



Hidalgo County Drainage District No. 1
Raul E. Segin, PE, CFM
District General Manager
Hidalgo County Floodplain Administrator

Grants: Funding for Flood Management Projects

Flood Management

May 19, 2021





Hidalgo County Drainage District No. 1
BOARD OF DIRECTORS

Board Member



David L. Fuentes
Commissioner Pct. #1

Board Member



Eduardo "Eddie" Cantu
Commissioner Pct. #2

Chairman of the Board



Richard F. Cortez
County Judge

Board Member



Everardo "Ever" Villarreal
Commissioner Pct. #3

Board Member



Ellie Torres
Commissioner Pct. #4



Hidalgo County Drainage District No. 1

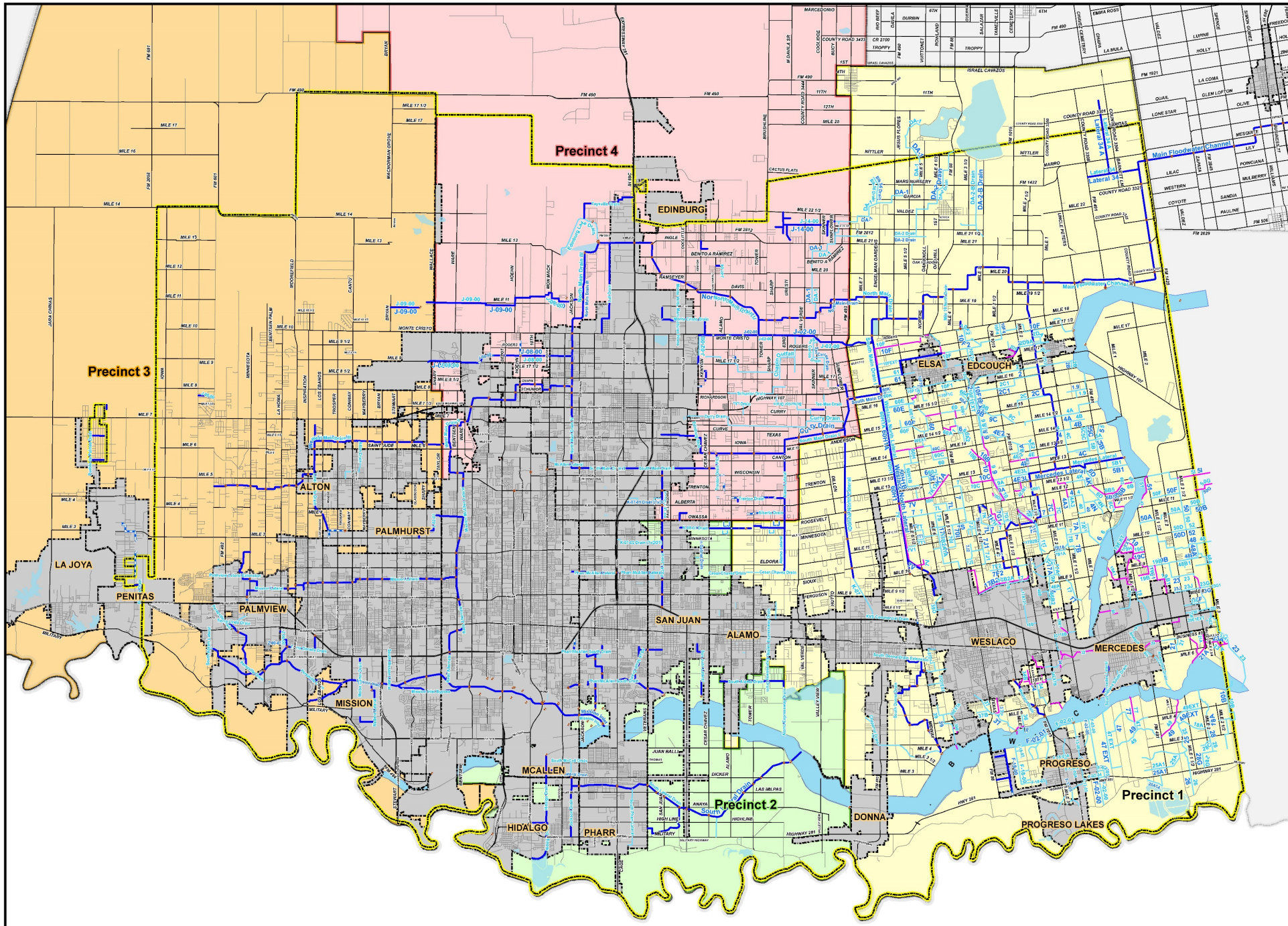
Grants: Purpose and Need

Mission Statement

The mission of the Hidalgo County District No. 1 is to proactively manage the Hidalgo County Master Drainage System and allow for the efficient exportation of drainage water, to protect life and property for Hidalgo County residents, businesses and surrounding jurisdictions.

