CITY OF INGLESIDE
REGULAR CITY COUNCIL MEETING
AGENDA
APRIL 23, 2024
6:30 PM

Notice is hereby given that the Ingleside City Council will hold a Regular City Council Meeting on April 23, 2024, at 6:30 PM. The Meeting will be held in person at City Hall, 2671 San Angelo Street, Ingleside, Texas. Members of the public can view the meeting via live stream at https://inglesidetx.gov/.

With respect to any subject matter set forth below, the City Council may take action, unless otherwise expressly indicated with respect to any particular subject matter.

Opening Agenda

1. Call Meeting to Order.

2. Roll Call.

3. Invocation.

4. Pledge of Allegiance.

5. Citizen Comments and Reports.
Persons wishing to address the Council and who have registered using the Citizen Participation Form will have up to three minutes to speak. In accordance with the Open Meetings Act, Council may not discuss or take action on any item that has not been posted on the agenda. While civil public criticism is not prohibited; disorderly conduct or disturbance of the peace as prohibited by law shall be cause for the chair to terminate the offender's time to speak.

6. Staff Comments and Reports.
The Council may discuss any subject which is specifically listed under this item.

a. Council Comments and Reports.

b. Announcements of Community Interest and/or upcoming events.

c. City of Ingleside expenditures paid over $3,000.00 for the period of March 2024.

d. City of Ingleside monthly financial report as of March 2024.

e. Update on the Budget Calendar for Fiscal Year 2024-2025

f. City of Ingleside 2021 Certificate of Obligation Series Issuance Review

g. Update on General Projects

h. Update on migration from Utility Data Systems (UDS) MCRS to ERP 10 and from Tyler

Technologies ERP 9 to ERP 10.

Presentations

7. Proclamation to recognize the Ingleside Woman's Club 90th Anniversary.

8. Cove Park Advisory Group Presentation

9. Proclamation to recognize 55th Anniversary of Municipal Clerks Week May 5 – May 11, 2024.

Consent Agenda

All consent agenda items listed are considered to be routine by the City Council and will be enacted by one motion. There will be no separate discussion of the items unless a Council Member so requests, in which event the item will be removed from the Consent Agenda and considered in its normal sequence on the agenda.

10. Deliberate and take appropriate action on second and final reading of an Ordinance altering the prima facie speed limits established for vehicles under the provisions of SEC. 545-356, Texas Transportation Code, upon the basis of an engineering and traffic investigation, upon certain streets and highways, or parts thereof, within the corporate limits of the City of Ingleside, as set out in the Ordinance; and Providing a penalty of a fine in an amount of not less than twenty five dollars ($25.00) or more than five hundred dollars ($500.00) for violation of this Ordinance; and providing for effective date, reading severance, and publication.

11. Deliberate and take appropriate action on the second and final reading of an Ordinance adopting the Drainage Master Plan, an element of the Comprehensive Master Plan of the City of Ingleside; Amending conflicting provisions of the City Comprehensive Plan, and further providing for effective date, reading, severance, and publication.

12. Deliberate and take appropriate action on the Regular Meeting Minutes of April 09, 2024.

Executive Session

13. Closed Session
City Council will meet in Closed Session pursuant to the provisions of Chapter 551 of the Texas Government Code, in accordance with the authority contained in:

A. Section 551.074 Personnel Matters - City Manager Lewis

14. Open Session
City Council will reconvene in Open Session at which time action on the matter(s) discussed in Closed Session may be considered.

A. Section 551.074 Personnel Matters - City Manager Lewis

Public Hearing

The City Council shall call a public hearing on each item below in this section. Any person wishing to address the City Council on these items should please come forward when that public hearing is called.

Regular Agenda

15. Deliberate and take appropriate action on the selection of the Law Offices of Davidson Troilo Ream & Garza, a Professional Corporation, to provide Legal Services and be appointed the City Attorney.

16. Deliberate and take appropriate action to allow the purchase of several pieces of street repair equipment to allow City employees to do street repair and maintenance in-house.

17. Items to consider for placement on future agendas.

18. Adjourn.

Special Accommodations

This facility is wheelchair accessible and there are special parking spaces near the main entrance. Request for accommodations or special services must be made 48 hours prior to this meeting. Please contact City Secretary's Office at (361) 776-2517 or Fax (361) 776-1027 or email citycouncilquestions@inglesidetx.gov for further information.

With respect to any subject matter set forth, the City Council may meet in Closed Executive Session, if and to the extent allowed by Chapter 551 of the Texas Government Code, including, but not limited to, any of the following sections of Chapter 551: Section 551.071 Consultations with Attorney, Section 551.072 Deliberation about Real Property, Section 551.073 Deliberation regarding Prospective Gift, Section 551.074 Personnel Matters, Section 551.087 Deliberation regarding Economic Development Negotiations, and Section 551.089 Deliberation regarding Security Devices Or Security Audits.

Certification

I, Jana Stork, certify that the above notice of this Regular Meeting of the City Council was posted on the City Hall bulletin board at 2671 San Angelo Street, Ingleside, Texas on April 19, 2024 by 2:00 p.m.

Jana Stork

Jana Stork, Assistant City Secretary

This public notice was removed from the official posting board at the Ingleside City Hall on the following:

Date: _____ Time: _____

By: _____
City Secretary's Office
City of Ingleside, Texas

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.a

Council Comments and Reports.

SUBMITTED BY:

APPROVED FOR AGENDA: Ruby Beaven, City Secretary

BACKGROUND:

FISCAL ANALYSIS:

RECOMMENDATION:

ATTACHMENTS:
None

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.b

Announcements of Community Interest and/or upcoming events.

SUBMITTED BY: Ruby Beaven, City Secretary

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

1. Volunteers needed for Boards and Commissions
2. Stage 2 Water Restriction Guidelines
3. Ingleside Rotary Club Fishing Tournament, April 27
4. Tree City USA Designation Celebration Day, May 11, 2024
5. Ingleside Smokin Jazz & BBQ Cookoff, May 31 - June 1
6. Ingleside Community Clean up June 8 - June 15
7. Best of the Bay Saltwater Fishing Tournament, July 26-27
8. Early Voting Election Day Schedule

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Information purposes only.

ATTACHMENTS:

1. Community Events v4



Volunteers Needed!

Looking for an opportunity to serve your community?

You can find additional information like qualifications, duties, terms and an application at http://inglesidetx.gov/297/Boards-Commissions.

Please email your completed application and/or questions to the City Secretary at citysecretary@inglesidetx.gov.





City Of Ingleside

Stage 2 Water Restriction Guidelines

Basics:

- On March 18, 2024, the City of Ingleside initiated the Stage II Drought Contingency Plan;
- This plan has Stage 2 drought restrictions which are explained below;
- Enforcement of the new restrictions begin immediately;
- These measures apply to ALL Ingleside Water customers.

Water Uses & Restrictions

Sprinkler Irrigation Limited to **once per week**. The designated watering day for customers **NORTH** of Hwy 361 is on Thursday, for customers **SOUTH** of Hwy 361 is on Friday; it is still prohibited between 10 a.m. and 6 p.m.

Hand-held and drip irrigation Allowed any time, any day with a hand-held bucket, hand-held hose, or drip irrigation system equipped with a positive shutoff nozzle (includes soaker hoses)

Car washing Limited to designated watering day, except at a commercial car wash. Home washing shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses.

Filling Pools Limited to designated watering day.

Decorative Ponds, Fountains and Waterfalls Prohibited, except if necessary for the survival of aquatic life.

Water Use from Hydrants Permitted for construction purposes with special permit. Water is also permitted for firefighting and purposes necessary to maintain public health, safety, and welfare (i.e. flushing dead-end mains)

Golf Course Irrigation Use of potable water for irrigation of golf courses is limited to designated watering day.

Foundations The use of water to maintain the integrity of building foundations is limited to the customer's designated watering day; a drip irrigation system or hand-held hose must be used.

Dust Control Prohibited, except by permit.

Washing buildings, sidewalks, etc. Prohibited, except for business purposes or if in interest of public health and safety.

Restaurant Water Restaurants will serve water to customers only upon request. Restaurants are permitted to wash down outside eating areas and around the dumpster area.

Always in Effect:

- No person shall allow water to run off a property into streets or storm drains;
- No person shall allow water to flow constantly through a tap, hydrant, or valve;
- Defective plumbing resulting in water loss or leaks must be repaired.
- No person shall use any non-recycling decorative water fountain
- Irrigation heads or sprinklers are not permitted to spray directly on paved surfaces, such as drive- ways or sidewalks in public rights-of-way.
- An irrigation system cannot operate at water pressures higher than recommended, causing heads to mist, or to operate with broken heads.

Variances/Exemptions:

Variances or exemptions from water-use restrictions are available under certain circumstances and must be approved. These exemption types include new plantings, athletic fields, and water wells. The permit is required to be displayed in a visible location. Water Restriction Exemption permit application is available at http://inglesidetx.gov/documentcenter/view/450.

For more information on drought stages, please go to https://www.inglesidetx.gov/267/Drought-Contingency-Plan or call 361-776-3815.

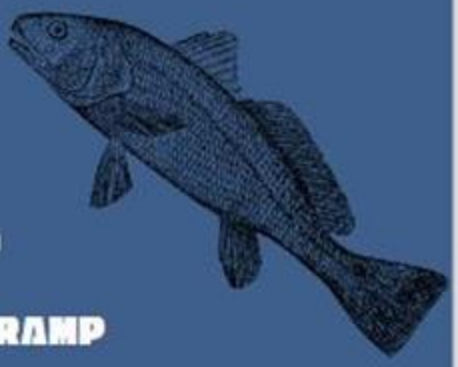
INGLESIDE ROTARY CLUB

FISHING TOURNAMENT

BOAT I PIER I WADE I SURF I JETTY I KAYAK

PROCEEDS BENEFIT INGLESIDE ROTARY CLUB SCHOLARSHIPS

ENTRY FEE $200



SATURDAY, APRIL 27TH

WEIGH-IN: 2:00 PM - 4:00 PM

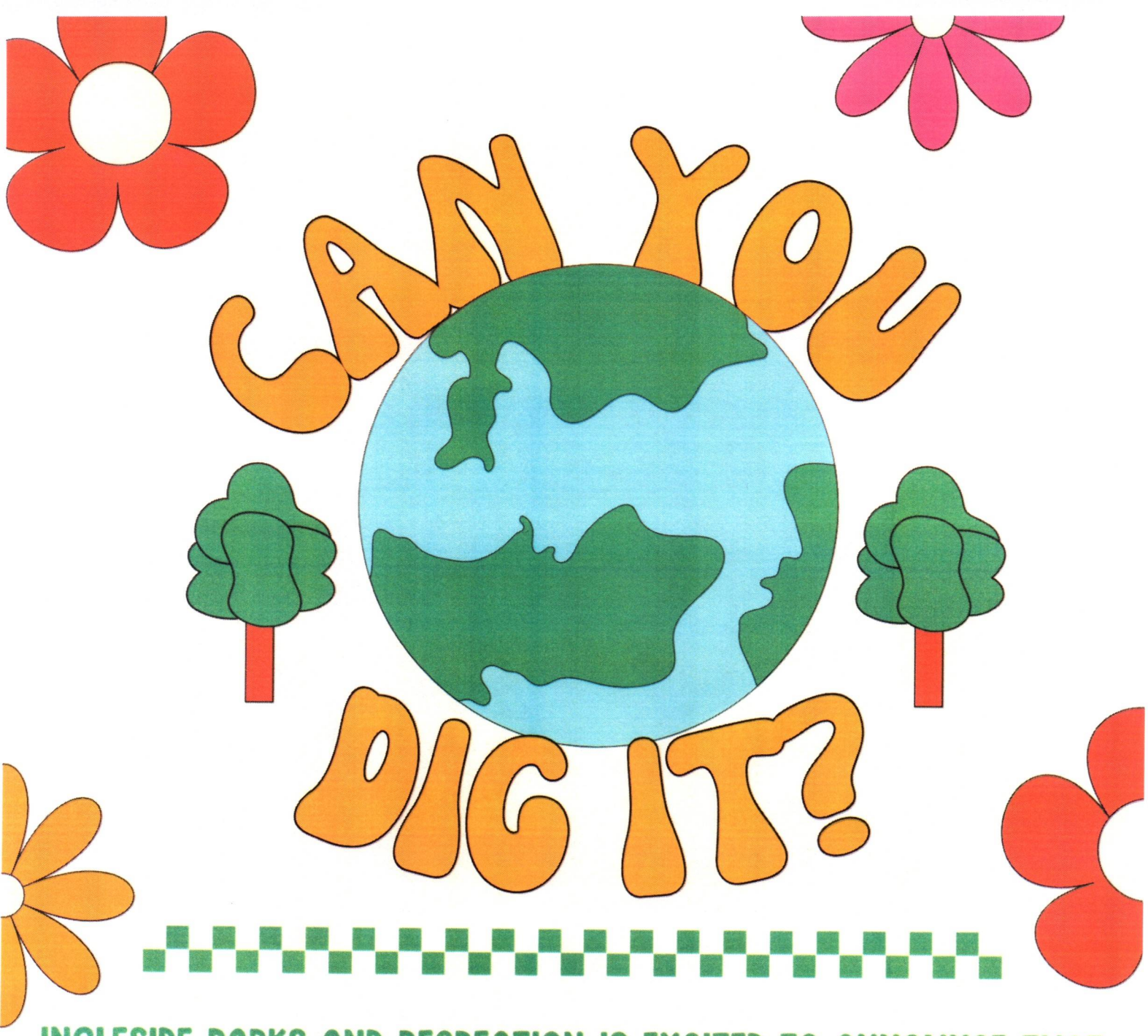
INGLESIDE BOAT RAMP

Cove Park
Ingleside, TX

venmo

For complete information & registration visit:
https://sites.google.com/a/inglesideisd.org/fishing-tourney/home

For more information, contact:
Troy Mircovich 361-790-6260



INGLESIDE PARKS AND RECREATION IS EXCITED TO ANNOUNCE THAT ARBOR DAY FOUNDATION DESIGNATES THE CITY OF INGLESIDE A TREE CITY USA COMMUNITY

COME CELEBRATE OUR TREE CITY USA RECOGNITION WITH US

MAY 11, 2024
10AM-12PM
N.O. SIMMONS PARK

THE CITY OF INGLESIDE WOULD LIKE TO ACKNOWLEDGE AND RECOGNIZE ALL THE MEMBERS OF THE INGLESIDE GARDEN CLUB FOR THEIR SUPPORT IN MAKING THIS POSSIBLE


INGLESIDE
Smokin'
JAZZ
& BARBECUE COOK-OFF
MAY 31ST & JUNE 1ST, 2024
Ingleside Smokin Jazz &
BBQ COOKOFF
Sanctioned BBQ Cookoff
Music, Food Trucks, Craft Vendors
and more
N.O. Simmons Park
2867 Ave J
Ingleside, TX 78362
FOR MORE INFORMATION 361-776-2906
INGLESIDE

INGLESIDE COMMUNITY CLEAN UP

LET'S TEAM UP TO CLEAN UP INGLESIDE

CITY OF INGLESIDE RESIDENTS MAY DROP OFF UNWANTED ITEMS AT THE CITY OF INGLESIDE PUBLIC WORKS FACILITY

WHAT'S NOT ACCEPTED?

- TIRES
- APPLIANCES CONTAINING FREON
  (REFRIGERATORS, FREEZERS, A/C UNITS, ETC)
- OIL
- BATTERIES
- COMPRESSED GAS (O2 TANKS, ETC.)
- PAINT/OTHER HAZARDOUS CHEMICALS



FOR INGLESIDE RESIDENTS - A UTILITY BILL OR ID MUST BE PRESENTED

June 8-15, 2024 | 8AM - 5PM
Public Works - 2525 8th St
Ingleside, TX 78362

City Of Ingleside



The Ingleside Chamber of Commerce is excited to announce our partnership with Best of the Bay. Together we will bring you a Saltwater Fishing Tournament you won't forget. Join us on July 26th and 27th at Cove Park Ingleside, TX.

The 2024 10th Annual Best of the Bay Fishing Tournament is dedicated to raising scholarship money to benefit the incoming senior class of local High Schools. The opportunities that we provide will help the seniors with the rigorous expenses of college. Through our scholarships we can help our youth further their education. With your help and participation, we can achieve these goals together. We look forward to seeing you and thanks again for your support.

The Ingleside Chamber, Best of the Bay and Fin Addict Angler Foundation presents Family Fishing Day at Cove Park. Register your kids for a day of fishing at Cove Park, it's Free! Fill out the form and email it to the chamber office: Inglesidetxchamber@gmail.com

CALL (361)364-6121 For General Information (Llame para Información General)

May 4, 2024 (4 de mayo de 2024)

General Election – City of Ingleside / ISD

(Elección general – ciudad de Ingleside y Ingleside ISD)

EARLY VOTING SCHEDULE

(Horario Para el Voto Adelantado)

Days / Dias	Dates / Fechas	Hours / Horas
Monday / Lunes	April 22, 2024	8:00 AM – 5:00 PM
Tuesday / Martes	April 23, 2024	7:00 AM – 7:00 PM
Wednesday / Miércoles	April 24, 2024	8:00 AM – 5:00 PM
Thursday / Jueves	April 25, 2024	8:00 AM – 5:00 PM
Friday / Viernes	April 26, 2024	8:00 AM – 5:00 PM
Saturday / Sabado	April 27, 2024	CLOSED
Sunday / Domingo	April 28, 2024	CLOSED
Monday / Lunes	April 29, 2024	7:00 AM – 7:00 PM
Tuesday / Martes	April 30, 2024	8:00 AM – 5:00 PM

EARLY VOTING LOCATIONS

(Casillas Electorales para el Voto Adelantado)

Humble Station
Community Center
2821 Main St
Ingleside, TX 78362

ELECTION DAY POLLING LOCATIONS 7:00 AM – 7:00 PM

(Día de Elección las Casillas Electorales abren de 7:00 a.m. a 7:00 p.m)

Humble Station
Community Center
2821 Main St
Ingleside, TX 78362

San Patricio County Elections Department, 410 W. Market St. Sinton, TX

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.c

City of Ingleside expenditures paid over $3,000.00 for the period of March 2024.

SUBMITTED BY: Caron Vela, Director of Finance

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Purchases are in compliance with the purchase policy. Purchase orders have been approved by the appropriate officials.

FISCAL ANALYSIS:

City of Ingleside expenditures paid over $3,000.00 03/01/2024-03/31/2024
Total A/P Check Amount: $2,552,809.77

RECOMMENDATION:

Information only.

ATTACHMENTS:

1. 2024-04-23 over 3K REPORT 03012024-03312024

VENDOR SET: 01 Ingleside
BANK: PCOP POOLED CASH - OPERATING
DATE RANGE: 3/01/2024 THRU 3/31/2024

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00010		IRS							
	I-T1 202403065302	FIT W/H	D	3/08/2024	16,790.90		000499		
	I-T3 202403065302	FICA W/H	D	3/08/2024	26,334.24		000499		
	I-T4 202403065302	MEDICARE W/H	D	3/08/2024	6,158.90		000499		49,284.04
00159		TML INTERGOVERNMENT							
	I-PINGLES02403	TML HEALTH INSURANCE MAR 24	D	3/01/2024	114,835.08		000502		114,835.08
00011		TEXAS MUNICIPAL RETIREMENT SYS							
	I-TMRS FEB 24	TMRS FEB 24 EMPLOYER EXP	D	3/13/2024	36,590.18		000503		
	I-TMRS FEB 24-2	TMRS FEB 24 TMRS EMPLOYEE	D	3/13/2024	21,936.60		000503		58,526.78
00325		CARD SERVICE CENTER							
	I-20240227 0744	MISC CARD CHARGES	D	3/14/2024	21,769.84		000504		21,769.84
00010		IRS							
	I-T1 202403215313	FIT W/H	D	3/22/2024	16,720.50		000505		
	I-T3 202403215313	FICA W/H	D	3/22/2024	26,319.36		000505		
	I-T4 202403215313	MEDICARE W/H	D	3/22/2024	6,155.38		000505		49,195.24
04326		BOKF, NA							
	I-INGL815CO 032024	CO SERIES 2015	D	3/05/2024	1,029,454.64		000514		1,029,454.64
05778		AOC HOLDING COMPANY							
	I-B838570-IN	FUEL	R	3/07/2024	3,485.01		077522		3,485.01
00401		CASCO INDUSTRIES INC.							
	I-259496	QUICK CONNECTS AND BOTTLE	R	3/07/2024	18,370.00		077528		18,370.00
05403		CIVICPLUS, LLC							
	I-288419	ANNUAL FEES	R	3/07/2024	5,035.80		077530		5,035.80
04453		CORE & MAIN LP							
	I-U359949	OVAL H-DUTY METER BOXES	R	3/07/2024	9,750.00		077531		
	I-U379190	METER BOXES W/LID	R	3/07/2024	13,851.00		077531		23,601.00
05521		DELAURO, GENE							
	I-20240301	LABOR & MILEAGE	R	3/07/2024	3,107.36		077532		3,107.36
05770		H&E EQUIPMENT SERVICES							
	I-99209851	TWO BOOM LIFT RENTALS	R	3/07/2024	2,332.94		077541		
	I-99217627	JOHN DEERE RENTAL	R	3/07/2024	6,950.38		077541		9,283.32

VENDOR SET: 01 Ingleside
BANK: PCOP POOLED CASH - OPERATING
DATE RANGE: 3/01/2024 THRU 3/31/2024

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
05199		MOFFITT HOLDINGS, LLC.							
	I-450428	FUEL	R	3/07/2024	5,256.76		077549		5,256.76
04747		OSTARCH HILMY & MCCAULEY, PLLC							
	I-198	MISC CHARGES JAN 2024	R	3/07/2024	7,625.00		077555		7,625.00
05581		RABA KISTNER, INC.							
	I-K010200	TESTING	R	3/07/2024	4,147.00		077559		4,147.00
00054		SAN PATRICIO MUNICIPAL WATER D							
	I-03302000 202402280	CALI WATER PURCHASES	R	3/07/2024	36,653.76		077564		
	I-03302200 20240228	CALI WATER PURCHASES	R	3/07/2024	50,350.08		077564		
	I-202403	SCADA INTERLOCAL 23-24	R	3/07/2024	250.00		077564		87,253.84
03334		SIDDONS-MARTIN EMERGENCY GROUP							
	I-316-00000009997	EMERGENCY SERVICE	R	3/07/2024	1,211.33		077565		
	I-316-0000008743	ANNUAL MAINTENANCE- #140	R	3/07/2024	3,515.95		077565		
	I-316-0000010038	MAINTENANCE	R	3/07/2024	3,245.01		077565		7,972.29
04399		THE RETAIL COACH, LLC							
	I-20240220	CONTRACT EXTENSION	R	3/07/2024	3,750.00		077568		3,750.00
00286		UNIQUE EMPLOYMENT I LTD							
	I-28364	TEMPS	R	3/07/2024	7,228.02		077571		7,228.02
00432		VULCAN MATERIALS COMPANY							
	I-62723953	100 TONS OF ASPHALT	R	3/07/2024	6,156.04		077573		
	I-62738281	ASPHALT	R	3/07/2024	12,144.17		077573		18,300.21
03532		GEXA ENERGY, LP							
	I-20240217	ELECTRIC BILL JAN 24	R	3/13/2024	47,542.23		077598		47,542.23
05820		PROGRESSIVE STRUCTURES, INC.							
	I-PAY APP 1	ANIMAL SHELTER PROJECT	R	3/13/2024	98,336.90		077616		
	I-PAY APP 2	ANIMAL SHELTER PROJECT	R	3/13/2024	55,902.39		077616		154,239.29
00034		REPUBLIC SERVICES, INC.							
	I-0847-001324509	GARBAGE BILL	R	3/13/2024	110,540.15		077617		110,540.15
03609		SAN PATRICIO CO TAX ASSESSOR							
	I-COI 2023	2023 TAX YEAR	R	3/13/2024	12,748.40		077618		12,748.40
05481		SYSTEMSEVEN SERVICES, LLC							
	I-INV61322	PHONE/INTERNET/FAX MAR24	R	3/13/2024	4,200.33		077622		4,200.33

VENDOR SET: 01 Ingleside
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DATE RANGE: 3/01/2024 THRU 3/31/2024

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00286		UNIQUE EMPLOYMENT I LTD							
	I-28391	TEMPS	R	3/13/2024	6,918.86		077627		6,918.86
00366		MCCOY CORPORATION							
	I-570604	CONCRETE CULVERTS	R	3/19/2024	12,155.36		077639		12,155.36
05821		DAVID RENE CONTRERAS							
	I-031324	BIG GRANT	R	3/21/2024	10,000.00		077646		10,000.00
05188		AT&T MOBILITY LLC							
	I-287299413911030324	CELL & HOTSPOTS FEB 24	R	3/21/2024	3,221.33		077647		3,221.33
04453		CORE & MAIN LP							
	I-U388205	ADAPTER AND GASKET KITS	R	3/21/2024	9,031.00		077655		9,031.00
04387		DAVIDSON TROILO REAM & GARZA							
	I-44472	PERSONNEL/EMPLOYMENT	R	3/21/2024	3,761.90		077657		3,761.90
05521		DELAURO, GENE							
	I-20240315	LABOR & MILEAGE	R	3/21/2024	3,107.36		077658		3,107.36
05230		ES OPCO USA, LLC. DBA VESERIS							
	I-IN-4477140	VECTOR KONTROL	R	3/21/2024	5,304.62		077663		5,304.62
05452		ESO SOLUTIONS, INC.							
	I-ESO-135636	REPORTING SOFTWARE	R	3/21/2024	3,270.25		077664		3,270.25
04638		FREESE AND NICHOLS, INC.							
	I-1367103	ING21605 DRAINANGE MP	R	3/21/2024	27,446.51		077665		27,446.51
00389		GT DISTRIBUTORS, INC.							
	I-INV0991653	PROTECTIVE EQUIPMENT	R	3/21/2024	4,646.40		077671		4,646.40
04295		HANSON PROFESSIONAL SERVICES,							
	I-ARIV1004631	HULTGREEN A-Z PROJECT	R	3/21/2024	9,250.00		077672		
	I-ARIV1004634	19L0026AL ANIMAL SHELTER	R	3/21/2024	2,971.00		077672		
	I-ARIV1004635	18L0321 STORMWATER PRJ	R	3/21/2024	2,203.47		077672		14,424.47
03576		HAYNES ELECTRIC LLC							
	I-6352	TROUBLESHOOT WELCOME SIGN	R	3/21/2024	3,650.00		077673		3,650.00
05180		MAX UNDERGROUND CONSTRUCTION,							
	I-PAY APP #1	HULTGREEN A-Z PROJECT	R	3/21/2024	349,521.45		077678		349,521.45

VENDOR SET: 01 Ingleside
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DATE RANGE: 3/01/2024 THRU 3/31/2024

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
05199		MOFFITT HOLDINGS, LLC.							
	I-454227	FUEL	R	3/21/2024	5,462.06		077681		5,462.06
05820		PROGRESSIVE STRUCTURES, INC.							
	I-PAY APP 3	ANIMAL SHELTER PROJECT	R	3/21/2024	165,982.62		077691		165,982.62
01936		RICOH USA, INC.							
	I-5069087823	COPIER RENTAL/COPIES	R	3/21/2024	3,769.01		077693		3,769.01
05791		SAFERITE SOLUTIONS							
	I-INV-469479	GAS MONITORS	R	3/21/2024	6,882.15		077695		6,882.15
00169		TRI COUNTY EMERGENCY MEDICAL S							
	I-14426	AMBULANCE SUBSIDY	R	3/21/2024	20,292.60		077704		20,292.60
05379		WEX BANK							
	I-95780731	FUEL PD AC CE	R	3/21/2024	6,169.38		077708		6,169.38
02993		LOPEZ, JERRY DBA LAGUNA CRANE							
	I-232323	BOOM LIFT REPAIR	R	3/27/2024	3,344.82		077733		
	I-240216	ANNUAL INSPECTION #101	R	3/27/2024	583.88		077733		3,928.70
04747		OSTARCH HILMY & MCCAULEY, PLLC							
	I-199	MISC CHARGES FEB 24	R	3/27/2024	4,650.00		077741		4,650.00
00524		SAN PATRICIO CO ECONOMIC DEVEL							
	I-2024-006	ANNUAL CONTRIBUTION	R	3/27/2024	4,759.50		077742		4,759.50
00878		SHI-GOVERNMENT SOLUTIONS, INC.							
	I-GB00518790	MAINTENANCE AGREEMENT	R	3/27/2024	3,660.00		077743		3,660.00
00286		UNIQUE EMPLOYMENT I LTD							
	I-28431	TEMPS	R	3/27/2024	9,017.61		077748		9,017.61
00069		UNITED STATES POSTAL SERVICE							
	I-202404	QRTR PREPAYMENT 04/24-06/24	R	3/28/2024	5,025.00		077753		5,025.00

* * T O T A L S * *	NO		INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	45		1,229,744.15	0.00	1,229,744.15
HAND CHECKS:	0		0.00	0.00	0.00
DRAFTS:	6		1,323,065.62	0.00	1,323,065.62
EFT:	0		0.00	0.00	0.00
NON CHECKS:	0		0.00	0.00	0.00
VOID CHECKS:	0	VOID DEBITS 0.00			
		VOID CREDITS 0.00	0.00	0.00	

TOTAL ERRORS: 0

VENDOR SET: 01 Ingleside
BANK: PCOP POOLED CASH - OPERATING
DATE RANGE: 3/01/2024 THRU 3/31/2024

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 01 BANK: PCOP TOTALS:	51	2,552,809.77	0.00	2,552,809.77
BANK: PCOP TOTALS:	51	2,552,809.77	0.00	2,552,809.77
REPORT TOTALS:	51	2,552,809.77	0.00	2,552,809.77

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.d

City of Ingleside monthly financial report as of March 2024.

SUBMITTED BY: Caron Vela, Director of Finance

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Monthly financial report ending March 31, 2024.

FISCAL ANALYSIS:

FY2024 See attachments for the month listed above: A.1; A.2; A.3; B.1; and C.1.
FY2024 The February 2024 Council Discretionary Funds account balance is $156,687.00

RECOMMENDATION:

Information only.

ATTACHMENTS:

1. 2024-04-23 FINANCIALS 03 2024

Monthly Financial Report to City Council April 23, 2024

Finance Department
Submitted by: Caron Vela

		Page
A.)	**Statement of Revenues and Expenditures through Feb 2024 (Preliminary)**	
	1.) Summary By Fund	A.1
	2.) General Fund	A.2
	3.) Utility Fund	A.3
B.)	**Monthly Portfolio Report - February 29, 2024**	B.1
C.)	**Cash Basis Sales Tax Collections through Mar 2024**	C.1
D.)	**FY23 General Fund Tax Roll Collection through Mar 2024**	

Total Value - Feb 29, 2024	$	67,316,308.12	
Total Value - Jan 31, 2023	$	65,065,601.84	
Net Change	**$**	**2,250,706.28**	

FYD - Total	$	2,153,120.71	(Gross 6 months 45.06%)
Budgeted - Total	$	3,350,000.00	Remaining to Collect:
Difference Budget vs. Received	$	1,196,879.29	35.73%

FYD - Total	$	14,541,520.75	
Budgeted - Total	$	10,246,840.00	Remaining to Collect:
Difference Budget vs. Received	$	(4,294,680.75)	-41.91%

REVENUE AND EXPENDITURES REPORT (UNAUDITED)

AS OF: MARCH 31ST, 2024

10 -GENERAL FUND

50.0% OF YEAR COMPLETED

	PRIOR YEAR BUDGET	PRIOR YEAR ACTUAL	CURRENT BUDGET	CURRENT PERIOD	CURRENT YTD ACTUAL	PRIOR YEAR PO ADJUST.	YEAR TO DATE ENCUMBERED	BUDGET VARIANCE	% OF BUDGET
10 -GENERAL FUND									
TOTAL REVENUE	15,803,938.00	11,999,848.02	18,635,090.00	1,177,875.71	15,245,257.00	0.00	(62,833.28)	(3,452,666.28)	81.81
TOTAL EXPENDITURES	14,657,563.00	5,310,375.19	18,392,920.00	1,275,134.92	7,319,145.59	0.00	1,017,668.63	10,056,105.78	39.79
REVENUES OVER/(UNDER) EXPENDITURES	1,146,375.00	6,689,472.83	242,170.00	(97,259.21)	7,926,111.41	0.00	(1,080,501.91)	6,603,439.50	3,272.95
18 -COVE PARK TOURISM FUND									
TOTAL REVENUE	25,360.00	7,531.63	25,000.00	849.87	11,164.67	0.00	0.00	(13,835.33)	44.66
TOTAL EXPENDITURES	0.00	2,230.69	32,850.00	0.00	0.00	0.00	0.00	32,850.00	0.00
REVENUES OVER/(UNDER) EXPENDITURES	25,360.00	5,300.94	(7,850.00)	849.87	11,164.67	0.00	0.00	19,014.67	142.23-
19 -HURRICANE EMERGENCY									
TOTAL REVENUE	0.00	15,678.04	0.00	0.00	245,837.49	0.00	0.00	245,837.49	0.00
TOTAL EXPENDITURES	0.00	5,385.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REVENUES OVER/(UNDER) EXPENDITURES	0.00	10,293.04	0.00	0.00	245,837.49	0.00	0.00	245,837.49	0.00
21 -HOTEL-MOTEL FUND									
TOTAL REVENUE	253,240.00	106,839.17	300,000.00	6,102.41	112,265.43	0.00	0.00	(187,734.57)	37.42
TOTAL EXPENDITURES	332,965.00	89,839.69	336,420.00	4,582.87	80,956.89	0.00	13,500.00	241,963.11	24.06
REVENUES OVER/(UNDER) EXPENDITURES	(79,725.00)	16,999.48	(36,420.00)	1,519.54	31,308.54	0.00	(13,500.00)	54,228.54	85.97-
23 -INGLESIDE DEVELOPMENT									
TOTAL REVENUE	579,000.00	302,868.98	604,721.00	49,998.71	349,989.62	0.00	0.00	(254,731.38)	57.88
TOTAL EXPENDITURES	581,765.00	49,133.89	580,900.00	14,000.00	46,502.19	0.00	0.00	534,397.81	8.01
REVENUES OVER/(UNDER) EXPENDITURES	(2,765.00)	253,735.09	23,821.00	35,998.71	303,487.43	0.00	0.00	279,666.43	1,274.03
25 -GENERAL FUND GRANTS									
TOTAL REVENUE	6,287.00	12,935.78	11,990.00	6,483.65	221,518.27	0.00	0.00	209,528.27	1,847.53
TOTAL EXPENDITURES	1,906,287.00	227,465.64	11,990.00	383,676.40	2,164,981.39	0.00	2,250,860.93	(4,403,852.32)	8,056.56
REVENUES OVER/(UNDER) EXPENDITURES	(1,900,000.00)	(214,529.86)	0.00	(377,192.75)	(1,943,463.12)	0.00	(2,250,860.93)	(4,194,324.05)	0.00
28 -INGLESIDE STREET MAINTENA									
TOTAL REVENUE	2,311,000.00	296,494.02	0.00	46,252.24	327,510.26	0.00	0.00	327,510.26	0.00
TOTAL EXPENDITURES	235,210.00	0.00	0.00	0.00	159,077.36	0.00	95,606.64	(254,684.00)	0.00
REVENUES OVER/(UNDER) EXPENDITURES	2,075,790.00	296,494.02	0.00	46,252.24	168,432.90	0.00	(95,606.64)	72,826.26	0.00
30 -CAPITAL PROJECTS FUND									
TOTAL REVENUE	7,007,385.00	292,967.80	0.00	46,298.46	281,600.43	0.00	0.00	281,600.43	0.00
TOTAL EXPENDITURES	11,168,890.00	4,059,933.13	0.00	3,327.88	407,877.66	0.00	4,293,728.52	(4,701,606.18)	0.00

REVENUE AND EXPENDITURES REPORT (UNAUDITED)

AS OF: MARCH 31ST, 2024

10 -GENERAL FUND

50.0% OF YEAR COMPLETED

	PRIOR YEAR BUDGET	PRIOR YEAR ACTUAL	CURRENT BUDGET	CURRENT PERIOD	CURRENT YTD ACTUAL	PRIOR YEAR PO ADJUST.	YEAR TO DATE ENCUMBERED	BUDGET VARIANCE	% OF BUDGET
32 -ROLLING STOCK & EQUIPMENT									
TOTAL REVENUE	354,900.00	171,193.00	0.00	186,828.00	1,149,559.00	0.00	0.00	1,149,559.00	0.00
TOTAL EXPENDITURES	122,372.00	0.00	0.00	2,700.00	2,700.00	0.00	309,987.92	(312,687.92)	0.00
REVENUES OVER/(UNDER) EXPENDITURES	232,528.00	171,193.00	0.00	184,128.00	1,146,859.00	0.00	(309,987.92)	836,871.08	0.00
40 -DEBT SERVICE FUND									
TOTAL REVENUE	3,701,135.00	2,192,943.56	4,251,120.00	111,084.73	4,208,263.01	0.00	0.00	(42,856.99)	98.99
TOTAL EXPENDITURES	3,672,476.00	1,903,606.86	4,273,250.00	1,029,454.64	3,648,942.48	0.00	0.00	624,307.52	85.39
REVENUES OVER/(UNDER) EXPENDITURES	28,659.00	289,336.70	(22,130.00)	(918,369.91)	559,320.53	0.00	0.00	581,450.53	2,527.43-
50 -UTILITY FUND									
TOTAL REVENUE	5,344,100.00	2,749,339.51	6,131,040.00	525,007.65	3,443,832.50	0.00	0.00	(2,687,207.50)	56.17
TOTAL EXPENDITURES	5,343,015.00	2,102,263.19	5,520,810.00	345,649.70	2,349,883.21	0.00	824,436.86	2,346,489.93	42.56
REVENUES OVER/(UNDER) EXPENDITURES	1,085.00	647,076.32	610,230.00	179,357.95	1,093,949.29	0.00	(824,436.86)	(340,717.57)	179.27
51 -UITILITIES CAPITAL IMPROV									
TOTAL REVENUE	1,908,195.00	43,872.78	0.00	26,699.38	163,295.95	0.00	0.00	163,295.95	0.00
TOTAL EXPENDITURES	2,053,140.00	2,682,402.12	0.00	264,370.50	567,136.08	0.00	210.00	(567,346.08)	0.00
REVENUES OVER/(UNDER) EXPENDITURES	(144,945.00)	(2,638,529.34)	0.00	(237,671.12)	(403,840.13)	0.00	(210.00)	(404,050.13)	0.00
52 -UTILITIES ROLLING STOCK									
TOTAL REVENUE	126,520.00	63,268.00	0.00	0.00	10,542.00	0.00	0.00	10,542.00	0.00
REVENUES OVER/(UNDER) EXPENDITURES	126,520.00	63,268.00	0.00	0.00	10,542.00	0.00	0.00	10,542.00	0.00
54 -UTILITY IMPACT FEES									
TOTAL REVENUE	43,500.00	42,527.28	0.00	7,717.96	53,274.90	0.00	0.00	53,274.90	0.00
REVENUES OVER/(UNDER) EXPENDITURES	43,500.00	42,527.28	0.00	7,717.96	53,274.90	0.00	0.00	53,274.90	0.00
60 -ASSET SEIZURES & FORFEIT.									
80 -GENERAL FIXED ASSETS									
90 -POOLED CASH									
GRAND TOTAL REVENUES	37,465,060.00	18,298,307.57	29,958,961.00	2,191,198.77	25,823,910.53	0.00	(62,833.28)	(4,197,883.75)	86.20
GRAND TOTAL EXPENDITURES	40,073,683.00	16,432,635.40	28,149,140.00	3,322,896.91	16,747,202.85	0.00	8,805,999.50	3,595,937.65	57.45
REVENUES OVER/(UNDER) EXPENDITURES	(2,608,623.00)	1,865,672.17	809,821.00	(1,131,698.14)	9,076,707.68	0.00	(8,868,832.78)	(601,946.10)	1,120.83

REVENUE & EXPENSE REPORT (UNAUDITED)

AS OF: MARCH 31ST, 2024

10 -GENERAL FUND

FINANCIAL SUMMARY 50.00% OF YEAR COMPLETED

ACCT# ACCOUNT NAME	ANNUAL	CURRENT	Y-T-D ACTUAL	% OF BUDGET	FAVORABLE (UNFAVORABLE)	PRIOR YR Y-T-D
REVENUE SUMMARY						
TAX REVENUES	13,430,890.00	554,103.89	12,027,945.32	89.55	1,402,944.68	9,151,143.92
FRANCHISE FEES	1,254,100.00	182,867.70	707,047.49	56.38	547,052.51	621,534.98
SERVICES	1,275,600.00	131,922.22	789,629.80	61.90	485,970.20	609,579.99
FINES & FORFEITURES	372,700.00	69,037.19	261,922.70	70.28	110,777.30	271,756.15
LICENSES & PERMITS	329,750.00	6,463.15	55,424.99	16.81	274,325.01	221,128.31
OTHER REVENUE	1,002,050.00	155,148.56	804,951.70	80.33	197,098.30	487,198.67
TRANSFERS FROM OTHER FUND	970,000.00	78,333.00	598,335.00	61.68	371,665.00	637,506.00
*** TOTAL REVENUES ***	18,635,090.00	1,177,875.71	15,245,257.00	81.81	3,389,833.00	11,999,848.02
EXPENDITURE SUMMARY						
NON-DEPARTMENTAL	2,126,400.00	80,020.92	758,192.77	35.66	1,368,207.23	835,277.83
MAYOR AND CITY COUNCIL	248,200.00	222.34	9,187.56	3.70	239,012.44	18,757.19
CITY MANAGER	240,950.00	21,035.24	100,737.55	41.81	140,212.45	93,222.14
CITY SECRETARY	316,490.00	35,719.67	151,195.33	47.77	165,294.67	111,760.20
FINANCE	444,720.00	41,922.65	234,229.49	52.67	210,490.51	156,680.46
CITY ATTORNEY	190,000.00	4,650.00	34,730.30	18.28	155,269.70	64,518.08
MUNICIPAL COURT	329,990.00	25,650.10	141,407.80	42.85	188,582.20	120,930.03
LIBRARY	379,990.00	35,720.34	179,338.58	47.20	200,651.42	156,628.41
FIRE	359,750.00	23,118.31	161,451.36	44.88	198,298.64	143,968.47
POLICE	4,136,100.00	358,493.75	1,831,410.99	44.28	2,304,689.01	1,580,603.01
PARKS AND RECREATION	1,251,620.00	93,136.74	480,503.24	38.39	771,116.76	278,187.88
STREETS	4,267,130.00	261,376.55	1,474,241.57	34.55	2,792,888.43	512,022.13
DEVELOPMENT SERVICES	632,260.00	46,861.19	220,410.73	34.86	411,849.27	183,406.49
ANIMAL CONTROL	320,640.00	29,432.99	162,859.12	50.79	157,780.88	89,215.12
RECYCLING CENTER	165,120.00	6,346.93	30,302.95	18.35	134,817.05	31,474.46
CODE ENFORCEMENT	353,340.00	15,414.95	86,199.05	24.40	267,140.95	93,722.26
ECONOMIC DEVELOPMENT	205,280.00	21,739.68	95,137.18	46.35	110,142.82	68,744.07
FACILITIES MAINTENANCE	291,910.00	18,672.73	90,653.78	31.06	201,256.22	1,777.63
HUMAN RESOURCES	269,180.00	21,284.96	126,322.91	46.93	142,857.09	106,845.86
EMERGENCY MANAGEMENT	49,330.00	2,591.38	20,990.48	42.55	28,339.52	21,753.80
IT	614,520.00	21,162.09	266,450.01	43.36	348,069.99	146,702.14
SANITATION	1,200,000.00	110,561.41	663,192.84	55.27	536,807.16	494,177.53
*** TOTAL EXPENDITURES ***	18,392,920.00	1,275,134.92	7,319,145.59	39.79	11,073,774.41	5,310,375.19

REVENUE & EXPENSE REPORT (UNAUDITED)

AS OF: MARCH 31ST, 2024

50 -UTILITY FUND

FINANCIAL SUMMARY 50.00% OF YEAR COMPLETED

ACCT# ACCOUNT NAME	ANNUAL	CURRENT	Y-T-D ACTUAL	% OF BUDGET	FAVORABLE (UNFAVORABLE)	PRIOR YR Y-T-D
REVENUE SUMMARY						
TAX REVENUES	5,781,640.00	480,577.36	3,143,111.82	54.36	2,638,528.18	2,577,031.40
OTHER REVENUE	349,400.00	44,430.29	300,720.68	86.07	48,679.32	172,308.11
*** TOTAL REVENUES ***	6,131,040.00	525,007.65	3,443,832.50	56.17	2,687,207.50	2,749,339.51
EXPENDITURE SUMMARY						
NON-DEPARTMENTAL	1,272,750.00	76,914.75	587,627.44	46.17	685,122.56	628,106.00
UTILITY BILLING OFFICE	301,340.00	25,735.68	154,121.44	51.15	147,218.56	117,733.05
WATER	2,444,700.00	152,851.88	1,002,677.16	41.01	1,442,022.84	940,792.80
WASTEWATER	1,502,020.00	90,147.39	605,457.17	40.31	896,562.83	415,631.34
*** TOTAL EXPENDITURES ***	5,520,810.00	345,649.70	2,349,883.21	42.56	3,170,926.79	2,102,263.19
*** REVENUES OVER/(UNDER) EXPENDITURES *	610,230.00	179,357.95	1,093,949.29	179.27	(483,719.29)	647,076.32

MEEDER
PUBLIC FUNDS

Portfolio Summary Dashboard

02/01/2024 - 02/29/2024

City of Ingleside (341943)

Dated: 04/15/2024

Portfolio Summary

	CO 2020 TX WATER DEV BOARD, HOTEL-MOTEL, UTILITY	DEBT SERVICE, IMPACT FEES, UTILITY CAPITAL IMPROVEMENT	GENERAL, INGLESIDE DEVELOPMENT, Grand Total	GENERAL CAPITAL PROJECTS, INGLESIDE STREET MAINTENANCE	GENERAL FUND GRANTS, POOLED CASH
Par Value	2,678,850.21 1,308,965.25 1,374,783.74	2,725,179.44 1,555,013.83 165,188.88	2,186,267.79 2,961,818.69 67,316,306.12	9,931,307.59 2,158,205.11	269,409.98 40,001,315.61
Principal Cost	2,678,850.21 1,308,965.25 1,374,783.74	2,725,179.44 1,555,013.83 165,188.88	2,186,267.79 2,961,818.69 67,328,903.12	9,931,307.59 2,158,205.11	269,409.98 40,013,912.61
Book Value	2,678,850.21 1,308,965.25 1,374,783.74	2,725,179.44 1,555,013.83 165,188.88	2,186,267.79 2,961,818.69 67,317,534.53	9,931,307.59 2,158,205.11	269,409.98 40,002,544.02

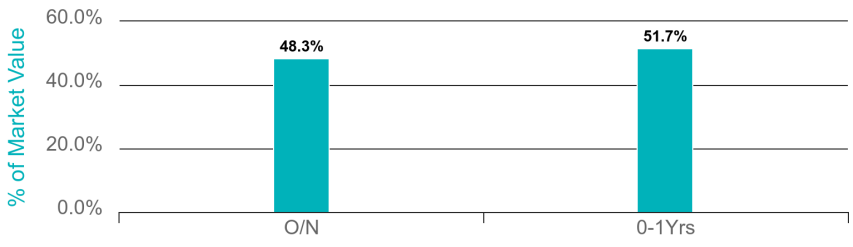
Footnotes: 1,2,3
Continued on page 3

Portfolio Characteristics

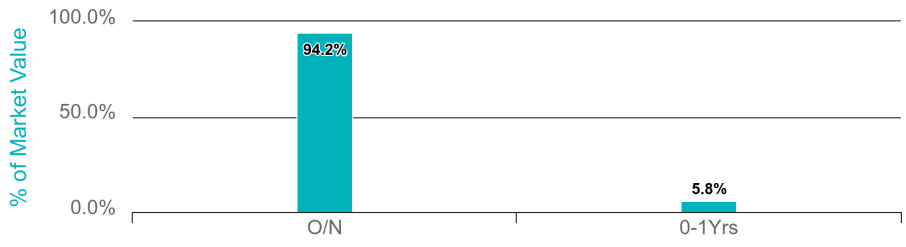
	CO 2020 TX WATER DEV BOARD, HOTEL-MOTEL, UTILITY	DEBT SERVICE, IMPACT FEES, UTILITY CAPITAL IMPROVEMENT	GENERAL, INGLESIDE DEVELOPMENT, Grand Total	GENERAL CAPITAL PROJECTS, INGLESIDE STREET MAINTENANCE	GENERAL FUND GRANTS, POOLED CASH
Weighted Average Maturity	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.019	0.000 0.000	0.000 0.031
Portfolio Effective Duration	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.018	0.000 0.000	0.000 0.031
Weighted Average Life	0.000 0.000 0.000	0.000 0.000 0.000	0.000 0.000 0.019	0.000 0.000	0.000 0.031

Footnotes: 1,2,3
Continued on page 4

Maturity Distribution (Excl. Cash & Equiv.)



Maturity Distribution (All)



MEEDER
PUBLIC FUNDS

Portfolio Summary Dashboard

02/01/2024 - 02/29/2024

City of Ingleside (341943)

Dated: 04/15/2024

Asset Allocation

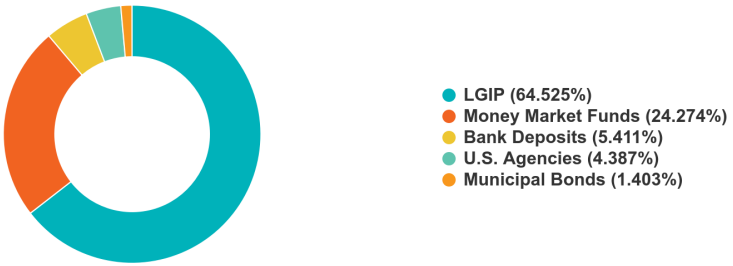


Chart calculated by: % of Market Value

Credit Quality

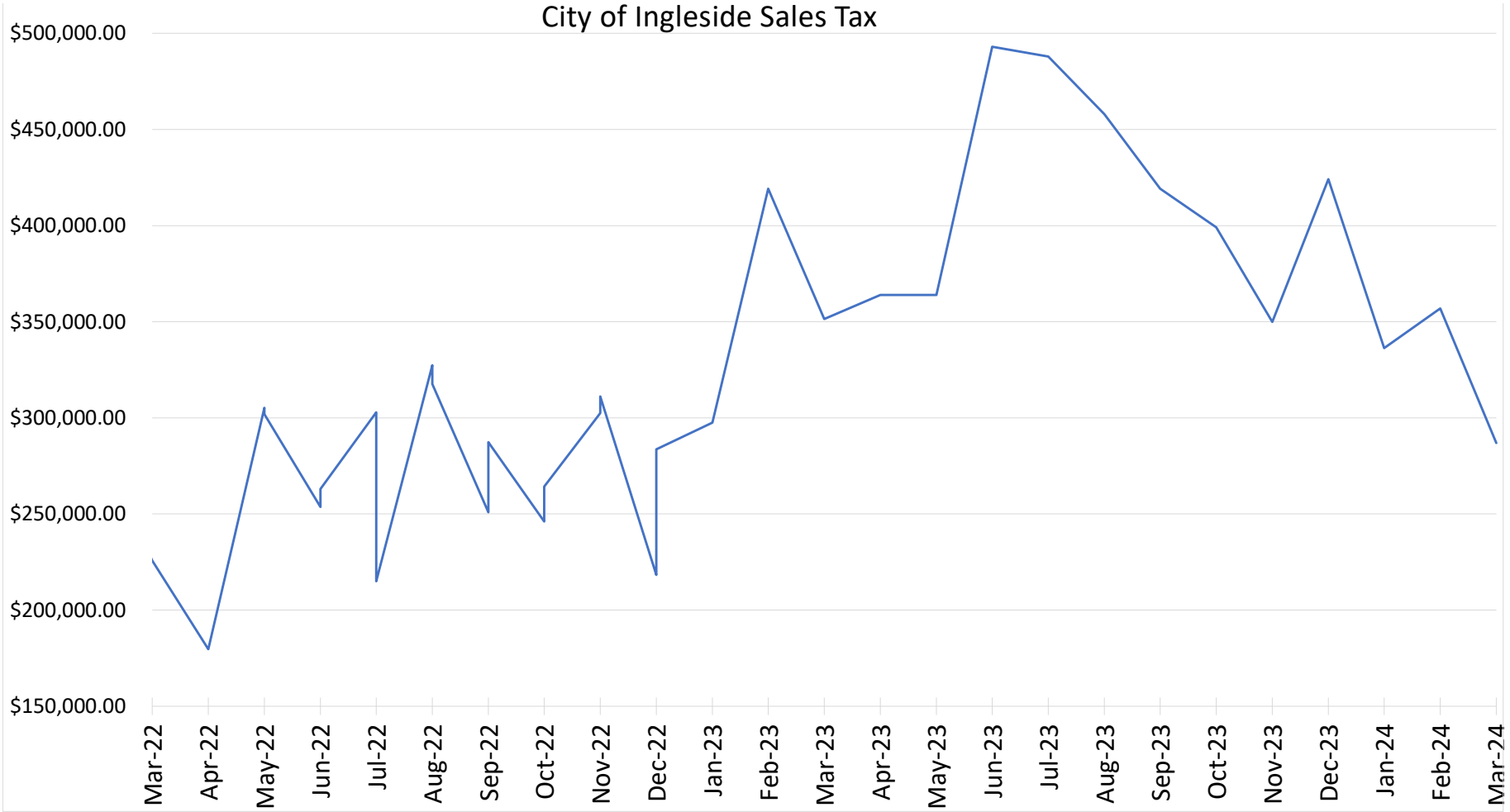


Chart calculated by: % of Market Value

Issuer Concentration

Issuer	*Ending Current Units*	*Ending Book Value*	*% of Ending Book Value*
TEX PRIME	43,399,789.38	43,399,789.38	64.470%
Invesco Government and Agency Fund	13,647,977.68	13,647,977.68	20.274%
Federal Home Loan Banks	3,000,000.00	3,000,000.00	4.456%
Morgan Stanley Institutional Liquidity Funds - Government Portfolio	2,678,850.21	2,678,850.21	3.979%
Frost Bank Public Fund Checking Account	1,849,038.29	1,849,038.29	2.747%
Frost Bank Account Analysis	1,790,650.56	1,790,650.56	2.660%
Carlstadt New Jersey	950,000.00	951,228.41	1.413%
Total	**67,316,306.12**	**67,317,534.53**	**100.000%**

Footnotes: 2,4,5


City of Ingleside Sales Tax
$500,000.00
$450,000.00
$400,000.00
$350,000.00
$300,000.00
$250,000.00
$200,000.00
$150,000.00
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Jan-23
Feb-23
Mar-23
Apr-23
May-23
Jun-23
Jul-23
Aug-23
Sep-23
Oct-23
Nov-23
Dec-23
Jan-24
Feb-24
Mar-24


March - Sales Tax Allocations by Year
Tax Allocations
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Tax Year

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.e

Update on the Budget Calendar for Fiscal Year 2024-2025

SUBMITTED BY: Brenton Lewis, City Manager

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Each year the City must adopt a budget for the next Fiscal Year. The City of Ingleside has held budget workshops for strategic planning and reviewing departmental requests. Also, State Law establishes certain dates and time periods that have to be met. To ensure that the City Council and public are informed of the dates that are designated for certain discussions and actions, and a budget calendar is presented before the budget process begins. The calendar is a working document and may be changed as schedules of the elected body and staff changes.

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Report Only

ATTACHMENTS:

1. Budget Calendar Fiscal Year 2024-2025

CITY OF INGLESIDE 2024-2025 BUDGET PLANNING CALENDAR

DATE	WHO	ACTION REQUIRED
April 23		
April 24 - 30	All Departments	Departments begin preliminary budget development
May 1	Director of Finance	Distribution of Budget Packets
May 11	City Council	Strategic Planning Retreat
May 20 - 24	All Departments	Meet with City Manager and Finance to review baseline budgets and requests
May 28 - 31	City Manager	Follow-up budget meetings with departments if needed
June 17	Director of Finance	Compile approved budget requests and submit to City Manager
June 24 - 28	All Departments	Meet with City Manager to review budget presentations
July 13	City Council	Budget Workshop with departmental presentations
July 25	Chief Appraiser	Receipt of Certified Tax Roll
August 7	Director of Finance	
August 13	City Manager	Regular City Council Meeting 1) Present Proposed Budget to City Council 2) Present the 5 Year Capital Improvement Plan 3) Submit the No-New-Revenue, Voter-Approval Tax Rate, and De Minimus Rate to City Council 4) Record Vote to set date of Public Hearing on Proposed Tax Rate
August 29	City Manager	Last day to file proposed budget with City Secretary
September	Director of Finance	1) Publish Notice of Budget Hearing (not later than 10th day before budget public hearing) 2) Publish Notice of Tax Rate Increase (Not later than the 5th day before the Public Hearing)
September	Director of Finance	Continuous Internet notice of Public Hearing (at least 7 days before the Public Hearing on the Tax Rate)
September 17	City Council	Special City Council Meeting 1) Public Hearing on the Budget 2) Public Hearing on Tax Increase
September 24	City Council	Regular City Council Meeting 1st and only reading of ordinance to adopt the Budget 1st and only reading of ordinance to adopt the Tax Rate

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.f

City of Ingleside 2021 Certificate of Obligation Series Issuance Review

SUBMITTED BY: Brenton Lewis, City Manager

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The City Council requested an update on the funds that are available from the 2021 Certificate of Obligation Series issue. The CO was issued with the proceeds being $7,022.583.02 to fund the following projects:

Faith Park Projects:

- Multi-Purpose Ball Fields and Concession Stand
- Pool/Pool House/Pump House/Restrooms
- Parking Lot
- Garden Center Building
- Walking Trail

Humble Center Remodel
Collection Station/Bulk Collection Facility
Animal Control Facility Building
Animal Control Fencing
Volunteer Department Brush Truck

As shown in the fiscal analysis, there are not funds currently available to complete the three pending projects being the Garden Center Building, Walking Trail, and Bulk Collection Facility, which are in the negative at $180,837.90. Once FEMA funds of $250,225.79 are received the remaining projects can be completed.

FISCAL ANALYSIS:

CITY OF
INGLESIDE
CO SERIES 2021
PROJECTS

Bond Proceeds	$ 7,022,583.02	
HEB-KTB Grant	$ 131,471.28	
Multi Purpose Ball Fields and Concession Stand	(2,711,284.96)	
Pool - Pool House/Pump House/Restrooms	(1,308,893.82)	
Humble Center Remodel	(106,326.00)	
Parking Lot	(265,615.09)	
Collection Station	(195,957.31)	
Bulk Collection Facility	(100,000.00)	Pending
Animal Control Facility Building	(1,808,025.57)	
Animal Control Facility Fencing	(91,974.43)	
Garden Center Building	(350,000.00)	Pending
Walking Trail	(200,000.00)	Pending
Vol. Fire Department Brush Truck	(216,815.02)	
	$ (200,837.90)	
FEMA-CONCESSION STAND	206,844.71	
FEMA-POOL	43,381.08	

49,387.89

By comparing the pending projects to available funds if the walking trail and bulk collection facility are placed on hold until the FEMA funds are received, then there will be $449,162.10 to complete the Garden Center Building.

RECOMMENDATION:

Staff will continue to proceed with the remodel of the Garden Center Building, using the existing funds available of $449,162.10

ATTACHMENTS:

None

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.g

Update on General Projects

SUBMITTED BY: Gary Paredez, Director of Infrastructure Services

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The City Council identified a total of 15 projects to be done throughout the City. Nine of the fifteen currently listed projects have been completed to date, three are under construction, and the remaining three are pending or in the design phase or contract phase. The five streets that were originally approved by the City council for Seal Coat are slated to be started on April 29th. The contractor is in the process of setting out barricades to alert residents of the work to be done. The two streets that are in the area of the schools will be left for last to try to minimize the interference with school traffic. See the attached list for project status.

FISCAL ANALYSIS:

The various projects were funded by a range of funds. Some were funded by FY 2020 bond funds, some by FY 2021 bond funds along with grants and regular budget funds.

RECOMMENDATION:

N/A Information purposes only.

ATTACHMENTS:

1. Project List 4.18.2024
2. Kenny Lane Construction Door Hanger 4.15.2024
3. Animal Control (1) 4.18.2024
4. Animal Control (2) 4.18.2024
5. Animal Control Duct Work
6. Hultreen (1) 4.18.2024
7. Hultgreen (2) 4.18.2024
8. Hultgreen (3) 4.18.2024

Project Name	Project Status
1. Kenny Lane Roadway Improvement	Contractor is in the process of putting out barricades for TCP.
2. Wastewater Treatment Plant	Awaiting final approval from TCEQ for permit. Preliminary decision has been issued.
3. Houghton Drainage Improvement	Completed. All closeout paperwork has been submitted to Grant Works.
4. Recycle/Bulk Collection Facility	Recycle complete: We currently have 45,000lbs of cardboard; We scheduled our 1st pick up. We have 29 bales of plastic bottles and we need 40 bales and a loading ramp to schedule a pick up. The recently received grant from HEB will allow us to build a loading dock. Currently working on quotes.
5. Live Oak Pavement Improvement- Timber Leaf Drive, Spring Park Drive, Lee Lane, Meadow Drive, Ridgewood Circle, Todd Circle, Live Oak Park Entrance A	Contracting.
6. Animal Control Facility	Under construction: Building has been erected and shelled. Piping for water and sewer have been delivered on site.
7. Hultgreen Improvement	Water line has been tied in. The wastewater line installation is at approximately 75%. Road construction is at about 50%.
a. Multi-Purpose Athletic Fields	Complete.
b. Garden Center	Finalizing details for contract.
c. Faith Park Walking Trail	90% designed and coordinating with Hanson Professional Services on OPCC.
8. N.O. Simmons Playground Lighting	Currently under design.
9. West Main Street Parking Lot & City Hall Parking Lot	Currently coordinating with engineer on design.
10. Meter Installation	We have approximately 95% meters installed. Most of the meters left would be the 2” and above meters.
11. Seal Coat Street repairs	The 5 streets selected by the street committee and approved by the City Council include Big Oak Lane (from 1st to 4th), 3rd Street (1069 to Ave K), Munson St, Blaschke, and Pen Oak.

The City of Ingleside
KENNY LANE IMPROVEMENTS
Are coming to your neighborhood.

2 WEEK NOTICE
WATER/SEWER IMPROVEMENTS
WHAT TO EXPECT

Refer to the City's Website for additional Updates: https://inglesidetx.gov/

CONSTRUCTION

- Work is expected to begin on your street **April 15th**
- Utility construction is expected to take approximately 1-2 months.
- Improvements include underground water and sanitary sewer.
- Roadway work is anticipated upon completion of utility improvements.
- Road closures or partial closures are expected.
- Dust and noise will be minimized as much as possible

ACCESS

- Your driveway will remain open during the evenings and most days however, you will be notified, and parking arrangements will be made if your driveway will be blocked
- Trash will remain on your normal schedule.
- Brush should not be put out when construction is occurring directly in front of your property. If possible place brush for collection only a few days before your scheduled pick up date.

CONTACTS

- Questions or concerns during construction:
- City Public Works at 361-776-7409
- Contractor Spokesperson Scott Lucia 218-341-9731
- Contractor Representative Trent Koput - 608-343-5640
- For more information about the project
  Email: gparedez@inglesidetx.gov

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Animal Control


Animal Control


Animal Control Duct Work


Hultgreen



Hultgreen


Hultgreen

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 6.h

Update on migration from Utility Data Systems (UDS) MCRS to ERP 10 and from Tyler Technologies ERP 9 to ERP 10.

SUBMITTED BY: Tommy Sauceda, Information Technology Director

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Since the employment of the Director of Information Technology, the progress on the migration from Utility Data Systems (UDS) MCRS to ERP 10 and from Tyler Technologies (Tyler) ERP 9 to ERP 10.

Project 1--Court UDS Migration to EPR 10

For the migrating of UDS (MCRS) to ERP 10, staff has scheduled and held a second round of kickoff activities.
The conversion summary documents are distributed and updated, therefore staff has contacted UDS.

Staff will work with UDS in providing Tyler with a full data pull from our legacy system for evaluation. Staff is collaborating with Tyler, regarding what data needs to be pulled from UDS.

Next steps will be a full review of any other submitted questionnaires and a collection of all blackout dates in anticipation of building a schedule.

Building out a schedule hinges 100% on providing Tyler with a full data pull from the Municipal Court legacy system for evaluation. Once staff to evaluate the data, staff can proceed with building a schedule for the migration.

Project 2--City-Wide Migration from ERP 9 To ERP 10

A meeting has been held with Tyler to begin the process of building a unified project team that will explain or reiterate why the project is happening at your organization, set general guidelines for what to expect from the project and the project team, including timelines, if you have established them, and generate excitement and support for the project.

The staff is working on setting up a meeting for the week of April 25th for more comprehensive knowledge on modules.

The meeting should take around 4-5 hours to complete. Staff members who are most familiar with the **financial modules** to be in attendance. This will enable IT to better understand how the software is being used.

Discovery Meeting
The goals and modules that we will be discussing are:

Modules:

- Administration / Security Setup
- General Ledger
- Accounts Payable
- Bank Reconciliation
- Purchasing
- Project Accounting
- Fixed Assets
- Payroll
- Human Resources
- Time Entry

Goals:

- To fully understand how your site uses the software (Financial Modules only), to enable the IT dept. to prepare a migration plan to suit the city's needs
- To provide the team with a homework list of data cleanup that will need to be done so you can properly migrate over to v10 of the software in a timely manner

---

FISCAL ANALYSIS:

Possible cost of migration

RECOMMENDATION:

Report only

ATTACHMENTS:

None

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 7

Proclamation to recognize the Ingleside Woman's Club 90th Anniversary.

SUBMITTED BY: Ruby Beaven, City Secretary

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The City of Ingleside would like to recognize the Ingleside Woman's Club 90th Anniversary for the outstanding contributions made by this volunteer service club for their dedication to improving our community.

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Information purposes only.

ATTACHMENTS:

1. Ingleside Woman's Club 90th Anniversary Proclamation

PROCLAMATION
Ingleside Woman's Club 90th Anniversary

WHEREAS, the Ingleside Woman's Club was organized in 1933 by women from the area's founding families; and

WHEREAS, the General Federation of Women's Clubs (GFWC) is an international organization dedicated to improving local communities through volunteer service. The GFWC recognized the Ingleside Woman's Club in 1934.

WHEREAS, the Ingleside Woman's Club is the oldest woman's organization in Ingleside; and

WHEREAS, the Ingleside Woman's Club has for the past 90 years provided outstanding leadership, personal service, and monetary contributions to our community, especially contributions totaling over $100,000 to the Ingleside Public Library, which had its grand opening May 23, 1938, with 200 books; and

WHEREAS, the most recent in a long list of outstanding community projects continue to raise monies from fund raisers from which proceeds have gone to the Ingleside Public Library, Mr. Kippy's Reading Program, the San Patricio County Adult Literacy Council, the Ingleside High School Scholarship Program, the First Friday Mammogram Program, M.D. Anderson Hospital, and other many other worthwhile causes; and

WHEREAS, the members of this organization have faithfully and honorably adhered to their purposes by providing assistance whenever needed, willingly giving time, talents, and resources to increase the quality of life for one and all, especially through their ongoing projects which include supporting the Ingleside Library Board, the Ingleside Friends of the Library, the Box Tops for Education Project, and the global Operation Smile Project; and

WHEREAS, former Mayor, Elaine W. Kemp proclaimed the Ingleside Woman's Club Anniversary Day as May 10 in 2008.

NOW, THEREFORE, I, Pedro Oscar Adame, Mayor of the City of Ingleside, Texas, do hereby recognize May 10, 2024 as

"INGLESIDE WOMAN'S CLUB'S ANNIVERSARY DAY"

FURTHERMORE, I deem it an honor and great privilege to extend my sincere congratulations on the occasion of this 90th anniversary in recognition of the outstanding contributions made by this service club; and

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Ingleside to be affixed this 23rd day of April, 2024.

CITY OF INGLESIDE, TEXAS

_____
Pedro Oscar Adame, Mayor

ATTEST:

_____
Ruby Beaven, City Secretary

DRAFT

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 8

Cove Park Advisory Group Presentation

SUBMITTED BY: Brenton Lewis, City Manager

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The City Council formed an advisory group to begin the process of reviewing and advising the City Council on possible amenities to be added to or enhancing Cove Park. During the review, the advisory group reviewed and incorporated the Parks Master Plan as adopted January 19, 2021. The Master Plan identifies five opportunities for improvements and new amenities that could include: improving the restroom, parking lot and boat ramp, adding a pavilion for events and shaded picnicking options, adding a canoe/kayak launch, expanding and enhancing the fishing areas, and adding trees and other landscaping to provide shade and improved aesthetics.

The draft layout of the proposed enhancement and added amentiries include additional paved parking, improvements to the bulkhead, relocation of the fish clearing station, adding of covered seating and a pavilion, relocation and improving of the kayak launch area, and improving the docks.

FISCAL ANALYSIS:

N/A at this time

RECOMMENDATION:

Presentation Only

ATTACHMENTS:

1. Cove Park - Layout 1
2. Park Master Plan Cove Park Excerpt

1 – PARKING LOT
2 – BULKHEAD
3 – FISH CLEANING STATION
4 – COVERED SEATING
5 – 50'x40' PAVILLION
6 – KAYAK LAUNCH
7 – DOCKS (ATTACHED TO BULKHEAD)

PARK BOUNDARY
MIRCOVICH LANE
MAIN STREET
PARKVIEW PLACE
PARK ROAD
INGLEWOOD DRIVE
PARK BOUNDARY
PARK BOUNDARY
PARKVIEW PLACE

47
48

0 50 100 200 FEET

C:\Users\fosterb2\OneDrive - Enbridge\Documents\Drawing Checkout\Cove Park - Layout 3.dwg, 4/11/2024 5:41:04 PM, AutoCAD PDF (General Documentation).pc3

Cove Park (1319 Ocean Drive)

Cove Park encompasses the City's only publicly accessible waterfront at Ingleside Cove. It is also located directly adjacent to Ingleside on the Bay, a neighboring community. The park was established in 1991 and includes a boat ramp, fishing pier, fish cleaning station, restroom and small uncovered picnic area. There are also a few acres of undeveloped open space and a small wetland area.

In addition to providing waterfront access and views for Ingleside residents, Cove Park serves a regional user group of boaters and anglers. The annual Best of the Bay and Fire Department Fishing tournaments are held here to take advantage of the spectacular fishing.

The restroom building at Cove Park had the roof, including framing, removed in its entirety during Hurricane Harvey. The courtesy dock along the boat ramp as well as the fish cleaning station and its pier were all destroyed during the storm. Most of the hurricane damage has been repaired at this point.

While this park is located at the edge of the City and is somewhat removed from Ingleside's residential areas, it does provide quality waterfront access for this coastal community.

Opportunities for improvements and new amenities could include:

- Improving the restroom, parking lot and boat ramp
- Adding a pavilion for events and shaded picnicking options
- Adding a canoe/kayak launch
- Expanding and enhancing the fishing areas
- Adding trees and other landscaping to provide shade and improved aesthetics



Location Map

Packet Page 50 of 307

Map 7. Cove Park



Aerial imagery from Nearmap

Park Size

- 5.6 acres

Park Type

- Regional

Park Features

- Fishing Pier
- Boat Ramp
- Fish Cleaning Station
- Picnic Amenities
- Restroom
- Parking









CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 9

Proclamation to recognize 55th Anniversary of Municipal Clerks Week May 5 – May 11, 2024.

SUBMITTED BY: Ruby Beaven, City Secretary

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Purpose:
To recognize the vital and appreciated services performed by Municipal and Deputy Clerks in serving the changing needs of their communities.

History:
This year, May 5 through May 11, will be the 55th Annual Professional Municipal Clerks Week, initiated in 1969 by IIMC and is endorsed by all of its members throughout the United States, Canada and 15 other countries. In 1984 and in 1994, Presidents Ronald Reagan and Bill Clinton, respectively, signed a Proclamation officially declaring Professional Municipal Clerks Week the first full week of May and recognizing the essential role Municipal Clerks play in local government.

