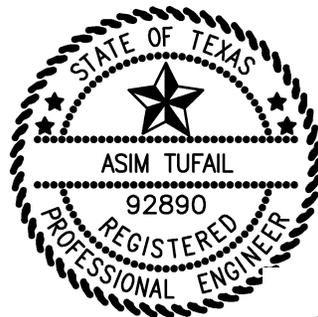


# Gulf Breeze PID Engineering Report

Hitchcock, Texas

January 2024



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1/30/2024

Prepared by:  
Blackline Engineering  
Texas Registered Firm No. 14051

**BLACKLINE**  
ENGINEERING

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Office 832-431-5959 BLACKLINE-ENG.COM

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Appendix H: Construction Schedule

## 1.0 Introduction

Gulf Breeze Public Improvement District (“District”) is an existing public improvement district in the City of Hitchcock (“City”), Galveston County consisting of approximately 225 acres, bound by Avenue “C” and FM 2004. Phases 1 through 5 include 701 single-family lots, with 301 lots being 55’ in width and another 300 lots being 45’ in width. The remaining 100 lots are patio homes. In addition to the lots there will be open space lots, landscape lots and a park. Proposed improvements include water and wastewater utilities, drainage and detention, parks, and streets.

The tracts generally drain from the southwest to the northeast in a sheet flow pattern which contributes stormwater runoff to the Jay Road ditch, and ultimately discharges to the Highland Bayou diversion channel. The site is located partially within Unshaded (outside 500 year flood plain) and Shaded Zone X (500 year flood plain). Roughly 80-85% of the site is located in this Shaded Zone X.

## 2.0 Public Improvement District

The Gulf Breeze project is subject to the Agreement between the City of Hitchcock and Four Windy Hill Investments, LLC dated April 18<sup>th</sup> 2022, included as Appendix K. The PID consists of Sections 1 - 5 and the Patio Homes. The PID authorized improvements will be financed by PID Bond Issue.

The PID will include 300 single-family lots (45’ wide), 301 single-family lots (55’ wide), 100 patio homes, 1 lift station and Detention Pond 1, 2 & 3. Improvements will also include street, drainage, water and wastewater improvements.

## 3.0 Zoning

The Gulf Breeze Project is located within the city limits of the City of Hitchcock and is subject to the rules and regulations of the Single Family Residential District.

## 4.0 Development Improvements

### 4.1 Streets

FM 2004 will be largely accessible from a new roadway connection to Gulf Breeze to the south. As a result of the Project's development, it is expected that FM 2004 will need a few enhancements built in stages to meet the increase in traffic. To enable access and circulation within the development, a number of streets will be built, beginning with an entering boulevard, reducing to a collector street, and ultimately diverging into a number of local residential streets. These streets will be built with concrete curbs in compliance with City requirements.

### 4.2 Water and Wastewater Utilities

The Project will construct water distribution lines to service the development in accordance with city requirements. The water lines will range in size from 6 to 12 inches in diameter and be PVC material. All lines will be located within public rights-of-way or dedicated easements. Fire Hydrants and water valves will be located at intervals in accordance with city requirements.

Water service will be provided via an existing water line connection along FM 2004 from the City of Hitchcock. A waterline extension from the site along FM 2004 to the existing connection will need to be constructed.

The Project will construct wastewater collection lines to service the development in accordance with city requirements. The sanitary sewer lines will range in size from 8 to 12 inches in diameter and be PVC material. Residential leads are proposed at 6 inches. The minimum proposed slope of all gravity sewer lines will be no less than 0.33%. A lift station for the tract will be required. Lift stations and force mains will be constructed to maintain minimum cover and slope across the development.

Wastewater service will be provided via an existing sanitary sewer line connection along FM 2004 from the City of Hitchcock. A sanitary sewer force main will connect the site to a gravity line along FM 2004 to the existing connection. This will need to be constructed along with an off-site lift station along FM 2004.

### 4.3 Drainage/Detention

Gulf Breeze is located within the Highland Bayou watershed. The site generally drains from the southwest to the north and northeast in a sheet flow pattern which contributes to the stormwater runoff to the Jay Road ditch. The Jay Road ditch ultimately discharges into the Highland Bayou diversion channel. Pape-Dawson developed a preliminary drainage model of the Gulf Breeze project site using Atlas 14 100-yr rainfall intensities to determine the hydrology and runoff rates for the region and utilized 2018 LiDAR to analyze the hydraulics in the area. This was done because of the prevalent concerns about the limited existing capacity of the Jay Road ditch. This

drainage model was run under existing conditions, as well as an iterative proposed conditions (post site development) state to schematically analyze the amount of detention that would be necessary to develop the tract and prevent any adverse impacts upstream, downstream, or adjacent to the property. This Preliminary analysis has revealed that a detention storage rate of approximately 1.05 acre-feet per acre of development will be necessary to mitigate for the increased runoff and sheet flow storage volume lost due to proposed development of the site. The attached preliminary land plan for the site provides over 57 acres of interconnected detention and drainage areas to provide the area necessary for this storage volume. In the current proposed condition, adjacent properties should experience a minor reduction in sheet flow flooding across their tracts, since the site would capture over 12-inches of rainfall that occurs within the property and prevent it from cascading downstream.

Detention ponds are adequately sized to hold storm runoff at a rate of approximately 1.05 acre-feet per acre. No floodplain mitigation is required for this site, as it is not located within the 100-year floodplain. In addition to the detention mitigation, the project will provide an internal storm drainage system comprised of 24-inch and larger storm drainage pipes, concrete curb inlets, concrete storm drainage manholes, and various interceptor and outfall structures that will be installed within the proposed street right of ways or adjacent easements as shown in Figure 3. These internal storm drainage systems will discharge via various outfalls into the detention lakes proposed within the project, that will then attenuate the stormwater runoff rate from the side and allow it to drain to the north and ultimately to the Jay Road ditch and diversion channel.

#### 4.4 Park System

The project will include one large central park and several smaller green spaces for community use. Trails and/or sidewalks will be utilized for access to the park system. Another location within the site will be an existing area of lakes/trees to remain. Appendix C shows all proposed parks and green space within the District boundary.

#### 4.5 Off-Site Improvements

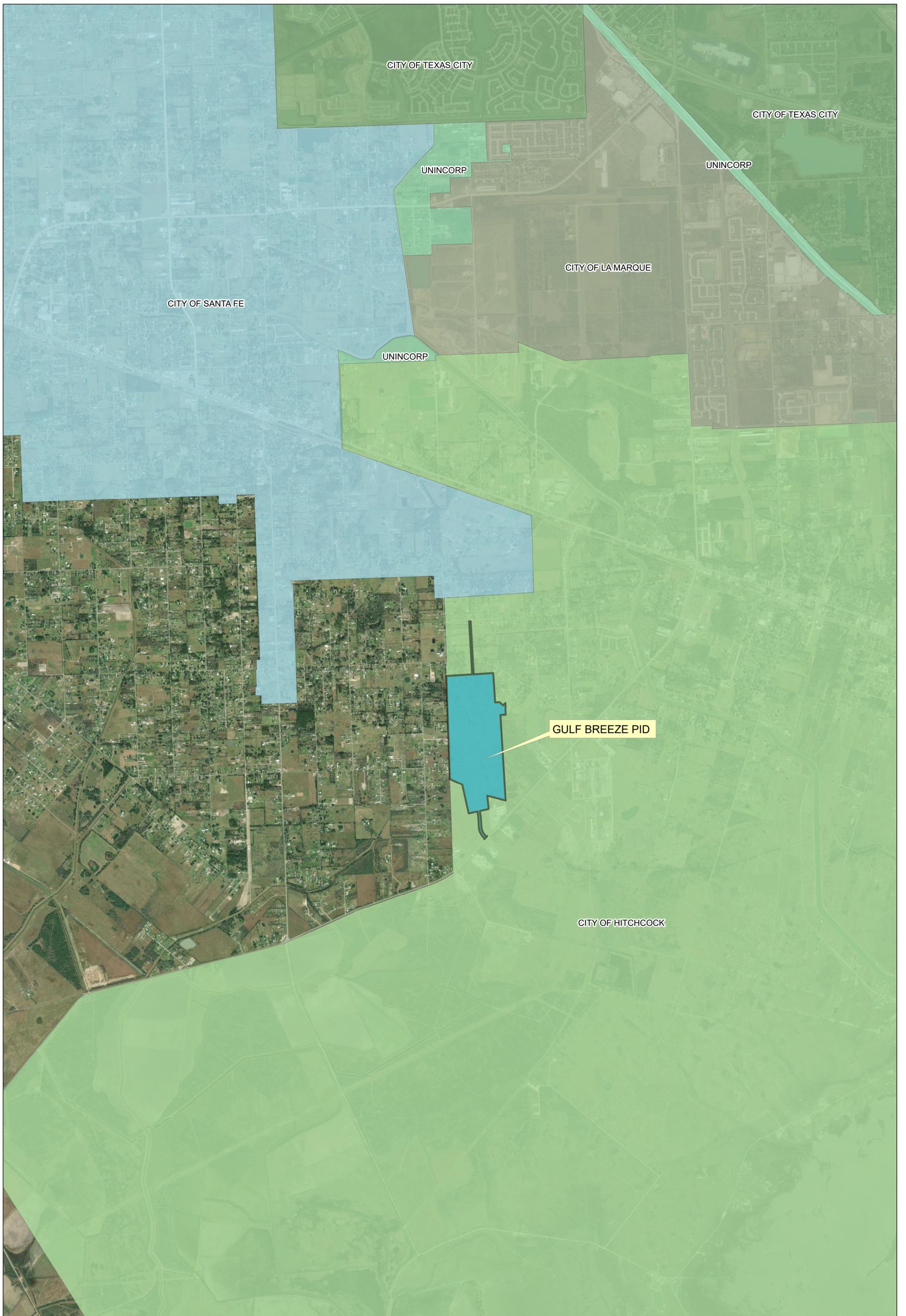
Several improvements in the project are classified as major improvements to the site impacting the PID (Appendix G). These include the entry road from FM 2004 to the round-a-bout, off-site utility connections including an off-site lift station with the City of Hitchcock, the North-South Ditch and Jay Road Ditch improvements, and off-site street improvements. All improvements will be amongst the first construction activities for the site and are critical for this projects development except for a traffic signal installation which will be required once complete lot build out has occurred.