- **RESTORE Act (Bucket 1)
Raymondville Drain**
- **GLO 2015 Flood Mitigation Competition
MFWC Expansion Project Phase I**
- **GLO 2015 Flood Mitigation Competition
MFWC Expansion Project Phase II**
- **Texas Water Development Board (TWDB) / Federal Emergency Management Agency (FEMA)
South Main Drain Expansion Project - Community Flood Mitigation Project**
- **Texas Water Development Board (TWDB) / Flood Infrastructure Fund
Flood Control Project Phase I (Project 40031)**





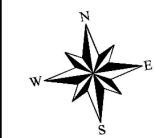
HIDALGO COUNTY
DRAINAGE DISTRICT No. 1

902 DOOLITTLE RD
EDINBURG TX 78542
TEL: (956) 292-7080
www.hcd1.org



Raul E. Sesin, P.E., C.F.M.
General Manager
Flooding Administrator

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 DRAINAGE SYSTEM MAP



1 inch = 7,000 feet

Date Saved: 2/21/2020





Hidalgo County Drainage District No. 1

Grants: Raymondville Drain – RESTORE Act

Raymondville Drain Project Overview

- ❖ The main function of the diversion channel is to improve regional storm water capacity and avoid significant flooding.
- ❖ The Recommended Plan generally consists of multiple sections of proposed new stormwater channels, improvements to existing channels, as well as the construction or use of necessary retention/detention basins and control structures.
- ❖ The diversion channel would intercept overland flow and divert flood water away from the North Main Drain.
- ❖ Within Hidalgo and Willacy counties, the proposed improvements include:
 - ❖ The construction of 13.9 miles of new diversion channel.
 - ❖ Approximately 45.0 miles of channel modifications (widening).
 - ❖ The construction of a 300-acre detention basin in Hidalgo County.
 - ❖ The use of La Sal Vieja as a retention basin.
 - ❖ The construction of four control structures.
- ❖ **Construction of the project is divided into six (6) phases.**
 - Phase 1 is the construction of the Diversion Channel and channel expansion within Hidalgo County.
 - Phase 2 was the cleaning of the existing channel which is now the RESTORE Act Project.
 - Phases 3 through 6 are the channel expansion within Willacy County.
 - Phase 3 – from the Hidalgo/Willacy County Line to La Sal Vieja Control Structure
 - Phase 4 – from SH 186 to FM 2209
 - Phase 5 – from FM 2209 to UP Railroad at I-69E
 - Phase 6 – From UP Railroad at I-69E to La Sal Vieja Control Structure





