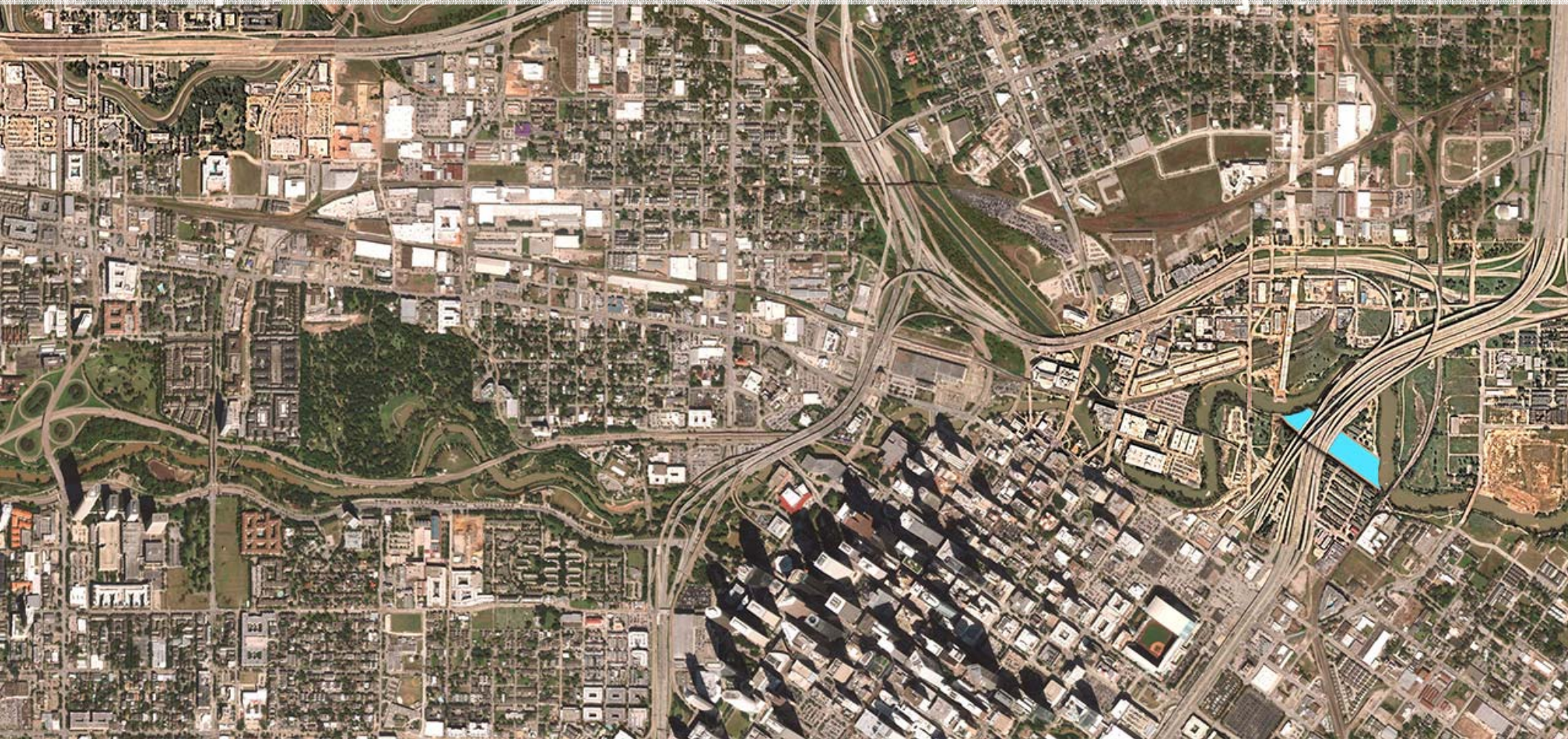
Utility Impacts in the North Canal Channel Diversion Area