## 5.0 Erosion Control

The Gulf Breeze Project will use construction techniques and standards in compliance with City of Hitchcock codes and manuals. Typical erosion control measures will be used including silt fence, stabilized construction entrances, inlet protection barriers, rock dams, hydro mulching, and stabilized rock berms.

## 6.0 Funding Sources

Authorized improvements are funded by a combination of developer and builder equity, a development loan, and PID bonds. An Engineer's Opinion of Probable Cost (OPC) is included in Appendix G with descriptions of each authorized improvement. Appendix H contains a construction schedule for the authorized improvements.



CITY OF TEXAS CITY

CITY OF TEXAS CITY

UNINCORP

UNINCORP

CITY OF SANTA FE

CITY OF LAMARQUE

UNINCORP

GULF BREEZE PID

CITY OF HITCHCOCK

N

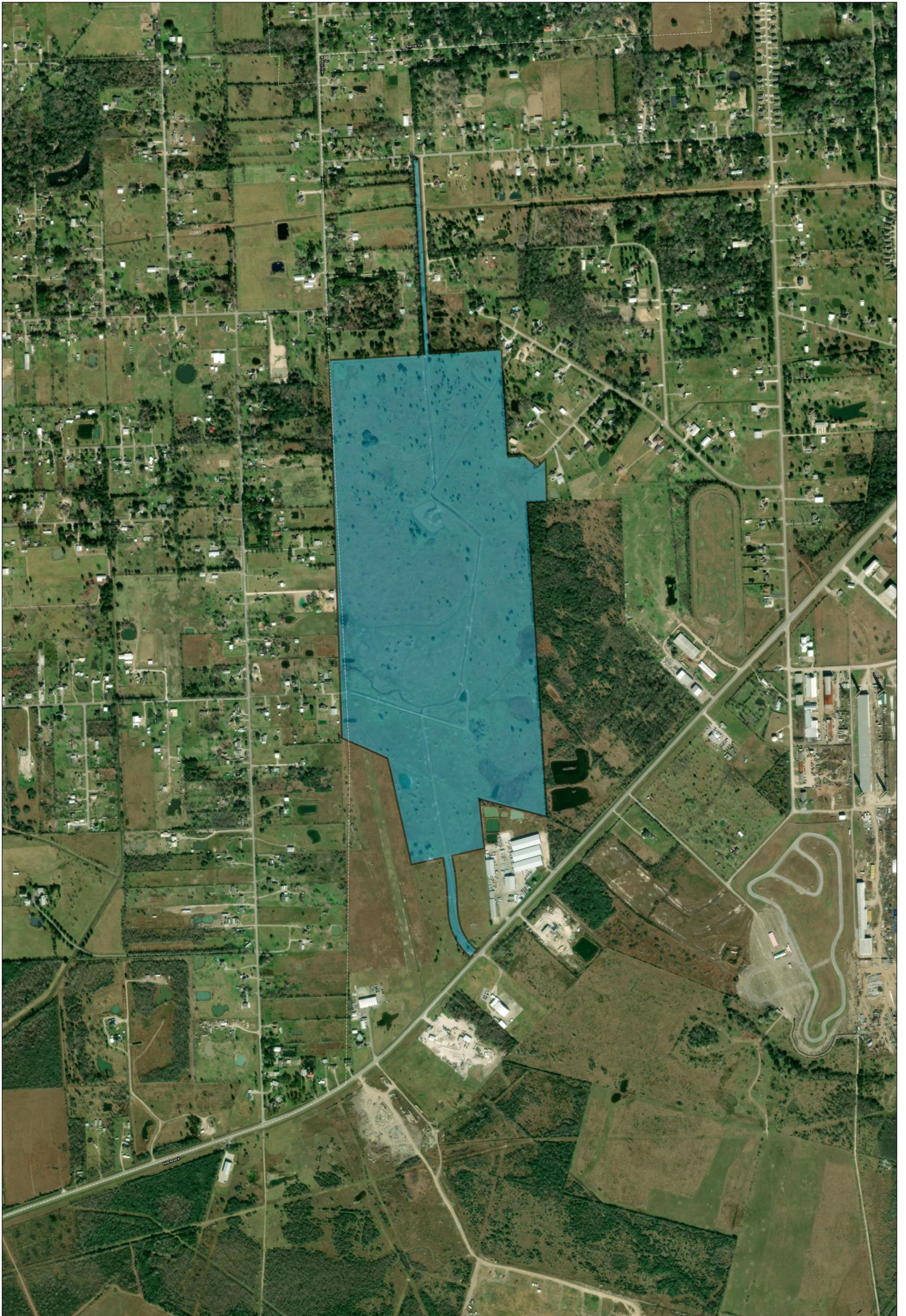


1 inch = 1,667 feet

# GULF BREEZE PID VICINITY MAP APPENDIX A

**BLACKLINE**  
ENGINEERING

1616 S. VOSS RD, SUITE 300 HOUSTON, TX 77057  
(832) 431-5959  
WWW.BLACKLINE-ENG.COM  
FIRM No. 14051



N

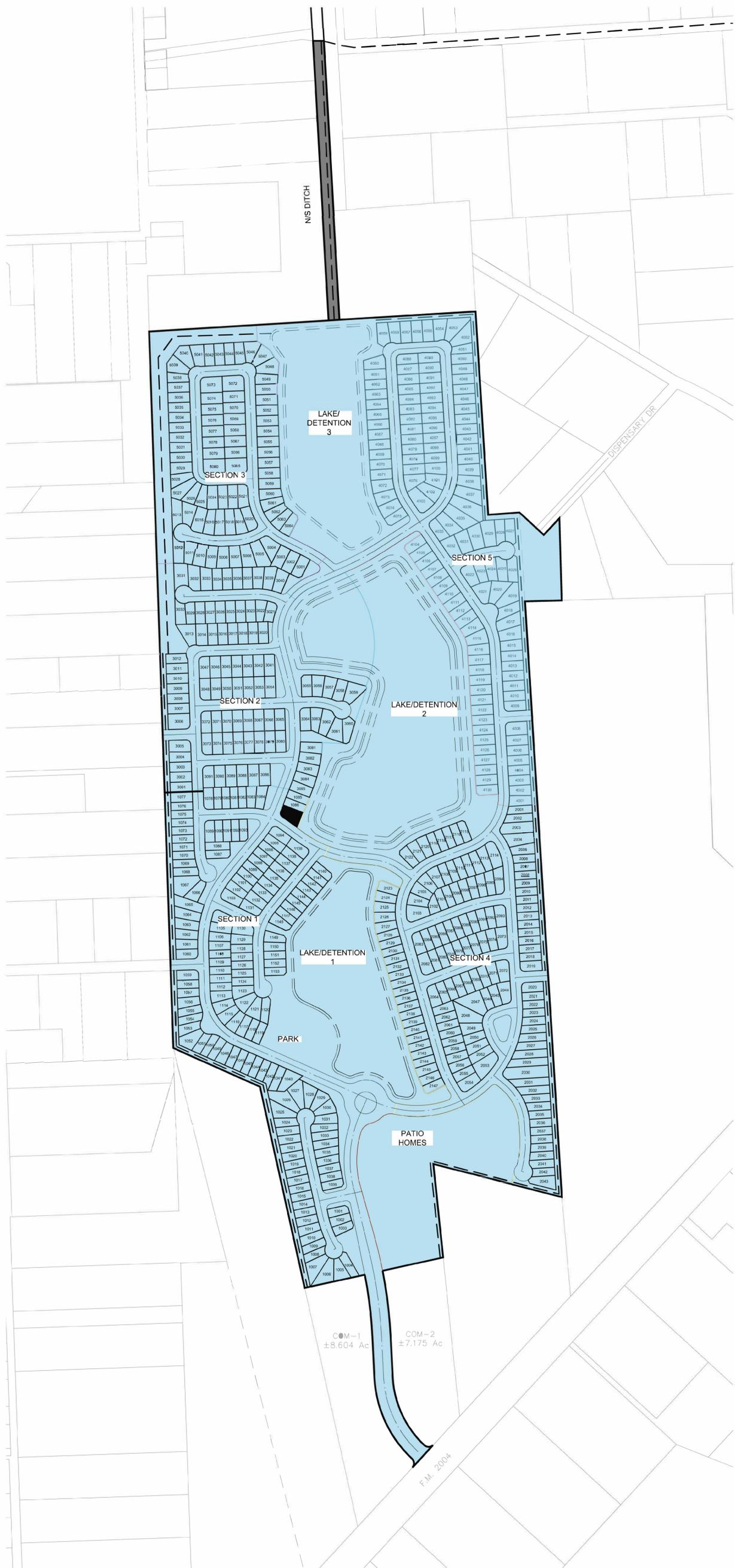
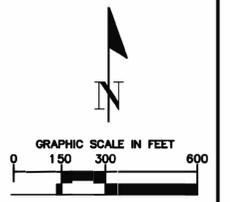