Hidalgo County Drainage District No. 1 Grants: Raymondville Drain – RESTORE Act

Total Project Costs

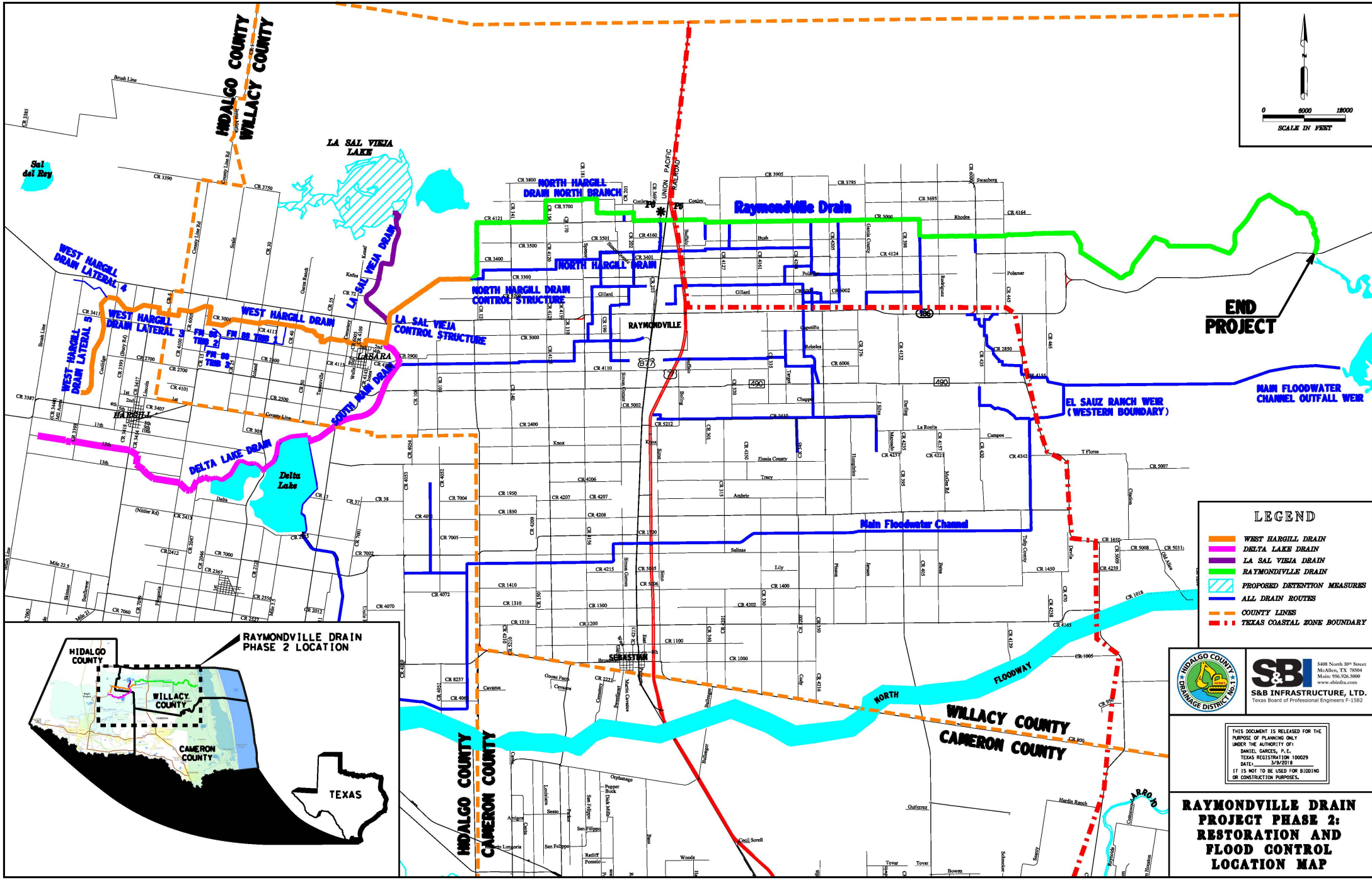
- Utility Adjustments \$35,053,079
- Right of Way \$20,437,183
- Planning and Design \$23,523,211
- Construction \$261,369,012
- **Total Installed Cost \$327,102,275**

Current WRDA Guidelines require a Federal/Non-Federal share of project costs to be at minimum 35-65 percent.

RESTORE Act Project Overview

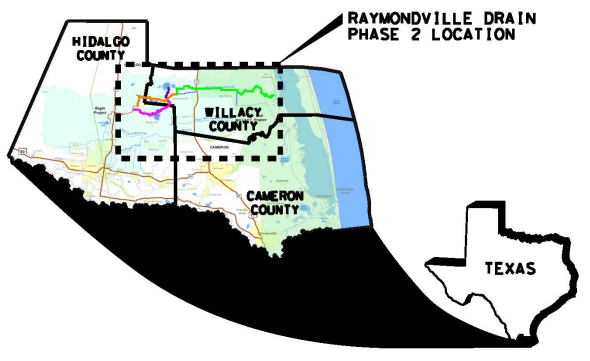
- ❖ The Hidalgo County Drainage District No. 1 received a \$7M grant under the Direct Component (Bucket 1) of the RESTORE Act as part of Texas' Multiyear Implementation Plan to clean out and Restore the existing Raymondville Drain Channel.
 - Treasury Department through TCEQ
- ❖ The project aims to provide immediate relief to communities along the existing Raymondville Drain, such as San Perlita, Raymondville, Lasara and Hargill by cleaning the channel of obstructions.
 - Approximately 62 miles of existing channel from the channel crossing at SH 186 near Port Mansfield, Willacy County to the end of the Hargill Drain Lateral 5 near Hargill, including the La Sal Vieja Drain and the Delta Lake Drain
 - 14.8 miles in Hidalgo
 - 47.3 miles in Willacy
 - Activities include Survey, Permitting and PS&E which are underway.
 - HCDD1 in-house forces will perform the restoration work.
 - Time
 - Environmental: approximately 60 days
 - Construction: 2 years





END PROJECT

- LEGEND**
- WEST HARGILL DRAIN
 - DELTA LAKE DRAIN
 - LA SAL VIEJA DRAIN
 - RAYMONDVILLE DRAIN
 - PROPOSED DETENTION MEASURES
 - ALL DRAIN ROUTES
 - COUNTY LINES
 - TEXAS COASTAL ZONE BOUNDARY



S&B
S&B INFRASTRUCTURE, LTD.
Treas. Board of Professional Engineers P-1582

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF PLANNING ONLY UNDER THE AUTHORITY OF: DAVID GARCES, P.E. TEXAS REGISTRATION 100029 DATE: 3/9/2018 IT IS NOT TO BE USED FOR BIDDING OR CONSTRUCTION PURPOSES.