Typical Responsibilities of the Municipal and Deputy Clerk:

- Maintains the official council minutes, ordinance books and all records and documents.
- Indexes all official actions of council.
- Issues licenses and permits.
- Processes contracts and agreements.
- Keepers of community history and vital records.
- Receives, distributes, and files correspondence from citizens and other governmental agencies.
- Administers elections, registration, and voting.
- Acts as a key liaison between local government and its citizens.
- Handles significant financial responsibilities including preparation of tax rolls, special assessments, and budgets.
- Provides central services such as personnel, purchasing, etc.

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Information Purposes Only.

ATTACHMENTS:

1. 55th Annual Professional Municipal Clerks week Proclamation

PROCLAMATION
55th ANNUAL PROFESSIONAL MUNICIPAL CLERKS WEEK
May 5 – May 11, 2024

WHEREAS, The Office of the Professional Municipal Clerk, a time honored and vital part of local government exists throughout the world; and

WHEREAS, The Office of the Professional Municipal Clerk is the oldest among public servants; and

WHEREAS, The Office of the Professional Municipal Clerk provides the professional link between the citizens, the local governing bodies and agencies of government at other levels; and

WHEREAS, Professional Municipal Clerks have pledged to be ever mindful of their neutrality and impartiality, rendering equal service to all; and

WHEREAS, The Professional Municipal Clerk serves as the information center on functions of local government and community; and

WHEREAS, Professional Municipal Clerks continually strive to improve the administration of the affairs of the Office of the Professional Municipal Clerk through participation in education programs, seminars, workshops and the annual meetings of their state, provincial, county and international professional organizations; and

WHEREAS, It is most appropriate that we recognize the accomplishments of the Office of the Professional Municipal Clerk; and

NOW, THEREFORE, I, Pedro Oscar Adame, Mayor of the City of Ingleside, Texas, do recognize the week of May 5 through May 11, 2024, as Professional Municipal Clerks Week, and further extend appreciation to our Professional Municipal Clerks Ruby Beaven, Jana Stork, and Elisabeth Staton and to all Professional Municipal Clerks for the vital services they perform and their exemplary dedication to the communities they represent.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Ingleside to be affixed this 23rd day of April, 2024.

CITY OF INGLESIDE, TEXAS

_____
Pedro Oscar Adame, Mayor

ATTEST:

_____
Ruby Beaven, City Secretary

DRAFT

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 10

Deliberate and take appropriate action on second and final reading of an Ordinance altering the prima facie speed limits established for vehicles under the provisions of SEC. 545-356, Texas Transportation Code, upon the basis of an engineering and traffic investigation, upon certain streets and highways, or parts thereof, within the corporate limits of the City of Ingleside, as set out in the Ordinance; and Providing a penalty of a fine in an amount of not less than twenty five dollars ($25.00) or more than five hundred dollars ($500.00) for violation of this Ordinance; and providing for effective date, reading severance, and publication.

SUBMITTED BY: Ruby Beaven, City Secretary

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

TxDot recently performed a speed study along FM 1069 from approximately 1470FT North of SH 35 to 111FT South of FM 3512 to investigate whether or not the speed limit might be decreased within these limits. Based on the data that was received and the constraints of the roadway, TxDot was able to reduce the speed limits that were within our study limits. Within the memo attached you will find the limits of these proposed speed zones to be passed by the City of Ingleside. TxDot requires City action to approve and pass an Ordinance. Once approved, TxDot can schedule sign installations.

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Staff recommends passage of second reading of an Ordinance altering the prima facie speed limit, as presented.

ATTACHMENTS:

1. Ord - 2024-xx - Ordinance Speed Limit-DRAFT V3
2. FM1069_City_Ingleside_Proposed_City_Ordinance

ORDINANCE NO. 2024-XX

AN ORDINANCE ALTERING THE PRIMA FACIE SPEED LIMITS ESTABLISHED FOR VEHICLES UNDER THE PROVISIONS OF SEC. 545-356, TEXAS TRANSPORTATION CODE, UPON THE BASIS OF AN ENGINEERING AND TRAFFIC INVESTIGATION, UPON CERTAIN STREETS AND HIGHWAYS, OR PARTS THEREOF, WITHIN THE CORPORATE LIMITS OF THE CITY OF INGLESIDE, AS SET OUT IN THE ORDINANCE; AND PROVIDING A PENALTY OF A FINE IN AN AMOUNT OF NOT LESS THAN TWENTY FIVE DOLLARS ($25.00) OR MORE THAN FIVE HUNDRED DOLLARS ($500.00) FOR VIOLATION OF THIS ORDINANCE; AND PROVIDING FOR EFFECTIVE DATE, READING SEVERANCE, AND PUBLICATION.

WHEREAS, Section 545.356, Texas Transportation Code, provides that whenever the governing body of the City shall determine upon the basis of an engineering and traffic investigation that the prima facie speed therein set forth is greater or less than is reasonable or safe under the conditions found to exist at any intersection or other place or upon any part of a street or highway within the city, taking into consideration the width and condition of the pavement and other circumstances on such portion of said street or highway, as well as the usual traffic thereon, said governing body may determine and declare a reasonable and safe prima facie speed limit threat or thereon by the passage of an Ordinance, which shall be effective when appropriate signs giving notice thereof are erected as such intersection or other place or part of the street or highway;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF INGLESIDE, COUNTY OF SAN PATRICIO, STATE OF TEXAS:

SECTION 1. ESTABLISHED

Upon the basis of an engineering and traffic investigation heretofore made as authorized by the provisions of Section 545.356 Texas Transportation Code, the following prima facie speed limits hereafter indicated for vehicles are hereby determined and declared to be reasonable and safe; and such speed limits are hereby fixed at the rate of speed indicated for vehicles traveling upon the named streets and highways, or parts thereof, described as follows:

1) Beginning at the northern city limit of Ingleside on State Highway 1069 or 90 FT South of Highland Ave to 111 FT South of FM 3512, **50 MPH.**

SECTION 2. PENALTY OF A FINE

Any person violating any part of the provisions of this Ordinance shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined in an amount of not less than twenty five dollars ($25.00) and not more than five hundred dollars ($500.00).

SECTION 3. EFFECTIVE DATE

As provided by Article III, Section 3.11C of the Charter of the City of Ingleside, this ordinance shall be effective upon adoption and, in addition, if any penalty, fine or forfeiture is imposed by the ordinance, then this ordinance shall be effective only after publication of this ordinance in its entirety or in summary form once in the official newspaper of the City of Ingleside.

SECTION 4. READING
As provided by Article III, Section 3.11B of the Charter of the City of Ingleside, this ordinance or the caption of it shall be read at two city council meetings with at least two weeks elapsing between each reading.

SECTION 5. SEVERANCE
If any part of this ordinance is invalid or void or is declared to be so, then said part shall be severed from the balance of this ordinance and said invalidity shall not affect the balance of this ordinance, the balance of the ordinance to be read as if said invalid or void portion thereof were not included.

SECTION 6. PUBLICATION
If and as required by Article III, Section 3.11C of the Charter of the City of Ingleside, the caption of this ordinance shall be published one time in the official newspaper of the City of Ingleside, San Patricio County, Texas.

PASSED, ORDAINED, APPROVED AND ADOPTED this 23rd day of April 2024.

CITY OF INGLESIDE

_____
Pedro Oscar Adame, Mayor

ATTEST:

_____
Ruby Beaven, City Secretary

First Reading: 04/09/2024

Second Reading: 04/23/2024

DRAFT

DocuSign Envelope ID: 85D4ACBD-7606-4670-AEE5-38CFF363F862

Texas Department of Transportation

125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

February 22, 2024

The Honorable Oscar Adame
Mayor of Ingleside, TX
2671 San Angelo St.
Ingleside, TX 78362

Dear Mayor Adame,

My name is Bianca Mijares and I work in the Corpus Christi District Traffic Engineering Office of the Texas Department of Transportation. We recently conducted a speed study along FM 1069 from 1,470FT North of SH35 to 111FT South of FM3512 and would like to propose to set the speed limits as shown below. We are proposing the following:

Figure 1.

- That a 50-mph zone be established by the City of Ingleside from the northern city limits (or 90FT South of Highland Ave) to 111FT South of FM3512.

If our proposal is satisfactory, please secure city action and return a copy of the city ordinance to our office. Once we have this information, we will schedule sign installations.

I have attached a map for your reference which includes the proposed speed zones in the area described above. If you have any questions or need additional information, please contact me at (361) 808-2276.

Sincerely,

DocuSigned by:
Bianca B. Mijares
F568EE981A13480...

Bianca B. Mijares, P.E.
Corpus Christi District Traffic Operations
361-808-2276

DocuSign Envelope ID: 85D4ACBD-7606-4670-AEE5-38CFF363F862

Texas Department of Transportation

125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

Figure 1.



CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 11

Deliberate and take appropriate action on the second and final reading of an Ordinance adopting the Drainage Master Plan, an element of the Comprehensive Master Plan of the City of Ingleside; Amending conflicting provisions of the City Comprehensive Plan, and further providing for effective date, reading, severance, and publication.

SUBMITTED BY: Gary Paredez, Director of Infrastructure Services

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The Freese & Nichols Engineering firm was the firm selected by the City Council to generate the City's drainage master plan. An assessment was made on all the drainage infrastructure throughout the City. Freese & Nichols put together a master plan draft report that was submitted to City Council and City staff for input. All the responses have been incorporated into the final draft that will serve as a guide for the maintenance and upkeep of the drainage avenues.

FISCAL ANALYSIS:

N/A.

RECOMMENDATION:

Staff recommends approval and adoption of the Drainage Master Plan, on second and final reading.

ATTACHMENTS:

1. Ord 2024-XX Drainage Master Plan V2
2. 2024 04 01 Ingleside DMP Report_Final to Council (2)

ORDINANCE NO. 2024-XX

AN ORDINANCE ADOPTING THE DRAINAGE MASTER PLAN, AN ELEMENT OF THE COMPREHENSIVE MASTER PLAN OF THE CITY OF INGLESIDE; AMENDING CONFLICTING PROVISIONS OF THE CITY COMPREHENSIVE PLAN, AND FURTHER PROVIDING FOR EFFECTIVE DATE, READING, SEVERANCE, AND PUBLICATION.

WHEREAS, the City Council adopted the Ingleside Comprehensive Master plan on January 12, 2016 (Resolution 2016-01); and

WHEREAS, the Comprehensive Master Plan allows for additional plans or documents as additions to the Comprehensive Master Plan to meet the needs of the City as warranted; and

WHEREAS, the City Council desires to develop a Drainage Master Plan and incorporate it as an element of the Comprehensive Master Plan; and

WHEREAS, the Staff has forwarded the City Council its recommendations regarding the Drainage Master Plan; and

WHEREAS, the City Council has determined that the adoption of the Drainage Master Plan, an element of the Comprehensive Master Plan of the City of Ingleside, would best serve public health, necessity, and convenience and the general welfare of the City of Ingleside and its citizen.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF INGLESIDE, COUNTY OF SAN PATRICIO, STATE OF TEXAS:

Section 1. That the matter of facts recited in the preamble hereof are found and determined to be true and correct.

Section 2. That the City of Ingleside Drainage Master Plan established the key capital project needs based on analysis of the existing storm drainage systems as well as future land use conditions.

Section 3. That the Comprehensive Master Plan is amended by the adoption of the Drainage Master Plan, a copy of which is hereto attached, and except as changed by this ordinance, all other portions of the Comprehensive Master Plan remain in full force and effect.

Section 4. Effective Date. As provided by Article III, Section 3.11C of the Charter of the City of Ingleside, this ordinance shall be effective upon adoption and, in addition, if any penalty, fine or forfeiture is imposed by this ordinance, then this ordinance shall be effective only after publication of this ordinance in its entirety or in summary form once in the official newspaper of the City of Ingleside.

Section 5. Reading. As provided by Article III, Section 3.11.B of the Charter of the City of Ingleside, this ordinance or the caption of it shall be read at two City Council meetings with at

least two weeks elapsing between each reading.

Section 6. Severance. If any part of this ordinance is invalid or void or is declared to be so, then said part shall be severed from the balance of this ordinance and said invalidity shall not affect the balance of this ordinance, the balance of the ordinance to be read as if said invalid or void portion thereof were not included.

Section 7. Publication. As provided by Article III. Section 3.11C, this ordinance shall be published one time in the official newspaper of the City of Ingleside, San Patricio County, Texas, which publication shall contain the caption of this ordinance stating in substance the purposes of same.

PASSED, ORDAINED, APPROVED AND ADOPTED this 23rd day of April, 2024.

CITY OF INGLESIDE, TEXAS

_____
Pedro Oscar Adame, Mayor

ATTEST:

_____
Ruby Beaven, City Secretary

First Reading: 04/09/2024

Second Reading: 04/23/2024

DRAFT





CITY OF INGLESIDE
DRAINAGE MASTER PLAN

Prepared for:

City of Ingleside

April 1, 2024

Prepared by: **FREESE AND NICHOLS, INC.**

800 N. Shoreline Blvd. Suite 1600N
Corpus Christi, Texas 78401
361-561-6500

Innovative approaches
Practical results
Outstanding service

CITY OF INGLESIDE
DRAINAGE MASTER PLAN

Prepared for:

City of Ingleside

April 1, 2024

STATE OF TEXAS
SARAH L. WEST
101328
LICENSED
PROFESSIONAL ENGINEER

04/01/2024

FREESE AND NICHOLS, INC.
TEXAS REGISTERED
ENGINEERING FIRM
F-2144

Prepared by: **FREESE AND NICHOLS, INC.**

800 N. Shoreline Blvd. Suite 1600N
Corpus Christi, Texas 78401
361-561-6500

ING21605

TABLE OF CONTENTS

EXECUTIVE SUMMARY ES-1

1 INTRODUCTION 4

1.1 Purpose of Study and Approach 4

1.2 Previous Planning Efforts 5

1.2.1 2016 Comprehensive Master Plan 5

1.2.2 2018 San Patricio County Hazard Mitigation Plan 5

1.2.3 2020 Transportation Master Plan 6

1.2.4 2021 Parks, Recreation and Open Space Master Plan 7

2 STORMWATER MASTER PLAN DEVELOPMENT 7

2.1 Pre-Project Conditions 7

2.1.1 Open Channels – HEC-RAS Modeling 8

2.1.2 Local Systems – ICM Modeling 9

2.2 Problem Area Identification 10

2.3 Project Development 12

2.3.1 Proposed Capital Improvement Projects 13

2.3.2 Small Projects List 61

2.4 Opinion Of Probable Project Costs 62

3 PROJECT PRIORITIZATION 63

3.1 Identification of Ranking Criteria 64

3.2 Criteria Weighting 64

3.3 Criteria Scoring 65

3.3.1 Life and Safety 65

3.3.2 Property Damage 66

3.3.3 Road Level of Service 66

3.3.4 Planning Linkages 67

3.3.5 Project Cost 67

3.4 Project Scoring and Ranking 68

4 GIS DATABASE DEVELOPMENT 69

4.1 Data Collection 69

5 MAINTENANCE PLAN 70

5.1 Key Maintenance Locations 70

5.2 Maintenance Recommendations 72
6 STORMWATER CRITERIA REVIEW AND BEST MANAGEMENT PRACTICES 73
7 FUNDING ASSESSMENT 78
7.1 General Obligation Bonds (GO Bonds) 78
7.1.1 Purpose 78
7.1.2 Constraints 79
7.1.3 Benefits 79
7.1.4 Potential Applications 79
7.1.5 Potential Roadblocks 79
7.2 State and Federal Grants 80
7.2.1 Purpose 80
7.2.2 Constraints 84
7.2.3 Benefits 87
7.2.4 Potential Applications 89
7.2.5 Potential Roadblocks 90
7.3 4B Sales Tax Fund 92
7.3.1 Purpose 92
7.3.2 Constraints 92
7.3.3 Benefits 93
7.3.4 Potential Applications 93
7.3.5 Potential Roadblocks 93
7.4 Establishment of Special Districts 94
7.5 Stormwater Utility Fee 97
7.6 General Fund 98
7.7 Certificates of Obligation (CO Bonds) 99
7.8 Community Development Corporation (CDC) 99
7.9 Texas Capital Fund Infrastructure Program (EDA/TEDC) 100
7.10 Clean Water State Revolving Loan Fund (EPA/TWDB) 100
7.11 Project Funding Matrix 101
7.12 Conclusion 104

LIST OF TABLES

Table ES-1: Project Ranking ES-2
Table 2-1: Storm Event Correlation Table 8
Table 2-2: Humble Ditch Improvements - Summary of Results 16
Table 2-3: Kenny Lane/Whitney Lake Infrastructure - Summary of Results 21

Table 2-4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Summary of Results 26
Table 2-5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Summary of Results 31
Table 2-6: Nystrom Addition Drainage Improvements - Summary of Results 36
Table 2-7: Parkside Terrace Subdivision Drainage Improvements - Summary of Results 41
Table 2-8: Villanova Place Drainage Improvements - Summary of Results 48
Table 2-9: Humble Addition and Avenue B Drainage Improvements - Summary of Results 54
Table 2-10: Live Oak Ditch - Summary of Results 59
Table 2-11: OPPC Summary by Project Site 63
Table 3-1: Pairwise Evaluation Criteria Ranking Results 65
Table 3-2: Life and Safety Scoring 66
Table 3-3: Property Damage Scoring 66
Table 3-4: Road Level of Service Scoring 67
Table 3-5: Planning Linkages Scoring 67
Table 3-6: Project Cost Scoring 68
Table 3-7: Project Ranking 68
Table 7-1: CIP Funding Matrix 103
Table 7-2: Conservative Scenario Debt Service 104
Table 7-3: Optimized Grant-Assisted Scenario Debt Service 104

LIST OF FIGURES

Figure ES-1: Proposed Project Sites ES-3
Figure 2-1: Existing Inundation Depth Results and Problem Areas for 5-Year Storm Event 11
Figure 2-2: Humble Ditch Improvements - Existing Conditions Flooding Extents 14
Figure 2-3: Humble Ditch Improvements - Proposed Drainage Improvements 15
Figure 2-4: Kenny Lane/Whitney Lake Infrastructure - Existing Conditions Flooding Extents 18
Figure 2-5: Kenny Lane/Whitney Lake Infrastructure - Proposed Drainage Improvements 19
Figure 2-6: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Existing Conditions Flooding Extents 23
Figure 2-7: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Proposed Drainage Improvements 25
Figure 2-8: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Existing Conditions Flooding Extents 29
Figure 2-9: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Proposed Drainage Improvements 30
Figure 2-10: Nystrom Addition Drainage Improvements - Existing Conditions Flooding Extents 33
Figure 2-11: Nystrom Addition Drainage Improvements - Proposed Drainage Improvements 35
Figure 2-12: Parkside Terrace Subdivision Drainage Improvements - Existing Conditions Flooding Extents 39
Figure 2-13: Parkside Terrace Subdivision Drainage Improvements - Proposed Drainage Improvements 40
Figure 2-14: Villanova Place Drainage Improvements - Existing Conditions Flooding Extents 44

Figure 2-15: Villanova Place Drainage Improvements - Proposed Drainage Improvements 47
Figure 2-16: Humble Addition and Avenue B Drainage Improvements - Existing Conditions Flooding Extents 51
Figure 2-17: Humble Addition and Avenue B Drainage Improvements - Proposed Drainage Improvements 53
Figure 2-18: Live Oak Ditch - Existing Conditions Flooding Extents 57
Figure 2-19: Live Oak Ditch - Proposed Drainage Improvements 58
Figure 5-1: Key Maintenance Locations 72

APPENDICES

Appendix A: City of Ingleside Drainage Area Map and Existing Drainage Channels Map
Appendix B: Inundation Maps
Appendix C: One-Page CIP Summary Sheets
Appendix D: Opinion of Probable Project Costs
Appendix E: Stormwater Structures Type Guide and Condition Rating Guide
Appendix F: City of Ingleside Standard Stormwater Construction Details
Appendix G: Project Ranking
Appendix H: Funding Source Matrix
Appendix I: Summaries of Public and Stakeholder Engagement Activities
Appendix J: Small Projects Memorandum
Appendix K: Hydrologic and Hydraulic Methodologies Memorandum

EXECUTIVE SUMMARY

The Ingleside Drainage Master Plan was prepared to assist the City of Ingleside (City) in identifying key capital project needs based on analysis of the existing storm drainage system as well as future land use conditions. The planning effort reviewed existing problem areas, evaluated existing storm drainage system capacity, and defined recommended improvements to address continued growth and development, resulting in recommendations for adding storm water projects to the City's Capital Improvement Plan (CIP).

A total of ten problem area sites were identified based on the existing conditions modeling. After discussions with City staff and City Council, nine potential projects were selected for further analysis (Site 2 did not progress to further analysis and CIP development). **Figure ES-1** shows the location of each of these proposed CIP projects. Preliminary improvements were proposed to mitigate flooding in the problem areas, and some are recommended to be constructed in a phased approach.

A project cost was developed for each CIP based on 2023 dollars. It should be noted that the proposed improvements are not based on detailed engineering analysis or design. Rather they are based on field visits, review of existing data, and limited modeling and calculations. Each project cost includes engineering costs to perform field investigations and to develop the final design.

The projects were prioritized according to a ranking system developed through coordination with City staff, which is based on five weighted criteria (life and safety, property damage, road level of service, planning linkages, and project cost). Criteria weighting was developed using a "pairwise" methodology that compares each criterion to all other criteria to determine what is most important to the City. The following summarizes the results of this exercise.

- Life and Safety (Criteria Weight = 30%) - based on depth of flooding within the project limits, where deeper flooding depths are assigned higher points.
- Property Damage (Criteria Weight = 25%) - based on the number of potentially inundated structures within a project extent based on modeling.
- Road Level of Service (Criteria Weight = 20%) - based on road classification (e.g., arterial, local, etc.), with a project's score being higher for roadways that have higher volumes of traffic.

- Planning Linkages (Criteria Weight = 15%) - based on if the drainage project can be incorporated as part of another project identified in one of the City's master plans (Parks, Recreation and Open Space Master Plan; Transportation Master Plan; Comprehensive Plan; or San Patricio County Hazard Mitigation Plan).

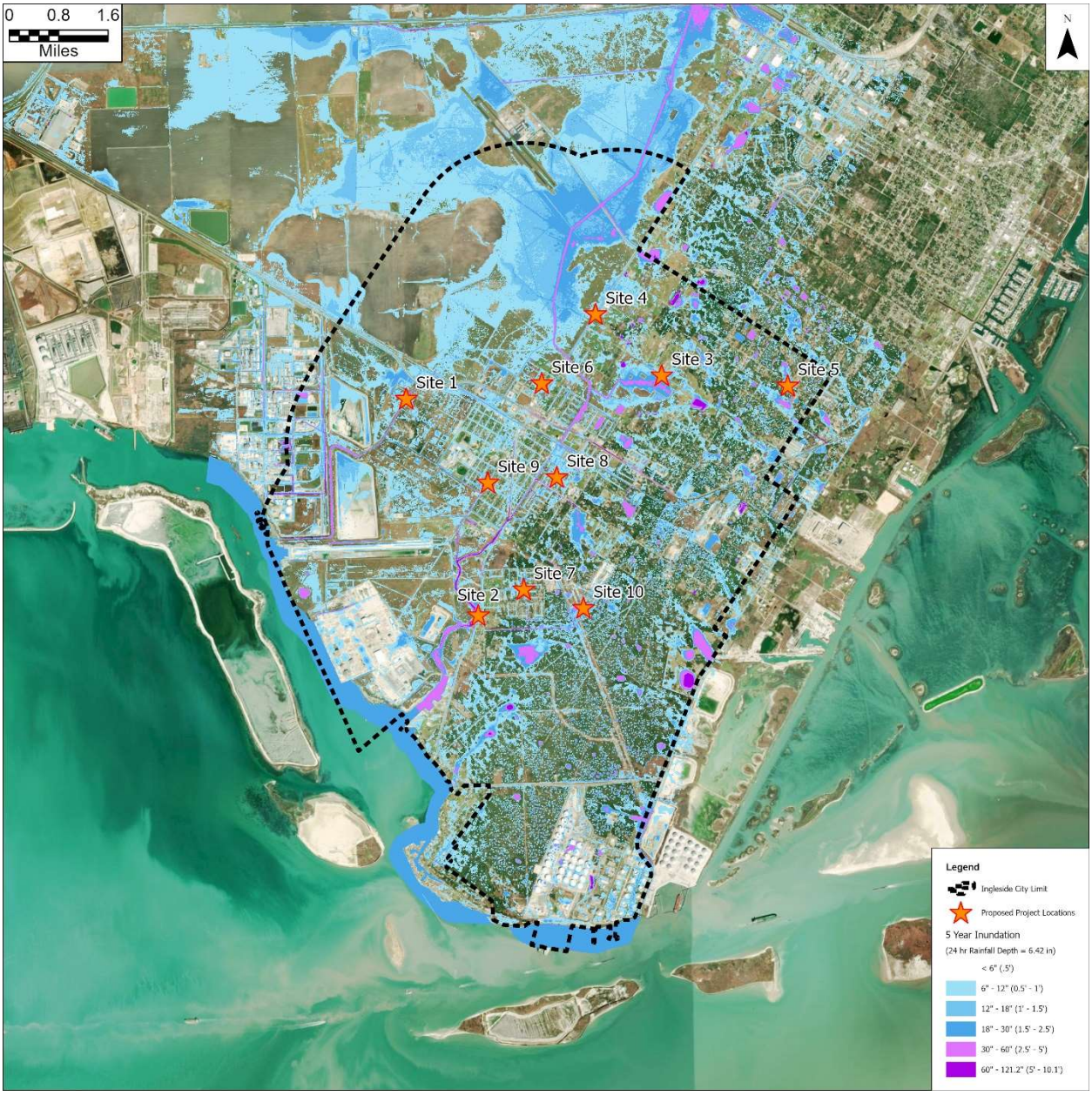
- Project Cost (Criteria Weight = 10%) - based on the estimate of total project cost, with lower-cost projects receiving the highest points.

The projects were organized and ranked within a Microsoft Excel spreadsheet. **Table ES-1** lists the proposed CIP projects, their cost, score, and rank. A detailed breakdown of the city-wide ranking of the drainage CIPs and associated project costs is provided in **Appendix G**. One-page summary sheets of each recommended CIP are included in **Appendix C**.

Table ES-1: Project Ranking

Project Name	Project Cost	Project Score	Project Ranking
Site 1: Humble Ditch Improvements	$ 10,227,900	2.70	6
Site 3: Kenny Lane/Whitney Lake Infrastructure	$ 2,876,083	2.96	3
Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane	$ 15,869,600	2.45	7
Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street	$ 1,019,800	2.40	8
Site 6: Nystrom Addition Drainage Improvements	$ 2,823,800	1.95	9
Site 7: Parkside Terrace Subdivision Drainage Improvements	$ 9,148,800	2.71	5
Site 8: Villanova Place Drainage Improvements	$ 10,075,000	2.75	4
Site 9: Humble Addition and Avenue B Drainage Improvements	$ 5,362,300	3.10	2
Site 10: Live Oak Ditch	$ 16,188,700	3.50	1

Figure ES-1: Proposed Project Sites



Note: Site 2 did not progress to further analysis and CIP development.

1 INTRODUCTION

In June 2022, the City of Ingleside (City) authorized Freese and Nichols, Inc. (FNI) to provide professional engineering services for developing the City of Ingleside's Drainage Master Plan. The Drainage Master Plan will support the goals presented in the City's Comprehensive Master Plan by providing proposed stormwater system improvements and maintenance recommendations, management recommendations to reduce erosion and improve water quality, and a prioritized list of projects that reflect the City's commitment to resolving existing flooding issues while preparing for continued growth.

1.1 PURPOSE OF STUDY AND APPROACH

The Ingleside Drainage Master Plan was prepared to assist the City in evaluating the existing conditions of selected stormwater infrastructure and to develop prioritized capital improvement projects (CIPs) to address problem areas identified as part of the drainage master planning process. All identified problem areas were discussed with City staff to obtain their observations on the identified areas, and compared to the citizen input received through the Virtual Open House community outreach process. Meetings were also held with local stakeholders (TxDOT, San Patricio County Drainage District, and the City of Aransas Pass) to obtain their input on issues they have noted and opportunities for collaboration. Summaries of these meetings are included in **Appendix I**. Additional information on the Virtual Open House process is included in **Section 2.2** and **Section 2.3**.

The evaluation of existing conditions consisted of reviewing various sources of data (such as past studies, Geographical Information System (GIS) data, as-builts, models) and site visits to develop conceptual drainage CIPs. Data from various drainage studies performed in the past were provided to FNI by the City.

For each problem area, at least one conceptual solution and cost estimate was developed to encompass the CIP. The results were used to develop an implementation plan for the City to prioritize improvements. FNI also developed ranking criteria and a scoring system to enable the City to prioritize these CIPs. The developed drainage CIPs were organized in a Microsoft Excel spreadsheet where they can be stored and recalled, with an easy-to-use interface allowing the City to build upon the database in the future.

1.2 PREVIOUS PLANNING EFFORTS

The City of Ingleside has already locally completed or regionally participated in several master planning efforts. This section summarizes the current effective plans. **Section 2.3.1** documents planning linkages to these previous planning efforts for each of the proposed capital improvement projects.

1.2.1 2016 Comprehensive Master Plan

The 2016 Comprehensive Master Plan's (CMP) purpose was to set the stage for the long-range development of the City. The powers granted under Texas Local Government Code Section 213 allow for the promotion of sound development. The CMP describes the City's vision and principles, in part, to tailor future development to the community's needs.

Drainage was noted as a community challenge in the CMP. There is a desire to address this challenge and verify that City standards for curb/gutter, streets and drainage are appropriate for all areas. Improved drainage infrastructure would help with three main concerns: residential development, hazard mitigation, and alignment with other master plans that improve quality of life.

Some of the drainage-related policies and recommendations included:

- Reducing runoff contamination
- Encouraging the development of greenbelts in combination with drainage facilities
- Improving drainage conditions according to proximity to the coast
- Considering ultimate development in the area
- Instituting regulations that protect drainage and improve long-term drainage performance
- Providing floodplain management to reduce erosion, peak flows and poor water quality
- Implementing a systematic maintenance program for water, wastewater, drainage and streets

1.2.2 2018 San Patricio County Hazard Mitigation Plan

San Patricio County's location in the lower Gulf Coast is prone to a wide array of natural hazards that disrupt safety, property, and the local economy. It is impossible to completely prevent natural hazards from taking place, but with proper planning, measures to reduce long-term risks can be implemented. The focus of the 2018 San Patricio County Hazard Mitigation Plan (HMP) was to address vulnerabilities,

minimize the costs of disaster response and recovery, and protect human life by identifying and implementing hazard mitigation actions.

The HMP identified a variety of County-wide recommended actions, such as developing a hazards education program, adopting disaster resistant building codes, and implementing a tree trimming program to clear branches from rights-of-way, among others. A series of 17 actions specific to the City of Ingleside were included in the HMP. These include recommendations such as:

- Improve drainage and implement drainage right-of-way on California Street.
- Adopt and implement a program to regularly clean and repair stormwater drains, and upgrade undersized stormwater drains to improve drainage and reduce flooding.
- Undertake a comprehensive study of flood risk and flood reduction alternatives with the assistance of the US Army Corps of Engineers (USACE) and implement feasible alternatives for flood reduction.
- Implement Avenue B drainage project improvements.

1.2.3 2020 Transportation Master Plan

Transportation master planning addresses public infrastructure (e.g., construction and maintenance of streets), plans for the reduction of congestion, understands and applies alternate modes of mobility, and identifies tools to preserve future corridors. Ingleside's 2020 Transportation Master Plan (TMP) included an existing conditions assessment, proposed street classifications, proposed maintenance plan, and a proposed plan for transportation and mobility throughout the City.

The TMP noted that roadway and mobility improvements should incorporate drainage (and other utility) improvements, when possible, to use the City's limited financial resources most efficiently. Additionally, the TMP discussed the concept of block-by-block infrastructure repair, which includes upgrades and/or addressing any necessary repairs to all utilities within a block to a point where no infrastructure improvements will be needed for the design life. Consistent maintenance of the City's drainage system will help create a longer life cycle for the streets of Ingleside. The TMP also has crossover relevance with the 2021 Parks, Recreation and Open Space Master Plan in that drainage alignments may help better facilitate pedestrian and bicycle connectivity between park facilities.

1.2.4 2021 Parks, Recreation and Open Space Master Plan

The 2021 Parks, Recreation and Open Space Master Plan (PROSMP) guides the long-term vision for the City's parks and recreation system. The PROSMP summarizes the needs and recommended improvements to the parks and recreation system for the following five to ten years. Recommendations include park improvements and new facilities, programming and events, connectivity and accessibility, natural resources, safety and maintenance, and funding and partnerships.

While PROSMP recommendations focus on parks and recreation, there may be opportunities to improve parks and drainage through the same project. For example, trail corridors often run parallel to drainage channels. Conversely, it is also important to ensure that parks and drainage improvements are complementary. For example, one of the City's parks, Whitney Lake, is a constructed wetland with integrated water quality and habitat benefits. As park improvements are considered, it is important to ensure that drainage and stormwater benefits are upheld on the site if not improved.

2 STORMWATER MASTER PLAN DEVELOPMENT

2.1 PRE-PROJECT CONDITIONS

Prior to developing the models for pre-project conditions, a modeling strategy was developed to identify consistent hydrologic and hydraulic modeling nomenclature, practices, parameters, and criteria to be used throughout the analyses. A methodology memorandum (**Appendix K**) was submitted to City staff to document the planned approach and included a map of 100-year storm event HEC-RAS 2D model results indicating flood risk hotspots within the city limits, and a drainage area map that covered the full city limits. The flood risk hotspots exhibit included in the memorandum has since been refined with more detailed modeling, and all exhibits included in this report reflect those refinements and now display the 5-year storm event results. For easier reference, the drainage area map included in the memorandum is included in this report as **Appendix A, Exhibit 1**. Additionally, a new exhibit was developed based on City staff input to show the existing channel infrastructure within the City with channel names identified (**Appendix A, Exhibit 2**).

All analyses were run for the 5-year, 10-year, 25-year, 100-year and 500-year storm events. **Table 2-1** correlates the return period of various storm events to how many inches of rainfall that equates to in a 24-hour period. Additional storm events are included in the table for future reference even though not all

storm events were analyzed as part of the Drainage Master Plan project. Rainfall precipitation values are sourced from the NOAA Atlas 14 Precipitation Frequency Data Server at the centroid of the city limits.

Table 2-1: Storm Event Correlation Table

Storm Event (year)	24-hour Rainfall Depth (inches)
2	4.76
5	6.42
10	7.93
25	10.20
50	11.70
100	14.20
500	19.80

2.1.1 Open Channels – HEC-RAS Modeling

The City's primary open channel systems include Humble Ditch, Kinney Bayou, and McCampbell Slough. A two-dimensional (2D) HEC-RAS model was developed for the entire City, including the City's extraterritorial jurisdiction (ETJ). The 2D HEC-RAS program was selected due to its capability to model riverine systems and surface water. Base Level Engineering (BLE) HEC-RAS models were requested from the Texas Water Development Board (TWDB) to aid in the creation of the City of Ingleside HEC-RAS models. These HEC-RAS models were modified as necessary to meet the needs and criteria of the City of Ingleside.

The information used to update the HEC-RAS models included a combination of readily available data and data developed through hydrologic analysis. Readily available data included data requested from the City of Ingleside, land cover data obtained from the National Land Cover Database (NLCD) from the Multi-Resolution Land Characteristics Consortium website, DEM data obtained from USGS using the 3DEP LidarExplorer website, and soil data from the USGS Web Soil Survey website. Existing land use data was manually categorized for highly developed areas based on aerial imagery. The manually categorized area was merged with NLCD land use data to provide full land use coverage within the HEC-RAS model boundary. The HEC-HMS hydrologic modeling program was used to remove infiltration losses and develop precipitation excess data using NOAA Atlas 14 precipitation depths. This precipitation excess data was used for the HEC-RAS models as the rainfall input data.

Once developed, the HEC-RAS model was run for the following scenarios.

- Existing Conditions – This is a snapshot of current drainage conditions in the City of Ingleside.
    - Where necessary and available, the HEC-RAS model used existing City stormwater infrastructure data, survey, as-built plans, and construction plans, to create an up-to-date existing conditions model.
    - Existing land use data was manually categorized for areas within the HEC-RAS model boundary based on aerial imagery from January 2023.
    - Model results showed overtopping of several roadways, and back-flow of some channels was observed. These results were confirmed by City of Ingleside staff during the Existing Conditions Meeting.
    - Model results were also validated through a comparison of Hurricane Harvey high water marks collected by the USGS at the power plant and at Cove Park. Based on NOAA radar rainfall records, Hurricane Harvey was comparable to a 100-yr, 24-hr SCS design event at the boat ramp and a 50-yr design event at the power plant. Results of the existing conditions HEC-RAS model for these events showed validation of the high water marks to within six inches.
- Future Conditions – This is a look forward to the City of Ingleside once it is completely built out.
    - Future conditions are based on the future land use map developed as part of the City's Comprehensive Plan and assumes no additional stormwater improvements are made.
    - Model results showed the future condition results paralleled existing conditions. However, most issues identified in the existing conditions were exacerbated, attributable to an increase in impervious cover.

2.1.2 Local Systems – ICM Modeling

An Infoworks Integrated Catchment Model (ICM) was developed for the local systems, which generally constitute the developed areas of Ingleside with underground storm drain systems. The ICM program was selected due to its capability to model underground drainage systems and their relationship to surface water. The HEC-HMS hydrologic modeling program was used to remove infiltration losses and develop precipitation excess data using NOAA Atlas 14 precipitation depths. This precipitation excess data was used for the ICM models as the rainfall input data.

Once developed, the ICM model was run for the following scenarios.

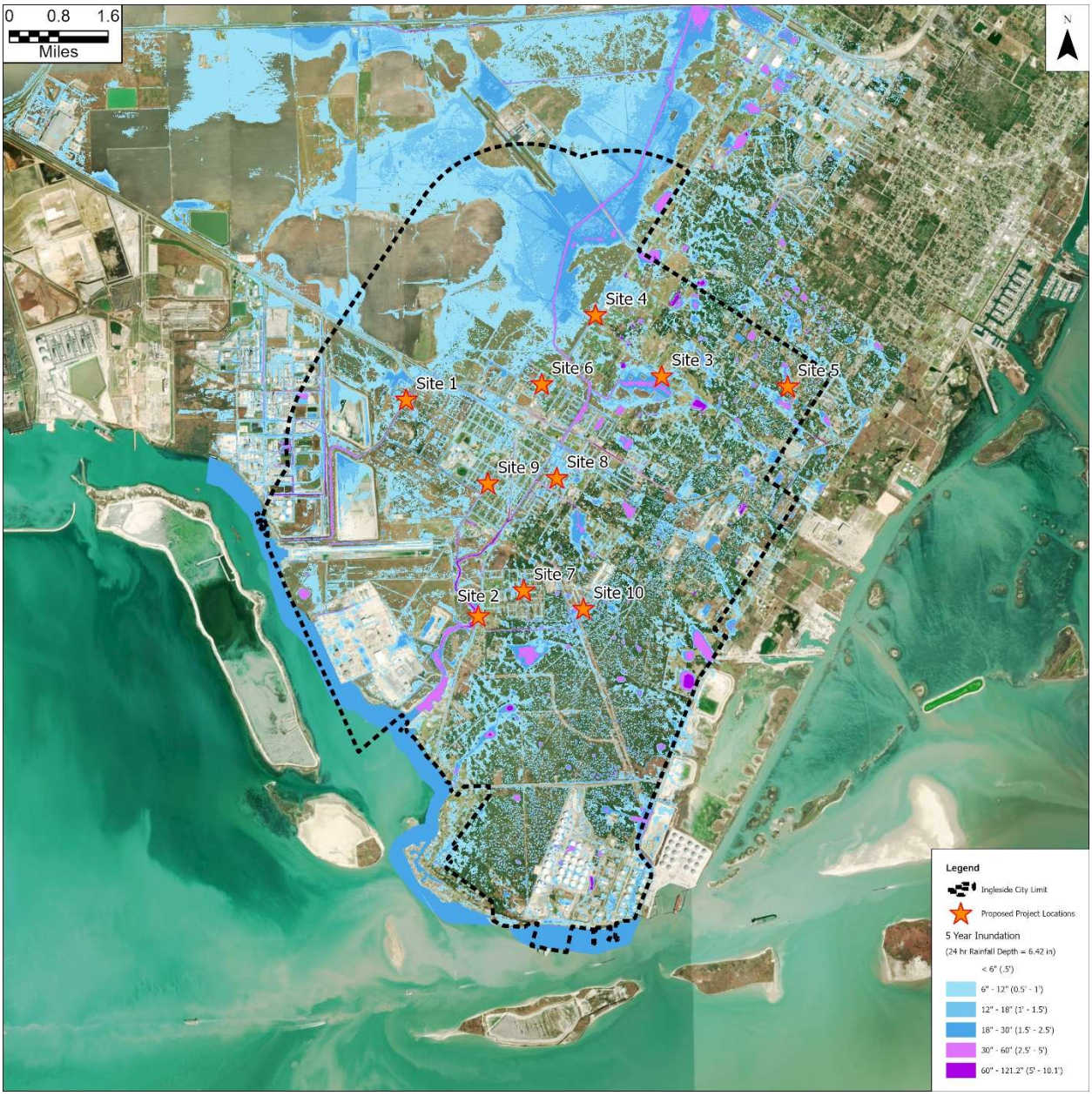
- Existing Conditions – This is a snapshot of current drainage conditions in the City of Ingleside.
    - The ICM model used existing city stormwater infrastructure data as well as data from CCTV, survey, as-builts plans, and construction plans to create an up-to-date existing conditions model.
    - Existing land use data was manually categorized for areas within the ICM model boundary based on aerial imagery from January 2023.
    - Model results showed flooding in numerous neighborhoods, homes, and streets due to the insufficient capacity of stormwater systems. These results were confirmed by City of Ingleside staff during the Existing Conditions Meeting.
- Future Conditions – This is a look forward to the City of Ingleside once it is completely built out.
    - Future conditions are based on the future land use map developed as part of the City's Comprehensive Plan and assumes no additional stormwater improvements are made.
    - Model results showed the future condition results paralleled existing conditions. However, most issues identified in the existing conditions were exacerbated, attributable to an increase in impervious cover.

2.2 PROBLEM AREA IDENTIFICATION

Based on the existing buildout conditions and future buildout conditions modeling, numerous inundation hotspots were noted across the City. After compiling the problem areas, FNI developed a preliminary problem area location map and site identification numbers (see the list below and **Figure 2-1**).

- Site 1: Humble Ditch and West Main area
- Site 2: Kinney Bayou overtopping of SH 1069 between North Street and Port Avenue
- Site 3: Kenny Lane/Whitney Lake area
- Site 4: SH 1069 between McCampbell Slough and Mooney Lane
- Site 5: Long-term ponding in the northern section of Ingleside
- Site 6: Inundation in the Nystrom Addition neighborhood
- Site 7: Inundation in the Parkside Terrace subdivision
- Site 8: Inundation in the Villanova Place subdivision
- Site 9: Inundation in the Humble Addition neighborhood and along Avenue B
- Site 10: Planning for future development on the south side of Ingleside near Achievement Boulevard and 8th Street

Figure 2-1: Existing Inundation Depth Results and Problem Areas for 5-Year Storm Event



Note: Site 2 did not progress to further analysis and CIP development.

These ten potential CIP project locations were developed based on the most severely inundated areas that appeared to be impacting a significant number of residents and public roadways. The identified problem areas were reviewed with City staff and also validated by public input received through the Virtual Open House #1 (VOH-1), which provided opportunities for people to learn about the Drainage Master Plan process and provide input about their experiences with flooding in Ingleside. VOH-1 activities included an introductory video, a public survey, and an interactive map. Eight survey responses were

received, and 31 comments were added to the interactive map. Responses are summarized in **Appendix I.2**.

The maximum number of projects scoped for modeling in this Drainage Master Plan was nine projects. To pare down the list, discussions were held with City staff and a recommendation was made to City Council to not progress Site 2 forward into the CIP development phase. Although modeling shows potential for inundation of SH 1069 under future buildout conditions at Site 2, City staff reported they have not seen this occur or be an issue in the past. However, flooding is known to occur under existing conditions in the other nine sites that were noted, so those sites were progressed to the CIP development phase.

2.3 PROJECT DEVELOPMENT

This task included the development of improvement alternatives to address identified flood prone areas. The alternatives in fully developed areas considered retrofit and upsizing of existing systems, whereas alternatives in undeveloped areas reflect anticipated development to allow planning of drainage infrastructure ahead of development, which will be necessary to accommodate future flows.

Preliminary improvements were proposed to mitigate these drainage problems and to develop the CIPs. The CIPs range from small projects that may be able to be implemented by City crews to large projects that will require a contractor. Ultimately, the City can break out or combine various elements of the different CIPs as needed to make the best use of City funds.

In addition to the larger, capital projects, a list of small drainage projects was also developed. These small projects are typically maintenance focused and can likely be completed by City staff (see **Section 2.3.2** and **Appendix J**).

It should be noted that the proposed improvements are not based on detailed engineering analysis or design. Rather they are based on field visits, review of existing data, and limited modeling and calculations. A detailed hydrologic and hydraulic impact analysis should be performed during final design to ensure the recommended improvements will not cause adverse impacts upstream or downstream of the project site.

These nine CIP projects developed for this drainage master plan were reviewed with City staff, presented to City Council, and shared publicly for community input through the Virtual Open House #2 (VOH-2). The purpose of VOH-2 was to give the people living and working in the community an opportunity to provide feedback on the proposed projects. The VOH-2 website included an overview map of the projects,

summaries of the existing problems, summaries of the proposed improvements, and figures providing a schematic of the proposed improvements. Seventeen comments were received from a total of seven individuals (based on unique IP addresses). Responses are summarized in **Appendix I.3**.

2.3.1 Proposed Capital Improvement Projects

A total of nine project sites were analyzed for a potential drainage project that would reduce inundation during the 5-year storm event. The baseline was set by determining the depth of inundation and the number of potentially impacted structures during the 5-year storm event and based on existing land use conditions. Analysis of the effectiveness of the proposed improvements was determined based on:

- Inundation depth reduction.
- The number of structures removed from the potentially inundated areas. (Analysis assumed all structures have a finished floor elevation of at least 6-inches above the topographic surface. If inundation depths intersecting a structure were greater than 6-inches of depth, the structure was assumed to be inundated.)
- Reduction in the length of impassable roadway, defined as roadway inundated to a depth of greater than 6-inches.

Based on the analyses, the project limits were refined, and the following list of projects was developed.

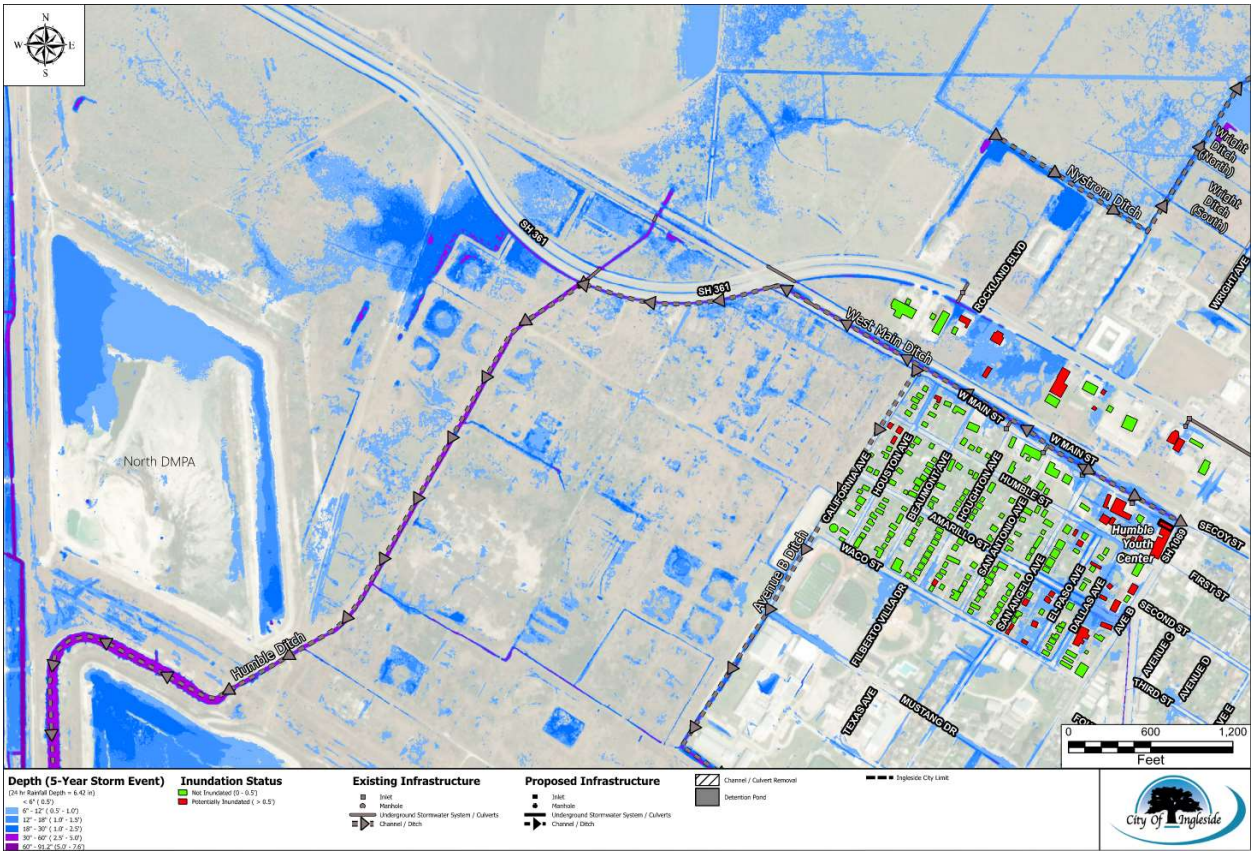
- Site 1: Humble Ditch Improvements
- Site 3: Kenny Lane/Whitney Lake Infrastructure
- Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane
- Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street
- Site 6: Nystrom Addition Drainage Improvements
- Site 7: Parkside Terrace Subdivision Drainage Improvements
- Site 8: Villanova Place Drainage Improvements
- Site 9: Humble Addition and Avenue B Drainage Improvements
- Site 10: Live Oak Ditch

Each project area is summarized as a one-page document located in **Appendix C**, and in the following subsections.

2.3.1.1 Site 1: Humble Ditch Improvements

Existing problem: West Main Street experiences flooding that overtops the road and limits access to and from the adjacent business, including the Humble Youth Center, during even the smaller storm events. City staff indicated that cars driving along West Main Street cause waves that send water into the Humble Youth Center building. Flooding issues in the West Main Street area are exacerbated due to backflow in the upstream section of the Humble Ditch. This backflow is represented in the model and has been confirmed by City staff. Water near the Humble Youth Center also seems to be relatively isolated from the drainage systems which causes lack of flow and ponding along West Main Street. These flooding issues can result in road and building damage. The existing inundation extents are shown in **Figure 2-2** and in **Appendix B.1A**.

Figure 2-2: Humble Ditch Improvements - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: Improve approximately 5,000 linear feet of the Humble Ditch. Improvements include regrading the Humble Ditch from the south edge of State Highway 361 (SH 361) to approximately halfway between the Dredge Material Placement Area (DMPA) cells,

and concrete lining the channel. Proposed dimensions include a 20-foot bottom width with the top width being restrained by the San Patricio County Drainage District easements. These improvements will allow the Humble Ditch to flow in the original intended direction and relieve some ponding in between SH 361 and West Main Street. The proposed improvements do not entirely prevent ponding along West Main Street, but improving the drainage downstream of the problem area does reduce the amount of time ponding occurs along West Main Street. also, improving the Humble Ditch cannot entirely alleviate the flooding at the Humble Youth Center, so flood protection systems for the building itself should be considered to prevent water damage to the building. Proposed improvements are shown in **Figure 2- 3** and in **Appendix B.1B**.

Figure 2- 3: Humble Ditch Improvements - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood extents in the area between SH 361 and West Main Street and a reduction in the amount of time the West Main Street system is inundated. The HEC-RAS models indicate that the proposed alternatives may decrease the extent or depth of flooding in nearby areas, but almost no significant positive impacts are noted near the Humble Youth Center. Several different proposed improvement scenarios were analyzed, but the greatest beneficial impacts were attributed to improvements to the Humble Ditch, which reduced backflow into the West Main

Ditch and reduced the amount of time the West Main Street systems were inundated. **Table 2-2** summarizes the results.

Table 2-2: Humble Ditch Improvements - Summary of Results

Site 1: Humble Ditch Improvements			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	72.3	65.7	92.0
Inundated Roadway (> 6" depth; LF)	10,812	10,443	13,707
Number of Potentially Inundated Structures (> 6" depth)	37	36	58
Maximum Flood Depth (ft)	1.22	1.17	1.40
Length of Time Inundated (hrs)	34.00	33.00	43.25
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	91.9	87.2	109.8
Inundated Roadway (> 6" depth; LF)	14,148	13,590	17,077
Number of Potentially Inundated Structures (> 6" depth)	55	55	70
Maximum Flood Depth (ft)	1.45	1.39	1.62
Length of Time Inundated (hrs)	41.25	40.25	48.50
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	116.7	111.9	133.9
Inundated Roadway (> 6" depth; LF)	18,974	17,943	20,540
Number of Potentially Inundated Structures (> 6" depth)	86	80	101
Maximum Flood Depth (ft)	1.81	1.68	1.94
Length of Time Inundated (hrs)	50.75	49.75	60.25
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	153.4	153.3	167.9
Inundated Roadway (> 6" depth; LF)	24,363	24,316	25,340
Number of Potentially Inundated Structures (> 6" depth)	125	125	133
Maximum Flood Depth (ft)	2.20	2.22	2.31
Length of Time Inundated (hrs)	69.25	68.50	71.00
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	183.1	184.3	196.7
Inundated Roadway (> 6" depth; LF)	28,066	28,062	29,277
Number of Potentially Inundated Structures (> 6" depth)	146	145	154
Maximum Flood Depth (ft)	2.46	2.50	2.59
Length of Time Inundated (hrs)	72.25	71.50	73.50

Project Considerations: The San Patricio County Drainage District (SPCDD) is responsible for channel maintenance and improvements on the Humble Ditch. The proposed improvements to Humble Ditch should be achievable within the existing SPCDD drainage easement, but this should be confirmed during final design. The locations of any utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. There are several oil, gas, highly volatile liquid pipelines and a major water transmission line crossing the Humble Ditch at unknown depths. Coordination with these private and public pipeline owners will be required during project development and construction. No permitting requirements are anticipated.

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP highlights a need for improved flood control measures and includes infrastructure policies to implement varying methods for stormwater drainage management. While there are no specific projects recommended in the CMP, the proposed Humble Ditch improvements help to implement its high-level policies.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  The HMP recommended County-wide and Ingleside-specific mitigation actions to reduce the negative impacts of natural hazards. The proposed Humble Ditch improvements help support proposed action #7 for the City of Ingleside to undertake a comprehensive study of flood risk and implement feasible alternatives for flood reduction.

- 2020 Transportation Master Plan (TMP):

  The TMP recommends combining street and utility projects whenever possible. However, this project includes minimal work along a roadway, so there are no strong plan linkages to the TMP.

- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

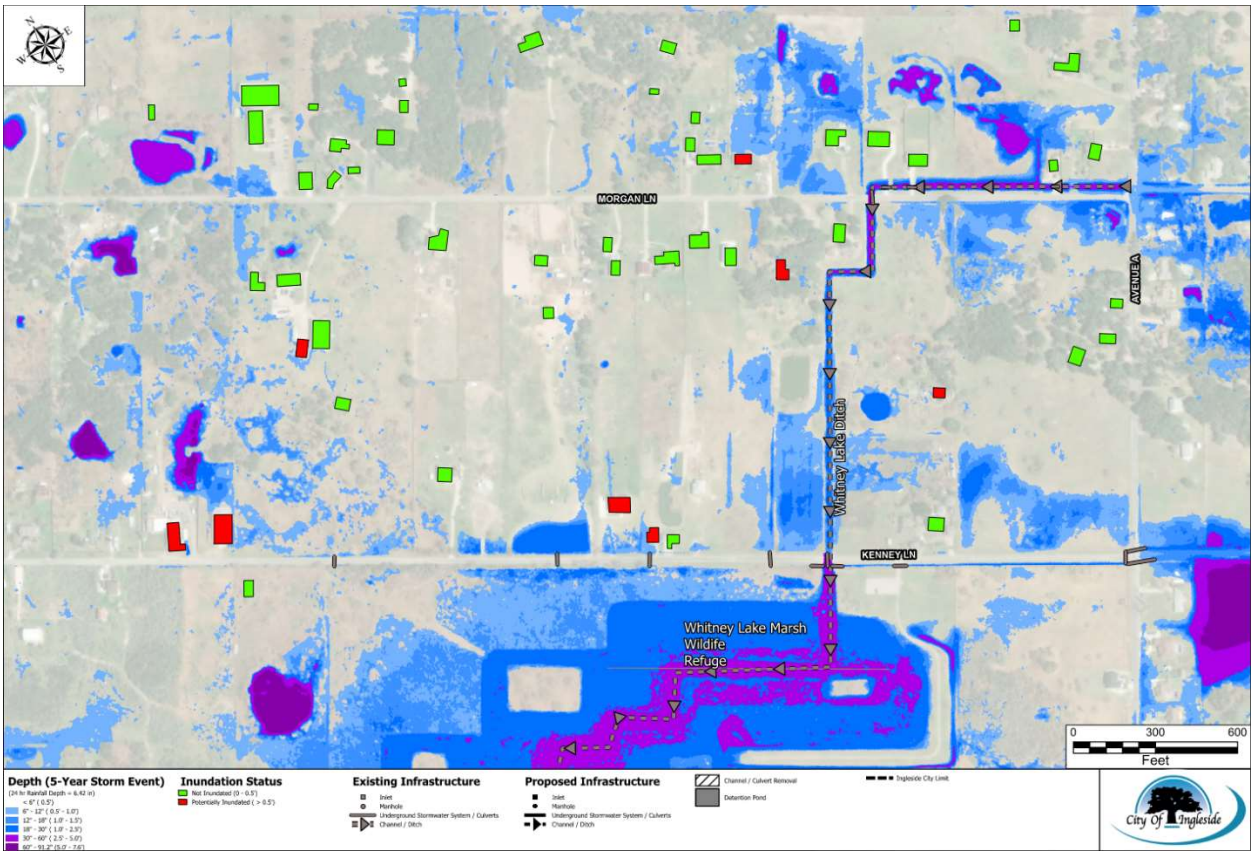
  The Humble Youth Center provides a variety of recreational camps and programs and is the only City-run recreation facility for youth. It is safe to assume that the ability of the Center to provide these programs can be inhibited by flooding conditions. This project

will help to reduce the flooding impact on the Center and thus support recreation options for the community. In addition to implementing the Humble Ditch improvements, the City should also consider flood protection systems for the building to best protect this recreation resource from storm events.

2.3.1.2 Site 3: Kenny Lane/Whitney Lake Infrastructure

Existing problem: Residential properties along Kenny Lane are flooding during even small storm events. Additionally, Kenny Lane experiences roadway overtopping during the 100-year or larger storm events. There are no existing roadside ditches and only one property on Kenny Lane has a driveway culvert. Existing cross culverts are limited and undersized due to lack of cover. Flooding events can limit residents' ability to leave their homes, pose a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. The existing inundation extents are shown in **Figure 2-4** and in **Appendix B.2A**.

Figure 2- 4: Kenny Lane/Whitney Lake Infrastructure - Existing Conditions Flooding Extents

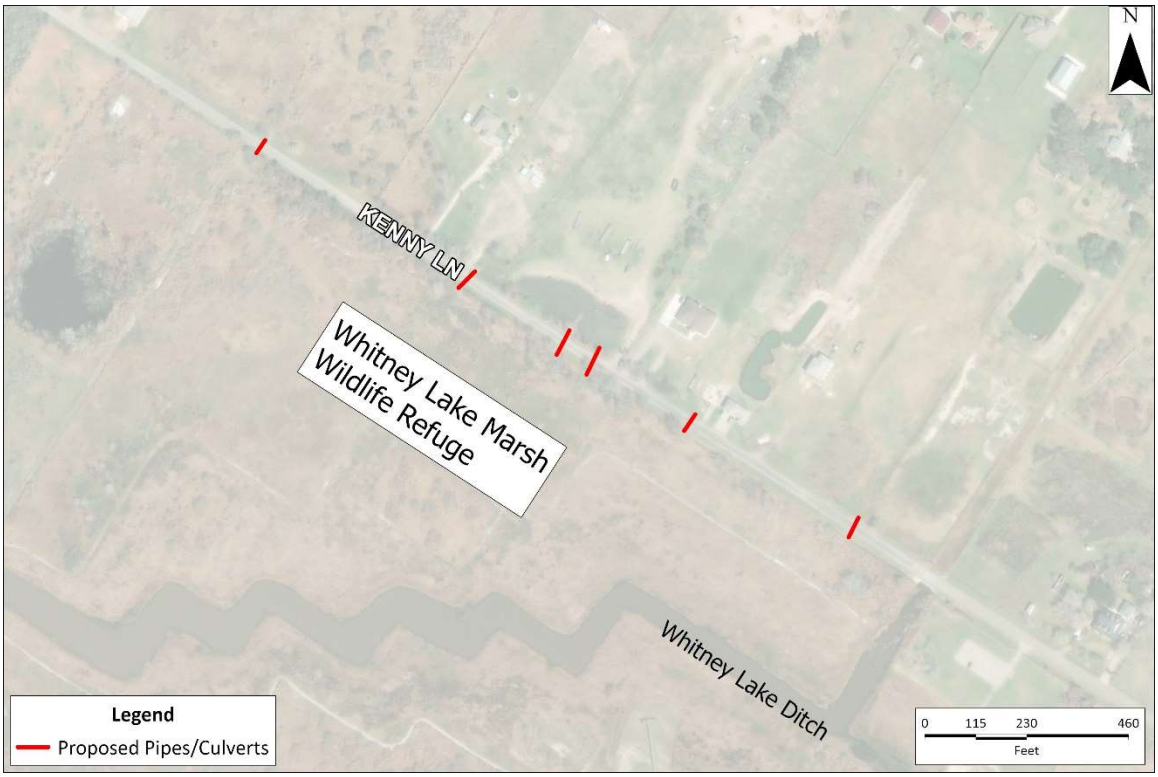


Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: At the onset of this project, there were already plans for improvements along Kenny Lane. Proposed improvements in the Kenny Lane Construction Plans provided by the City were modeled. This includes approximately 440 linear feet of 15-inch reinforced concrete pipe (RCP) culverts along Kenny Lane to provide flow from the north side to the south side of Kenny Lane. Proposed improvements are shown in **Figure 2-5** and in **Appendix B.2B**. The following additional alternatives were analyzed to determine if further improvements were warranted, but none proved to be substantially more effective than the improvements in the Kenny Lane Construction Plans.

- Modeled culverts in the same plan configuration as the current construction plans, but extended the outfall into Whitney Lake instead of the south side of Kenny Lane
- Concrete-lined the upstream section of the channel between Morgan Lane and Kenny Lane
- Added culverts on the east side of the main culvert crossing under Kenny Lane to relieve the northeast area

Figure 2- 5: Kenny Lane/Whitney Lake Infrastructure - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed Kenny Lane Construction Plan Improvements include reductions in drainage time. Only minor depth and extent reductions were observed. Similar trends were observed for the alternative with the culverts directly draining to the lake. Upstream channel improvements had insignificant changes to the Kenny Lane area and only slightly decreased water surface elevation and extent for a few houses on Morgan Lane. Cross culverts on the east side of the main Kenny Lane culvert only provide small relief to a couple of houses northeast of the culvert. **Table 2-3** summarizes the modeling results for proposed improvements (based on the Kenny Lane Construction Plans).

Table 2- 3: Kenny Lane/Whitney Lake Infrastructure - Summary of Results

Site 3: Kenny Lane/Whitney Lake Infrastructure			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	63.8	63.6	78.9
Inundated Roadway (> 6" depth; LF)	83	83	196
Number of Potentially Inundated Structures (> 6" depth)	8	7	13
Maximum Flood Depth (ft)	1.65	1.43	1.76
Length of Time Inundated (hrs)	28.75	28.75	33.75
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	78.9	78.5	92.7
Inundated Roadway (> 6" depth; LF)	232	234	624
Number of Potentially Inundated Structures (> 6" depth)	12	12	13
Maximum Flood Depth (ft)	1.83	1.79	2.4
Length of Time Inundated (hrs)	33.00	33.00	37.75
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	97.3	96.7	108.0
Inundated Roadway (> 6" depth; LF)	988	914	1,869
Number of Potentially Inundated Structures (> 6" depth)	14	14	16
Maximum Flood Depth (ft)	2.65	2.57	2.81
Length of Time Inundated (hrs)	37.25	37.25	42.25
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	120.0	119.8	129.4
Inundated Roadway (> 6" depth; LF)	3,092	3,092	3,508
Number of Potentially Inundated Structures (> 6" depth)	20	20	23
Maximum Flood Depth (ft)	3.23	3.23	3.46
Length of Time Inundated (hrs)	41.50	41.50	46.50
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	142.5	142.4	149.3
Inundated Roadway (> 6" depth; LF)	4,576	4,576	5,012
Number of Potentially Inundated Structures (> 6" depth)	26	26	29
Maximum Flood Depth (ft)	3.93	3.93	4.1
Length of Time Inundated (hrs)	45.75	45.75	50.25

Project Considerations: The proposed improvements have already been incorporated into the Kenny Lane Construction Plans. No utility conflicts are anticipated, and no drainage easement acquisition or permitting is required.

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):
  Improving flood control is a policy listed in the CMP. The proposed Kenny Lane/Whitney Lake infrastructure improvements will help to reduce flood depths in the area, thus supporting the CMP policy.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):
  The Kenny Lane/Whitney Lake infrastructure improvements do not address any site-specific actions in the HMP, but do support action #7 for the City of Ingleside to implement feasible alternatives for flood reduction.

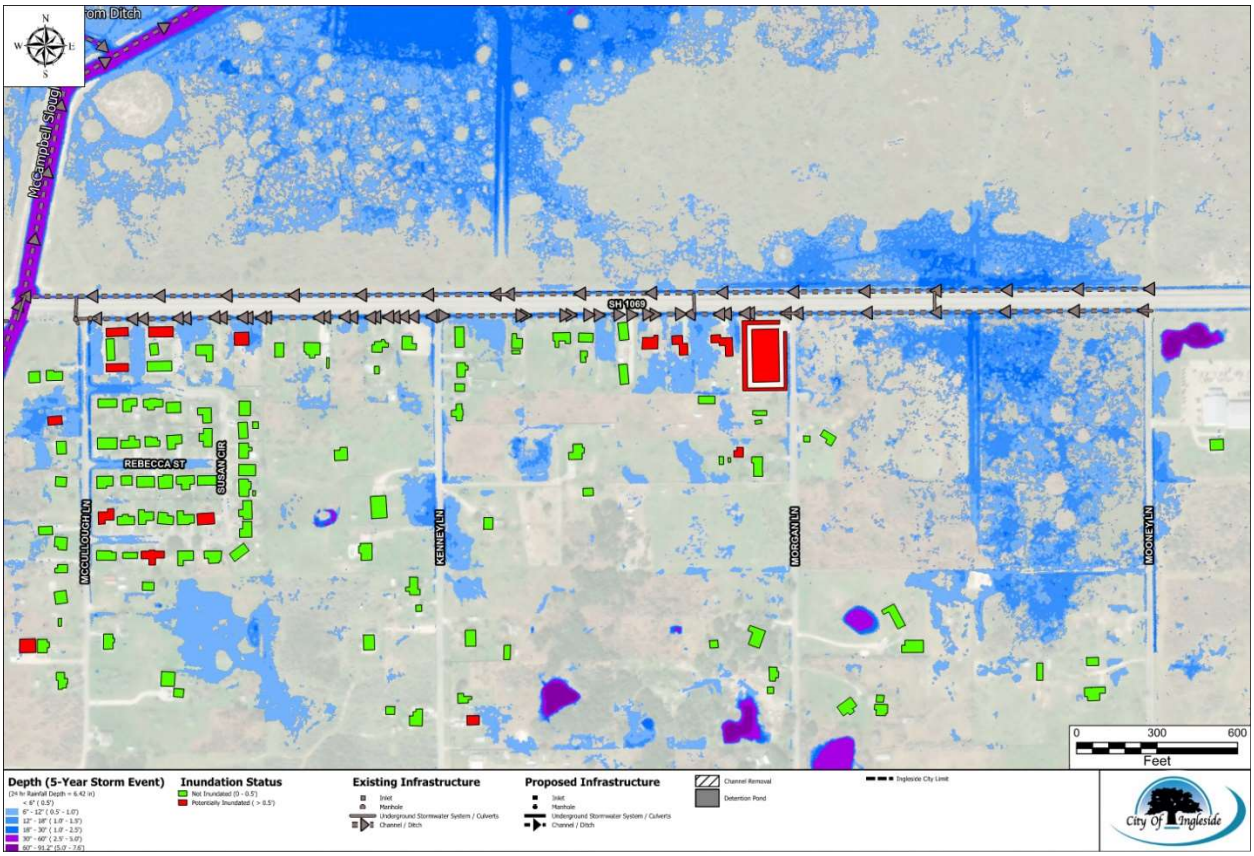
- 2020 Transportation Master Plan (TMP):
  The Thoroughfare Plan in the TMP illustrates Kenny Lane as a proposed Minor Collector. It is not clear if this means that the road will be upsized in the future. If so, roadway improvements will need to complement the proposed flood reduction infrastructure. Regardless, if any current roadway work is needed in the areas of proposed drainage improvements, the TMP policies recommend combining it with the drainage project to the extent feasible to best use City resources.

- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):
  The Kenny Lane/Whitney Lake infrastructure improvements are located adjacent to the northeastern boundary of Whitney Lake, which is a City park and a constructed wetland. Allowing stormwater drainage to move into the park rather than pond on the north side of Kenny Lane complements the park's purpose. However, the PROSMP identified various proposed improvements to the park, one of which is a loop trail around the property. When the City proceeds with the loop trail, it will be important to verify that the trail routing and design complements the proposed Kenny Lane/Whitney Lake infrastructure.

2.3.1.3 Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane

Existing problem: State Highway 1069 (SH 1069) is acting as a barrier that causes water surface elevations to rise on the east side of the highway, resulting in inundation of properties east of SH 1069 between McCampbell Slough and Mooney Lane. The ponding caused by the road can lead to lack of accessibility to the properties in the area, pose a safety concern if emergency services are unable to safely access inundated properties, and could potentially result in damage to structures. Existing cross culverts and roadside ditches on either side of SH 1069 do not have enough capacity to efficiently move flow to McCampbell Slough. The existing inundation extents are shown in **Figure 2-6** and in **Appendix B.3A**.

Figure 2-6: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: The roadside ditches along SH 1069 will be improved, additional culverts will be constructed under SH 1069 to move stormwater more efficiently from the east side to the west side of the highway, and a new detention pond will be constructed. Proposed improvements are shown in **Figure 2-7** and in **Appendix B.3B**.

- Construct approximately 3,452 linear feet of 4-foot bottom width, concrete-lined roadside ditch along the west side of SH 1069. The concrete lined ditch is assumed to daylight to existing ground at a slope of 3 horizontal to 1 vertical (3H:1V). Top width varies due to differences in existing ground elevations.

- Construct approximately 1,610 linear feet of 3-foot bottom width grass-lined ditch improvements along the east side of SH 1069. Grass-lined ditches between Morgan Lane and Mooney Lane are assumed to daylight to existing ground at a slope of 3H:1V, while remaining grass-lined ditches daylight at a rate of 5H:1V. Top width varies due to differences in existing ground elevations.

- Culverts to move water from east to west of SH 1069 will be placed in strategic locations. Ditches on the east side of the road will be graded to send flow to the cross culverts.

- The west side ditch will be graded to send flow from the cross culverts to McCampbell Slough.

- A detention pond is also recommended on the corner of SH 1069 and Mooney Lane due to the general lack of flow in the area. A gravity drained detention pond would not be deep enough to provide significant drainage benefits; therefore, a pumped detention pond of approximately 48 acre-feet is proposed for this site.