1 inch = 455 feet

# GULF BREEZE PID BOUNDARY MAP APPENDIX B

**BLACKLINE**  
ENGINEERING

1616 S. VOSS RD, SUITE 300 HOUSTON, TX 77057  
(832) 431-5959  
WWW.BLACKLINE-ENG.COM  
FIRM No. 14051



**LEGEND**

- SECTION ONE  
(45' LOTS = 153)
- SECTION TWO  
(55' LOTS = 91)
- SECTION THREE  
(55' LOTS = 80)
- SECTION FOUR  
(45' LOTS = 147)
- SECTION FIVE  
(55' LOTS = 130)
- PATIO HOMES  
(LOTS = 100)
- N-S DITCH

AREA TABLE	
SECTION 1	55.578 AC
SECTION 2	29.016 AC
SECTION 3	21.588 AC
SECTION 4	55.970 AC
SECTION 5	48.462 AC
PATIO HOMES	11.508 AC
N-S DITCH	2.100 AC

# APPENDIX D

METES AND BOUNDS DESCRIPTION  
224.892 ACRES OUT OF THE  
LEMUEL CRAWFORD SURVEY, ABSTRACT No. 48  
LEMUEL CRAWFORD SURVEY, ABSTRACT No. 47  
DANIEL BUCKLEY SURVEY, ABSTRACT No. 43  
GALVESTON COUNTY, TEXAS

A tract or parcel of land containing 224.892 acres (9,796,278 square feet) out of the Lemuel Crawford Survey, Abstract No. 48, the Lemuel Crawford Survey, Abstract No. 47, and the Daniel Buckley Survey, Abstract No. 43 Galveston County, Texas, being all of the called 202.541 acre tract conveyed to Shannon Sharp in deed recorded under Clerk's File Number (C.F. No.) 2000058142 of the Official Public Records of Real Property of Galveston County (O.P.R.R.P.G.C.), all of the called 2.00 acre tract described in deed to Shannon Sharp recorded under C.F. No. 2004075055 of the O.P.R.R.P.G.C., all of the called 2030 foot long by 60 foot wide strip of land described in deed to Shannon Sharp recorded under C.F. No. 2001033372 of the O.P.R.R.P.G.C., and a portion of the called 33.5634 acre tract described in deed to Shannon Sharp recorded under C.F. No. 2010060664 of the O.P.R.R.P.G.C., said 224.891 acres being more particularly described by metes and bounds as follows: (The basis of bearing for this survey is the Texas State Plane Coordinate System, North American Datum 1983, South Central Zone (4204));

BEGINNING at a concrete monument found at the northwest corner of "Tract II" as recorded under C.F. No. 2011033494 of the O.P.R.R.P.G.C., the north corner of a called 5.000 acre tract as recorded under C.F. No. 992519 of the O.P.R.R.P.G.C., the southwest corner of said 202.541 acres, being in the east line of a called 2.765 acre tract as recorded under C.F. No. 2011030614 of the O.P.R.R.P.G.C., being a southwesterly corner and POINT OF BEGINNING of the herein described tract, having a coordinate value of X=3,223,315.06 (E), Y=13,689,086.26 (N);

THENCE NORTH 01 degrees 55 minutes 43 seconds WEST, 3932.74 feet along the western boundary of said 202.541 acres and the eastern boundary of a series of smaller tracts as recorded in C.F. Nos. 2011030614, 2021048429, 2008021506, 001-96-1333, 2021039222, 2021054447, 2014068462, 2019019546, 2015022290, 2007058614, 2004045983, 2012055144, 2017002315, and 2002044781 respectively to a concrete monument found for the northwest corner of said 202.541 acres, for the southwest corner of a tract described as Part of Lot 3 Share E of the Taquard Partition in C.F. No. 2004021904 of the O.P.R.R.P.G.C., in the east line of a tract described in C.F. No. 2002044781 of the O.P.R.R.P.G.C., and being the most westerly northwest corner of the herein described tract;

THENCE NORTH 86 degrees 30 minutes 43 seconds EAST, 983.90 feet along the northern boundary of said 202.541 acres and the southern boundary of said Part of Lot 3 Share E of the Taquard Partition to a concrete monument found for the southeast corner of said Part of Lot 3 Share E of the Taquard Partition, the southwest corner of said 2030' x 60' strip of land, and being an interior corner of the herein described tract;

THENCE NORTH 03 degrees 12 minutes 51 seconds WEST, 2030.20 feet along the western boundary of said 2030' x 60' strip of land and the eastern boundary of said Part of Lot 3 Share E of the Taquard Partition as well as the eastern boundary of a series of smaller tracts as recorded in C.F. Nos. 2004021904, 2013053334, 2004035166, 2004035166, 2001058415, 20000058645, 9109226, and 2018075109 respectively to a concrete monument found in the south right-of-way of Jay Road (60' ROW) for the northwest corner of said 2030' x 60' strip of land, the northeast corner of a called 0.3447 acre tract as recorded under C.F. No. 2018075109 of the O.P.R.R.P.G.C., and being the most northerly northwest corner of the herein described tract;

THENCE NORTH 86 degrees 28 minutes 49 seconds EAST, 59.78 feet along the southern R.O.W. of Jay Road to a 5/8" iron rod found for the northeast corner of said 2030' x 60' strip of land, the northwest corner of a called 75' wide strip of land tract as recorded under C.F. No. 2007051851 of the O.P.R.R.P.G.C., and being the most northerly northeast corner of the herein described tract;

THENCE SOUTH 03 degrees 12 minutes 51 seconds WEST, 2030.06 feet along said 75' wide strip of land to a 1/2" iron rod found in the north line of said 202.541 acres, for the southeast corner of said 2030' x 60' strip of land, the southwest corner of a called "Tract I" as recorded under C.F. No. 9954732 of the O.P.R.R.P.G.C., and being an interior corner of the herein described tract;

THENCE NORTH 86 degrees 28 minutes 02 seconds EAST, 746.03 feet along the south line of said "Tract I" to a 2" iron pipe found for the northeast corner of said 202.541 acres, the southeast corner of said "Tract I", in the west line of a called 1.489 acre tract as recorded in C.F. No. 2019053162 of the O.P.R.R.P.G.C., and being a northeasterly corner of the herein described tract;

THENCE SOUTH 03 degrees 33 minutes 18 seconds EAST, 117.09 feet along the east line of said 202.541 acres and the west line of a series of smaller tracts as recorded in C.F. Nos. 2019053162, 2021030542, and 20000035779 respectively to a 1" iron pipe found for the southwest corner of a tract described in C.F. No. 20000035779 of the O.P.R.R.P.G.C., and being a northeasterly corner of the herein described tract;

THENCE NORTH 85 degrees 37 minutes 15 seconds EAST, 170.78 feet along a northern line of said 202.541 acres to a 1 1/2" iron pipe found for the northwest corner of said 2.00 acres, and being a northeasterly corner of the herein described tract;

THENCE SOUTH 47 degrees 17 minutes 44 seconds EAST, 182.07 feet along the north line of said 2.00 acres to a point for the most southerly corner Dispensary Drive (60' R.O.W.), and being a northeasterly corner of the herein described tract;

THENCE NORTH 42 degrees 53 minutes 22 seconds EAST, 124.78 feet along the north line of said 2.00 acres to a 5/8" iron rod found for the northwest corner of a called 2.476 acre tract described in C.F. No. 2019037015 of the O.P.R.R.P.G.C., and being the most easterly northeast corner of the herein described tract;