RAYMONDVILLE DRAIN PROJECT PHASE 2: RESTORATION AND FLOOD CONTROL LOCATION MAP



COMMISSIONER
Everardo "Ever" Villarreal





Hidalgo County Drainage District No. 1

Grants: GLO 2015 Flood Mitigation Competition

MFWC Expansion Project Phase I

Grant Amount: \$9,858,499.00

- ❖ All stormwater in Hidalgo County ultimately outfalls to the Gulf of Mexico through either the Main Floodwater Channel, the USIBWC North Floodway, or the Arroyo Colorado Floodway.
- ❖ Expansion of the Main Floodwater Channel due to the greater regional benefit.
- ❖ All drainage systems from Abram Road, FM 495, FM 490, and FM 491 flow through the Main Floodway Channel.
- ❖ 3.29 miles in length
- ❖ Average of 150 feet to more than doubling its capacity, a width of 350 - 400 feet.
- ❖ Estimated to benefit nearly 400,000 residents
- ❖ LMI more than 53%
- ❖ Classified by U.S. Fish & Wildlife Service in the National Wetlands Inventory as a R2UBHx.
- ❖ Awaiting award from GLO to start the Environmental and design work which will be performed with in house forces.
- ❖ Construction will be bid out in approximately \$3M segments.
- ❖ Estimated design time: six (6) months.
- ❖ Estimated construction time: two (2) years.





Hidalgo County Drainage District No. 1

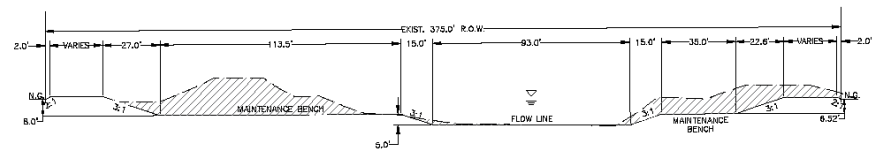
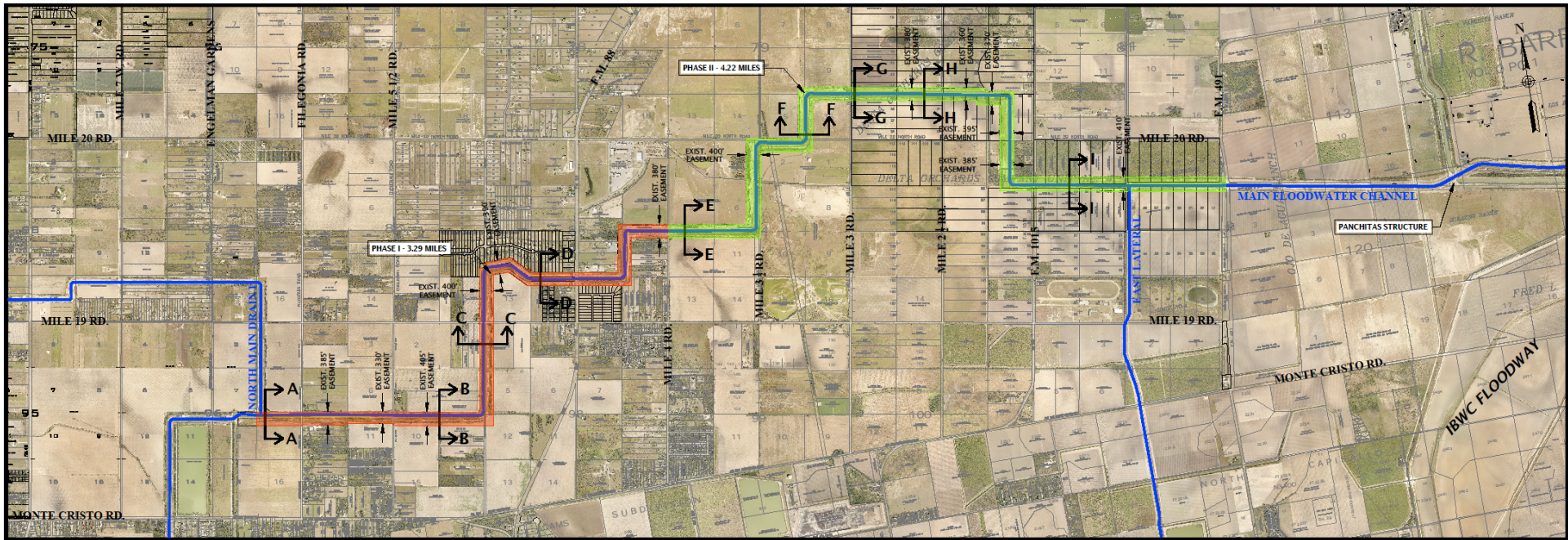
Grants: GLO 2015 Flood Mitigation Competition