Figure 2-7: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood depth, and minor reductions in the number of potentially inundated structures, the potentially inundated area extents, and length of inundated roadway. **Table 2-4** summarizes the modeling results for SH 1069 between McCampbell Slough and Mooney Lane.

Table 2-4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane - Summary of Results

Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	125.5	122.4	168.0
Inundated Roadway (> 6" depth; LF)	5,931	5,909	7,565
Number of Potentially Inundated Structures (> 6" depth)	16	12	30
Maximum Flood Depth (ft)	1.43	1.05	1.64
Length of Time Inundated (hrs)	33.50	33.50	51.75
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	171.2	164.2	203.6
Inundated Roadway (> 6" depth; LF)	7,460	7,408	8,877
Number of Potentially Inundated Structures (> 6" depth)	28	24	45
Maximum Flood Depth (ft)	1.64	1.28	1.82
Length of Time Inundated (hrs)	35.00	34.75	53.50
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	220.7	211.7	250.8
Inundated Roadway (> 6" depth; LF)	9,668	9,410	11,019
Number of Potentially Inundated Structures (> 6" depth)	47	39	54
Maximum Flood Depth (ft)	1.92	1.58	2.17
Length of Time Inundated (hrs)	36.75	36.75	55.75
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	303.2	297.6	333.5
Inundated Roadway (> 6" depth; LF)	13,315	12,795	15,777
Number of Potentially Inundated Structures (> 6" depth)	73	70	87
Maximum Flood Depth (ft)	2.48	2.20	2.67
Length of Time Inundated (hrs)	39.75	39.75	58.75
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	381.5	381.4	404.6
Inundated Roadway (> 6" depth; LF)	19,486	19,478	21,853
Number of Potentially Inundated Structures (> 6" depth)	99	99	108
Maximum Flood Depth (ft)	2.96	2.95	3.1
Length of Time Inundated (hrs)	43.75	43.00	63.25

Project Considerations: Coordination with and project approval by TxDOT will be required to achieve the proposed project. Land acquisition for the proposed detention pond will be required. City staff should also confirm that the proposed improvements along SH 1069 can be constructed within the TxDOT ROW, or if additional drainage easements will need to be obtained from the adjacent property owners. Natural gas, oil, and wastewater pipelines may cause construction conflicts. Locations of utilities in the area should be confirmed during the design process to ensure no conflicts exist with the proposed drainage improvements. Water quality improvements should be incorporated into the detention pond during final design. A USACE Nationwide Permit (NWP 43) may be required for this project due to the project tie-in at McCampbell Slough and should be confirmed during final design. Phasing of this project could be considered starting with the most downstream portions of the project.

- Phase 1 – Roadside ditch improvements and culverts crossing SH 1069
- Phase 2 – Detention pond

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP identified policies to improve flood control as well as the need to partner with TxDOT on roadway projects. By reducing maximum flood depths and the number of potentially inundated structures, as well as coordinating with TxDOT on the improvements along SH 1069, this project is helping to implement multiple policies in the CMP.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  There are no site-specific actions items in the HMP near the SH 1069 drainage improvements. However, by improving drainage conditions, this project is helping to support action #7 for the City of Ingleside to implement feasible alternatives for flood reduction.

- 2020 Transportation Master Plan (TMP):

  The recommended maintenance program in the TMP calls for pairing transportation improvements with other utility improvements. Many of the SH 1069 drainage improvements run parallel to the road. These improvements will reduce the number of inundated roadways. As an existing primary arterial road, this is especially important. If other roadway work is needed in the areas of proposed drainage improvements, it should be completed with the drainage project to the extent feasible to best use City resources.

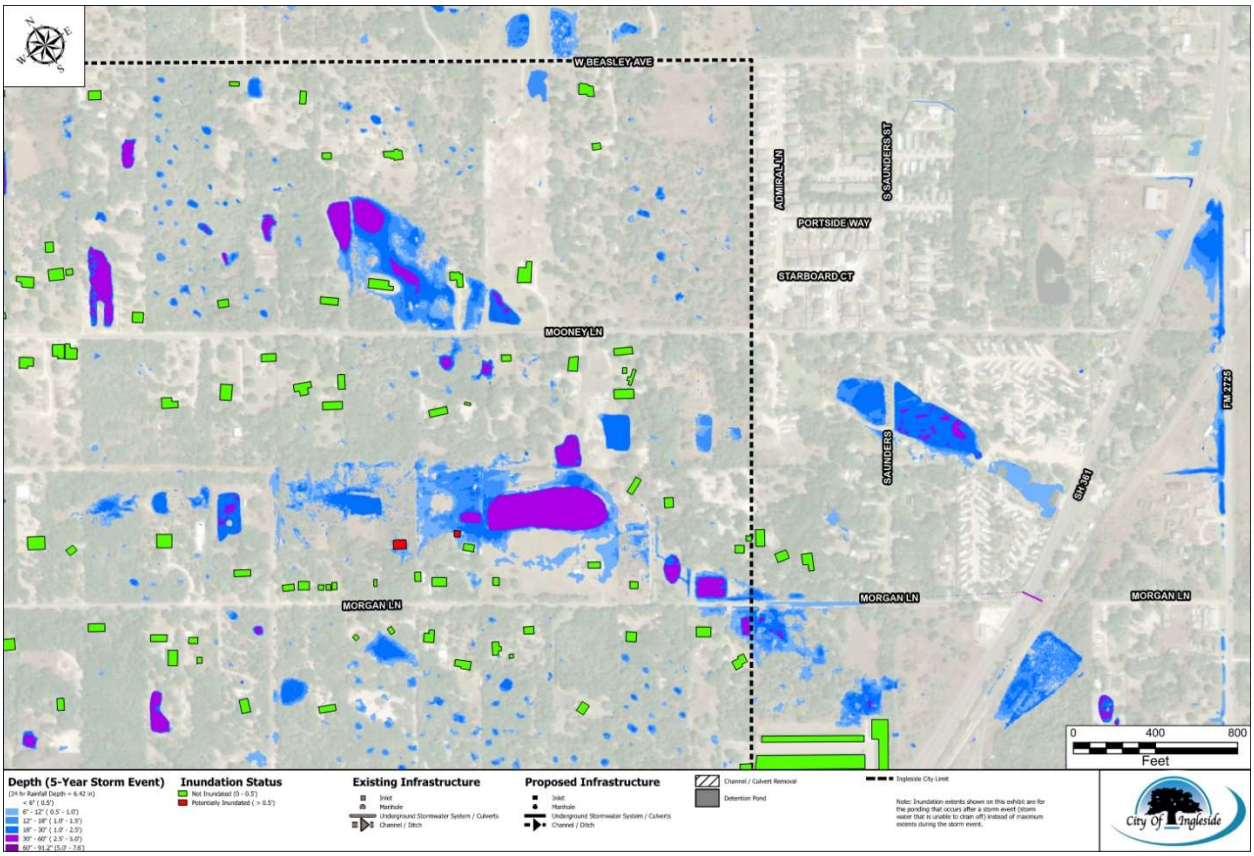
- 2021 Parks, Recreation and Open Space Master Plan:

  The proposed SH 1069 drainage improvements are not near any existing or proposed parks or recreation amenities or facilities, so there are no strong plan linkages to the PROSMP.

2.3.1.4 Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street

Existing problem: Stormwater is ponding on residential lots on both sides of Mooney Lane between Avenue A and South Saunders Street. Water stands on the lots for extended periods of time even after most areas have drained. This long-term ponding has been observed in the HEC-RAS model and confirmed by City staff and public comments during the Virtual Open House #1. This creates potential health concerns and inconveniences for nearby homeowners. The existing inundation extents are shown in **Figure 2-8** and in **Appendix B.4A**.

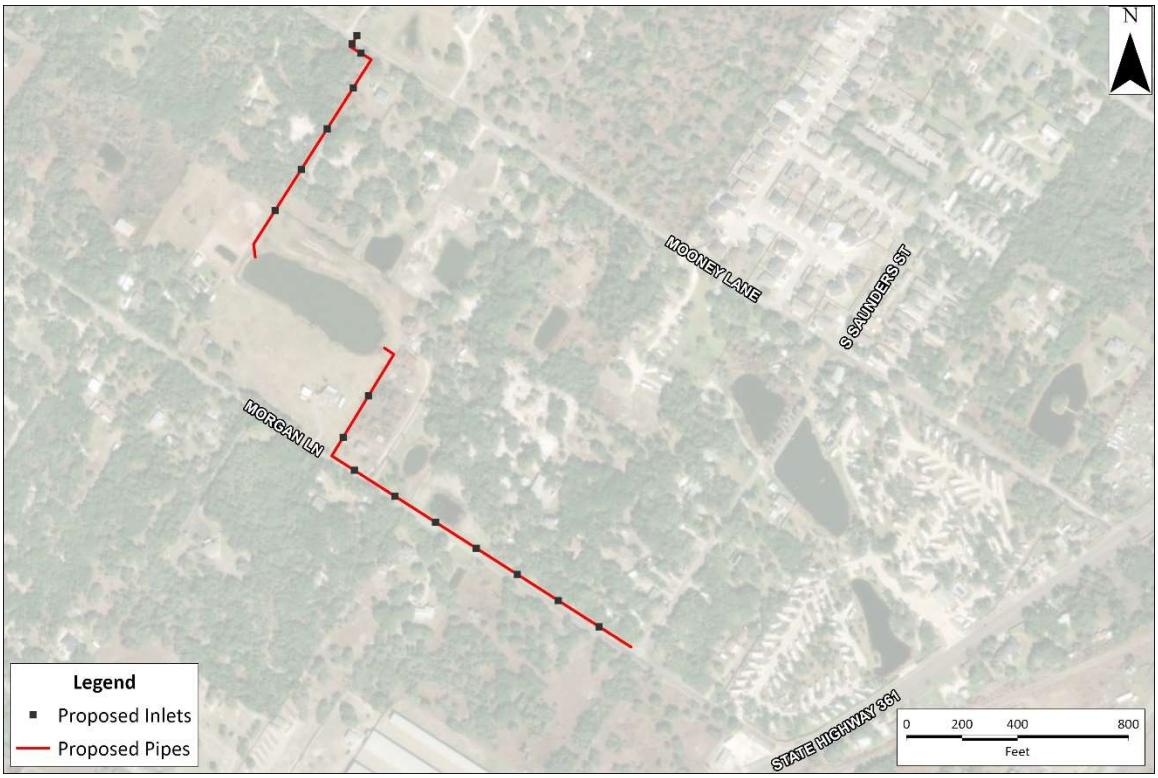
Figure 2-8: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event. Inundation extents shown are for the ponding that occurs after a storm event (stormwater that is unable to drain off) instead of maximum extents during the storm event.

Proposed Improvements: Construct approximately 2,585 linear feet of 15-inch PVC pipe to connect flow from the ponded areas north of Mooney Lane to the existing pond south of Mooney Lane. An outfall pipe will be added to the pond south of Mooney Lane, which will drain to an existing TxDOT or City of Aransas Pass inlet near the intersection of Morgan Lane and South Saunders Street, which appears to drain along Morgan Lane to a TxDOT culvert under SH 361. Grate or post inlets will be installed along the new pipes at an interval of 175 feet to help drain the area. Proposed improvements are shown in **Figure 2-9** and in **Appendix B.4B**.

Figure 2-9: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in drainage time. Based on the modeling results, there were areas that never drain off after a storm event (water would inundate the lots until it could evaporate or infiltrate into the soil). This proposed project significantly decreases the amount of time these properties experience inundation and provides a mechanism for the properties to drain after a storm event. **Table 2-5** summarizes the modeling results for the Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street project.

Table 2-5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street - Summary of Results

Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	29.5	18.8	29.1
Inundated Roadway (> 6" depth; LF)	192	79	184
Number of Potentially Inundated Structures (> 6" depth)	3	3	3
Maximum Flood Depth (ft)	2.92	1.31	2.91
Length of Time Inundated (hrs)	N/A	92.00	N/A
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	30.7	19.1	30.0
Inundated Roadway (> 6" depth; LF)	192	81	186
Number of Potentially Inundated Structures (> 6" depth)	3	3	4
Maximum Flood Depth (ft)	2.95	1.38	2.91
Length of Time Inundated (hrs)	N/A	94.50	N/A
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	31.4	19.6	30.0
Inundated Roadway (> 6" depth; LF)	192	83	186
Number of Potentially Inundated Structures (> 6" depth)	4	3	4
Maximum Flood Depth (ft)	2.95	1.33	2.95
Length of Time Inundated (hrs)	N/A	99.75	N/A
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	31.4	19.9	30.0
Inundated Roadway (> 6" depth; LF)	192	89	186
Number of Potentially Inundated Structures (> 6" depth)	4	3	4
Maximum Flood Depth (ft)	2.95	1.42	2.95
Length of Time Inundated (hrs)	N/A	102.75	N/A
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	31.4	20.2	30.1
Inundated Roadway (> 6" depth; LF)	192	99	186
Number of Potentially Inundated Structures (> 6" depth)	4	3	4
Maximum Flood Depth (ft)	2.95	1.44	2.95
Length of Time Inundated (hrs)	N/A	128.75	N/A

Note: N/A values indicate the ponding never drained off.

Project Considerations: To achieve the proposed improvements, drainage easements across private properties will be required. The proposed system ties into existing TxDOT or City of Aransas Pass infrastructure. Therefore, coordination with and project approval by TxDOT or Aransas Pass will be required. Natural gas, oil, and wastewater pipelines may cause construction conflicts. Locations of utilities in the area should be confirmed during the design process to ensure no conflicts with the proposed drainage improvements. No permitting requirements are anticipated.

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP documented community concern about flooding in residential areas. The proposed drainage improvements at this site will help to address these community concerns, thus supporting the CMP.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  There are no site-specific actions items in the HMP near the Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street drainage improvements. However, by improving drainage conditions, this project is helping to support action #7 for the City of Ingleside to implement feasible alternatives for flood reduction.

- 2020 Transportation Master Plan (TMP):

  Some of this project's drainage improvements will run along a road. If other roadway work is needed in the areas of proposed drainage improvements, it should be completed with the drainage project to the extent feasible to best use City resources.

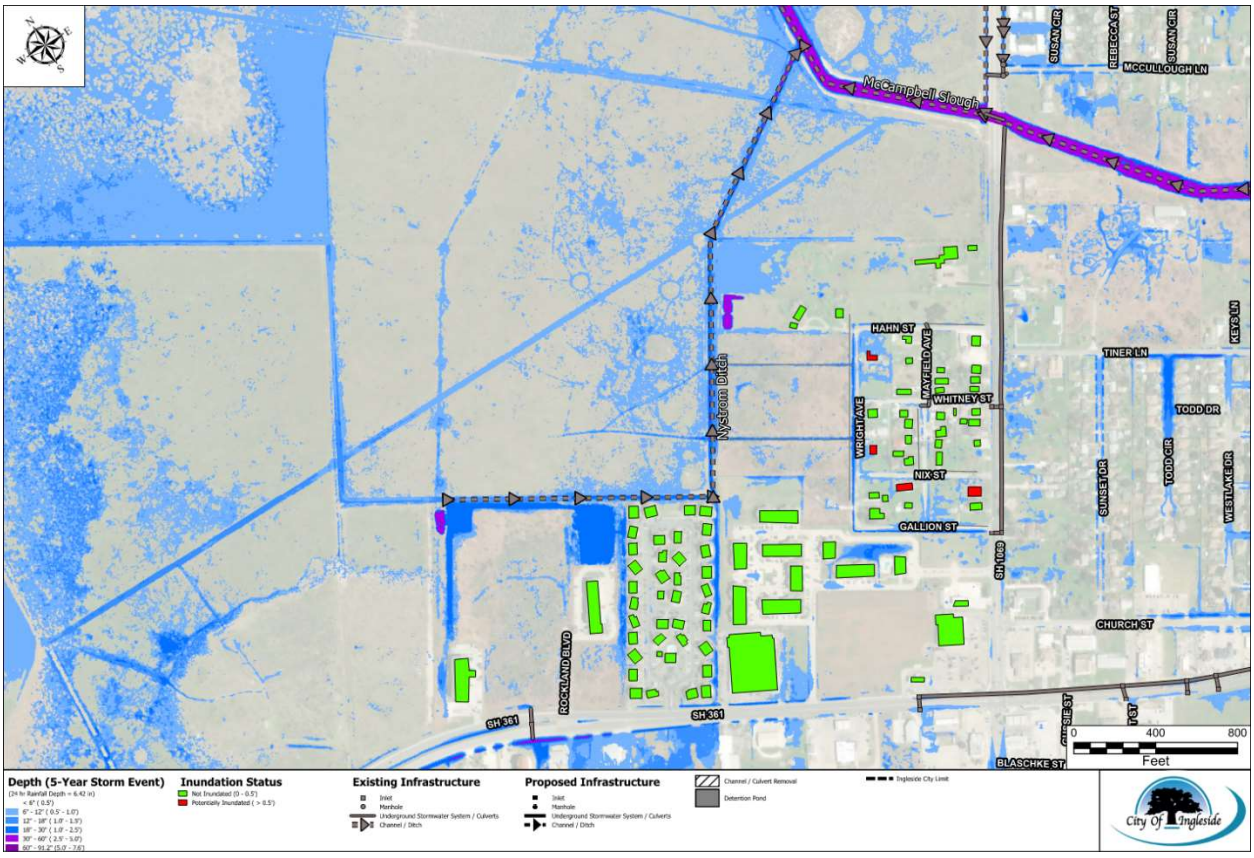
- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

  The proposed Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street drainage improvements are not near any existing or proposed parks or recreation amenities or facilities, so there are no strong plan linkages to the PROSMP.

2.3.1.5 Site 6: Nystrom Addition Drainage Improvements

Existing problem: Residential properties in the Nystrom Addition neighborhood are flooding during even small storm events. Additionally, the neighborhood streets (Gallion Street, Wright Avenue, Hahn Street, Whitney Street, Nix Street, and Mayfield Avenue) experience overtopping during storm events. Existing roadside ditches throughout the neighborhood do not have enough capacity to efficiently move flow to the two outfall ditches to the west (Wright Ditch (North) and Wright Ditch (South)), and the outfall ditches (Wright Ditch (North), Wright Ditch (South), and Nystrom Ditch) are also undersized. These instances of flooding can limit residents' ability to leave their homes during a flood event, pose a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. The existing inundation extents are shown in **Figure 2-10** and in **Appendix B.5A**.

Figure 2-10: Nystrom Addition Drainage Improvements - Existing Conditions Flooding Extents

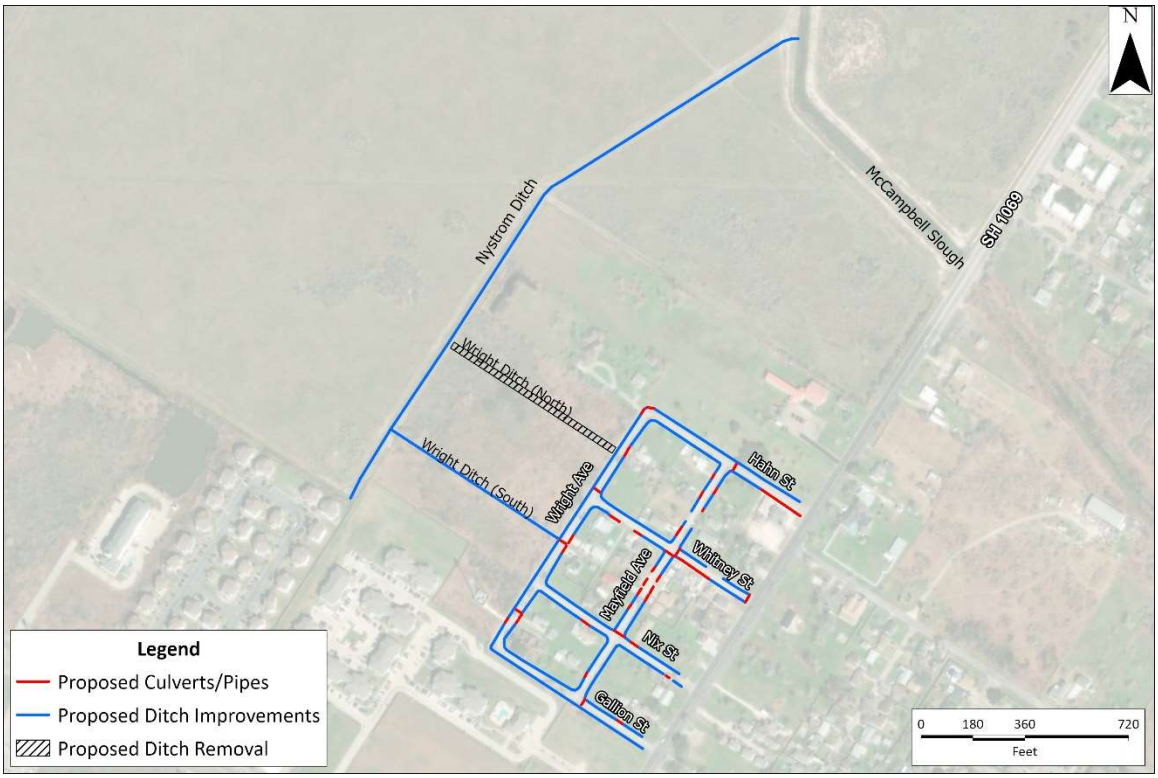


Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: The existing Nystrom Ditch will be improved, the two Wright Ditches will be combined into a single ditch, and the neighborhood roadside ditches will be improved by regrading and the addition of culverts. Proposed improvements are shown in **Figure 2-11** and in **Appendix B.5B**.

- Regrade approximately 5,595 linear feet of grass-lined roadside ditches (3-foot bottom width) and 1,460 linear feet of grass-lined roadside ditch (4-foot bottom width) throughout the neighborhood.
- Improve the outfall ditches to the west of the neighborhood by consolidating the two smaller ditches (Wright Ditch (North) and Wright Ditch (South)) into one larger ditch with sufficient capacity to drain the neighborhood.
    - The entire Wright Ditch (North) will be filled for a total of 670 linear feet.
    - Wright Ditch (South) will be lowered by approximately 2 feet and widened (10-foot bottom width) for 696 linear feet.
- Farther west, the ditch running northeast (Nystrom Ditch) will also require improvements; 2,288 linear feet of Nystrom Ditch will be lowered by approximately 2 feet and widened from a V-shaped ditch (no defined bottom width) to a bottom width of 20 feet.
- All proposed ditches will have 3H:1V side slopes.
- To move flow from the neighborhood ditches to the larger ditches, nine culverts ranging in size from 15-inches to 24-inches will be added to allow stormwater to cross the neighborhood streets into the improved ditches. Driveway culvert improvements will also be required to achieve positive drainage within the neighborhood.

Figure 2-11: Nystrom Addition Drainage Improvements - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood depth, a reduction in the inundated area, a reduction in the number of potentially inundated structures, a reduction in the length of unpassable road, and a reduction in the length of time inundation occurs. **Table 2-6** summarizes the modeling results for the Nystrom Addition neighborhood.

Table 2-6: Nystrom Addition Drainage Improvements - Summary of Results

Site 6: Nystrom Addition Drainage Improvements			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	38.1	27.9	72.2
Inundated Roadway (> 6" depth; LF)	356	297	956
Number of Potentially Inundated Structures (> 6" depth)	4	0	6
Maximum Flood Depth (ft)	0.83	0.62	1.05
Length of Time Inundated (hrs)	17.00	13.25	26.50
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	61.3	52.1	97.9
Inundated Roadway (> 6" depth; LF)	801	348	1,351
Number of Potentially Inundated Structures (> 6" depth)	6	2	8
Maximum Flood Depth (ft)	0.96	0.67	1.13
Length of Time Inundated (hrs)	22.75	21.25	31.00
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	99.2	95.1	129.7
Inundated Roadway (> 6" depth; LF)	1,520	437	1,847
Number of Potentially Inundated Structures (> 6" depth)	9	3	10
Maximum Flood Depth (ft)	1.06	0.76	1.17
Length of Time Inundated (hrs)	27.50	26.25	36.00
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	151.0	148.6	162.0
Inundated Roadway (> 6" depth; LF)	2,390	981	2,626
Number of Potentially Inundated Structures (> 6" depth)	20	6	23
Maximum Flood Depth (ft)	1.17	0.97	1.27
Length of Time Inundated (hrs)	33.00	31.75	41.25
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	177.7	175.6	184.2
Inundated Roadway (> 6" depth; LF)	3,295	2,438	3,926
Number of Potentially Inundated Structures (> 6" depth)	36	13	43
Maximum Flood Depth (ft)	1.65	1.63	1.86
Length of Time Inundated (hrs)	37.75	36.75	45.50

Project Considerations: To achieve the proposed improvements, a drainage easement for the Wright South Ditch will be required. City staff should also confirm that an appropriate drainage easement is in place for the Nystrom Ditch and that the proposed improvements can be constructed within the existing easement. Coordination with the SPCDD will be required for improvements being made at the connection of Nystrom Ditch into McCampbell Slough. Potential conflict of a natural gas line crossing the Nystrom Ditch may require further coordination between relevant parties. The locations of other utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. A USACE Nationwide Permit (NWP 7, 18, or 58) may be required for this project due to the project tie-in at McCampbell Slough and should be confirmed during final design. Phasing of this project should be considered starting with the most downstream portions of the project.

- Phase 1 – Nystrom Ditch improvements
- Phase 2 – Wright Ditch improvements
- Phase 3 – Nystrom Addition neighborhood improvements (roadside ditches and culverts)

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):
  Although this site is not directly mentioned in the CMP, the proposed improvements do help to address the community concerns noted in the CMP about flooding in residential areas.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):
  There are no site-specific actions items in the HMP near the Nystrom Addition drainage improvements. However, by increasing the capacity of drainage infrastructure in the neighborhood, the improvements support proposed action #6 for the City of Ingleside to upgrade undersized storm water drains to improve drainage, reduce flooding, and reduce flood damages to structures and infrastructure.

- 2020 Transportation Master Plan (TMP):

  The Thoroughfare Plan in the TMP identifies a proposed minor collector running generally parallel to the McCampbell Slough. It will be important to ensure that the future road does not impede any of the proposed drainage improvements. Additionally, as with other proposed drainage projects along roads, if any roadway work is needed in the areas of proposed drainage improvements, the TMP policies recommend combining it with the drainage project to the extent feasible to best use City resources.

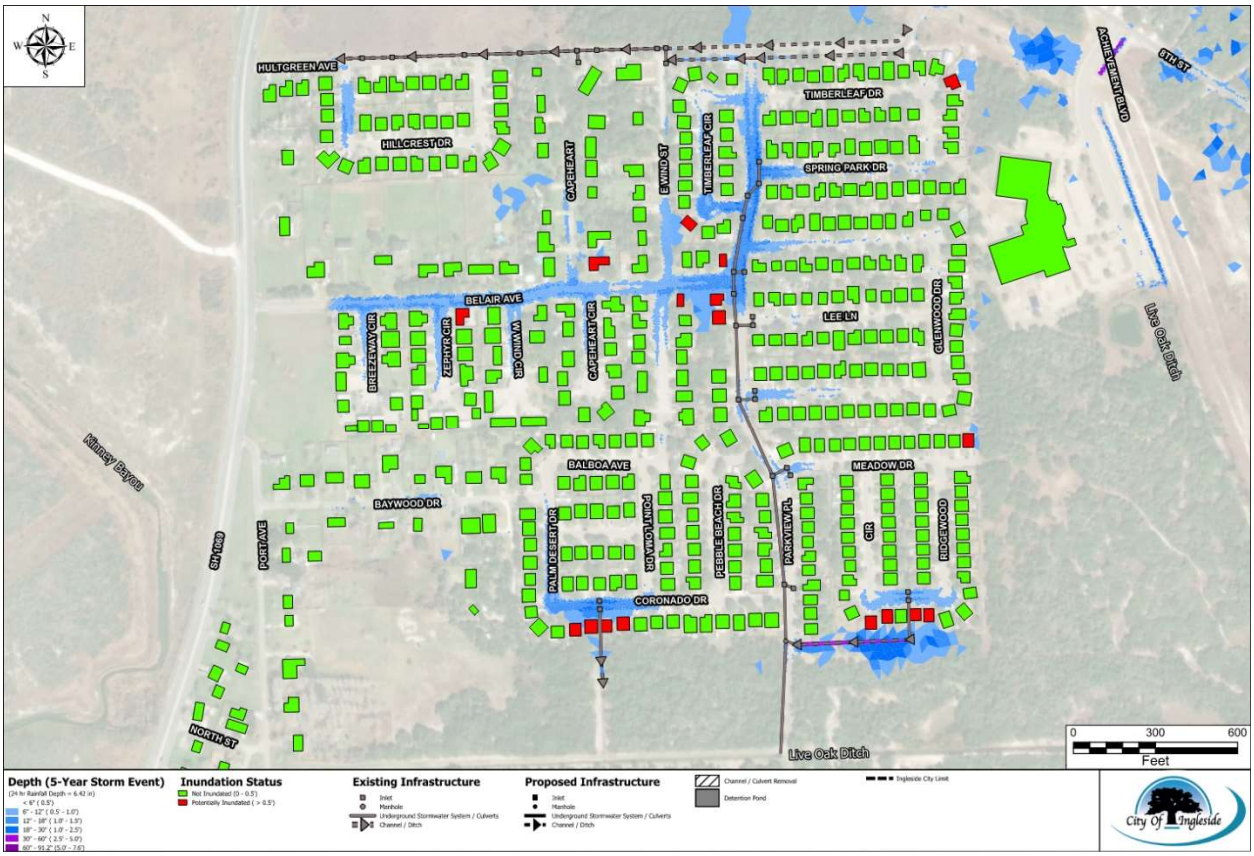
- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

  The proposed Nystrom Addition drainage improvements are not near any existing or proposed parks or recreation amenities or facilities, so there are no strong plan linkages to the PROSMP.

2.3.1.6 Site 7: Parkside Terrace Subdivision Drainage Improvements

Existing problem: Residential properties in the Parkside Terrace Subdivision are flooding during even minor storm events. Additionally, the neighborhood streets, namely Coronado Drive, Ridgewood Circle, Parkview Place, Belair Avenue, and Timberleaf Circle, experience overtopping during small storm events. The existing storm drain infrastructure does not have enough capacity to efficiently move flow south to Live Oak Ditch and more inlets are needed to capture flow. These instances of flooding can limit residents' ability to leave their homes during a flood event, pose a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. The existing inundation extents are shown in **Figure 2-12** and in **Appendix B.6A**.

Figure 2-12: Parkside Terrace Subdivision Drainage Improvements - Existing Conditions Flooding Extents



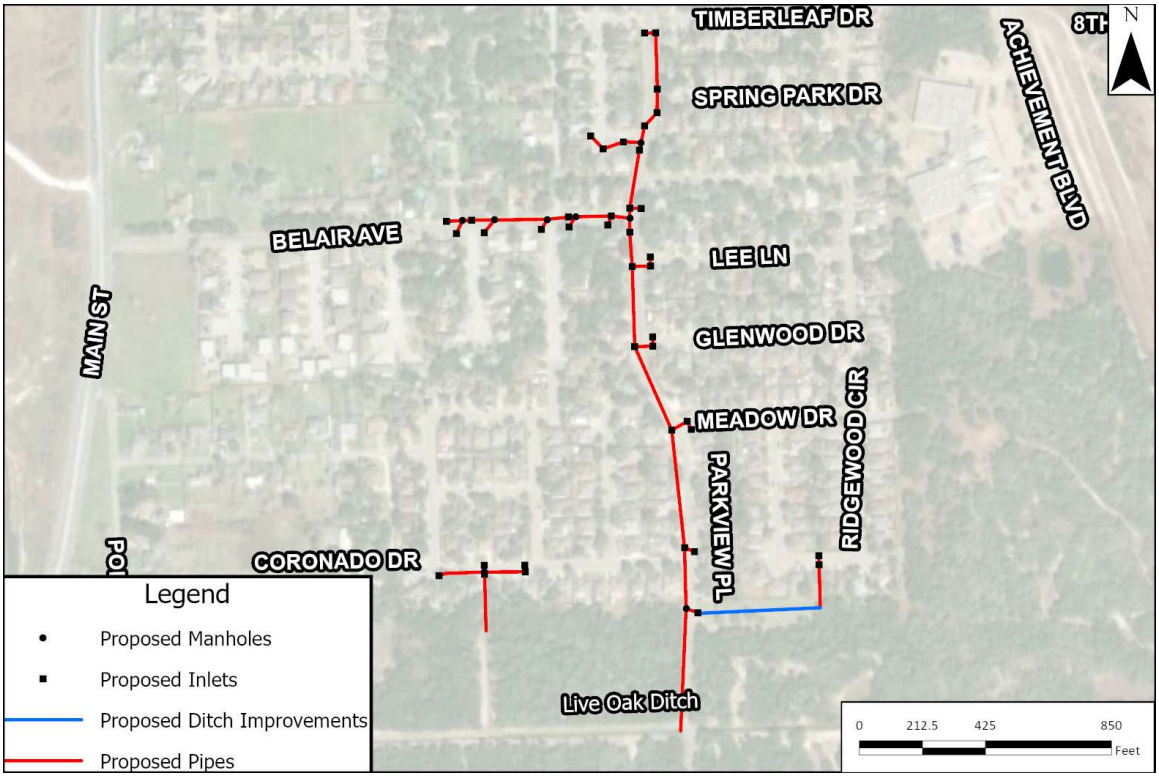
Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: Improvements in this area are already being constructed on Hultgreen Avenue and have been incorporated in the existing conditions model. Since a project has already been developed for the northern portion of the subdivision, the project developed for this DMP focused on improvements in the middle and southern portions of the subdivision. Proposed improvements include upsizing and extending the main trunk line on Parkview Place, extending lateral lines on Belair Avenue and Timberleaf Drive, and upsizing the systems on Coronado Street and Ridgewood Circle. Proposed improvements are shown in **Figure 2-13** and in **Appendix B.6B.**

- Extending the main trunk line north on Parkview Place by approximately 190 feet. The main trunk line would be upsized to 4’ x 3’ to 6’ x 3’ RCBs.
- Adding 620 feet of new 36-inch to 48-inch RCP lateral line to the west on Belair Avenue.
- Adding 190 feet of new 36-inch lateral line to the west on Timberleaf Avenue.

- New 10-ft curb inlets will be installed along each street where improvements are being made.
- Approximately 290 feet of 3.5’ x 2’ RCB would be added on Coronado Street along with upsizing the existing pipes to be 3.5 x 2’ RCB.
- The existing pipes on Ridgewood Circle would also be upsized to 3.5’ x 2’ RCB.
- Ditch improvements would be made to the ditch south of Ridgewood Circle which flows west to the stormwater system on Parkview Place. The ditch would be deepened by approximately 1.5 feet to allow more capacity for water flowing to it and give the proposed system flowing south from Ridgewood Circle a steeper slope.

Figure 2-13: Parkside Terrace Subdivision Drainage Improvements - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood depth, a reduction in the inundated area, a reduction in the number of potentially inundated structures, a reduction in the length of unpassable road, and a reduction in the length of time inundation occurs. **Table 2-7** summarizes the modeling results for the Parkview Place neighborhood.

Table 2-7: Parkside Terrace Subdivision Drainage Improvements - Summary of Results

Site 7: Parkside Terrace Subdivision Drainage Improvements			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	9.8	6.5	10.5
Inundated Roadway (> 6" depth; LF)	5,655	4,253	5,797
Number of Potentially Inundated Structures (> 6" depth)	17	4	20
Maximum Flood Depth (ft)	1.70	1.30	1.70
Length of Time Inundated (hrs)	3.25	0.93	3.30
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	12.0	8.2	12.5
Inundated Roadway (> 6" depth; LF)	6,878	5,086	6,926
Number of Potentially Inundated Structures (> 6" depth)	25	7	22
Maximum Flood Depth (ft)	1.8	1.6	1.8
Length of Time Inundated (hrs)	5.35	1.20	5.42
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	15.0	11.6	15.3
Inundated Roadway (> 6" depth; LF)	8,247	6,731	8,256
Number of Potentially Inundated Structures (> 6" depth)	32	19	32
Maximum Flood Depth (ft)	2	1.8	2
Length of Time Inundated (hrs)	8.35	2.13	8.55
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	18.7	16.3	19.7
Inundated Roadway (> 6" depth; LF)	10,014	8,877	10,049
Number of Potentially Inundated Structures (> 6" depth)	39	28	44
Maximum Flood Depth (ft)	2.1	2	2.2
Length of Time Inundated (hrs)	13.67	3.77	14.27
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	24.3	21.7	24.6
Inundated Roadway (> 6" depth; LF)	11,469	10,723	11,521
Number of Potentially Inundated Structures (> 6" depth)	58	45	57
Maximum Flood Depth (ft)	2.3	2.2	2.4
Length of Time Inundated (hrs)	15.21	6.60	16.72

Project Considerations: The Site 10 (Live Oak Ditch) proposed improvements should be implemented prior to these Site 7 (Parkside Terrace) improvements for maximum benefit of the Site 7 project. If the Site 7 project is constructed prior to the Site 10 project, a lower level of benefit will be realized until the Site 10 improvements are implemented. No drainage easements are anticipated for this project, but existing easements should be confirmed during final design to verify no additional drainage easements or ROW will be required. Existing water and wastewater lines, including wastewater force mains, may cause potential conflicts during construction. Locations of other utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. No permitting requirements are anticipated. Phasing of this project could be considered since there are three distinct pipe networks that drain the Parkside Terrace Subdivision. These could be implemented in any order.

- Phase 1 – Coronado Drive Improvements
- Phase 2 – Parkview Place Improvements
- Phase 3 – Ridgewood Circle Improvements

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP doesn't recommend any specific drainage improvements in the Parkside Terrace Subdivision but identifies drainage as a City-wide concern. The proposed Parkside Terrace Subdivision improvements will help to reduce current flooding issues within the subdivision, thus working to address the concerns identified in the CMP.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  Although there are no projects in the HMP that are specific to the Parkside Terrace Subdivision, there are multiple City-wide action items that address drainage and flooding for the entire City. The proposed improvements to the Parkside Terrace Subdivision support proposed City of Ingleside action #6 in the HMP for the City to upgrade undersized stormwater drains to improve drainage and reduce flooding.

- 2020 Transportation Master Plan (TMP):

  The recommended maintenance program in the TMP calls for pairing transportation improvements with other utility improvements. Most proposed improvements in the Parkside Terrace Subdivision run along roads. These improvements will reduce the extent of unpassable roads during flood conditions as well as help to maintain the quality of pavement by reducing the inundation time during and after storm events. If other roadway work is needed in the areas of proposed drainage improvements, it should be completed with the drainage project to the extent feasible to best use City resources.

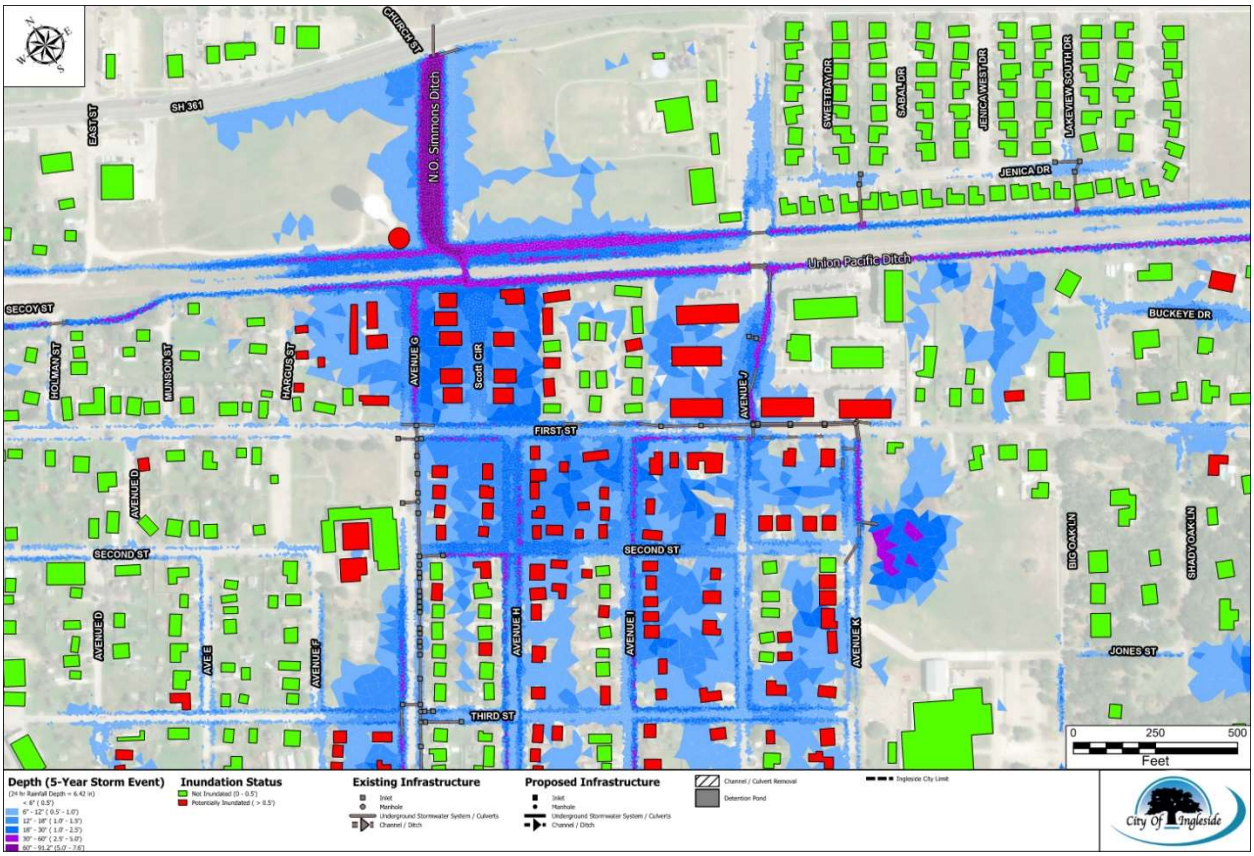
- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

  The Parkside Terrace Subdivision is located north of Live Oak Park. The PROSMP identified the sidewalks along Parkview Place as part of the citywide trail/pedestrian corridor network to provide pedestrian access to and through Live Oak Park. If feasible and sufficient right-of-way is available, the City should consider improving and/or widening the sidewalks along Parkview Place at the time of construction of the Parkside Terrace Subdivision drainage improvements to best leverage City resources and implement DMP and PROSMP recommendations during the same project.

2.3.1.7 Site 8: Villanova Place Drainage Improvements

Existing problem: Houses within the Villanova Place neighborhood are flooding heavily during small storm events. Additionally, the neighborhood streets (First Street, Second Street, Third Street, Avenue H, Avenue I, Avenue J, and Avenue K) experience overtopping during even minor storm events. Existing stormwater infrastructure throughout the neighborhood does not have enough capacity to efficiently move flow to the outfalls, and there isn't enough capacity at current neighborhood outfalls to hold the amount of water that is ponding. The neighborhood is located in an area of low topography and is inundated by stormwater overflow from the Ave G stormwater system as well as from flow which overtops Ave J. These instances of flooding can limit residents' ability to leave their homes during a flood event, poses a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. The existing inundation extents are shown in **Figure 2-14** and in **Appendix B.7A**.

Figure 2-14: Villanova Place Drainage Improvements - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event.

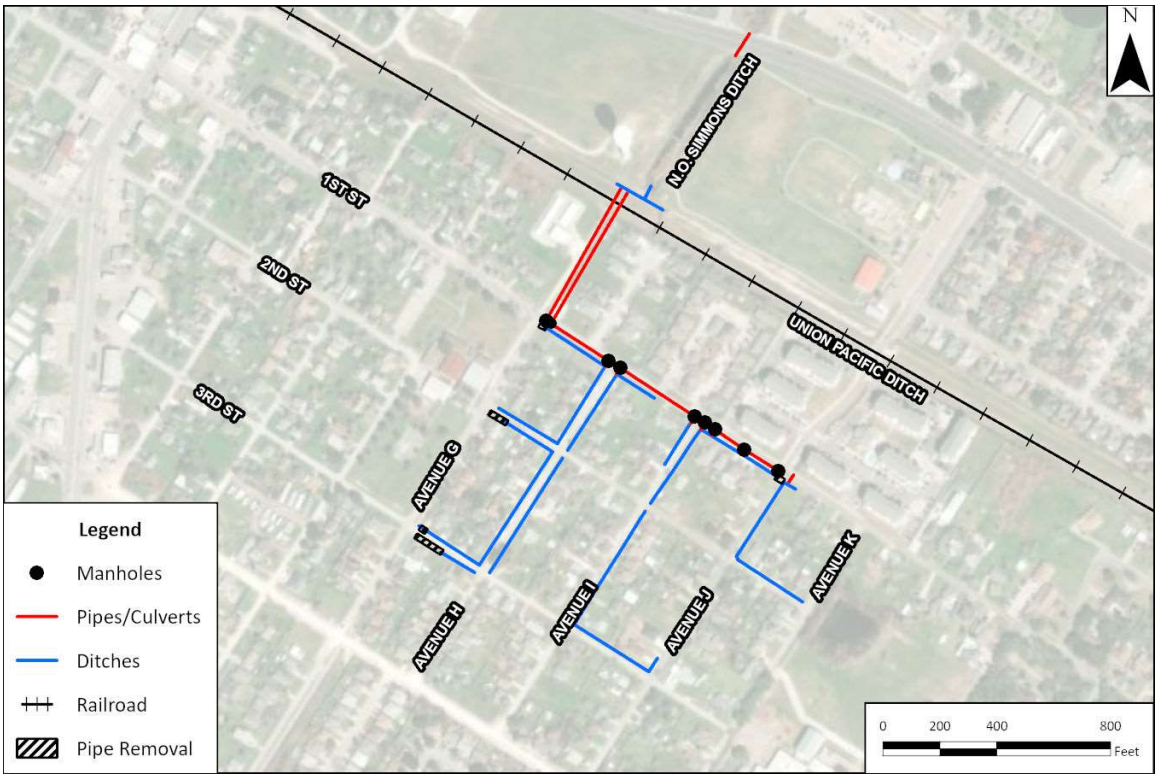
Proposed Improvements: Proposed improvements include the regrading of neighborhood ditches along Avenue H, Avenue I, Avenue J, and sections of First Street, Second Street, and Third Street along with the creation of two new outfalls north of the Union Pacific Railroad. Proposed improvements are shown in **Figure 2-15** and in **Appendix B.7B**.

- Approximately 795 linear feet of roadside ditches would be regraded on each side of Avenue H, starting at 3rd Street, and flowing north up to 1st Street.
- Avenue I will have 785 linear feet of roadside ditch regraded on the east side of the street starting at 3rd Street and flowing north to 1st Street and 175 linear feet added on the west side of the road, mid-way between 2nd and 1st Street, ending at 1st Street.
- Approximately 250 linear feet of roadside ditches will be added on the north side of 3rd Street and 140 linear feet on the south side of the road, flowing east to the ditches on Avenue H.

- Approximately 240 linear feet of roadside ditches will be added on the north side of 2nd street and 200 linear feet added on the south side of the street, flowing east to the ditches on Avenue H.
- Approximately 55 linear feet of roadside ditches on Avenue J will be regraded to flow south to connect to 310 linear feet of regraded ditch flowing west on 3rd Street, which will connect to the regraded roadside ditch on Avenue I.
- Approximately 280 linear feet of roadside ditch will be regraded to flow west on Second Street from Avenue K to Avenue J, and then flow north on Avenue J for 310 linear feet until it reaches First Street. A new 10' x 2' lateral will replace the existing 15" RCP and connect this newly regraded ditch to the existing trunkline on First Street, which outfalls into the Avenue J ditch near the Parc apartments and flows north to the Union Pacific Railroad Ditch.
- 24" RCPs will be added for street crossings and driveway culverts where necessary.
- A proposed new trunkline will be installed under First Street running west from Avenue J to avenue G, where it will turn north and run under the railroad to outfall into the north railroad ditch.
    - Seven 24" RCP laterals will connect the First Street south roadside ditches to the main trunkline between Avenue J and Avenue G.
    - The main trunkline will range in size from 7' x 2.5' RCB at the upstream end to two, 7' x 2' RCB at the downstream end.
- Roadside ditches on the south side of First Street will be regraded as follows:
    - 250 linear feet of roadside ditch will flow east from Avenue G to Avenue H to a new 24" lateral which connects to the new First Street trunkline.
    - 150 linear feet will flow west from mid-way between Avenue I and Avenue H to a new 24" lateral which connects to the new First Street trunkline.
    - 315 linear feet will flow west from Avenue J to Avenue I to new 24" laterals which connect to the new First Street trunkline.
    - 50 linear feet will flow west from the east side of Avenue J to the new 10' x 2' RCB lateral drains to the existing First Street trunkline.

- An additional proposed 6’ x 2’ RCB will be added to the existing system on Avenue G and will outfall north under the railroad into the north railroad ditch. The purpose of this proposed pipe is to provide a controlled outlet for the existing system on Avenue G to backflow when overwhelmed instead of overtopping and spilling into the neighborhood.
- Additional grading will be done at the north railroad ditch outfalls to provide lower elevations, more capacity, and a better connection to the N.O. Simmons Ditch.
- To provide some relief to the existing system on Avenue G, existing laterals will be removed to allow water to instead flow into the proposed ditches and new First Street system. Two, 24” RCPs will be removed on First Street; one, 24” RCP will be removed on Second Street; and one, 24” RCP and one, 15” RCP will be removed at Third Street.
- An existing 15” RCP will be removed from 1st Street where it connects flow from the west side of Avenue J to the east side of Avenue J. This will be removed to keep water from flowing to and overwhelming the existing system that runs north up Avenue J, and instead directs the flow into the proposed system.
- Finally, the outfall pipe that crosses under SH 361 will be upsized from four, 7’ x 3’ boxes to five, 10’ x 5’ boxes. This will allow more flow to cross under the highway instead of building up and overtopping the N.O. Simmons Dirch and the upstream systems.

Figure 2-15: Villanova Place Drainage Improvements - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include a reduction in the flood depth, a reduction in the inundated area, a reduction in the number of potentially inundated structures, a reduction in the length of unpassable road, and a reduction in the length of time inundation occurs. **Table 2-8** summarizes the modeling results for the Villanova Place neighborhood.

Table 2-8: Villanova Place Drainage Improvements - Summary of Results

Site 8: Villanova Place Drainage Improvements			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	73.3	55.6	87.1
Inundated Roadway (> 6" depth; LF)	15,150	13,458	17,611
Number of Potentially Inundated Structures (> 6" depth)	180	147	213
Maximum Flood Depth (ft)	2.40	1.70	2.60
Length of Time Inundated (hrs)	13.20	7.60	20.42
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	90.1	80.4	103.3
Inundated Roadway (> 6" depth; LF)	18,456	18,030	20,165
Number of Potentially Inundated Structures (> 6" depth)	220	207	250
Maximum Flood Depth (ft)	2.7	2.3	2.8
Length of Time Inundated (hrs)	18.72	11.37	25.57
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	115.0	103.2	120.4
Inundated Roadway (> 6" depth; LF)	22,138	22,124	22,933
Number of Potentially Inundated Structures (> 6" depth)	281	266	292
Maximum Flood Depth (ft)	3	2.9	3.1
Length of Time Inundated (hrs)	25.78	14.88	30.25
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	134.3	130.1	138.2
Inundated Roadway (> 6" depth; LF)	24,893	24,979	25,049
Number of Potentially Inundated Structures (> 6" depth)	320	326	334
Maximum Flood Depth (ft)	3.4	3.3	3.4
Length of Time Inundated (hrs)	45.75	22.78	74 .00
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	150.3	148.3	151.9
Inundated Roadway (> 6" depth; LF)	26,612	26,637	26,634
Number of Potentially Inundated Structures (> 6" depth)	351	355	361
Maximum Flood Depth (ft)	3.8	3.7	3.8
Length of Time Inundated (hrs)	46.12	29.15	76.9

Project Considerations: To achieve the proposed improvements, a drainage easement with the Union Pacific Railroad will be required. Coordination with and project approval by TxDOT for the proposed structures under SH 361 will be required to achieve the proposed project. The availability of existing ROW or drainage easements should be confirmed during final design. Existing water and wastewater lines, including a wastewater force main, may cause potential conflicts during construction. The locations of other utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. No permitting requirements are anticipated. The phasing of this project should be considered starting with the most downstream portions of the project.

- Phase 1 – Culvert Improvements Under SH 361
- Phase 2 – Avenue G and First Street Underground System Additions
- Phase 3 – Neighborhood Ditch Improvements and Culvert Removals

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):
  The CMP doesn't recommend any specific drainage improvements in the Villanova Place neighborhood but identifies drainage as a City-wide concern. The proposed Villanova Place drainage improvements will help to reduce current flooding issues within the neighborhood, thus working to address the concerns identified in the CMP.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):
  There are no site-specific actions items in the HMP near the Villanova Place neighborhood. However, by improving drainage and reducing flooding impacts in the neighborhood, the improvements support proposed City of Ingleside action #6 in the HMP for the City to upgrade undersized stormwater drains to improve drainage, reduce flooding, and reduce flood damages to structures and infrastructure.

- 2020 Transportation Master Plan (TMP):
  Much of the drainage improvements proposed in the Villanova Place neighborhood run parallel to roads. Per policy in the TMP, any road improvement projects also needed in

the areas of proposed drainage improvements should be completed at the same time to best leverage City resources.

- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

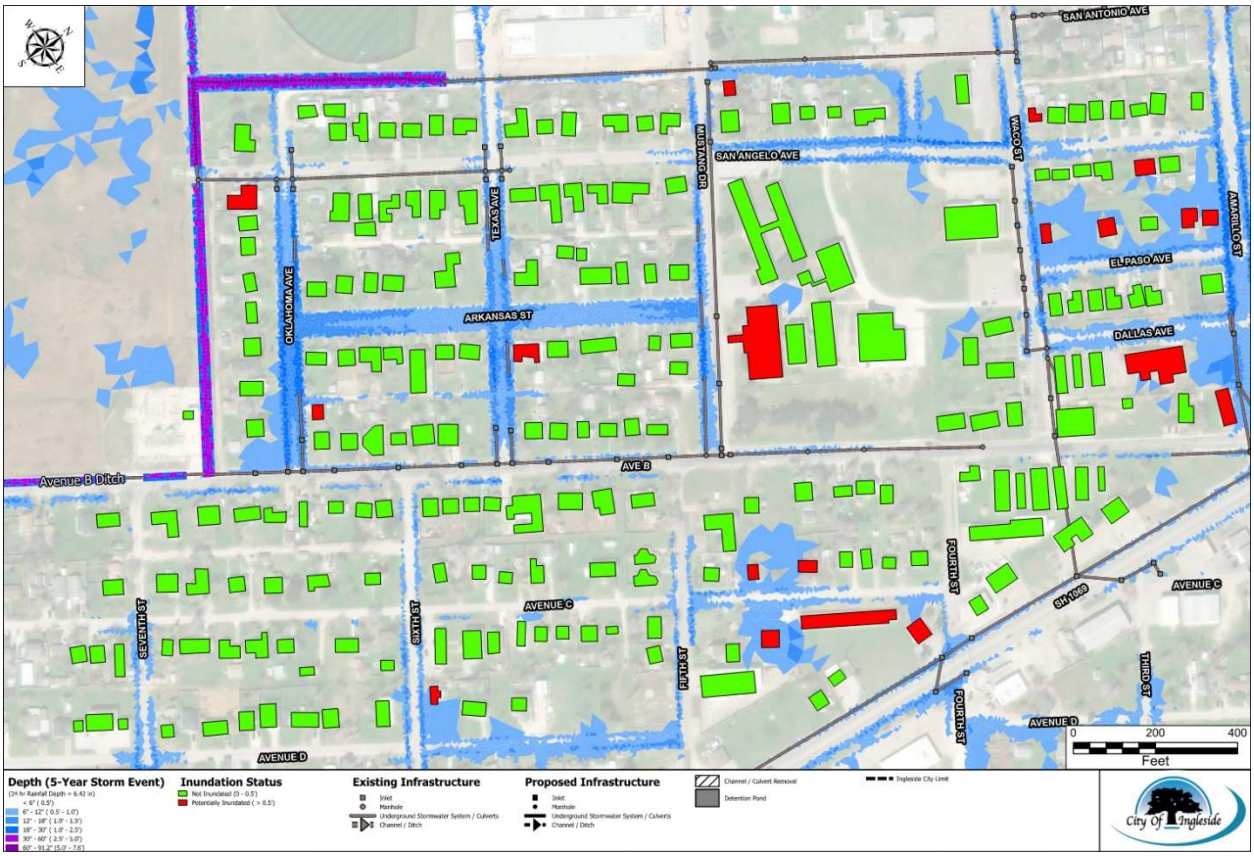
  The proposed drainage infrastructure includes new outfalls on the north side of the Union Pacific Railroad near a drainage channel. This channel is at the northwest end of one of the City's most heavily programmed parks, N.O. Simmons Park. There is also a well-used trail around the perimeter of the park. As long as the trail remains usable, there shouldn't be any concerns about the proposed drainage improvements. There are no other strong linkages to the PROSMP.

  - The PROSMP recommended updating the pedestrian bridge that crosses the N.O. Simmons Ditch. Bridge replacement should be considered as part of the drainage project.

2.3.1.8 Site 9: Humble Addition and Avenue B Drainage Improvements

Existing problem: Residential properties in the Humble Addition are experiencing inundation throughout the neighborhood and local streets. Additionally, the neighborhood streets (Oklahoma Avenue, Texas Avenue, Arkansas Street, and Waco Street) experience overtopping during even minor storm events. Existing roadside ditches throughout the neighborhood do not have enough capacity to efficiently move flow to stormwater pipes, resulting in ponding within the streets and flooding of homes. CCTV inspection of the existing pipes also showed several locations of damage or debris in the pipes which is limiting the capacity of the pipes. These instances of flooding can limit residents' ability to leave their homes during a flood event, poses a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. There are also three schools located within or adjacent to the Humble Addition neighborhood. Reducing flood extents will provide a safer route to the schools for children that live in the neighborhood, or who cross through the neighborhood to get to school. The existing inundation extents are shown in **Figure 2-16** and in **Appendix B.8A**.

Figure 2-16: Humble Addition and Avenue B Drainage Improvements - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: The main trunkline on Avenue B will be upsized, lateral lines on the side streets will be upsized and/or extended, and roadside ditches will be regraded for better connection to the Avenue B trunkline. Proposed improvements are shown in **Figure 2-17** and in **Appendix B.8B**.

- The existing trunkline along Avenue B will be removed and new pipes will be installed ranging in size from 36-inch RCP at the most upstream end to a 6' x 3' RCB at the downstream end.
- Laterals on the north side of Oklahoma Drive will be extended by 125 feet, and upsized to RCPs ranging in size from 24-inch RCP to 36-inch RCP.
- Laterals on both sides of Texas Avenue will be extended by 75 feet, and upsized to 36-inch RCPs.

- Ditches on 5th Street, 6th Street, and 7th Street will be regraded to flow west into the Avenue B trunkline, and 18-inch RCP culverts will be added crossing Avenue B to connect the ditches to the main system. The roadside ditch along the east side of Avenue B will also be regraded to these new culverts.

- Ditches will also be regraded along both sides of Oklahoma Avenue, Texas Avenue, Mustang Drive, and the north side of Waco Street. Driveway culverts will be added or upsized where necessary to provide adequate capacity for water flowing through the ditches.

    - The ditches on Oklahoma Avenue will flow northwest into an existing system on San Angelo and southeast into the Avenue B system.

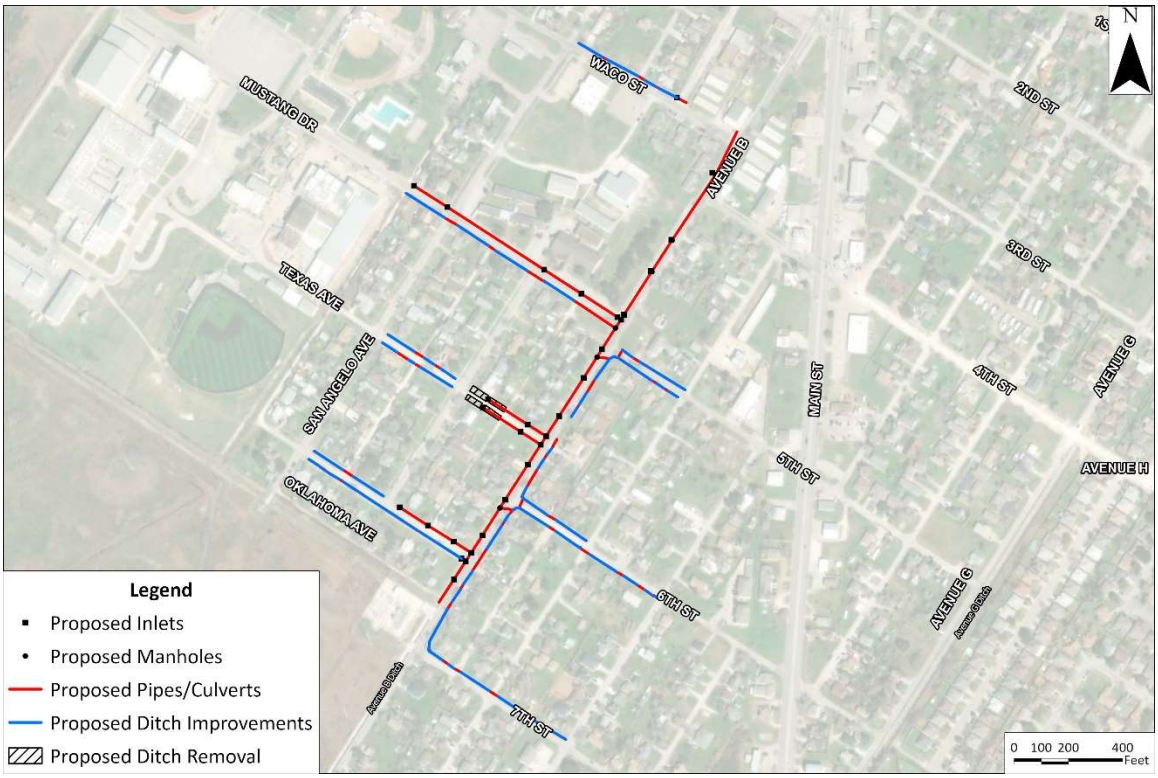
    - Texas Avenue will flow northwest into the existing system on San Angelo.

    - Mustang Drive will flow southeast into the Avenue B system.

    - The ditches on Waco Street will flow southeast to an existing underground stormwater system that runs east along Waco Street and connects to the Main Street system.

- A connection will be made from the existing Waco Street system to the new Avenue B system so water from Waco Street can flow into the Avenue B system or the Main Street system, which it is currently connected to, as system capacity is available.

Figure 2-17: Humble Addition and Avenue B Drainage Improvements - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood depth and inundated area, a reduction in the number of potentially inundated structures, a reduction in the length of unpassable road, and a small reduction in the length of time inundation occurs. **Table 2-9** summarizes the modeling results for the Humble Addition neighborhood.

Table 2-9: Humble Addition and Avenue B Drainage Improvements - Summary of Results

Site 9: Humble Addition and Avenue B Drainage Improvements			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	13.9	12.3	15.2
Inundated Roadway (> 6" depth; LF)	3,867	2,940	4,410
Number of Potentially Inundated Structures (> 6" depth)	19	16	26
Maximum Flood Depth (ft)	1.50	1.20	1.60
Length of Time Inundated (hrs)	4.95	4.32	6.65
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	18.8	17.5	20.1
Inundated Roadway (> 6" depth; LF)	5,600	5,159	6,088
Number of Potentially Inundated Structures (> 6" depth)	34	27	40
Maximum Flood Depth (ft)	1.8	1.7	1.9
Length of Time Inundated (hrs)	7.18	5.75	
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	25.5	24.7	26.3
Inundated Roadway (> 6" depth; LF)	7,458	7,248	7,759
Number of Potentially Inundated Structures (> 6" depth)	56	55	64
Maximum Flood Depth (ft)	2	1.9	2
Length of Time Inundated (hrs)	8.72	6.05	9.20
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	33.6	32.9	35.0
Inundated Roadway (> 6" depth; LF)	9,527	9,287	9,835
Number of Potentially Inundated Structures (> 6" depth)	80	80	89
Maximum Flood Depth (ft)	2.2	2.1	2.4
Length of Time Inundated (hrs)	10.15	8.38	12.78
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	44.0	43.5	46.0
Inundated Roadway (> 6" depth; LF)	11,212	11,204	11,811
Number of Potentially Inundated Structures (> 6" depth)	108	109	111
Maximum Flood Depth (ft)	2.3	2.2	2.3
Length of Time Inundated (hrs)	15.25	13.70	16.40

Project Considerations: For the proposed improvements to continue to be beneficial for the neighborhood, any future development that will outfall into the Avenue B Ditch should be required to detain stormwater on site and release it at a rate equal to or less than existing conditions. If development is allowed to occur to the future buildout conditions anticipated in the Future Land Use Plan without limiting stormwater runoff, the Avenue B Ditch becomes overburdened, and the proposed Humble Addition and Avenue B Drainage Improvements become ineffective. Existing water and wastewater lines may cause potential conflicts during construction. Locations of other utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. No permitting requirements are anticipated.

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP highlights a need for improved flood control measures and includes infrastructure policies to implement varying methods for stormwater drainage management. While there are no specific projects recommended in the CMP, the proposed Humble Addition and Avenue B drainage improvements help to implement the CMP's high-level policies and address community concern about flooding in residential areas.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  City of Ingleside action #12 in the HMP recommends implementation of Avenue B drainage project improvements to reduce the risk of flood damage to structures and infrastructure an improve emergency access to neighborhoods. The HMP notes that this project is a key component of down-stream drainage improvements for the older neighborhoods in the City and that residences in the area were blocked by high water during Hurricane Harvey. The proposed Humble Addition and Avenue B drainage improvements have strong plan linkages to the HMP.

- 2020 Transportation Master Plan (TMP):

  The TMP recommends combining street and utility projects whenever possible. All of the proposed drainage improvements in this project run parallel to roads. If any road improvement projects are also needed in the areas of proposed drainage improvements, they should be completed at the same time to best leverage City resources.

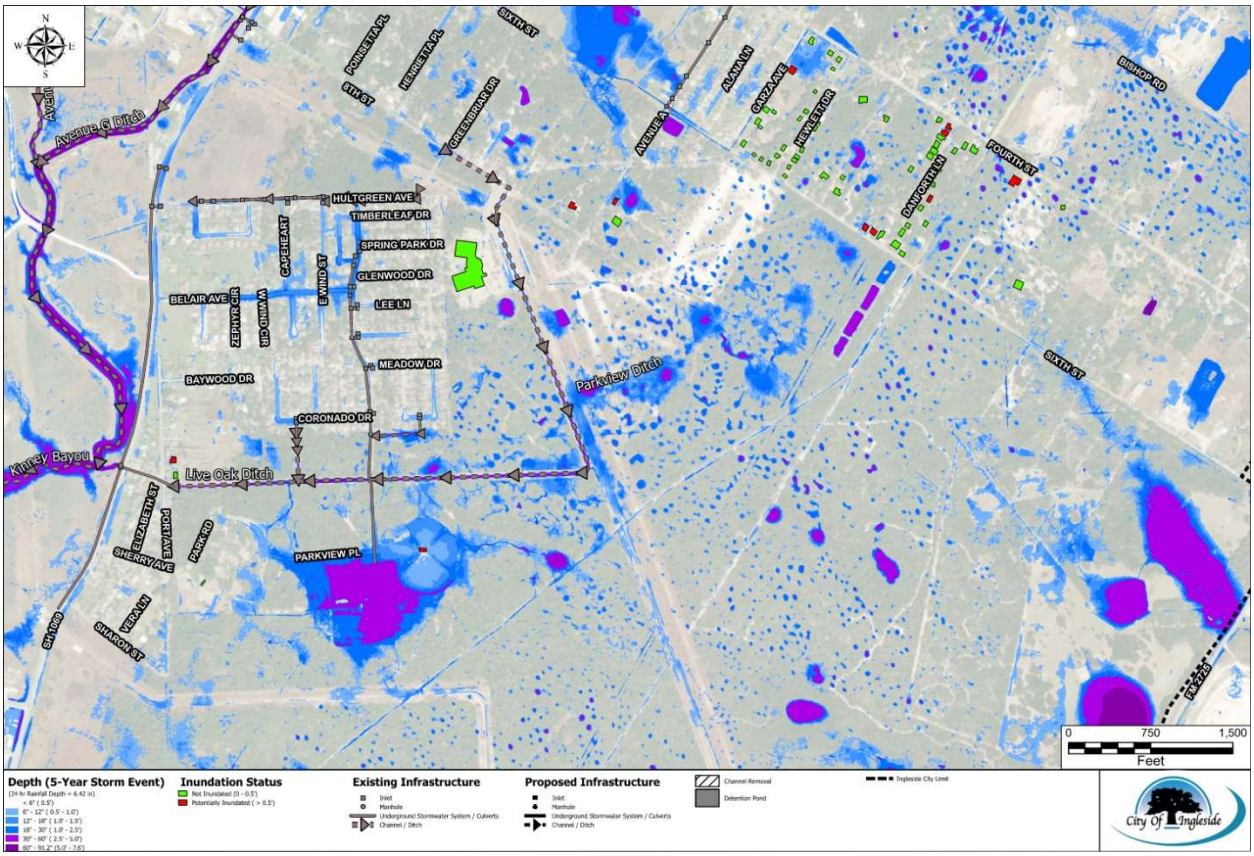
- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):

  The proposed Humble Addition and Avenue B drainage improvements are located east of Faith Park. The PROSMP identified the sidewalks along Avenue B and Mustang Drive as part of the citywide trail/pedestrian corridor network to provide pedestrian access to Faith Park. If feasible and sufficient right-of-way is available, the City should consider improving and/or widening the sidewalks along Avenue B and Mustang Drive at the time of construction of the Humble Addition and Avenue B drainage improvements. This will best leverage City resources and implement DMP and PROSMP recommendations during the same project.

2.3.1.9 Site 10: Live Oak Ditch

Existing problem: Live Oak Ditch has low points along the channel banks that are overtopped during all modeled storm events. The overtopping is mostly occurring in the ditch section upstream of Parkview Place Road. This is likely due to restricted flow through the culverts under Parkview Place and the outfall culvert into Kinney Bayou under North Street and Main Street (FM 1069). Runoff from the east of the channel is not able to enter since the culverts are restricting flow and causing water surface elevations to increase in the upstream section of the channel. Additionally, residential development is anticipated east of Achievement Boulevard, and will drain into Live Oak Ditch. Future development pressure on the existing system will increase flooding depth and extents, and result in flooding problems to existing and future homes and residents. The existing inundation extents are shown in **Figure 2-18** and in **Appendix B.9A**.

Figure 2-18: Live Oak Ditch - Existing Conditions Flooding Extents



Note: Flooding extents based on existing land use conditions and the 5-year storm event.

Proposed Improvements: Regrade and widen Live Oak Ditch, install a larger outfall structure for the Live Oak Ditch, and add a new Parkview Ditch for future development. Proposed improvements are shown in **Figure 2-19** and in **Appendix B.9B**.