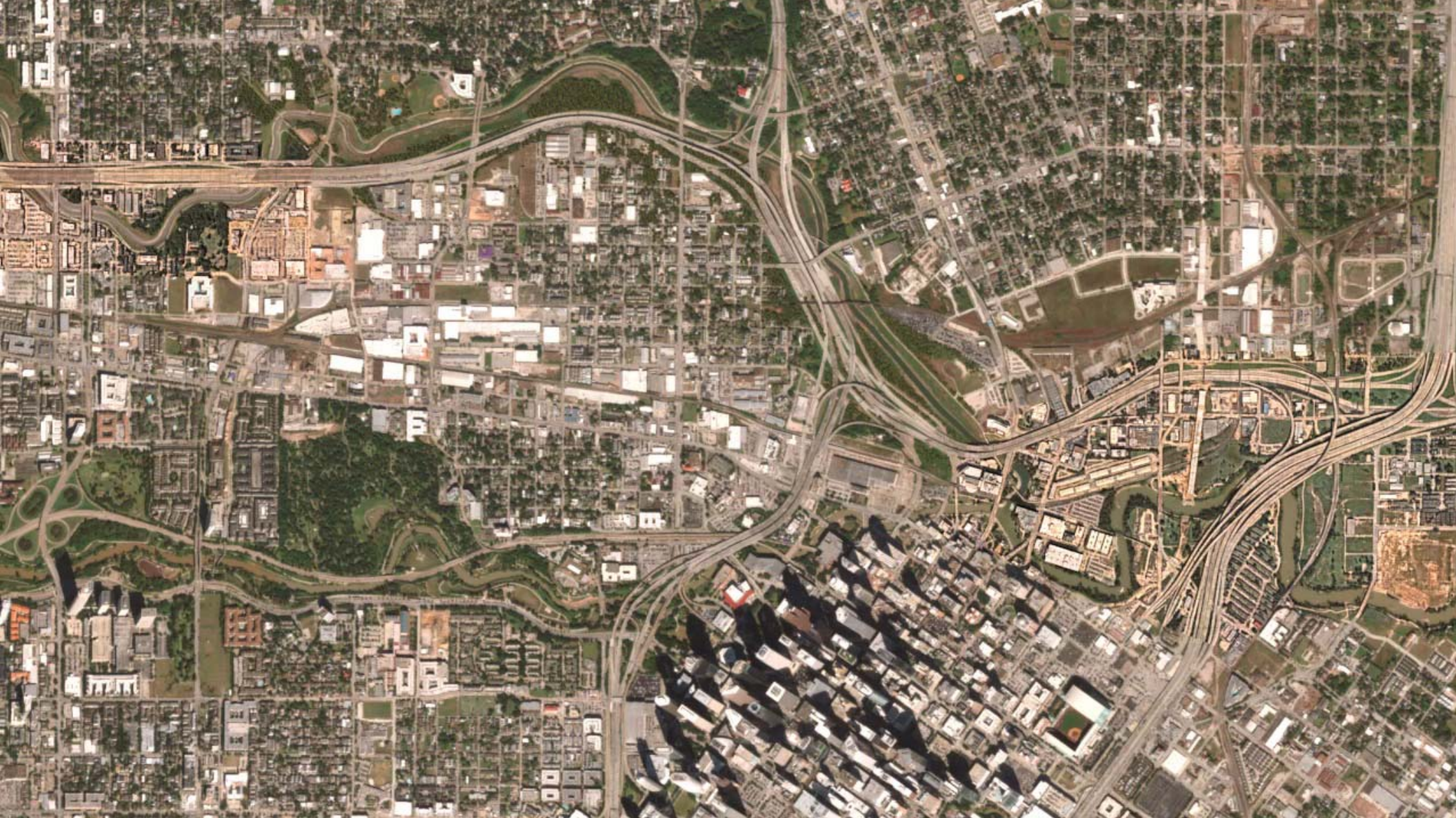


Union Pacific Railroad (UPRR) Impacts in the North Canal Channel Diversion Area



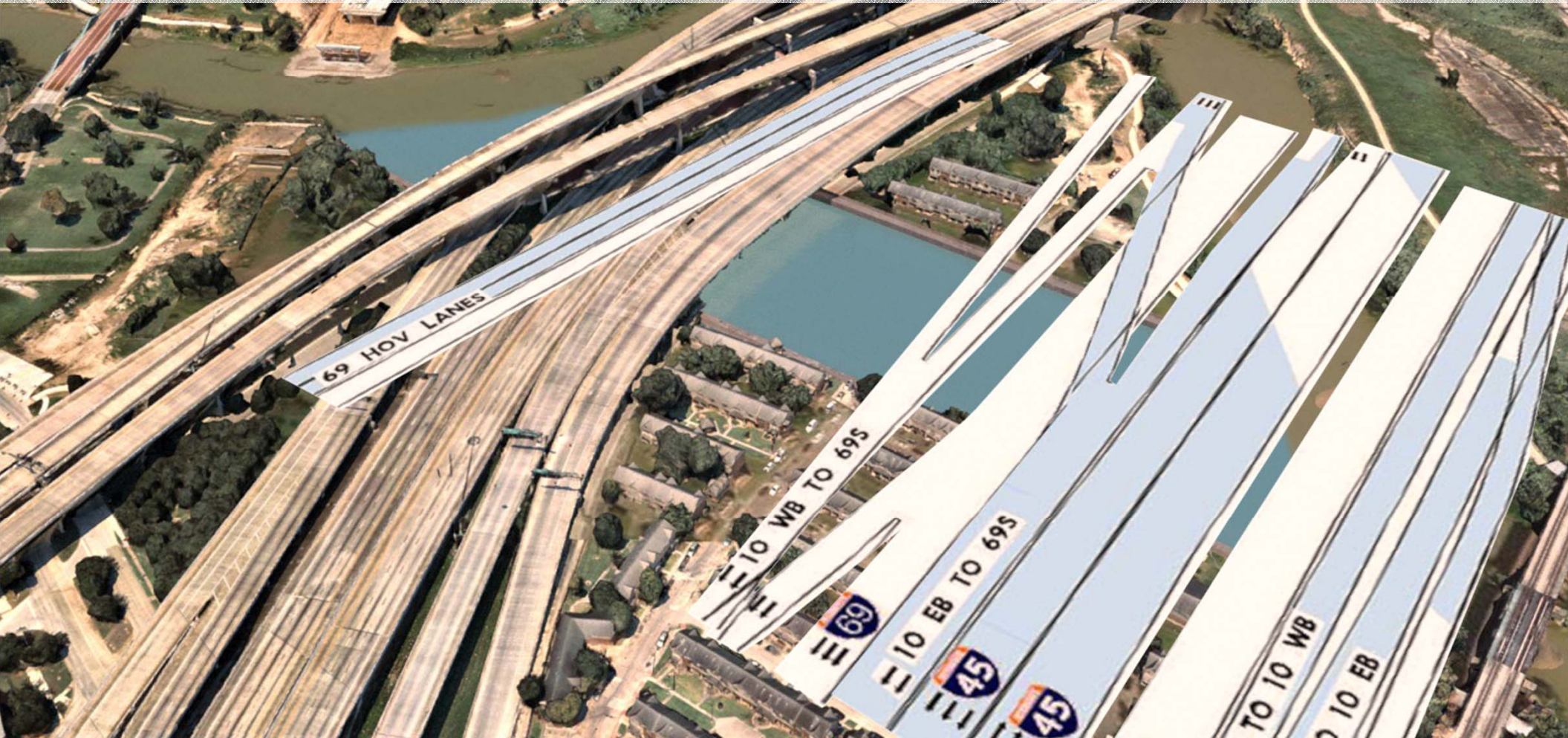
South Canal Channel Diversion/Detainment Area