THENCE SOUTH 01 degrees 40 minutes 51 seconds EAST, 451.16 feet along the east line of said 2.00 acres and the west line of said 2.476 acres to a 1/2" iron rod found in the north line of a called 711.55 acre tract described in C.F. No. 9918863 of the O.P.R.R.P.G.C., and being an easterly corner of the herein described tract;

THENCE SOUTH 88 degrees 29 minutes 20 seconds WEST, 201.17 feet along the south line of said 2.00 acres and the north line of said 711.55 acres to a 1 1/2" iron pipe found in the east line of said 202.541 acres, for the southwest corner of said 2.00 acres, and being an easterly corner of the herein described tract;

THENCE SOUTH 03 degrees 31 minutes 50 seconds EAST, 3273.65 feet along the east line of said 202.541 acres and the west line of said 711.55 acres to a 2" iron pipe found for the southeast corner of said 202.541 acres, for the northeast corner of a called 5.6189 acre tract described in C.F. No. 2017017333 of the O.P.R.R.P.G.C, and being a southeasterly corner of the herein described tract;

THENCE NORTH 75 degrees 26 minutes 42 seconds WEST, 725.96 feet along the south line of said 202.541 acres and the north line of said 5.6189 acres and the north lines of a 4.42 acre tract and a 4.54

acre tract as described in C.F. No. 2017050216 of the O.P.R.R.P.G.C to a 1 1/2" iron pipe found for the northwest corner of said 4.54 acre tract, for the northeast corner of said 33.5634 acres, and being a southerly corner of the herein described tract;

THENCE SOUTH 05 degrees 56 minutes 34 seconds EAST, 515.55 feet along the east line of said 33.5634 acres and the west line of said 4.54 acres to a 5/8" iron rod set with plastic cap for the southerly corner of the herein described tract;

THENCE over and across said 33.5634 acres the following courses and distances:

SOUTH 77 degrees 30 minutes 24 seconds WEST, 339.31 feet to a 5/8" iron rod set with plastic cap;

SOUTHEASTERLY along a curve to the right through a central angle of 08 degrees 12 minutes 04 seconds to a 5/8" iron rod set with plastic cap for an easterly corner of the herein described tract, said curve having a radius of 2550.00 feet, an arc length of 365.00 feet and a long chord bearing SOUTH 06 degrees 59 minutes 15 seconds EAST, 364.69 feet;

SOUTH 02 degrees 53 minutes 13 seconds EAST, 223.09 feet to a 5/8" iron rod set with plastic cap;

SOUTHEASTERLY along a curve to the left through a central angle of 43 degrees 54 minutes 01 seconds to a 5/8" iron rod set with plastic cap for an easterly corner of the herein described tract, said curve having a radius of 550.00 feet, an arc length of 421.41 feet and a long chord bearing SOUTH 24 degrees 50 minutes 13 seconds EAST, 411.18 feet;

SOUTHEASTERLY along a curve to the left through a central angle of 84 degrees 27 minutes 58 seconds to a 5/8" iron rod set with plastic cap in the northwest right of way of F.M. 2004 as recorded in Volume 1675, Page 34 of the O.P.R.R.P.G.C., and being a southeasterly corner of the herein described tract, said curve having a radius of 35.00 feet, an arc length of 51.60 feet and a long chord bearing SOUTH 89 degrees 01 minutes 02 seconds EAST, 47.05 feet;

SOUTH 42 degrees 40 minutes 00 seconds WEST, 162.29 feet along the northwest R.O.W. of F.M 2004 to a 5/8" iron rod set with plastic cap;

NORTHWESTERLY along a curve to the left through a central angle of 83 degrees 01 minutes 35 seconds to a 5/8" iron rod set with plastic cap for a westerly corner of the herein described tract, said curve having a radius of 35.00 feet, an arc length of 50.72 feet and a long chord bearing NORTH 05 degrees 25 minutes 00 seconds WEST, 46.40 feet;

NORTHWESTERLY along a curve to the right through a central angle of 44 degrees 02 minutes 17 seconds to a 5/8" iron rod set with plastic cap for a westerly corner of the herein described tract, said curve having a radius of 650.00 feet, an arc length of 499.60 feet and a long chord bearing NORTH 24 degrees 54 minutes 22 seconds WEST, 487.39 feet;

NORTH 02 degrees 53 minutes 13 seconds WEST, 223.09 feet to a 5/8" iron rod set with plastic cap at a westerly corner of the herein described tract;

NORTHWESTERLY along a curve to the left through a central angle of 08 degrees 08 minutes 39 seconds to a 5/8" iron rod set with plastic cap for a westerly corner of the herein described

tract, said curve having a radius of 2450.00 feet, an arc length of 348.24 feet and a long chord bearing NORTH 06 degrees 57 minutes 31 seconds WEST, 347.95 feet;

SOUTH 77 degrees 30 minutes 24 seconds WEST, 336.48 feet to a 5/8" iron rod set with plastic cap in the west line of said 33.5634 acres and the east line of said "Tract II";

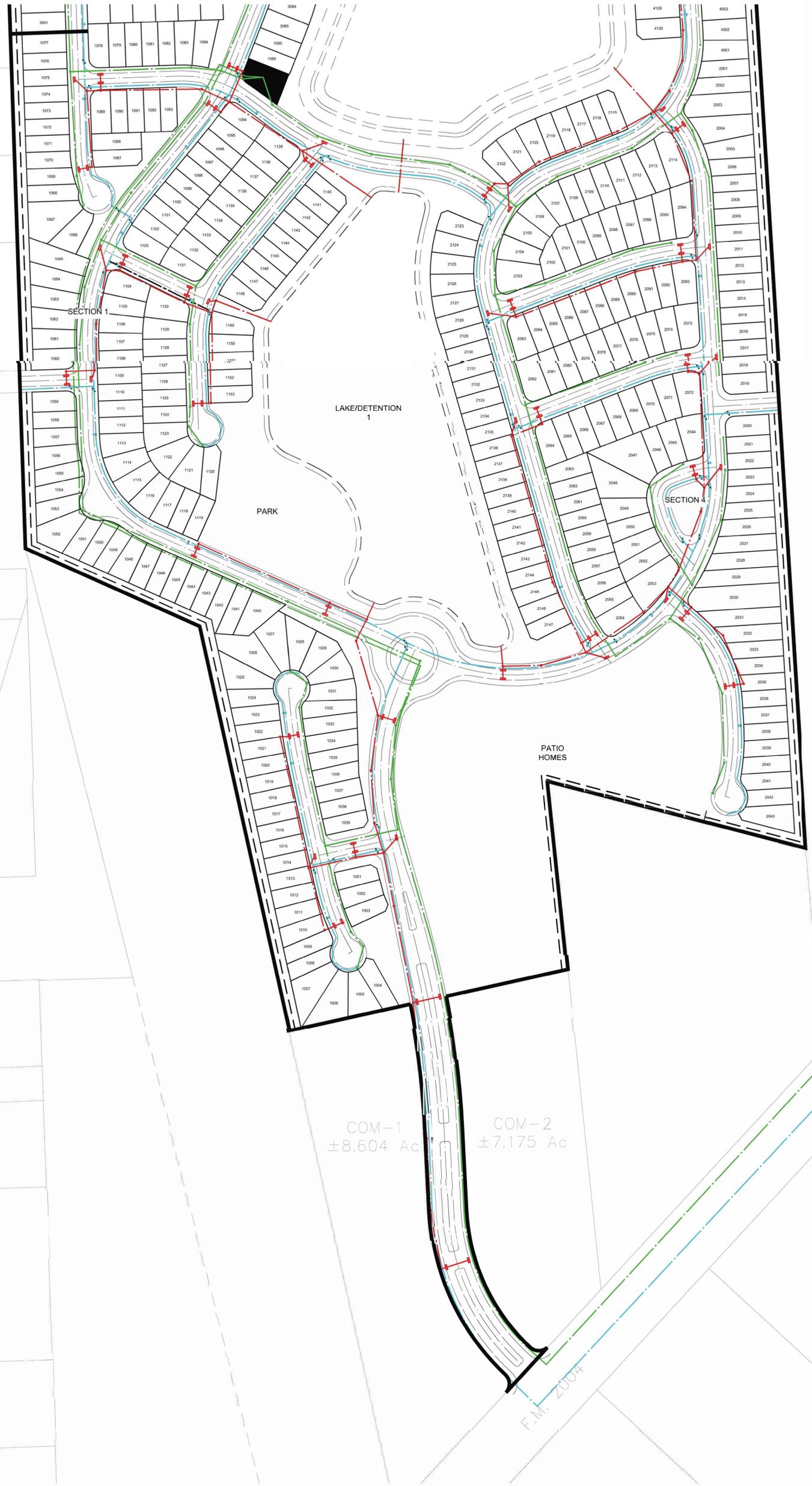
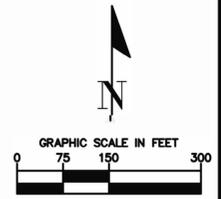
THENCE NORTH 12 degrees 30 minutes 25 seconds WEST, 1130.35 feet along the east line of said "Tract II" to a 1/2" iron rod found in the south line of said 202.541 acres, for the northwest corner of said 33.5634 acres and northeast corner of said "Tract II", and being an interior corner of the herein described tract;

THENCE NORTH 65 degrees 54 minutes 37 seconds WEST, 519.74 feet along the north line of said "Tract II", to the POINT OF BEGINNING of the herein described tract, containing 224.892 acres (9,796,278 square feet) of land.