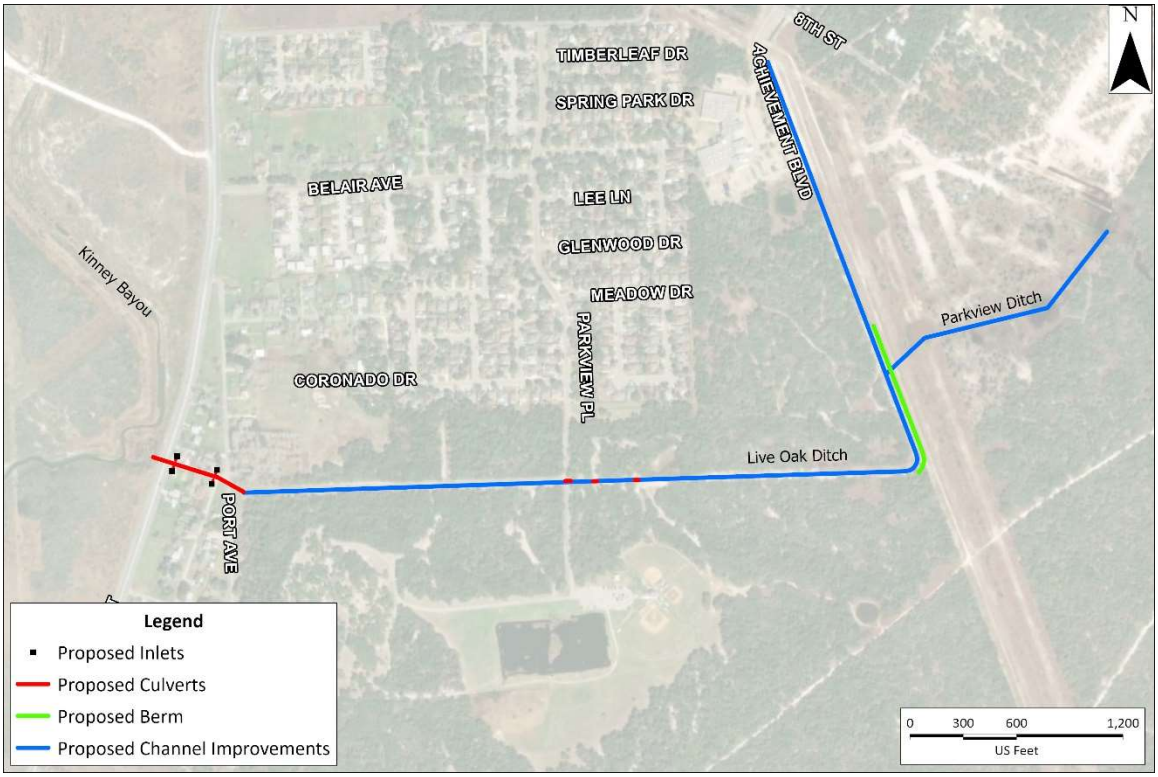
- Improve approximately 6,230 linear feet of the grass-lined Live Oak Ditch. The bottom width will be widened from approximately 15 feet to 18 feet, and the ditch will be deepened by approximately 3.5 feet in some locations. These improvements include regrading and widening the full length of the ditch and concrete lining the bend in the ditch to prevent erosion.

- Upsize all culverts within Live Oak Ditch to two 9’ x 5’ RCBs to allow the channel to flow with no impedance from the culverts.

- Install 1,106 linear feet of two new 9’ x 5’ RCB outfall structures to connect Live Oak Ditch to Kinney Bayou.

- An additional ditch, “Parkview Ditch”, is also proposed to discharge into Live Oak Ditch to support future development of nearby land. Parkview Ditch will consist of approximately 1,550 linear feet of grass-lined ditch with a 20-foot bottom width.

Figure 2-19: Live Oak Ditch - Proposed Drainage Improvements



Summary of Results: Benefits stemming from the proposed improvements include reductions in the flood depth, flood extents, and the amount of inundated time. **Table 2-10** summarizes the modeling results for the Southside Outfall area.

Table 2-10: Live Oak Ditch - Summary of Results

Site 10: Live Oak Ditch			
Criteria	**Existing Conditions (No Improvements)**	**Existing Conditions (With Improvements)**	**Future Buildout (No Improvements)**
5-yr Storm Event (6.42 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	156.2	109.1	191.3
Inundated Roadway (> 6" depth; LF)	2,803	2,378	3,579
Number of Potentially Inundated Structures (> 6" depth)	11	5	14
Maximum Flood Depth (ft)	1.56	0.90	1.81
Length of Time Inundated (hrs)	66.00	62.00	60.00
10-yr Storm Event (7.93 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	189.9	134.3	223.1
Inundated Roadway (> 6" depth; LF)	3,780	2,896	4,158
Number of Potentially Inundated Structures (> 6" depth)	13	5	16
Maximum Flood Depth (ft)	2.06	1.32	2.22
Length of Time Inundated (hrs)	72.25	68.75	66.25
25-yr Storm Event (10.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	235.9	169.8	268.1
Inundated Roadway (> 6" depth; LF)	4,673	3,833	4,880
Number of Potentially Inundated Structures (> 6" depth)	15	8	16
Maximum Flood Depth (ft)	2.52	1.88	2.64
Length of Time Inundated (hrs)	77.25	70.75	70.75
100-yr Storm Event (14.20 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	303.0	224.6	332.8
Inundated Roadway (> 6" depth; LF)	5,896	4,864	6,040
Number of Potentially Inundated Structures (> 6" depth)	19	11	21
Maximum Flood Depth (ft)	3.08	2.55	3.17
Length of Time Inundated (hrs)	82.25	71.25	77.25
500-yr Storm Event (19.80 inches/24-hrs)			
Inundated Area (> 6" depth; AC)	366.7	288.8	390.9
Inundated Roadway (> 6" depth; LF)	6,661	5,769	6,810
Number of Potentially Inundated Structures (> 6" depth)	22	13	21
Maximum Flood Depth (ft)	3.59	3.13	3.63
Length of Time Inundated (hrs)	86.25	75.25	80.25

Project Considerations: The proposed improvements to existing components (Live Oak Ditch and the culvert under North Street/Main Street) should be achieved within the existing City ROW or drainage easements. However, it should be confirmed during final design that the proposed improvements can be constructed within the existing easements. Coordination with and project approval by TxDOT will be required to achieve the proposed project. A new drainage easement will be required for construction of the Parkview Ditch. The easement can be dedicated prior to development or would need to be part of the plat requirements when development occurs. Oil, natural gas, highly volatile liquid, and wastewater pipelines may cause potential conflicts during construction. The most notable point of potential conflict is near the proposed Parkview Ditch. Locations of utilities in the area should be confirmed during the design process to ensure there are no conflicts with the proposed drainage improvements. A USACE Nationwide Permit (NWP 7, 18, or 58) may be required for this project due to the project tie-in at Kinney Bayou and should be confirmed during final design. Phasing of this project should be considered starting with the most downstream portions of the project.

- Phase 1 – North Street Culvert between Live Oak Ditch and Kinney Bayou
- Phase 2 – Live Oak Ditch Improvements
- Phase 3 – New Parkview Ditch

Planning Linkages: This section identifies potential areas of overlap and/or mutually beneficial projects recommended in this Plan and those described in the Previous Planning Efforts section at the beginning of this report.

- 2016 Comprehensive Master Plan (CMP):

  The CMP documented multiple concerns about drainage throughout the City. While there is no specific project documented in the CMP that complements or conflicts with the Live Oak Ditch, the proposed ditch improvements will help to improve drainage in the existing residential area to the north as well as the planned future residential area to the east. This proposed project will help to address some of the drainage concerns identified in the CMP.

- 2018 San Patricio County Hazard Mitigation Plan (HMP):

  The HMP recommended County-wide and Ingleside-specific mitigation actions to reduce the negative impacts of natural hazards. The proposed improvements to the Live Oak

Ditch support proposed action #7 for the City of Ingleside to undertake a comprehensive study of flood risk and implement feasible alternatives for flood reduction.

- 2020 Transportation Master Plan (TMP):
  The Thoroughfare Plan included in the TMP identifies a proposed major collector road running north-south just east of Live Oak Park. This is one of the areas that will benefit from improved drainage once the Live Oak Ditch improvements are implemented. If any further detail is known about the exact routing of that future road, it should be considered when designing this project.

- 2021 Parks, Recreation and Open Space Master Plan (PROSMP):
  The Live Oak Ditch runs through the northern part of the City's Live Oak Park, a large portion of which is in the existing inundation area during a 5-year storm event. The PROSMP included a conceptual master plan for the park with various improvements. The proposed park improvements are south of the ditch and do not conflict with the proposed ditch improvements. Instead, the Live Oak Ditch improvements will help to alleviate some park inundation during storm events and thus help to support the master plan vision. While much of the park and its proposed improvements will still be inundated during a 5-year storm event, it will be to a lesser extent.

2.3.2 Small Projects List

FNI was tasked to develop a list of "small" drainage projects that do not require hydrologic or hydraulic modeling but will improve the performance of the drainage system. These small projects are maintenance focused and can likely be completed by City staff or utilizing the City's operations and maintenance budget. The locations of potential small projects were noted during site visits, surveys, and CCTV inspections. A summary of each suggested small project is listed below, and the complete Small Projects Memorandum is included as **Appendix J**.

1. **Clear Blocked Storm Pipe on Texas Avenue**
   - Concrete debris is blocking the storm drain. Clear the debris in the pipe to improve performance of drainage system.

2. **Clear and Repair Storm Pipe on Avenue B**

    - Obstructions and collapsed/deformed pipes are blocking flow in the storm drains. Clear debris and repair failing pipe segments to improve performance of drainage system.

3. **Clean Storm Pipes, Manholes, and Safety End Treatments on Main Street**

    - The storm drains and manholes are blocked with silt and trash making them inaccessible. Clear silt and debris to improve performance of drainage system.

    - Coordinate with landscape workers and/or property owners not to leave excessive grass cuttings in ditches and pipe inlet areas to prevent buildup within drainage system.

4. **Clean out Driveway Culverts on Church Street**

    - Driveway culverts are filled with dirt and one culvert end is broken. Clear dirt in culverts and fix broken culvert end to improve performance of drainage system.

5. **Clean out Storm Drains on Avenue A**

    - Culverts are filled with leaves and dirt. Clean dirt and vegetation in culverts to improve performance of drainage system.

2.4 OPINION OF PROBABLE PROJECT COSTS

An opinion of probable project cost was developed for each CIP based on the conceptual project components. The project cost includes final design, permitting, and construction. It was assumed that each CIP would be completed as a standalone project.

All unit prices are in 2023 dollars and are based on recent bid tabulations and FNI's experience with projects with similar design, construction, permitting, and maintenance elements. The cost for maintenance is not included. A 30% construction contingency was included in each estimate due to the preliminary nature of the design as no survey, geotechnical, structural services, or locations of underground utilities and infrastructure were performed.

The requirement for land acquisition is noted for the projects where applicable. However, land acquisition costs were not accounted for during the development of CIP opinion of probable construction cost. The City is encouraged to confirm land acquisition requirements and costs prior to the final design process to ensure the required easements or rights-of-way can be obtained.

USACE permitting was incorporated into the cost estimate for each project. Based on past FNI experience and the nature of each project, it was determined whether each project might require a Nationwide

permit, an Individual permit, or no permit. Projects that were anticipated to require a Nationwide permit were assumed to require $50,000 for permitting purposes, while those that were anticipated to require an individual permit were assumed to require $100,000 for the permitting process.

Appendix D contains the preliminary opinion of probable project cost (OPPC) for each CIP, and total project costs are summarized in **Table 2-11**.

Table 2-11: OPPC Summary by Project Site

Project Name	Project Cost
Site 1: Humble Ditch Improvements	$ 10,227,900
Site 3: Kenny Lane/Whitney Lake Infrastructure	$ 2,876,083
Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane	$ 15,869,600
Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street	$ 1,019,800
Site 6: Nystrom Addition Drainage Improvements	$ 2,823,800
Site 7: Parkside Terrace Subdivision Drainage Improvements	$ 9,148,800
Site 8: Villanova Place Drainage Improvements	$ 10,075,000
Site 9: Humble Addition and Avenue B Drainage Improvements	$ 5,362,300
Site 10: Live Oak Ditch	$ 16,188,700

3 PROJECT PRIORITIZATION

A ranking system was used to assess the relative severity of the identified drainage problems using weighted criteria that are used to assign a score to each project. The CIP ranking will assist the City in establishing annual funding priorities and needs. The ranking system is an integral component of a "living" master plan document with which existing projects can be modified and future projects can be added and prioritized. The overall ranking list shown in **Appendix G** provides the City with a method for determining which projects receive priority. This ranking process is not intended to provide a prioritized list in which the City must complete in order without exception. However, it is a tool that can be used to help the City staff in annual budgeting and project implementation for their stormwater infrastructure improvements.

3.1 IDENTIFICATION OF RANKING CRITERIA

The first step in the ranking process was to develop the criteria for scoring and ranking the projects. FNI coordinated with City staff to develop the different ranking criteria. The following ranking criteria were recommended (see **Section 3.3** for additional information on each ranking criteria).

- Life and Safety
- Property Damage
- Road Level of Service
- Project Cost
- Planning Linkages

3.2 CRITERIA WEIGHTING

The second step in the ranking process was to assign weighting factors to each criterion. This was accomplished through the "pairwise" process. Pairwise comparison provides a simple, customizable, and rational framework to structure the ranking process. A pairwise comparison table was created, which allowed each criterion to be weighed against the others by determining which criterion was more important than another based on a scale of 1 to 3. A score of 3 means that one criterion is considered more important than another, a score of 2 means that the criteria are of the same importance, and a score of 1 means that the criterion is considered less important than another.

The results of the pairwise exercise are shown in **Table 3-1**. For example, when comparing Life and Safety to Property Damage, a value of 3 would mean Life and Safety is considered more important, a value of 2 would mean the two criteria are equally important, and a value of 1 would mean Life and Safety is less important than Property Damage. Once this comparison is complete for each criterion, the total score for that criterion is determined and then the "weight" of that criterion is determined by dividing the individual score for that criterion by the sum of all scores. The formula used to calculate criterion weights, as well as an example calculation for the weight of the Life and Safety criterion is represented in **Equation 3-1** and **Equation 3-2**, respectively.

Equation 3-1: Calculation of Criterion Weight

$$\boldsymbol{Weight = \frac{Individual\ Score}{Sum\ of\ all\ Scores}}$$

Equation 3-2: Example Calculation of Criterion Weight

$$\boldsymbol{Weight\ (Life\ \&\ Safety) = \frac{9}{24} = 0.38}$$

Table 3-1: Pairwise Evaluation Criteria Ranking Results

Criteria	Life and Safety	Property Damage	Road Level of Service	Planning Linkages	Project Cost	Sum	Weight
Life and Safety		3	3	3	3	12	0.30
Property Damage	1		3	3	3	10	0.25
Road Level of Service	1	1		3	3	8	0.20
Planning Linkages	1	1	1		3	6	0.15
Project Cost	1	1	1	1		4	0.10

3.3 CRITERIA SCORING

After the criteria weighting was complete, FNI collaborated with the City to develop thorough descriptions and scoring systems for each category. The goal was to establish measures that provide consistent results and that would allow future projects to be added to the Master Plan if needed. It was determined that each criterion would have a 5-point scoring range, ranging from a minimum score of 0 and a maximum score of 5. Quantifiable measures and unique scoring guidelines were developed for each criterion. The following list provides descriptions of the ranking process and the scoring ranges developed for each criterion.

3.3.1 Life and Safety

Even though roadways are commonly used to convey stormwater, the depth of the water over the roadway can pose a risk to the public. This criterion can help high risk areas rank higher on the list.

Project scoring is based on depth of flooding within the project limits, where deeper flooding depths are assigned higher points. **Table 3-2** shows the scoring point system for this category.

Table 3-2: Life and Safety Scoring

Depth of Flooding (ft)	Points
> 2	5
1.5 - 2	4
1 – 1.5	3
0.5 - 1	2
0 – 0.5	1
0	0

3.3.2 Property Damage

Property damage due to flooding can have a lasting impact on communities due to the economic hardships it can impose on families and businesses during the rebuilding process and the reduction in property values that can accompany a home being flooded.

Project scoring is based on the number of potentially inundated structures within a project extent based on modeling. For the Ingleside projects, the number of potentially inundated structures was determined based on modeling the existing land use conditions (existing buildout) with existing infrastructure remaining (no stormwater improvements). Projects that serve an area with more potentially inundated structures will score higher. **Table 3-3** shows the scoring point system for this category.

Table 3-3: Property Damage Scoring

Potentially Inundated Structures (Existing Buildout; No Improvements)	Points
> 20	5
11 - 19	4
4 - 10	3
2 - 3	2
1	1
0	0

3.3.3 Road Level of Service

During significant rainfall events, stormwater may overtop roadways or pedestrian routes creating a hazard for pedestrians, bicyclists, and motor vehicle operators. Also, the flooding of a roadway effectively removes that segment from the surface transportation system. Based on the location of such flooding, and the traffic loading of the street, serious problems may result by interrupting a driver's ability to move through the area, particularly to critical facilities (e.g., hospitals, police stations, etc.).

Project scoring is based on road classification (e.g., arterial, local, etc.), with a project's score being higher for roadways that have higher volumes of traffic. Roadway functional classifications were determined using the City's Transportation Master Plan. **Table 3-4** shows the scoring point system for this category.

Table 3-4: Road Level of Service Scoring

Road Level of Service	Points
Arterial	5
Collector	3
Local	1
No Road	0

3.3.4 Planning Linkages

If a drainage project can be incorporated into another City planned project, that achieves multiple plan goals, is efficient use of City funds, and could potentially open additional funding source opportunities. For example, a grant typically dedicated to parks development could potentially be leveraged to fund a proposed drainage project as part of the overall park project.

Project scoring is based on if the drainage project can be incorporated as part of another project identified in one of the City's master plans (Parks, Recreation and Open Space Master Plan; Transportation Master Plan; Comprehensive Plan; or San Patricio County Hazard Mitigation Plan). If there is a linkage to projects in one of the other plans, then it gets a higher score. **Table 3-5** Table shows the scoring point system for this category.

Table 3-5: Planning Linkages Scoring

Linked to a Project in Another Master Plan?	Points
Yes	5
No	0

3.3.5 Project Cost

Each stormwater capital project will vary in size of improvement, the type of project, and the overall cost. It is important for the City to be able to provide funds for each identified project, and to develop a cost-effective implementation schedule for the funding provided. This criterion can help some smaller projects rank higher on the list because lower cost projects can be accomplished with less impact to the City budget.

Project scoring is based on the estimate of total project cost, with lower-cost projects receiving the highest points. **Table 3-6** shows the scoring point system for this category.

Table 3-6: Project Cost Scoring

Project Cost ($)	Points
Project Cost < $100,000	5
$100,000 ≤ Project Cost ≤ $500,000	4
$500,000 ≤ Project Cost ≤ $1,000,000	3
$1,000,000 ≤ Project Cost ≤ $5,000,000	2
Project Cost > $5,000,000	1

3.4 PROJECT SCORING AND RANKING

Each project was scored in each of the four criteria and then multiplied by the corresponding criteria weights to develop a total score. The projects were ranked according to the total score, with 5 being the maximum possible score and 0 being the lowest possible score. In the event of a tied score between projects, the project with the higher criteria score for the highest weighted criteria was prioritized. Project scoring and ranking for all nine CIP projects are summarized in **Table 3-7** with additional details included in **Appendix G**.

Table 3-7: Project Ranking

Project Name	Project Score	Project Ranking
Site 1: Humble Ditch Improvements	2.70	6
Site 3: Kenny Lane/Whitney Lake Infrastructure	2.96	3
Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane	2.95	7
Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street	2.40	8
Site 6: Nystrom Addition Drainage Improvements	1.95	9
Site 7: Parkside Terrace Subdivision Drainage Improvements	2.71	5
Site 8: Villanova Place Drainage Improvements	2.75	4
Site 9: Humble Addition and Avenue B Drainage Improvements	3.10	2
Site 10: Live Oak Ditch	3.50	1

4 GIS DATABASE DEVELOPMENT

FNI GIS personnel developed an ESRI File Geodatabase schema for survey and field data collection of City owned assets. Assets include City stormwater-specific data to acquire detailed and accurate data of channels, roadway crossings, and hydraulic structures along the key outfalls for the studied watersheds. FNI coordinated with the City and survey field collection subconsultant to receive input on developing the GIS data schema model and define data collection attributes. Certain principles were utilized to guide the overall database design (e.g., elimination of redundant data to improve database performance). A good database design will divide data into specific subject tables, links data tables together via joins and/or relationships classes, ensures a high level of accuracy and integrity of data, and enhances data processing and project reporting.

A database should be considered a "living document" that can be altered as needed in the future as new projects arise or as the City's needs change. It should be noted that some aspects of the database may need to be revisited by City personnel. Data can be updated within the provided schema using ESRI's ArcGIS Field Maps app as well as ArcGIS PRO. The end user can download the ArcGIS Field Maps app to their preferred mobile device and link directly to an ArcGIS Online web map containing all GIS spatial data provided by the City and data collected via survey. FNI worked with City personnel to create an ArcGIS Online stormwater asset web map that can be used to collect data in real-time allowing the City to further develop their stormwater asset inventory. The use of ArcGIS Field Maps allows the end user to:

- Efficiently collect and update data in the field
- Work offline if Wi-Fi is not available
- Provide Real-Time data storage in the ESRI cloud environment
- Spatially link field photos and data to feature locations
- Support Android, iOS and Windows devices
- Easily share work with your internal and external clients, including videos and images

4.1 DATA COLLECTION

Due to the scale of the project and having subconsultants collect survey data, data management was essential. The City provided FNI with their GIS stormwater infrastructure inventory, which includes stormwater pipes and numerous stormwater features throughout the City. This dataset has been periodically updated over time to include new developments. FNI reviewed previous watershed studies,

reports, and record drawings from the City for the study area. FNI deployed surveyors into the field to collect attribute data for specific stormwater features. These attributes were, in turn, utilized by FNI engineers for hydraulic analysis and models. The City's stormwater infrastructure data was then used in the basin delineation to accurately portray the direction that runoff moves throughout the City.

Asset GIS attribute data collected by the CCTV inspector and surveyor included storm drain system features, channel cross sections, and culvert elevation data upstream and downstream. FNI obtained data for culverts, storm drain pipes, bridge type and shape, channel type and shape, stormwater pipes, inlets, curb opening, types of structures, elevations, asset shape, length and width, detailed notes, etc. FNI developed a Stormwater Structures Type Guide, which can be referenced by a data collector to ensure they are entering the correct information into the geodatabase. FNI also developed a Condition Rating Guide, which can be used by data collectors or surveyors in the field to rate the current conditions of the infrastructure. Having a guide should result in more consistent data entry between multiple input sources if all data collectors reference the guide when making their assessments. These systems can be applied to each asset inventoried within the ArcGIS database. **Appendix E** provides a summary of the Stormwater Structures Type Guide and Condition Rating Guide. The rating system was deployed with automated domains (pull-down menus) within the ESRI geodatabase so end users can easily select a rating on their mobile device in the field. Predefined pull-down domain menus reduce the risk of spelling errors within the database, as well as reduce post-office time/cost during the QC process. Once the data was collected in the field, it was published to the ESRI ArcGIS Online cloud and exported to a geodatabase that can be saved to the City local network.

5 MAINTENANCE PLAN

5.1 KEY MAINTENANCE LOCATIONS

Maintaining the City's drainage infrastructure improves the system's performance during a storm event and reduces costs by making repairs early before a system failure occurs. The following locations (see **Figure 5-1**) have been identified as priorities for maintenance to ensure proper system functionality.

- **Whitney Lake** – This regional detention pond and wetlands area is a key component of the drainage system for the northern area of Ingleside. Not only does it provide storage during various storm events, but it also provides important water quality features. It should be regularly maintained so it functions as intended.

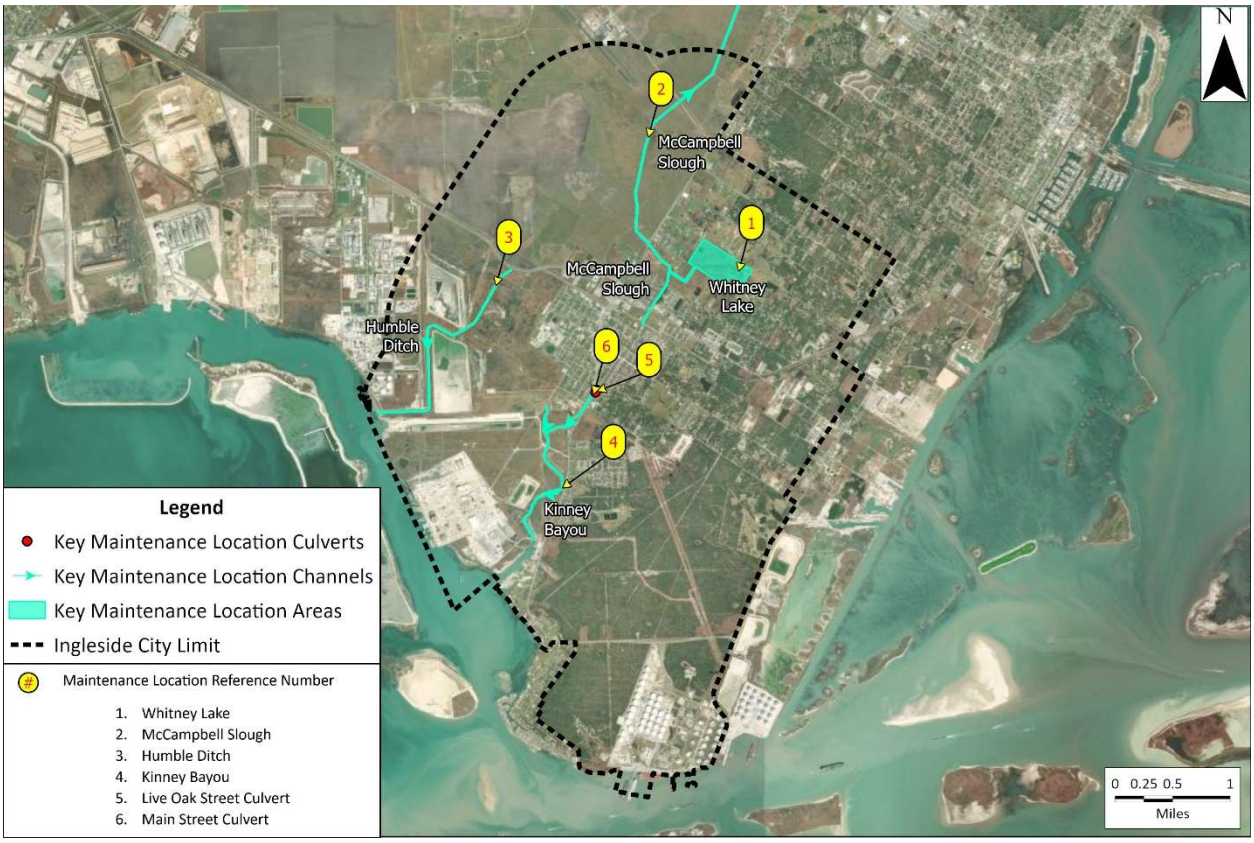
- **McCampbell Slough** – This ditch is a major component of the City's drainage system, providing drainage for a significant portion of the City located north of SH 361 as well as some areas located south of SH 361 and the railroad. McCampbell Slough should be regularly checked for erosion and the channel should be maintained so it is clear of brush and trees. Allowing vegetative growth or erosion/sedimentation in the channel reduces its capacity and reduces the efficiency of the systems draining to McCampbell Slough.

- **Humble Ditch** – Although not a major outlet for much of the existing developed area in the City, if this ditch is not maintained properly stormwater in the system will backflow into the West Main Street area and result in ponding water that takes a significant amount of time to drain off. Keeping the channel clear of brush and trees allows for the areas of the City that drain to the ditch to drain off more quickly.

- **Kinney Bayou** – This ditch is a major component of the City's drainage system, providing drainage for the majority of the City located south of SH 361. Kinney Bayou should be regularly checked for erosion and the channel should be maintained so it is clear of brush and trees. Allowing vegetative growth or erosion/sedimentation in the channel reduces its capacity and reduces the efficiency of the systems draining to Kinney Bayou.

- **Live Oak Street/Main Street Culverts** – The Avenue G Ditch crosses under Live Oak Street and then Main Street before outfalling into Kinney Bayou. These two culvert systems are a key component of the drainage system for a large portion of the City. These culverts should be regularly inspected for integrity and capacity. Any debris clogging the culverts should be removed, and any damage should be repaired to prevent further damage or degradation that would result in more costly repairs in the future.

Figure 5-1: Key Maintenance Locations



5.2 MAINTENANCE RECOMMENDATIONS

The City's plan for maintaining drainage capacity and longevity of the stormwater infrastructure should include the following components.

- Once a year provide a public informational flyer to residents either through utility billing or public broadcast that lists dos and don'ts for maintaining the City's drainage system. These include the following:
    - Remove trash and debris before major storm events.
    - Properly dispose of yard trimmings and pet waste.
    - Do not pour grease into the storm drain system.
    - Keep yard and pet waste out of the path of drainageways.
    - Report issues and damaged drainage infrastructure before it becomes a major repair.
    - Document issues for investigation or repair.

- City staff should enforce the following:
    - Proper disposal of yard trimmings by residents and businesses.
    - Proper erosion and sedimentation controls for all developments.
- Mowing/trimming vegetation twice a year to no less than 6 inches in height along all ditches/channels.
- Use aquatic herbicide to control cattails in all channels.
- Inspecting major channels/outfalls/culvert crossings after each significant storm event to assess damages, erosion, siltation/sediment, or excess drainage/ponding for blockages.
- Create a list of known areas that clog regularly to address those issues first after a rain event. Note the major issue for the persistent problem and determine a reasonable solution (e.g., grate inlet clogs with debris/grass clippings; install an alternate inlet to allow the debris to pass, such as, an area inlet).
- Establish a routine inspection schedule for drainage facilities throughout the community to ensure maintenance agreements are followed and facilities are functioning correctly. Routine inspection will encourage acceptable practices and make ordinances more effective.

6 STORMWATER CRITERIA REVIEW AND BEST MANAGEMENT PRACTICES

Stormwater criteria and regulations represent the first defense in creating an effective, high quality stormwater conveyance system. By ensuring proper design and construction, the City can be confident that stormwater challenges will not only cease to worsen, but potentially improve over time. Likewise, actions by property owners beyond the design and construction of stormwater infrastructure can drastically impact performance of Ingleside's conveyance system. Enacting and updating regulations serve to reduce the potential for negative impacts to adjacent properties and preserve the effectiveness of stormwater infrastructure. The following storm water criteria recommendations are provided for the City's consideration.

- Establish impervious cover or lot coverage standards, either within the subdivision ordinance or by district within the zoning ordinance, in order to provide firm parameters for coverage and runoff coefficients to support improved design. This would also reduce exacerbation of flooding concerns prompted by increased development intensity.

- Establish standards and practices to minimize impervious surface through efforts such as reduced street widths, incorporating sunken landscaped islands, clustering development, preservation of natural areas, reducing parking requirements, and requiring use of pervious surfaces for excess parking above minimum ratios.

- Establish regulations for illicit discharges into the municipal storm system. This regulatory approach seeks to specifically prohibit several activities, as well as erosion controls and mitigation, likely to result in increased non-point source pollutant loads in the stormwater system and that can also interfere with stormwater flow performance. Requirements for erosion and sedimentation controls reduce pollutant loads in runoff and maintain stormwater conveyance system flow capacity.

- Enforce, and adopt as needed, policies, regulations and practices to assure individual sites and development projects avoid negatively impacting adjacent property owners through poor storm drainage. Establish and update stormwater management and drainage regulations, creating a system of inspections, creation of necessary easements and establishment of maintenance entities to ensure private stormwater facilities function as designed years later as well as during construction. This should establish provisions for post-construction maintenance by the property owner in an effort to assure proper performance of stormwater conveyances. This can be coupled with third-party inspectors and reporting to the City.

- Promote regional stormwater detention as preferable to numerous, disconnected and poorly maintained on-site detention ponds and water quality facilities. Evaluate potential to establish a drainage impact fee approach for Ingleside.

- Update inspection and acceptance criteria for new stormwater infrastructure related to new development, as well as City-related projects. Require contractors to submit CCTV for storm drain projects as part of the substantial completion review in order to identify issues for contractor resolution before issuing acceptance or final payments.

- Update ordinances to require mitigation of impervious areas through green stormwater infrastructure controls and establish criteria and appropriate design technical standards. This serves to reduce pollutant loads in runoff, reduce maintenance costs to the City in maintaining and repairing the stormwater conveyance system, and preserves flow capacity and performance.

- Update regulations to limit cut and fill of a site without a development permit. This ordinance addresses the fundamental geography of Ingleside, where changes in grade of less than a foot can significantly alter runoff characteristics, direction and other attributes. By requiring all cut and fill activity to secure an appropriate permit, the City is better positioned to avoid issues of negative stormwater impacts to adjacent properties. This is commonly accomplished through zoning ordinances.

- Amend the zoning, subdivision and other relevant ordinances to require pre-construction and pre-development meetings. This provides a forum to ensure projects begin with the best of intentions with clarity of standards and expectations, resulting in a better experience for all parties.

- Update or replace the City's current flood damage prevention ordinance, enacting several provisions representing higher regulatory approaches for potential participation in the Community Rating System. The recommended changes, particularly increases to freeboard and raising finished floor elevations above the crown of the street, acknowledge the changing characteristics of flooding related to rising sea levels, higher tidal ranges and increasingly severe tropical systems. Specifically, the following enhancements are recommended:

    - Require that new construction and substantial improvement of any residential structure shall have the lowest floor (including basement) and exposed plumbing and electrical components, elevated to a minimum of 2 feet above the base flood elevation. In all cases, the lowest floor of a residential structure shall be elevated at least 2 feet above the natural grade or the crown of the road, whichever is higher.

    - Require that new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to a minimum of 2 feet above the base flood level or together with attendant utility and sanitary facilities, be designed so that the structure is watertight to a minimum of 2 feet above the base flood elevation with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

    - Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an

expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest horizontal structural member of the chassis of the manufactured home and exposed plumbing and electrical components are elevated to a minimum of 2 feet above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- Require that the lowest floor of a manufactured home that is outside of the SFHA shall be elevated 2 feet above the natural grade or the crown of the road, whichever is higher.
- Require that fill material used to elevate any structure in Zones A, A1-30, AE, AO, AH, AR, or A99, be subject to the following:
  - Fill material must be compacted to at least 95 percent of Standard Laboratory Maximum Density (Standard Proctor) according to ASTM Standard D-698;
  - Fill soils must be fine grained soils of low permeability, such as those classified as CH, CL, SC, or ML according to ASTM Standard D-2487, “Classification of Soils for Engineering Purposes.” See Table 1804.2 in the International Building Code (IBC) for descriptions of these soil types.
  - The fill material must be homogeneous and isotropic; that is, the soil must be all of one material, and the engineering properties must be the same in all directions.
- Require that for subdivisions, at least one primary entry road to a residential structure shall be elevated to or above the BFE to allow entry and exit of vehicles during a base flood event.
- Require that, in areas of shallow flooding (AO/AH zones), all new construction and substantial improvements of residential structures have the lowest floor (including basement) and exposed plumbing and electrical components elevated to a minimum of 2 feet above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least 2 feet if no depth number is specified).

- Require that, for areas outside the SFHA, the lowest floor of a nonresidential or residential structure, or manufactured home that is outside of the SFHA shall be elevated 2 feet above the natural grade or the crown of the road, whichever is higher.
- Require that, for areas outside the SFHA, if a new or substantially improved nonresidential or residential structure, or manufactured home is constructed outside the SFHA but is within 500 feet of the centerline of a known but unmapped water course (including an intermittent water course) on the community's FIRM, then it shall be elevated so that the lowest floor (including basement is a minimum of 2 feet above the highest adjacent grade.

- Consider participating in the FEMA Community Rating System (CRS) to reduce potential for flood damage and support reduced flood insurance costs for residents and businesses. Ingleside should set an initial goal to achieve CRS Class 6.
- Consider updating stormwater design to the 5-, 10-, 25- and 100-year storm events, with no adverse impacts to existing or proposed structures from the proposed installation of any development, improvement or renovation.
- Transition to and adopt a drainage criteria manual, shifting technical elements such as the defined design storm event, and establishing appropriate design standards for stormwater facilities in Ingleside. It may be possible to adopt a regional manual by reference.
- Update stormwater regulations to require the use of best available data for drainage design.
- Add regulations limiting lot-to-lot drainage and establishing standards for such instances including requirements for swales and drainage easements.
- The FEMA Hazard Mitigation Plan Status from FEMA's Mitigation Planning Portal indicates the San Patricio County Hazard Mitigation Action Plan expired on 12/4/2023, which jeopardizes access to various useful funding mechanisms to support drainage improvements and may impair efficient access to funding in the event of a declared disaster.
- Protect natural conservation areas through deed restrictions and conservation easements, especially areas that serve as buffers that can catch pollutants before they enter the bay or key drainage infrastructure, or that serve as natural stormwater management facilities like marshes. Develop maintenance agreements with developers to ensure the areas are protected and

maintained without added workload to City staff. Develop criteria to identify natural areas to conserve and identify those areas.

In addition to providing stormwater management recommendations, standard stormwater construction details were developed as part of this Drainage Maste Plan (**Appendix F**). The recommended standard details are based on standards that have been effectively used in the Coastal Bend for many years and are familiar to local contractors.

7 FUNDING ASSESSMENT

There are many funding options and opportunities the City could consider for funding stormwater projects. This section includes a funding evaluation for proposed drainage CIPs, including findings on each funding option, a project funding matrix, and an analysis of conservative and optimum scenarios for applying the various cost-sharing opportunities to the identified CIPs. The optimum scenario assumes cost-sharing from federal and state funding, while the conservative scenario assumes cost-sharing and federal and state grants will not be available as funding sources. The resulting general obligation bond repayment options required to pay back the project costs after each scenario are also included.

The following are funding mechanisms to pay for all or part of the identified drainage CIPs. An evaluation of the purpose, constraints, benefits, potential applications, and potential roadblocks is provided for each potential funding mechanism.

7.1 GENERAL OBLIGATION BONDS (GO BONDS)

7.1.1 Purpose

A general obligation bond (GO bond) is a common type of municipal bond that is secured by the local government's general operating revenues and taxing power. As a bond used to finance public projects, the issuer (i.e., the local government) owes the bond holders a debt and is obliged to pay them interest and/or to repay the principal at the maturity date. Most GO bond pledges at the local government level include a pledge to levy a property tax to meet debt service requirements. The City can issue GO bonds to finance CIPs, as they are considered long-term municipal financial solutions.

7.1.2 Constraints

Two conditions must be met before a city can issue GO bonds:

1. There must be a specific provision in the city charter that allows the issuance of bonds for the specified purpose of stormwater drainage improvements, and
2. The voters must approve the bond issuance at an election held on the issue.

Before a local government can receive a GO bond, the capital market evaluates the credit-worthiness of the government but does not specifically evaluate the technical and marketing risk of any project.

7.1.3 Benefits

Because the credit of a municipality stands behind GO bonds, they typically have high bond ratings. In other words, they have a high assessment of the likelihood the debt will be repaid, resulting in high-quality bonds that offer good protection for principal and interest payments. The reason for this high rating is the municipality's power of taxation: a city or town always has the option of raising tax rates or levying new taxes to meet its obligation to bondholders. Thus, it is rare for a municipality to default on its GO bonds. GO bonds are also paired with low interest rates because the investor risk is minimal resulting from guarantees by the city's tax-collecting capacity.

7.1.4 Potential Applications

Potential applications are wide-ranging, from landscaping to improvement of public buildings such as libraries, to drainage improvements, to street improvements. GO bonds are sold to raise funds for works that benefit the entire community and do not provide direct sources of revenue, such as roads, bridges, and parks.

7.1.5 Potential Roadblocks

There must be a specific provision in the city charter that allows the issuance of bonds for the specified purpose of drainage improvements and voters must approve the bond by election before it can be issued.

7.2 STATE AND FEDERAL GRANTS

7.2.1 Purpose

A grant is one of the ways federal and state governments fund ideas and projects to provide public services and stimulate the economy. Grants support critical recovery initiatives, innovative research, and many other programs listed in the Catalog of Federal Domestic Assistance (CFDA). Grants are provided by many state and federal agencies. Grant availability varies throughout the year and funds are awarded based on approval of an entity's application. Each grant has specific criteria that must be met. **Appendix H** offers additional information that can provide a better appreciation for the requirements and nuances of several grant funding opportunities.

A descriptive list of federal grants which can be applied to stormwater projects is provided below:

- **Building Resilient Infrastructure and Communities (BRIC); sponsored by the Federal Emergency Management Agency (FEMA)**

  The Building Resilient Infrastructure and Communities (BRIC) grant program makes federal funds available for hazard mitigation activities. It does so with a recognition of the growing hazards associated with climate change, and of the need for natural hazard risk mitigation activities that promote climate adaptation and resilience with respect to those hazards. These include both acute extreme weather events and chronic stressors which have been observed and are expected to increase in intensity and frequency in the future. Eligible activities may include building codes; project scoping and planning; projects designed to increase resilience and public safety; reduce injuries and loss of life; and reduce damage and destruction to property, critical services, facilities, and infrastructure (including natural systems) from a multitude of natural hazards, including drought, wildfire, earthquakes, extreme heat, and the effects of climate change; and eligible and reasonable indirect costs, direct administrative costs, and other administrative expenses associated with a specific mitigation measure or project. The cost share for the BRIC program is typically 75% federal and 25% non-federal. FEMA made $2.295 billion available for the Building Resilient Infrastructure and Communities (BRIC) grant program in fiscal year 2022. For the BRIC initial selections announced in May 2023, FEMA selected 325 subapplications totaling $136 million across 55 states and territories, and 34 tribes.

- **Economic Development Assistance Programs (EDAP); sponsored by the U.S. Economic Development Administration (EDA)**

  Under the EDAP Federal Funding Opportunity (FFO) announcement, EDA will make construction, non-construction, and revolving loan fund investments under the Public Works and Economic Adjustment Assistance (EAA) Programs. Grants made under these programs must support development in economically distressed areas of the United States by fostering job creation and attracting private investment. The cost-sharing amount varies.

- **Nonpoint Source Grant Program [Section 319 (h)]; sponsored by the U.S. Environmental Protection Agency (EPA)**

  The 1987 amendments to the Clean Water Act (CWA) established the Section 319 Nonpoint Source (NPS) Management Program. Under Section 319, states, territories, and Tribes receive grant money that supports a wide variety of activities including technical assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source implementation projects. In 2022, $21.2 million in grant money was awarded.

  The Texas NPS Management Program is Texas' comprehensive strategy for addressing NPS pollution. The most recent program publication was submitted to the EPA by the Governor in 2022 Annual Report. The types of projects covered by this program are watershed protection plans in priority watershed, NPS portion of Total Maximum Daily Load (TMDL) implementation plans, surface water quality monitoring, data analysis and modeling, best management practices (BMPs), and public outreach/education. Over the past two years, the State's allocation of funding has been approximately $43.2 million.

- **Emergency Watershed Protection (EWP) Program; sponsored by the Natural Resources Conservation Service (NRCS)**

  The objective of the EWP Program is to assist sponsors, landowners, and operators in implementing emergency recovery measures for runoff retardation and erosion prevention to relieve imminent hazards to life and property created by a natural disaster that causes a sudden impairment of a watershed. Financial assistance for flood protection projects is made available following a Presidential Disaster Declaration. Applicants submit requests immediately following a disaster in anticipation of future funding through disaster declaration.

This grant applies to the construction of projects that: (1) provide protection from flooding or soil erosion, (2) remove debris that would affect runoff or erosion, and (3) restore hydraulic capacity following a disaster.

- **Flood Mitigation Assistance (FMA) Grant Program; sponsored by the Federal Emergency Management Agency (FEMA)**

  The FMA program is authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FMA provides funding to states, territories, federally recognized Tribes and local communities for projects and planning that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. FMA funding is also available for management costs. Generally, local communities will sponsor applications on behalf of homeowners and then submit the applications to the state, which then submits the application to FEMA. For fiscal year 2022, FEMA announced selections of 230 subapplications totaling $711 million in FMA grant funding.

- **Flood Infrastructure Fund (FIF); sponsored by the Texas Water Development Board (TWDB)**

  The FIF program assists in the financing of drainage, flood mitigation, and flood control projects, including: planning and design activities, work to obtain necessary regulatory approvals, and construction and/or implementation of flood projects. The FIF program allows for a wide range of flood projects. Only Flood Management Evaluations (FME), Flood Mitigation Projects (FMP), and Flood Management Strategies (FMS) recommended in an amended regional flood plan approved by the TWDB are eligible for financial assistance.

  Under the FME category, Under this category, eligible applicants conduct studies to identify, assess, and quantify flood risk or identify, evaluate, and recommend flood risk reduction solutions. These studies involve planning of entire watersheds, as required by the TWDB regional flood planning program, to better inform the development of strategies using structural and nonstructural measures before a flood event. This may include determining and describing problems from or related to flooding, identifying, and planning solutions to flooding problems, and estimating the benefits and costs of these solutions.

  Under the FMP category, eligible applicants may undertake activities to construct or rehabilitate structural flood mitigation improvements or implement non-structural improvements.

FMS are flood risk reduction solution ideas and strategies that do not belong in FME or FMP categories. Examples may include regulatory enhancements, development of entity-wide buyout programs, and public outreach and education. This category may include projects that can be implemented quickly and are understood to be immediately effective in protecting life and property. Eligible FMS Category projects include warning systems, crossing barriers, gages, and public education and outreach.

The FIF program may also provide an eligible applicant's non-federal share for a federal grant program, such as the BRIC or FMA programs.

Both grants at various amounts and 0% interest rate loans are available, with the grant depending on the applicant's household income level.

In its first funding round, the TWDB committed over $513 million to 138 projects.

- **Hazard Mitigation Grant Program (HMGP); sponsored by FEMA**

  The purpose of HMGP is to help communities implement hazard mitigation measures following a Presidential Major Disaster Declaration in the areas of the state, Tribe, or territory requested by the Governor or Tribal Executive. The key purpose of this grant is to enact mitigation measures that reduce the risk of loss of life and property from future disasters. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

- **Watershed Protection and Flood Prevention Program; sponsored by NRCS**

  The Watershed and Flood Prevention Operations (WFPO) Program provides technical and financial assistance in carrying out works of improvement to protect, develop, and utilize the land and water resources in watersheds. The program provides cost sharing funds to state agencies for flood mitigation projects including floodwater dams, floodplain easements and flood-proofing of residential and commercial structures.

- **Watershed Rehabilitation Program (Rehab); sponsored by NRCS**

  Rehab helps project sponsors rehabilitate aging dams that are reaching the end of their 50-year design lives. This rehabilitation addresses critical public health and safety concerns. Since 1948, NRCS has assisted local sponsors in constructing more than 11,800 dams.

- **Water and Environmental Programs; sponsored by the United States Department of Agriculture - Rural Development (USDA-RD)**

  Under the Water and Environmental Programs, the applicable grant program is the Water & Waste Disposal Loan & Grant Program. This program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

- **Continuing Authorities Program; sponsored by the United States Army Corps of Engineers (USACE)**

  This program allows the USACE to plan, design, and construct smaller projects without specific authorization from Congress. The potential sponsor must request the USACE to investigate potential flood risk management issues that might fit the program. Once the USACE determines that the project fits the program, the District will request funds to initiate a reconnaissance effort to determine potential federal interest in proceeding to a feasibility study. There are three authorities available for this program:

  - Section 14 – Emergency Streambank and Shoreline Protection
  - Section 205 – Small Flood Risk Management Projects
  - Section 208 – Clearing and Snagging of Waterways

7.2.2 Constraints

- **BRIC:** Typically, only 75% of a project's costs are provided as the federal grant, leaving the project sponsor seeking the remaining 25%. And while the per-project cap is $50 million, the period of performance is only three years. This program is highly competitive and may result in only one or two projects funded in any given state. Lastly, all of the federal requirements apply such as Davis-Bacon Act wages, NEPA-level environmental, and requirements that almost all aspects of constructed projects have a Buy American preference (American Iron and Steel, manufactured products, and construction materials).

- **EDAP:** The maximum award amount from the EDA is $3,000,000 with a minimum award amount of $100,000. An area receiving this grant must be considered economically distressed and the

project must support the creation of new, permanent jobs. To be considered economically distressed, the applicable region must meet the following criteria:

  - A 24-month unemployment rate that is at least 1 percentage point greater than the national average
  - Per capita income that is not more than 80% of the national average
  - "Special Need," as determined by EDA and as discussed in Section C.3. of the application instructions

- **NPS Grant Program:** The NPS Grant Program is administered by the Texas Commission on Environmental Quality (TCEQ) and the Texas State Soil and Water Conservation Board (TSSWCB) for providing funding as grants to cooperating entities for activities that address the goals and objectives stated in the Texas NPS Management Program. The agencies request proposals during each grant cycle. They should stress interagency coordination, demonstrate new or innovative technologies, use comprehensive strategies that have statewide applicability, and stress public participation. They should also include a Quality Assurance Project Plan (QAPP).
  - This grant is more applicable to water quality projects, not stormwater drainage projects.

- **EWP Program:** All EWP work must reduce threats to life and property and must be economically, environmentally, and socially defensible and sound from a technical standpoint. EWP cannot solve problems that existed before the disaster or to improve the level of protection above that which existed before a disaster. It cannot fund operation and maintenance work or repair private or public transportation facilities or utilities. The work cannot adversely affect downstream water rights and fund cannot be used to install measures not essential to the reduction of hazards.
  - Sponsors must submit a formal request to the State Conservationist for assistance within 60 days of the natural disaster occurrence, or 60 days from the date when access to the sites becomes available.

- **FMA Program:** Requirements include community participation in the National Flood Insurance Program (NFIP), mitigated property insured by NFIP, a FEMA-approved hazard mitigation plan (HMAP), and that the CIP be cost-beneficial.

- **FIF Program:** The TWDB is only offering $375 million for the 2024-2025 program cycle. Also, only projects in the current Texas regional flood plans are eligible with no opportunity to advance

studies funded by the 2020 funding cycle to actual projects. Lastly, only complete projects as listed in the regional plans are eligible and phasing or partial projects are not allowed.

- **HMGP:** Requirements include community participation in NFIP, a FEMA-approved HMAP, and a cost-beneficial project. The foundational requirement, however, is the grant is only applicable following a Presidential Disaster Declaration.

- **WFPO Program:** Sponsoring local organizations can request that watershed project plans be authorized for Federal Watershed Operations funding assistance. Watershed plans involving federal contributions of more than $5,000,000 for contribution, or construction of any single structure having a capacity more than 2,500 ac-ft, require Congressional approval. Criteria for being an eligible authorized watershed project are:
    - Public sponsorship
    - Watershed projects up to 250,000 acres
    - Benefits that are directly related to agriculture, including rural communities, that are at least 20% of the total benefits of the project

- **Rehab Program:** The Rehab grant program is only applicable to the rehabilitation or decommissioning of NRCS aging dams.

- **Water & Waste Disposal Program:** Borrowers must have the legal authority to construct, operate and maintain the proposed services or facilities. Projects must also be financially sustainable. A preliminary engineering report, environmental report, and median household income are required in the application for this grant. Areas that may be served by this grant program include:
    - Rural areas and towns with fewer than 10,000 people
    - Tribal lands in rural areas
    - Colonias

- **Continuing Authorities Program**

  Section 14: The Corps of Engineers is authorized to construct bank protection works to protect endangered highways, highway bridge approaches, and other essential, important public works, such as municipal water supply systems and sewage disposal plants, churches, hospitals, schools, and non-profit public services and known cultural sites that are endangered by flood-caused bank

or shoreline erosion. Privately owned property and facilities are not eligible for protection under this authority. Each project is limited to a total federal cost of $1.5 million.

Section 205: Before the federal government can participate in implementing a flood risk management project, a planning study must be conducted to determine if the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable. Planning studies are typically conducted in two phases - reconnaissance and feasibility.

Section 208: In the interest of flood control, the Corps of Engineers can conduct clearing, snagging, or channel excavation. Limited embankment construction can be provided by utilizing the materials from the cleaning operation.

7.2.3 Benefits

- **BRIC:** Annual program with large project caps. Also, the BRIC program has been very well funded through 2026 by the Infrastructure Invest and Jobs Act. Lastly, a very broad range of projects that mitigate natural hazards are eligible.

- **EDAP**: There are no submission deadlines under this opportunity. Proposals and applications are accepted on an ongoing basis until the publication of a new EDAP FFO. Applicants may be from rural or urban areas. As previously mentioned, the cost-sharing varies, but generally, the amount of the EDA grant may not exceed 50% of the total cost of the project. Projects may receive up to an additional 30% based on the relative needs of the region in which the project will be located.

- **NPS Grant Program**: Cost sharing is 60% federal, 40% local governments.

- **EWP Program**: The NRCS may bear up to 75% (90% within limited resource areas as identified by the U.S. Census data) of the construction cost of emergency measures. Thus, the local government must cover the other 25% of the cost.

- **FMA Program**: Normally, funding is appropriated by Congress annually. For projects involving Severe Repetitive Loss Properties, the grant will cover 100% of the project. For projects involving Repetitive Loss Properties, the grant will cover 90% of the project. Finally, for projects involving NFIP insured properties, the grant will cover 75% of the project while the local government must

pay for 25% of the project. Also and like the BRIC program, the FMA program has been very well funded through 2026 by the Infrastructure Invest and Jobs Act.

- **FIF**: State program with state-level requirements, federal financial assistance requirements do not apply unless required by other cross-cutting federal laws. Also, projects that are currently listed in the regional flood plans have already been defined, scored, and ranked and therefore it is fairly certain which projects will be funded in the 2024-2025 program years. In addition, household income is considered on a project benefit area basis and therefore while Ingleside may not qualify for grant on a community-wide (city limit) basis, it may still have projects that do qualify to receive grant funding.

- **HMGP**: The benefits of HMGP include support for risk reduction activities, improvement of resiliency, elimination of the impact of future events, long-term solutions to problems, cost-effective solutions, and help to avoid repetitive damage from disasters. FEMA provides up to 75% of the funds for mitigation projects under HMGP. The remaining 25% can come from a variety of sources.

- **WFPO Program**: Cost sharing varies and availability of the grant is annually. This grant program is applicable to the Ingleside CIPs.

- **Rehab Program**: The NRCS has made $4.8 million available to Ellis and Williamson counties to complete the design and construction of four watershed rehabilitation projects through Rehab. The cost sharing allocation is 65% federal and 35% local.

- **Water & Waste Disposal Program**: Long-term, low-interest loans are available, and grants may be combined with a loan if necessary to keep user costs reasonable. However, they are only available to rural areas with a population less than 10,000 people.

- **Continuing Authorities Program**: The first $100,000 of the Planning Design Analysis phase is a federal expense. All PDA costs after the first $100,000 are cost shared 50/50. All construction costs are cost shared 65% federal and 35% non-federal. Each project is limited to a total federal cost of $1.5 million.

7.2.4 Potential Applications

- **BRIC:** Potential applications of this program include most hazard mitigation projects that are cost effective, meaning having benefits that at least equal the costs. Projects may directly relate to stormwater or protection for public facilities and roadways. Other risk reduction or resiliency activities are eligible that directly help to reduce impacts to the National Flood Insurance Program (NFIP).

- **EDAP**: Potential applications of this program are public works projects such as water and sewer system improvements, industrial parks, shipping and logistics facilities, etc.

- **NPS Grant Program**: Potential applications are limited for the CIPs in Ingleside, but may include watershed assessment, planning, implementation, demonstration and education projects with the boundaries of impaired watersheds.

- **EWP Program**: Potential applications are limited for the CIPs in Ingleside since the grant does not apply to pre-existing conditions and may only be applied immediately after a disaster has occurred.

- **FMA Program**: Potential applications include acquisition for demolition or relocation, structure elevation or reconstruction, dry flood-proofing, minor localized flood reduction projects, HMAP (flood hazard only) development or update.

- **FIF Program**: Potential applicants may include planning phase activities such as preliminary engineering, project design, feasibility assessments, coordination and development of regional projects, obtaining regulatory approvals, and hydraulic and hydrologic studies; construction/rehabilitation phase activities such as drainage infrastructure (e.g., channels, ditches, ponds, pipes, etc.), flood control infrastructure, flood mitigation infrastructure, retention basins, detention ponds, sustainable infrastructure, nonstructural flood mitigation, development of or amendments to flood related codes, permeable pavement, erosion control, levees, pump stations, rehabilitation of existing infrastructure taking into consideration methods of improving resiliency (not including costs associated with current or future operations and maintenance activities), property acquisitions determined to be the best solution for highest-risk properties, restoration of riparian corridors, floodplains, coastal areas, and wetlands, natural erosion and

runoff control; and other projects such as flood early warning systems, stream gauges, educational campaigns, and crossing barriers.

- **HMGP**: Potential applications are limited for the CIPs in Ingleside since the grant does not apply to pre-existing conditions and may only be applied immediately after a disaster has occurred.
- **WFPO Program**: Potential applications include flood damage mitigation through dams, easements, and flood-proofing, agricultural/rural water supply projects, water quality projects, water conservation projects, groundwater recharge projects, public fish and wildlife habitat conservation, and public water-based recreation projects.
- **Rehab Program**: The main application for this grant is to the rehabilitation or decommissioning of NRCS dams.
- **Water & Waste Disposal Program**: Applications of this grant are toward the design and construction of water, sanitary sewer, stormwater and solid waste facilities. However, the area's population must be fewer than 10,000 people.
- **Continuing Authorities Program**: Potential applications include flood risk management, ecosystem restoration, erosion control, streambank restoration, and multipurpose projects.

7.2.5 Potential Roadblocks

- **BRIC:** In the BRIC program, these could include projects that are not cost effective where the costs outweigh the benefits, projects that don't adequately reduce risk or do not provide resiliency, do not address climate change, do not provide benefits to communities, or areas of communities, that typically do not see investments in infrastructure, or have not garnered support of the affected community and have not leveraged community partnerships.
- **EDAP**: The City of Ingleside is unlikely to be considered an "economically distressed area," and is thus unlikely to receive this grant.
- **NPS Grant Program**: The grant cycle has defined open periods. It will be important to apply when the new cycle has started. The City of Ingleside may not be within the boundaries of an impaired watershed.
- **EWP Program**: Potential roadblocks exist due to the program requirements since the grant does

not apply to pre-existing conditions and may only be applied immediately after a disaster has occurred.

- **FMA Program**: The FMA program is a competitive grant program and FEMA chooses the applicants to be funded based on the applicant's ranking of the project and the eligibility and cost-effectiveness of the project. The application deadline is typically in October.

- **FIF Program**: Even if it is determined that the City has high-priority stormwater projects, if these same projects are not in a regional flood plan, they are not eligible for FIF funding. Also, Ingleside must gain the support of other communities if its project(s) extend outside of the City's limits. This can sometime be difficult, contentious, or even impossible. Lastly, many times communities struggle to provide the additional funding needed to complete a project when 100% grant is not offered or in the case of 0% interest rate loans, may not currently have the debt service capacity to repay even a 30-year loan.

- **HMGP**: Potential roadblocks exist due to the program requirements since the grant does not apply to pre-existing conditions and may only be applied immediately after a disaster has occurred.

- **WFPO Program**: The watershed area must not exceed 250,000 acres, the capacity of a single structure is limited to 25,000 acre-ft of total capacity, and 12,500 acre-ft of floodwater detention capacity. The watershed meets this criterion, but the CIPs must also meet the latter two requirements.

- **Rehab Program**: If none of the City of Ingleside's proposed CIPs include the decommissioning or rehabilitation of an aging dam, then this grant does not apply.

- **Water & Waste Disposal Program**: This program is primarily for water and wastewater infrastructure and may be limited for stormwater projects.

- **Continuing Authorities Program**: Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The USACE would oversee project construction; however, once constructed, the operation and maintenance of the project would be the responsibility of the project sponsor.

7.3 4B SALES TAX FUND

7.3.1 Purpose

The use of the sales tax for economic development purposes has been one of the most popular and effective tools used by cities to promote economic development. Since the authorization for the local option tax took effect in 1989, more than 586 cities have levied an economic development sales tax. These cities have cumulatively raised more than $573 million annually in additional sales tax revenue dedicated to the promotion of local economic development. Of these cities, 101 have adopted a Type A economic development sales tax, 367 cities have adopted a Type B economic development sales tax, and 118 cities have adopted both a Type A and a Type B sales tax.

7.3.2 Constraints

There are several important differences between Type A and Type B sales taxes for economic development. Type A and Type B taxes can be distinguished on the following grounds: 1) the authorized use of the tax proceeds; 2) the oversight procedure regarding project expenditures; and 3) the means for adopting and altering the tax by election.

The Type B tax also can be used to fund the provision of land, buildings, equipment, facilities, expenditures, targeted infrastructure and improvements that are for the creation or retention of primary jobs for projects such as manufacturing and industrial facilities, research and development facilities, military facilities, including closed or realigned military bases, transportation facilities, sewage or solid waste disposal facilities, recycling facilities, air or water pollution control facilities, distribution centers, small warehouse facilities, primary job training facilities for use by institutions of higher education, regional or national corporate headquarters facilities, eligible job training classes, certain career centers and certain infrastructural improvements that promote or develop new or expanded business enterprises. However, unlike the Type A tax, the Type B tax can additionally fund projects that are typically considered to be community development initiatives. For example, authorized categories under Type B include, among other items, land, buildings, equipment, facilities, expenditures, and improvements for professional and amateur sports facilities, park facilities and events, entertainment and tourist facilities, and affordable housing. Also, the Type B tax may be expended for the development of water supply facilities or water conservation programs.

If the city is eligible to adopt a Type B tax, it may propose a tax rate equal to one-eighth, one-fourth, three-eighths or one-half of one percent. The city may not adopt a sales tax rate that would result in a combined rate of all local sales taxes that would exceed two percent.

7.3.3 Benefits

Every Texas city is eligible to adopt a Type B sales tax if the combined local sales tax rate does not exceed two percent.

7.3.4 Potential Applications

Type B corporations may provide land, buildings, equipment, facilities and improvements found by the board of directors to promote or develop new or expanded business enterprises that create or retain primary jobs, including a project to provide:

- Transportation facilities (including but not limited to airports, hangars, airport maintenance and repair facilities, air cargo facilities, related infrastructure located on or adjacent to an airport facility, ports, mass commuting facilities and parking facilities)
- Sewage or solid waste disposal facilities
- Air or water pollution control facilities
- Facilities for furnishing water to the public
- Public safety facilities
- Streets and roads
- Drainage and related improvements
- Demolition of existing structures
- General municipally owned improvements
- Any improvements or facilities that are related to any of those projects and any other projects that the board in its discretion determines promoted or develops new or expanded business enterprises that create or retain primary jobs.

7.3.5 Potential Roadblocks

- Any drainage improvements would have to be approved by the Type B corporation board.

7.4 ESTABLISHMENT OF SPECIAL DISTRICTS

A special district is a political subdivision established to provide a single public service (such as water supply or sanitation) within a specific geographic area.

- **Public Improvement District (PID)**

  A PID is a special assessment area created at the request of the property owners in the district. These owners pay a supplemental assessment with their taxes, which the PID uses for services above and beyond existing City services. A PID may be formed to perform any of the following improvements:

  - Water, wastewater, health and sanitation, or drainage improvements
  - Street and sidewalk improvements
  - Mass transit improvements
  - Parking improvements
  - Library improvements

- **Water Control and Improvement District (WCID)**

  A WCID is a political subdivision of the state of Texas, and is empowered to purchase, construct, operate, and maintain everything necessary to provide water, wastewater, and drainage services. Through "general law," a district may be created by the TCEQ or the county commissioners court. WCIDs have broad authority to supply and store water for domestic, commercial, and industrial use; to operate sanitary wastewater systems; and to provide irrigation, drainage, and water quality services.

- **Municipal Utility District (MUD)**

  A MUD is a special-purpose district that provides public utilities (such as electricity, natural gas, sewage treatment, waste collection/management, wholesale telecommunications, water) to district residents. MUDs engage in the supply of water, conservation, irrigation, drainage, firefighting, solid waste (garbage) collection and disposal (including recycling activities), wastewater (sewage) treatment, and recreational facilities. A MUD can require its customers to use its solid waste services as a condition for receiving other MUD services. A MUD may provide solid waste and recycling services through a private company. While they

can develop, maintain, or acquire parks or recreational facilities, MUDs are prohibited from issuing bonds to pay for these facilities. They can, however, set and charge user fees.

- **Drainage District (DD)**

  Most DDs (or drainage improvement districts, DID) are administered by an internal drainage board (IDB), which are single purpose local drainage authorities, dealing with the drainage and water level management of clean water only. Each DD has a defined area, and the IDB only has powers to deal with matters affecting that area. An example of an established DD in Texas is the City of Garland. They established a DD to assist residential and commercial property owners who are experiencing property damage due to erosion from creeks or other bodies of water within the City.

- **Local Improvement District (LID)**

  An LID is a method by which a group of property owners can share in the cost of transportation infrastructure improvements or other types of public improvements such as installing water and sanitary sewer lines. Most LIDs involve improving a street, building sidewalks, and installing a stormwater management system. An LID can also be used to install sidewalks on existing streets that previously have been accepted for maintenance by the City. When property owners decide they want to form a LID, they assume responsibility to pay for the project if the project is approved by City Council. The City works with property owners to determine the scope of the project and develops an assessment methodology. A variety of methods are used, including square footage, linear footage or equivalent dwelling unit. Sometimes a combination of these methods is used, but square footage is most commonly used for projects in residential areas.

- **Flood Control District (FCD)**

  The role of the FCD is to reduce flood risk and conserve stormwater runoff while improving water quality, providing recreation opportunities, and enhancing open space where feasible. For example, the Harris County FCD roles include widening and deepening bayous to carry more stormwater and reduce the size of floodplains, excavating stormwater detention basins to safely store millions of gallons of stormwater, implementing voluntary home buyouts, and maintaining drainage infrastructure by addressing erosion, slope failure, and sediment build-

up. FCDs are generally capital improvement programs that address flooding from a regional perspective.

- **Tax Increment Reinvestment Zone (TIRZ)**

  A TIRZ is a political subdivision of a municipality or county in Texas created to implement tax increment financing. They may be initiated by the city or county or by petition of owners whose total holdings in the zone consist of a majority of the appraised property value. To get funding for a TIRZ area, applicants should follow three steps.

  - Property owners possessing 50% or more of the appraised value of a district submit a petition to the county, city, or town requesting a TIRZ be set up, or the local government may decide to create one. A specific lifetime for the TIRZ is determined. A TIRZ may only be city-initiated if less than 10% of its land area consists of residential area.
  - For the purposes of existing tax-collecting entities (water districts, counties, etc.) the assessed values of properties within the new TIRZ are frozen. It is assumed that property values will increase over the lifetime of the TIRZ; the property taxes collected on this increase constitute the "increment".
  - The municipality or county passes an ordinance establishing a governing board for the TIRZ and the zone as a legal entity itself. The board then meets to create a budget for the lifetime of the zone, establishing what projects it will undertake and how they will be financed. This plan is passed as another ordinance.

- **Municipal Development District (MDD)**

  An MDD is created to generate economic development and growth opportunities within the boundaries of the district. To create an MDD, a city must call an election through an order that defines the proposed boundaries of the district. The ballot at this election must be printed to allow voting for or against the proposition. In the order calling the election, the city may provide that the district boundaries will automatically conform to future changes in the city's boundaries. If the voters turn down the creation of the district, a subsequent election to establish a district may not be held within a year of the first election. The MDD is funded through a local sales tax. State law permits a tax rate of one-eighth to one-half of one percent.

- **Sales Tax Reallocation Election (HB 157)**

  Texas law allows cities to hold an election to reallocate sales tax revenue. Cities may hold elections to adopt sales taxes (general revenue or dedicated) in any increment of one-eighth of one percent, so long as the total city sales tax does not exceed the maximum two-percent local sales tax cap. In other words, cities now have increased flexibility to reallocate city sales taxes in a way that makes sense to the city and its residents. The election can be initiated at the discretion of the city council or by a petition signed by 20 percent of the number of voters who cast ballots in the most recent regular municipal elections.

7.5 STORMWATER UTILITY FEE

The state of Texas provides municipalities the opportunity to establish a stormwater utility, which is a legal mechanism used to generate revenue to finance the city's cost to provide and manage stormwater services in the city. The Texas Municipal Drainage Utility Systems Act [Local Government Code 552 Subchapter C] authorizes cities in Texas to establish a municipal stormwater utility system to "protect the public health and safety in municipalities from loss of life and property caused by surface water overflows, surface water stagnation, and pollution arising from non-point source runoff within the boundaries of the established service area…" [LGC 552.042(3)]. To provide these services, municipalities are authorized to assess fees to users of the stormwater utility system.

The stormwater utility fee is a service fee and must be based on the projected cost of providing stormwater service within the city's jurisdiction. Some stormwater-related costs that are allowed by state law [LGC 552.044(2)] to be included in the development of the projected revenue needs for stormwater service include the following:

- Property acquisition
- Service fees (architectural, engineering, legal, surveys, etc.)
- Capital (equipment, machinery, furniture, facilities, etc.)
- Funding and finance costs for construction projects
- Debt service
- Administration

When developing the fee rate for users, classification of affected properties must be nondiscriminatory, equitable, and reasonable. Specific requirements and allowances to exempt certain property owners and property types, respectively, are established in the law. The statute [LGC 552.053(c)] and recent amendments [LGC 580.003] specifically restrict the city from assessing the stormwater utility fee on certain types of property:

- Property with proper construction and maintenance of a wholly sufficient and privately-owned drainage system [LGC 552.053(c)(1)]
- Property held and maintained in its natural state, until such time that the property is developed and all the public infrastructure constructed has been accepted by the municipality in which the property is located for maintenance [LGC 552.053(c)(2)]
- A subdivided lot, until a structure has been built on the lot and a certificate of occupancy has been issued by the municipality in which the property is located [LGC 552.053(c)(3)]
- A State agency or public institution of higher education [LGC 580.003]

The city is also provided the opportunity to exempt certain properties from the stormwater utility fee without regard to the properties' impacts to the storm system. The following property is allowed by law [LGC 552.053(a), (b), and (d)] to be exempted from the stormwater utility fee:

- County property
- City property
- School district property
- Property owned by a tax-exempt religious institution
- Closed cemetery

7.6 GENERAL FUND

A general fund is a financial term referring to a nonprofit entity's financial pool of resources. This term traditionally refers to a fund used by a government or university, because for-profit businesses use a general ledger to monitor finances. From a general fund, all operating expenses, services and employee payrolls are provided. The money for this fund comes from several sources, depending on the institution. The bulk of a governmental fund is drawn from taxes. No matter if it is a state, local or national government, taxpayers are primarily the people helping fund services and operation. Beyond taxes, a

government makes other income from having a surplus from the previous fund, from interest on investments and from charging fees, such as entry fees into parks.

7.7 CERTIFICATES OF OBLIGATION (CO BONDS)

COs were initially authorized by Texas' Certificate of Obligation Act of 1971. Cities, counties and health or hospital districts can use them to fund the construction, demolition, or restoration of structures; purchase materials, supplies, equipment, machinery, buildings, land and rights-of-way; and pay for related professional services. COs are issued for terms of up to 40 years and usually are supported by property taxes or other local revenues.

COs often are associated with emergency spending, but their use isn't restricted to such purposes. They can be used to fund public works as part of standard local government operations.

Commissioners courts, city councils and health or hospital district boards opting to issue COs must post a description of the projects to be financed in local newspapers at least twice, first more than 30 days before the governing body's vote on the CO issuance and again a week after the initial posting. These postings must describe the general purpose and amount of the debt to be issued, name the method of repayment, and list the time and place of the governing body's vote.

COs do not require voter approval unless 5 percent of qualified voters within the jurisdiction petition for an election on the spending in question.

COs provide local governments with important flexibility when they need to finance projects quickly, as with reconstruction after a disaster or as a response to a court decision requiring capital spending. But the way COs circumvent voter approval has made them controversial in the past, leading to 2015 legislation restricting their use.

7.8 COMMUNITY DEVELOPMENT CORPORATION (CDC)

Community Development Corporations (CDCs) are nonprofit, community-based organizations focused on revitalizing the areas in which they are located, typically low-income, underserved neighborhoods that have experienced significant disinvestment. While they are most commonly celebrated for developing affordable housing, they are usually involved in a range of initiatives critical to community health such as economic development, sanitation, streetscaping, and neighborhood planning projects, and oftentimes even provide education and social services to neighborhood residents.

CDCs play a critical role in building community wealth for a few key reasons:

- They anchor capital in communities by developing residential and commercial property, ranging from affordable housing to shopping centers and even businesses.
- At least one-third of a CDC's board is typically composed of community residents, allowing for the possibility of direct, grass-roots participation in decision-making.
- CDCs' work to enhance community conditions oftentimes involves neighborhood organizing, a process critical for empowering residents and gaining political power.

A Community Development Corporation, often referred to as a 4B corporation for its enabling legislation, uses a half of a cent of the municipality's sales tax to fund a defined array of public improvements including buildings, equipment, programs and parks, as well as the promotion and development of business enterprises.