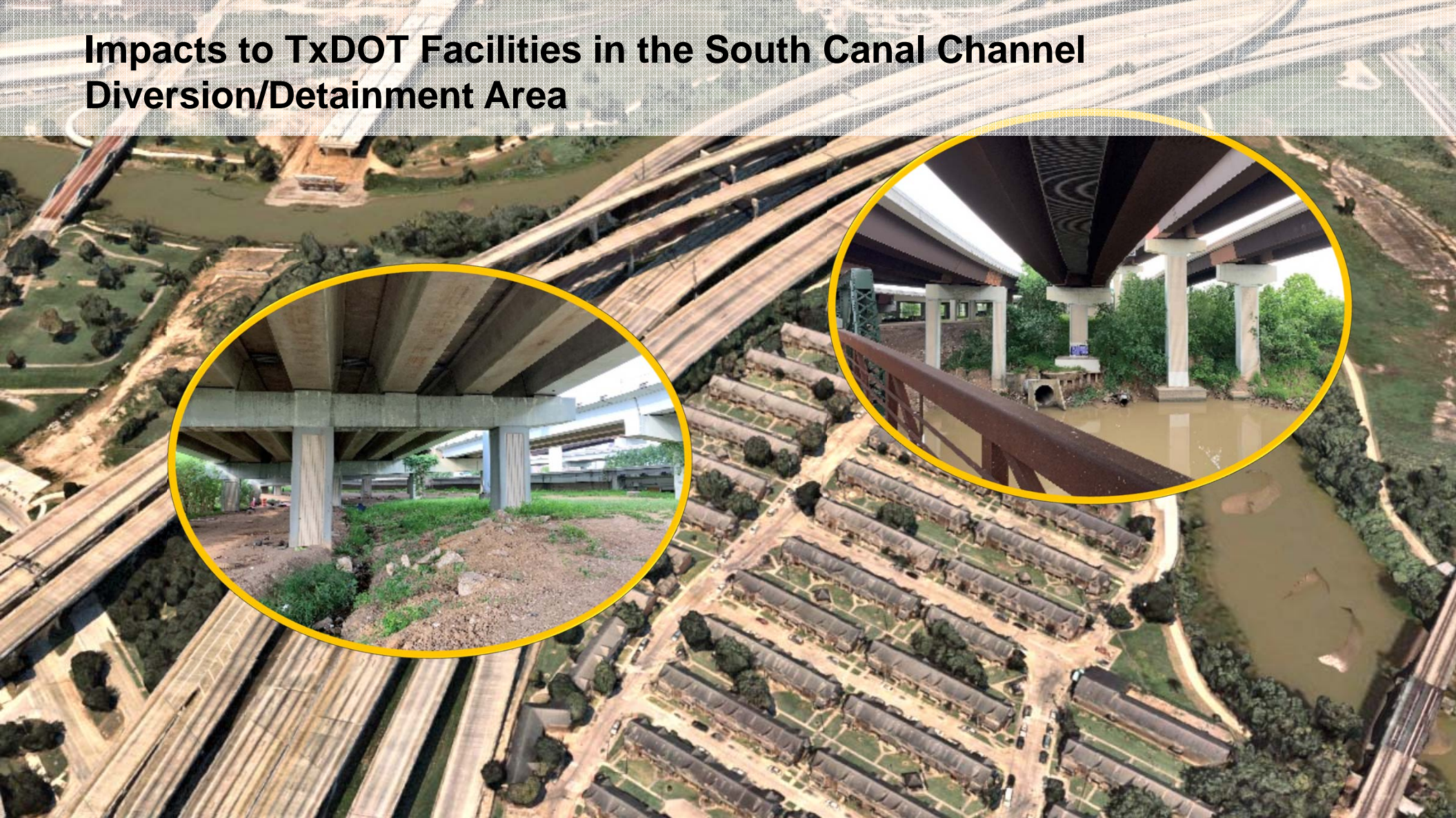




Future Roadways in the South Canal Channel Diversion/Detainmentment Area



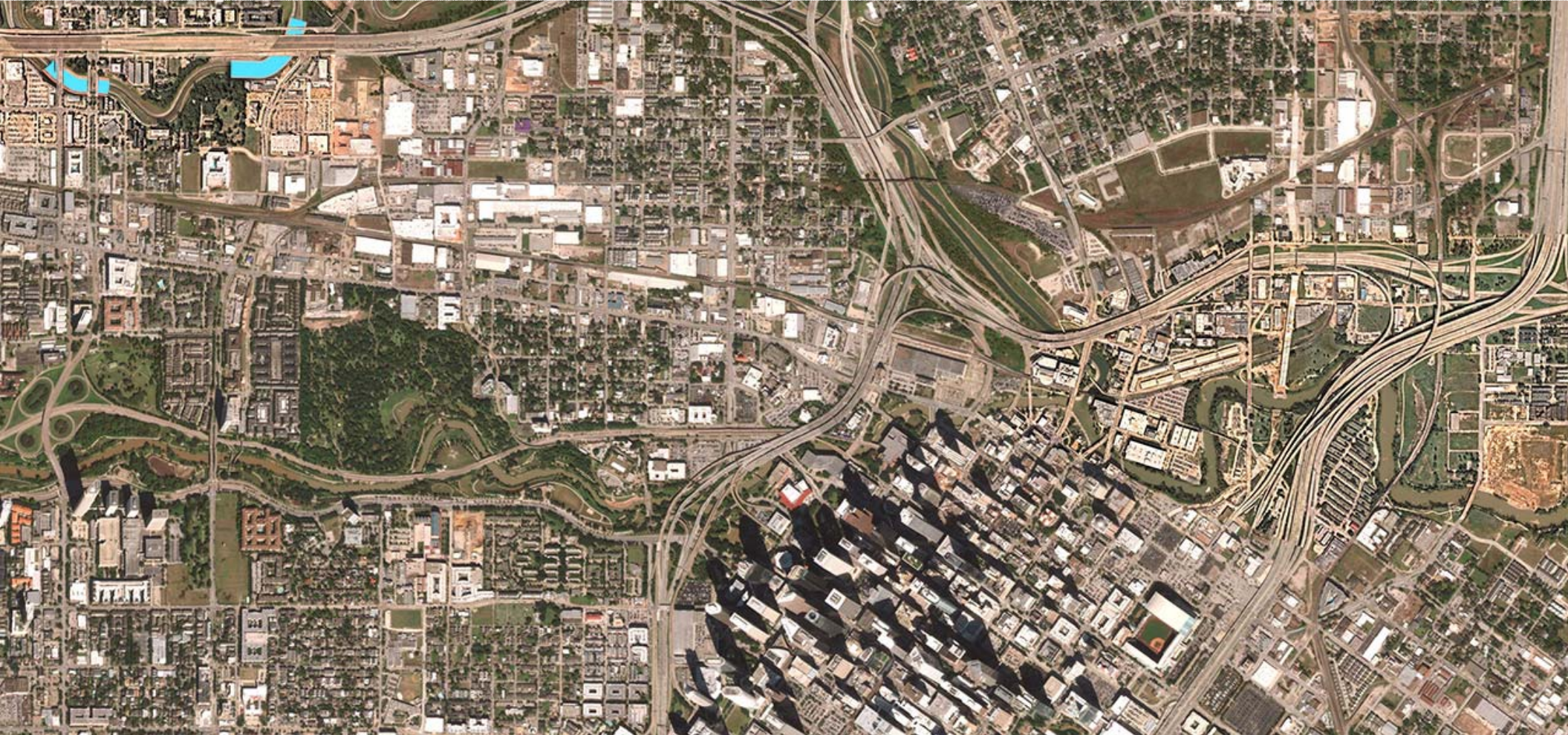
Impacts to TxDOT Facilities in the South Canal Channel Diversion/Detainment Area

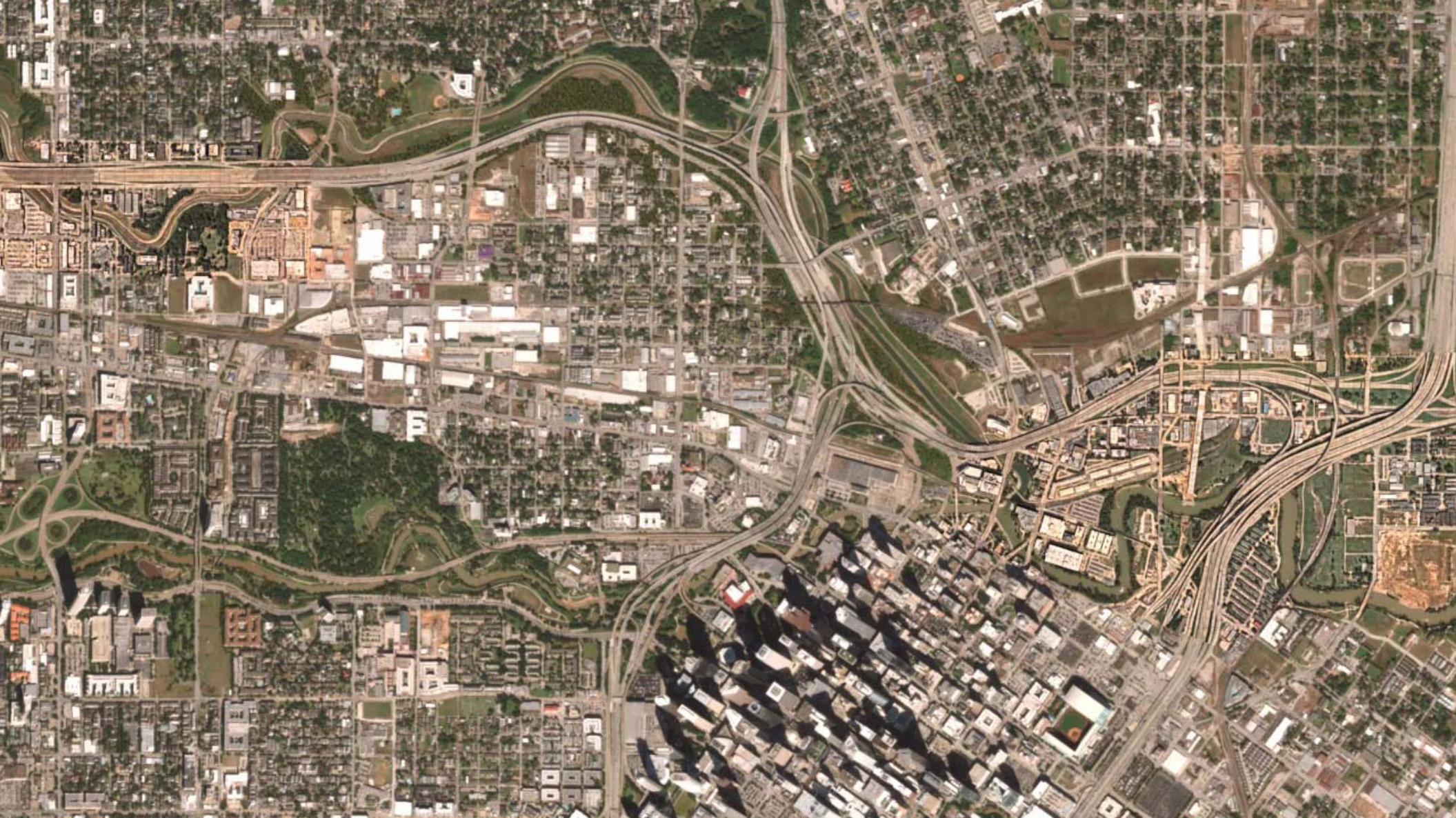


Impacts to the Pedestrian Trails in the South Canal Channel Diversion/Detention Area