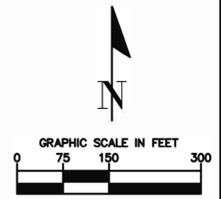


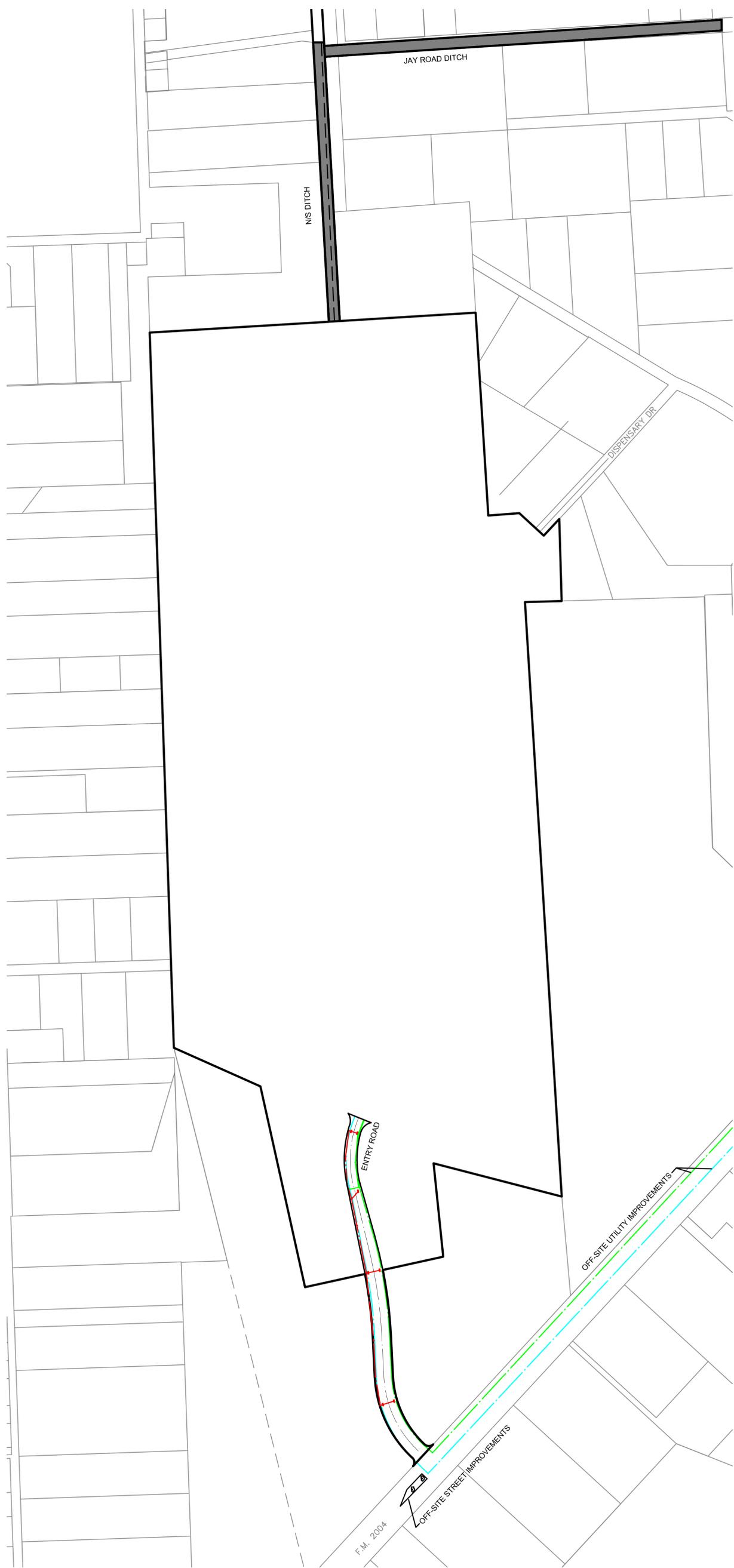
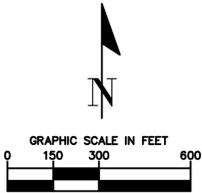
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Joel Robert Bilyeu  
Registered Professional Land Surveyor  
Texas Registration No. 6106  
May 31, 2023  
68200-417-0-DEV  
S&V Surveying, Inc.  
T.B.P.E.L.S. Registration No. 120247-00  
20111 Krahn  
Spring, Texas 77388  
Ph: 281.353.2570



# APPENDIX E





LEGEND

JAY ROAD DITCH	
N-S DITCH	

# APPENDIX F

# APPENDIX G

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

**ESTIMATED TOTAL**

**ESTIMATED CONSTRUCTION COSTS**

**UTILITIES**

1	Site Preparation	\$	131,555
2	Storm Water Pollution Prevention System	\$	253,975
3	Water Distribution System	\$	1,708,406
4	Wastewater Collection System & Lift Station	\$	2,943,780
5	Storm Drainage System	\$	3,420,197
6	Detention Ponds	\$	5,238,660
7	Construction Contingencies (20%)	\$	2,739,315
	<b>Subtotal Utilities</b>	<b>\$</b>	<b>16,435,888</b>

**STREETS**

1	Site Preparation	\$	128,465
2	Streets	\$	7,643,972
3	Construction Contingencies (20%)	\$	1,554,487
	<b>Subtotal Streets</b>	<b>\$</b>	<b>9,326,924</b>

**PARKS/LANDSCAPE**

1	Parks/Landscape	\$	1,150,000
	<b>Subtotal Parks/Landscape</b>	<b>\$</b>	<b>1,150,000</b>

**TOTAL CONSTRUCTION COST** **\$** **26,912,812**

**ESTIMATED ENGINEERING, INSPECTION, SURVEYING AND MISCELLANEOUS FEES**

**CIVIL ENGINEERING (BLACKLINE ENGINEERING, LLC)**

1	Utilities Design	\$	1,644,000
2	Paving Design	\$	933,000
	<b>Subtotal Civil Engineering</b>	<b>\$</b>	<b>2,577,000</b>

**CONSTRUCTION INSPECTION**

1	Project Representation-Utilities	\$	411,000
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**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

		<b>ESTIMATED TOTAL</b>	
2	Project Representation-Paving	\$	233,500
	<b>Subtotal Construction Inspection</b>	<b>\$</b>	<b>644,500</b>
<b>SURVEYING</b>			
1	Land Title Survey	\$	70,500
2	Topographic Survey	\$	87,000
3	Utility Control Staking	\$	25,000
4	Paving Control Staking	\$	25,000
5	As-Built Survey	\$	50,000
6	Detention Pond As-Built Survey	\$	30,000
7	Lot As-Built Survey	\$	10,500
8	Lot Staking	\$	56,000
	<b>Subtotal Surveying</b>	<b>\$</b>	<b>354,000</b>
<b>GEOTECHNICAL &amp; MATERIALS TESTING</b>			
1	Soils Report	\$	47,190
2	Utility & Detention Materials Testing	\$	247,000
3	Paving Materials Testing	\$	140,000
	<b>Subtotal Materials Testing</b>	<b>\$</b>	<b>434,190</b>
<b>PLATTING</b>			
1	Master Plan Preparation	\$	45,000
2	Calc Map	\$	28,000
3	Preliminary Plat Preparation	\$	45,000
4	Final Plat Submission & Approval	\$	22,000
5	Recordation Fees & Expenses	\$	25,000
	<b>Subtotal Platting</b>	<b>\$</b>	<b>165,000</b>
<b>WETLANDS</b>			
1	Wetlands Delineation	\$	44,000
2	Jurisdictional Determination Process	\$	8,800
	<b>Subtotal Wetlands</b>	<b>\$</b>	<b>52,800</b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

	<b>ESTIMATED TOTAL</b>	
<b>MISCELLANEOUS FEES</b>		
1 County and City Submittal Fees	\$	15,000
2 Advertisement	\$	15,000
3 Plan Copies and Deliveries	\$	15,000
4 Drainage Study (Pape Dawson)	\$	100,000
5 Traffic Impact Analysis	\$	50,000
6 PID Creation Report	\$	50,000
	<hr/>	<hr/>
<b>Subtotal Miscellaneous Fees</b>	<b>\$</b>	<b>245,000</b>
<b>TOTAL ENGINEERING, INSPECTION, SURVEYING AND MISCELLANEOUS FEES</b>	<b>\$</b>	<b>4,472,490</b>
	<hr/>	<hr/>
<b>TOTAL ESTIMATED COST</b>	<b>\$</b>	<b>31,385,302</b>
	<hr/>	<hr/>

**NOTES**

- (1) The quantities in this preliminary cost estimate were obtained from the Preliminary Landplan and are subject to change.
- (2) This estimate does not include CenterPoint Energy Fees.
- (3) This estimate does not include cost related to driveways.
- (4) This estimate assumes 5 sections.
- (5) This estimate does not include cost associated with relocation and/or removal of existing public and/or private utilities.
- (6) This estimate does not include cost for off-site utility easement acquisition.
- (7) This estimate assumes all fill is placed on site.
- (8) This estimate assumes no traffic signal lights will be required.
- (9) This estimate assume the detention rate provided by Pape Dawson is sufficient, and is subject to change based on result of final H&H report.
- (10) This estimate assumes wet/amenity ponds for all proposed detention basins.
- (11) This estimate assumes that only the portion of Jay Road ditch between N-S Ditch and Blimp Base Road will require improvement.
- (12) This estimate does not include any improvements to or downstream of Blimp Base Road Crossing (H&H report required for further analysis).
- (13) This estimate assumes the 36" outfall pipe within N-S ditch ROW proposed by Pape Dawson will be sufficient (H&H report required for further analysis).
- (14) This estimate assumes the current land plan proposed by Pape Dawson meets all local platting and subdivision criteria.