7.9 TEXAS CAPITAL FUND INFRASTRUCTURE PROGRAM (EDA/TEDC)

TEDC, or Texas Economic Development Council, is an Austin-based, statewide, non-profit professional association dedicated to the development of economic and employment opportunities in Texas. The Texas Capital Fund Infrastructure Program provides grants for infrastructure development to create or retain permanent jobs in primarily rural communities and counties. The money can be used for a variety of public infrastructure improvements. The program is only available to "non-entitlement" city or county governments. Non-entitlement cities/counties do not receive direct funding from HUD (U.S. Department of Housing and Urban Development) and typically include cities with a population of less than 50,000 and counties of less than 200,000. There are over 1,200 eligible cities and counties in the state. The award floor is $50,000 and the award ceiling is $1,500,000.

7.10 CLEAN WATER STATE REVOLVING LOAN FUND (EPA/TWDB)

The Clean Water State Revolving Fund (CWSRF) program is a federal-state partnership that provides communities a permanent, independent source of low-cost financing for a wide range of water quality infrastructure projects. Using a combination of federal and state funds, state CWSRF programs provide loans to eligible recipients to:

- Construct municipal wastewater facilities
- Control nonpoint sources of pollution

- Manage, reduce, or treat stormwater,
- Create green infrastructure projects
- Protect estuaries
- Fund other water quality projects

Under the CWSRF, EPA provides grants to all 50 states plus Puerto Rico to capitalize state CWSRF loan programs. The states contribute an additional 20 percent to match the federal grants. The 51 CWSRF programs function like environmental infrastructure banks by providing low interest loans to eligible recipients for water infrastructure projects. As money is paid back into the state's revolving loan fund, the state makes new loans to other recipients for high priority, water quality activities. Repayments of loan principal and interest earnings are recycled back into individual state CWSRF programs to finance new projects that allow the funds to "revolve" at the state level over time.

States are responsible for the operation of their CWSRF program. Under the CWSRF, states may provide various types of assistance, including loans, refinancing, purchasing, or guaranteeing local debt and environmental needs . As with the BRIC and FMA federal grant programs, the CWSRF has been well funded by the Infrastructure Investment and Jobs Act for the federal fiscal years 2022-2026.

7.11 PROJECT FUNDING MATRIX

Based on the researched funding mechanisms and known project scopes, FNI created the funding matrix shown in **Table 7-1**. The purpose of the funding matrix is to show the relevant funding options for each of the ranked projects identified by FNI. Although many funding options were researched only the relevant funding options are shown in **Table 7-1**. Using the associated cost for each CIP, the following two funding scenarios were analyzed:

- Conservative Projection; no external cost sharing
- Grant-Assisted Projection; maximum external cost sharing

For the conservative funding scenario, it is assumed that none of the projects will benefit from cost sharing. Under this scenario the full financial burden of addressing the CIPs falls on the City. The projects would have to be paid for through the General Fund, GO Bonds, a Stormwater Utility Fee, or the 4B sales tax corporation. As a result, the total cost to the City is $73,591,983.

For the grant-assisted funding scenario, it is assumed that the projects will benefit from the highest amount of cost sharing with state and federal agencies. Certain federal and state grant programs place limits on the amount of funds that can be awarded to each applicant. For example, FMA and BRIC programs do not award more than $50 million to a project. The Continuing Authorities Program (CAP) is limited to $1.5 million in federal share per project. Keeping these limits in mind, the federal and state grants were used strategically for each project to reduce the total cost to the City. As a result, the total cost to the City is $25,757,194, assuming the maximum City share is 35%.

Table 7-1: CIP Funding Matrix

Rank	Project ID	Project	Funding Options						Total Project Cost	Max Grant-Assisted Project Cost to City
			GO Bonds	Stormwater Utility Fee	4B Sales Tax	Federal/State Grants[1]				
						FMA[2]	BRIC[3]	CAP[4]		
7	Site 1	Humble Ditch Improvements	Applies	Applies	Applies	75/25	75/25	65/35	$10,227,900	$3,579,765
3	Site 3	Kenny Lane/Whitney Lake Infrastructure	Applies	Applies	Applies	75/25	75/25	65/35	$2,876,083	$1,006,629
4	Site 4	SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane	Applies	Applies	Applies	75/25	75/25	65/35	$15,869,600	$5,554,360
8	Site 5	Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street	Applies	Applies	Applies	75/25	75/25	65/35	$1,019,800	$356,930
9	Site 6	Nystrom Addition Drainage Improvements	Applies	Applies	Applies	75/25	75/25	65/35	$2,823,800	$988,330
6	Site 7	Parkside Terrace Subdivision Drainage Improvements	Applies	Applies	Applies	75/25	75/25	65/35	$9,148,800	$3,202,080
5	Site 8	Villanova Place Drainage Improvements	Applies	Applies	Applies	75/25	75/25	65/35	$10,075,000	$3,526,250
2	Site 9	Humble Addition and Avenue B Drainage Improvements	Applies	Applies	Applies	75/25	75/25	65/35	$5,362,300	$1,876,805
1	Site 10	Live Oak Ditch	Applies	Applies	Applies	75/25	75/25	65/35	$16,188,700	$5,666,045
								Total	**$73,591,983**	**$25,757,194**

1 *Only relevant grants for the listed projects are shown. The listed ratios are federal contribution/local contribution.*

2 *Higher levels of grant are possible for projects that address RL & SRL properties. $50 million per project cap. Period of performance is 36 months from date of award.*

3 *$50 million per project cap. Period of performance is 36 months from date of award.*

4 *The first $100,000 of the Planning Design Analysis phase is a federal expense. All PDA costs after the first $100,000 are cost-shared 50/50. All construction costs are cost-shared 65/35. Each project is limited to a total Federal cost of $10 million.*

As is seen in **Table 7-1**, cost sharing with federal agencies can be very beneficial for the City and may result in up to 75% savings. However, even under the optimum scenario shown above, the City would still need to cover about $25.8 million in costs for the 9 listed projects. These will likely need to be paid by the 4B sales tax, general fund, and/or a stormwater utility fee.

Regardless of the local funding mechanism used, general obligation bonds would need to be issued for the remaining project cost to the City**. Table 7-2** and **Table 7-3** show the resulting bond repayment options required to pay back the project costs.

Table 7-2: Conservative Scenario Debt Service

Bond Amount	$73,591,983	$73,591,983	$73,591,983	$73,591,983	$73,591,983
Interest Rate[1]	5.0%				
Repayment Period	10	15	20	25	30
Est. Annual Payment Required	$9,530,498	$7,090,020	$5,905,211	$5,221,532	$4,787,264

[1]*Assumed interest rate by FNI*

Table 7-3: Optimized Grant-Assisted Scenario Debt Service

Bond Amount	$25,757,194	$25,757,194	$25,757,194	$25,757,194	$25,757,194
Interest Rate[1]	5.0%				
Repayment Period	10	15	20	25	30
Est. Annual Payment Required	$3,335,674	$2,481,507	$2,066,824	$1,827,536	$1,675,542

[1]*Assumed interest rate by FNI*

7.12 CONCLUSION

FNI recommends that cost sharing with state and federal agencies be pursued strategically to maximize the amount of cost sharing across all the projects. The optimum scenario presented in **Table 7-1** can result in up to 75% cost savings to the City. Additional cost savings can be realized through the use of low-interest SRF loans through the TWDB. Any remaining costs will need to be paid for locally through issuing GO bonds. These GO bonds will then need to be paid back through the use of 4B sales tax, general fund, and/or a stormwater utility fee.

APPENDIX A
CITY OF INGLESIDE DRAINAGE AREA MAP AND EXISTING DRAINAGE CHANNELS MAP



FREESE AND NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401
(P) 361-561-6500

Drainage Area Map

Ingleside, Texas

FN JOB NO	ING21605
FILE	KB_Task4_ModelingStrategy
DATE	2/17/2023
SCALE	1:60,000
DRAFTED	08215

EXHIBIT 1



FREESE AND NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401
(P) 361-561-6500

Existing Drainage Channels Map

Ingleside, Texas

FN JOB NO	ING21605
FILE	KB_Task4_ModelingStrategy
DATE	1/11/2024
SCALE	1:38,400
DRAFTED	08215

EXHIBIT 2

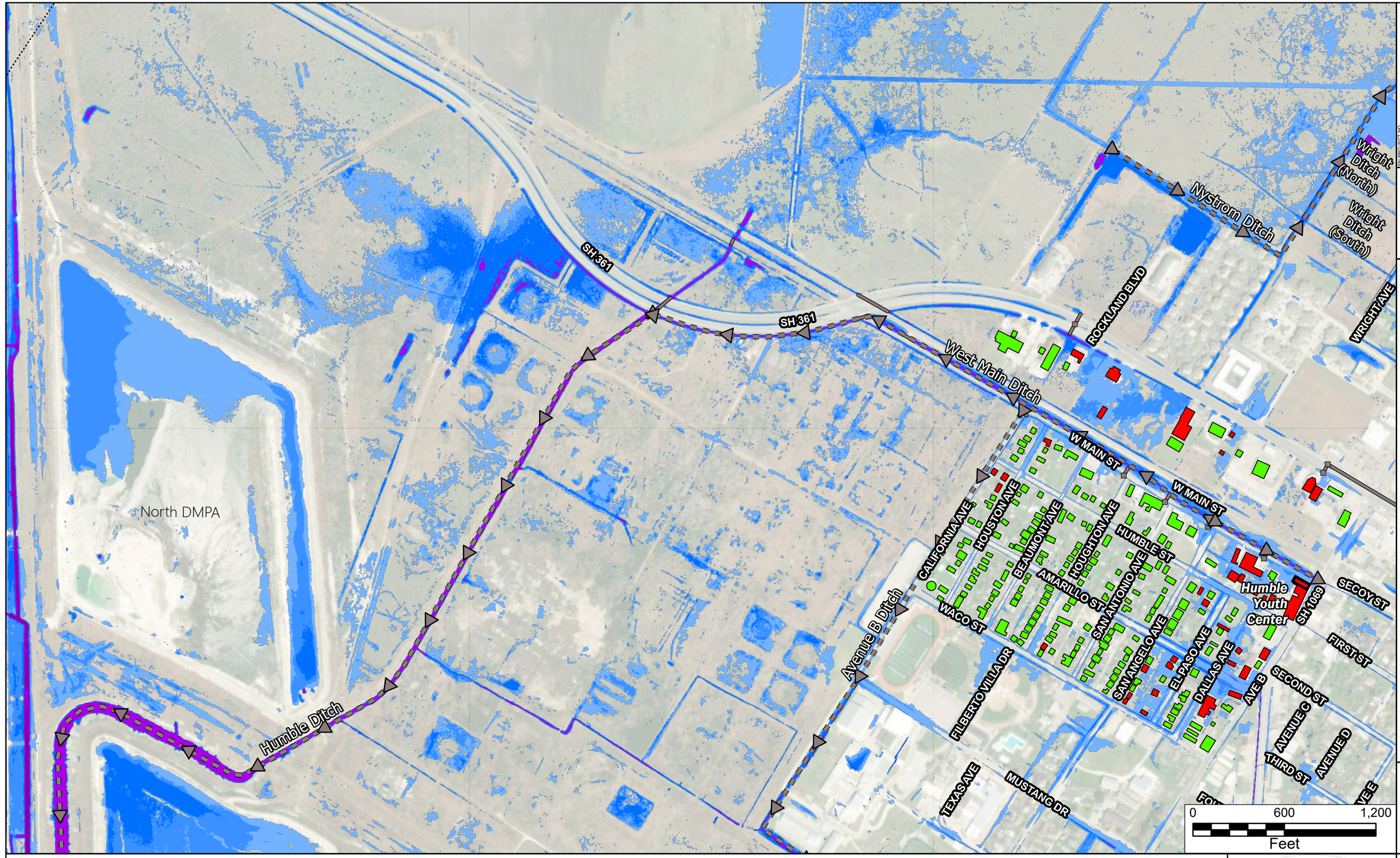
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APPENDIX B
INUNDATION MAPS

SITE 1: HUMBLE DITCH IMPROVEMENTS

EXISTING CONDITIONS INUNDATION MAP

FNI PROJECT NO.	ING21605
DATE CREATED	Date: 2/28/2024
DATUM & COORDINATE SYSTEM	NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME	Name: Ingleside2
PREPARED BY	EME



Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

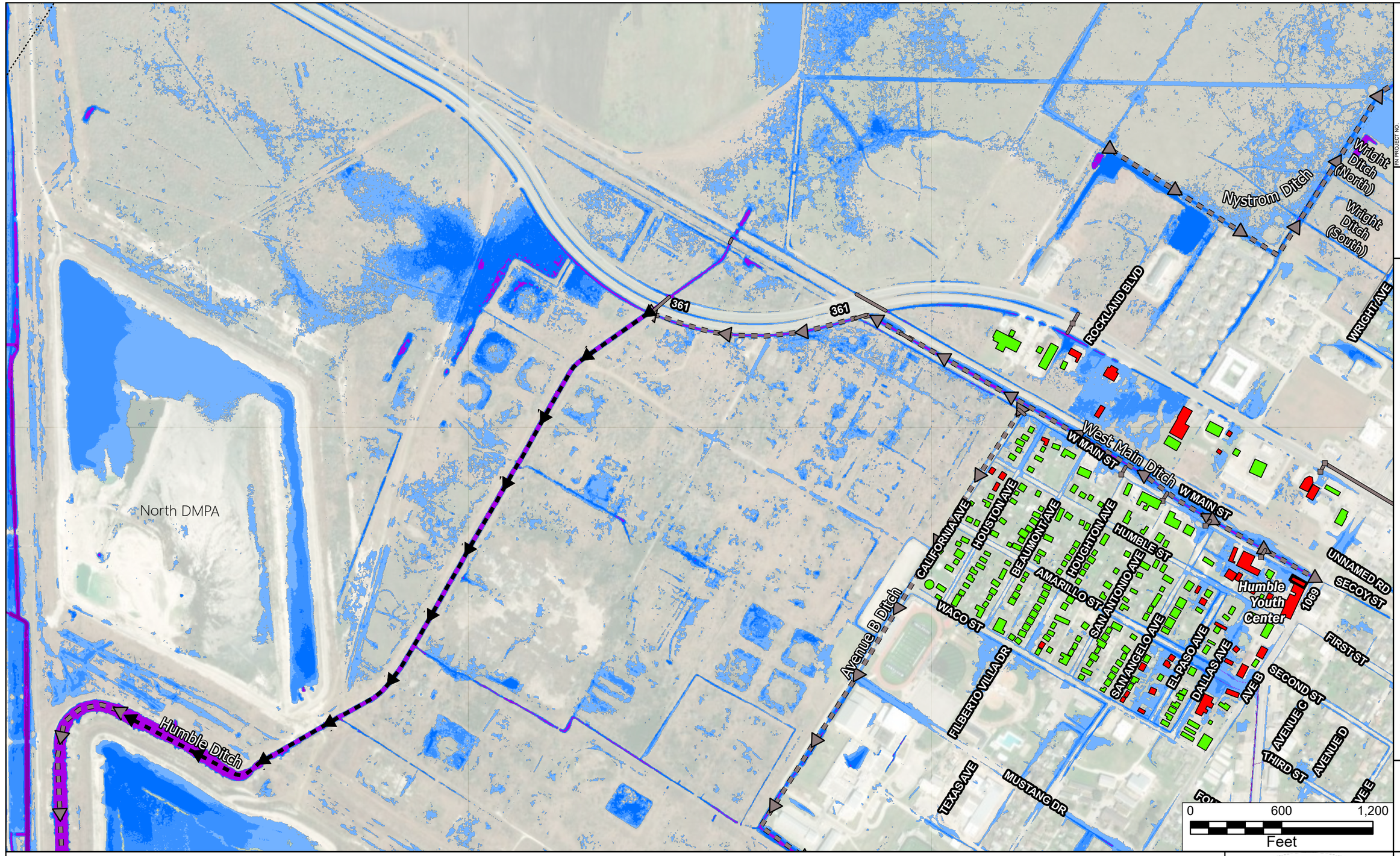
FIGURE

1A

SITE 1: HUMBLE DITCH IMPROVEMENT'S

PROPOSED IMPROVEMENTS INUNDATION MAP

FNI PROJECT NO.	ING21605
DATE CREATED	Date: 2/28/2024
DATUM & COORDINATE SYSTEM	NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME	Name: Ingleside2
PREPARED BY	EME



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- 60" - 91.2" (5.0' - 7.6')

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- Manhole
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- Channel / Ditch

Proposed Infrastructure
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- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE

1B

MORGAN LN

AVENUE A

Whitney Lake Ditch

KENNEY LN

Whitney Lake Marsh
Wildife
Refuge

0 300 600
Feet

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
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- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

N W E S

SITE 3: KENNY LANE/WHITNEY LAKE

EXISTING CONDITIONS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
2A

Date Saved: 2/28/2024 10:40 AM

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MORGAN LN

AVENUE A

Whitney Lake Ditch

KENNEY LN

Whitney Lake Marsh
Wildife
Refuge

0 300 600
Feet

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
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- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

PROPOSED IMPROVEMENTS INUNDATION MAP

SITE 3: KENNY LANE/WHITNEY LAKE

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
2B

Nystrom Ditch

McCampbell Slough

SH 1069

REBECCA ST

SUSAN CIR

MCCULLOUGH LN

KENNEY LN

MORGAN LN

MOONEY LN

0 300 600

Feet

N

W E

S

FN PROJECT NO. ING21605

DATE CREATED Date: 3/1/2024

DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

FILE NAME Name: Ingleside2

PREPARED BY EME

SITE 4: SH 1069 DRAINAGE IMPROVEMENTS MCCAMPBELL SLOUGH TO MOONEY LANE

EXISTING CONDITIONS INUNDATION MAP

Depth (5-Year Storm Event)

(24 hr Rainfall Depth = 6.42 in)

- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
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Existing Infrastructure

- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure

- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel Removal
- Detention Pond
- Ingleside City Limit

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

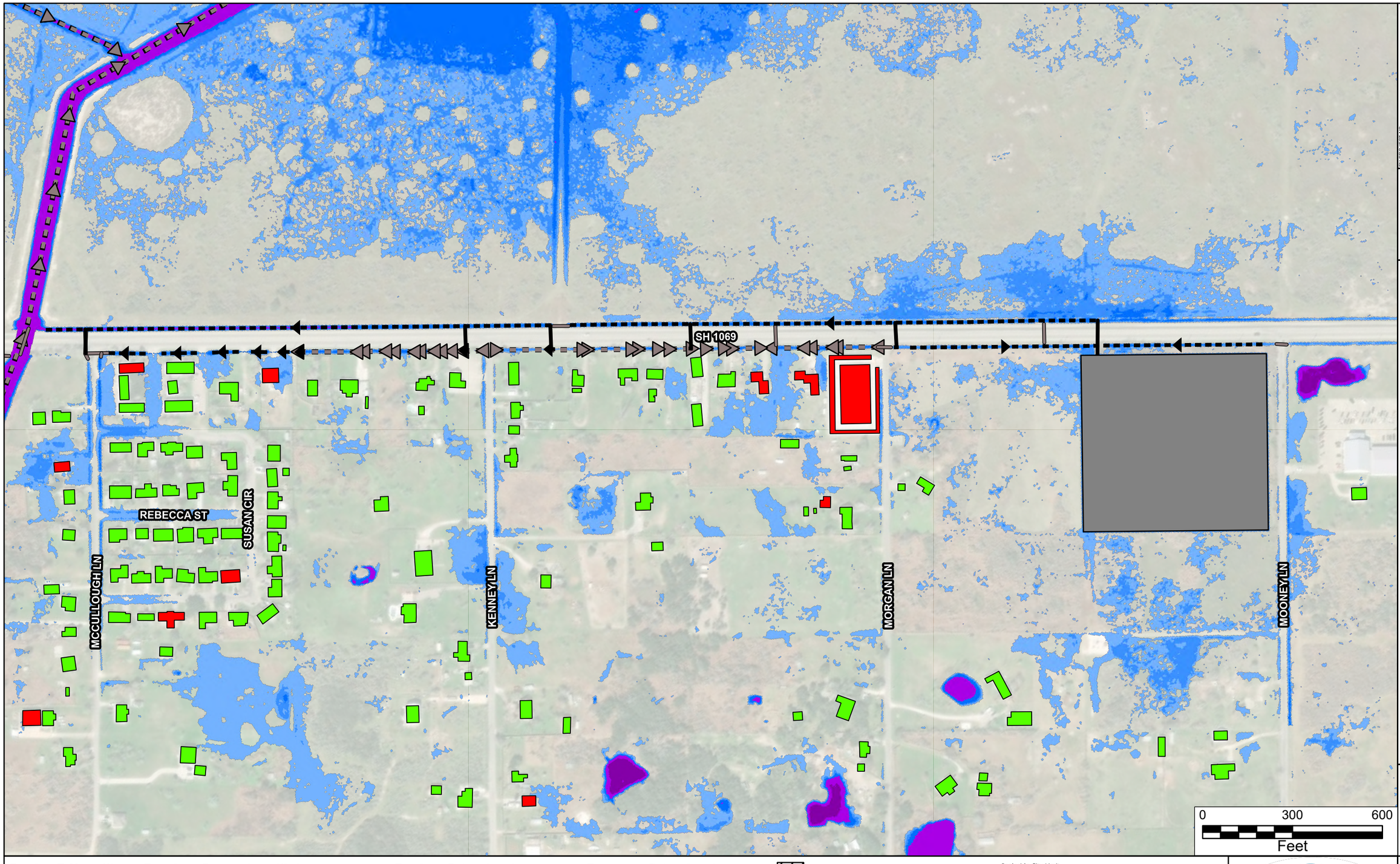
City Of Ingleside

FIGURE

3A

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Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
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- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO. ING21605
DATE CREATED Date: 3/1/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

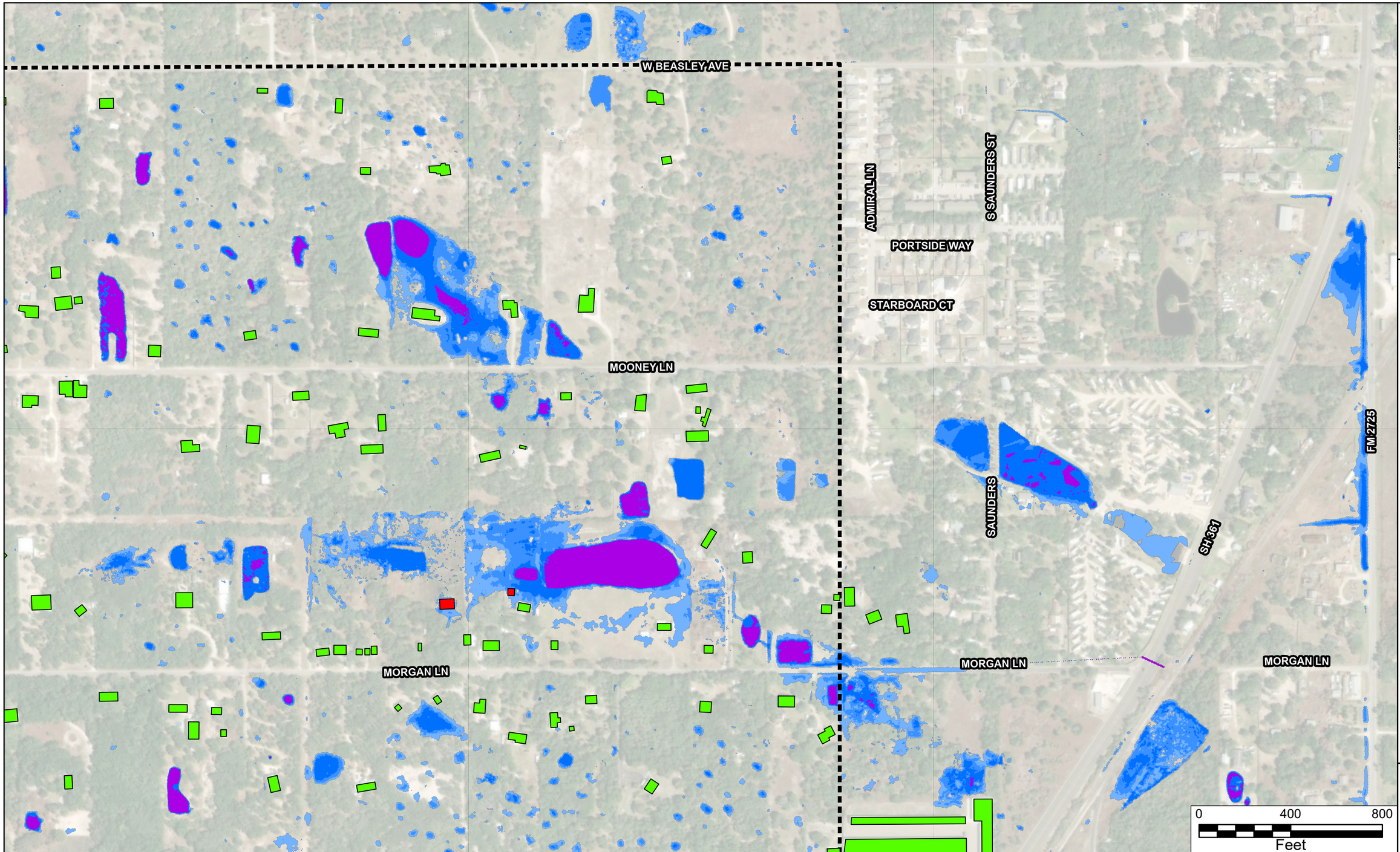
PROPOSED IMPROVEMENTS INUNDATION MAP

SITE 4: SH 1069 DRAINAGE IMPROVEMENT MCCAMPBELL SLOUGH TO MOONEY LANE

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
3B



Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
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Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

Note: Inundation extents shown on this exhibit are for the ponding that occurs after a storm event (storm water that is unable to drain off) instead of maximum extents during the storm event.

FN PROJECT NO: ING21605
DATE CREATED: Date: 2/28/2024
DATUM & COORDINATE SYSTEM: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME: Name: Ingleside2
PREPARED BY: EME

SITE 5: MOONEY/MORGAN LONG-TERM PONDING AVENUE A TO SAUNDERS

EXISTING CONDITIONS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
4A

W BEASLEY AVE

Admiral LN

S SAUNDERS ST

PORTSIDE WAY

STARBOARD CT

MOONEY LN

SAUNDERS

SH 361

FM 2725

MORGAN LN

MORGAN LN

MORGAN LN

0 400 800

Feet

Depth (5-Year Storm Event)

(24 hr Rainfall Depth = 6.42 in)

- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status

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Existing Infrastructure

- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure

- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

Note: Inundation extents shown on this exhibit are for the ponding that occurs after a storm event (storm water that is unable to drain off) instead of maximum extents during the storm event.

FN PROJECT NO: ING21605

DATE CREATED: Date: 2/28/2024

DATUM & COORDINATE SYSTEM: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

FILE NAME: Name: Ingleside2

PREPARED BY: EME

N W E S

SITE 5: MOONEY/MORGAN LONG-TERM PONDING AVENUE A TO SAUNDERS

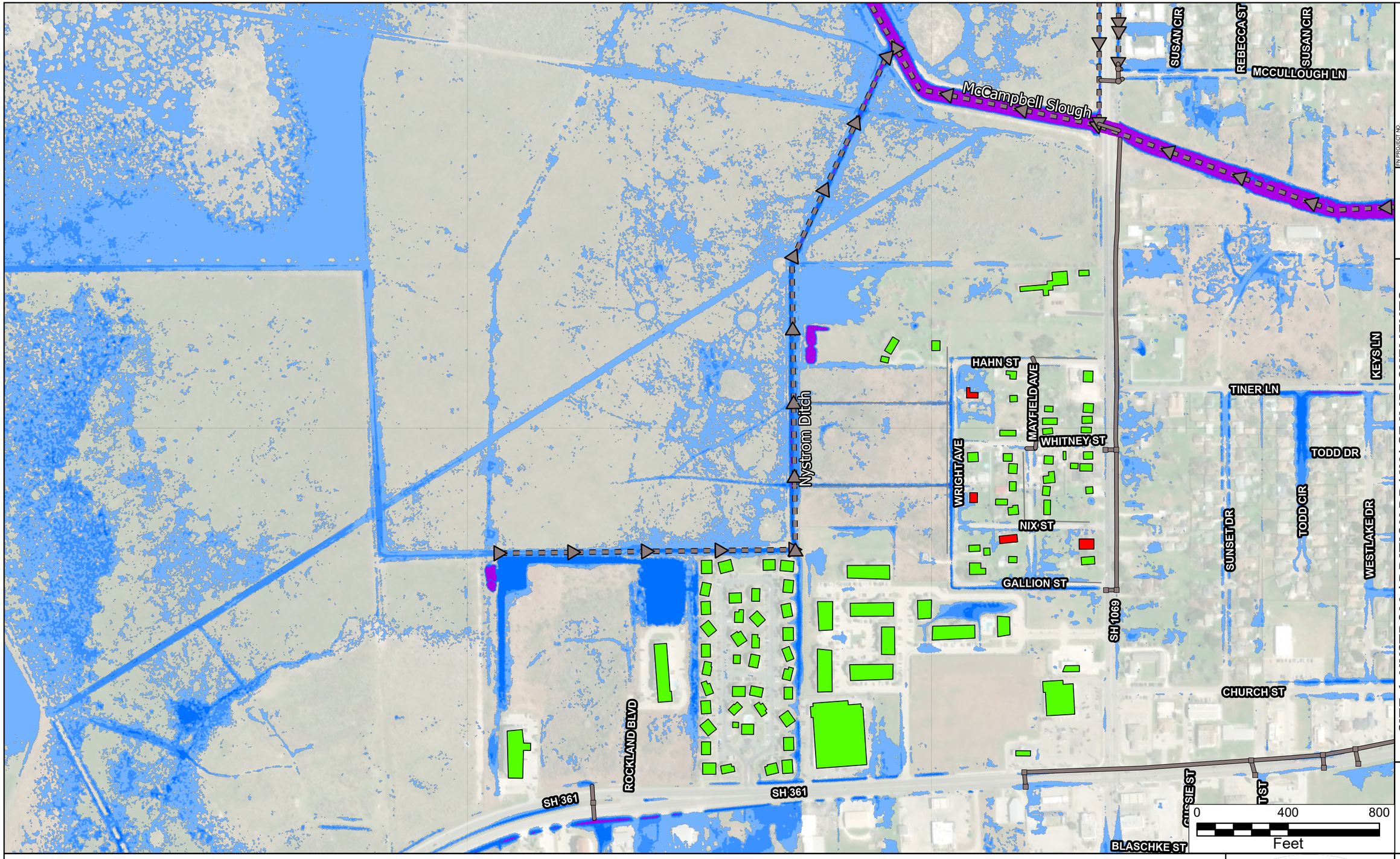
PROPOSED IMPROVEMENTS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE

4B



Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
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- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
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- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO: ING21605
DATE CREATED: Date: 2/28/2024
DATUM & COORDINATE SYSTEM: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME: Name: Ingleside2
PREPARED BY: EME

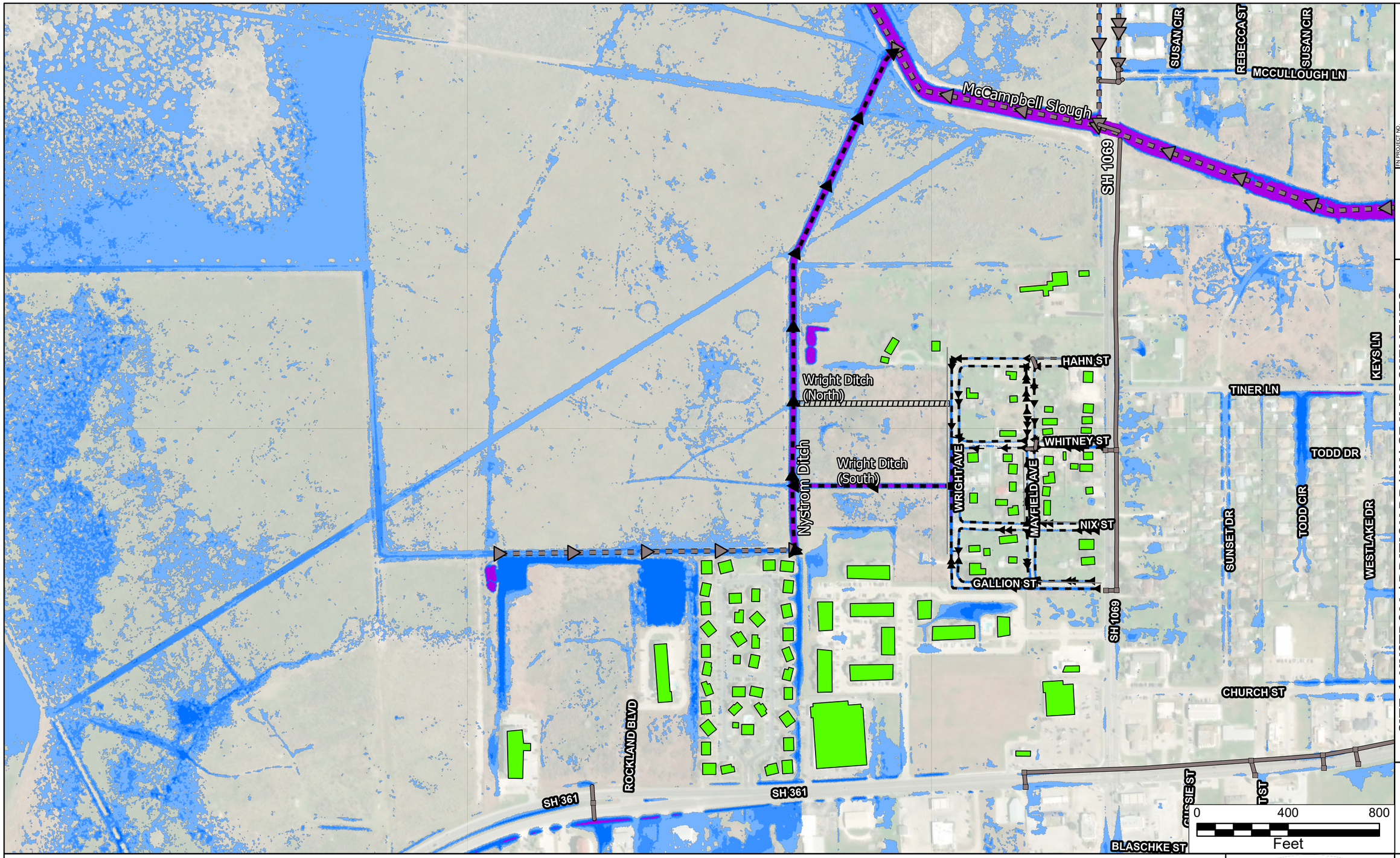
EXISTING CONDITIONS INUNDATION MAP

SITE 6: NYSTROM ADDITION DRAINAGE IMPROVEMENTS

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
5A



Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
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Proposed Infrastructure
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- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO: ING21605
DATE CREATED: Date: 2/28/2024
DATUM & COORDINATE SYSTEM: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME: Name: Ingleside2
PREPARED BY: EME

PROPOSED IMPROVEMENTS INUNDATION MAP

SITE 6: NYSTROM ADDITION DRAINAGE IMPROVEMENTS

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
5B

HULTGREEN AVE
HILLCREST DR
CAPEHEART
E WIND ST
TIMBERLEAF CIR
TIMBERLEAF DR
SPRING PARK DR
ACHIEVEMENT BLVD
8TH ST
Live Oak Ditch
BELAIR AVE
BREEZEWAY CIR
ZEPHYR CIR
W WIND CIR
CAPEHEART CIR
LEE LN
GLENWOOD DR
Kinney Bayou
BALBOA AVE
MEADOW DR
BAYWOOD DR
SH 1069
PORT AVE
PALM DESERT DR
POINT LOMA DR
PEBBLE BEACH DR
PARKVIEW PL
CIR
RIDGEWOOD
CORONADO DR
NORTH ST
Live Oak Ditch

FIN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

N
W E
S

SITE 7: PARKSIDE TERRACE SUBDIVISION
DRAINAGE IMPROVEMENTS

EXISTING CONDITIONS INUNDATION MAP

0 300 600
Feet

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

Depth (5-Year Storm Event)
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- Channel / Ditch

Proposed Infrastructure
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- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

City Of Ingleside

FIGURE
6A

HULTGREEN AVE
HILLCREST DR
CAPEHEART
E WIND ST
TIMBERLEAF CIR
TIMBERLEAF DR
SPRING PARK DR
8TH ST
ACHIEVEMENT BLVD
BELAIR AVE
BREEZEWAY CIR
ZEPHYR CIR
W WIND CIR
CAPEHEART CIR
LEE LN
GLENWOOD DR
Live Oak Ditch
Kinney Bayou
BALBOA AVE
POINT OMAHA DR
MEADOW DR
BAYWOOD DR
PALM DESERT DR
PEBBLE BEACH DR
PARKVIEW PL
CIR
RIDGEWOOD
SH 1069
PORT AVE
CORONADO DR
NORTH ST
Live Oak Ditch

0 300 600
Feet

FIN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

N
W E
S

SITE 7: PARKSIDE TERRACE SUBDIVISION DRAINAGE IMPROVEMENTS

PROPOSED IMPROVEMENTS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

Depth (5-Year Storm Event)
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- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

City Of Ingleside

FIGURE
6B

CHURCH ST
SH 361
EAST ST
N.O. Simmons Ditch
SWEETBAY DR
SABAL DR
JENICA WEST DR
LAKEVIEW SOUTH DR
JENICA DR
Union Pacific Ditch
SECOY ST
HOLMAN ST
MUNSON ST
HARGUS ST
AVENUE G
Scott CIR
AVENUE J
FIRST ST
BUCKEYE DR
AVENUE D
SECOND ST
AVENUE D
AVE E
AVENUE F
AVENUE H
AVENUE I
AVENUE K
THIRD ST
BIG OAK LN
SHADY OAK LN
JONES ST
0 250 500
Feet

FN PROJECT NO: ING21605
DATE CREATED: Date: 2/28/2024
DATUM & COORDINATE SYSTEM: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME: Name: Ingleside2
PREPARED BY: EME

N W E S

SITE 8: VILLANOVA PLACE DRAINAGE IMPROVEMENTS
EXISTING CONDITIONS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

City Of Ingleside

FIGURE
7A

CHURCH ST
N.O. Simmons Ditch
SH 361
EAST ST
SWEETBAY DR
SABAL DR
JENICA WEST DR
LAKEVIEW SOUTH DR
JENICA DR
Union Pacific Ditch
SECOY ST
HOLMAN ST
MUNSON ST
HARGUS ST
Scott CIR
AVENUE J
BUCKEYE DR
FIRST ST
AVENUE D
AVENUE G
SECOND ST
BIG OAK LN
SHADY OAK LN
AVENUE K
JONES ST
AVENUE D
AVE E
AVENUE F
AVENUE H
THIRD ST
AVENUE I
0 250 500
Feet
N
S
E
W

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

SITE 8: VILLANOVA PLACE DRAINAGE IMPROVEMENTS
PROPOSED IMPROVEMENTS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

City Of Ingleside

FIGURE
7B

Date Saved: 2/28/2024 10:40 AM
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SAN ANTONIO AVE
SAN ANGELO AVE
MUSTANG DR
WACO ST
AMARILLO ST
EL PASO AVE
DALLAS AVE
OKLAHOMA AVE
TEXAS AVE
ARKANSAS ST
AVE B
Avenue B Ditch
SEVENTH ST
SIXTH ST
AVENUE C
FIFTH ST
FOURTH ST
SH 1069
THIRD ST
AVENUE D

0 200 400
Feet

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

SITE 9: HUMBLE ADDITION AND AVENUE B DRAINAGE IMPROVEMENTS
EXISTING CONDITIONS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
8A

TEXAS AVE
SAN ANTONIO AVE
WACO ST
SAN ANGELO AVE
MUSTANG DR
AMARILLO ST
EL PASO AVE
DALLAS AVE
OKLAHOMA AVE
ARKANSAS ST
AVE B
Avenue B Ditch
FOURTH ST
SH 1069
AVENUE C
SIXTH ST
FIFTH ST
THIRD ST
SEVENTH ST
AVENUE D

0 200 400
Feet

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel / Culvert Removal
- Detention Pond
- Ingleside City Limit

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

PROPOSED IMPROVEMENTS INUNDATION MAP

SITE 9: HUMBLE ADDITION AND AVENUE B DRAINAGE IMPROVEMENTS

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
8B

AVENUE B
Avenue B Ditch
Avenue G Ditch
POINSETTA PL
HENRIETTA PL
8TH ST
SIXTH ST
GREENBRIAR DR
AVENUE A
ALANA LN
GARZA AVE
HEWLETT DR
BISHOP RD
DANFORTH LN
FOURTH ST
HULTGREEN AVE
TIMBERLEAF DR
SPRING PARK DR
GLENWOOD DR
LEE LN
MEADOW DR
CAPEHEART
E WIND ST
W WIND CIR
ZEPHYR CIR
BELAIR AVE
BAYWOOD DR
CORONADO DR
Parkview Ditch
SIXTH ST
Kinney Bayou
Live Oak Ditch
ELIZABETH ST
PORT AVE
PARK RD
SHERRY AVE
PARKVIEW PL
VERA LN
SHARON ST
SH 1069
FM 2725

0 750 1,500
Feet

N
W E
S

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

SITE 10: LIVE OAK DITCH

EXISTING CONDITIONS INUNDATION MAP

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

- Channel Removal
- Detention Pond
- Ingleside City Limit

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

City Of Ingleside

FIGURE
9A

Date Saved: 2/28/2024 10:40 AM
Path: H:\STORMWATER\Working\EME\Ingleside\Ingleside2.aprx

AVENUE B
Avenue B Ditch
Avenue G Ditch
POINSETTA PL
HENRIETTA PL
SIXTH ST
8TH ST
GREENBRIAR DR
AVENUE A
ALANA LN
GARZA AVE
HEWLETT DR
BISHOP RD
DANFORTH LN
FOURTH ST
HULTGREEN AVE
TIMBERLEAF DR
SPRING PARK DR
GLENWOOD DR
LEE LN
CAPEHEART
E WIND ST
W WIND CIR
ZEPHYR CIR
BELAIR AVE
MEADOW DR
BAYWOOD DR
CORONADO DR
Parkview Ditch
SIXTH ST
SH 1069
Kinney Bayou
Live Oak Ditch
ELIZABETH ST
PORT AVE
PARK RD
SHERRY AVE
PARKVIEW PL
VERA LN
SHARON ST
FM 2725

0 750 1,500
Feet

N
W E
S

FN PROJECT NO. ING21605
DATE CREATED Date: 2/28/2024
DATUM & COORDINATE SYSTEM NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME Name: Ingleside2
PREPARED BY EME

SITE 10: LIVE OAK DITCH
PROPOSED IMPROVEMENTS INUNDATION MAP

FREESE AND NICHOLS, INC.
800 N SHORELINE BLVD
SUITE 1600N
CORPUS CHRISTI, TX 78401
PHONE: (361) 561-6500

Depth (5-Year Storm Event)
(24 hr Rainfall Depth = 6.42 in)
- < 6" (0.5')
- 6" - 12" (0.5' - 1.0')
- 12" - 18" (1.0' - 1.5')
- 18" - 30" (1.0' - 2.5')
- 30" - 60" (2.5' - 5.0')
- 60" - 91.2" (5.0' - 7.6')

Inundation Status
- Not Inundated (0 - 0.5')
- Potentially Inundated (> 0.5')

Existing Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch

Proposed Infrastructure
- Inlet
- Manhole
- Underground Stormwater System / Culverts
- Channel / Ditch
- Berm
- Channel Removal
- Detention Pond

Ingleside City Limit

City Of Ingleside

FIGURE
9B

APPENDIX C
ONE-PAGE CIP SUMMARY SHEETS

City of Ingleside

Capital Improvements Plan

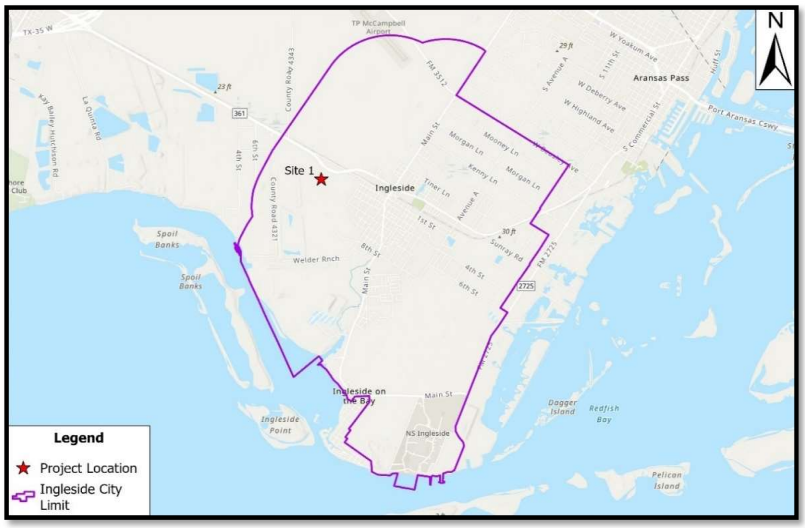
Project Summary Information:

Project ID:	1	Date:	3/5/2024
Project Name:	Site 1: Humble Ditch Improvements		
Project Type:	Channel	# Structures Impacted Pre-Project:	37
Easements Required?	No	# Structures Impacted Post-Project:	36

Existing Problem:

West Main Street experiences flooding that overtops the road and limits access to and from the adjacent business, including the Humble Youth Center, during even the smaller storm events. City staff has indicated that cars driving along West Main Street cause waves that send water into the Humble Youth Center building. Flooding issues in the West Main Street area are exacerbated due to backflow in the upstream section of the Humble Ditch. Water near the Humble Youth Center also seems to be relatively isolated from the drainage systems which causes lack of flow and ponding along West Main Street. These flooding issues can result in road and building damage.

Design Improvements Schematic:



Project Cost Information:

Design	$1,334,073
Permitting	$0
Construction	$8,893,815
Total	**$10,227,900**

Proposed Improvements:

Improve approximately 5000 linear feet of the Humble Ditch, including regrading the ditch from the south edge of SH 361 to approximately halfway between the Dredge Material Placement Area (DMPA) cells, and concrete lining the channel. These improvements will allow the Humble ditch to flow in the original intended direction and relieve some ponding in between SH 361 and West Main Street. The proposed improvements do not entirely prevent ponding along West Main Street, but improving the drainage downstream of the problem area does reduce the amount of time ponding occurs along West Main Street. Based on existing conditions, improving the Humble Ditch cannot entirely alleviate the flooding at the Humber Youth Center, so flood protection systems for the building itself should be considered to prevent water damage to the building.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 1
- Reduction in Flood Depth: 2.64 inches
- Impassible Road Length (>5" Depth) Reduction: 369 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	2
0.25	Property Damage	5
0.20	Road Level of Service	0
0.15	Planning Linkages	5
0.10	Project Cost	1
	Total Weighted Point Score:	2.70
	CIP Rank:	6

Notes:

The San Patricio County Drainage District (SPCDD) is responsible for channel maintenance and improvements on the Humble Ditch; project coordination with SPCDD will be required. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. Several oil and gas pipelines and a major water transmission line cross the Humble Ditch at unknown depths. Coordination with the private and public pipeline owners will be required during project development and construction. No permitting requirements are anticipated.

City of Ingleside

Capital Improvements Plan

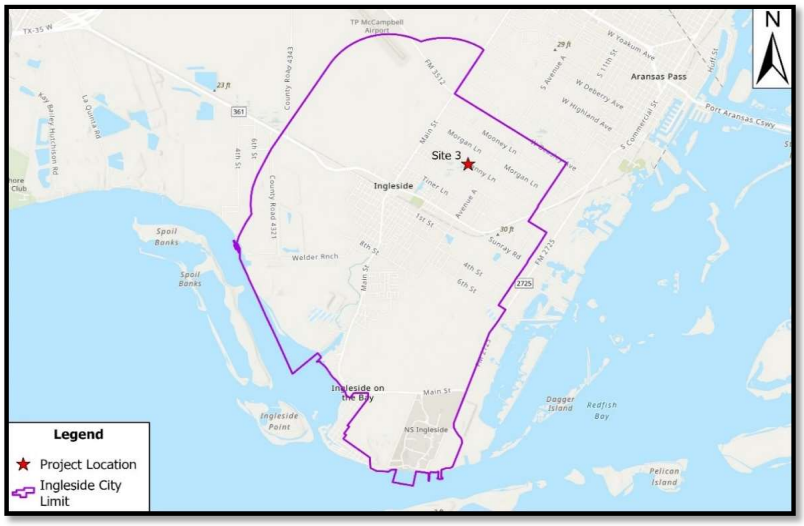
Project Summary Information:

Project ID:	2	Date:	3/5/2024
Project Name:	Site 3: Kenny Lane/Whitney Lake Infrastructure		
Project Type:	Storm Sewer	# Structures Impacted Pre-Project:	8
Easements Required?	No	# Structures Impacted Post-Project:	7

Existing Problem:

Residential properties along Kenny Lane are flooding during even small storm events. Additionally, Kenny Lane experiences roadway overtopping during the 100-year or larger storm events. There are no existing roadside ditches and only one property on Kenny Lane has a driveway culvert. Existing cross culverts are limited and undersized due to lack of cover. Flooding events can limit residents' ability to leave their homes, pose a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation.

Design Improvements Schematic:

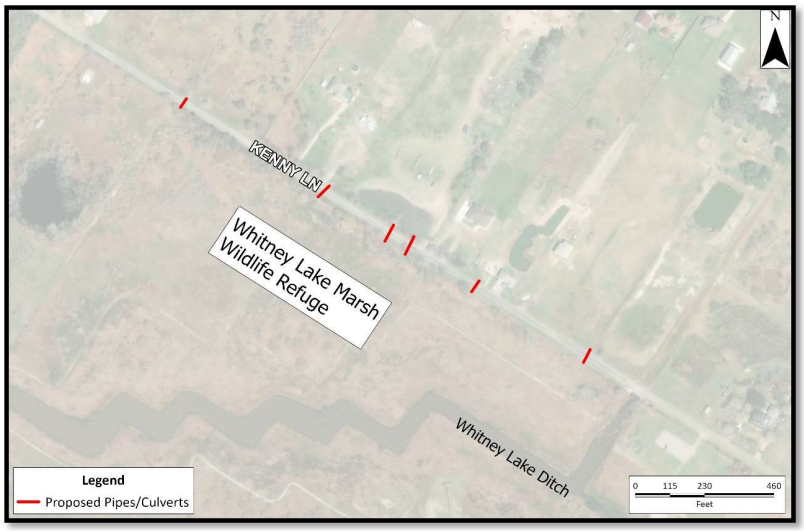


Project Cost Information:

Design	$372,923
Permitting	$0
Construction	$2,486,150
Total	**$2,859,100**

Proposed Improvements:

Proposed improvements in the Kenny Lane Construction Plans provided by the City were modeled. This includes approximately 440 linear feet of 15" reinforced concrete pipe (RCP) culverts along Kenny Lane to provide flow from the north side to the south side of Kenny Lane. Additional alternatives were analyzed to determine if further improvements were warranted, but none proved to be substantially more effective than the improvements already included in the Kenny Lane Construction Plans.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 1
- Reduction in Flood Depth: 2.64 inches
- Impassible Road Length (>5" Depth) Reduction: 0 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	3
0.25	Property Damage	2
0.20	Road Level of Service	3
0.15	Planning Linkages	5
0.10	Project Cost	2
	Total Weighted Point Score:	2.96
	CIP Rank:	3

Notes:

The proposed improvements have already been incorporated into the Kinney Lane Construction Plans. No utility conflicts are anticipated, and no drainage easement acquisition or permitting is required.

City of Ingleside

Capital Improvements Plan

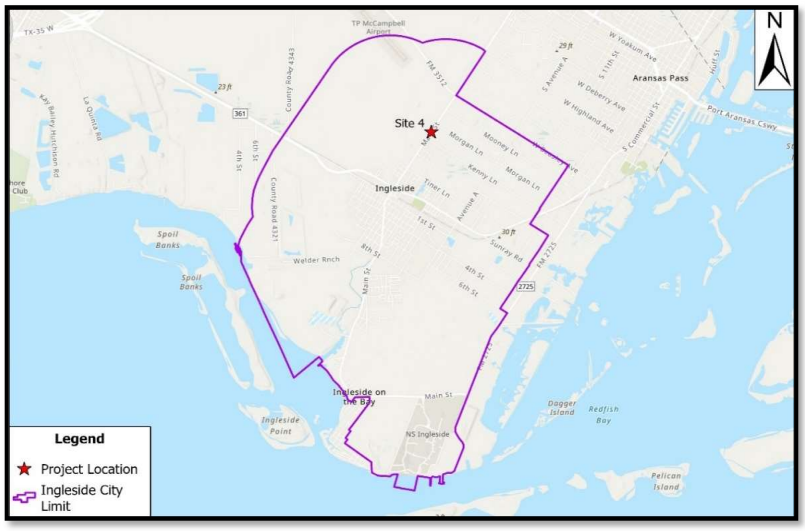
Project Summary Information:

Project ID:	3	Date:	3/5/2024
Project Name:	Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane		
Project Type:	Storm Sewer, Channel, & Detention	# Structures Impacted Pre-Project:	16
Easements Required?	Yes	# Structures Impacted Post-Project:	12

Existing Problem:

State Highway 1069 (SH 1069) is acting as a barrier that causes water surface elevations to rise on the east side of the highway, resulting in inundation of properties east of SH 1069 between McCampbell Slough and Mooney Lane. The ponding caused by the road can lead to lack of accessibility to the properties in the area, pose a safety concern if emergency services are unable to safely access inundated properties, and could potentially result in damage to structures. Existing cross culverts and roadside ditches on either side of SH 1069 do not have enough capacity to efficiently move flow to McCampbell Slough.

Design Improvements Schematic:

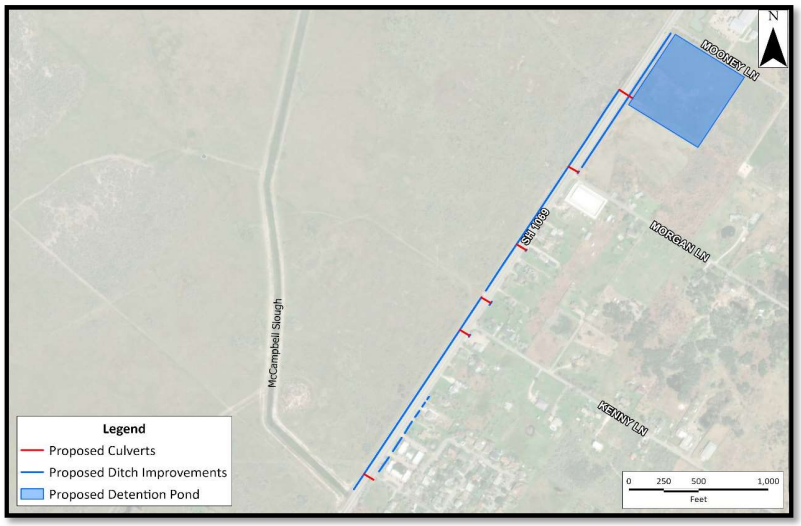


Project Cost Information:

Design	$2,063,421
Permitting	$50,000
Construction	$13,756,136
Total	**$15,869,600**

Proposed Improvements:

Construct approximately 3452 linear feet of 4-ft bottom width, concrete-lined roadside ditch along the west side of SH 1069 and 1610 linear feet of 3-ft bottom width grass-lined ditch improvements along the east side. Culverts to move water from east to west of SH 1069 will be placed in strategic locations. Ditches on the east side of the road will be graded to send flow to the cross culverts. The west ditch will be graded to send flow from the cross culverts to McCampbell Slough. A detention pond is also recommended on the corner of SH 1069 and Mooney Lane due to the general lack of flow in the area. A gravity drained detention pond would not be deep enough to provide significant drainage benefits; therefore, a pumped detention pond is proposed for this site.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 4
- Reduction in Flood Depth: 4.56 inches
- Impassible Road Length (>5" Depth) Reduction: 22 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	2
0.25	Property Damage	3
0.20	Road Level of Service	5
0.15	Planning Linkages	0
0.10	Project Cost	1
	Total Weighted Point Score:	2.45
	CIP Rank:	7

Notes:

Coordination with and project approval by TxDOT will be required. Land acquisition for the proposed detention pond will be required. Need to confirm during design that proposed improvements along SH 1069 can be constructed within the TxDOT ROW, or if additional drainage easements will need to be obtained from adjacent property owners. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. A USACE Nationwide Permit (NWP 43) may be required for this project and should be confirmed during final design. Phasing of this project could be considered starting with the most downstream portions of the project.

- Phase 1 – Roadside ditch improvements and culverts crossing SH 1069
- Phase 2 – Detention pond

City of Ingleside

Capital Improvements Plan

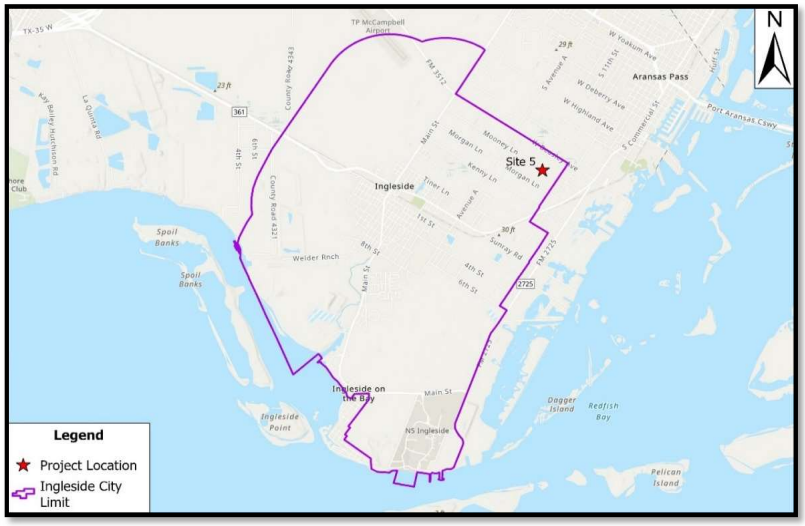
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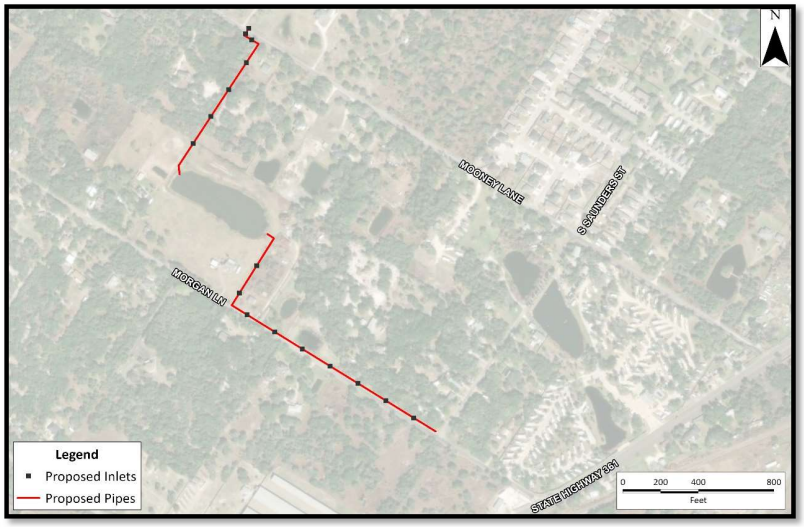
Project ID:	4	Date:	3/5/2024
Project Name:	Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street		
Project Type:	Storm Sewer and Channel	# Structures Impacted Pre-Project:	3
Easements Required?	Yes	# Structures Impacted Post-Project:	3

Existing Problem:

Stormwater is ponding on residential lots on both sides of Mooney Lane between Avenue A and South Saunders Street. Water stands on the lots for extended periods of time even after most areas have drained. This creates potential health concerns and inconveniences for nearby homeowners.

Design Improvements Schematic:





Project Cost Information:

Design	$133,006
Permitting	$0
Construction	$886,703
Total	**$1,019,800**

Proposed Improvements:

Construct approximately 2585 linear feet of 15” PVC pipe to connect flow from the ponded areas north of Mooney Lane to the existing pond south of Mooney Lane. An outfall pipe will be added to the pond south of Mooney Lane, which will drain to an existing TxDOT or City of Aransas Pass inlet near the intersection of Morgan Lane and South Saunders Street, which appears to drain along Morgan Lane to a TxDOT culvert under SH 361. Grate or post inlets will be installed along the new pipes at an interval of 175 ft to help drain the area.

Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 0
- Reduction in Flood Depth: 19.32 inches
- Impassible Road Length (>5" Depth) Reduction: 113 feet

NOTE: These values are based on model results for the ponding that occurs after a storm event (storm water that is unable to drain off) instead of maximum extents during the storm event.

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	5
0.25	Property Damage	2
0.20	Road Level of Service	1
0.15	Planning Linkages	0
0.10	Project Cost	2
	Total Weighted Point Score:	2.40
	CIP Rank:	8

Notes:

To achieve the proposed improvements, drainage easements across private properties will be required. The proposed system ties into existing TxDOT or Aransas Pass infrastructure. Therefore, coordination with and project approval by TxDOT or Aransas Pass will be required. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. No permitting requirements are anticipated.

City of Ingleside

Capital Improvements Plan

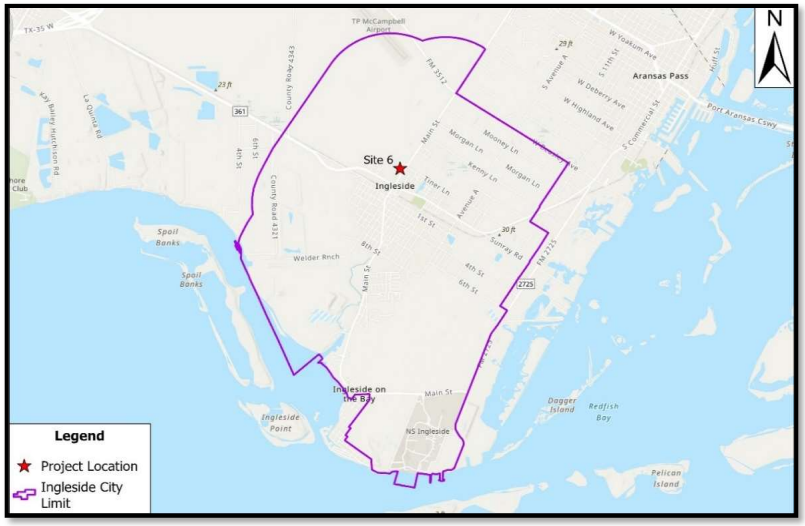
Project Summary Information:

Project ID:	5	Date:	3/5/2024
Project Name:	Site 6: Nystrom Addition Drainage Improvements		
Project Type:	Storm Sewer and Channel	# Structures Impacted Pre-Project:	4
Easements Required?	Yes	# Structures Impacted Post-Project:	0

Existing Problem:

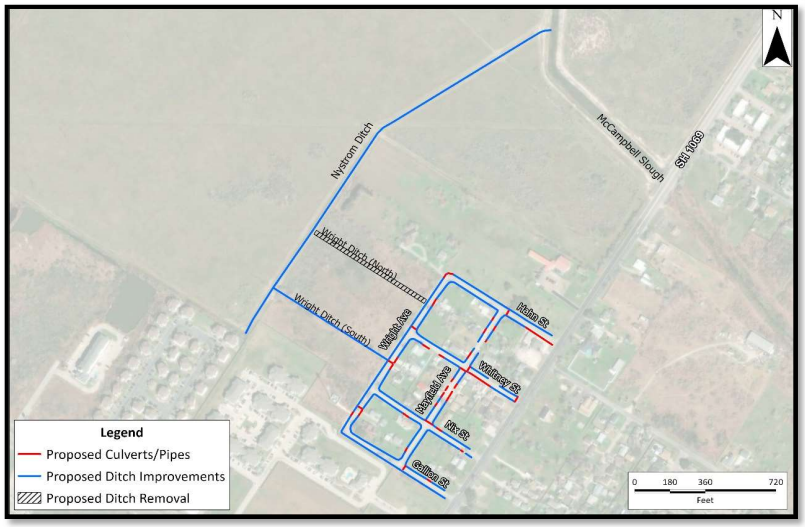
Residential properties in the Nystrom Addition neighborhood are flooding during even small storm events. Additionally, the neighborhood streets (Gallion Street, Wright Avenue, Hahn Street, Whitney Street, Nix Street, and Mayfield Avenue) experience overtopping during storm events. Existing roadside ditches throughout the neighborhood do not have enough capacity to efficiently move flow to the outfall ditches to the west, and the outfall ditches are also undersized. These instances of flooding can limit residents' ability to leave their homes during a flood event, pose a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation.

Design Improvements Schematic:



Project Cost Information:

Design	$361,799
Permitting	$50,000
Construction	$2,411,992
Total	**$2,823,800**



Proposed Improvements:

Construct approximately 7055 linear feet of grass lined roadside ditches throughout the neighborhood. Improve the outfall ditches to the west of the neighborhood by consolidating the two smaller ditches (Wright Ditch (North) & Wright Ditch (South)) into one larger ditch with sufficient capacity to drain the neighborhood. Wright Ditch (South) will be lowered by approximately 2' and widened (10-ft bottom width). For the Nystrom Ditch, 2288 linear feet will be lowered by approximately 2' and widened from a V-shaped ditch (no defined bottom width) to a bottom width of 20-ft. To move flow from the neighborhood ditches to the larger ditches, nine culverts will be added to allow stormwater to cross the neighborhood streets into the improved ditches. Driveway culvert improvements will also be required to achieve positive drainage within the neighborhood.

Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 4
- Reduction in Flood Depth: 2.52 inches
- Impassible Road Length (>5" Depth) Reduction: 59 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	1
0.25	Property Damage	2
0.20	Road Level of Service	1
0.15	Planning Linkages	5
0.10	Project Cost	2
	Total Weighted Point Score:	1.95
	CIP Rank:	9

Notes:

A drainage easement for the Wright South Ditch will be required. Confirm during design that an appropriate drainage easement is in place for the Nystrom Ditch and that proposed improvements can be constructed within the existing easement. Coordination with SPCDD required for improvements at the connection of Nystrom Ditch into McCampbell Slough. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. A USACE Nationwide Permit (NWP 7, 18, or 58) may be required for this project and should be confirmed during final design. Phasing of this project should be considered.

- Phase 1 – Nystrom Ditch improvements
- Phase 2 – Wright Ditch improvements
- Phase 3 – Nystrom Addition neighborhood improvements (roadside ditches and culverts)

City of Ingleside

Capital Improvements Plan

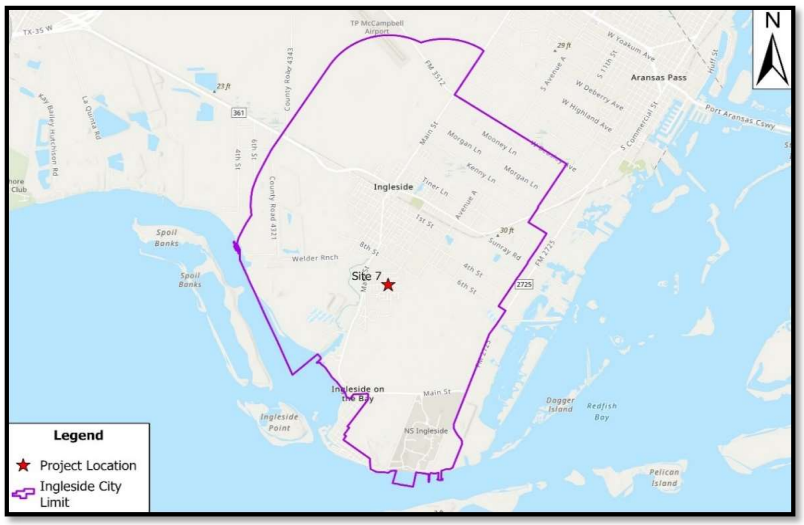
Project Summary Information:

Project ID:	6	Date:	3/5/2024
Project Name:	Site 7: Parkside Terrace Subdivision Drainage Improvements		
Project Type:	Storm Sewer	# Structures Impacted Pre-Project:	17
Easements Required?	No	# Structures Impacted Post-Project:	4

Existing Problem:

Residential properties in the Parkside Terrace Subdivision are flooding during even minor storm events. Additionally, the neighborhood streets, namely Coronado Drive, Ridgewood Circle, Parkview Place, Belair Avenue, and Timberleaf Circle, experience overtopping during storm events. The existing storm drain infrastructure does not have enough capacity to efficiently move flow south to Live Oak Ditch and more inlets are needed to capture flow. These instances of flooding can limit residents' ability to leave their homes during a flood event, poses a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation.

Design Improvements Schematic:

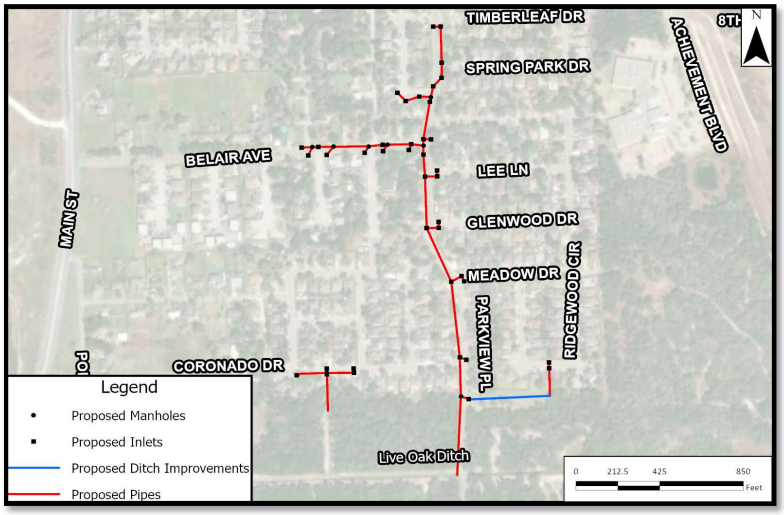


Project Cost Information:

Design	$1,193,322
Permitting	$0
Construction	$7,955,477
Total	**$9,148,800**

Proposed Improvements:

Proposed improvements include extending the main trunk line north on Parkview Place by approximately 190', west on Belair Ave by 620', and west on Timeberleaf Ave by 190', along with adding additional inlets on each street. The main trunk line would be upsized to RCBs ranging in size from 4' x 3' to 6' x 3 '. Approximately 290' of 3.5' x 2' RCB would be added on Coronado Street along with upsizing the existing pipes to be 3.5' x 2' RCB. The existing pipes on Ridgewood Circle would also be upsized to 3.5' x 2'. All inlets connected to the system would be 10' curb inlets.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 13
- Reduction in Flood Depth: 4.80 inches
- Impassible Road Length (>5" Depth) Reduction: 1,402 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	3
0.25	Property Damage	3
0.20	Road Level of Service	1
0.15	Planning Linkages	5
0.10	Project Cost	1
	Total Weighted Point Score:	2.71
	CIP Rank:	5

Notes:

The Site 10 proposed improvements should be implemented prior to these Site 7 improvements for maximum benefit of the Site 7 project. If the Site 7 project is constructed prior to the Site 10 project, a lower level of benefit will be realized until the Site 10 improvements are implemented. No drainage easements are anticipated for this project, but existing easements should be confirmed during final design to verify no additional drainage easements or ROW will be required. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. No permitting requirements are anticipated. Phasing of this project could be considered.