Yale Street / Heights Boulevard Bridges Area







Yale Street Bridge Utility Impacts



Impacts to the Trails in the Yale Street / Heights Boulevard Bridges Area



Lower Flood Levels in the Yale Street / Heights Boulevard Bridges Area





Coordination with TxDOT in the Yale Street / Heights Boulevard Bridges Area



Houston's safety and social, environmental and economic vitality depends on reliable infrastructure



Experience and relationships with key stakeholders assures workable solutions

Challenge

Multiple agencies with multiple voices, interests, initiatives, projects

Challenge

The new normal, social/environmental justice and equity, COVID-19, political considerations, economic impacts



FEMA



“WHAT YOU DON’T DO
WITH US, YOU DO
TO US.” – THE COMMUNITY

Social listening and understanding the community maximizes public buy-in and support

MENTIONS

115

Engagement

1.3K

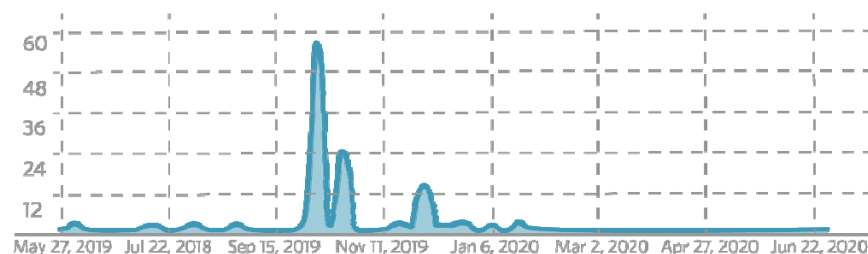
Sentiment

11%

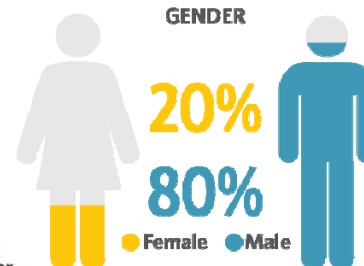
Positive

3%

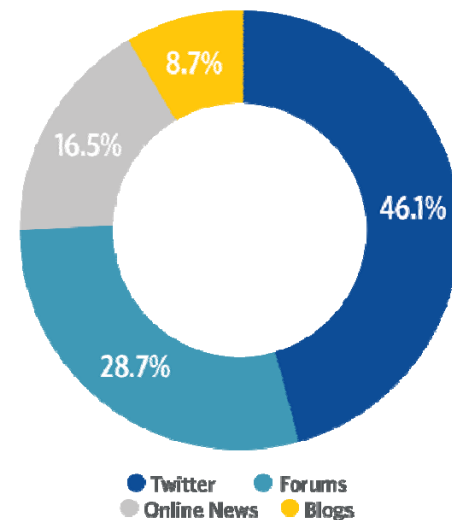
Negative



GENDER



SHARE OF MEDIA TYPES





Trina McGuire-Collier

HDR Engineering

Stakeholder Outreach Delivery Coordinator



Emily Woodell

KGB Texas

Strategic Communication



Leslie Hollaway

Hollaway Environmental + Communications

Government and Community Relations

UNPARALLELED
EXPERIENCE
& **EXPERTISE**



Our Path to Success

Set the vision | roles, desired outcomes, protocols, audiences, stakeholders, key issues

Assess resources | staffing, capabilities, technology, **partners**

Build the plan | who does what, says what, when, where and how, **and to whom**



2

Has your team identified opportunities for compressing the timeline for the project? If so, describe how the City and partners could take advantage of those opportunities in order to shorten the timeline. Your SOQ indicated that you are ready to mobilize quickly; elaborate on how much preparation and due diligence you have completed to date and how that will allow for a quick mobilization.



Jeff Mitchell, PE
North Canal Team Leader



Raj Tanwani, PE
South Canal Team Leader



Derek St. John, PE, CFM
Yale/Heights Team Leader

SCALABLE **DEEP** BENCH OF **RESOURCES**

From team structure and depth to early planning and an aggressive start; what have we done?



Project management



Stakeholder outreach



Mobilization

Developed a 30-60-90 day fast start strategy

HDR plan aggressively front-loads information sharing and data acquisition

Potential opportunities to compress the schedule

- **Utility adjustments** | can provide joint bid utility adjustments
- **Survey** | start design with available LiDAR
- **UPRR** | eliminate temporary track
- **Yale Heights Bridges** | hydraulic solution no replacement
- **Environmental** | draft NEPA documentation needed for USACE to reduce timeframe





3

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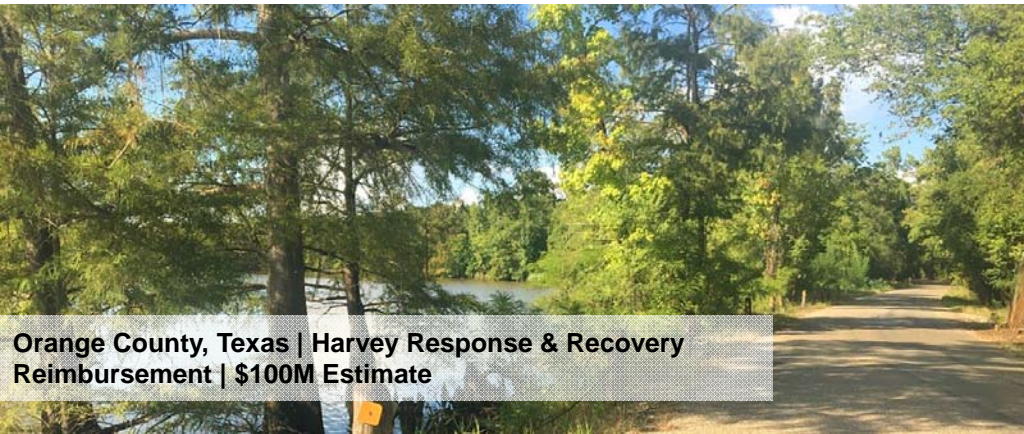
Navigating the FEMA HMGP requires proven experience and expertise



City of Houston | Wortham Theater Center and Theater District Garages | Disaster Services | \$186M Final, \$150M Original



GLO | Hurricane Ike Recovery | \$95M Final, \$80M Original



Orange County, Texas | Harvey Response & Recovery Reimbursement | \$100M Estimate



TABC | Harvey FEMA Response Reimbursement | \$2M Final, No Original Estimate



The Wortham Theater Center: A Success Story

Rapid recovery, full reimbursement

- Fast-paced project met the Mayor's goal of opening on September 1, 2018 - one year after Hurricane Harvey

- How?

- Fast-track scheduling
- Cost containment measures
- Innovative hazard mitigation implementation and procurement management
- Hazard mitigation workshops with the City's Grant Administrator

... while fully complying with FEMA requirements

- **The Result** | The City and Houston First Corporation achieved local goals in full compliance. We **significantly accelerated reimbursement** while **managing project risk**

A proven workflow for support and integration of all FEMA functions to streamline our efforts