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS**

**WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>SITE PREPARATION- UTILITIES</u></b>					
1.	Mobilization	EA	5	\$ 10,000.00	\$ 50,000
2.	Detention Pond Mowing & Stripping	AC	35.30	\$ 1,500.00	\$ 52,950
3.	ROW Mowing & Stripping- 1/2 for Utilities	AC	19.07	\$ 1,500.00	\$ 28,605
<b><u>TOTAL ESTIMATED SITE PREPARATION-UTILITIES</u></b>					<b><u>\$ 131,555</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>STORM WATER POLLUTION PREVENTION PLAN</u></b>					
1.	Prepare & Submit N.O.I.s & N.O.T.s, SWPPP For Contractor and Developer and posting of Material on job Site	LS	5	\$ 1,000.00	\$ 5,000
2.	TPDES Permitting Compliance	LS	5	\$ 5,000.00	\$ 25,000
3.	Perform weekly inspections during the contract period, as required by the current TPDES permit	MO	75	\$ 125.00	\$ 9,375
4.	Stabilized construction access (60% of unit cost for furnish and installation and 40% of unit cost for removal)	EA	5	\$ 5,000.00	\$ 25,000
5.	Refresh stabilized construction access	EA	5	\$ 500.00	\$ 2,500
6.	Furnish, install and remove filter fabric fencing	LF	47,900	\$ 1.50	\$ 71,850
7.	Furnish, install and remove concrete truck washout	EA	5	\$ 3,000.00	\$ 15,000
8.	Street cleaning and maintenance of all temporary controls through the contract period	HR	750	\$ 33.00	\$ 24,750
9.	Maintenance of stabilized areas	HR	300	\$ 25.00	\$ 7,500
10.	Inlet Protection Barrier ( All Phases), Complete in place	EA	136	\$ 500.00	\$ 68,000
<b><u>TOTAL ESTIMATED SWPPP</u></b>					<b><u>\$ 253,975</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS**

**WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>WATER DISTRIBUTION SYSTEM</u></b>					
1.	6" C900 PVC CL 150 Waterline (incl. fittings) (incl. spreading spoils on lots)	LF	4,845	\$ 30.00	\$ 145,350
2.	8" C900 PVC CL 150 Waterline (incl. fittings) (incl. spreading spoils on lots)	LF	16,440	\$ 40.00	\$ 657,600
3.	12" C900 PVC CL 150 Waterline (incl. fittings) (incl. spreading spoils on lots)	LF	6,640	\$ 65.00	\$ 431,600
4.	6" Gate Valve & Box	EA	12	\$ 1,200.00	\$ 14,400
5.	8" Gate Valve & Box	EA	49	\$ 1,500.00	\$ 73,500
6.	12" Gate Valve & Box	EA	22	\$ 4,000.00	\$ 88,000
7.	Fire Hydrants Assembly (All Depths) (Including FH lead, 6" tee and 6" Gate Valve & Box)	EA	46	\$ 5,000.00	\$ 230,000
8.	2" Blow-off valve & box	EA	9	\$ 450.00	\$ 4,050
9.	6" Plug & Clamp	EA	20	\$ 200.00	\$ 4,000
10.	OSHA Trench Safety System (to be used only with authorization from the engineer)	LF	27,925	\$ 1.00	\$ 27,925
11.	Extra Cast Iron Fittings (to be used only with authorization from the Engineer)	TON	3	\$ 2,000.00	\$ 6,981
12.	Extra Bank Sand (to be used only with authorization from the Engineer)	CY	1000	\$ 25.00	\$ 25,000
<b><u>TOTAL ESTIMATED WATER DISTRIBUTION SYSTEM</u></b>					<b><u>\$ 1,708,406</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS**

**WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>WASTEWATER COLLECTION SYSTEM &amp; LIFT STATION</u></b>					
1.	6" Sanitary Sewer Lead (including wyes and fittings, long and short sides) (incl. spreading spoils on lots)	EA	381	\$ 1,500.00	\$ 571,500
2.	8" SDR 26 PVC Sanitary Sewer Pipe (incl. spreading spoils on lots)	LF	22,550	\$ 35.00	\$ 789,250
3.	12" SDR 26 PVC Sanitary Sewer Pipe (incl. spreading spoils on lots)	LF	3,605	\$ 72.00	\$ 259,560
4.	Sanitary Sewer Manhole	EA	152	\$ 2,200.00	\$ 334,400
5.	OSHA Trench Safety System (to be used only with authorization from the engineer)	LF	26,155	\$ 1.00	\$ 26,155
6.	Extra Cement Stabilized Sand (to be used only with authorization from the Engineer)	CY	500	\$ 20.00	\$ 10,000
7.	Dewatering (to be used only with authorization from the Engineer)	LF	6,539	\$ 20.00	\$ 130,775
8.	4" Sanitary Sewer Force Main	LF	2,566	\$ 40.00	\$ 102,640
9.	2" Air Release Valve	EA	3	\$ 6,500.00	\$ 19,500
10.	Lift Station	LS	1	\$ 700,000.00	\$ 700,000
<b><u>TOTAL ESTIMATED WASTEWATER COLLECTION SYSTEM &amp; LIFT STATION</u></b>					<b><u>\$ 2,943,780</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b>STORM DRAINAGE SYSTEM</b>					
1.	24" ASTM C76 CLIII RCP (All depths)	LF	12,367	\$ 70.00	\$ 865,690
2.	36" ASTM C76 CLIII RCP (All depths)	LF	4,854	\$ 125.00	\$ 606,750
3.	48" ASRTM C76 CLIII RCP (All depths)	LF	3,378	\$ 200.00	\$ 675,600
4.	60" ASRTM C76 CLIII RCP (All depths)	LF	218	\$ 350.00	\$ 76,300
5.	Type "B-B" Inlet	EA	134	\$ 3,500.00	\$ 469,000
6.	Type "A" Inlet	EA	1	\$ 3,500.00	\$ 3,500
7.	Type "C" Manhole (24"-42")	EA	120	\$ 4,000.00	\$ 480,000
8.	Dewatering (to be used only with authorization from the Engineer)	LF	5,204	\$ 20.00	\$ 104,085
9.	Extra bank sand (to be used only with authorization from the Engineer)	CY	1,000	\$ 20.00	\$ 20,000
10.	Trench Safety System	LF	20,817	\$ 1.00	\$ 20,817
11.	Boundary Swale	CY	14,923	\$ 5.00	\$ 74,615
12.	Turf Establishment of Boundary Swale	AC	11.92	\$ 2,000.00	\$ 23,840
<b>TOTAL ESTIMATED STORM DRAINAGE SYSTEM</b>					<b>\$ 3,420,197</b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>DETENTION POND</u></b>					
1.	Detention Excavation (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	386,500	\$ 5.50	\$ 2,125,750
2.	Amenity Pond Excavation (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	303,600	\$ 5.50	\$ 1,669,800
3.	Turf Establishment of Detention Pond Side Slopes & Disturbed Areas	AC	35.30	\$ 2,000.00	\$ 70,600
4.	Backslope Swale	LF	13,260	\$ 3.50	\$ 46,410
5.	Backslope Interceptor Structures (including rip rap, CMP pipe, and spreading of spoils on-site)	EA	14	\$ 7,000.00	\$ 98,000
6.	100-Year Extreme Event Channel (Including grading and concrete)	EA	4	\$ 6,000.00	\$ 24,000
7.	5' x 5' Equalizer Box	LF	576	\$ 500.00	\$ 288,000
8.	5' x 2' Box Culvert	LF	240	\$ 300.00	\$ 72,000
9.	1.5' x 6' Arch Pipe	LF	60	\$ 400.00	\$ 24,000
10.	Temporary Drainage Swale through Ponds B & C	CY	148,200	\$ 5.50	\$ 815,100
11.	Dewatering (to be used only with authorization	LS	1	\$ 5,000.00	\$ 5,000
<b><u>TOTAL ESTIMATED DETENTION POND</u></b>					<b><u>\$ 5,238,660</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS**

**WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>SITE PREPARATION- STREETS</u></b>					
1.	Mobilization	EA	5	\$ 10,000.00	\$ 50,000
2.	Lot Mowing and Stripping	AC	99.72	\$ 500.00	\$ 49,860
3.	ROW Mowing & Stripping- 1/2 for Paving	AC	19.07	\$ 1,500.00	\$ 28,605
<b><u>TOTAL ESTIMATED SITE PREPARATION-STREETS</u></b>					<b><u>\$ 128,465</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED  
IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>STREETS</u></b>					
1.	6" Reinforced Concrete Paving	SY	94,563	\$ 60.00	\$ 5,673,780
2.	Roadway Excavation (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	118,204	\$ 4.00	\$ 472,816
3.	Load Transfer Device	LF	214	\$ 10.00	\$ 2,140
4.	6" Stabilized Subgrade	SY	108,747	\$ 6.00	\$ 652,482
5.	Lime	TON	1,860	\$ 205.00	\$ 381,300
6.	6" Concrete Curb	LF	53,409	\$ 6.00	\$ 320,454
7.	Combination Stop/ Street Name Sign	EA	41	\$ 1,000.00	\$ 41,000
8.	Provide and Install Type III Barricade	EA	10	\$ 1,000.00	\$ 10,000
9.	Connect to Existing Concrete Pavement (includes Traffic Control Plan)	EA	10	\$ 3,000.00	\$ 30,000
10.	Traffic Control, including signs, flaggers, barricades, barrels, fencing and maintenance of items, Complete in place.	LS	4	\$ 15,000.00	\$ 60,000
<b><u>TOTAL ESTIMATED STREETS</u></b>					<b><u>\$ 7,643,972</u></b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF OFF-SITE IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

		<b>ESTIMATED TOTAL</b>
<b><u>ESTIMATED CONSTRUCTION COSTS</u></b>		
<b>ENTRY ROAD</b>		
1	Entry Road	\$ 1,260,964
2	Construction Contingencies (20%)	\$ 252,193
	<b>Subtotal Entry Road</b>	<b>\$ 1,513,157</b>
 <b>OFF-SITE UTILITIES</b>		
1	General	\$ 35,000
2	Off-Site Water Line	\$ 569,438
3	Off-Site Sanitary Sewer Force Main	\$ 1,572,300
4	SWPPP	\$ 28,300
5	Construction Contingencies (20%)	\$ 441,008
	<b>Subtotal Off-Site Utilities</b>	<b>\$ 2,646,045</b>
 <b>OFF-SITE STREETS</b>		
1	General	\$ 35,000
2	Off-Site Streets	\$ 700,000
3	SWPPP	\$ 14,000
4	Construction Contingencies (20%)	\$ 149,800
	<b>Subtotal Off-Site Streets</b>	<b>\$ 898,800</b>
 <b>OFF-SITE DRAINAGE</b>		
1	N-S Ditch Improvements	\$ 269,000
2	Jay Road Ditch Improvements	\$ 22,560
3	Construction Contingencies (20%)	\$ 58,312
	<b>Subtotal Off-Site Drainage</b>	<b>\$ 349,872</b>
	<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 5,407,874</b>

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF OFF-SITE IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

**ESTIMATED TOTAL**

**ESTIMATED ENGINEERING, INSPECTION, SURVEYING AND MISCELLANEOUS FEES**

**CIVIL ENGINEERING (BLACKLINE ENGINEERING, LLC)**

1	Entry Road	\$	151,500
2	Off-Site Utilities Design	\$	265,000
3	Off-Site Paving Design	\$	90,000
4	Off-Site Drainage Design	\$	35,000
	<b>Subtotal Civil Engineering</b>	<b>\$</b>	<b>541,500</b>

**CONSTRUCTION INSPECTION**

1	Project Representation-Utilities	\$	75,000
2	Project Representation-Offsite Paving	\$	22,500
3	Project Representation-Entry Road	\$	38,000
	<b>Subtotal Construction Inspection</b>	<b>\$</b>	<b>135,500</b>

**TOTAL ENGINEERING, INSPECTION, SURVEYING AND  
MISCELLANEOUS FEES**

**\$ 677,000**

**TOTAL ESTIMATED COST**

**\$ 6,084,874**

**NOTES**

- (1) The quantities in this preliminary cost estimate were obtained from the Preliminary Landplan and are subject to change.
- (2) This estimate does not include CenterPoint Energy Fees.
- (3) This estimate does not include cost related to driveways.
- (4) This estimate assumes 5 sections.
- (5) This estimate does not include cost associated with relocation and/or removal of existing public and/or private utilities.
- (6) This estimate does not include cost for off-site utility easement acquisition.
- (7) This estimate assumes all fill is placed on site.
- (8) This estimate assume the detention rate provided by Pape Dawson is sufficient, and is subject to change based on result of final H&H report.
- (9) This estimate assumes wet/amenity ponds for all proposed detention basins.
- (10) This estimate assumes that only the portion of Jay Road ditch between N-S Ditch and Blimp Base Road will require improvement.
- (11) This estimate does not include any improvements to or downstream of Blimp Base Road Crossing (H&H report required for further analysis).

**PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF OFF-SITE IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

- (12) This estimate assumes the 36" outfall pipe within N-S ditch ROW proposed by Pape Dawson will be sufficient (H&H report required for further analysis).
- (13) This estimate assumes the current land plan proposed by Pape Dawson meets all local platting and subdivision criteria.

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>GENERAL</u></b>					
1.	Mobilization, Move-in & set up, including bonds & insurance	LS	1	\$ 20,000.00	\$ 20,000
2.	Traffic Control Plan (Contractor to provide all traffic control devices, signs and materials per the approved Traffic Control Plan)	LS	1	\$ 15,000.00	\$ 15,000
<b>SUBTOTAL GENERAL</b>					<b>\$ 35,000</b>
<b><u>OFF-SITE STREETS</u></b>					
3.	Left Hand Turn Lane on FM 2004, including excavation, subgrade, pavement, curb striping, any necessary signage, demolition and disposal of existing material	EA	1	\$ 150,000.00	\$ 150,000
4.	Right Hand Turn Lane off of FM 2004, including excavation, subgrade, pavement, curb striping, any necessary signage, demolition and disposal of existing material	EA	1	\$ 150,000.00	\$ 150,000
5.	Traffic Signal Installation	LS	1	\$ 400,000.00	\$ 400,000
<b>SUBTOTAL OFF-SITE PAVING</b>					<b>\$ 700,000</b>
<b><u>SWPPP</u></b>					
6.	Prepare & Submit N.O.I.s & N.O.T.s, SWPPP For Contractor and Developer and posting of Material on job site	LS	1	\$ 5,000.00	\$ 5,000
7.	TPDES General Permit No. TXR150000	LS	1	\$ 1,500.00	\$ 1,500
8.	Perform weekly inspections during the contract period, as required by the current TPDES permit	LS	1	\$ 500.00	\$ 500

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
9.	Furnish and install reinforced filter fabric fence (60% of unit cost for furnish and installation and 40% unit of cost is for removal)	LF	500	\$ 2.00	\$ 1,000
10.	Street cleaning and maintenance of all temporary controls and stabilized areas through the contract period	HR	48	\$ 125.00	\$ 6,000
<b>SUBTOTAL SWPPP</b>					<b>\$ 14,000</b>
<b><u>TOTAL ESTIMATED OFF-SITE STREETS</u></b>					<b><u>\$ 749,000</u></b>

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b>GENERAL</b>					
1.	Mobilization, Move-in & set up, including bonds & insurance	LS	1	\$ 20,000.00	\$ 20,000
2.	Traffic Control Plan (Contractor to provide all traffic control devices, signs and materials per the approved Traffic Control Plan)	LS	1	\$ 15,000.00	\$ 15,000
<b>SUBTOTAL GENERAL</b>					<b>\$ 35,000</b>
<b>OFF-SITE WATER LINE</b>					
3.	12" C900 PVC CL 150 Waterline by Open Cut Construction	LF	4,750	\$ 65.00	\$ 308,750
4.	20" Steel Casing by Bore and Jack Construction, including 12" Waterline for Pavement Crossings	LF	320	\$ 450.00	\$ 144,000
5.	12"x12" Tapping Sleeve and Valve	EA	1	\$ 7,000.00	\$ 7,000
6.	12" Gate Valve & Box	EA	5	\$ 4,000.00	\$ 20,000
7.	Fire Hydrants Assembly (All Depths) (Including FH lead, 6" tee and 6" Gate Valve & Box)	EA	11	\$ 5,000.00	\$ 55,000
8.	Site Restoration/ Turf Establishment	LF	4,750	\$ 5.00	\$ 23,750
9.	OSHA Trench Safety System (to be used only with authorization from the engineer)	LF	4,750	\$ 1.00	\$ 4,750
10.	Extra Cast Iron Fittings (to be used only with authorization from the Engineer)	TON	1	\$ 2,000.00	\$ 1,188
11.	Extra Bank Sand (to be used only with authorization from the Engineer)	CY	200	\$ 25.00	\$ 5,000
<b>SUBTOTAL OFF-SITE WATER LINE</b>					<b>\$ 569,438</b>
<b>OFF-SITE SANITARY</b>					
12.	Offsite Lift Station	LS	1	\$ 1,000,000.00	\$ 1,000,000.00