MFWC Expansion Project Phase II

Grant Amount: \$9,962,444.40

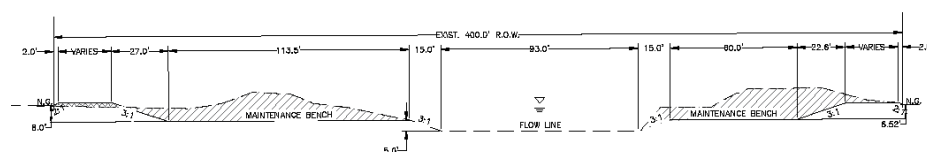
- ❖ All stormwater in Hidalgo County ultimately outfalls to the Gulf of Mexico through either the Main Floodwater Channel, the USIBWC North Floodway, or the Arroyo Colorado Floodway.
- ❖ Expansion of the Main Floodwater Channel due to the greater regional benefit.
- ❖ All drainage systems from Abram Road, FM 495, FM 490, and FM 491 flow through the Main Floodway Channel.
- ❖ 4.22 miles in length
- ❖ Existing ROW 330' to 410'
- ❖ Average Existing Channel Width 65' to 100'
- ❖ Average New Channel Width 321' to 346'
- ❖ The project is estimated to benefit nearly 377,800 residents
- ❖ LMI percentage of 54.26%
- ❖ Classified by U.S. Fish & Wildlife Service in the National Wetlands Inventory as a R2UBHx
- ❖ Awaiting award from GLO to start the Environmental and design work which will be performed with in house forces.
- ❖ Construction will be bid out in approximately \$3M segments.
- ❖ Estimated design time: six (6) months.
- ❖ Estimated construction time: two (2) years.





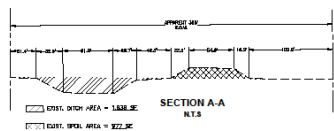
PROP. CROSS SECTION - 375 R.O.W.
N.T.S.

EXIST. DITCH AREA = 1.350 SE
FUTURE DITCH AREA = 2.643 SE

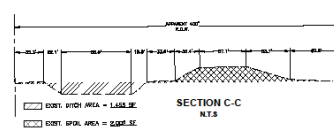


PROP. CROSS SECTION - 400 R.O.W.
N.T.S.

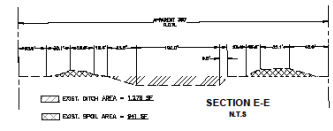
EXIST. DITCH AREA = 1.665 SE
FUTURE DITCH AREA = 3.121 SE



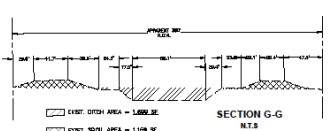
SECTION A-A
N.T.S.



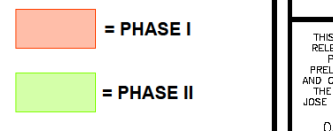
SECTION C-C
N.T.S.



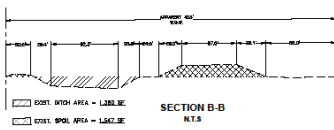
SECTION E-E
N.T.S.



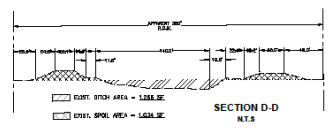
SECTION G-G
N.T.S.



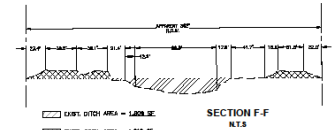
SECTION I-I
N.T.S.



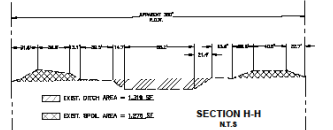
SECTION B-B
N.T.S.



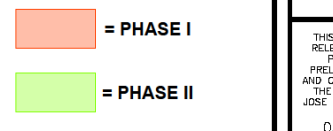
SECTION D-D
N.T.S.



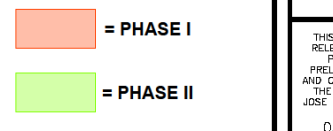
SECTION F-F
N.T.S.



SECTION H-H
N.T.S.

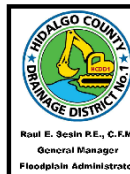


SECTION J-J
N.T.S.



= PHASE I

= PHASE II



Raul E. Sesin P.E., C.F.M.
General Manager
Floodplain Administrator

HIDALGO COUNTY DRAINAGE

DISTRICT NO. 1
902 N. DOOLITTLE RD
EDINBURG, TX 78542
TEL: (956) 292-7080
WWW.HCD1.ORG

MAIN FLOODWATER CHANNEL

(FROM NORTH MAIN DRAIN I TO FM 491)

THIS DOCUMENT IS
RELEASED FOR THE
PURPOSE OF
PRELIMINARY REVIEW
AND COMMENTS UNDER
THE AUTHORITY OF
JOSE N. SALDIVAR P.E.
94076 ON
03/17/21
IT IS NOT TO BE USED
FOR CONSTRUCTION,
BIDDING, AND/OR PERMIT
PURPOSES.