**Review Hazard
Mitigation Plan (HMP)**

**Obtain FEMA
Preapproval**

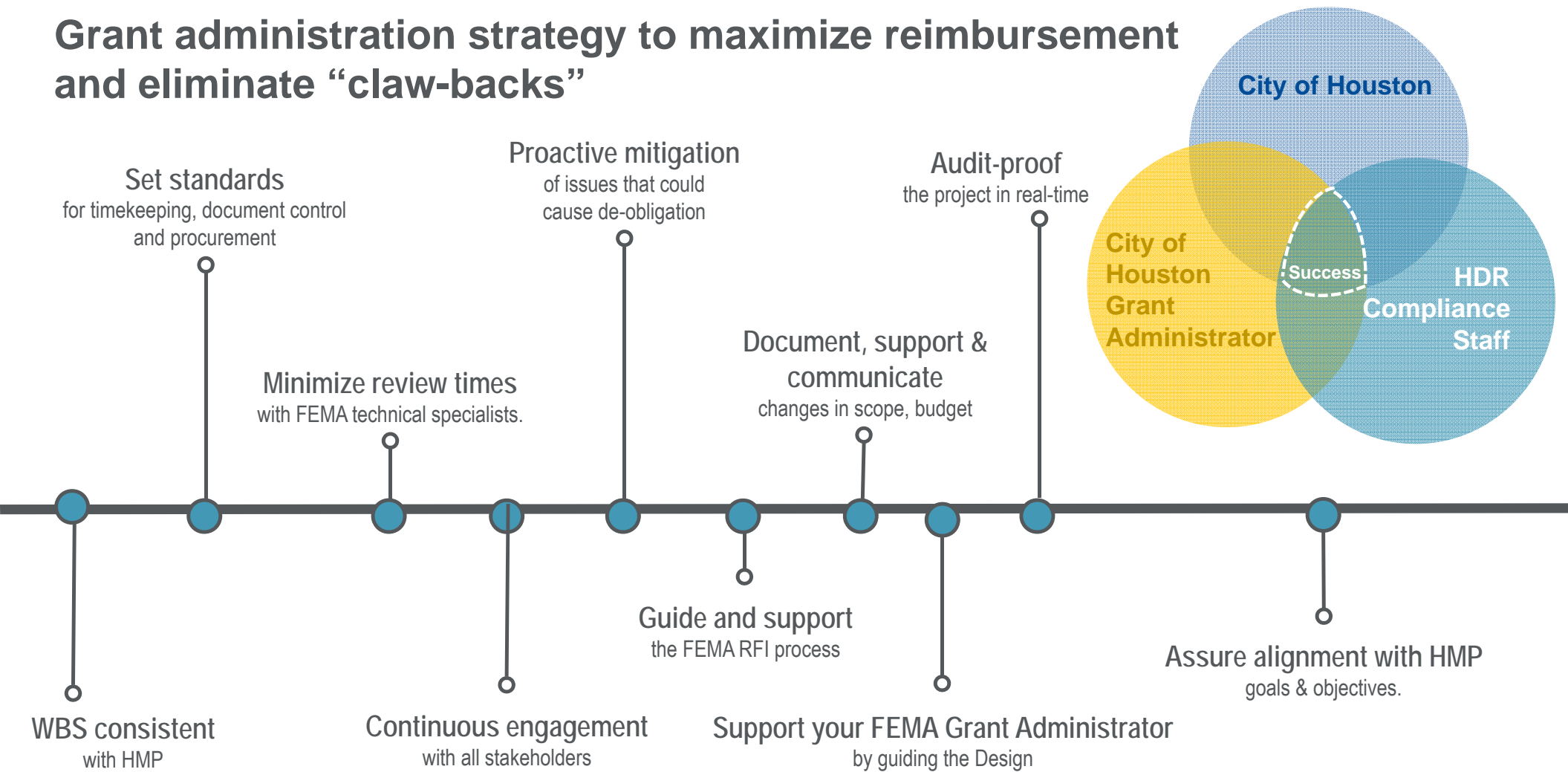
Closeout Process

**Document
Retention**



**Continuous Web-Based Reporting of
Financials & Performance**

Grant administration strategy to maximize reimbursement and eliminate “claw-backs”



We will proactively identify, manage, and communicate risk for prompt mitigation

R I S K I D E N T I F I C A T I O N					I N I T I A L A S S E S S M E N T			
Name	Risk Group	Clients	Type	Risk Trigger	Probability of Occurrence	Impact to Cost	Impact to Schedule	Rank
Scope creep - engineering	Technical	Various	Threat	Design phase	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	1
USACE permitting delays	Procedural	Various	Threat	Preliminary engineering phase	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	2
FEMA documentation audit	Contractual	FEMA	Threat	Project completion	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	3
FEMA claw back	Contractual	FEMA	Threat	Project completion	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	4

Rank | 1 = Highest Risk, 4 = Lowest Risk ■ High ■ Moderate ■ Low

Weekly reports generated for the CoH Grant Administrator and FEMA

Use the Power Query editor to connect, prepare, and transform data.



NCHFDC Project Executive Dashboard Example

Actual, Planned & Total Cost



Project Total

\$131,249,359

Estimated Cost at Completion

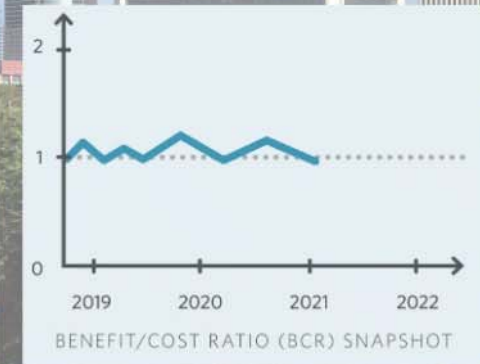
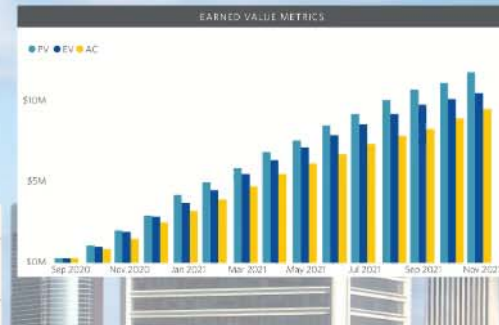
\$114,606,261

Cost Variance at Completion

\$16,643,098

Key Performance Indicators by Project Area:

#	Project Area	CPI	SPI
1	North Canal Channel Diversion	✓ 1.08	✓ 1.08
2	South Canal Channel Diversion/Retention	✓ 1.13	✓ 1.11
3	Bridge & Channel Impmts @ Yale & Heights	✓ 1.25	✓ 1.20





4

This project will require extensive surveying of water boundaries to inform design and determine necessary right-of-way acquisition. Can you describe your experience with water boundary surveying? Please note specific challenges and how those challenges were addressed.

Early identification of boundary is important for establishing the basis for planning and acquisition