- Phase 1 – Coronado Drive Improvements
- Phase 2 – Parkview Place Improvements
- Phase 3 – Ridgewood Circle Improvements

City of Ingleside

Capital Improvements Plan

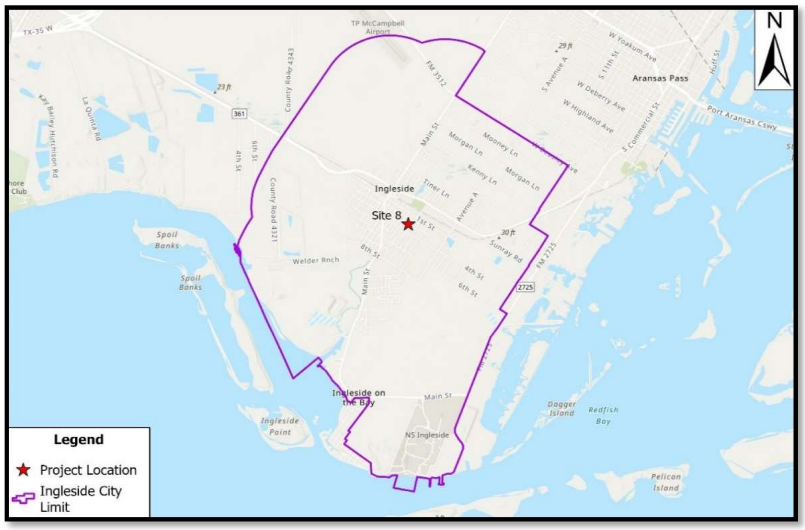
Project Summary Information:

Project ID:	7	Date:	3/5/2024
Project Name:	Site 8: Villanova Place Drainage Improvements		
Project Type:	Storm Sewer	# Structures Impacted Pre-Project:	180
Easements Required?	Yes	# Structures Impacted Post-Project:	147

Existing Problem:

Houses within the Villanova Place neighborhood are flooding heavily during small storm events. Additionally, the neighborhood streets (First Street, Second Street, Third Street, Avenue H, Avenue I, Avenue J, and Avenue K) experience overtopping during even minor storm events. Existing stormwater infrastructure throughout the neighborhood does not have enough capacity to efficiently move flow to the outfalls, and there isn't enough capacity at current neighborhood outfalls to hold the amount of water that is ponding. These instances of flooding can limit residents' ability to leave their homes during a flood event, poses a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation.

Design Improvements Schematic:

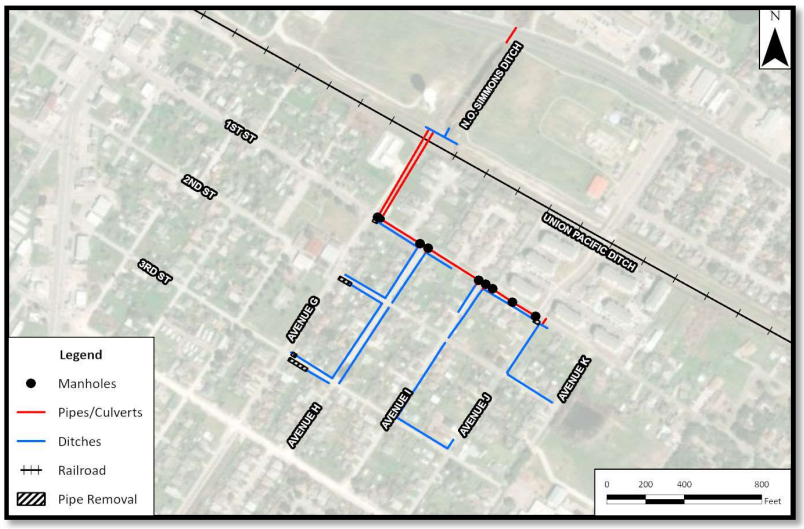


Project Cost Information:

Design	$1,314,131
Permitting	$0
Construction	$8,760,867
Total	**$10,075,000**

Proposed Improvements:

Proposed improvements include regrading roadside ditches along Ave H, Ave I, Ave J, First Street, Second Street, and Third Street; installation of a new underground stormwater system under First Street and Ave G; and installation of a new outfall into the north Union Pacific Ditch. This project would also add another underground stormwater system connecting to the existing Ave G underground system, and provide an additional outfall into the north Union Pacific Ditch. The purpose of the connection to the Ave G system is to provide a way for the system on Ave G to backflow to the north when the southern downstream system is overwhelmed, instead of overtopping and inundating the neighborhood streets and property. Finally, the outfall pipe that crosses under SH 361 will be upsized to allow more flow under the highway, reducing overtopping of the N.O. Simmons Ditch and the upstream systems.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 33
- Reduction in Flood Depth: 8.40 inches
- Impassible Road Length (>5" Depth) Reduction: 1,692 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	4
0.25	Property Damage	5
0.20	Road Level of Service	1
0.15	Planning Linkages	0
0.10	Project Cost	1
	Total Weighted Point Score:	2.75
	CIP Rank:	4

Notes:

To achieve the proposed improvements, a drainage easement from the Union Pacific Railroad will be required. Coordination with and project approval by TxDOT for the proposed structures under SH 361 will be required. Availability of existing ROW or drainage easements should be confirmed during final design. Existing water and wastewater lines, including a wastewater force main, may cause potential conflicts during construction. Locations of all utilities should be confirmed during final design to ensure there are no conflicts with the proposed drainage improvements. No permitting requirements are anticipated. Phasing of this project should be considered starting with the most downstream portions of the project.

- Phase 1 – Culvert Improvements Under SH 361
- Phase 2 – Avenue G and First Street Underground System Additions
- Phase 3 - Neighborhood Ditch Improvements and Culvert Removals

City of Ingleside

Capital Improvements Plan

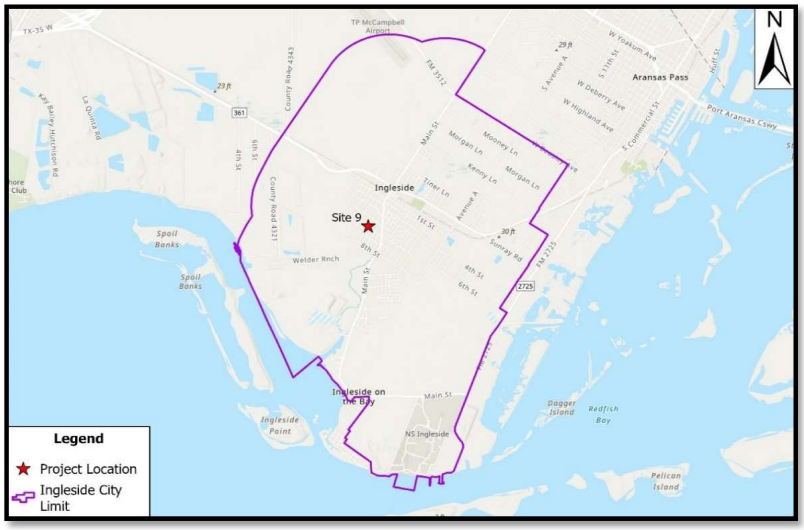
Project Summary Information:

Project ID:	8	Date:	3/5/2024
Project Name:	Site 9: Humble Addition and Avenue B Drainage Improvements		
Project Type:	Storm Sewer and Channel	# Structures Impacted Pre-Project:	19
Easements Required?	No	# Structures Impacted Post-Project:	16

Existing Problem:

Residential properties in the Humble Addition are experiencing inundation throughout the neighborhoods and local streets. Additionally, the neighborhood streets (Oklahoma Avenue, Texas Avenue, Arkansas Street, and Waco St) experience overtopping during even minor storm events. Existing roadside ditches throughout the neighborhood do not have enough capacity to efficiently move flow to stormwater pipes, resulting in ponding within the streets and could lead to flooding of homes. The convergence of the Avenue B outfall and the existing ditch south of Oklahoma overpowers the existing culverts downstream, leading to water spilling out and moving back north though the neighborhood. These instances of flooding can limit residents' ability to leave their homes during a flood event, poses a safety concern if emergency services are unable to safely access these residences, and can cause damage to pavement over time due to repeated inundation. There are also three schools located within or adjacent to the Humble Addition neighborhood. Reducing flood extents will provide a safer route to the schools for children that live in the neighborhood, or who cross through the neighborhood to get to school.

Design Improvements Schematic:

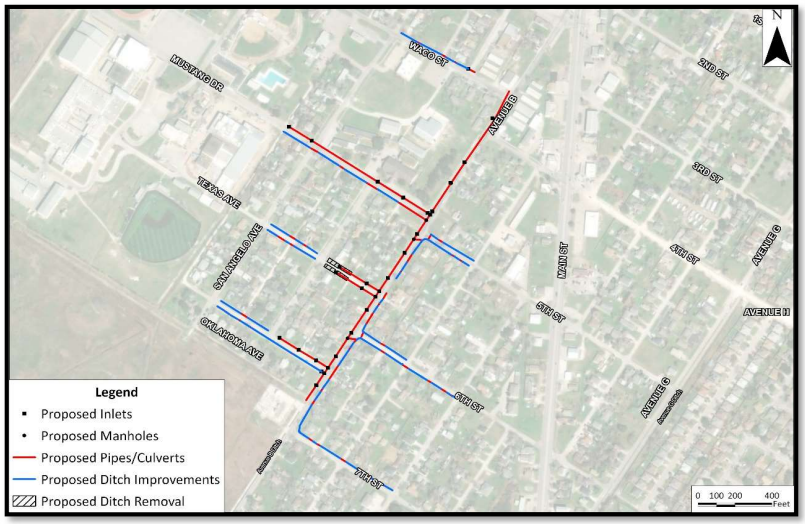


Project Cost Information:

Design	$699,422
Permitting	$0
Construction	$4,662,812
Total	**$5,362,300**

Proposed Improvements:

The main trunkline on Ave B will be upsized to pipes ranging from 36" RCP to 6' x 3' RCB. Laterals on Oklahoma Dr and Texas Ave will be extended and upsized to 24" to 36" RCPs. Ditches on 5th St, 6th St, and 7th St will be regraded to flow west into the Ave B trunkline, and 18" RCPs will be added crossing Ave B to connect the ditches to the main system. Ditches will also be regraded along Oklahoma Ave, Texas Ave, Mustang Dr, and Waco Street. Driveway culverts will be added or upsized where necessary to provide adequate capacity for water flowing through the ditches. A connection will be made from the existing Waco Street system to the new Ave B system so water from Waco Street can flow into the Ave B system or the Main Street system, which it is currently connected to, as system capacity is available.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 3
- Reduction in Flood Depth: 3.60 inches
- Impassible Road Length (>5" Depth) Reduction: 814 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	3
0.25	Property Damage	3
0.20	Road Level of Service	3
0.15	Planning Linkages	5
0.10	Project Cost	1
	Total Weighted Point Score:	3.10
	CIP Rank:	2

Notes:

For the proposed improvements to continue to be beneficial for the neighborhood, any future development that will outfall into the Avenue B Ditch should be required to detain stormwater on site and release it at a rate equal to or less than existing conditions. If development is allowed to occur to the future buildout conditions anticipated in the Future Land Use plan without limiting stormwater runoff, the Avenue B Ditch becomes overburdened, and the proposed Humble Addition and Avenue B Drainage Improvements become ineffective. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. No permitting requirements are anticipated.

City of Ingleside

Capital Improvements Plan

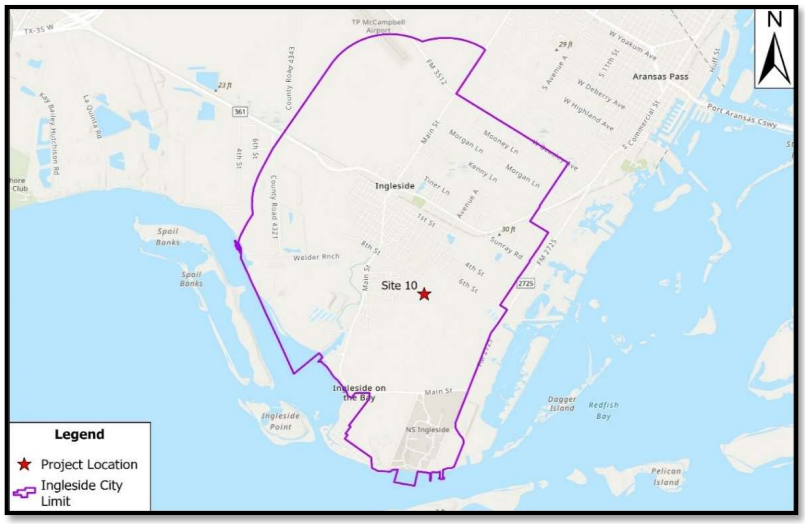
Project Summary Information:

Project ID:	9	Date:	3/5/2024
Project Name:	Site 10: Live Oak Ditch		
Project Type:	Storm Sewer and Channel	# Structures Impacted Pre-Project:	11
Easements Required?	Yes	# Structures Impacted Post-Project:	5

Existing Problem:

Live Oak Ditch has low points along the channel banks, mostly occurring in the ditch section upstream of Parkview Place road, that are overtopped during all modeled storm events. This is likely due to restricted flow through the culverts under Parkview Place and the outfall culvert into Kinney Bayou under North Street and Main Street (FM 1069). Runoff from the east of the channel is not able to enter since the culverts are restricting flow and causing water surface elevations to increase in the upstream section of the channel. Additionally, residential development is anticipated east of Achievement Boulevard, and will drain into Live Oak Ditch. Future development pressure on the existing system will increase flooding depth and extents, and result in flooding problems to existing and future homes and residents.

Design Improvements Schematic:

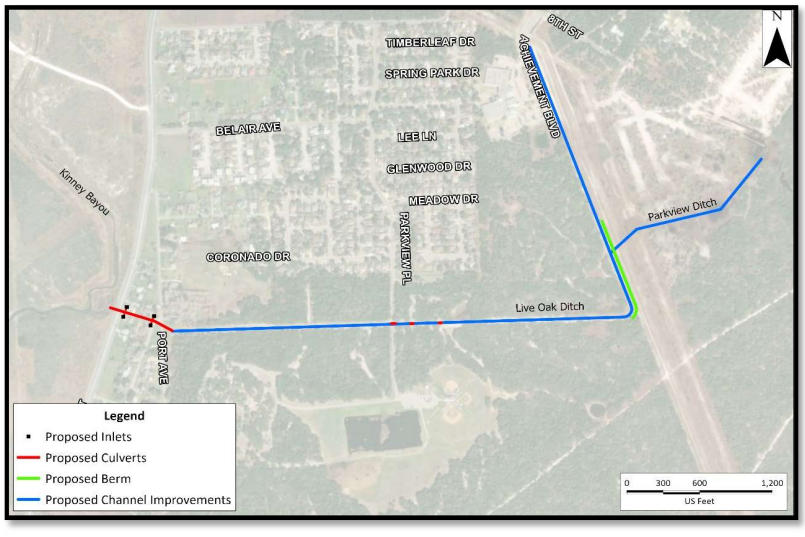


Project Cost Information:

Design	$2,105,039
Permitting	$50,000
Construction	$14,033,592
Total	**$16,188,700**

Proposed Improvements:

Improve approximately 6230 linear feet of the grass lined Live Oak Ditch. The bottom width will be widened from approximately 15 ft to 18 ft, and the ditch will be deepened by approximately 3.5 ft in some locations. These improvements include regrading and widening the full length of the ditch and concrete lining the bend in the ditch to prevent erosion. Other improvements include upsizing all culverts within the ditch to (2) 9' x 5' RCB's to allow the channel to flow with no impedance from the culverts, and installing 1106 linear feet of new (2) 9' x 5' RCB outfall structure to connect Live Oak Ditch to Kinney Bayou. An additional ditch, "Parkview Ditch", is also proposed to discharge into Live Oak Ditch to support future development of nearby land. Parkview Ditch will consist of approximately 1550 linear feet of grass lined ditch with a 20 ft bottom width.



Summary of Project Benefits:

- Number of Structures Removed from Potential Inundation Risk: 6
- Reduction in Flood Depth: 7.92 inches
- Impassible Road Length (>5" Depth) Reduction: 425 feet

Weight	CIP Ranking Criteria	Score
0.30	Life and Safety	3
0.25	Property Damage	3
0.20	Road Level of Service	5
0.15	Planning Linkages	5
0.10	Project Cost	1
	Total Weighted Point Score:	3.50
	CIP Rank:	1

Notes:

Proposed improvements to existing components (Live Oak Ditch and the culvert under North Street/Main Street) should be achieved within the existing City ROW or drainage easements, but easement widths should be confirmed during final design to verify no additional easements are required. A new drainage easement will be required for construction of the Parkview Ditch. The easement can be dedicated prior to development, or would need to be part of the plat requirements when development occurs. Locations of other utilities in the area should be confirmed to ensure no conflicts with the proposed drainage improvements. A USACE Nationwide Permit (NWP 7, 18, or 58) may be required for this project and should be confirmed during final design. Phasing of this project should be considered.

- Phase 1 – North Street Culvert between Live Oak Ditch and Kinney Bayou
- Phase 2 – Live Oak Ditch Improvements
- Phase 3 – New Parkview Ditch

APPENDIX D
OPINION OF PROBABLE PROJECT COSTS

Opinion of Probable Project Cost - Site 1: Humble Ditch Improvements					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
GENERAL					
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 317,739	$ 317,739
2	INSURANCE AND BONDS	2.5%	LS	$ 158,870	$ 158,870
3	TRAFFIC CONTROL	-	LS	$ 10,000	$ 10,000
				CONSTRUCTION - GENERAL	**$ 486,610**
BASE BID					
4	EXCAVATION (CHANNEL)	10,506	CY	$ 58	$ 604,082
5	EMBANKMENT (CHANNEL)	1,988	CY	$ 20	$ 39,756
6	EXCAVATION- HAUL OFF	11,149	CY	$ 10	$ 111,488
7	SWPPP FILTER FABRIC FENCE	4,940	LF	$ 3	$ 14,820
8	CLASS A CONCRETE (CHANNEL LINING)	8,588	CY	$ 650	$ 5,582,127
9	ROCK FILTER DAM INSTALLATION	22	LF	$ 92	$ 2,017
10	ROCK FILTER DAM REMOVAL	22	LF	$ 23	$ 497
				CONSTRUCTION - BASE BID:	**$ 6,354,787**
		CONTINGENCY		30%	$ 2,052,420
				TOTAL:	**$ 8,893,817**
		DESIGN		15%	$ 1,334,073
		PERMITTING		-	$ -
				Estimated Project Total:	**$ 10,227,900**

Opinion of Probable Project Cost - Site 3: Kenny Lane/Whitney Lake Infrastructure					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
GENERAL					
1	MOBILIZATION / DEMOBILIZATION	1	LS	$ 122,926	$ 122,926
2	INSURANCE AND BONDS	1	LS	$ 23,056	$ 23,056
3	TRAFFIC CONTROL	1	LS	$ 17,010	$ 17,010
				CONSTRUCTION - GENERAL	**$ 162,992**
BASE BID					
4	All Items Including Streets, Drainage, Water and Wastewater	1	LS	$ 2,323,159	$ 2,323,159
	Note: This project has already been bid and the construction contract has been awarded. This OPPC reflects the bid amount awarded for construction; the design costs are an estimate.				
				CONSTRUCTION - BASE BID:	**$ 2,323,159**
				CONTINGENCY 0%	$ -
				TOTAL:	**$ 2,486,151**
				DESIGN 15%	$ 372,923
				PERMITTING -	$ -
				Estimated Project Total:	**$ 2,859,100**

Opinion of Probable Project Cost - Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
GENERAL					
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 487,518	$ 487,518
2	INSURANCE AND BONDS	2.5%	LS	$ 243,759	$ 243,759
3	TRAFFIC CONTROL	-	LS	$ 100,000	$ 100,000
				CONSTRUCTION - GENERAL	**$ 831,277**
BASE BID					
4	24" RCP INSTALLATION	1,329	LF	$ 125	$ 166,100
5	18" RCP REMOVAL	330	LF	$ 34	$ 11,219
6	EXCAVATION (ROADWAY)	2,422	CY	$ 17	$ 42,136
7	CEMENT STABILIZED SAND - BEDDING MATERIAL	801	CY	$ 172	$ 137,734
8	EMBANKMENT (ROADWAY)	1,201	CY	$ 20	$ 24,011
9	EXCAVATION (CHANNEL)	2,187	CY	$ 58	$ 125,726
10	EMBANKMENT (CHANNEL)	250	CY	$ 20	$ 4,991
11	EXCAVATION (DETENTION POND)	76,933	CY	$ 58	$ 4,423,641
12	EXCAVATION (MAINTANCE ROAD)	20	CY	$ 58	$ 1,126
13	EXCAVATION- HAUL OFF	111,394	CY	$ 10	$ 1,113,936
14	REMOVING CONCRETE (RIPRAP)	4,135	SY	$ 26	$ 108,586
15	CLASS A CONCRETE (CHANNEL LINING)	2,874	CY	$ 650	$ 1,868,278
16	ASPHALT PAVEMENT REPAIR	1,092	SY	$ 120	$ 131,043
17	6" TOPSOIL	49,251	SY	$ 16	$ 763,383
18	EROSION CONTROL MATTING	12,930	SY	$ 17	$ 213,350
19	HYDROMULCH	49,251	SY	$ 9	$ 443,255
20	LIMESTONE BASE (4")	6	CY	$ 133	$ 823
21	CONCRETE PAVEMENT (6")	10	CY	$ 650	$ 6,780
22	CONCRETE DRIVEWAY REPAIRS	4,158	SF	$ 20	$ 81,081
23	SWPPP FILTER FABRIC FENCE	7,068	LF	$ 3	$ 21,205
24	TRENCH SAFETY	1,329	LF	$ 9	$ 11,959
25	DETENTION POND PUMP	1	EA	$ 50,000	$ 50,000
				CONSTRUCTION - BASE BID:	**$ 9,750,365**
		CONTINGENCY		30%	$ 3,174,493
				TOTAL:	**$ 13,756,136**
		DESIGN		15%	$ 2,063,421
		PERMITTING		-	$ 50,000
				Estimated Project Total:	**$ 15,869,600**

Opinion of Probable Project Cost - Site 5: North Ingleside Long-Term Ponding					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
			GENERAL		
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 30,794	$ 30,794
2	INSURANCE AND BONDS	2.5%	LS	$ 15,397	$ 15,397
3	TRAFFIC CONTROL	-	LS	$ 20,000	$ 20,000
				CONSTRUCTION - GENERAL	**$ 66,192**
			BASE BID		
4	15" PVC Installation	2,585	LF	$ 105	$ 271,425
5	2.5' X 2.5' GRATE INLET INSTALLATION	16	EA	$ 6,240	$ 99,840
6	EXCAVATION (GROUND)	2,730	CY	$ 17	$ 47,497
7	EXCAVATION BACKFILL	2,016	CY	$ 20	$ 40,328
8	EXCAVATION- HAUL OFF	999	CY	$ 10	$ 9,987
9	CEMENT STABILIZED SAND - BEDDING MATERIAL	591	CY	$ 172	$ 101,668
10	CONCRETE DRIVEWAY REPAIRS	634	SF	$ 20	$ 12,363
11	TRENCH SAFETY	2,585	LF	$ 9	$ 23,265
12	SWPPP FILTER FABRIC FENCE	2,585	LF	$ 3	$ 7,755
13	INLET PROCTECTION	160	LF	$ 11	$ 1,760
				CONSTRUCTION - BASE BID:	**$ 615,887**
		CONTINGENCY		30%	$ 204,624
				TOTAL:	**$ 886,703**
		DESIGN		15%	$ 133,006
		PERMITTING		-	$ -
				Estimated Project Total:	**$ 1,019,800**

Opinion of Probable Project Cost - Site 6: Nystrom Addition Drainage Improvements					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
	GENERAL				
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 84,901	$ 84,901
2	INSURANCE AND BONDS	2.5%	LS	$ 42,451	$ 42,451
3	TRAFFIC CONTROL	-	LS	$ 30,000	$ 30,000
				CONSTRUCTION - GENERAL	**$ 157,352**
	BASE BID				
4	15" RCP INSTALLATION	2,243	LF	$ 105	$ 235,481
5	24" RCP INSTALLATION	134	LF	$ 125	$ 16,697
6	15" RCP REMOVAL	1,093	LF	$ 34	$ 37,159
7	15" CORRUGATED METAL PIPE REMOVAL	41	LF	$ 34	$ 1,394
8	3' X 3' GRATE INLET REMOVAL	2	EA	$ 1,385	$ 2,771
9	EXCAVATION (ROADWAY)	1,094	CY	$ 17	$ 19,027
10	EMBANKMENT (ROADWAY)	373	CY	$ 20	$ 7,467
11	CEMENT STABILIZED SAND - BEDDING MATERIAL	545	CY	$ 172	$ 93,763
12	EXCAVATION (CHANNEL)	6,972	CY	$ 58	$ 400,907
13	EXISTING CHANNEL FILL	360	CY	$ 20	$ 7,200
14	EXCAVATION- HAUL OFF	7,621	CY	$ 10	$ 76,205
15	6" TOPSOIL	12,466	SY	$ 16	$ 193,217
16	EROSION CONTROL MATTING	12,466	SY	$ 17	$ 205,683
17	HYDROMULCH	12,466	SY	$ 9	$ 112,191
18	DITCH GRADING AND REGRADING	7,099	LF	$ 14	$ 95,834
19	ASPHALT PAVEMENT REPAIR	346	SY	$ 120	$ 41,482
20	CONCRETE DRIVEWAY REPAIRS	6,750	SF	$ 20	$ 131,625
21	SWPPP FILTER FABRIC FENCE	3,943	LF	$ 3	$ 11,830
22	TRENCH SAFETY	491	LF	$ 9	$ 4,423
23	ROCK FILTER DAM INSTALLATION	32	LF	$ 92	$ 2,945
24	ROCK FILTER DAM REMOVAL	32	LF	$ 23	$ 726
				CONSTRUCTION - BASE BID:	**$ 1,698,026**
		CONTINGENCY		30%	$ 556,614
				TOTAL:	**$ 2,411,992**
		DESIGN		15%	$ 361,799
		PERMITTING		-	$ 50,000
				Estimated Project Total:	**$ 2,823,800**

Opinion of Probable Project Cost - Site 7: Parkside Terrace Subdivision Drainage Improvements					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
	GENERAL				
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 282,307	$ 282,307
2	INSURANCE AND BONDS	2.5%	LS	$ 141,153	$ 141,153
3	TRAFFIC CONTROL	-	LS	$ 50,000	$ 50,000
				CONSTRUCTION - GENERAL	**$ 473,460**
	BASE BID				
4	4' X 3' RCB	1,362	LF	$ 500	$ 680,950
5	36" RCP INSTALLATION	363	LF	$ 240	$ 87,024
6	6' X 3' RCB	1,751	LF	$ 775	$ 1,357,258
7	24" RCP INSTALLATION	312	LF	$ 125	$ 38,938
8	3.5' X 2' RCB	709	LF	$ 450	$ 319,230
9	TYPE C INLET (10')	40	EA	$ 9,421	$ 376,848
10	48" DIAMETER MANHOLE	1	EA	$ 10,850	$ 10,850
11	6' X 6' JUNCTION BOX	5	EA	$ 13,833	$ 69,165
12	8' X 8' JUNCTION BOX	2	EA	$ 18,181	$ 36,362
13	TYPE C INLET (5') REMOVAL	18	EA	$ 1,385	$ 24,937
14	MANHOLE REMOVAL	5	EA	$ 1,342	$ 6,710
15	TRENCH SAFETY (STRUCTURE)	48	EA	$ 380	$ 18,240
16	15" RCP REMOVAL	131	LF	$ 34	$ 4,464
17	18" RCP REMOVAL	482	LF	$ 34	$ 16,402
18	24" RCP REMOVAL	596	LF	$ 34	$ 20,278
19	30" RCP REMOVAL	1,784	LF	$ 34	$ 60,642
20	EXCAVATION (ROADWAY)	14,043	CY	$ 17	$ 244,351
21	EMBANKMENT (ROADWAY)	5,215	CY	$ 20	$ 104,310
22	EXCAVATION- HAUL OFF	11,193	CY	$ 10	$ 111,927
23	TRENCH SAFETY	157	LF	$ 9	$ 1,410
24	SWPPP FILTER FABRIC FENCE	157	LF	$ 3	$ 470
25	CEMENT STABILIZED SAND - BEDDING MATERIAL	2,520	CY	$ 172	$ 433,473
26	INLET PROCTECTION	413	LF	$ 11	$ 4,538
27	ASPHALT PAVEMENT REPAIR	1,166	SY	$ 120	$ 139,968
28	PRIME COAT	1,614	GAL	$ 8	$ 12,592
29	HOT MIX ASPHALT (TYPE D) (2")	8,072	SY	$ 9	$ 71,034
30	LIME SUBGRADE (8")	10,090	SY	$ 7	$ 70,327
31	LIMESTONE BASE (10")	6,727	CY	$ 133	$ 891,956
32	REMOVE-REPLACE CURB AND GUTTER	6,054	LF	$ 55	$ 335,089
33	DITCH GRADING AND REGRADING	1,955	LF	$ 14	$ 26,395
34	WATER OR WASTEWATER UTILITY ADJUSTMENT	10	EA	$ 7,000	$ 70,000
				CONSTRUCTION - BASE BID:	**$ 5,646,137**
		CONTINGENCY		30%	$ 1,835,880
				TOTAL:	**$ 7,955,478**
		DESIGN		15%	$ 1,193,322
		PERMITTING		-	$ -
				Estimated Project Total:	**$ 9,148,800**

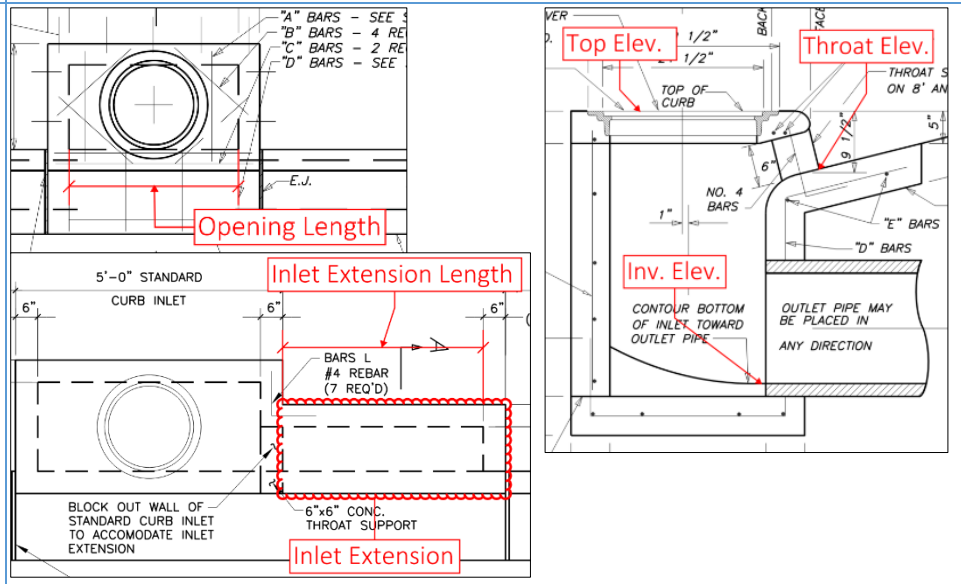
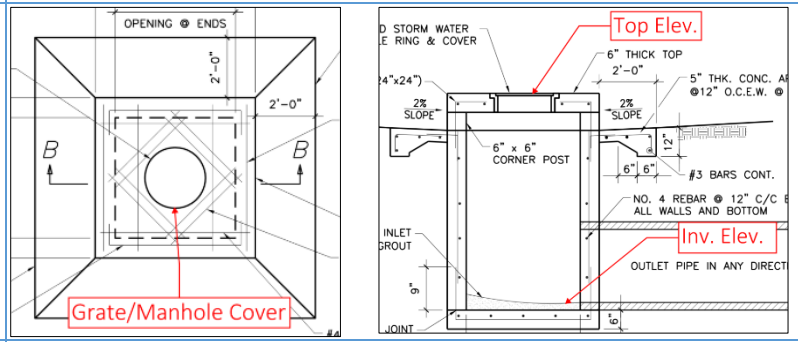
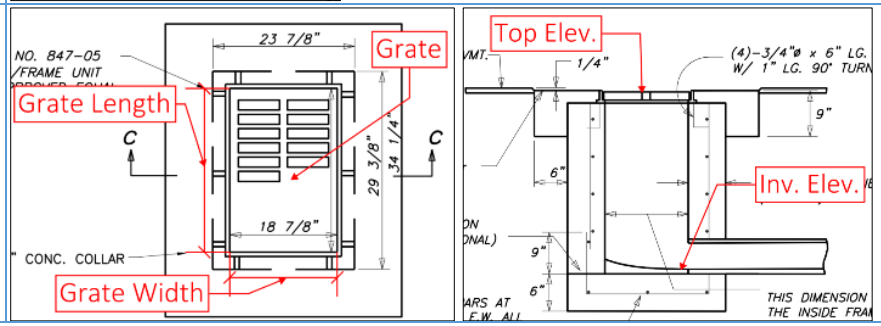
Opinion of Probable Project Cost - Site 8: Villanova Place Drainage Improvements					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
			GENERAL		
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 311,122	$ 311,122
2	INSURANCE AND BONDS	2.5%	LS	$ 155,561	$ 155,561
3	TRAFFIC CONTROL	-	LS	$ 50,000	$ 50,000
				CONSTRUCTION - GENERAL	**$ 516,683**
			BASE BID		
4	24" RCP INSTALLATION	1,060	LF	$ 125	$ 132,441
5	3' X 2' RCB	165	LF	$ 395	$ 65,294
6	6' X 2' RCB	567	LF	$ 620	$ 351,540
7	7' X 2.5' RCB	2,637	LF	$ 850	$ 2,241,365
8	5' X 2' RCB	67	LF	$ 525	$ 35,280
9	6' X 2.5' RCB	249	LF	$ 700	$ 174,580
10	10' X 5' RCB	460	LF	$ 1,526	$ 701,091
10	8' X 8' JUNCTION BOX	8	EA	$ 18,181	$ 145,448
11	TRENCH SAFETY (STRUCTURE)	8	EA	$ 380	$ 3,040
12	18" RCP REMOVAL	1,060	LF	$ 34	$ 36,024
13	7' X 3' RCB REMOVAL	368	LF	$ 34	$ 12,498
13	EXCAVATION (ROADWAY)	12,955	CY	$ 17	$ 225,413
14	EMBANKMENT (ROADWAY)	4,306	CY	$ 20	$ 86,120
15	EXCAVATION- HAUL OFF	11,978	CY	$ 10	$ 119,781
16	TRENCH SAFETY	3,432	LF	$ 9	$ 30,887
17	SWPPP FILTER FABRIC FENCE	3,716	LF	$ 3	$ 11,147
18	CEMENT STABILIZED SAND - BEDDING MATERIAL	2,867	CY	$ 172	$ 493,174
19	CONCRETE DRIVEWAY REPAIRS	9,804	SF	$ 20	$ 191,178
20	ASPHALT PAVEMENT REPAIR	4,698	SY	$ 120	$ 563,820
21	PRIME COAT	549	GAL	$ 8	$ 4,284
22	HOT MIX ASPHALT (TYPE D) (2")	2,746	SY	$ 9	$ 24,168
23	LIME SUBGRADE (8")	3,433	SY	$ 7	$ 23,928
24	LIMESTONE BASE (10")	2,289	CY	$ 133	$ 303,474
25	DITCH GRADING AND REGRADING	3,716	LF	$ 14	$ 50,160
26	EDGE CURB	2,546	LF	$ 22	$ 56,012
27	INLET PROCTECTION	27	LF	$ 11	$ 297
28	WATER OR WASTEWATER UTILITY ADJUSTMENT	20	EA	$ 7,000	$ 140,000
				CONSTRUCTION - BASE BID:	**$ 6,222,445**
		CONTINGENCY		30%	$ 2,021,739
				TOTAL:	**$ 8,760,868**
		DESIGN		15%	$ 1,314,131
		PERMITTING		-	$ -
				Estimated Project Total:	**$ 10,075,000**

Opinion of Probable Project Cost - Site 9: Humble Addition and Avenue B Drainage Improvements					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
			GENERAL		
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 164,501	$ 164,501
2	INSURANCE AND BONDS	2.5%	LS	$ 82,251	$ 82,251
3	TRAFFIC CONTROL	-	LS	$ 50,000	$ 50,000
				CONSTRUCTION - GENERAL	**$ 296,752**
			BASE BID		
4	4' X 3' RCB	473	LF	$ 500	$ 236,300
5	36" RCP INSTALLATION	1,387	LF	$ 240	$ 332,904
6	6' X 3' RCB	217	LF	$ 775	$ 168,485
7	24" RCP INSTALLATION	1,156	LF	$ 125	$ 144,463
8	5' X 3' RCB	510	LF	$ 530	$ 270,300
9	12" RCP INSTALLATION	1,311	LF	$ 97	$ 126,594
10	18" RCP INSTALLATION	455	LF	$ 123	$ 55,904
11	3' X 3' RCB	59	LF	$ 405	$ 23,814
12	3' X 3' GRATE INLET INSTALLATION	18	EA	$ 6,240	$ 112,320
13	2' X 2' GRATE INLET INSTALLATION	7	EA	$ 6,240	$ 43,680
14	TYPE C INLET (5')	3	EA	$ 6,855	$ 20,564
15	TYPE C INLET (10')	1	EA	$ 9,421	$ 9,421
16	48" DIAMETER MANHOLE	3	EA	$ 10,850	$ 32,550
17	6' X 6' JUNCTION BOX	3	EA	$ 13,833	$ 41,499
18	8' X 8' JUNCTION BOX	5	EA	$ 18,181	$ 90,905
19	1' DIAMETER GRATE INLET REMOVAL	11	EA	$ 1,385	$ 15,239
20	2' X 2' GRATE INLET REMOVAL	10	EA	$ 1,385	$ 13,854
21	MANHOLE REMOVAL	11	EA	$ 1,342	$ 14,763
22	TRENCH SAFETY (STRUCTURE)	40	EA	$ 380	$ 15,200
23	6" RCP REMOVAL	134	LF	$ 34	$ 4,553
24	12" RCP REMOVAL	1,046	LF	$ 34	$ 35,571
25	18" RCP REMOVAL	773	LF	$ 34	$ 26,282
26	24" RCP REMOVAL	690	LF	$ 34	$ 23,453
27	32" RCP REMOVAL	1,222	LF	$ 34	$ 41,548
28	36" RCP REMOVAL	37	LF	$ 34	$ 1,251
29	EXCAVATION (ROADWAY)	6,211	CY	$ 17	$ 108,077
30	EMBANKMENT (ROADWAY)	1,955	CY	$ 20	$ 39,104
31	EXCAVATION- HAUL OFF	5,804	CY	$ 10	$ 58,039
32	TRENCH SAFETY	5,567	LF	$ 9	$ 50,099
33	SWPPP FILTER FABRIC FENCE	3,684	LF	$ 3	$ 11,051
34	CEMENT STABILIZED SAND - BEDDING MATERIAL	2,510	CY	$ 172	$ 431,696
35	INLET PROCTECTION	297	LF	$ 11	$ 3,267
36	CONCRETE DRIVEWAY REPAIRS	11,075	SF	$ 20	$ 215,963
37	ASPHALT PAVEMENT REPAIR	1,455	SY	$ 120	$ 174,608
38	DITCH GRADING AND REGRADING	5,262	LF	$ 14	$ 71,036
39	REMOVING CONCRETE (SIDEWALKS)	6,132	SF	$ 5	$ 27,594
40	4" THICK CONCRETE SIDEWALK	7,665	SF	$ 10	$ 78,566
41	ADA RAMPS	8	EA	$ 2,899	$ 23,189
42	CURB AND GUTTER	1,260	LF	$ 21	$ 26,321
43	WATER OR WASTEWATER UTILITY ADJUSTMENT	10	EA	$ 7,000	$ 70,000
				CONSTRUCTION - BASE BID:	**$ 3,290,026**
		CONTINGENCY		30%	$ 1,076,034
				TOTAL:	**$ 4,662,812**
		DESIGN		15%	$ 699,422
		PERMITTING		-	$ -
				Estimated Project Total:	**$ 5,362,300**

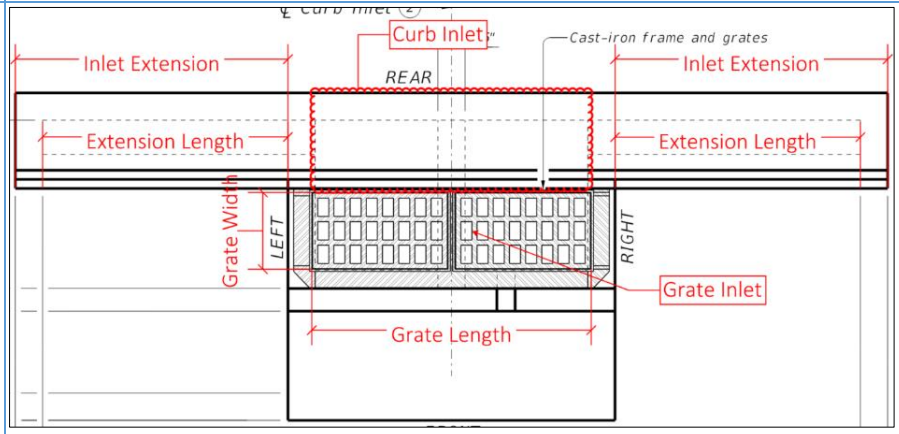
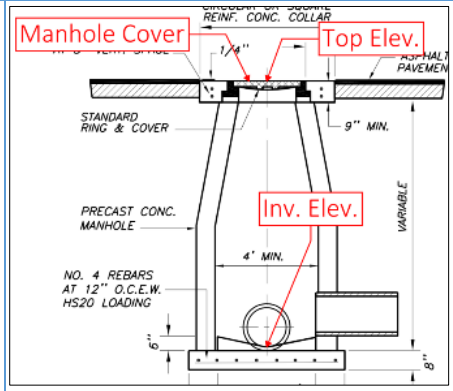
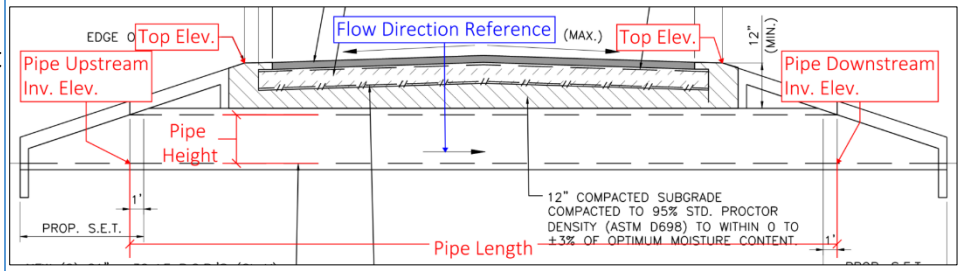
Opinion of Probable Project Cost - Site 10: Live Oak Ditch					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
GENERAL					
1	MOBILIZATION / DEMOBILIZATION	5%	LS	$ 497,445	$ 497,445
2	INSURANCE AND BONDS	2.5%	LS	$ 248,723	$ 248,723
3	TRAFFIC CONTROL	-	LS	$ 100,000	$ 100,000
				CONSTRUCTION - GENERAL	**$ 846,168**
BASE BID					
4	9' X 5' RCB	1,234	LF	$ 1,600	$ 1,974,624
5	18" RCP INSTALLATION	88	LF	$ 123	$ 10,824
6	48" RCP REMOVAL	60	LF	$ 34	$ 2,039
7	60" RCP REMOVAL	42	LF	$ 34	$ 1,434
8	66" RCP REMOVAL	543	LF	$ 34	$ 18,459
9	TYPE C INLET (5')	4	EA	$ 6,855	$ 27,419
10	TYPE C INLET (5') REMOVAL	2	EA	$ 1,385	$ 2,771
11	7' X12' CIP JUNCTION BOX	4	EA	$ 23,000	$ 92,000
12	EXCAVATION (ROADWAY)	5,802	CY	$ 17	$ 100,948
13	EMBANKMENT (ROADWAY)	2,857	CY	$ 20	$ 57,139
14	CEMENT STABILIZED SAND - BEDDING MATERIAL	878	CY	$ 172	$ 151,070
15	EXCAVATION (CHANNEL)	64,957	CY	$ 58	$ 3,735,034
16	EXCAVATION- HAUL OFF	95,062	CY	$ 10	$ 950,624
17	6" TOPSOIL	60,293	SY	$ 16	$ 934,541
18	EROSION CONTROL MATTING	60,293	SY	$ 17	$ 994,834
19	HYDROMULCH	60,293	SY	$ 9	$ 542,637
20	CLASS A CONCRETE (CHANNEL LINING)	106	CY	$ 650	$ 69,221
21	ASPHALT PAVEMENT REPAIR	2,115	SY	$ 120	$ 253,770
22	CURB AND GUTTER	660	LF	$ 21	$ 13,787
23	SWPPP FILTER FABRIC FENCE	705	LF	$ 3	$ 2,115
24	TRENCH SAFETY	705	LF	$ 9	$ 6,346
25	TRENCH SAFETY (STRUCTURE)	8	EA	$ 380	$ 3,040
26	ROCK FILTER DAM INSTALLATION	37	LF	$ 92	$ 3,391
27	ROCK FILTER DAM REMOVAL	37	LF	$ 23	$ 836
				CONSTRUCTION - BASE BID:	**$ 9,948,903**
		CONTINGENCY		30%	$ 3,238,522
				TOTAL:	**$ 14,033,593**
		DESIGN		15%	$ 2,105,039
		PERMITTING		-	$ 50,000
				Estimated Project Total:	**$ 16,188,700**

APPENDIX E
STORMWATER STRUCTURES TYPE GUIDE AND CONDITION RATING GUIDE

Stormwater Structures Type Guide

Structure Type	Schematic	Pictures
Curb Inlet		 
Post Inlet		
Grate Inlet		 

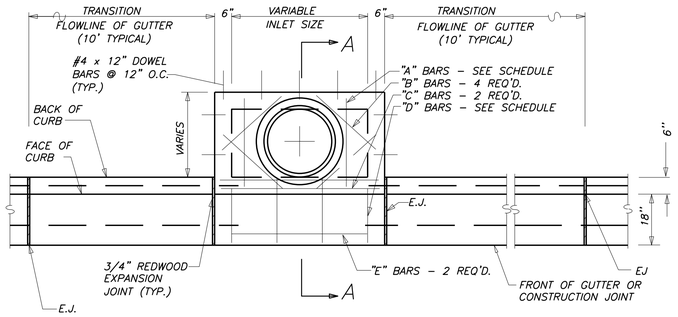
Stormwater Structures Type Guide

Structure Type	Schematic	Pictures
Combination Inlet		 
Manhole or Junction Box		
Stormwater Pipe or Culvert		 

Stormwater Structures Condition Rating Guide

Rating	General Service Level		Specific Rating Description	Pictures
	Culverts	Bridges		
Excellent	Culvert is structurally sound and flows freely with no accumulated debris or sedimentation. Channel slopes are stable and well protected. Water does not breach the embankment and cross the roadway. No noticeable or noteworthy structural deficiencies.	No problems of any consequence noted with the structural bridge components. No maintenance on structural items is required.	Excellent condition	 
Good	Culvert is structurally sound and has only minor localized deficiencies. Silt and debris build-up is minimal. Banks may show some signs of instability. Water does not breach the embankment and cross the roadway.	There may be some deterioration or other minor defects in structural components. The capacity of the bridge is not impacted by deterioration or maintenance needs.	Good condition – some minor problems	  
Fair	Culvert has moderate silt & debris build-up that requires occasional maintenance. Moderate to major deterioration occurring in localized areas & culvert may be misaligned. Erosion occurring in channel & banks may be unstable. Culvert can handle most heavy flows but may build up head water.	All primary structural elements are sound but may have minor defects.	Fair condition - minor deterioration of structural elements	  
Poor	Culvert has significant silt & debris build-up impacting capacity. Bank protection has failed, and water may be piping around the culvert. The culvert has deteriorated to the point where settlement is likely occurring in the roadway. Partial culvert collapse is imminent if corrective action is not taken, or culvert has lost all structural capacity and has failed beyond the point of repair.	Bridge may be showing advanced deterioration in one or more structural components. Deterioration has seriously affected primary structural components & all parts of structure require some level of maintenance. Local failures are possible. Bridge should be closely monitored until repairs can be made. Bridge likely cannot carry legal loads.	Poor condition – deterioration significantly affects structural capacity & operation	     

APPENDIX F
CITY OF INGLESIDE STANDARD STORMWATER CONSTRUCTION DETAILS

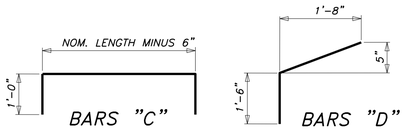


PLAN OF 5' STANDARD INLET

NOT TO SCALE

SPECIAL NOTE:

1. CONTRACTOR TO PROVIDE #4 x 12" DOWELS @ 12" O.C. WHERE PROP. SIDEWALK ABUTS INLET. (NO SEPARATE PAYMENT)
2. FOR CURB INLET THROAT EXTENSION DETAILS REFER TO STORM WATER STANDARD DETAIL SHEET 3 OF 3.

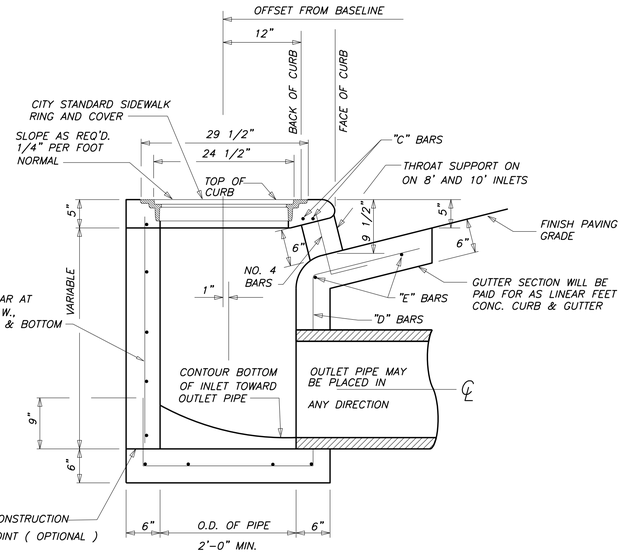


** THROAT OPENINGS SHALL HAVE A 6" X 6" CONCRETE SUPPORT PLACED AT MID-THROAT

* NOMINAL LENGTH OF INLET SHALL BE DESIGNATED AS THE CLEAR WIDTH OPENING.

STANDARD CURB INLET STEEL SCHEDULE					
ALL BARS No. 4 PREFORMED					
INLET SIZE (Nom. Length)	NO. REQ'D./LENGTH				
	"A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS
4'	2/a	4/1'-10"	2/5'-6"	4/3'-2"	2/4'-6"
5'	2/a	4/3'-2"	2/6'-6"	4/3'-2"	2/5'-6"
6'	4/a	4/4'-0"	2/7'-6"	6/3'-2"	2/6'-6"
* * 8'	4/a	4/4'-0"	2/9'-6"	6/3'-2"	2/8'-6"
* * 10'	6/a	4/4'-0"	2/11'-6"	7/3'-2"	2/10'-6"
BENDING	STRAIGHT	STRAIGHT	SEE DET.	SEE DET.	STRAIGHT

a = O.D. + 8", 2'-8" MIN. MAX. PIPE I.D. = 48 INCHES

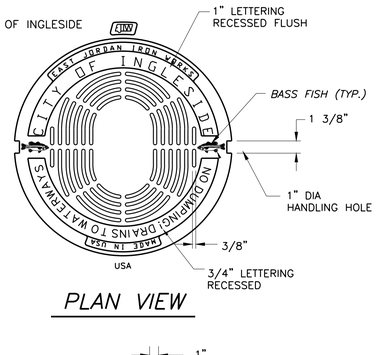


SECTION A-A

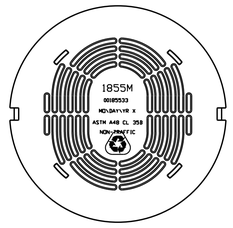
NOT TO SCALE

FLOWLINE TRANSITION AT INLET FOR 4" OR 6" STD. CURB AND GUTTER

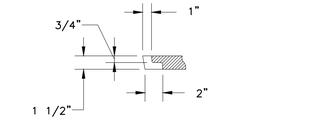
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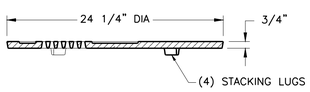
PLAN VIEW



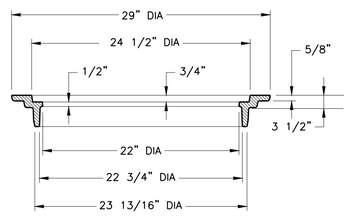
GRATE BLOCK



PICKSLOT DETAIL



GRATE SECTION



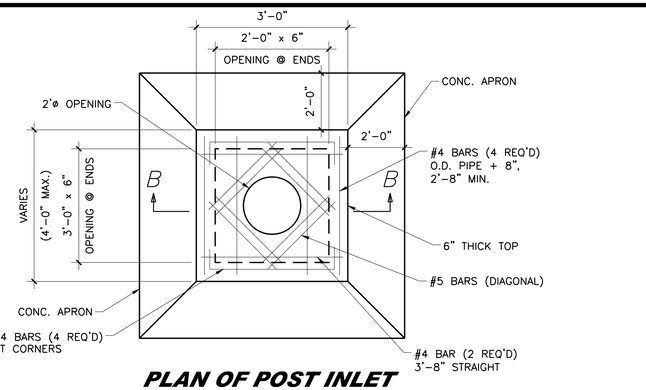
RING SECTION

CITY STANDARD INLET AND SIDWALK MANHOLE RING & COVER CASTING DETAILS

NOT TO SCALE

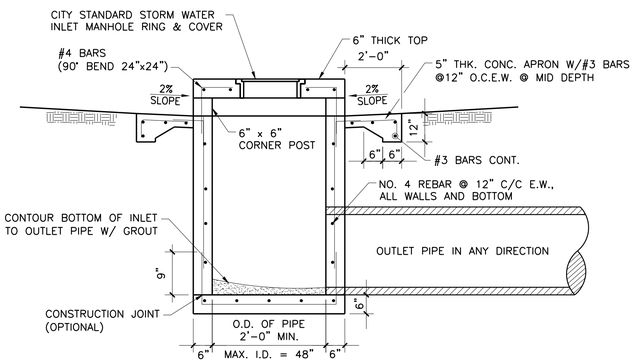
INLET AND SIDEWALK MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN MANHOLE ASSEMBLY FOR LOAD RATING NON-TRAFFIC.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS: THE COVER = 60 POUNDS, THE RING = 135 POUNDS.



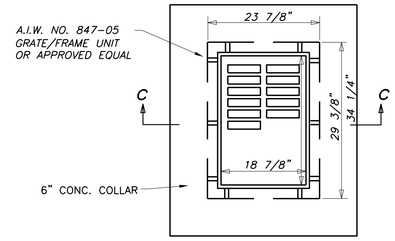
PLAN OF POST INLET

NOT TO SCALE



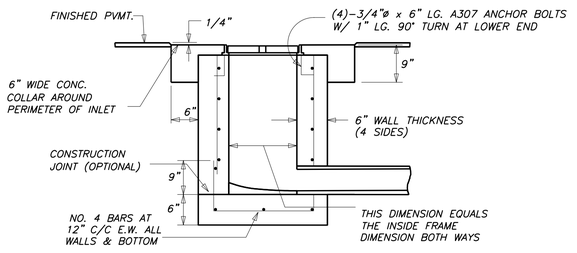
SECTION B-B

NOT TO SCALE



PLAN OF STANDARD GRATE INLET

NOT TO SCALE



SECTION C-C

NOT TO SCALE

REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE

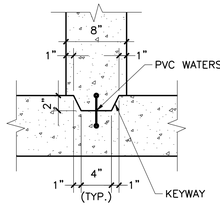
STORM WATER STANDARD DETAILS

1 OF 3

SHEET _____ of _____

RECORD DRAWING NO.

CITY PROJECT # _____



PRE-CAST CONC. MANHOLE NOTES:

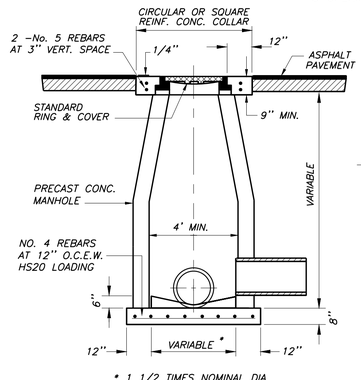
HS20 LOADING

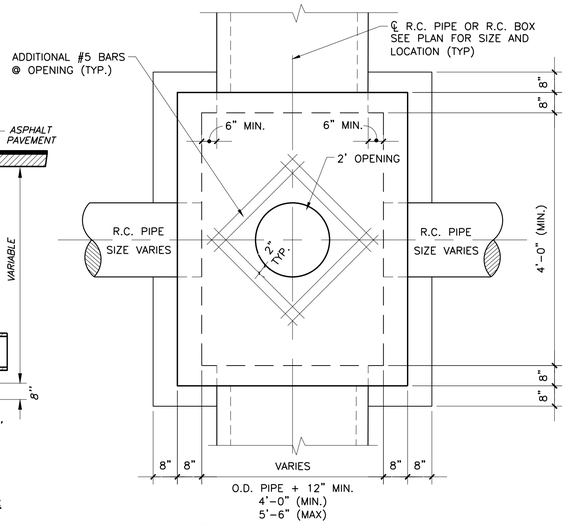
CONCRETE 28 DAY COMPRESSIVE STRENGTH - 5000 PSI

REINFORCEMENT STEEL - 60,000 PSI

REBAR MIN. SPLICE LENGTHS: #4-22" #5-28" #6-33"

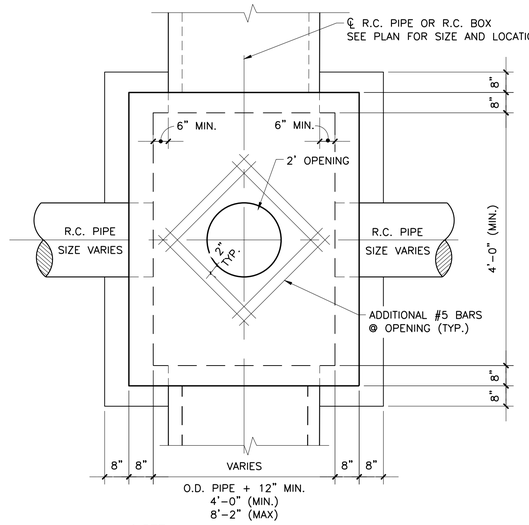
MANHOLE WALL/RISER REINFORCED PER ASTM C-478





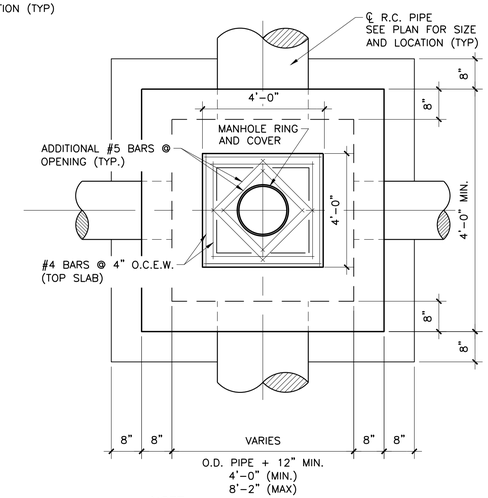
NOTE:

FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES



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NOTE:

FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

KEYWAY DETAIL

NOT TO SCALE

TYPE "A" MANHOLE

NOT TO SCALE

PLAN
TYPE 'B' MANHOLE

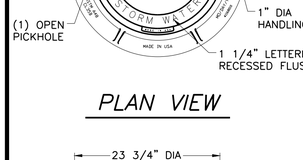
NOT TO SCALE

PLAN
TYPE 'C' MANHOLE

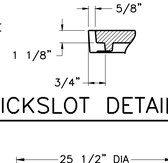
NOT TO SCALE

PLAN
TYPE 'D' MANHOLE

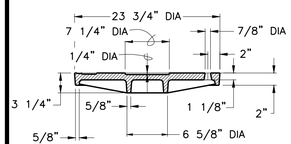
NOT TO SCALE



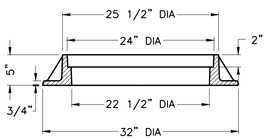
PLAN VIEW



PICKSLOT DETAIL



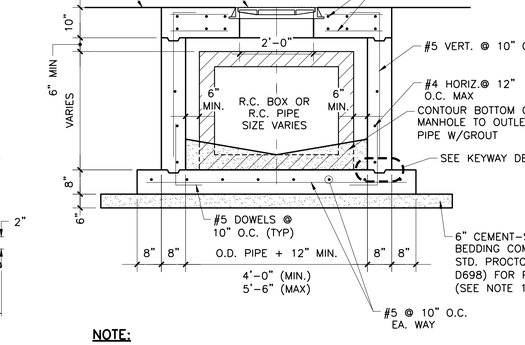
COVER SECTION



FRAME SECTION

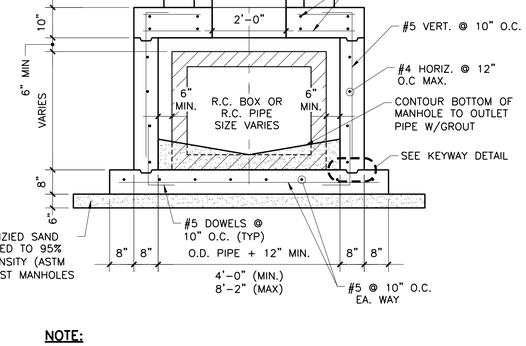
CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL

NOT TO SCALE



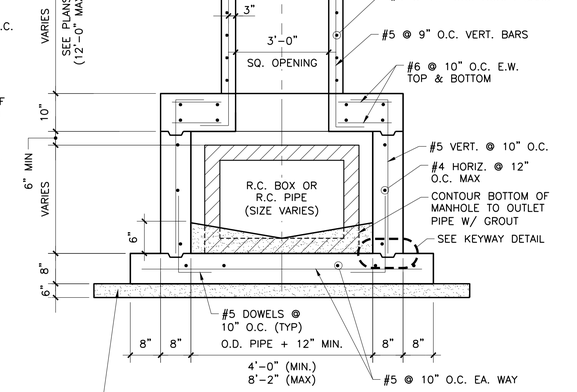
NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY



NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY



6" CEMENT-STABLIZIED SAND BEDDING COMPACTED TO 95% STD. PROCTOR DENSITY (ASTM D698) FOR PRECAST MANHOLES (SEE NOTE 12)

SECTION
TYPE 'B' MANHOLE

NOT TO SCALE

SECTION
TYPE 'C' MANHOLE

NOT TO SCALE

SECTION
TYPE 'D' MANHOLE

NOT TO SCALE

NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY

ROADWAY MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN V 1168 ASSEMBLY AND FOR SCHOOL ZONE SHALL BE EAST JORDAN BOLTED-IN 1168 ASSEMBLY LOAD RATING HEAVY DUTY.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS : THE COVER = 160 POUNDS, THE RING = 180 POUNDS.
9. POLYETHYLENE MANHOLE ADJUSTMENT RINGS SHALL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING.

GENERAL NOTES FOR CONCRETE DRAINAGE STRUCTURES:

1. ALL CONCRETE SHALL BE CLASS "C" (3600 PSI) EXCEPT CITY STANDARD CURB INLETS AND CONCRETE COLLARS MAY BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. CHAMFER ALL EXPOSED EDGES 3/4".
7. PROVIDE CITY STANDARD SIDEWALK MANHOLE RING AND COVER FOR CITY STANDARD CURB INLET. PROVIDE CITY STANDARD ROADWAY STORM WATER MANHOLE RING AND COVER FOR SPECIAL CURB INLET.
8. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS AND MANHOLES, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION. PRECAST MANHOLE WITHIN THE ROADWAY SHAL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING AND SEALED BY A LICENSED ENGINEER.
9. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION **CURB**.
10. INVERT OF INLET SHALL BE SLOPED 1:20 WITH GROUT.
11. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED EXCEPT WHERE OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
12. IN DEEP EXCAVATIONS (> 20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE

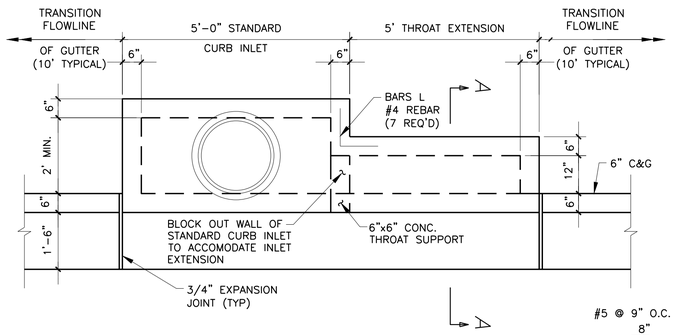
STORM WATER STANDARD DETAILS

2 OF 3

SHEET _____ of _____

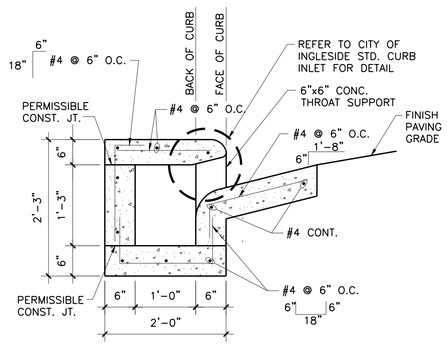
RECORD DRAWING NO.

CITY PROJECT # _____



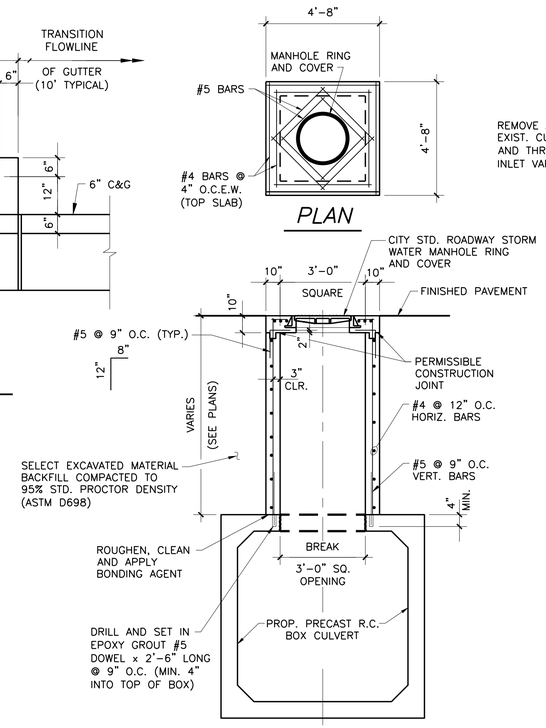
CURB INLET THROAT EXTENSION PLAN

NOT TO SCALE



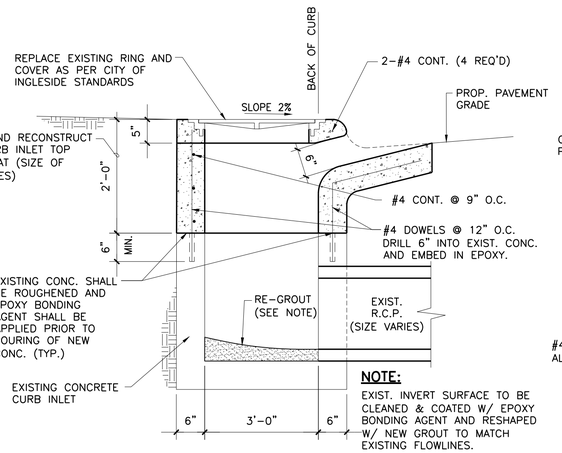
SECTION A-A

NOT TO SCALE



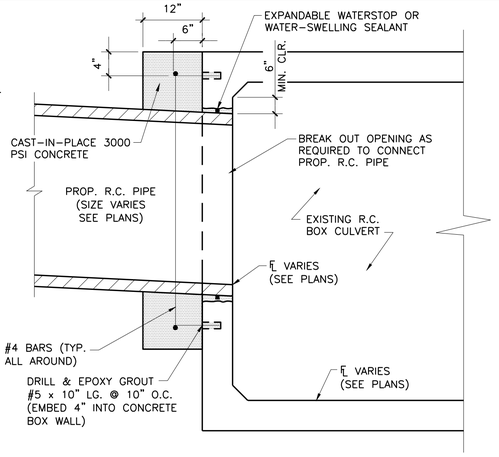
MANHOLE RISER DETAIL

NOT TO SCALE



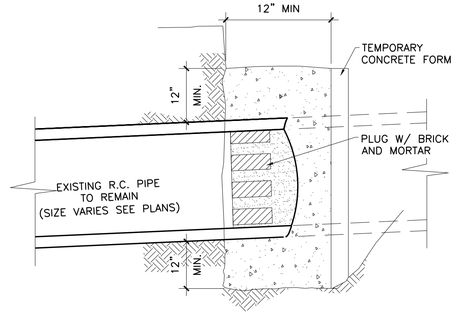
REMOVE AND REPLACE TOP OF EXISTING CURB INLET DETAIL

NOT TO SCALE



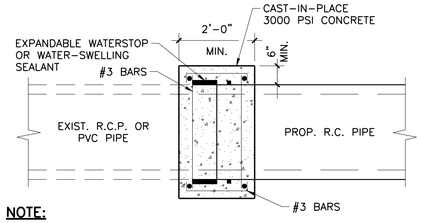
PROP. PIPE TO EXISTING R.C. BOX CONNECTION DETAIL

NOT TO SCALE



EXISTING R.C. PIPE PLUG

NOT TO SCALE

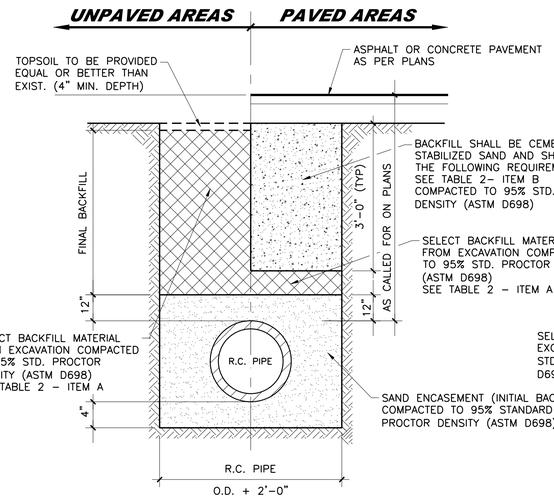


NOTE:

PIPE COLLAR SHALL BE USED WHERE A TIGHT JOINT CANNOT BE PLACED, SUCH AS A BREAK IN ALIGNMENT, DAMAGED PIPE ENDS OR TIE-IN TO EXISTING PIPE OR STRUCTURES.

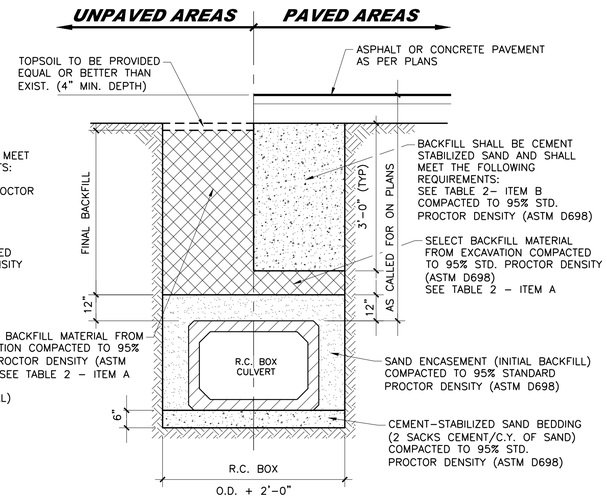
CONCRETE COLLAR DETAIL

NOT TO SCALE



TRENCH BACKFILL FOR STORM WATER PIPES

NOT TO SCALE



NOTE: (CONCRETE PAVEMENT ONLY)

CONTRACTOR HAS OPTION TO USE CEMENT STABILIZED SAND OR BACKFILL WITH SELECT BACKFILL MATERIAL.

TRENCH BACKFILL FOR STORM WATER R.C. BOX CULVERTS

NOT TO SCALE

GENERAL NOTES FOR BACKFILL

TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL. SEWER LINES:

1. *EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA.*

   MEETING REQUIREMENTS OF ASTM D2487 FOR:

SP	GP
SW	GW
SP-SM	GP-GM
SW-SM	GW-GM

   AND IN ADDITION:
   PASSING 1/2" SIEVE - 100%
   PASSING #4 SIEVE - 30% MINIMUM
   PLASTICITY INDEX (PI) - NP TO 10 MAX.