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
13.	12" SDR 26 PVC Sanitary Sewer Pipe (incl. spreading spoils on lots)	LF	5,100	\$ 72.00	\$ 367,200
14.	18" Steel Casing by Bore and Jack Construction, including 10" Waterline for Pavement Crossings	LF	320	\$ 450.00	\$ 144,000
15.	48" Sanitary Sewer Manhole	EA	13	\$ 2,200.00	\$ 28,600
16.	Tie in to existing sanitary sewer manhole	EA	1	\$ 5,000.00	\$ 5,000
17.	Extra Cement Stabilized Sand (to be used only with authorization from the Engineer)	CY	100	\$ 20.00	\$ 2,000
18.	Dewatering (to be used only with authorization from the Engineer)	LF	1,275	\$ 20.00	\$ 25,500
<b>SUBTOTAL OFF-SITE SANITARY</b>					<b>\$ 1,572,300</b>
 <b><u>SWPPP</u></b>					
19.	Prepare & Submit N.O.I.s & N.O.T.s, SWPPP For Contractor and Developer and posting of Material on job site	LS	1	\$ 5,000.00	\$ 5,000
20.	TPDES General Permit No. TXR150000	LS	1	\$ 1,500.00	\$ 1,500
21.	Perform weekly inspections during the contract period, as required by the current TPDES permit	LS	1	\$ 500.00	\$ 500
22.	Furnish and install reinforced filter fabric fence (60% of unit cost for furnish and installation and 40% unit of cost is for removal)	LF	10,200	\$ 1.50	\$ 15,300
23.	Street cleaning and maintenance of all temporary controls and stabilized areas through the contract period	HR	48	\$ 125.00	\$ 6,000
<b>SUBTOTAL SWPPP</b>					<b>\$ 28,300</b>

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>TOTAL ESTIMATED OFF-SITE UTILITIES</u></b>					<b><u>\$ 2,205,038</u></b>

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>EST QTY</b>	<b>EST UNIT COST</b>	<b>EST TOTAL COST</b>
<b><u>N-S DITCH IMPROVEMENTS</u></b>					
1.	Excavate and Re-Grade Existing Ditch (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	11,400	\$ 5.50	\$ 62,700
2.	Turf Establishment	AC	3.15	\$ 2,000.00	\$ 6,300
3.	36" RCP Outfall Pipe	LF	1,536	\$ 125.00	\$ 192,000
4.	Type "C" Manhole (24"-42")	EA	2	\$ 4,000.00	\$ 8,000
<b>SUBTOTAL N-S DITCH IMPROVEMENTS</b>					<b>\$ 269,000</b>
<b><u>JAY ROAD DITCH IMPROVEMENTS</u></b>					
5.	Excavate and Re-Grade Existing Ditch (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	1,920	\$ 5.50	\$ 10,560
6.	Turf Establishment	AC	6.00	\$ 2,000.00	\$ 12,000
<b>SUBTOTAL JAY ROAD DITCH IMPROVEMENTS</b>					<b>\$ 22,560</b>
<b><u>TOTAL ESTIMATED OFF-SITE DRAINAGE</u></b>					<b><u>\$ 291,560</u></b>

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

ITEM NO.	DESCRIPTION	UNIT	EST QTY	EST UNIT COST	EST TOTAL COST
<b><u>SUBDIVISION ENTRY STREET</u></b>					
1.	6" Reinforced Concrete Paving	SY	9,263	\$ 60.00	\$ 555,780
2.	Roadway Excavation (Including Hauling, Spreading & Compaction within fill areas According to Lot Grading Plan & Specs)	CY	11,579	\$ 4.00	\$ 46,316
3.	Load Transfer Device	LF	150	\$ 10.00	\$ 1,500
4.	6" Stabilized Subgrade	SY	10,652	\$ 6.00	\$ 63,912
5.	Lime	TON	182	\$ 205.00	\$ 37,310
6.	6" Concrete Curb	LF	6,250	\$ 6.00	\$ 37,500
7.	Combination Stop/ Street Name Sign	EA	1	\$ 1,000.00	\$ 1,000
8.	Provide and Install Type III Barricade	EA	1	\$ 1,000.00	\$ 1,000
9.	Connect to Existing Concrete Pavement (includes Traffic Control Plan)	EA	1	\$ 3,000.00	\$ 3,000
10.	Traffic Control, including signs, flaggers, barricades, barrels, fencing and maintenance of items, Complete in place.	LS	1	\$ 15,000.00	\$ 15,000
<b>SUBTOTAL ENTRY STREET</b>					<b>\$ 762,318</b>
<b><u>SUBDIVISION ENTRY STREET UTILITIES</u></b>					
1.	12" C900 PVC CL 150 Waterline (incl. fittings) (incl. spreading spoils on lots)	LF	1,925	\$ 65.00	\$ 125,125
2.	12" Gate Valve & Box	EA	1	\$ 4,000.00	\$ 4,000
3.	Fire Hydrants Assembly (All Depths) (Including FH lead, 6" tee and 6" Gate Valve & Box)	EA	5	\$ 5,000.00	\$ 25,000
4.	OSHA Trench Safety System (to be used only with authorization from the engineer)	LF	1,925	\$ 1.00	\$ 1,925
5.	8" SDR 26 PVC Sanitary Sewer Pipe (incl. spreading spoils on lots)	LF	405	\$ 35.00	\$ 14,175
6.	Sanitary Sewer Manhole	EA	3	\$ 2,200.00	\$ 6,600
7.	OSHA Trench Safety System (to be used only with authorization from the engineer)	LF	405	\$ 1.00	\$ 405

**OFF-SITE IMPROVEMENTS  
PRELIMINARY CONSTRUCTION COST ESTIMATE  
FOR THE DEVELOPMENT OF AUTHORIZED IMPROVEMENTS  
WITHIN GULF BREEZE PUBLIC IMPROVEMENT DISTRICT**

ITEM NO.	DESCRIPTION	UNIT	EST QTY	EST UNIT COST	EST TOTAL COST
8.	4" Sanitary Sewer Force Main	LF	1,925	\$ 40.00	\$ 77,000
9.	2" Air Release Valve	EA	2	\$ 6,500.00	\$ 13,000
10.	24" ASTM C76 CLIII RCP (All depths)	LF	1,410	\$ 70.00	\$ 98,700
11.	36" ASTM C76 CLIII RCP (All depths)	LF	380	\$ 125.00	\$ 47,500
12.	Type "B-B" Inlet	EA	6	\$ 3,500.00	\$ 21,000
13.	Type "C" Manhole (24"-42")	EA	10	\$ 4,000.00	\$ 40,000
14.	Dewatering (to be used only with authorization from the Engineer)	LF	448	\$ 20.00	\$ 8,950
15.	Trench Safety System	LF	1,790	\$ 1.00	\$ 1,790
<b>SUBTOTAL ENTRY STREET UTILITIES</b>					<b>\$ 485,170</b>
<b>ENTRY STREET SITE PREPARATION</b>					
1.	ROW Mowing & Stripping- 1/2 for Utilities	AC	1.99	\$ 1,500.00	\$ 2,988
2.	ROW Mowing & Stripping- 1/2 for Utilities	AC	1.99	\$ 1,500.00	\$ 2,988
3.	Furnish, install and remove filter fabric fencing	LF	3,000	\$ 1.50	\$ 4,500
4.	Inlet Protection Barrier ( All Phases), Complete in place	EA	6	\$ 500.00	\$ 3,000
<b>SUBTOTAL ENTRY STREET SITE PREPARATION</b>					<b>\$ 13,476</b>
<b>TOTAL ESTIMATED ENTRY STREET</b>					<b>\$ 1,260,964</b>

# APPENDIX H

	Gulf Breeze Appendix I - Construction Schedule					
	PID					
	Section 1	Section 2	Section 3	Section 4	Section 5	Patio Homes
	Completed Date of Construction					
A. Streets	January, 2025	March, 2025	March, 2025	March, 2026	July, 2026	March, 2025
B. Wastewater	January, 2025	March, 2025	March, 2025	March, 2026	July, 2026	March, 2025
C. Water	January, 2025	March, 2025	March, 2025	March, 2026	July, 2026	March, 2025
D. Detention/Drainage	January, 2025	March, 2025	March, 2025	March, 2026	July, 2026	March, 2025
E. Parks	January, 2025	March, 2025	March, 2025	March, 2026	July, 2026	March, 2025