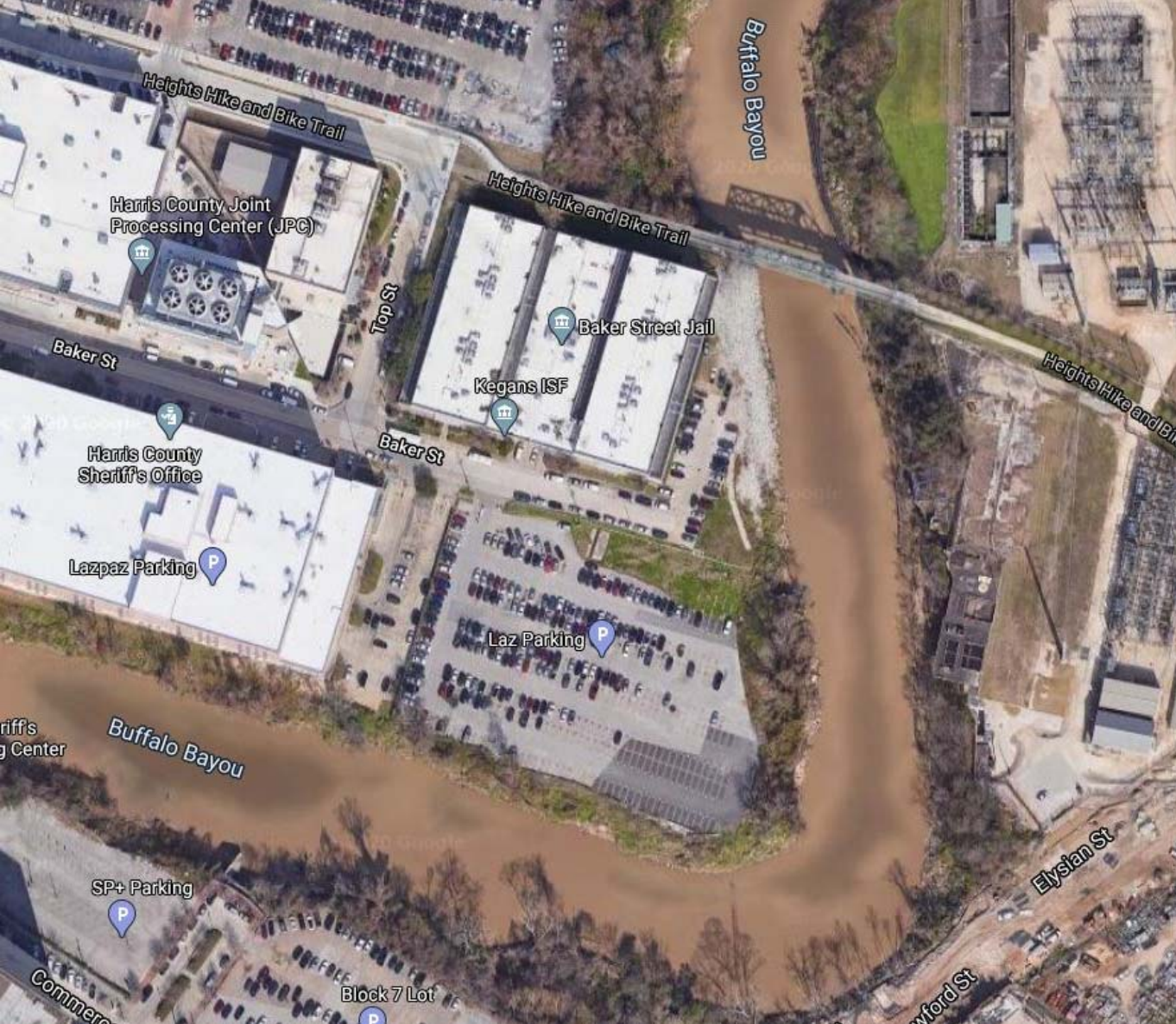
- Gradient boundary | Arthur A Stiles determined the state line between Texas and Oklahoma along the Red River
- Gradient boundary | Lowest qualified bank, the accretion bank is built with material conveyed and deposited by the water in the river and is where the lowest qualifying bank can be found
- Check | Locate the toe of the river and the vegetation line and the gradient is halfway between the two



Building on lessons learned avoids project delays

- Bayou urbanization
- Boat launch access
- Potential boundary disputes
 - To date, there have been no disputes to either gradient or tidal boundaries that Pape-Dawson has determined





Water boundary surveys past experience

- Buffalo Bayou Gradient Boundary West of IH 610 West
- Brazos River Gradient Boundary 130-Acre Private Development
- Trinity River Gradient Boundary SH 7 Bridge Replacement
- Clear Creek, Tidal Boundary SH 270 Bridge Improvements
- Pelican Island, Tidal Boundary Pelican Island Causeway Bridge Improvements
- Lee and Joe Jamail Bay Park, Tidal Boundary Boundary and Design Survey



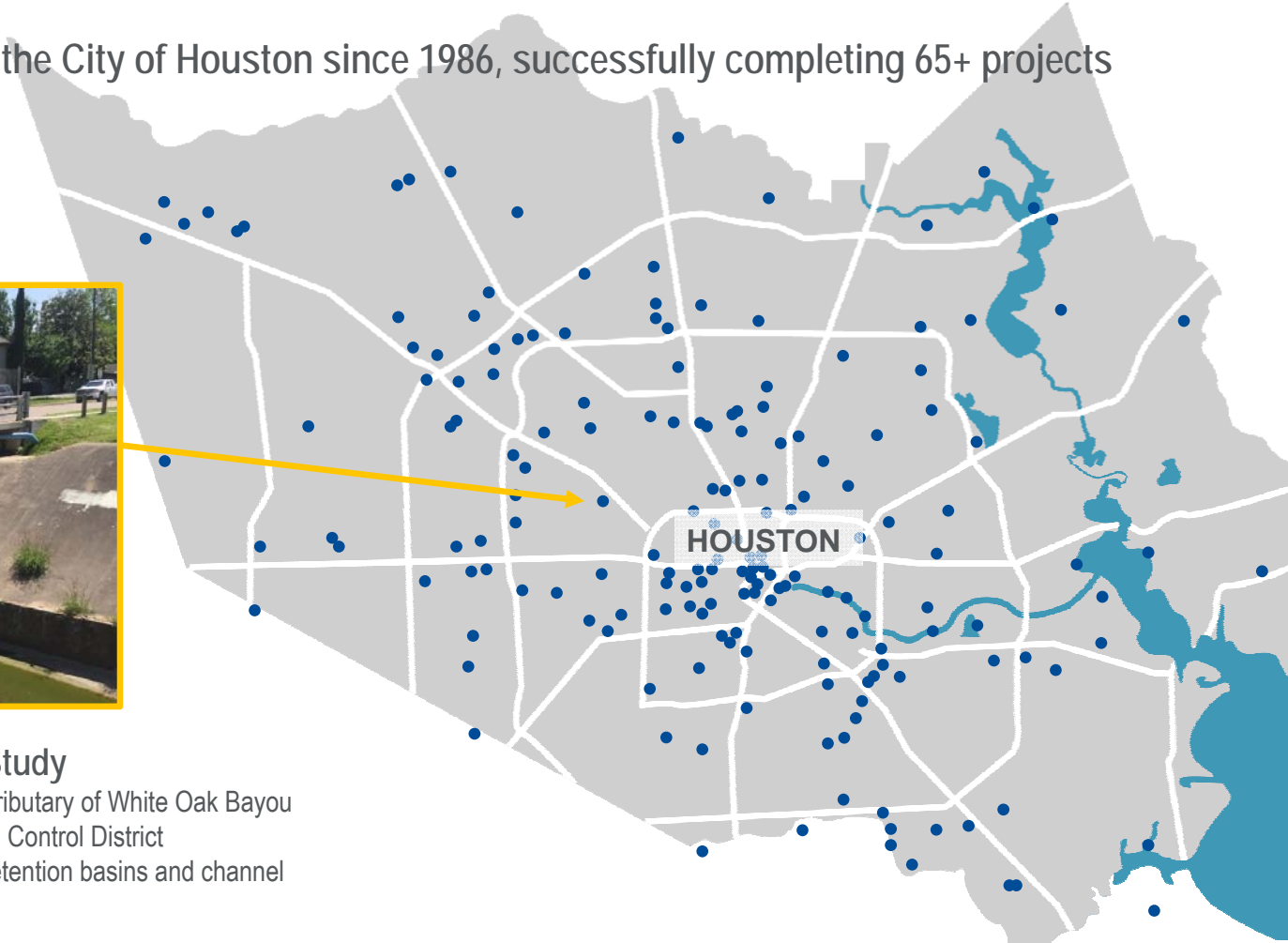
5

Elaborate on the Prime's experience with and knowledge of the local area.