PROJECT NO. E-20-048
SCALE: H 1"=150'
DRAWN BY: J.G.N.C./A.V.F.A.
CHECKED BY: R.S.N.S.
TOP BY: E.I.D.F.
SHEET: 1 OF 1



COMMISSIONER
Everardo "Ever" Villarreal





Hidalgo County Drainage District No. 1

Grants: Texas Water Development Board (TWDB)

Federal Emergency Management Agency (FEMA)

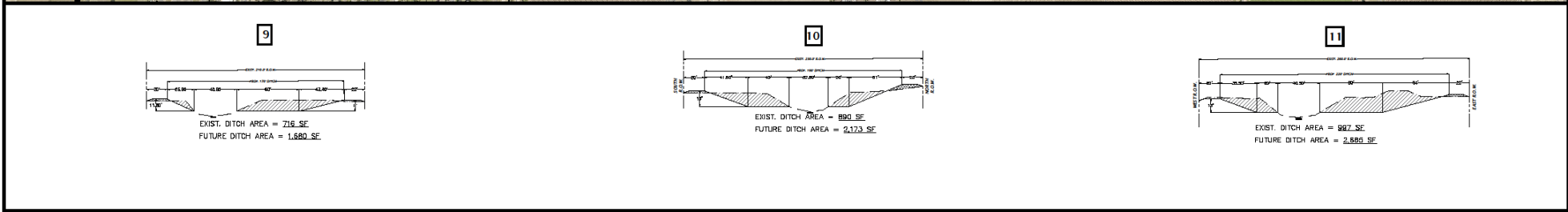
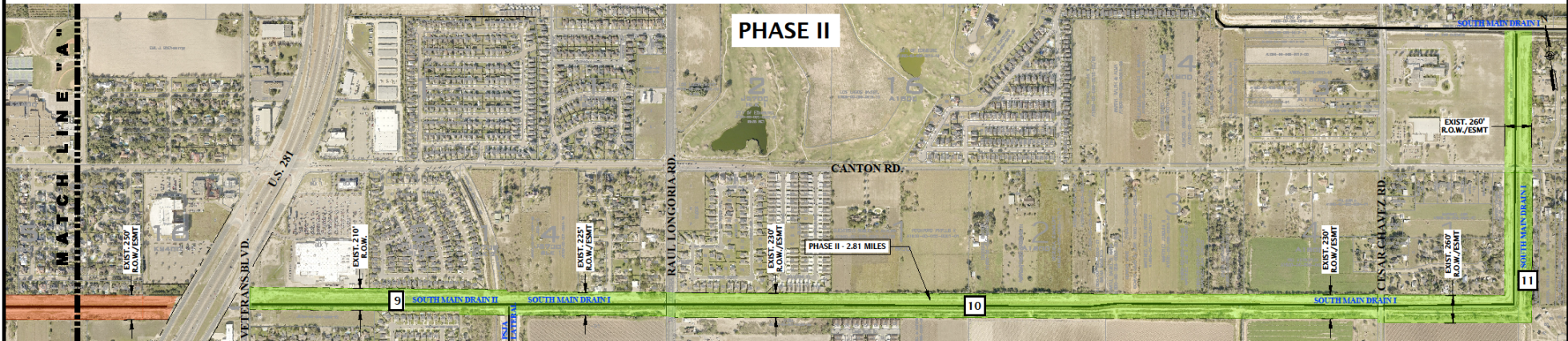
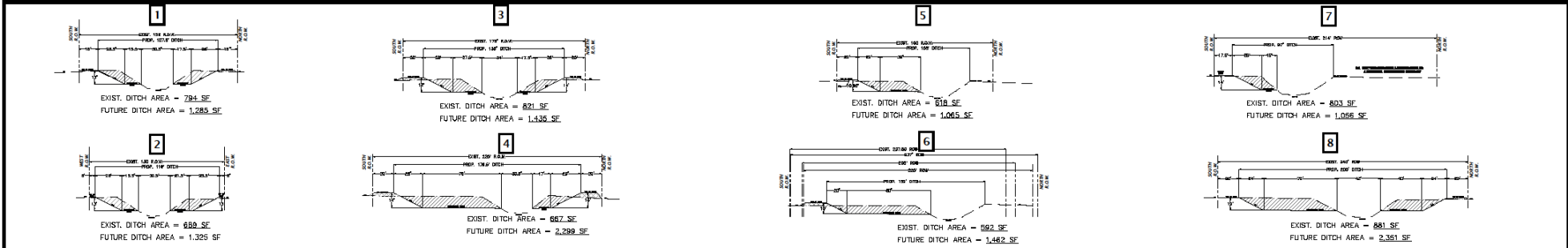
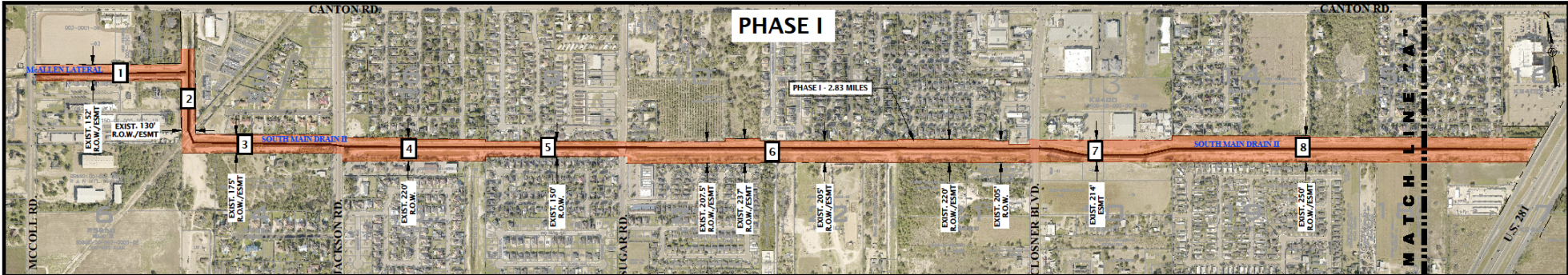
South Main Drain Expansion Project - Community Flood Mitigation Project



