

NOTICE OF A SPECIAL AND REGULAR MEETING OF THE CITY OF FRIENDSWOOD PLANNING AND ZONING COMMISSION, TO BE HELD THURSDAY, OCTOBER 4, 2018, BEGINNING AT 7 PM, IN THE COUNCIL CHAMBERS AT CITY HALL LOCATED AT 910 S. FRIENDSWOOD DRIVE, FRIENDSWOOD, TEXAS

SPECIAL MEETING AS CAPITAL IMPROVEMENTS ADVISORY COMMITTEE

1. Call to order
2. Communication from the public
(To comply with provisions of the Open Meetings Act, the Commission may not deliberate on subjects discussed under this agenda item. However, the Commission may direct such subjects be placed on a later regular Commission agenda for discussion and/or possible action.)
3. Discussion and possible action regarding the City of Friendswood [2018 Update Study for Land Use Assumptions, Capital Improvements Plan, and Impact Fees](#)
4. Adjournment

REGULAR MEETING

1. Call to order
2. Communication from the public/committee liaisons
(To comply with provisions of the Open Meetings Act, the Commission may not deliberate on subjects discussed under this agenda item. However, the Commission may direct such subjects be placed on a later regular Commission agenda for discussion and/or possible action.)
3. Consent agenda
These items are considered routine or ministerial in nature and will be enacted with one motion. There will be no separate discussion of items unless a commissioner or citizen so requests in which case the item would be removed from the consent agenda and considered separately.

A. Minutes from September 20, 2018

Action Items

According to the Planning and Zoning Rules of Procedure (R2010-09), all action of the Commission shall be made by an affirmative vote of four (4) or more members of the Commission present at such Commission meetings.

4. Consideration and possible action regarding the [Preliminary Plat of Georgetown Boulevard Street Dedication Section 2](#), a subdivision of 3.809 acres located in the Hooper and Wade Survey, Section 22, Abstract 491 and I&GN RR Co Survey, Block 1, Section 23, Abstract 624, Friendswood, Galveston County, Texas

5. Consideration and possible action regarding the [Preliminary Plat of Georgetown Section 1](#), a subdivision of 15.144 acres located in the I&GN RR Co Survey, Block 1, Section 23, Abstract 624, Friendswood, Galveston County, Texas
6. Consideration and possible action regarding the [Preliminary Plat of Georgetown Section 2](#), a subdivision of 40.675 acres located in the Hooper and Wade Survey, Section 22, Abstract 491 and I&GN RR Co Survey, Block 1, Section 23, Abstract 624, Friendswood, Galveston County, Texas
7. Consideration and possible action regarding future Planning and Zoning Commission meeting dates

Thursday, October 18 – No Meeting – APA Conference

Thursday, November 1 – regular meeting

Monday, November 5 - Council

Thursday, November 15 – regular meeting

8. Communications
 - a. Commissioners
 - Suggestions for future agenda items and general comments
 - Updates from liaison assignments
 - b. Council Liaison – Sally Branson
 - c. Staff
 - [Downtown District changes – Ordinance Subcommittee](#)
 - [September 2018 DRC Report](#)
9. Adjournment



FRIENDSWOOD PLANNING & ZONING COMMISSION AGENDA ITEM FORM

Subject: Amendment to the Land Use Assumptions, Capital Improvements Plan and Impact Fees (2018)

Current Ordinance/Requirement:

Chapter 395 of the Local Government Code requires a city that imposes impact fees to update the Land Use Assumptions and Capital Improvements Plan at least every five years.

SUMMARY / ORIGINATING CAUSE

Additionally, per Chapter 395, the Planning and Zoning Commission is designated by City Council to act as the Capital Improvement Advisory Committee.

Advisory Committee Comments on Amendments – the advisory committee shall file its written comments on the proposed amendments to the land use assumptions, capital improvements plan, and impact fee before the fifth business day before the date of the public hearing on the amendments.

IMMINENT CONSEQUENCES / BENEFIT TO COMMUNITY

The proposal increases the current impact fee (water and sewer) from \$2,928 to \$4,500.

RECOMMENDATIONS

V. SUMMARY AND RECOMMENDATIONS

The City of Friendswood, Texas has elected to adopt Water and Wastewater Impact Fees to assist in the financing of Capital Improvements for the systems that are necessitated by growth and development anticipated in the City.