Creative solutions formed from decades of local experience with the City of Houston will help successfully deliver your North Canal Project



We've been working with the City of Houston since 1986, successfully completing 65+ projects



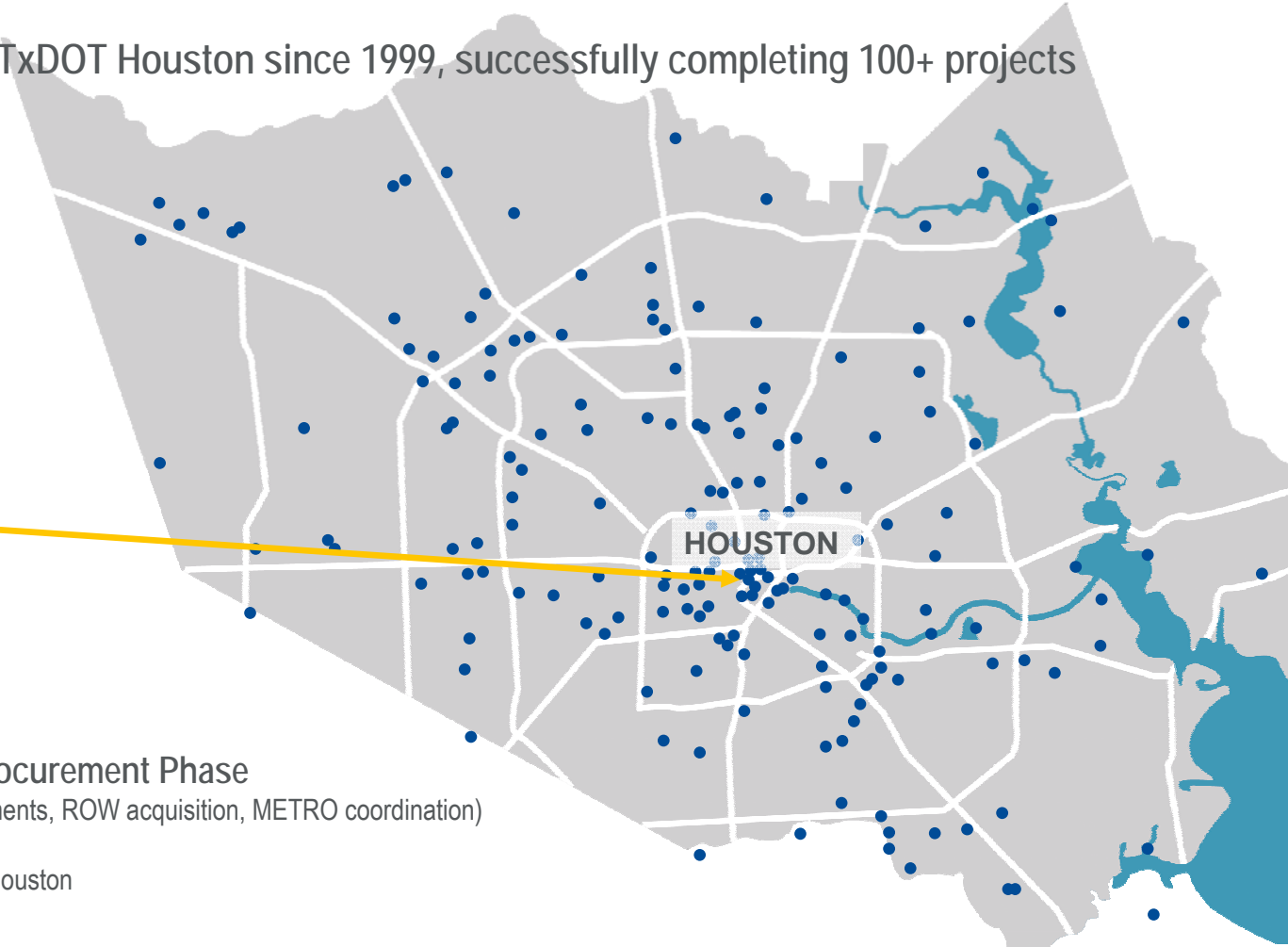
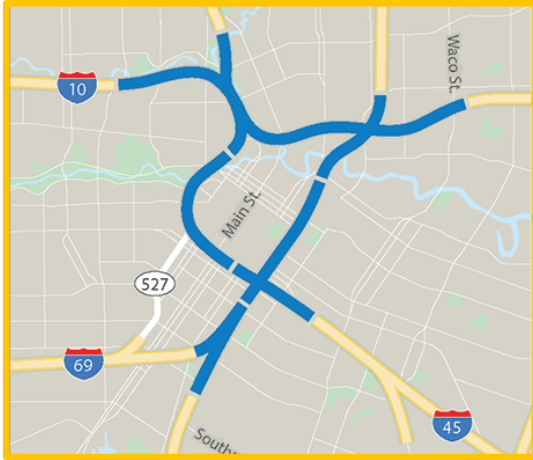
Brickhouse Gully Drainage Feasibility Study

- Reduced flood risk along the Brickhouse Gully, a tributary of White Oak Bayou
- Jointly funded by the City and Harris County Flood Control District
- Included multiple bridge replacements, regional detention basins and channel improvements

Creative solutions formed from decades of local experience with TxDOT's Houston District will avoid schedule delays



We've been working with TxDOT Houston since 1999, successfully completing 100+ projects



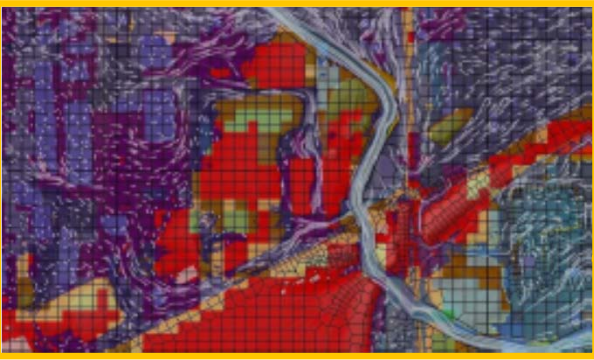
NHHIP General Engineering Consultant | Procurement Phase

- Providing DB procurement support (procurement documents, ROW acquisition, METRO coordination)
- \$3B project
- Reconstruct IH 10, IH 45 and IH 69 around downtown Houston

Creative solutions formed from decades of local experience with Harris County Flood Control District will streamline project delivery