Project Cost Estimate: \$10,402,906.78

- ❖ The project will add millions of additional cubic yards of stormwater storage capacity.
- ❖ Phase I: 2.83 Miles in Length
- ❖ Phase II: 2.81 Miles in Length
- ❖ Total: 5.64 Miles in Length
- ❖ Existing ROW 130' to 260'
- ❖ Average Existing Channel Top Width 68' to 80'
- ❖ Average New Channel Top Width 107' to 220'
- ❖ Approximate Hidalgo County residents: 828,000
- ❖ Approximate number of residents to Benefit: 150,000 (17%)
- ❖ Indirect Benefit: 225,000 acres
(includes critical infrastructure: i.e., county courthouse, medical areas, I-69C evacuation route)
- ❖ Approximate Beneficiaries: 397,000
- ❖ Classified by U.S. Fish & Wildlife Service in the National Wetlands Inventory as a R5UBHx
- ❖ Application Pending Approval







HIDALGO COUNTY DRAINAGE DISTRICT No. 1
Karl E. Sosin P.E., C.F.M.
General Manager
Floodplain Administrator

SOUTH MAIN DRAIN PHASE I & II

DISTRICT No. 1
902 N. DOOLITTLE RD
EDINBURG TX. 78542
TEL (956) 292-7080
www.hcdd1.org

PROPOSED CROSSINGS

EDINBURG, TEXAS

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF PRELIMINARY REVIEW AND COMMENTS UNDER THE AUTHORITY OF JOSE N. SALDIVAR P.E. 94076 ON 03/19/21
IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, AND/OR PERMIT PURPOSES.

PROJECT NO. E-20-061
SCALE: NTS
DRAWN BY: EV/FA
CHECKED BY: R.S./N.S.
TOPO BY:
SHEET: SHEET 1 OF 1





Hidalgo County Drainage District No. 1

Grants: Texas Water Development Board (TWDB) Flood Infrastructure Fund

Flood Control Project Phase I (Project 40031)

B-18-21 Mile 10 North & Mile 1 West (Phases I – II)

B-18-22 Mile 11 North & FM 1015 (Phases I – IV)

B-18-23 Mile 11 North & Texas Blvd (Phases I – III)