- The Planning Period for this Impact Fee Study is **2018-2028**.
- A growth rate of **1.5%** per year is recommended for projection of population and resulting service units for the calculation of the Impact Fee amount.
- The projected population increase for this Planning Period is **6,492** people.
- The equivalent increase in service units is **2,705 ESU**.
- Total Costs for eligible Water Projects identified in the CIP equate to **\$10,693,000**.
- Total Costs for eligible Wastewater Projects identified in the CIP equate to **\$13,731,000**.

Table 9
Previous Impact Fees

Year	Water	Sewer	Total
2003	\$1,892	\$967	\$2,859
2008	\$1,849	\$1,290	\$3,139
2013	\$2,088	\$840	\$2,928

Based on the information presented in this 2018 Impact Fee Study, the Impact Fee Advisory Committee recommends that the City Council adopt the following Impact Fee rates:

Recommended Water Impact Fee	=	\$1,977 / ESU
Recommended Wastewater Impact Fee	=	\$2,523 / ESU
Recommended Total Impact Fee	=	\$4,500 / ESU

ATTACHMENTS

[2018 Update Study of Land Use - Draft](#)

[Capital Improvement Program – 2017 Update](#)

[2013 Update Study for Land Use Assumptions, CIP and Impact Fee](#)

IMPACT FEE STUDY

2018 UPDATE STUDY OF LAND USE ASSUMPTIONS,
CAPITAL IMPROVEMENTS PLAN & IMPACT FEES

WATER SUPPLY/DISTRIBUTION AND
WASTEWATER TREATMENT/COLLECTION

CITY OF FRIENDSWOOD, TEXAS



OCTOBER 2018

PREPARED BY:

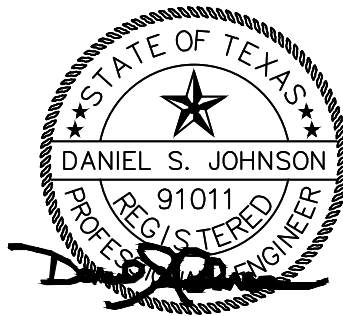
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ENGINEERING, LLC

19701 MORRIS AVENUE, MANVEL, TEXAS 77578
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CITY OF FRIENDSWOOD
IMPACT FEE STUDY

ADVISORY COMMITTEE

MEMBER	JOE MATRANGA
MEMBER	RICHARD CLARK
MEMBER	BRETT BANFIELD
MEMBER	ERIC GUENTHER
MEMBER	LISA LUNDQUIST
MEMBER	RICHARD SASSON
MEMBER	MARCUS PERRY



09/28/2018

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

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CITY OF FRIENDSWOOD
IMPACT FEE STUDY

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CITY OF FRIENDSWOOD
IMPACT FEE STUDY

I. INTRODUCTION

A. BACKGROUND

The City of Friendswood, Texas has elected to adopt Water and Wastewater Impact Fees to assist in the financing of Capital Improvements for those systems that are necessitated by growth and development anticipated in the City. These Impact Fees were first adopted on June 4, 1990 by Resolution No. 90-22, in accordance with the provisions of the, then current State Law.

The State Law originally required that impact fees be reviewed and updated at least every three years from the adoption date; however, the legislation was amended to revise the maximum period to five years between required updates. Table 1 provides a historical summary of all updates to the Impact Fee Study for the City of Friendswood:

TABLE 1
IMPACT FEE STUDY UPDATE SUMMARY

<u>Year</u>	<u>Revision</u>	<u>Resolution</u>	<u>Preparer</u>
1990	Original	R90-22	Brown & Gay Engineers, Inc.
1991	Amendment	R91-4	Brown & Gay Engineers, Inc.
1993	Update #1	R93-24	Brown & Gay Engineers, Inc.
1997	Update #2	R97-48	Claunch & Miller, Inc.
2000	Update #3	R2000-40	Claunch & Miller, Inc.
2003	Update #4	R2003-47	Claunch & Miller, Inc.
2008	Update #5	R2008-17	HDR/Claunch & Miller, Inc.
2013	Update #6	R2013-11	JET Civil Consulting, LLC
2018	Update #7	R2018-	Daniel Scott Engineering, LLC

In 2013, the City Council authorized JET Civil Consulting, LLC to prepare the update of the Land Use Assumptions, Capital Improvements Plan (CIP), and Impact Fee Study in accordance with Chapter 395 of the Local Government Code (Impact Fee Legislation), which is the state legislation regulating this adoption process.