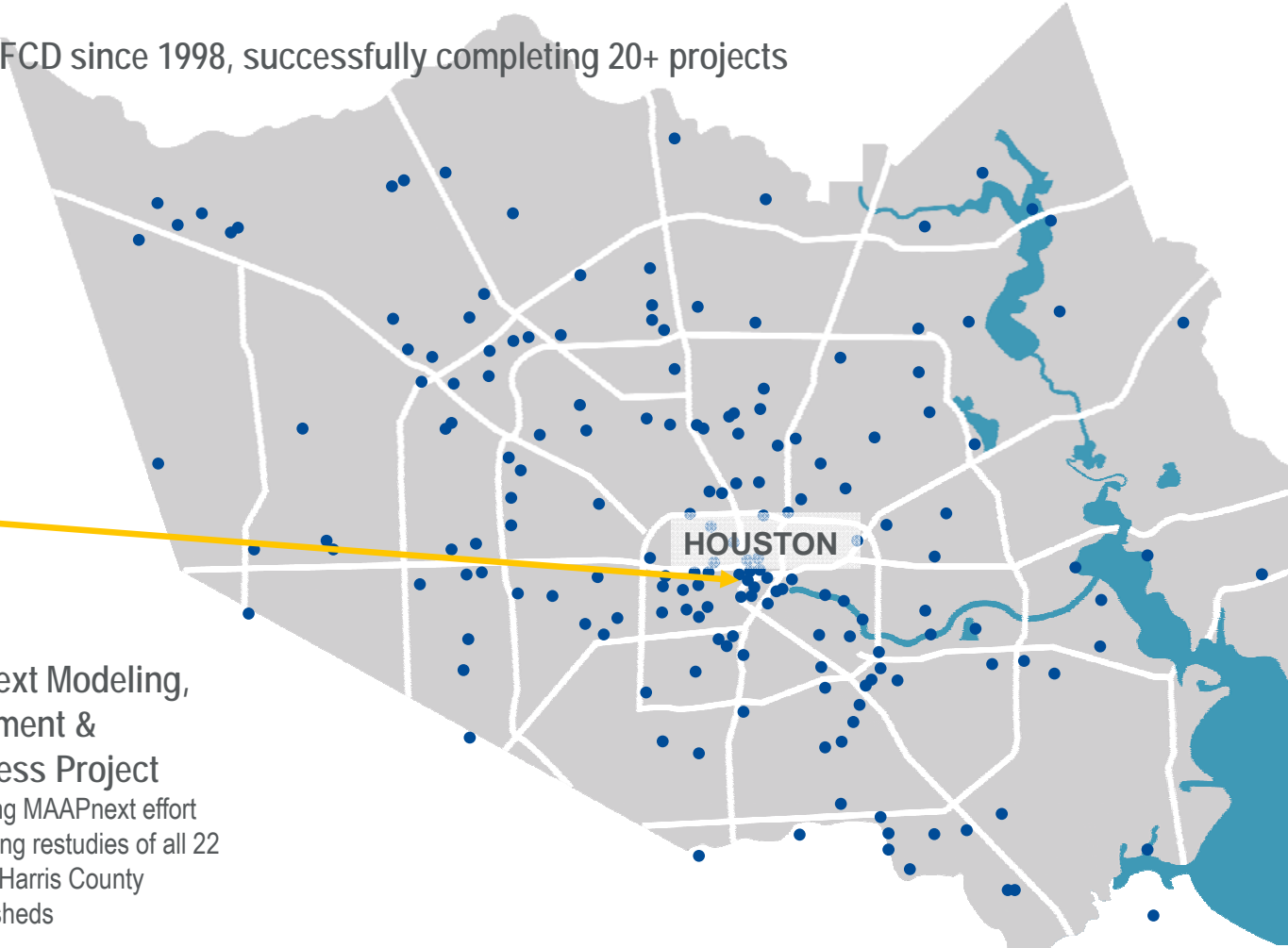


We've been working with HCFCD since 1998, successfully completing 20+ projects



MAAPnext Modeling, Assessment & Awareness Project

- Leading MAAPnext effort
- Involving restudies of all 22 major Harris County watersheds



Houston, this is our home

1. Houston Parks & Recreation Department Arbor Day
2. HDR distributed ice after Hurricane Ike
3. HISD Engineers Week
4. Rebuilding Houston
5. HISD Beautification Day
6. Houston Adopt-a-Drain Cleanup

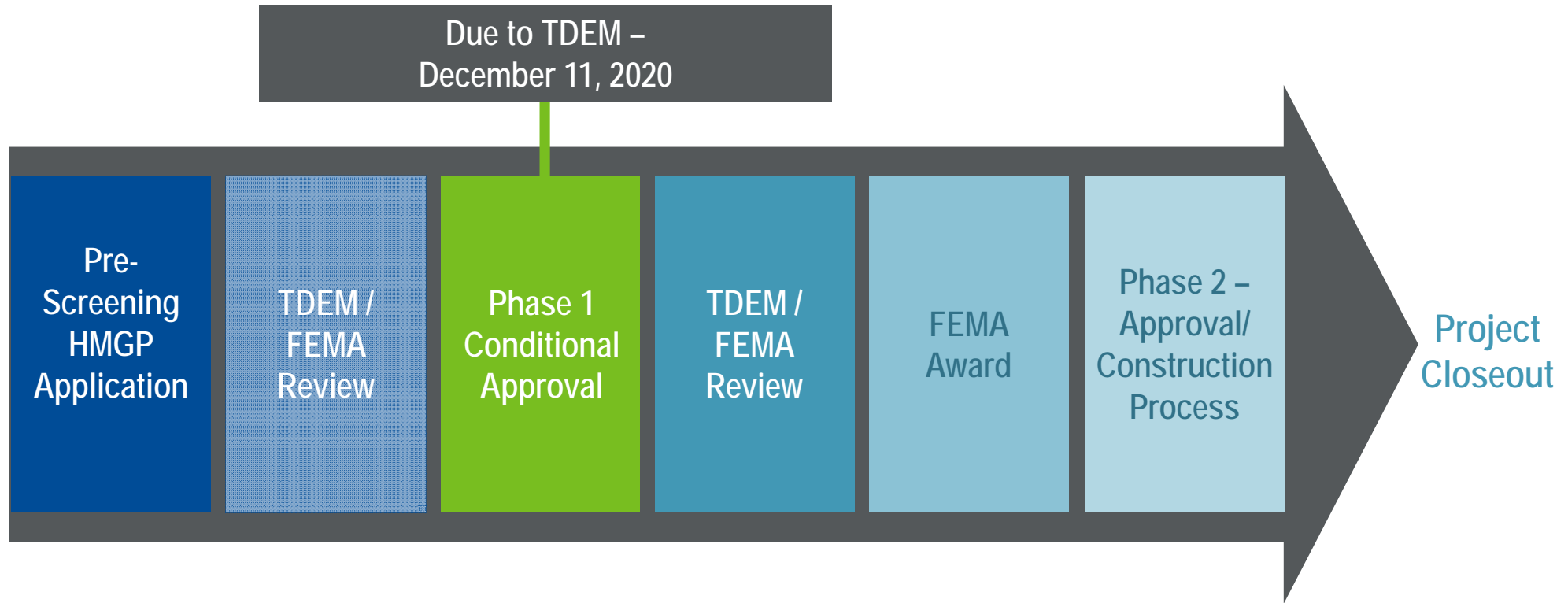




6

Your SOQ mentions the utilization of HAZUS. FEMA Region VI has questioned the use of the HAZUS methodology. Have you used alternative methodologies in other projects? How will you adapt to Region VI requirements regarding HAZUS?

FEMA 404 HMGP-phased project flowchart



Using HAZUS to confirm BCR is a risk identified by the City

HAZUS Challenges

- Not currently accepted by FEMA
- Limited benefit categories
- No costs
- No BCR
- Must use FEMA BCA toolkit v6.0
- Processing time
- Analytical detail

Alternative Benefits

- FEMA BCA Toolkit v6.0
- Customized excel model with Arc-GIS inventory
- Includes broad range of benefit categories

Houston has
[the use] of
nation tool.”
brandum Summary

Monetizing all
potential benefits to
provide the most
favorable Benefit –
Cost Ratio as
possible

FEMA HAZUS

Traditional BCA frameworks – FEMA Grants,
HUD CDBG-DR, etc.

Other customized models

Risk-based modeling – USACE, US BOR, NRCS



With the scale and timeline associated with this project, it is anticipated that there will be times where 100% dedicated staff will be required. While your Project Manager/Team Leader is dedicated at 100%, the Environmental Lead/Regulatory Delivery Coordinator is dedicated at 25%. It is expected the environmental and regulatory work for this project will be a critical path item. With the dedication rate of your Environmental Lead/Regulatory Delivery Coordinator at 25%, how will you manage competing priorities?

I'm **100% committed**
to leverage my
unique **knowledge**
and experience in the
Houston area with
HDR's proven team of
technical experts to
design and permit the
canal diversions



Jurisdictional High-Water Mark Delineation
at Fulshear Creek, Fort Bend County

Our deep bench of local environmental experts will reduce permitting timeframes

James Thomas, PWS, CWB
404 Permitting



Shane Valentine, PE
TXDOT Permitting



Paula Jo Lemmonds, PE PG
Water Quality



Michael Bell, PWS
Biology/Endangered Species Act



Christine Magers, CWB

- Environmental/Regulatory Delivery Coordinator
- NEPA/Permitting
- Regulatory Compliance

Clayton Tinsley
Cultural/Historic



Nikki Davis, PhD
Biology/Endangered Species Act



Dr. Steve Tomka, PhD
Cultural/Historic



Selecting HDR to be your North Canal partner delivers...

Understanding of project scope and challenges to **streamline project delivery**

Proven federal project delivery will **accelerate schedule and maximize funding**

Flood reduction and hydraulic design expertise to **create solutions that work and meet basin-wide objectives**

Local team with **award-winning urban-design experience** assures accountability, accessibility, and creativity

Experience with environmental permitting and community outreach will **reduce schedule risks and foster stakeholder support**