2. *IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:*

   A. *CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.*

FOR ALL UTILITIES:

1. *FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE.*
2. *FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE.*

TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)

UNPAVED AREAS	PAVED AREAS
A. *FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER; LOOSE LIFTS TO BE PLACED 10" MAX.* *COMPACT MATERIAL TO 95% STD. PROCTOR (D698).* *MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.*	A. *FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE: BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR TO BE IMPORTED MATERIAL AND SHALL MEET THE FOLLOWING:* *LL<35* *PI 8-20* *NO CLUMPS > 2" DIA.* *MOISTURE 0 TO +3%* *COMPACT 95% D698 STD PROCTOR* *LOOSE LIFTS OF 10" MAX OR IF SELECT MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND SEE TABLE 2-ITEM B*
B. *TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. (4" MIN.) COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)*	B. *FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE:* *BACKFILL SHALL BE CEMENT STABILIZED SAND AND SHALL MEET THE FOLLOWING REQUIREMENTS:* *SAND GRADATION:* *% PASSING* *1/2" 100%* *#4 55-100* *#10 40-100* *#40 25-100* *#200 10-20* *PI NP-10* *2 SACKS CEMENT/C.Y. OF SAND.* *COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/-2%) OF OPTIMUM.*

REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE
STORM WATER STANDARD DETAILS
3 OF 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT # ____

SITE DESCRIPTION

PROJECT LIMITS: _____

PROJECT DESCRIPTION: _____

MAJOR SOIL DISTURBING ACTIVITIES: _____

TOTAL PROJECT AREA: _____

TOTAL AREA TO BE DISTURBED: _____

WEIGHTED RUNOFF COEFFICIENT:
(AFTER CONSTRUCTION): _____

EXISTING CONDITION OF SOIL & VEGETATIVE
COVER AND % OF EXISTING VEGETATIVE COVER: _____

NAME OF RECEIVING WATERS: _____

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

____ TEMPORARY SEEDING
____ PERMANENT PLANTING, SODDING, OR SEEDING
____ MULCHING
____ SOIL RETENTION BLANKET
____ BUFFER ZONES
____ PRESERVATION OF NATURAL RESOURCES

OTHER: _____

STRUCTURAL PRACTICES:

____ SILT FENCES
____ HAY BALES
____ ROCK BERMS
____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
____ DIVERSION DIKE AND SWALE COMBINATIONS
____ PIPE SLOPE DRAINS
____ PAVED FLUMES
____ ROCK BEDDING AT CONSTRUCTION EXIT
____ TIMBER MATTING AT CONSTRUCTION EXIT
____ CHANNEL LINERS
____ SEDIMENT TRAPS
____ SEDIMENT BASINS
____ STORM INLET SEDIMENT TRAP
____ STONE OUTLET STRUCTURES
____ CURBS AND GUTTERS
____ STORM SEWERS
____ VELOCITY CONTROL DEVICES
____ EROSION CONTROL LOGS

OTHER: _____

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

STORM WATER MANAGEMENT: _____

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE: _____

INSPECTION: _____

WASTE MATERIALS: _____

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): _____

SANITARY WASTE: _____

OFFSITE VEHICLE TRACKING:

____ HAUL ROADS DAMPENED FOR DUST CONTROL
____ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
____ EXCESS DIRT ON ROAD REMOVED DAILY
____ STABILIZED CONSTRUCTION ENTRANCE

OTHER: _____

REMARKS: _____

PERMITS:

CONTRACTOR SHALL UTILIZE THE STORM WATER POLLUTION PREVENTION PLAN AND SHALL OBTAIN ALL PERMITS AND FULFILL ALL PERMIT REQUIREMENTS, INCLUDING FEES, FOR T.C.E.Q. GENERAL PERMIT NO. TXR 150000 RELATING TO DISCHARGES FROM CONSTRUCTION ACTIVITIES. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO NOTICE OF INTENT (NOI, REQUIRED SITE POSTINGS AND NOTICE OF TERMINATION (NOT). ALL ACTIVITIES WILL BE PERFORMED AT THE MILESTONES REQUIRED BY THE T.C.E.Q. NO SEPARATE PAYMENT WILL BE MADE FOR SUCH PERMITS.

REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE
STORM WATER POLLUTION PREVENTION PLAN NOTES
1 OF 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT # _____

Stormwater Pollution Prevention - Clean Water Act Section 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres distrubed soil. Projects with any disturbed soil must protect for erosion and sedimentation.

☐ No Action Required ☐ Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000
2. Comply with the SW3P and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice, (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.
4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, submit NOI to TCEQ and the Engineer.

Work in or near Streams, Waterbodies and Wetlands Clean Water Act Sections 401 & 404

No Permit Required

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas.

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

☐

☐ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP* _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1.

2.

3.

4.

Best Management Practices:

Erosion	*Sedimentation*	*Post-Construction TSS*
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	

III. Cultural Resources

In the event historical issues or archeological artifacts (bones, burnt rock, flint, pottery, etc.) are found during construction, cease work in the immediate area and contact the Engineer immediately.

☐ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

5.

IV. Vegetation Resources

Preserve native vegetation to the extent practical.

☐ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds.

☐ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the Engineer immediately.

VI. Hazardous Materials or Contamination Issues

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets, (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the follwing are detected:

- *Dead or distressed vegetation (not identified as normal)*
- *Trash piles, drums, canister, barrels, etc.*
- *Undesirable smells or odors*
- *Evidence of leaching or seepage of substances*

Any other evidence indicating possible hazardous materials or contamination discoverd on site.

Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

VII. Other Environmental Issues

(Include applicable regional or site specific enviromental issues.)

☐ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

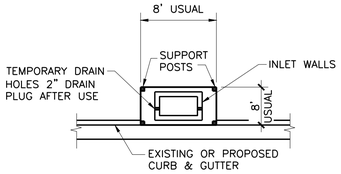
REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE
STORM WATER ENVIRONMENTAL PERMITS
ISSUED AND COMMENTS (EPIC) 2 OF 3

SHEET _____ of _____
RECORD DRAWING NO.

CITY PROJECT # _____

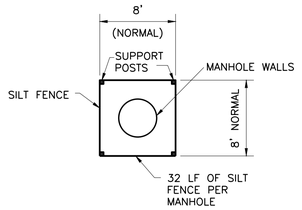


NOTE:

TYPICAL SILT FENCE INSTALLATION AT CURB INLET PRIOR TO PLACEMENT OF CURB AND INLET TOP.

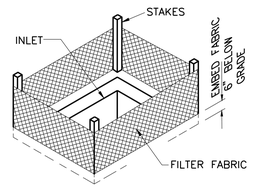
CURB INLET - PLAN

NOT TO SCALE



MANHOLE - PLAN

NOT TO SCALE

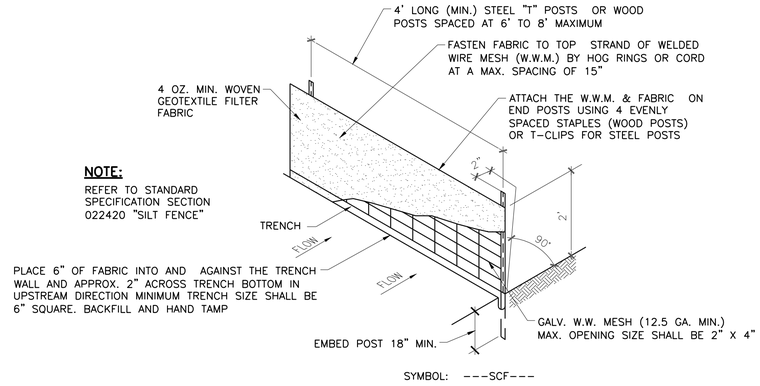


NOTES:

1. FILTER FABRIC INLET PROTECTION SHALL BE USED DURING CONSTRUCTION TO CONTROL SEDIMENTATION.
2. PERIMETER SILT FENCING AROUND INLET LOCATIONS SHALL BE INSTALLED AFTER PIPE IS PLACED.
3. FABRIC MATERIAL SHALL BE A NET-REINFORCED FENCE, USING WOVEN GEOTEXTILE FABRIC.
4. FENCE SHOULD BE REMOVED UPON COMPLETION OF CONSTRUCTION.

TEMPORARY FILTER FABRIC INLET PROTECTION DETAIL

NOT TO SCALE



NOTE:

REFER TO STANDARD SPECIFICATION SECTION 022420 "SILT FENCE"

SYMBOL: ---SCF---

TEMPORARY SEDIMENT CONTROL FENCE DETAIL

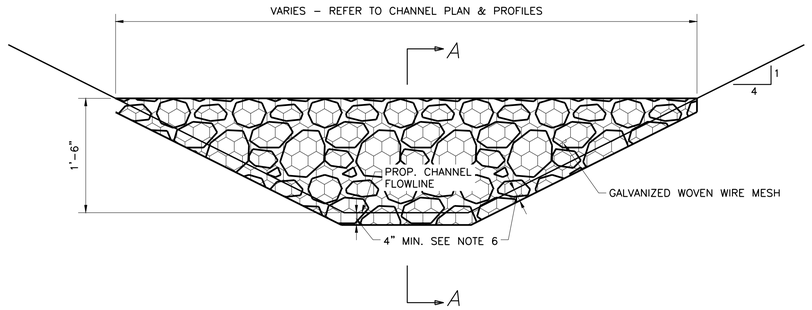
NOT TO SCALE

SEDIMENT CONTROL FENCE USAGE GUIDELINES:

SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.

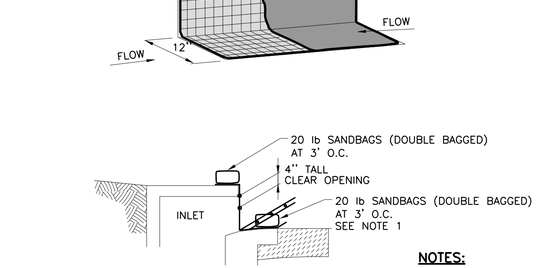
SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 100 GPM/FT. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE LARGER THEN 2 ACRES.

* THE GUIDELINES SHOWN HERE ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.



ROCK FILTER DAM AT EARTHEN BOTTOM CHANNEL

NOT TO SCALE



NOTES:

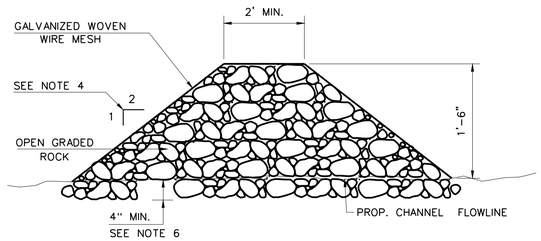
TYPICAL EROSION CONTROL INSTALLATION AT CURB INLET AFTER PLACEMENT OF CURB AND INLET TOP.

CURB INLET PROTECTION DETAIL

NOT TO SCALE

CURB INLET PROTECTION NOTES:

1. TO HOLD THE FILTER DIKE IN PLACE, 20 LB SANDBAGS SHALL BE USED AT 3' O.C. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1"X4" BOARD, SECURED WITH 1/4" OR 3/8" CONCRETE SCREWS. THE 1/4" OR 3/8" CONCRETE SCREWS SHALL BE ATTACHED TO THE GUTTER BY DRILLING AN APPROPRIATE PILOT HOLE WITH A CONCRETE BIT AND INSERT PLASTIC FASTENERS. THE TOP OF THE SCREW SHALL BE RECESSED BELOW THE TOP OF THE BOARD. THE SCREWS SHALL BE PLACED ON 3' O.C. THIS METHOD IS USED IN LIEU OF SANDBAGS, IN THE GUTTER ONLY, TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, EITHER LEAVE THE PLASTIC FASTENERS IN PLACE, OR REMOVE THE PLASTIC FASTENERS, CLEAN ANY DIRT/DEBRIS FROM THE SCREW LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH THE SURFACE OF THE GUTTER. THIS METHOD SHALL NOT BE USED ON THE INLET IN LIEU OF SANDBAGS.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2". INLET PROTECTION SHALL BE REPLACED AS NECESSARY DURING CONSTRUCTION DUE TO DAMAGE OR DETERIORATION (SUBSIDIARY TO INLET PROTECTION).
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND ONLY REMOVE INLET PROTECTION IF DIRECTED BY THE CITY OF INGLESIDE, OR IF CONTRACTOR OBSERVES AN IMMINENT THREAT OF FLOODING OF SURROUNDING PROPERTY.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

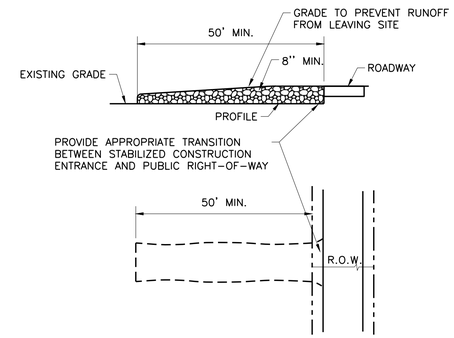


SECTION A-A

NOT TO SCALE

ROCK FILTER DAM NOTES:

1. IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOE OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND/OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
2. MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATIONS FOR "ROCK FILTER DAMS FOR EROSION AND SEDIMENT CONTROL."
3. THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE PLANS.
4. SIDE SLOPES SHOULD BE 2:1 OR FLATTER.
5. ROCK FILTER DAM SHALL BE A MINIMUM OF TWO FEET IN THICKNESS AT TOP OF DAM.
6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO EXISTING GROUND.
7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
8. ROCK FILTER DAM SHALL BE SECURED WITH 20 GUAGE GALVANIZED WOVEN WIRE MESH WITH 1" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT & SLOPE SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM USE THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
9. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.)
10. THE GUIDLELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.



PLAN

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE: 3-5" OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

REVISION NO.	DATE	BY	DESCRIPTION

City Of Ingleside

CITY OF INGLESIDE

STORM WATER POLLUTION PREVENTION STANDARD DETAILS

3 OF 3

SHEET _____ of _____

RECORD DRAWING NO.

CITY PROJECT # _____

APPENDIX G
PROJECT RANKING

Project Ranking												
CIP #	Project Name	Life and Safety [5 - Year Maximum Inundation Depth (ft)]	Life and Safety Score	Property Damage [No. of Potentially Inundated Structures in 5-Year Storm]	Property Damage Score	Road Level of Service	Road Level of Service Score	Planning Linkages	Planning Linkages Score	Project Cost	Project Cost Score	Project Total Score	Project Ranking
1	Site 1: Humble Ditch Improvements	1.2	2	37	5	No Road	0	Yes	5	$10,227,900	1	2.70	6
2	Site 3: Kenny Lane/Whitney Lake Infrastructure	1.7	3	8	2	Collector	3	Yes	5	$2,876,083	2	2.96	3
3	Site 4: SH 1069 Drainage Improvements - McCampbell Slough to Mooney Lane	1.4	2	16	3	Arterial	5	No	0	$15,869,600	1	2.45	7
4	Site 5: Mooney/Morgan Long-Term Ponding – Avenue A to Saunders Street	2.9	5	3	2	Local	1	No	0	$1,019,800	2	2.40	8
5	Site 6: Nystrom Addition Drainage Improvements	0.8	1	4	2	Local	1	Yes	5	$2,823,800	2	1.95	9
6	Site 7: Parkside Terrace Subdivision Drainage Improvements	1.7	3	17	3	Local	1	Yes	5	$9,148,800	1	2.71	5
7	Site 8: Villanova Place Drainage Improvements	2.4	4	180	5	Local	1	No	0	$10,075,000	1	2.75	4
8	Site 9: Humble Addition and Avenue B Drainage Improvements	1.5	3	19	3	Collector	3	Yes	5	$5,362,300	1	3.10	2
9	Site 10: Live Oak Ditch	1.6	3	11	3	Arterial	5	Yes	5	$16,188,700	1	3.50	1

Project Scoring Rubric									
Life and Safety [5 - Year Maximum Inundation Depth (ft)]	Life and Safety Score	Property Damage [No. of Potentially Inundated Structures in 5-Year Storm]	Property Damage Score	Road Level of Service	Road Level of Service Score	Planning Linkages	Planning Linkages Score	Project Cost	Project Cost Score
2.5	5	30	5	Arterial	5	Yes	5	$ 100,000	5
2.0	4	20	4	Collector	3	No	0	$ 500,000	4
1.5	3	10	3	Local	1			$ 1,000,000	3
1.0	2	3	2	No Road	0			$ 5,000,000	2
0.5	1	1	1					$ > $5,000,000	1
0.0	0	0	0						

APPENDIX H
FUNDING SOURCE MATRIX

	Flood Infrastructure Fund	Community Development Block Grant - Mitigation	Community Development Block Grant - Disaster Recovery	Texas CDBG - Community Development Fund (Grant)	Clean Water State Revolving Fund	Nonpoint Source Grant Program [Section 319 (h)]	Flood Mitigation Assistance Grant	Hazard Mitigation Grant Program - 404
Sponsor	TWDB	HUD/GLO	HUD/GLO	TDA	EPA/TWDB	EPA/TCEQ/TSWCB	FEMA/TWDB	FEMA/TDEM
Grant/Loan	Mixed Loan (0% interest) and Grant	Grant	Grant	Grant	Loan, Loan Forgiveness	Grant	Grant	Grant
Eligible Funding Activities	Drainage, flood mitigation and flood control such as: -Planning and design activities -Work to obtain regulatory approvals -Construction and implementation of flood projects	-Activities that increase resilience to disasters and reduce or eliminate the long- term risk of loss of life, injury, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters. -Per the Action Plan, funding will go toward 11 programs (local/regional mitigation, housing, planning), 3 of which are project competitions.	-Repairing, enhancing, and restoring infrastructure for local communities impacted by presidentially-declared disasters as part of a comprehensive long-term recovery program. Match for FEMA Public Assistance and Hazard Mitigation Grant Programs may be eligible. -Flood control and drainage repair and improvements -Restoration of infrastructure such as water and sewer facilities	Plan, design and construct public works projects in nonentitlement communities	-Planning, design and construction of wastewater infrastructure, including treatment and reuse facilities -Stormwater management and Nonpoint Source (NPS) pollution control	-Implementation of watershed protection plans -NPS portion of Total Maximum Daily Load (TMDL) Implementation Plans -Surface water quality monitoring, data analysis and modeling -Best management practices (BMPs) -Public outreach/education	-Project Scoping, Community Flood Projects, Technical Assistance, Flood HMP, and Individual Mitigation Projects, including: -Acquisition for demolition or relocation -Structure elevation or reconstruction -Dry flood-proofing (non-residential and historic) -Minor, localized flood reduction projects -Structural/non-structural retrofitting -Soil Stabilization -HMP (flood hazard only) development or update	-Acquisition for demolition or relocation -Structure elevation Dry flood-proofing -Minor, localized flood reduction projects (aquifer storage and recovery, floodplain and stream restoration, flood diversion and storage, or green infrastructure) -HMP development
Cost Share	Varies	None (100% Grant), additional scoring points for 1% local share	None (100% Grant)	Varies; typically 75% Grant / 25% Local	Long-term fixed rate loans at subsidized interest rates (up to 40% reduction from market rates) with a maximum repayment period of 30 years Additional subsidies (grants) available for disadvantaged communities, green projects, and emerging contaminents such as PFAS	60% Federal / 40% Local Match	0% Local/100% Federal, for projects involving Severe Repetitive Loss Properties 10% Local/90% Federal, for projects involving Repetitive Loss Properties 25% Local/75% Federal, for projects involving NFIP insured properties	25% Local/ 75% Federal
Recent Funding Levels	2024-2025: $375 M	$4.3 B total. Statewide competitive: 2015: $46,096,950 2016: $147,680,760 Harvey: $2,144,776,720	Based on congressional appropriation	PY 2023: $49.8 M	SFY 2024: $460 M	Not listed	Under the CY 2024 NOFO, $800 M Up to: $60 M for Capability and Capacity Building, $340 M for Localized Flood Risk Reduction Projects, and at least $400 M for Individual Flood Mitigation Projects	Variable (disaster-dependent)
Project Funding Cap	Overall, just the program capacity; Grant, $18.75 M	Varies for current Regional Mitigation Distribution thru COGS For Statewide competition 2015/2016: max $10 M, min $3 M Harvey: max $100 M, min $3 M (Projects >$100 M are Covered Projects Requiring State Action Plan Amendment)	Depends on state action plan	$500,000	Loans - None Principal forgiveness - $10 M from all sources (disadvantaged community, green, small/rural)	Not listed	$900,000 for project scoping, $50 M for localized flood risk reduction projects (previously called community flood projects); $50,000 per state for technical assistance; $25,000 for local HMP update $300,000 for other Capability and Capacity Building (C&CB) Activities	Based on project cost
Availability	$375 M available 2024-2025	Currently, $1.2B being distributed thru the Regional Mitigation Program by 9 regional COGS For Statewide Competition: One Time Occurrence (began 2020);	Following Presidential Disaster Declaration	Biennial	Annual	Annual	Annual	Following Presidential Disaster Declaration
Requirements	-Must show what the benefit/cost ratio is (at least 1:1) for construction related projects -Memorandum of understanding with neighboring political subdivisions relating to the management of watershed when same is partially located outside the applicant's jurisdiction -Must have floodplain ordinances or orders in place and enforced to NFIP standards	-Presidential Disaster Declaration. Eligible Counties varies by disaster (2015, 2016, Harvey) -Socially vulnerable Low market values -Low to moderate income >51% -Competition seeks projects with the highest benefitting population / project cost ratio	HUD's National Objectives: -Assist Low to Moderate Income (LMI) with housing, infrastructure, or economic development needs. -Alleviate Slum and Blight -Address Urgent Need	Eligible applicants are nonentitlement general purpose units of local government including cities (<50,000 pop) and counties (<200,000 pop) that are not participating or designated as eligible to participate in the entitlement portion of the federal Community Development Block Grant Program (CDBG)	-Water conservation and drought contingency plan for loans more than $500,000 -NEPA review -Davis-Bacon Act wage rates -Disadvantaged Business Enterprise program compliance -Build America, Buy America Act provisions (American Iron & Steel, manufactured products, construction materials)	-Quality Assurance Project Plan (QAPP) -See Priority Waters list for areas that are "of particular interest"	-Community participation in the NFIP (and in good standing) -Mitigated property insured by NFIP -FEMA-approved and locally adopted HMP -Cost-beneficial project	-Presidentially declared disaster -Community participation in NFIP (for projects located in SFHA) -FEMA-approved HMP -Cost-beneficial project
Application Deadline	2024 abridged applications due March 15, 2024	For Regional Mitigation, varies. 2015, 2016, 1st Round of Harvey closed.	Unknown at this time - dependent on the disaster timeline	Application Deadline: May 3, 2023	Next, March 1, 2024	Established annually; next call for applications expected Summer 2024	NOFO/E-grants Access: Typically August; Application Call: Typically October; Deadline: Typically End of January *State deadlines can be prior to FEMA* Texas 2024 Deadline as January 8.	Established following Presidential Disaster Declaration. 30 days for letter of intent from state/local government, sup-applications usually due within 1 year
Website	https://www.twdb.texas.gov/financial/programs/fif/index.asp	https://recovery.texas.gov/mitigation/	https://recovery.texas.gov/disasters/index.html	https://www.texasagriculture.gov/GrantsServices/RuralEconomicDevelopment/	https://www.twdb.texas.gov/financial/programs/CWSRF/index.asp?	https://www.tceq.texas.gov/waterquality/nonpoint-source/grants/grant-pgm.html#eligibleactivities	https://www.twdb.texas.gov/financial/programs/FMA/index.asp	https://www.fema.gov/grants/mitigation/hazard-mitigation
Legend	BRIC = Building Resilient Infrastructure and Communities • EPA = Environmental Protection Agency • FEMA = Federal Emergency Management Agency • GLO = Texas General Land Office • HMP = Hazard Mitigation Plan • HUD = Department of Housing and Urban Development • NFIP = National Flood Insurance Program • NRCS = Natural Resources Conservation Service • PY = Program Year • SFHA = Special Flood Hazard Area • SFY = State Fiscal Year • TCEQ = Texas Commission on Environmental Quality • TDA = Texas Department of Agriculture • TDEM = Texas Division of Emergency Management • TPWD = Texas Parks and Wildlife • TSWCB = Texas Soil and Water Conservation Board • TWDB = Texas Water Development Board • USACE = United States Army Corps of Engineers • USDA RD = United States Department of Agriculture - Rural Development • WEP = Water and Environment Program							

	BRIC Grant	Cooperating Technical Partners (CTP) Program	406 Mitigation Grant Program - Public Assistance	High Hazard Potential Dam Grant Program	Emergency Watershed Protection Program (Grant)	Watershed and Flood Prevention Operations Program	Watershed Rehabilitation	Water and Environmental Programs
Sponsor	FEMA/TDEM	FEMA	FEMA/TDEM	FEMA/TCEQ	NRCS	NRCS	NRCS	USDA RD
Grant/Loan	Grant	Grant	Grant	Grant	Grant	Grant	Grant	Grants and Loans
Eligible Funding Activities	-Capability and Capacity Building (Including HMP development, project development, application development) -Mitigation Projects, with a focus on community-wide infrastructure projects	-Support communities to continue ongoing regulatory NFIP responsibilities and mitigate risk through flood risk mapping, risk communications, and more (as part of the Risk MAP process). -Fundable activities include: Program Management, Communication and Outreach Strategies, LOMR Review, Special Projects, Technical Hazard Identification, Risk Analysis and Mapping.	-406 funds mitigation (Public Assistance) measures in conjunction with the repair of the disaster-damaged facilities	-Technical, planning, design, and construction activities toward: repair, replacement, reconstruction or removal of dams (includes Planning and Risk Prioritization projects)	Recovery Measures for watershed impairments: -Purchase floodplain easements Site-specific measures (non-prescriptive) to protect and repair sites, such as: -Provide protection from flooding or soil erosion -Remove debris that would affect runoff or erosion -Restore hydraulic capacity -Repair levees and structures -Repair conservation practices	-Flood damage mitigation: dams, easements, flood- proofing -Agricultural/rural water supply -Water quality Water conservation -Groundwater recharge -Public fish and wildlife habitat -Public water-based recreation	Rehabilitation or decommission of NRCS dams: -Funds Assessment, Planning, Design, and Construction	Design and construction of water, sanitary sewer, stormwater and solid waste facilities
Cost Share	Standard - 25% Local/75% Federal Up to 90% Federal share for Economically Disadvantaged Rural Communities Management costs paid at 100%	Cost share or match is not required	25% Local/ 75% Federal	35% Local/ 65% Federal	25% Local/ 75% Federal (90% federal for limited resource areas)	Varies, depending on both federal and state contributions	35% Local/ 65% Federal	Loans and a limited number of grants
Recent Funding Levels	6% of all federal disaster spending 2023/2024 - $1.0 B ($224 M State Allocation, $50 M Tribal, $701 M National Competition for Mitigation Projects)	FY 2022 Funding: $104 M	Variable (disaster-dependent)	FY 2024 Funding: $185 M	Varies, requires Congressional Approval	Unknown at this time	Unknown at this time	unknown
Project Funding Cap	$50 M for projects up to $1 M per state may be used for planning activities	Not explicit. 140 awards expected ($1.0 M avg)	Cost must be reasonable and justifiable	Based on State Allocation	Not listed	Not listed	Historically funded ~$1 M - $5 M per state, multiple projects per State	Varies
Availability	Annual	Annual	Following Presidential Disaster Declaration	Annually - dependent on the amount of funds available (TCEQ)	Following Natural Disaster (floods, windstorms, fire, drought, etc.)	Annual	Ongoing	Annually
Requirements	-States that have had a major disaster declaration in the last 7 years (COVID-19 resets 7 years to start at 2020 for all states) -Community participation in NFIP (for projects located in SFHA) -FEMA-approved HMP -Cost-beneficial project	-Participate in NFIP, comply with all statues and regulations -Sign a partnership agreement with FEMA	-Declared County -Eligible damaged facility and applicant -Cost-beneficial project OR Cost for mitigation measure doesn't exceed 15% of the damaged facility's repair cost OR mitigation measure is listed -Cost Effective Hazard Mitigation Measures AND the cost doesn't exceed 100% of the damaged facility's repair cost	Dam: dam classified as "high hazard potential" per State Dam Safety Program, have an Emergency Action Plan, fail to meet state safety standards -Community participation in the NFIP -FEMA-approved State HMP with all-dam risk -Floodplain Management Plan -Risk Prioritization -State Dam Safety Agency approval of award -Mitigated property insured by NFIP	-Impaired watershed as a result of a natural disaster -Cannot solve pre-existing problems -Cannot fund improved protection level prior to the disaster (paid by applicant) -Complete within 220 days of funding -HMP *not* required	Area must be less than 250,000 acres	-NRCS dams -National Environmental Policy Act	-Population less than 10,000 -Preliminary engineering report -Environmental report -Median household income
Application Deadline	NOFO/E-grants Access: Typically August; Application Call: Typically October; Deadline: Typically End of January *State deadlines can be prior to FEMA* Texas 2022 Deadline as December 2.	Unknkown at this time	Established following Presidential Disaster Declaration	Annually - dependent on the amount of funds available (TCEQ)	Within 60 days following the date of the natural disaster	Established annually	Ongoing	Applications accepted year-round
Website	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities	https://www.fema.gov/flood-maps/guidance-partners/cooperating-technical-partners	https://www.fema.gov/sites/default/files/2020-06/fema-pa406-mitigation-brochure.pdf	https://www.fema.gov/emergency-managers/risk-management/dam-safety/grants#hhpd	https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/landscape/ewpp/?cid=nrcseprd1381472	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wfpo/	https://www.nrcs.usda.gov/programs-initiatives/watershed-rehabilitation	https://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs
Legend	BRIC = Building Resilient Infrastructure and Communities • EPA = Environmental Protection Agency • FEMA = Federal Emergency Management Agency • GLO = Texas General Land Office • HMP = Hazard Mitigation Plan • HUD = Department of Housing and Urban Development • NFIP = National Flood Insurance Program • NRCS = Natural Resources Conservation Service • PY = Program Year • SFHA = Special Flood Hazard Area • SFY = State Fiscal Year • TCEQ = Texas Commission on Environmental Quality • TDA = Texas Department of Agriculture • TDEM = Texas Division of Emergency Management • TPWD = Texas Parks and Wildlife • TSWCB = Texas Soil and Water Conservation Board • TWDB = Texas Water Development Board • USACE = United States Army Corps of Engineers • USDA RD = United States Department of Agriculture - Rural Development • WEP = Water and Environment Program							

	Continuing Authorities Program	Deepwater Horizon (DWH) Natural Resource Damage Assessment (NRDA) Funds	Texas CDBG - Colonia Fund (Grant)	Flood Control Dam Infrastructure Projects-Supplemental Funding	Structural Dam Repair Grant Program
Sponsor	USACE	TGLO / TCEQ / TPWD	TDA	TSWCB	TSWCB
Grant/Loan	Grant	Grant	Grant	Grant	Grant
Eligible Funding Activities	-Flood risk management -Ecosystem restoration -Erosion control -Stream bank restoration -Multipurpose projects	Restoring wetlands and other coastal habitats, reducing nonpoint source pollution, replenish and protect living coastal and marine resources	- Water and wastewater improvements - Housing rehabilitation for low to modearate-income households - Payment of assessments levied against properties owned and occupiied by persona of low and moderate income to recover the capital cost for a public improvement and other improvements including street paving and drainage	- Repair and rehabilitate flood control structures	
Cost Share	Feasibility Plan - $100,000 Federal then 50%/50% Design and Implementation 65% Federal/ 35% Applicant minimum	100% Grant			95% of the cost of allowable repair activities
Recent Funding Levels	Congress appropriated $53 M in FY 2022; IIJA provided $465 M; USACE FY 2023 IIJA spend plan was $380.3 M	Varies based on major restoration categories	unknown	Last update - $150 M appropriations bill passed June 6, 2019	
Project Funding Cap	Varies by section - $5-10 M typical	Not listed	Maximum of $1,000,000		
Availability	Ongoing	multiple cycles of planning, release and implementation of restoration plans will occur until funding is expended	Biennial		
Requirements	Federal requirements apply	-Comprehensive, integrated ecosystem-restoration approach for implementation; -Projects must be sponsored and administered by a trustee agency;	- This fund is available to eligible county applicants for projects in severely distressed unincorporated areas which meet the definition as a “colonia” under this fund. Eligible areas are units of general local government limited to nonentitlement areas (with the exception of Hidalgo County) located within 150 miles of the Texas-Mexico border. - Except for fund categories where additional restrictions apply, a county can only submit applications on behalf of eligible colonia areas located within 150 miles of the Texas-Mexico border region, except that any county that is part of a standard metropolitan statistical area with a population exceeding 1,000,000 is not eligible under this fund.		- dams constructed by the USDA-NRCS - priority given to damns that have the highest hazard classification and the highest potential to fail as a result of a rainfall event
Application Deadline	Ongoing based on project sponsor notifying USACE District of problem and requesting assistance	Ongoing	Last, May 3, 2023		
Website	https://www.nae.usace.army.mil/Missions/Public-Services/Continuing-Authorities-Program/	https://www.glo.texas.gov/coast/coastal-management/nrda/index.html	https://texasagriculture.gov/GrantsServices/RuralEconomicDevelopment/RuralCommunityDevelopmentBlockGrant(CDBG)/CDBGResources/Applications/ColoniaConstructionFundApplicationandGuide.aspx	https://www.tsswcb.texas.gov/flood-control-repair-projects	https://www.tsswcb.texas.gov/programs/flood-control-program
Legend	BRIC = Building Resilient Infrastructure and Communities • EPA = Environmental Protection Agency • FEMA = Federal Emergency Management Agency • GLO = Texas General Land Office • HMP = Hazard Mitigation Plan • HUD = Department of Housing and Urban Development • NFIP = National Flood Insurance Program • NRCS = Natural Resources Conservation Service • PY = Program Year • SFHA = Special Flood Hazard Area • SFY = State Fiscal Year • TCEQ = Texas Commission on Environmental Quality • TDA = Texas Department of Agriculture • TDEM = Texas Division of Emergency Management • TPWD = Texas Parks and Wildlife • TSWCB = Texas Soil and Water Conservation Board • TWDB = Texas Water Development Board • USACE = United States Army Corps of Engineers • USDA RD = United States Department of Agriculture - Rural Development • WEP = Water and Environment Program				

APPENDIX I
SUMMARIES OF PUBLIC AND STAKEHOLDER ENGAGEMENT ACTIVITIES

MEMORANDUM

FREESE AND NICHOLS

Innovative approaches
Practical results
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TO: Gary Paredez

CC: Dale McConnell, Donald Paty

FROM: Sarah West, PE, CFM

SUBJECT: Summary of Stakeholder Responses – SPCDD, TxDOT, & City of Aransas Pass

DATE: 2/10/2023

PROJECT: Ingleside Drainage Master Plan

The following questions were prepared and shared with the three (3) documented stakeholders (San Patricio County Drainage District (SPCDD), TxDOT, and the City of Aransas Pass) who potentially have jurisdiction over drainage infrastructure within the Ingleside City Limits, or over outfalls for the City of Ingleside. One in-person stakeholder meeting was held on 12/13/22 (City of Aransas Pass staff attended), and the questions were emailed to the stakeholders who were unable to attend the meeting (SPCDD and TxDOT). All responses to the questions are summarized below. Original questions are in **black text** and responses are included in **blue text.**

Stakeholder Questions – San Patricio County Drainage District:

Responder for SPCDD – Michael Vanecek and Roy Heistermann

1. What projects do they have going on that could impact the drainage in the future and timeline of those projects? - There are currently no planned drainage improvement projects within the City of Ingleside. The SPCDD relies on the City of Ingleside to prioritize future drainage projects and the City may use its currently available drainage funds.
    a. Anything coming out of the San Patricio County Drainage Master Plan that is underway? - Currently, no projects from the Drainage Master Plan for the Ingleside area are underway by the SPCDD.
2. Any past storm events that caused flooding? - There have been several storms that caused flooding throughout the City.
    a. Topical or local event? - The SPCDD does not keep records on flood events within the City unless they require subsequent drainage improvements.
        i. If local event what do you believe caused it (e.g. lack of drainage infrastructure, clogged pipes/inlets, etc..) - The flat topography and lack of adequate drainage outfall capacity within the existing ditches.
    b. Any documented high water marks? - No
3. What drainage components do you have jurisdiction over that impact the City of Ingleside's systems? - The attached map shows the existing ditches that are within the jurisdiction of the existing SPCDD drainage easements. [**Map attached to these notes for ease of reference.**]
    a. Confirm jurisdictional limits of the channels (McCampbell, Humble, Kinney); any SPCDD jurisdiction? - See attached map for the limits of drainage easements.
4. How are funds for drainage improvement projects allocated (specifically set aside for the City of Ingleside, or one large pot)? - The SPCDD allocates $70,000 per year for drainage-related projects

in the City of Ingleside. The current accumulated balance of funds for the City of Ingleside is $68,842.

   a. Does SPCDD allocate funds to specific projects? - No, the City decides how to allocate the drainage funds.

5. What is your inspection and maintenance schedule for stormwater system components (specifically those affecting the City of Ingleside)? - Maintenance is provided on an as-needed basis, as our schedule allows.
6. We are aware of an agreement between the City of Ingleside and SPCDD dated 9/26/1978. Is there a more current agreement we need to be aware of and/or a desire to update the 1978 agreement terms? - No
7. Is there a drainage easement through Buckeye property? If so, who has control of that easement and any future infrastructure (City of AP or SPCDD)? - Buckeye has not provided any drainage easement although one was requested in August 2019 (See attached pdf). [**Exhibit attached to these notes for ease of reference.**]
8. Would you consider joint participation in projects. Example: If City designs, would SPCDD construct/own/maintain? - The SPCDD does not do its own construction work anymore with the exception of setting culverts with a diameter of 36" or less. The SPCDD hires contractors from a pre-approved list for drainage projects within the existing SPDDD easements. The City of Ingleside may request the assistance of the SPCDD for ditch cleaning within the City.

Stakeholder Questions – TxDOT:

Responder for TxDOT – Robert Isassi

1. Do you have any planned projects that could impact the drainage in Ingleside, and can you provide the timeline of those projects?
   a. Looking into the next 3 to 5 years, the only project that comes to mind that could impact drainage would be the proposed SH-200 project within the City Limits of Ingleside. Other proposed would likely be roadway overlays, sidewalk, and traffic signal work.
2. Any past storm events that caused flooding?
   a. Topical or local event?
      i. If local event what do you believe caused it (e.g. lack of drainage infrastructure, clogged pipes/inlets, etc..)
      ii. Tropical Event: Hurricane Harvey. It was the events that caused flooding on our TxDOT facilities. What comes to mind as the closest we came to flooding is FM1069 (Main St) just north of 8th St (on the west side of the roadway). It is important that this outfall be maintained.
   b. Any documented high water marks? – Not to my knowledge.
3. What drainage components do you have jurisdiction over that impact the City of Ingleside's systems?
   a. State Roadway ditches such as the ditchline along FM1069. Culvert inlets and internal roadway drainage systems such as the system under SH-361 or FM1069 within the City.
4. What is your inspection and maintenance schedule for stormwater system components (specifically those affecting the City of Ingleside)?
   a. TxDOT works closely with the San Patricio County Drainage District to discuss and troubleshoot any drainage issues noted. TxDOT inspects bridges and water crossings routinely at least every two years a comprehensive inspection is done on bridge class culverts and large bridges. TxDOT maintenance forces inspect curb and drop inlets routinely when it becomes evident that drainage is moving slower than in previous years.

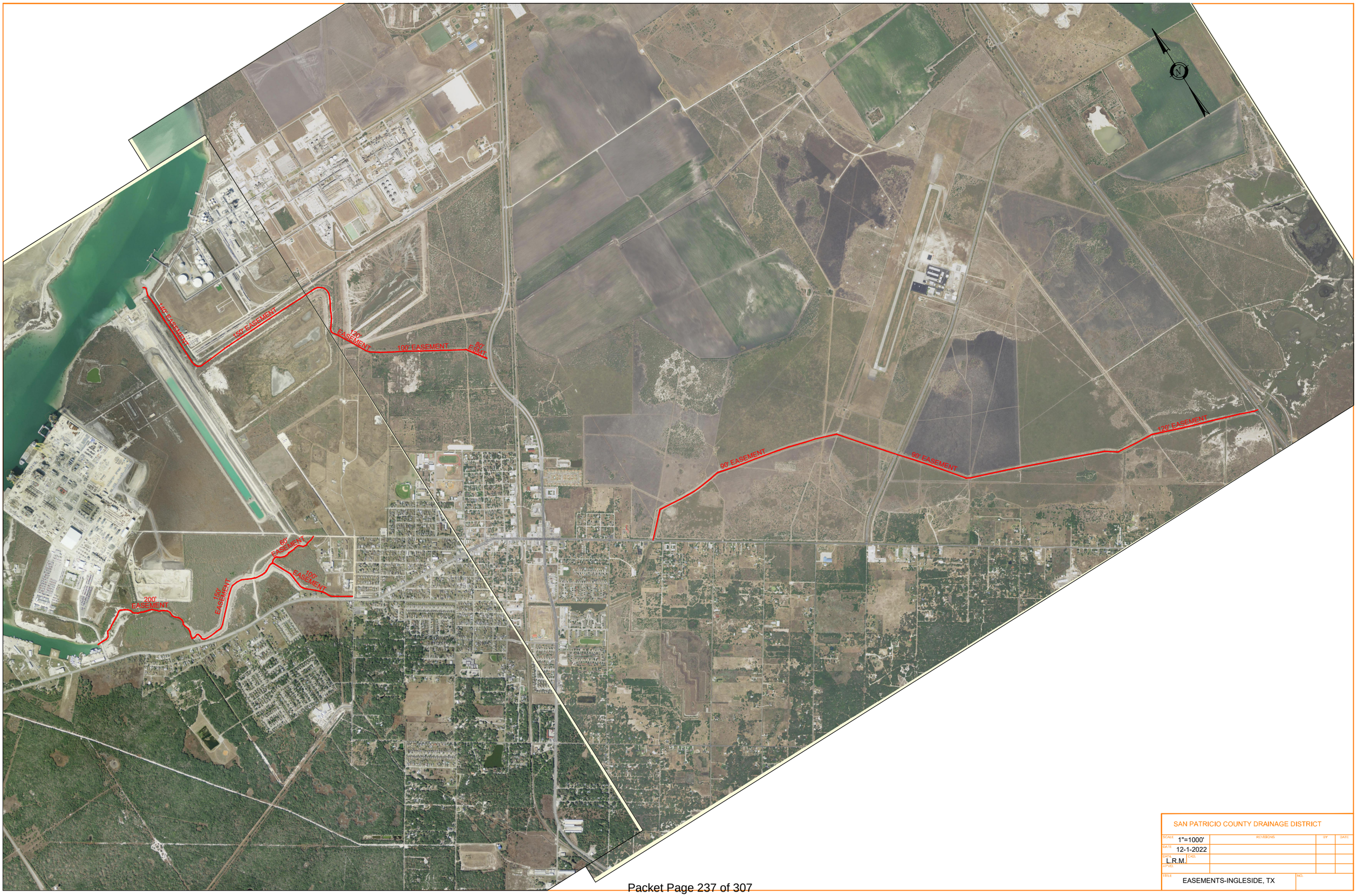
5. Are there any current maintenance and stormwater improvement agreements we need to be aware of?
    a. Not specifically to my knowledge but when new development is proposed and a developer wishes to gain access to the State Roadway system directly by way of a driveway permit, TxDOT also looks at how this new development will affect drainage.
6. Would you consider joint participation in projects. Example: If City designs, would SPCDD construct/own/maintain?
    a. Yes, projects like this could happen through a Donation Agreement where the City would propose an improvement in TxDOT right-of-way that benefits the City and/or the State and TxDOT would allow the City or its contractor to construct in State ROW where, when complete, TxDOT would take it into its system and maintain it. There are many types of Donation Agreements that could be done and could be handled on a case-by-case basis. The City would just need to discuss it with me and, if agreeable, I would walk the City through the process on something like this.

Stakeholder Questions – City of Aransas Pass:

Responder for Aransas Pass – David Flores

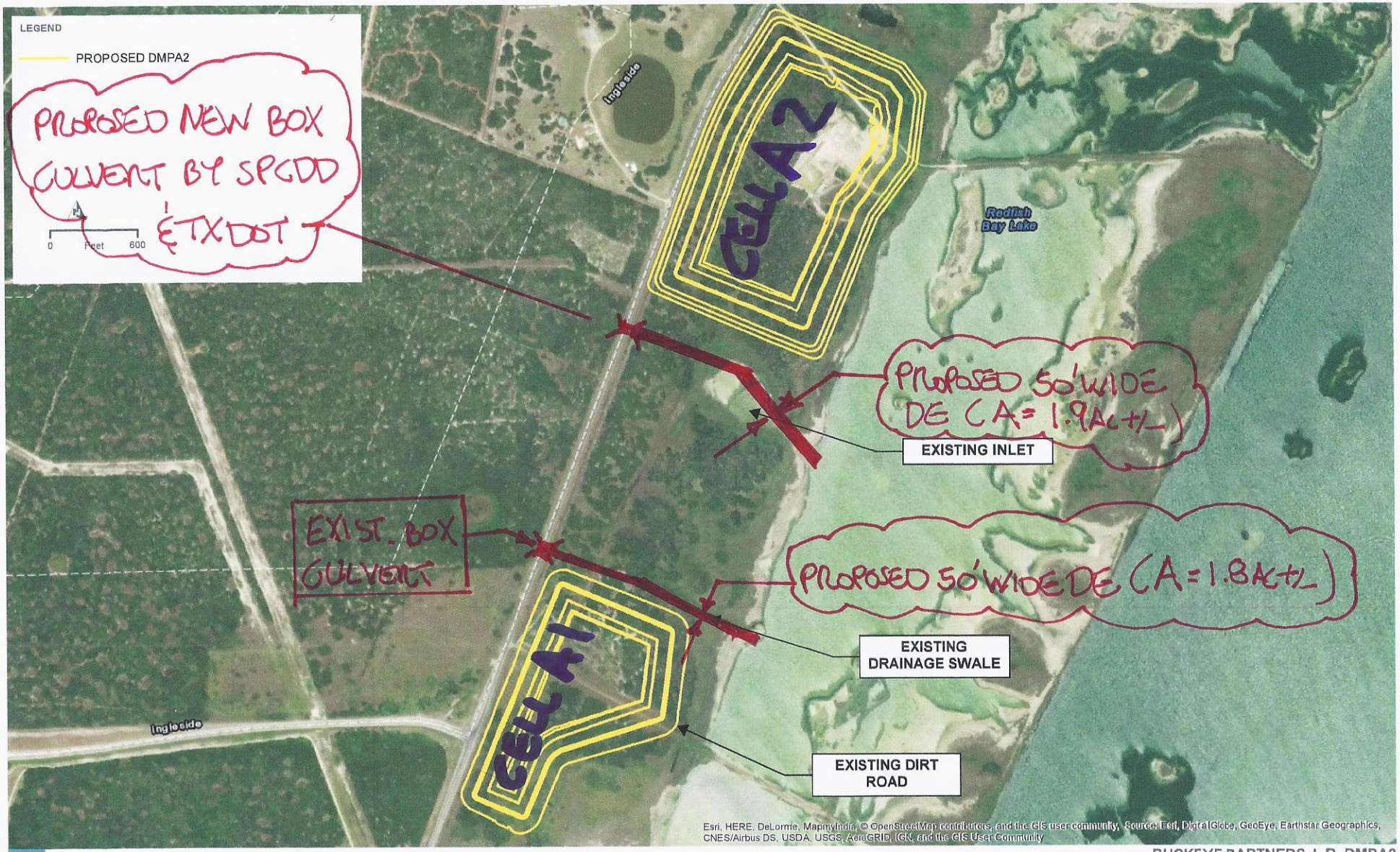
1. Do you have any planned projects that could impact the drainage in Ingleside, and can you provide the timeline of those projects?
    a. Aransas Pass is rebuilding 2 stormwater pump stations (Goodnight & Maddox) and replacing some existing infrastructure (new pipes, but not upsizing), but that should not affect Ingleside's drainage.
    b. The Euclid pump station is not slated for any repairs/upgrades.
        i. Sarah informed David that the Euclid pump station is on the list of projects in the Nueces Regional Flood Plan.
        ii. David requested Sarah send the description of that project.
2. Any past storm events that caused flooding?
    a. Topical or local event? – Had flooding with Hurricane Harvey in Aug 2017.
        i. If local event what do you believe caused it (e.g. lack of drainage infrastructure, clogged pipes/inlets, etc..)
    b. Any documented high water marks?
        i. City does not have any documented high-water marks that David is aware of.
3. What drainage components do you have jurisdiction over that impact the City of Ingleside's systems?
    a. Confirm jurisdictional limits of the channels (McCampbell, Humble, Kinney); any City of Aransas Pass jurisdiction?
        i. Aransas Pass doesn't have jurisdiction on any of these 3 channels.
    b. Aransas Pass does have jurisdiction over the drainage ditches on Beasley and is looking at improvements here (improvements for area between Beasley & Rhodes; close to Saunders).
        i. Dale requested David keep Ingleside public works staff informed about specific plans as they're developed.
4. Are there any current development, maintenance, and stormwater improvement agreements we need to be aware of?
    a. No official agreements in place between the two municipalities, but they have always had good working relationships between the public works departments.

5. Is there a drainage easement through Buckeye property? If so, who has control of that easement and any future infrastructure (City of AP or SPCDD)?
    a. David will confirm jurisdiction across this property
    b. Dale noted that there are possibly sluffed spoils that are blocking the existing ditch across that property.
6. Would you consider joint participation in projects. Example: Would Aransas Pass contribute design/construction funds for a mutually beneficial project?
    a. Aransas Pass public works staff would support joint projects, but Aransas Pass and Ingleside City Managers and Councils will have the ultimate decision.
7. General Discussion
    a. Flooding is tidally influenced in Ingleside
    b. Ingleside staff noted that when the soils are already saturated a 1”/hr rainfall will cause flooding.
    c. Ingleside staff noted that they have had some flooding issues since the TxDOT roadway (FM 1069) was repaved. Aransas Pass staff was not aware of similar issues in their jurisdiction along that roadway.



SAN PATRICIO COUNTY DRAINAGE DISTRICT

SCALE: 1"=1000'	REVISIONS	BY	DATE
DATE: 12-1-2022			
DWN: L.R.M. CHKD.			
APVD.			
TITLE: EASEMENTS-INGLESIDE, TX	NO.		



BUCKEYE PARTNERS, L.P. DMPA2

PROJECT LOCATION MAP

EXHIBIT 1

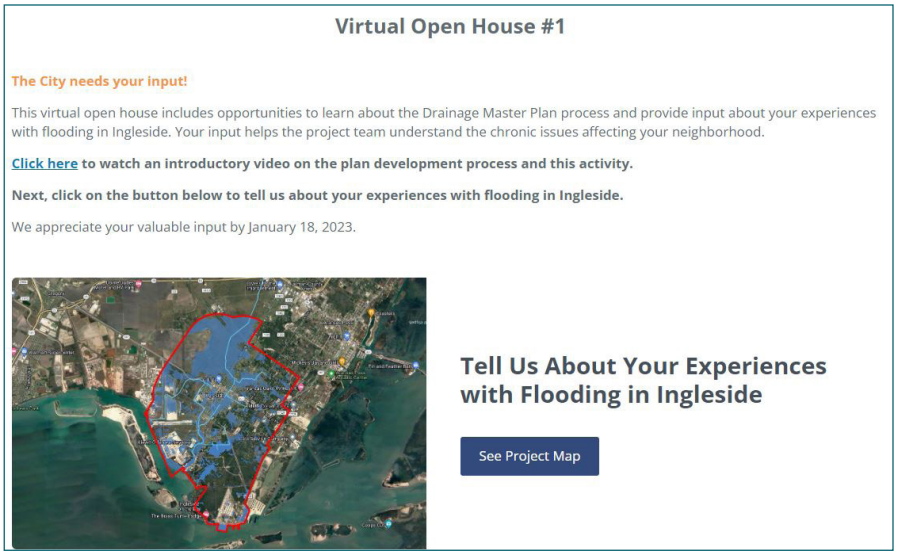
PATH: C:\WORKSPACE\NORTHCANALIGE\EXHIBIT1.MXD • USER: JBLEVINS • DATE: 5/13/2016

DRAINAGE ANALYSIS OF BUCKEYE PARTNERS, L.P. DREDGE MATERIAL PLACEMENT AREA

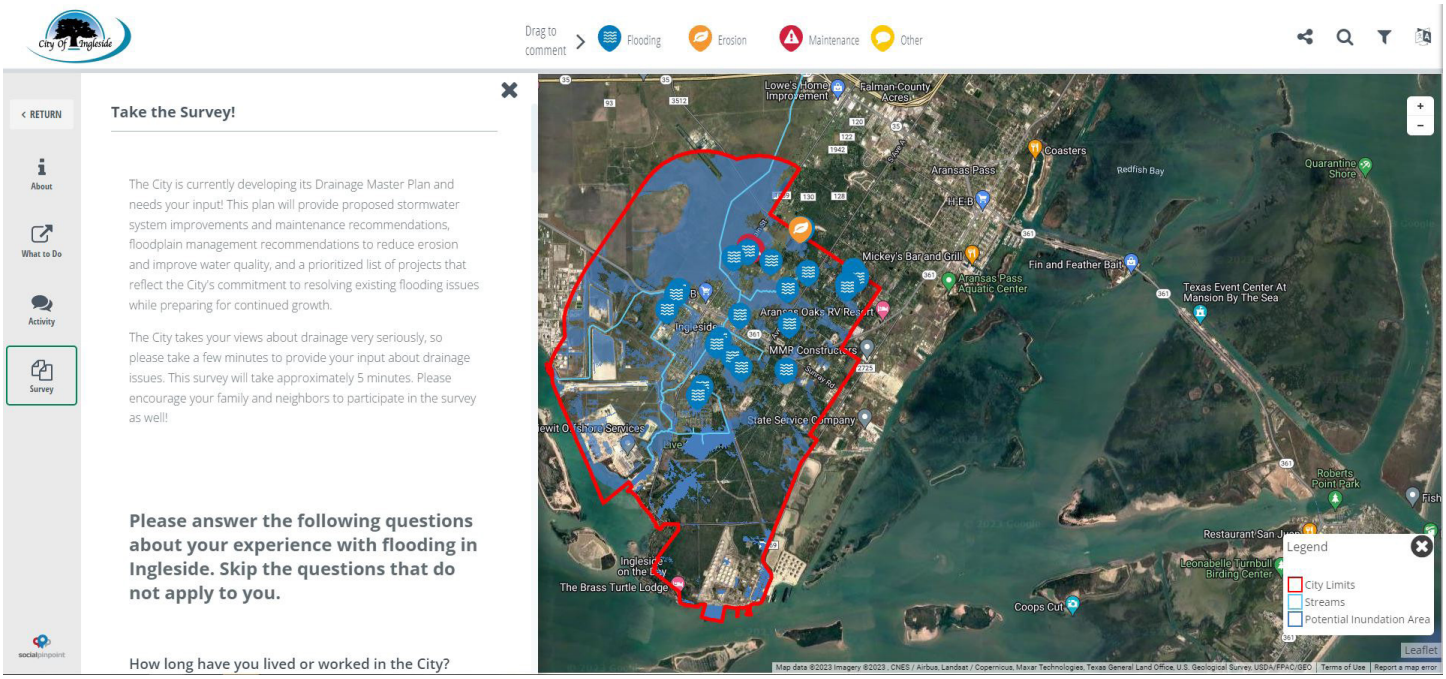
Virtual Open House #1 Summary

The first Virtual Open House included opportunities for participants to learn about the Drainage Master Plan process and provide input about their experiences with flooding in Ingleside. The Virtual Open House was hosted on a project website (www.InglesideDMP.com) and activities included an introductory video, a public survey and an interactive map. The Virtual Open House was live from December 19, 2022 to January 18, 2023.

There were eight survey responses and 31 comments added to the interactive map. Responses are summarized on the following pages.



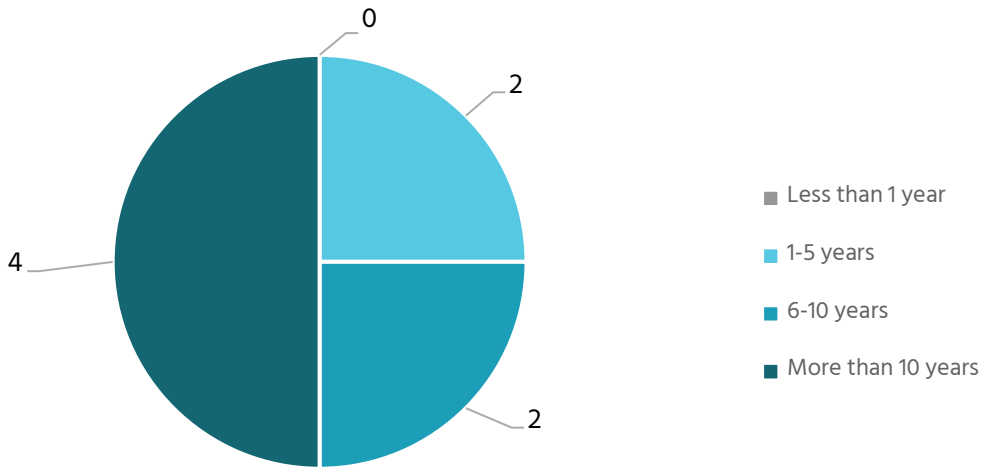
Project website



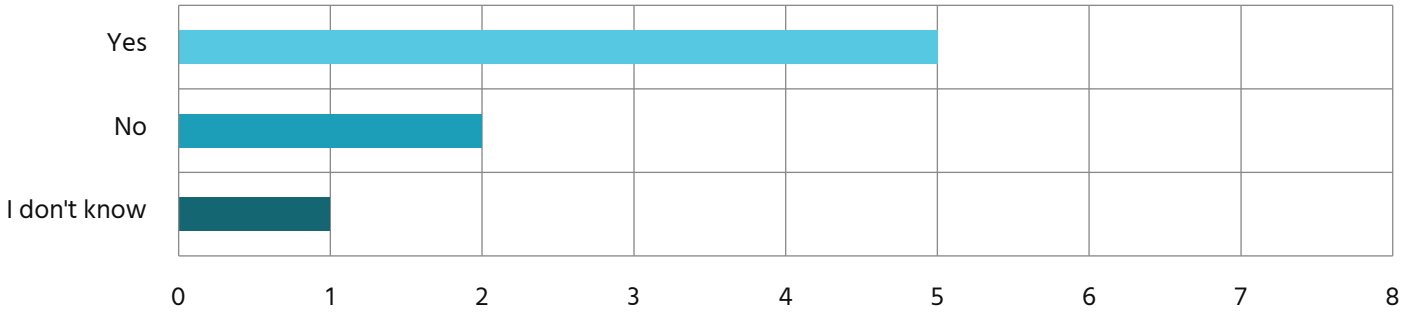
Interactive map and survey

Public Survey Responses

How long have you lived or worked in the City? (whichever is longest)



Do you live a potentially inundated area? (see map above or the interactive map)



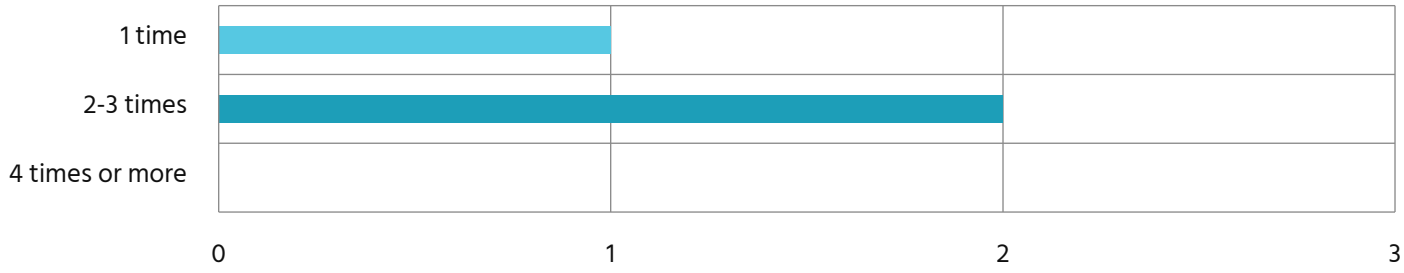
Have you experienced flooding in the City?

	Yes	No
Tropical event (e.g., hurricane)	8	0
Local event (e.g., typical rainstorm)	8	0
Structural flooding (i.e., building flooding regardless of the type of rain event)	3	5

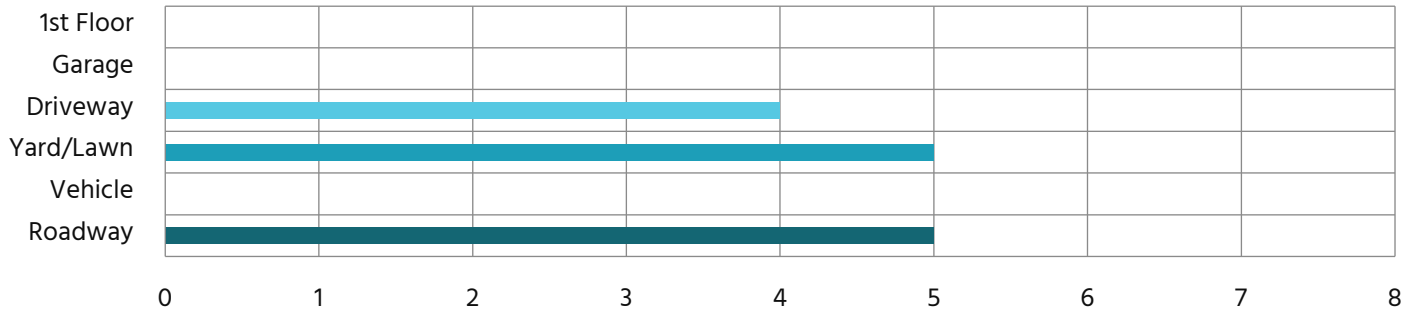
If a local event, what do you believe caused the flooding (e.g., lack of drainage infrastructure, clogged pipes/inlets, etc.)?

Response
Lack of drainage
Lack of drainage
Lack of Drainage infrastructure
lack of drainage infrastructure
Lack of drainage infrastructure, ditches not able to hold water
lack of drainage infrastructure, more houses being allowed to be built in a known flooding area. When the property is raised for building purposes this pushes the water to other locations around the property.
lack of drainage, broken pipes, clogged ditches
lack of maintenance on existing drainage

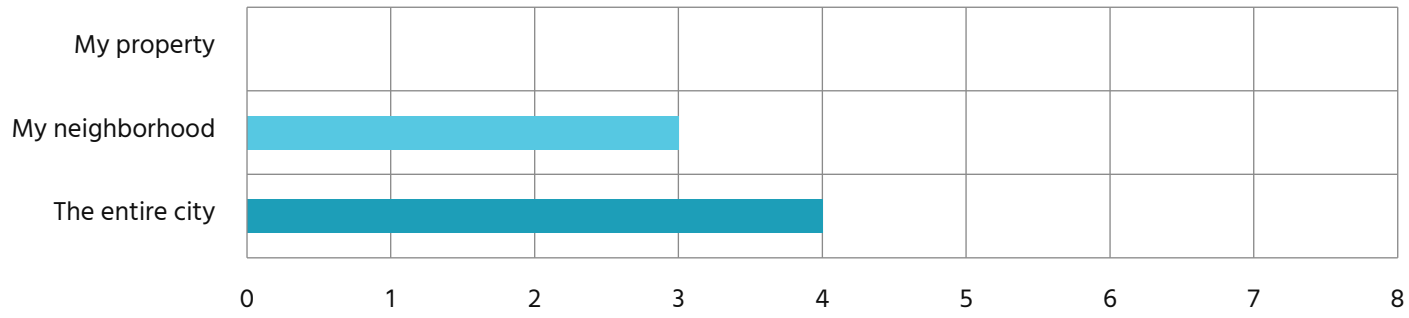
If you've experienced structural flooding, how many times has it happened?



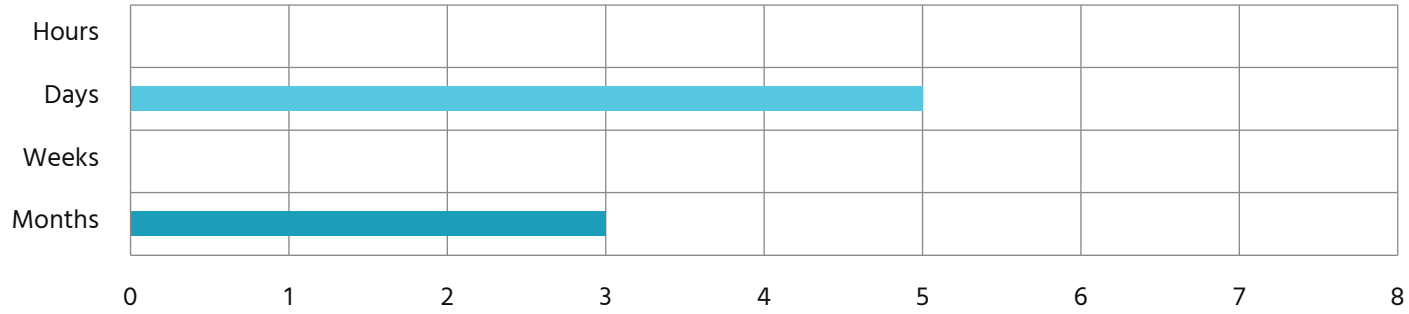
If your property has flooded, where was the water during the worst flooding event? (choose all that apply)



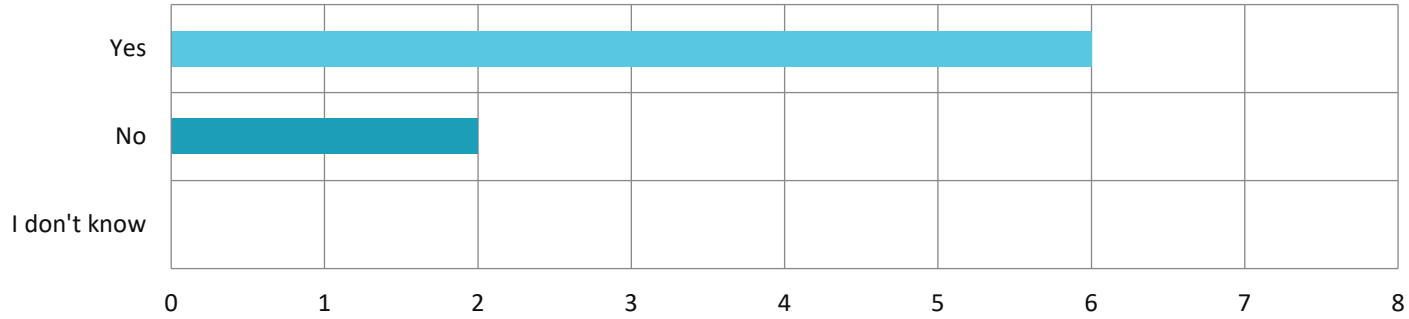
How widespread was the flooding during the worst flooding event?



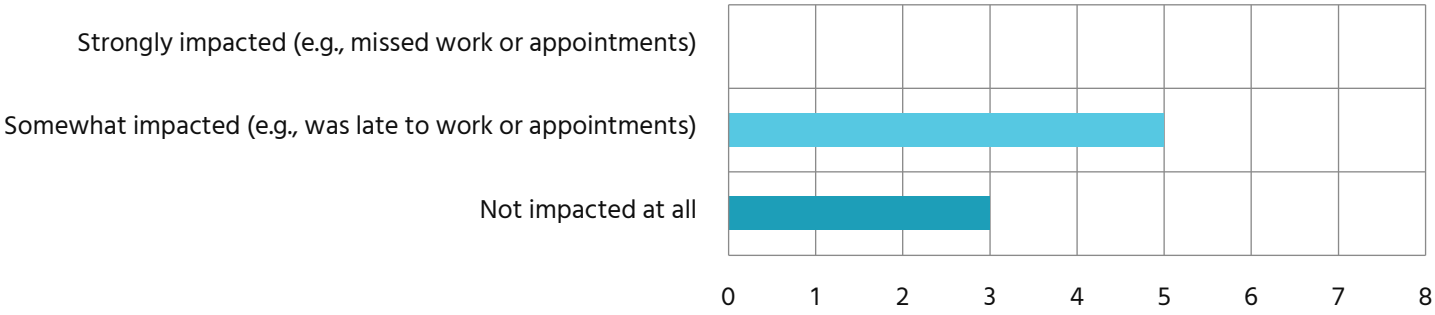
How long did it take for the water to recede?



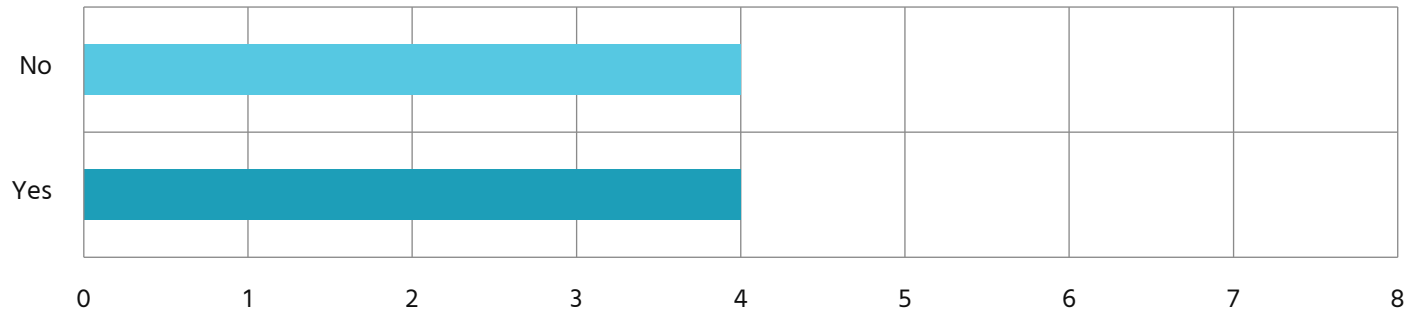
Do you have flood insurance?



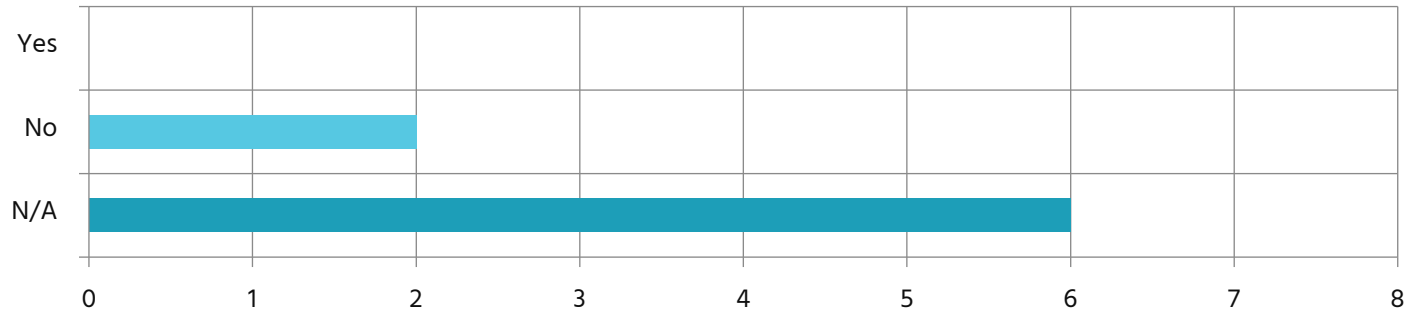
How strongly would you say flooding impacts your daily life?



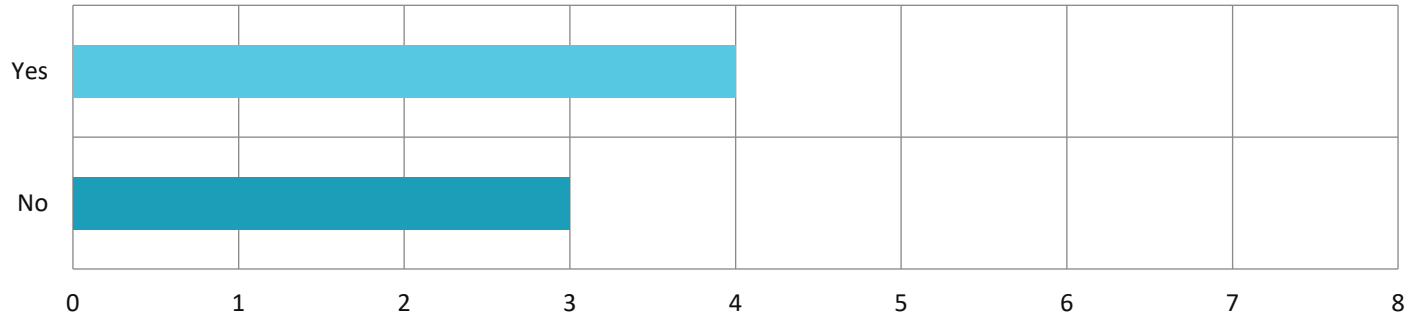
Have you reported flooding issues to the City in the past?