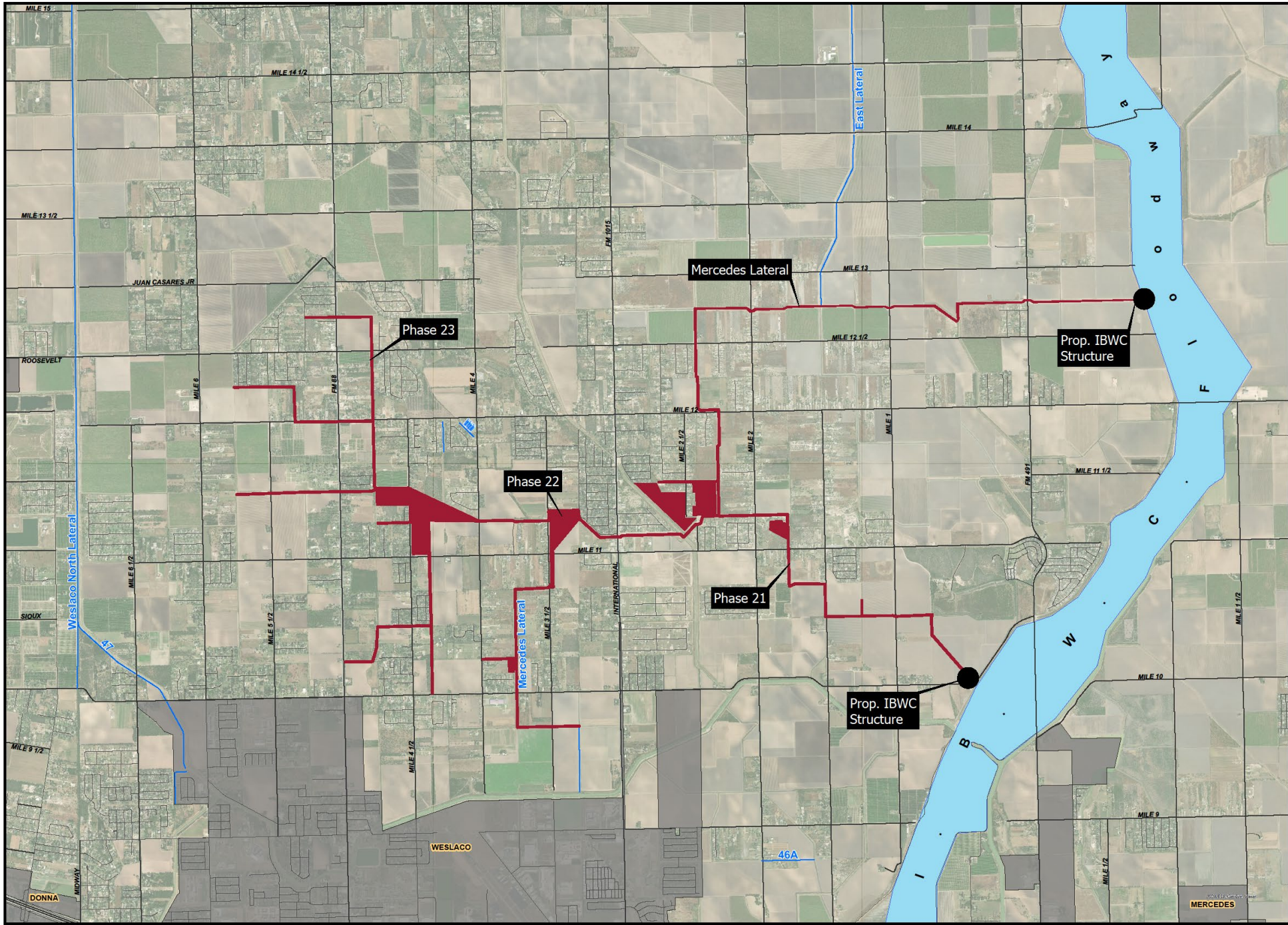
HCDD1 Mercedes Lateral

Project Cost Estimate: \$32,670,000

Loan: \$22,869,000 | Grant: \$9,801,000

- ❖ Three (3) Consultant Engineers and HCDD1 Engineering Department are working on this project.
- ❖ Existing system will be improved through ditch widening, Regional Detention Facilities (RDFs), and USIBWC structures.
- ❖ Approximately 16.5 miles of existing ditch widening between Mile 9 North, Mile 15 North, and FM 493, and the USIBWC Floodway
- ❖ Approximately 149 acres of RDFs
- ❖ Two (2) USIBWC structures with a proposed additional box and 70 cfs pump
- ❖ Project will be bid out in approximately \$3M segments
- ❖ Estimated Construction Time: Start – June 2022 / End – May 2024





**HIDALGO COUNTY
DRAINAGE DISTRICT No. 1**

902 DOOLITTLE RD.
EDINBURG, TX 78542
TEL: (956) 292-7080
www.hcd1.org



Raul E. Sosa P.E., C.F.M.
General Manager
Floodplain Administrator

Hidalgo County Drainage District No. 1

Phase 1 Flood Control Project



1 inch equals 1,500 feet



Questions & Answers Thank You!

Raul E. Segin, PE, CFM
District General Manager
raul.segin@hcdd1.org | Cell: 956-566-1974

**HIDALGO COUNTY
DRAINAGE DISTRICT NO. 1**

902

Jose Noe Saldivar, PE, CFM

Engineer IV

noe.saldivar@hcdd1.org | Cell: 956-292-5928

Lora Briones

Chief Financial Officer

lora.briones@hcdd1.org

Jaime J. Salazar

Operations Manager

jaime.salazar@hcdd1.org | Cell: 956-522-8095

902 North Doolittle Road | Edinburg, Texas 78542 | Office: 956-292-7080 | Website: hcdd1.org