Did you receive a follow-up call or resolution to the flooding issue?



Are you aware that the County has a drainage district that maintains some ditches/ waterways?



We may have questions about your responses. Please provide your email address below if we can contact you if needed.

Responses withheld for privacy.

Interactive Map Comments



Respondents were asked to drag a comment topic (i.e., flooding, erosion, maintenance or other) onto the map to drop a pin. They added comments and optional images describing their experience with flooding in the City. For each pin, they were asked to answer the following questions:

- When the site flooded, was the water ponding or flowing?
- When did the flooding occur?
- How deep was the flooding?
- What part of the property was damaged?

Once pins were added, participants were encouraged to review comments from others.

The comments on the following pages were submitted by respondents and have not been edited.

	Pin Type	Comment	Latitude	Longitude	Photo
1	Flooding	any time there is a decent rain this area floods	27.865832	-97.201498	
2	Flooding	This floods like not other	27.861862	-97.2104	
3	Flooding	Every time we get a little rain it floods and there is no where for water to go, and it takes months for water to dry up.	27.881677	-97.190864	
4	Flooding	This area floods and stays flooded for months making it difficult to clear and keep cleared because of it. Water stays on top of road causing more and more damage to it. Kenney Ln lacks, drainage, water and sewerage lines, fire hydrants and deal with horribly damaged road. Many of us were told the city had a plan to start construction for water and sewage as well as fire hydrants in June 2022 but then told it was put on hold.	27.887402	-97.194725	
5	Flooding	There is no adequate drainage on this road, most yards on the east side of the road flood. Can take weeks to over a month to dry up. Digging out the ditches would help tremendously.	27.874559	-97.190477	
6	Flooding	This area is a huge problem during rain storms, it floods really bad and it causes problems for students trying to attend school, it disrupts learning because students shoes and pants are soaked due to the flooding in this area taking on the name " Lake IHS"	27.877473	-97.218565	

	Pin Type	Comment	Latitude	Longitude	Photo
7	Flooding	With every rainfall our driveway fills up with water. When it's hard rain it starts coming in our garage. Currently the project has hit our street. Today it was flooded with dirty water. Supposedly the workers hit a brittle pipe and drinking water exploded. This water was filthy though. I was told it mixed with garbage and dirt from our street but when it floods with rain the water is never that gross. Also when land was first marked a pipe burst and was marked so they already knew pipe was weak	27.871565	-97.206386	
8	Flooding	Every time it rains real bad my back and front yards flood. We don't have any drainage down our block. I feel like this will help tremendously with our flood issue.	27.885116	-97.18619	
9	Flooding	This area floods due to overflow from the pond across the street. Overflow from the pond runs thru a concrete culvert under the street directly to the property and floods this property	27.883813	-97.174881	
10	Flooding	The eastern end of Mooney does not have drainage and causes flooding during mid to heavy rains. Flooding in some areas is 3 feet deep. The water ponds and does not flow. Water has remained for 6 to 7 months	27.884612	-97.175295	
11	Flooding	The site floods every time it rains, the ditches overflow with water and backs up all the way from the Corner of McCullough Ln, to the third house down on Susan Cir.	27.888058	-97.203268	

	Pin Type	Comment	Latitude	Longitude	Photo
12	Flooding	We have no drainage in this area, Everytime we get a good rain this whole are will flood and will take months to dry out. I have talked with city many times and have always been given same excuses, The city always wants to call it a " 30 Year flood" I have lived here for 15 Years and it happens at least one time a year. We need the city to find an exit for all this water. This Problem has gotten worse every year! we get most of Mooneys water when it rains,	27.882749	-97.177355	
13	Flooding	This area floods with the slightest of rains. Most of the water from the surrounding properties make their way to a very large pond and surrounding properties. Due to the large surface area that drains to this pond it doesn't take much to become overwhelmed at which point all of the properties around suffer. This water can take up to 9 months to dry out. I've had 1.5 acres under 12-18" of water for that length of time. From previous discussions there seem to be some viable options. Please help!	27.882035	-97.17728	
14	Flooding	Photo didn't attach, trying again.	27.882644	-97.177074	
15	Flooding	I have severe flooding from Kenney Ln to about 100 ft inside my property. At my electric gate ope key pad there is approx. 1 foot of water. The ditch is non existent. And the water just sits until it evaporates. The ditch across the street has trees growing in it. It is a real problem !!	27.889328	-97.199969	

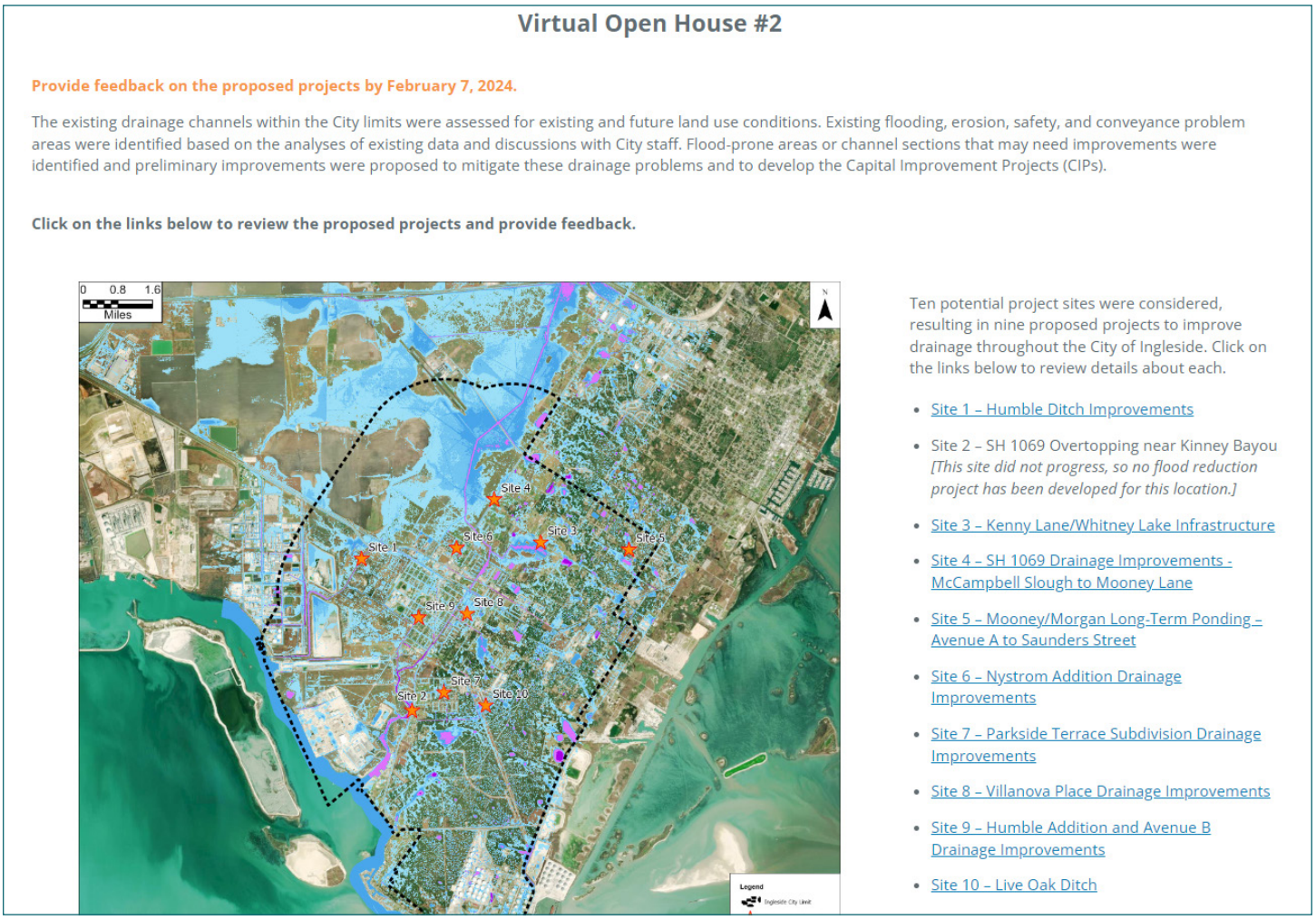
	Pin Type	Comment	Latitude	Longitude	Photo
16	Flooding	We have rain that flows from across the street into our yard, down the right side of house, and to our pond in the back of our 2 1/2 acres. It has lasted for as long as around 8 months. It will cover at least an acre and quarter of the land. Because our neighbors yard floods completely and flows to ours the berm between us is level with our yard. The large hill behind both of our yards which stops the water from flowing any further. These two homes are across from the land cleared last year.	27.884258	-97.174996	
17	Flooding	this 1638 Mooney when it rains we catch everyone's water we have no flow so it takes up to ten months for water to evaporate. Water is two to three feet deep. City has know of this issue for four years and has not address issue. Count commissioner Howard G. put this issue has one of his platforms for re-election bid and has done nothing to address issue	27.885558	-97.175716	
18	Flooding	Our property floods with every heavy rain. The water ponds and stands on our property sometimes for months. During several of the floods our property had 2-1/2 ' to 3' of standing water in the back. Flooding has caused our property to sink in many areas.	27.893994	-97.187977	
19	Flooding	Water is still standing on the property behind 3584 Vickery Ln. The City is well aware of the flooding issues in our area.	27.893837	-97.187279	
20	Erosion	The severe flooding in our area has caused the back of our property to sink considerably. City is aware of the flooding and standing water in our area and has been for years. We have had standing water for as much as 10 months in our backyard due to the water having no place to go. I was told the drainage ditch would be regraded but that has not happened yet. With each rain more of the soil from our yard erodes.	27.893842	-97.187896	

	Pin Type	Comment	Latitude	Longitude	Photo
21	Flooding	I can personally confirm this flood model. We've had water in the heaviest rain events cover the roadways completely and our yard more than 1/2 way up to the house. Luckily the water level has historically subsided quickly in almost 95% of this area. There is about a 5-10% area of pooling that last for several weeks and builds mosquito swarms.	27.876409	-97.201899	
22	Flooding	The front quarter of my property floods when there is a decent amount of rain and the last time it took over 5-6 months to dry up. The depth of water is only about 1 foot but across the street the depth is several feet but it all contributes to the mosquito population. The water flows to our area and stops as there is no outlet.	27.884611	-97.175775	
23	Flooding	Covert has been there for 50+ years and not maintained and clogged and will not drain.	27.88983	-97.198888	
24	Mainte-nance	Area has drain but requires cleaning.	27.889769	-97.198754	
25	Mainte-nance	Drain requires cleaning and dug out.	27.890324	-97.199762	
26	Flooding	Is there a key for the colors used on the map? Does the color blue mean accumulation of water after a 1 inch rain, 2 inch rain , 6 inch rain?	27.860172	-97.211417	
27	Flooding	Can the flood plain map be added?	27.867961	-97.203598	
28	Flooding	There were extensive aerial photos taken by C. Meyer and Jane Ward during the 2009 flood event. A complete set of those photos was provided to the then Parks/Drainage dept. head. O. Adame. Additional copies of the set was provided to Naismith Engineering and also retained within the Finance department.	27.865375	-97.191204	
29	Flooding	This street has a big dip that fills with water and takes days to go down	27.881489	-97.215785	
30	Flooding	Curb line is full of water after rain and takes days to drain.	27.880479	-97.216471	
31	Flooding	Standing water after rain. If it’s heavy rain it gets close to our front door.	27.870504	-97.207142	

Virtual Open House #2 Summary

The second Virtual Open House introduced participants to the nine proposed drainage improvement projects. Information about each project included a location map, description of the existing problem and proposed improvements, and a proposed improvement schematic diagram (see example on page 2). Public feedback was requested (but not required) on each project. The Virtual Open House was hosted on the project website (www.InglesideDMP.com) and was live from January 24, 2024 to February 7, 2024.

Seven individuals provided comments on the proposed projects. Responses are summarized on the following pages.



Project website

Survey Responses

City of Ingleside Drainage Master Plan

Proposed Site #1 - Humble Ditch Improvements

Existing Problem:

West Main Street experiences flooding that overtops the road and limits access to and from the adjacent business, including the Humble Youth Center, during even the smaller storm events. City staff has indicated that cars driving along West Main Street cause waves that send water into the Humble Youth Center building. Flooding issues in the West Main Street area are exacerbated due to backflow in the upstream section of the Humble Ditch. Water near the Humble Youth Center also seems relatively isolated from the drainage systems, which causes a lack of flow and ponding along West Main Street. These flooding issues can result in road and building damage.

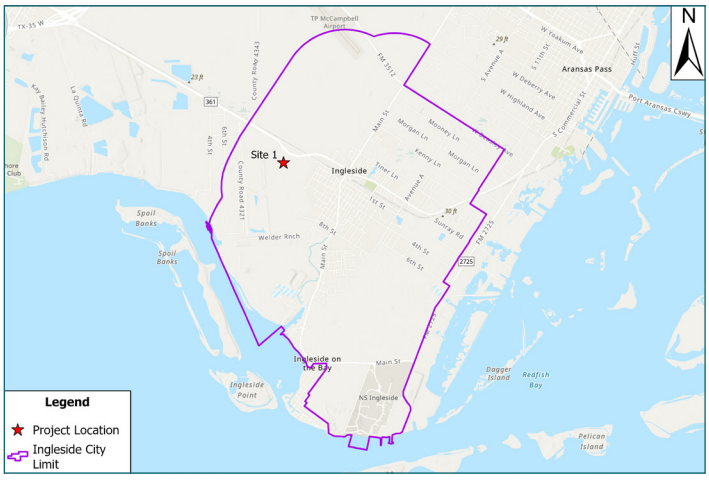
The site location is shown in the figures below.

Proposed Improvements:

Improve approximately 5,000 linear feet of the Humble Ditch, including regrading the ditch from the south edge of SH 361 to approximately halfway between the Dredge Material Placement Area (DMPA) cells, and concrete lining the channel. These improvements will allow the Humble Ditch to flow in the original intended direction and relieve some ponding between SH 361 and West Main Street. The proposed improvements do not entirely prevent ponding along West Main Street, but improving the drainage downstream of the problem area does reduce the amount of time ponding occurs along West Main Street. Based on existing conditions, improving the Humble Ditch cannot entirely alleviate the flooding at the Humble Youth Center, so flood protection systems for the building itself should be considered to prevent water damage to the building.

Proposed improvements are shown in the figures below.

Proposed Site #1 Project Description



Site #1 Location Map



Site #1 Proposed Schematic

Do you have any comments on the proposed improvements? If so, let us know below.

Survey	Comment
Site #1	This slough needs to be cleaned out and the area on the east side of 361 needs to drain downstream of the Ingleside outfall.
Site #1	As a small business manager, the flooding directly affects our business and the lively hoods of our employees. Not only does the roads become impassible, but the parking becomes non existent. The plumbing starts backing up and toilets over flow leaving us with no choice but to close.
Site #1	An additional drainage route would be ideal for this location to truly alleviate flooding.
Site #1	My area is not on the list. Pace and Indian Trial. The ditch going across my property, would love for you to decide if it needs to be that large, would love it to be maintained, get the trees out of it, the culvert I paid for is buried, the neighbor has no culvert therefore we have a trough. You do not have easement rights, but dug a ditch across my land so deep and wide years ago that it is impossible for anyone to maintain and yall claim you can not maintain it because you don't have easement. Please add my ditch to the list. Fill it, clean it, fix the pipes that are blocked and non existent. So lucky to be in the oldest part of Ingleside and have no sewer, no water, and a ditch that looks like Jurassic Park.
Site #3	No comment
Site #3	I believe the elevation of Kenny and Morgan is lower than surrounding areas. Will improvements really alleviate flooding in this area?
Site #4	This will require re setting TxDot drain lines
Site #4	I believe the elevation of Kenny, Morgan, and Mooney is lower than surrounding areas. Will improvements really alleviate flooding in this area? A pumped detention pond seems to be an expensive option for only a few houses.
Site #4	I have lived on the 1069 end of Morgan Ln. since 1953. I believe the holding pond is unnecessary as that area is already very low. It held water year-round until the present culvert, between Morgan & Moony, under 1069 was installed in the mid 1980s to allow water to drain into McCampbell Slough via the ditch on the West side of 1069. One additional culvert under 1069 should be installed between the existing culvert closer to Moony & the 1,610 linear feet of 3-ft bottom width grass-lined ditch improvements along the east side of 1069 should be extended to Collins Ln. Thank you Michael A. Morgan. I can be reached at morganm2378@gmail.com
Site #5	No comment
Site #5	Could somebody please consider coming out and speaking to me about the flooding issue we are having a miles south of this proposed site between Wayne Circle off Morgan Lane and Ave. A. I have done everything short of begging the city to address this issue for years.
Site #5	What is the proposed elevation of the inlet of this drain located on the north side of Mooney? Ground elevation appears to be 17' while surrounding area is as low at 15 ft. What is the plan for existing under the Mooney road culverts that run N to S? Will there be any drainage ditches along Mooney north and/or south toward the new drainage pipe? Will residents on Mooney need to fill/grade properties to utilize proposed drainage? Proposed drainage plan is presented with as conditional or qualified solution. Please explain

Survey	Comment
Site #6	This should help drain the area behind HEB with some regrading
Site #7	No Comment
Site #7	No comment. Improvement plan is good.
Site #9	No comment. Improvements seem reasonable.
Site #10	Is this the ditch the traverses the disc golf course? If so, will disc golfers still be able to obtain discs?

APPENDIX J
SMALL PROJECTS MEMORANDUM

MEMORANDUM

FREESE AND NICHOLS

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800 N. Shoreline Blvd., Suite 1600N + Corpus Christi, Texas 78401 + 361-561-6500 + FAX 817-735-7491

www.freese.com

TO:	Gary Paredez, Ingleside Director of Infrastructure Services
FROM:	Sarah West, PE, CFM
SUBJECT:	Small Projects List
PROJECT:	ING21605 – Ingleside Drainage Master Plan
DATE:	June 23, 2023
CC:	Brenton Lewis, Ingleside City Manager Donald Paty, Ingleside Director of Public Works



FREESE AND NICHOLS, INC.
TEXAS REGISTERED
ENGINEERING FIRM
F-2144

As part of the Drainage Master Plan (DMP) for the City of Ingleside (City), Freese and Nichols (FNI) was scoped to develop a list of "small" drainage projects that do not require hydrologic or hydraulic modeling but will improve the performance of the drainage system. These projects were identified using CCTV inspection reports and videos provided by Video Pipeline Inspections, Inc., and survey data field notes and photographs provided by CivilCorp, LLC. For each project, the extents and summary of problems and improvements are included. Photographs of each noted issue are included in Appendix A, and an exhibit is provided for each proposed project in Appendix B.

As some general guidance, FNI recommends not allowing corrugated metal pipe (CMP) in the right-of-way (ROW) for future developments or when replacing existing systems. If not already developed and implemented, FNI also recommends the City develop a routine operations and maintenance plan. Scheduling routine maintenance would be beneficial to prevent buildup within storm pipes.

1. CLEAR BLOCKED STORM PIPE ON TEXAS AVENUE

Location: South-east side of Texas Avenue between Arkansas Street and Avenue B

Problem: There is concrete debris blocking the 18" storm drain, approximately 77.8 feet east of grate inlet GI-19 (see photo attachments for GI-19 to GI-17 in Appendix A, CCTV report and video for GI-19 to GI-17, and Exhibit SP-1 in Appendix B)

Solution: Clear the debris in the pipe to improve performance of drainage system.

2. CLEAR AND REPAIR STORM PIPE ON AVENUE B

Location: Along Avenue B, south of Mustang Dr to Waco St

Problem 1: There is an obstruction completely blocking the 15" by 24" storm drain. This is approximately 156.9 feet north of grate inlet GI-11, located between 4th St and Waco St (see photo attachments for GI-11 to MH11A in Appendix A, CCTV report and video for GI-11 to MH11A, and Exhibit SP-2A in Appendix B).

Problem 2: The 15" by 24" storm drain has collapsed approximately 104.9 ft south of GI 11. There is a significant buildup of sentiment throughout the pipe segment as well. Located between Mustang Dr and 4th St (see photo attachments for GI-11 to GI-12 in Appendix A, CCTV report and video for GI-11 to GI-12, and Exhibit SP-2A in Appendix B).

Problem 3: The 15" by 24" storm drain has a deformed section approximately 190.3 ft south of GI 12 along with buildup throughout the pipe. This is located between Mustang Dr and 4th St (see photo attachments for GI-12 to GI-6 in Appendix A, CCTV report and video for GI-12 to GI-6, and Exhibit SP-2B in Appendix B).

Problem 4: There is lots of debris throughout the 15" storm drain from GI-6 travelling south to STMH 1. This is located on Avenue B crossing over Mustang Dr (see photo attachments for GI-6 to STMH 1 in Appendix A, CCTV data report and video for GI-6 to STMH 1, and Exhibit SP-2B in Appendix B).

Solution: Clear debris in pipe and repair failing pipe segments to improve performance of drainage system.

3. CLEAN STORM PIPES, MANHOLES, AND SAFETY END TREATMENTS ON MAIN STREET

Location: East side of Main St, from south of State Highway 361 to Morgan Ln

Problem: The storm drain is blocked with silt and trash and some manholes are inaccessible. The blockage is located approximately 70 feet south of State Highway 361 to Morgan Ln on Main St (see Survey field notes file 11003-23022ED and photo attachments for SW Asset Inventory Points 50015, 50016, 50035, 50038, 50044, 50048, 50190, 50200, 51454, 51461, 51468, 51475, 51482, 51488, 51496, 51507, 51514, 51521, 51525, 51535, 51542, 51549, 51556, 51563, 51570, 51715, 51726, 51733, 51740, 51755, 51764, 51771, 51778, 51784, 51793, 51794, 51795, 60023, 60024, 60041, 60042, 60055, and 60056 in Appendix A, and Exhibits SP-3A and SP-3B in Appendix B).

Solution: Clear silt and debris in pipes and manholes to improve performance of drainage system. It appears that grass clippings are accumulating in the culvert headwalls/safety end treatments. To prevent buildup within the drainage system, coordinate with landscape workers and/or property owners to not leave excessive grass cuttings in the ditches and pipe inlet areas.

4. CLEAN OUT DRIVEWAY CULVERTS ON CHURCH STREET

Location: Church St, between East St and State Highway 361

Problem: Driveway culverts are filled with dirt, which is obstructing water flow. This is located on the north side of Church St approximately 50 feet east of East St through 190 ft northwest of Westlake Dr and the south side of Church St, 30 ft west of Westlake Dr to 190 ft east of Westlake Dr. One of the culvert ends is broken approximately 260 ft east of East St (see photo attachments

for SW Asset Inventory Points 50064, 50065, 50066, 50067, 50068, 50073, 50074, 50077, 50078, 50084, and 50094 in Appendix A, and Exhibit SP-4 in Appendix B).

Solution: Clear dirt in culverts and fix broken culvert end to improve performance of drainage system.

5. CLEAN OUT STORM DRAINS ON AVENUE A

Location: Avenue A, south of Buckeye Dr to south of Union Pacific railroad

Problem: Culverts are filled with leaves and dirt, which is obstructing water flow. This is located 20 ft south of Buckeye Dr to a driveway culvert 117 ft south of Union Pacific railroad (see photo attachments for SW Asset Inventory Points 50800, 50804, 50805, 50899, and 50901 in Appendix A, and Exhibit SP-5 in Appendix B).

Solution: Clear dirt and vegetation in culverts to improve performance of drainage system.

End of Memorandum

Appendix A

Problem Area Photographs

(Please refer to maps in Appendix B for location of the photographs.)

Texas Avenue

GI-19 to GI-17:



Avenue B

GI-11 to MH11A:



GI-11 to GI-12:



GI-11 to GI-12:



GI-12 to GI-6:



GI-6 to STMH-1:



Main Street

50015: 	50016: 
50035: 	50038: 
50044: 	50048: 

50190:



50200:



51454:



51461:



51468:



51475:



51482: 	51488: 
51496: 	51507: 
51514: 	51521: 

51525: 	51535 
51542: 	51549: 
51556: 	51563: 

51570:



51715:



51726:



51733:



51740:



51755:



51764:



51771:



51778:



51784:



51793:



51794:



51795:



60023:



60024:



60041:



60042:



60055:



60056:



Church Street

50064:



50065:



50066:



50067:



50068:



50073:



50074:



50077:



50078:



50084:



50094:



Avenue A

50800:



50804:



50805:



50899:



50901:



Appendix B

Small Project Exhibits



GI15

GI18

GI19

GI16

GI17

GI 19 to GI 17

Texas Ave

Avenue B

0 20 40
Feet



Legend

- ProjectAreas
- Ingleside Storm Lines
- Ingleside Storm Points

N
W E
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FN PROJECT NO. ING21605
DATE CREATED 4/20/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 Ft US
FILE NAME KB_Task5_Workmap
PREPARED BY EME

Ingleside, Texas

Small Project List

Clear Blocked Storm Pipe on Texas Avenue

FREESE AND NICHOLS, INC.
10431 MORADO CIRCLE
BUILDING 5; SUITE 300
AUSTIN, TEXAS 78759
P: 512-617-3100

FIGURE

SP-1







GI 11 to 11A

GI 11 to GI 12

GI11

GI12

Avenue B

4th St

Avenue C

6th St

Oklahoma Ave

Texas Ave

San Angelo Ave

GI 12 to GI 6

GI 6 to STMH 1

GI 19 to GI 17

0 50 100
Feet

Legend

- ProjectAreas
- Ingleside Storm Lines
- Ingleside Storm Points

FN PROJECT NO. ING21605
DATE CREATED 4/20/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 FtUS
FILE NAME KB_Task5_Workmap
PREPARED BY EME

Ingleside, Texas

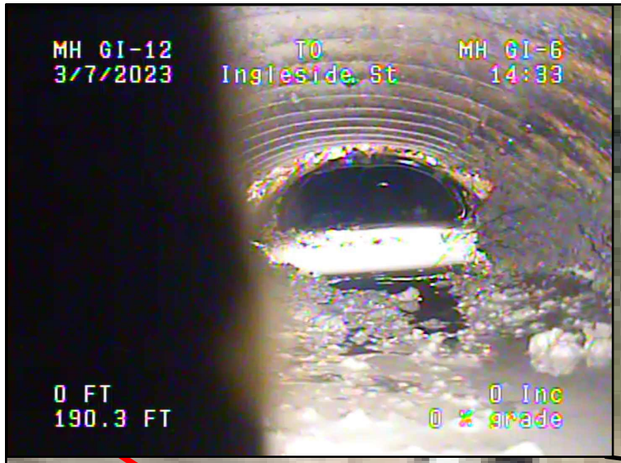
Small Project List

Clear and Repair Storm Pipe on Avenue B

FREESE AND NICHOLS, INC.
10431 MORADO CIRCLE
BUILDING 5; SUITE 300
AUSTIN, TEXAS 78759
P: 512-617-3100

FIGURE

SP-2A





GI 12 to GI 6

GI6

GI5

MAINCONNECT

GI 6 to STMH 1

STMH 1

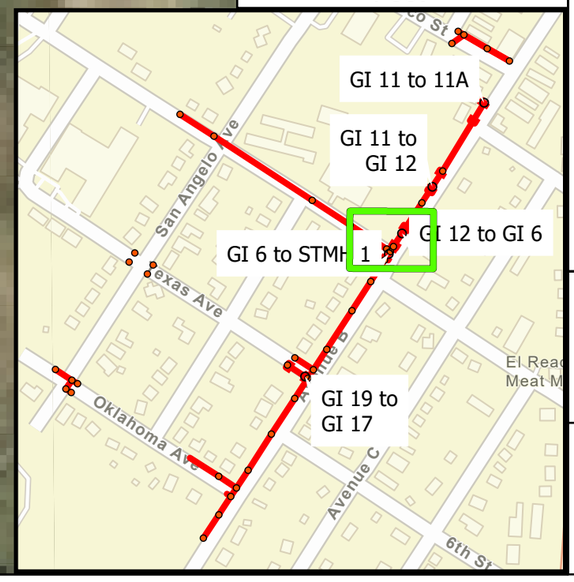
Avenue B

Mustang Dr

Legend

- ProjectAreas
- Ingleside Storm Lines
- Ingleside Storm Points

0 20 40
Feet



FN PROJECT NO. ING21605
DATE CREATED 4/20/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 Ft US
FILE NAME KB_Task5_Workmap
PREPARED BY EME

N
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Ingleside, Texas

Small Project List

Clear and Repair Storm Pipe on Avenue B

FREESE AND NICHOLS, INC.
10431 MORADO CIRCLE
BUILDING 5, SUITE 300
AUSTIN, TEXAS 78759
P: 512-617-3100

FIGURE

SP-2B

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Legend

- Main Streeet Project Area
- Storm Lines
- SW Asset Inventory Points

Ingleside, Texas

Small Project List

Clean Storm Pipes, Manholes, and Safety End Treatments on Main Street

FIGURE

SP-3A

FREESE AND NICHOLS, INC.
800 N. SHORELINE BLVD.
SUITE 1600N
CORPUS CHRISTI,
TEXAS 78401
P: 361-561-6500

FN PROJECT NO. INGI1605
DATE CREATED 6/14/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 PLUS
FILE NAME K:\S_Data\S_Working\
PREPARED BY EME

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Legend

- Main Streeet Project Area
- Storm Lines
- SW Asset Inventory Points

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DATE CREATED 6/14/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 PLUS
FILE NAME KB_Task5_Workmap2
PREPARED BY EME

Ingleside, Texas

Small Project List

Clean Storm Pipes, Manholes, and Safety End Treatments on Main Street

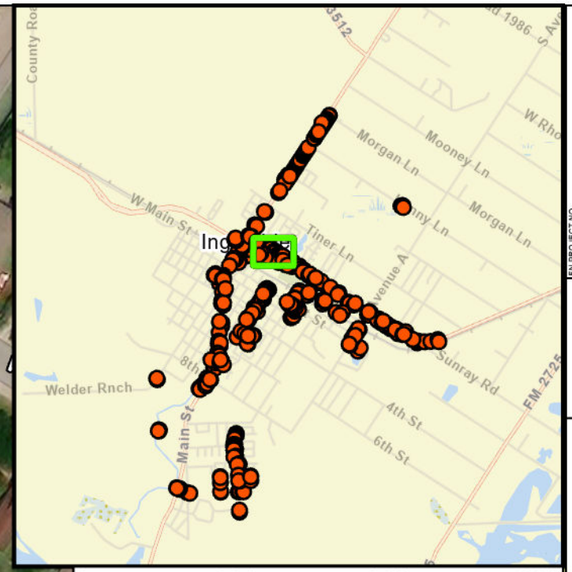
FREESE AND NICHOLS, INC.
800 N. SHORELINE BLVD.
SUITE 1600N
CORPUS CHRISTI,
TEXAS 78401
P. 361-561-6500

FIGURE

SP-3B







50063
50064
50065
50066
50067
50068
50069
50070
50071
50072
50073
50075
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50111
50128
50482
50483
50484
50485
50487
50492
50489
50491
50493
50499
50504
50149
50139
50138
50137
50136
50115
50116
50121

Westlake Dr
Westlake Ct
Church St
Church St
State Highway 361
East St
361
361
361

Legend

- Church Street Project Area
- Storm Lines
- SW Asset Inventory Points

FN PROJECT NO.	ING21605
DATE CREATED	6/14/2023
DATUM & COORDINATE SYSTEM	NAD 1983 2011 StatePlane Texas South Central FIPS 4204 Feet
FILE NAME	K:\S_Tas\S_Work\ING21605\Task5_Workmap2.aprx
PREPARED BY	EME

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S

Ingleside, Texas

Small Project List
Clean out Driveway Culverts on Church Street

FREESE AND NICHOLS, INC.
800 N. SHORELINE BLVD.
SUITE 1600N
CORPUS CHRISTI,
TEXAS 78401
P: 361-561-6500

FIGURE
SP-4

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Union Pacific

Avenue A

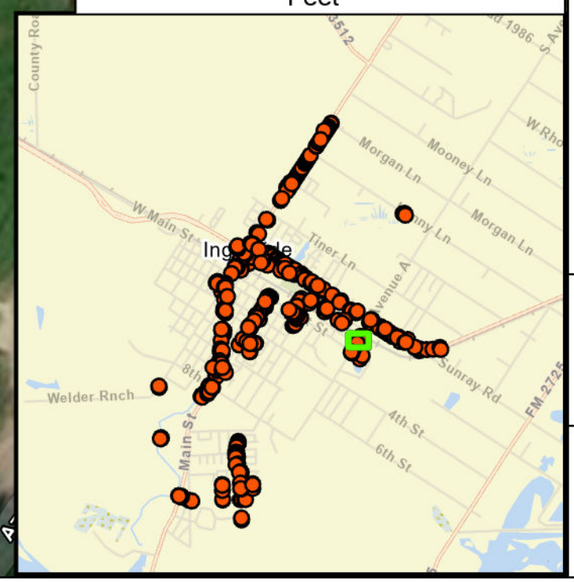
Buckeye Dr

50812
50810
50809
50811
50806
50805
50804
50802
50801
50803
50901
50900
50899
50898
50800
50799
50798
50797
50796

Legend

- Avenue A Project Areas
- Storm Lines
- SW Asset Inventory Points

0 50 100 150
Feet



FA PROJECT NO. ING21605
DATE CREATED 6/14/2023
DATUM & COORDINATE SYSTEM NAD 1983 2011 StatePlane Texas South Central FIPS 4204 Plus
FILE NAME K:\S_Task5_Workmap2
PREPARED BY EME

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S

Ingleside, Texas

Small Project List
Clean Out Storm Drains on Avenue A

FREESE AND NICHOLS, INC.
800 N. SHORELINE BLVD.
SUITE 1600N
CORPUS CHRISTI,
TEXAS 78401
P: 361-561-6500

FIGURE
SP-5

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APPENDIX K
HYDROLOGIC AND HYDRAULIC METHODOLOGIES MEMORANDUM

Technical Memorandum

FREESE AND NICHOLS

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TO:	Gary Paredez, City of Ingleside
FROM:	Sarah West, PE, CFM
SUBJECT:	Hydrologic and Hydraulic Methodologies
PROJECT:	Ingleside Drainage Master Plan
DATE:	February 16, 2023
CC:	Donald Paty, City of Ingleside Dale McConnell, City of Ingleside

1.0 PROJECT UNDERSTANDING

Freese and Nichols, Inc. (FNI) will develop a Drainage Master Plan (DMP) for the City of Ingleside (City). The DMP will support goals presented in the Comprehensive Master Plan (CMP) by providing recommendations for stormwater system improvements and maintenance. The DMP will also provide recommendations for floodplain management strategies for reducing flood risk and erosion potential as well as improving water quality. The DMP recommendations will guide the prioritization process for City stormwater projects such that each project reflects the City's commitment to resolving existing flooding issues while preparing for continued growth.

The purpose of this technical memorandum is to summarize the hydrologic and hydraulic methodologies that will be used in the Model Development and Runs (Task 5) for the Drainage Master Plan. The City of Ingleside includes two FEMA Zone AE creeks (effective November 8, 2016). These FEMA effective Flood Insurance Study (FIS) models were reviewed, and it was confirmed that that they are not viable for this study. Since the Base Level Engineering (BLE) HEC-RAS two-dimensional (2D) models are now available, it is recommended that the methodology shift from one-dimensional (1D) open channel (HEC-RAS) and storm drain models (StormCAD) that were originally scoped. The HEC-RAS 2D BLE models will be leveraged and supplemented with InfoWorks ICM for the study areas identified on Exhibit 1 where there is underground stormwater infrastructure present. InfoWorks ICM has the capability of combining the analysis of two-dimensional overland hydraulics with one-dimensional sub-surface stormwater system hydraulics. This gives the ability to assess the performance of surface and sub-surface stormwater infrastructure through a dynamic exchange of water with calculations for depth and velocity at incremental time steps during an entire flood event, not only during the peak flow condition. Separate inundation maps from each model will be developed and merged in GIS to the extent possible for the existing and fully-developed conditions floodplains for the 100-year event within the study limits. The following memorandum describes the methodology to be used and next steps resulting from Task 4 Modeling Strategy Development.

2.0 BASE MAP DATA SOURCES

2.01 Previous Studies:

- *Aransas Bay HUC-8 Watershed, Texas Base Level Engineering (BLE) Results* (July 2022), Halff Associates, Prepared for Federal Emergency Management Agency (FEMA)
- North Corpus Christi HUC-8 Watershed, Texas Base Level Engineering (BLE) Results (July 2022), Halff Associates, Prepared for FEMA

2.02 Topography:

- 2018 USGS South TX LiDAR, Nueces, San Patricio – terrains acquired from the BLE models

2.03 Coordinate System:

- NAD 1983 State Plane Texas South FIPS 4205 (US Feet) – DMP and North Corpus Christi BLE model
- NAD 1983 State Plane Texas S Central FIPS 4204 (US Feet) – Aransas Bay BLE model

2.04 Aerial:

- ArcGIS Pro – World Imagery Map Service, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

2.05 Soils:

- USGS, Web Soil Survey, Soil Survey Area (SSURGO)
    - Nueces County, Texas, Area Symbol TX355, Version: Survey Area Version 21 (Aug 24, 2022), Tabular Version 20 (Aug 24, 2022), Spatial Version 3 (Sep 12, 2019)
    - San Patricio and Aransas Counties, Texas Area Symbol TX620, Version: Survey Area Version 19 (Aug 24, 2022), Tabular Version 19 (Aug 24, 2022), Spatial Version 3 (Sep 12, 2019)

2.06 Land Use:

- Existing Land Use:
    - BLE Models: 2019 National Land Cover Dataset (NLCD)
    - ICM Model: Polygon feature class attributed with 2019 NLCD Land Cover classifications based on County tax parcels and aerial imagery. Within the ICM model, a polygon feature class will be used to incorporate more detail into the ICM model and to maintain consistency between the existing and future landuse data formats, so that existing and future conditions results are not affected by the use of different data formats (polygons versus raster).
- Future Land Use:
    - BLE Models: Existing BLE model curve numbers will be modified based on relative difference between existing and future landuse polygon feature classes used for the ICM model.
    - ICM Model: Existing land use feature class modified based on 2016 City of Ingleside GIS data.

2.07 Storm Drain Infrastructure:

- Survey and CCTV (per Task 3 of the scope)
- As-Built Plans to be provided by the City
- City of Ingleside GIS Data

2.08 Development Plans:

- As-Built Plans from the City

3.0 METHOD OF COMPUTING RUNOFF

3.01 Criteria Used to Select Method:

- City of Ingleside Code of Ordinances (dated October 20, 2022), one of the objectives of the DMP is to provide guidance to the City

3.02 Selected Method:

- The SCS Method will be used within HEC-HMS for the calculation of rainfall abstraction and infiltration losses and development of excess precipitation hyetographs. These hyetographs will be applied through a Rain-on-Mesh (ROM) approach to the InfoWorks ICM 2D mesh. Runoff hydrographs provided in the HEC-RAS BLE models will not be revised as part of this study. These hydrographs were generated using SCS Method and excess precipitation as well. More detail can be found in the BLE reports.

4.0 HYDROLOGIC PARAMETERS

4.01 Drainage Areas:

- Information used to delineate Drainage Areas (topography, as-builts, proposed design studies and plans):
  - Ingleside Drainage Basins exhibit by Naismith Engineering, Inc.
  - Topography (See “Base Map Data Source” Section)
  - City’s stormwater infrastructure GIS data
- Drainage Area Size Limitations: N/A
- Drainage Area Map showing delineations to primary City stormwater drainage systems is included as Exhibit 2
- Further sub-division of the drainage areas provided in Exhibit 2 will not be provided as part of this effort since it is not required for ROM

4.02 Time of Concentration:

- Methodology/Criteria: Since lag time does not impact the excess rainfall hyetograph, it is not necessary to calculate an accurate basin travel time, but the model still requires a value to run. The time of concentration will be approximated using the same methodology as the BLE models: “as the square root of the drainage area, then multiplied by 0.6 to compute the lag time.”

4.03 Loss Calculations: SCS Method

- Percent impervious: To be estimated from aerial imagery and National Land Cover classifications
- Source of Soil CN values: To be developed based on NLCD land cover data with reference to Tables 2-2a through d of the NRCS Technical Release 55 (TR-55) Manual
- Soil Moisture Conditions to be used: Antecedent Runoff Condition (ARC II)

4.04 Precipitation:

- Frequency/Events: 2-, 10-, 25-, 100-, and 500-year (24-hr rainfall depth: 4.72, 7.87, 10.10, 14.10, and 20.20 inches, respectively)

- Distribution: Frequency Storm
- Source of Depth: NOAA Atlas 14 Precipitation Frequency Data Server (PFDS) at the centroid of the City limits.

5.0 HEC-HMS MODEL

The sole purpose of the HEC-HMS model is to develop excess precipitation hyetographs to be applied to the ground model mesh in the 2D hydraulic models (HEC-RAS and InfoWorks ICM). Detailed watershed hydrologic modeling is not included as part of this study.

5.01 Available Models:

- The FEMA effective FIS models are outdated and not viable for this study. The BLE models will be used as reference since they provide the most up-to-date flood risk assessment for the study area. The BLE model parameters are:
    - Name/Watershed: Aransas Bay and North Corpus Christi
    - Version: 4.3
    - Area Reduction: NOAA Technical Paper Number 40 (TP40) Method based on an assigned storm area equivalent to approximately one half of the total study area was used for the BLE models, but will not be used for the drainage master plan
    - Routing Methodology: none
    - Model updates: The 2-year storm will be added using the Ingleside precipitation depths (not enough data was provided to reasonably obtain the 2-year depths that correspond to the BLE study).

5.02 Selected Model:

- Since different rainfall data and areal reductions are used for the two BLE models that cover the City of Ingleside, a separate HEC-HMS will be developed using rainfall data at the centroid of the city limits and no aerial reduction.

6.0 HEC-RAS MODEL (OPEN CHANNELS)

6.01 Available Models:

- FEMA effective FIS models are outdated and not viable for this study, the BLE models will be used as the basis of the open channel assessment since they provide the most up-to-date flood risk assessment for the study area (*Guidance for Flood Risk Analysis and Mapping: Base Level Engineering Analysis and Mapping* (Nov 2021), FEMA, pg 1).

6.02 Purpose:

- The HEC-RAS 2D BLE models will be used to assess the following creeks and streams:
    - Kinney Bayou and 3 tributaries, approx. 4.8 miles
    - McCampbell Slough and 3 tributaries, approx. 3.8 miles
    - Humble Ditch and 2 tributaries, approx. 3.9 miles
- Study Area 5 will also be modeled in HEC-RAS.

6.03 Stormwater Open Channels:

- Survey will be evaluated and incorporated into the model terrain only if it will improve the accuracy on the model results

- City GIS data will be supplemented with as-builts and survey to add Bridge/culvert crossings inside of the 2D Flow Area along the identified creeks and streams
    - If no data is available, crossings will be modelled by modifying the terrain to let flow through the embankment (referred to as "burning" the crossings into the terrain)
- Stormwater infrastructure outside of the study areas will only be modeled to the extent necessary to accurately represent the conditions at the study areas

6.04 Boundary Condition/Tailwater:

- Stage hydrographs representing a known water surface elevation of **1.5-feet** along Aransas Bay, Nueces Bay and Corpus Christi Bay were used for the boundary conditions in the BLE models. This was established using NOAA tidal datums for the Texas coast and applying the mean higher high water elevations.

7.0 INFOWORKS ICM MODEL (LOCAL SYSTEMS)

7.01 Purpose:

- The purpose of the InfoWorks ICM model is to supplement the HEC-RAS 2D BLE models for the study areas identified on Exhibit 1 where there is underground stormwater infrastructure present. Study Areas 1, 2, 3 and 4 all contain storm sewer and will be modeled in ICM.

7.02 Surface:

- Topography (See "Base Map Data Source" Section)
- Mesh size: Mean maximum mesh triangle size of 100 square feet, optimized to accurately model the systems and maintain reasonable run times
- Breaklines: roadway and stream centerlines will be used as necessary

7.03 Roughness Zones

- Land Use data (See "Base Map Data Source" Section)
- Manning's roughness values will be set using the best available data (*Open Channel Hydraulics, Chow, 1959,* and the *HEC-RAS User Manual*)
- Building footprints: roughness value of 10 (Two-Dimensional Modeling Guidelines, Harris County Flood Control District, July 2018)

7.04 Storm Drain Data:

- City GIS data will be supplemented with as-builts and survey
- Stormwater Inlets:
    - Inlet types and dimensions are not included in City GIS data. Available as-built and survey data will be used to incorporate inlet details in the model where possible.
    - When as-built or survey data is not available, Google Street View will be used for estimating inlet types and dimensions where possible. City standard 5-ft curb inlets will be assumed when no other methodology is available to make a size determination.

- Inlets will be set to Flood Type “2D” such that discharge between the 2D mesh and the inlets and manholes will be calculated using standard weir equations or inlet capacity curves.

- Stormwater Conduits:
  - Pipe material, dimensions and inverts will be modeled based on City GIS data. Missing information will be supplemented with available as-built and survey data. If none of these resources provide enough information to define the pipe geometries and vertical locations, interpolations will be made based on bounding pipes along the same system.
  - Head loss conditions at the upstream end of each link will be determined using ICM “NORMAL” headloss curves.
- Stormwater infrastructure outside of the study areas will only be modeled to the extent necessary to accurately represent the conditions at the study areas
  - Bridge/culvert crossings may be modelled by burning channels through the embankment when it is evident that there is ponding that should continue downstream

7.05 Boundary Condition/Tailwater:

- Stage hydrographs from the BLE models will be used as necessary to accurately model the systems tailwater.

Study Areas

Ingleside, Texas

1. 5. Recommend Outfall for Future Development
2.
3.
4.

Legend

- Ingleside City Limits
- Storm Points
- Storm Lines
- Known Projects
- Existing Drainage Infrastructure
- Project Locations

0 1,250 2,500 Feet

FREESE AND NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401
(P) 361-561-6500

FN JOB NO	ING21605
FILE	KB_Task4_ModelingStrategy
DATE	12/20/2022
SCALE	1:36,000
DRAFTED	08215

EXHIBIT 1



FREESE AND NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401
(P) 361-561-6500

Drainage Area Map

Ingleside, Texas

FN JOB NO	ING21605
FILE	KB_Task4_ModelingStrategy
DATE	2/17/2023
SCALE	1:60,000
DRAFTED	08215

EXHIBIT 2

100-Year Flood Indication Hotspots

Ingleside, Texas

FREESE AND NICHOLS
800 N. Shoreline Blvd, Suite 1600N
Corpus Christi, Texas 78401
(P) 361-561-6500

FN JOB NO	ING21605
FILE	FloodRiskHotspotExhibits
DATE	11/8/2022
SCALE	1:30,000
DRAFTED	08196

EXHIBIT 3

H:\STORMWATER\Working\FloodRiskHotspotExhibits\FloodRiskHotspotExhibits.aprx

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 12

Deliberate and take appropriate action on the Regular Meeting Minutes of April 09, 2024.

SUBMITTED BY: Ruby Beaven, City Secretary

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

Please see the accompanying Minutes:

Regular Meeting Minutes of April 09, 2024

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Staff recommends approval of the meeting minutes, as presented.

ATTACHMENTS:

1. 2024, 04-09 Regular Council Minutes_DRAFT

CITY OF INGLESIDE
REGULAR CITY COUNCIL MEETING
MINUTES
APRIL 9, 2024
6:30 P.M.

Opening Agenda

1. **Call Meeting to order**.

   The Regular Council Meeting of the City of Ingleside was called to order by Mayor Adame at 6:30 p.m. on April 9, 2024, at Ingleside City Hall, 2671 San Angelo Ave, Ingleside, TX and live video streaming.

2. **Roll Call.**

   With Council Members present a quorum was established.

   Council Members Present: Steve Diehl, Stewart Wilson, David Pruitt, John Salinas, Mayor Pro-Tem Tracy Long, Julio Salinas, and Mayor Adame.

3. **Invocation.**

   Council Member Pruitt led the invocation.

4. **Pledge of Allegiance.**

   Mayor Adame led the Pledge of Allegiance to the U.S. flag.

5. **Citizen Comments and Reports**

   Chuck Sullivan, 2627 Hwy 361, addressed the Council about being the owner of a local business, police presence of walkthroughs which are deterring customers every night, stated the revenue numbers of what is being lost, would like the Police Department to be under control, and was refused the right to speak to a supervisor when requested.

   Martha Habluetzel, 3508 Ave A, addressed the Council about Ingleside Cleanup on April 13th at 10 a.m., need youth to help, stated that the ball was dropped when it came to notification of Tree City USA, and that Tree City USA recognition does not need to be in November. City Manager Lewis made a statement of fact that Staff is working on putting together a true celebration where recognition will be given to those who were all involved.

   Ricardo Trevino, 2322 Morgan Lane, addressed the Council about being a Mayoral Candidate, being censored by local groups, and would like to see citizens given more the three (3) minutes to speak during Citizen Comments. Yielded the rest of his speaking time for Chuck Sullivan to address the Council again.

Chuck Sullivan, 2627 Hwy 361, addressed the Council about the Cleanup taking place on Saturday, asking for the past two (2) years to have curbs and drains cleaned up, buildings have grass that is too high around them, and making the roads look better.

Josh Ligman, 2535 5th St., addressed the Council about the empty lot next door to his property being a residential lot but is being used as an industrial storage lot, that there is 1500-gallon gas tank 15 feet away from his house, and that he has informed Code Compliance about the issue.

Vicky Cook, 3009 Lakeview West Dr., addressed the Council about Tree City USA, how it is about biodiversity on all levels and not just about trees, how everything interacts together and affects everyone, and getting signage to showcase Ingleside for Tree City USA.

Joyce Turner, 3202 Rebecca St., addressed the Council about Ingleside Cleanup taking place on April 13th at 10 a.m., cleaning up around the Humble, there being a lot of projects that Ingleside Cleanup can't always get to, and suggesting that businesses take care of cleaning up in front of their business.

6. **Staff Comments and Reports**

   A. Council Comments and Reports

   B. Announcements of Community Interest and/or upcoming events.

   No discussion was held on this item.

   C. Update to the City Council on the formation of the Sports Fields Committee.

   City Manager Lewis updated the Council about reaching out to League representatives to be on the Sports Fields Committee and has only received interest from two (2) people. Mayor Adame requested that Staff reach out to the Leagues again.

   D. Update on Tree City USA Designation.

   Discussion was held between Council Members and City Manager Lewis about recognition for those who contributed to Tree City USA, signage to recognize clubs, email to the community, and congratulations coming from Texas A&M Forest Service Bill Greene.

Presentations

7. **Presentation of a donation from the Ingleside Chamber of Commerce to the City of Ingleside for the Animal Control Facility.**

Barbara Gregg from the Ingleside Chamber of Commerce presented a donation check to Mayor Adame for the Animal Control Facility. She stated that they were from the tips jar that their booth had out during Round Up Days.

Consent Agenda

Agenda Item 8 was pulled from the Consent Agenda and moved into the regular Agenda for separate discussion.

8. **Deliberate and take appropriate action regarding the issuance of a Special Use Permit to Gypsy M/C International Corpus Christi Chapter for the usage of the front circle of Live Oak Park from May 2, 2024, through May 5, 2024.**

   Discussion held between Council Members and Gypsy M/C International Corpus Christi Chapter representative Jennifer Hunter about the use of Live Oak Park for their Cinco de Mayo event, starting setup on Thursday evening, the request of barricades for the back entrance so no one gets hurt when motorcycles are driving around the park circle, the cleanliness of the park after the event, and the invitation to the Council Members to come out to the event.

   Motion: Mayor Adame made a motion to approve the Special Use Permit to Gypsy M/C Internation Corpus Christi Chapter for the usage of the front circle of Live Oak Park from May 2, 2024, through May 5, 2024. Mayor Pro-Tem Long seconded the motion. Motion carried with all present voting in favor.

9. **Deliberate and take appropriate action regarding acceptance of the HOT Funds Post Event Form from the Ingleside Chamber of Commerce for their round Up Days & Music Festival Event held March 23-25, 2024, and payment of $60,500 to close out the event.**

10. **Deliberate and take appropriate action on a resolution appointing/reappointing member to the Board of Adjustment.**

    Proposed Resolution 2024-16.

11. **Deliberate and take appropriate action on the second reading of an Ordinance amending Ingleside Code of Ordinances Chapter 14-Animal control and providing for effective date, reading, severance, and publication.**

    Proposed Ordinance 2024-03.

12. **Deliberate and take appropriate action on the Regular Meeting Minutes of March 26, 2024.**

    Motion: Mayor Adame made a motion to approve the Consent Agenda excluding Item 8. Council Member Diehl seconded the motion. Motion carried with all present voting in favor.

Executive Session

13. **Closed Session**
    City Council will meet in Closed Session pursuant to the provision of Chapter 551 of the Texas Government Code, in accordance with the authority contained in:

    A. **Section 551.087 Deliberation regarding Economic Development Negotiations**
    B. **Section 551.071 Consultation with Attorney**

    At 7:05 p.m. Mayor Adame convened the Ingleside City Council into a closed session pursuant to provision of Chapter 551 of the Texas Government Code, in accordance with the authority contained in Section 551.087 Deliberation regarding Economic Development Negotiations – Update on ongoing industry and retail negotiations, Section 551.071 Consultation with Attorney, and Section 551.074 Personnel Matters – City Manager Lewis.

14. **City Council will reconvene in Open Session at which time action on the matters discussed in Closed Session may be considered.**

    A. **Section 551.087 Deliberation regarding Economic Development Negotiations – Update on ongoing industry and retail negotiations**
    B. **Section 551.071 Consultation with Attorney**

    At 7:26 p.m. Mayor Adame reconvened the Ingleside City Council into an open session pursuant to provision of Chapter 551 of the Texas Government Code to take any action necessary related to the executive session noted herein, or regular agenda items, noted above, and/or related items.

    Item A: No Action taken.

    Item B: No Action taken.

Public Hearing

No Public Hearing presented for this meeting.

Regular Agenda

15. **Deliberate and take appropriate action for an amendment to the Little League Agreement.**

    Discussion was held between Council Members and City Manager Lewis about the League needing help with cleaning, and that Tuesdays and Fridays are the better days for the City to help.

    Motion: Council Member Pruitt made a motion to approve the amendment to the Little League Agreement. Council Member John Salinas seconded the motion. Motion carried with all present voting in favor.

16. **Deliberate and take appropriate action on first reading of an Ordinance adopting the Drainage Master Plan, an element of the Comprehensive Master Plan of the City of Ingleside; Amending conflicting provisions of the City Comprehensive Plan, and further providing for effective date, reading, severance, and publication.**

    Discussion was held between Council Members and City Manager Lewis about Sarah West from Freese & Nichols giving presentations and draft plans, and that the Comprehensive Master Plan is a living document.

    Motion: Council Member Diehl made a motion to pass to the second reading of an Ordinance adopting the Drainage Master Plan, an element of the Comprehensive Master Plan of the City of Ingleside; Amending conflicting provisions of the City Comprehensive Plan, and further providing for effective date, reading, severance, and publication. Council Member John Salinas seconded the motion. Motion carried with all present voting in favor.

17. **Deliberate and take appropriate action regarding the purchase of a digital sign for tourism/information at a location near the Humble Station Community Center using HOT Funds.**

    Discussion was held between the Council Members and City Manager Lewis about the having the sign located on City property near the Humble Station Community Center, wanting to use the sign heavily for information to be broadcasted to citizens, staff recommending the use of Discretionary Funds instead of HOT Funds, this would be a second sign and different from the one that would be located at N. O. Simmons Park, and the project being a part of Council from previous years.

    Motion: Council Member Diehl made a motion to authorize the use of no more than $42,000 from the City Council Discretionary Funds for the purchase of a digital sign for tourism/information at a location near the Humble Station Community Center. Council Member Wilson seconded the motion. Motion carried 6:1.

For Motion:	Council Member Diehl, Council Member Wilson, Council Member Pruitt, Council Member John Salinas, Mayor Pro-Tem Long, and Mayor Adame.
Against Motion:	Council Member Julio Salinas

18. **Deliberate and take appropriate action on an Interlocal Cooperation Agreement between the Ingleside Independent School District and the City of Ingleside for two School Resource Officers.**

    Discussion was held between Council Members and City Manager Lewis about the agreement needing a small amendment to correct the wording in the document, Legislature adopting a bill to have a School Resource Officer on every campus, 75%-25% split between the City and the School District, and beneficial for the school because the children can make relationships with the Officers that can last outside of the classrooms as well.

Motion: Council Member John Salinas made a motion to approve the Interlocal Cooperation Agreement between the Ingleside Independent School District and the City of Ingleside for two School Resource Officers. Council Member Diehl seconded the motion. Motion carried with all present voting in favor.

19. **Deliberate and take appropriate action on first reading of an Ordinance altering the prima facie speed limits established for vehicles under the provisions of SEC. 545-346, Texas Transportation Code, upon the basis of an engineering and traffic investigation, upon certain streets and highways, or parts thereof, within the corporate limits of the City of Ingleside, as set out in the Ordinance; and Providing a penalty of a fine in an amount of not less than twenty five dollars ($25.00) or more than five hundred dollars ($500.00) for violation of this Ordinance; and providing for effective date, reading severance, and publication.**

    Discussion was held between Council Members and City Manager Lewis about the location of the speed limit change, and the change from 55 MPH to 50 MPH in the location.

    Motion: Council Member Diehl made a motion to pass to a second reading of an Ordinance altering the prima facie speed limits established for vehicles under the provisions of SEC. 545-346, Texas Transportation Code, upon the basis of an engineering and traffic investigation, upon certain streets and highways, or parts thereof, within the corporate limits of the City of Ingleside, as set out in the Ordinance; and Providing a penalty of a fine in an amount of not less than twenty five dollars ($25.00) or more than five hundred dollars ($500.00) for violation of this Ordinance; and providing for effective date, reading severance, and publication. Council Member Pruitt seconded the motion. Motion carried with all present voting in favor.

20. **Deliberate and take appropriate action on authorizing Staff to use City Council Discretionary funds to purchase retention binders to maintain historical documents.**

    Discussion was held between Council Members, City Manager Lewis, and City Secretary Beaven about the current binders becoming obsolete and disintegrating, the new binders will preserve the historical documents, and the cost being presented to Council covers the binders, shipping, and storage.

    Motion: Council Member Diehl made a motion to authorize the use of no more than $15,000 from the City Council Discretionary Funds to purchase retention binders to maintain historical documents. Council Member Wilson seconded the motion. Motion carried 6:1.

For Motion:	Council Member Diehl, Council Member Wilson, Council Member Pruitt, Council Member John Salinas, Mayor Pro-Tem Long, and Mayor Adame.
Against Motion:	Council Member Julio Salinas

21. **Deliberate and take appropriate action on a first and only reading of an Ordinance amending the Fiscal Year 2023-2024 Budget for the City of Ingleside, Texas, for the**

use of Council Discretionary funds for the purchase of retention binders to maintain historical documents.

Discussion was held between Council Members and City Manager Lewis about this confirming the previous agenda item.

Motion: Council Member Diehl made a motion to approve Ordinance 2024-04, an Ordinance amending the Fiscal Year 2023-2024 Budget for the City of Ingleside, Texas, for the use of Council Discretionary funds for the purchase of retention binders to maintain historical documents. Council Member Wilson seconded the motion. Motion carried 6:1.

For Motion:	Council Member Diehl, Council Member Wilson, Council Member Pruitt, Council Member John Salinas, Mayor Pro-Tem Long, and Mayor Adame.
Against Motion:	Council Member Julio Salinas

22. Items to consider for placement on future agendas.

Council Member John Salinas requested that the Cove Park Advisory Group be placed on a future agenda for a drawing and presentation.

Council Member Julio Salinas requested an update on the Sports Field Committee follow-up.

23. Adjourn.

Mayor Adame adjourned the regular meeting of the City of Ingleside at 7:57 p.m.

APPROVED:

_____
Pedro Oscar Adame, Mayor

ATTEST:

_____
Ruby Beaven, City Secretary

DRAFT

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 15

Deliberate and take appropriate action on the selection of the Law Offices of Davidson Troilo Ream & Garza, a Professional Corporation, to provide Legal Services and be appointed the City Attorney.

SUBMITTED BY:

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

The City of Ingleside staff advertised for Requests for Qualifications for City Attorney/Legal Services in newspapers in general circulation in Ingleside, Corpus Christi, and San Antonio and also placed the requests on the TML Job Board and City of Ingleside website. The City received three (3) RFQ's which were received and publicly opened and read on Tuesday, April 9, 2024, at 2:00 pm local time. Staff in attendance at the public opening included City Manager Lewis, Director of Infrastructure Services Paredez, Director of Information Technology Sauceda, and the Assistant City Secretary Stork. No firms submitting RFQ's were present.

The City Manager Lewis, Director of Infrastructure Services Paredez, and Interim Building Official Delaru reviewed the RFQ submissions and all reviewers recommended the Law Offices of Davidson Troilo Ream & Garza, a Professional Corporation, to provide Legal Services and be appointed the City Attorney.

FISCAL ANALYSIS:

N/A

RECOMMENDATION:

Staff recommends the Law Offices of Davidson Troilo Ream & Garza, a Professional Corporation, to provide Legal Services and be appointed the City Attorney.

ATTACHMENTS:

None

CITY COUNCIL AGENDA
Regular Meeting: April 23, 2024

AGENDA ITEM: 16

Deliberate and take appropriate action to allow the purchase of several pieces of street repair equipment to allow City employees to do street repair and maintenance in-house.

SUBMITTED BY: Gary Paredez, Director of Infrastructure Services

APPROVED FOR AGENDA: Brenton Lewis, City Manager

BACKGROUND:

During the previous budget workshops, the City Council stated that one of the main priorities for the city was street maintenance. The City Council approved the city manager to look into purchasing the required equipment to accomplish this in-house. A budget was established for this and quotes have been received.

Some of the bigger equipment has a long lead time, and we need to place an order for it as soon as possible. The equipment list includes an oil distributor (through Tips), a roller with a pad foot attachment (Buy Board), a rock spreader for the seal coating (Buy Board), a laydown machine to lay hot mix asphalt (Buy Board), and a trailer to move the equipment on site (3 quotes attached). We currently have a working maintainer, a pneumatic roller and dump trucks. Kiewit Industries has offered the use of one of their water trucks in coordination with them.

This equipment will allow us to do some of the needed repairs to our streets. In the future, we will require a couple more pieces of equipment to have a full ensemble. This includes a full-size motor-grader, a water truck of our own, a 12-yard dumb truck, and a few more qualified personnel.

FISCAL ANALYSIS:

Attached are quotes that were received for the purchase and training of the various pieces of equipment. A budget of 1.9 million dollars was appropriated for the purchase of this equipment is found in the Transfer Fund32 Vehicle/Equipment budget with a total of $1,750,000.00. The total for the listed equipment, including the discount, comes to $1,123,724.47.

RECOMMENDATION:

Staff recommends approval of purchases.

ATTACHMENTS:

1. Cooper Equipment Company

2. Texas Tide Trailers Quote
3. Ditch Witch Quote (T-30)
4. Ditch Witch Quote (T-20)
5. Felling Deck-Over Tilt Trailers Quote (No Response)

COOPER EQUIPMENT COMPANY

5210 N 1604 E San Antonio, TX 78247
Phone: (210) 657-5151 Fax: (210) 657-5871

April 10, 2024

City of Ingleside

Quotation

District Representative:
Eric Magiera: (210) 867-7034
Ericm@cooperequip.com

Attn: Raymond

New 2025 Etnyre Centennial Distributor

1 **New Etnyre Centennial Distributor**, 1500 gallon., with all standard equipment, including 1ft. Cab controls , BT-1 computer, ASME tank, 400 gpm pump 18ft variable bar ,power wash down system, heated pump, front suction HD pump, alum spray wand ,duel diesel burners, rear mounted camera, wet box bar end caps, mid ship drain, extra tank and screen. 12' steel hose and fittings.

Tips
#230-802

Mounted on a 2024 white Freightliner M2 Automatic trans, power windows live pto, Bluetooth radio, air ride seat, Cummins 260hp diesel motor. **$ 258,586.90**

1 year Full Warranty | ** EST Delivery Early 2025 **

2024 Etnyre Chip spreader 10-20ft variable hopper, 2 wheel drive
hydrostatic drive, computer rate, and speed control, sliding control station (manual), Cummins QSB Tier4 diesel, 25,000 lb. axles, all wheel power brakes, hopper w/ individual gate controls, electro-hydraulic truck hitch, folding "bat" wings at rear hopper 385/65R22.5 G tubeless radial wide tires, dual 24 inch wide conveyors with auto control, LED lights, backup alarm, Eng. warning system, front fenders, manuals..... **$ 388,792.19**

Buy Board
#685-22

1 year Full Warranty * Delivery 90 - 120 days Est. *

Demo 2023 Dynapac Ca1500 66in smooth drum W scrapers with a powerful **Deutz TD3.6/DPF (V) 75hp engine, 55 gallon fuel tank, failsafe** Mult safe disc brake in gear box, 12mph max speed 15,000 lbs. operating mass. **$ 124,973.08**

Buy Board
#685-22

1 year Full warranty **55Hours**
* Unit in stock * **Optional Pad foot shell kit... $ 22,106.90**

2024 Carlson Cp130 Commercial tracked Paver - 3 man
Cummins turbo charged diesel engine (130Hp) , 7in colored Led Screens.
Carlson Ez CSS electrically heated screed (8' -15' paving width)
Operating 22,250, hooper Capacity 9 tons, joy stick controls, vandal covers
155 fpm paving speed, wash down pump, slide out cat walks, Aux plug, becon light. **$ 329,265.40**
#1 commerical class paver on the market !
*Unit in Stock *

Buy Board
#685-22

Total Package Price... $ 1,123,724.47

* 1 year Full Factory Warranty *

Will Include day of training

Etnyre reserves the right to modify pricing on all quotes and orders with material and labor surcharges as needed. Cooper Equipment Co. will provide, if applicable, the letter from Etnyre stating the increase amount. [There is no additional increase added to this cost from Cooper Equip.

Invoice will be from licensed truck dealer per state DMV law, make PO to Doggett Freightliner for Dist. truck only !
Other PO's will be made out to Cooper Equipment

APPROVAL /ORDERED BY_____

Quote is valid till 6/31/2024

Signed: _____
Eric Magiera- District Manager, Cooper Equipment Co.

Texas Pride Trailers
Order Form

Sales Person Esteban Torres 936-714-5492 **Date** 2/27/24

Pick Up Location: MA: X ST: TN: CA: MO: NC:
HO: OR: TXA:

Method of Payment: Cash: X Bank Finance: Sheffield #

Customer Name/ Business Name: City Of Ingleside

POC & Number: 701-331-9662 - Dale McConnell

Email Address: gmcconnell@inglesidetx.gov

Mailing Address: 2525 8th ST Ingleside TX 78362

Physical Address:

County: San Patricio **EIN# or DL# & State Issued**

	Options/Notes:	Cost:	Tax
1	8.5' x 25' 30k GVWR Power Tilt Trailer Bumper Pull (Pintle Ring)	$20,495.00	Y
2	Dual 15k lb Axles	$0.00	Y
3	Dual 12k Jacks, Front Locking Tool Box	$0.00	Y
4	Side Locking Tool Box Houses Pump and Battery	$0.00	Y
5	16Ply Spare	$325.00	Y
6	Pipe Spools Between Stake Pockets	$200.00	Y
7	Upgrade to Cross Members On 12" Centers	$400.00	Y
8	8k Warn Winch With Battery and Charging System	$1,600.00	Y
9		$0.00	Y
10		$0.00	Y
11		$0.00	Y
12	Manager Discount	-$1,500.00	Y

Sub Total	$21,520.00
Sales Tax	$0.00
Registration	$110.00
Doc Fee	$50.00
Dealer Handling Fee	$55.25
CA Tire	$0.00
Token / Farm Tags	$0.00
Transfer Fee	$0.00
FET 12%	**$2,582.40**
Shipping	**$544.00**
Credit Card Convenience Fee	$0.00
Deposit	$0.00

Tax Rate:

Stock Numbers: (separate with comma)

The balance due must be paid in Cashiers Check, or wire
We will only accept cash payments up to 9,500$
We Do Not Accept Any CC payment over 10,000$
2% fee for any tranaction over $2,000 on Card Transactions
Deposit is non refundable once steel is cut for trailer.

Delivery Miles 272 Cost Per Mile $2.00

Estimated Pickup Date: 3 Weeks **Heard About Us?** Google

Total Sale: $24,861.65

DITCH WITCH SOUTH TEXAS
337 FLATO RD
CORPUS CHRISTI, TX 78405-2107
+1 361-289-1422
https://www.facebook.com/dwsouthtexas
United States

CITY OF INGLESIDE
2671 SAN ANGELO AVE
INGLESIDE, TX 78362-5801
United States

Date	**02/27/2024**
Quote	104179
Valid Until	03/28/2024
Account	1055784

Prepared by:
Jennifer Shay
jennifer.shay@dwsouthtexas.com

EQUIPMENT QUOTE

Product	Description	Qty	Unit Price	Line Total
T-30T	1 Base Model - T-30T • 24 Deck Length - In Feet • 24 Decking Type - 2" Nominal Oak • 1 Overall Width - 102" Wide • 1 Stationary Deck - 4' stationary deck • 2 Axles - 16k Oil Bath, Spring Ride, 49" Spread • 2 Brakes - Electric • 8 Tires - 215/75Rx17.5(H) • 8 Wheels - 8 Bolt, Outboard, Hub Piloted, Steel • 1 Jack - 25K 2 Speed • 1 Lights - L.E.D. • 1 Plug - 7 Pole Round • 1 Hitch/Neck - 3" Pintle Ring • 1 Trailer Color - Equipment Black • 10 Tie Downs - D-Rings	1	$ 41,000.00	$ 41,000.00

Equipment Subtotal	$41,000.00
Freight	$1,620.00
Quote Total	**$42,620.00**

Taxes are an estimate at time of quotation. Actual tax will be calculated at time of invoicing. If this is a tax exempt transaction, please provide tax exempt certificate or leasing details.

Acceptance

Please sign and return to indicate acceptance of quote

Signature: _____ Date: _____

Taxes are an estimate at time of quotation. Actual tax will be calculated at time of invoicing. If this is a tax exempt transaction, please provide tax exempt certificate or leasing details.

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Date	**02/27/2024**
Quote	104177
Valid Until	03/28/24
Account	1055784

Prepared by:
Jennifer Shay
jennifer.shay@dwsouthtexas.com

EQUIPMENT QUOTE

Product	Description	Qty	Unit Price	Line Total
T-20T	1 Base Model - T-20T • 24 Deck Length - In Feet • 24 Decking Type - 2" Nominal Oak • Overall Width - 102" Wide • 1 Stationary Deck - 4' stationary deck • 2 Axles - 10K Oil Bath 49" Axle Spacing • 2 Suspension - General Duty Suspension • 2 Brakes - Electric • 8 Tires - 235/85Rx16(E) • 1 Deck Height - 36" • 8 Wheels - 8 Bolt Budd • 1 Jack - 12K Drop Leg • 1 Plug - 7 Pole Round • 1 Hitch/Neck - 3" Pintle Ring • 1 Trailer Color - Equipment Black • 10 Tie Downs - D-Rings	1	$ 33,750.00	$ 33,750.00

Equipment Subtotal	$33,750.00
Freight	$1,620.00
Quote Total	**$35,370.00**

Taxes are an estimate at time of quotation. Actual tax will be calculated at time of invoicing. If this is a tax exempt transaction, please provide tax exempt certificate or leasing details.

Acceptance

Please sign and return to indicate acceptance of quote

Signature: _____ Date: _____

Taxes are an estimate at time of quotation. Actual tax will be calculated at time of invoicing. If this is a tax exempt transaction, please provide tax exempt certificate or leasing details.

No response

(800) 872-2390

FELLING DECK-OVER TILT TRAILERS

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DROP DECK TRAILERS
DROP DECK TILT TRAILERS
DECK-OVER TRAILERS
DECK-OVER TILT TRAILERS
HYDRAULIC TAIL TRAILERS
DUMP TRAILERS
RIGID NECK SEMI TRAILER
X-FORCE HDG TRAILERS

DECK-OVER TILT TRAILERS