In July 2018, the City authorized Daniel Scott Engineering, LLC (DSE) to prepare the required five-year update of the 2013 Study. This document includes the basis for determination of the Water and Wastewater Impact Fee per Equivalent Service Unit (ESU), based on Land Use Assumptions and the corresponding CIP.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

B. ADVISORY COMMITTEE

The City Council has appointed an Advisory Committee to give policy direction, guide the public hearing process, and make a recommendation to the Council regarding the final report and fee amount. This committee consists of the Friendswood Planning and Zoning Commission (P&Z), which currently has at least one member representing the real estate industry, as required by the Impact Fee Legislation.

C. PLANNING PERIOD

The City of Friendswood is located in a high growth corridor along Interstate 45, approximately 20 miles southeast of the City of Houston, and about 30 miles northwest of the City of Galveston. The planning period for this Impact Fee Study will be for the ten-year period from 2018-2028 in accordance with requirements of the aforementioned Chapter 395. Population projections and resulting growth for the planning period can be found in the Land Use Assumptions, and details of the projects are shown in the CIP.

D. CAPITAL IMPROVEMENTS

Water and Wastewater Capital Improvements are defined as *“any facility that has a life expectancy of three or more years and are owned and operated by or on behalf of a political subdivision: water supply, treatment and distribution facilities; wastewater collection and treatment facilities.”*

Costs for system improvements necessitated by regulatory changes, maintenance requirements, or to correct deficiencies in existing developed areas are not eligible for reimbursement by impact fees and are therefore not included in the CIP developed for the purposes of this study. Many of the improvements may be financed through the issuance of bonds, and therefore finance charges can be estimated and included in the fee calculation. Acquisition of land, easements, and engineering costs for the projects are also eligible under the legislation and can be included in the calculation.

E. IMPACT FEES

This document will establish the projected number of Equivalent Service Units estimated to be added to the City of Friendswood’s water and wastewater system over the Planning Period, as well as the anticipated areas, which will require these services. The required Capital Improvements to be constructed can then be determined with cost estimates that will be utilized to calculate the proposed Impact Fees.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

II. LAND USE ASSUMPTIONS

A. BASIS

The Land Use Assumptions established herein are based on the following:

- The City's current Zoning Map
- The City's Capital Improvements Program 2017 Update
- The City's Comprehensive Plan adopted in 1998
- Vision 2020
- Area Growth projections provided by HGAC and other sources
- United States Census Bureau data and previous historical data
- Current growth trends experienced in the City
- Availability of vacant tracts in the City

B. SERVICE AREA

The Impact Fee Legislation defines Land Use Assumptions as: *“a description of the service area and projections of changes in land uses, densities, intensities and population in the service area over at least a ten-year period.”* The City of Friendswood has elected to define the service area for Impact Fees as the current City Limits. The legislation also allows the City to impose impact fees in the City's Extraterritorial Jurisdiction (ETJ); however, the City of Friendswood has no ETJ.

The City has elected to establish Impact Fees on a system-wide basis. Currently, the City has no standalone systems (Municipal Utility Districts) providing water and wastewater to residents and businesses.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

C. POPULATION PROJECTIONS

According to the United States Census Bureau (Table 2), the population for the City of Friendswood was estimated at 39,839 on July 1, 2017. This represents an increase of 11.3% from the 2010 Official Census (35,805), and an increase of 4,034 people in seven years. After the increase of 23.3% (6,768 people) from 2000 (29,037) to 2010 (35,805), the Census Bureau continues to document Friendswood's growth toward buildout.

Over the last 47 years of Census data, the City of Friendswood has experienced varying population increases. The City witnessed tremendous population spikes of 88.9% from 1970 to 1980, and 112.8% from 1980 to 1990, and a steady increase of about 6,300 people every decade since the 1990's. Altogether, the City has experienced an average annual population increase of 4.27% since 1970.

The 2013 Impact Fee Study incorporated an average annual increase of 1.5% for the population projection, which proved to be consistent with the 1.54% increase observed by the Census Bureau.

TABLE 2
US CENSUS BUREAU

Geography Name	Year	Household Population	% Increase	Population Increase
Friendswood	1970	5,675		
Friendswood	1980	10,719	88.9%	5,044
Friendswood	1990	22,814	112.8%	12,095
Friendswood	2000	29,037	27.3%	6,223
Friendswood	2010	35,805	23.3%	6,768
Friendswood	2017	39,839	11.3%	4,034
		ANNUAL AVERAGE		
		SINCE 1970:	4.27%	726.9
		SINCE 1980:	3.62%	787.0
		SINCE 1990:	2.09%	630.6
		SINCE 2000:	1.88%	635.4
		SINCE 2010:	1.54%	576.3

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

The City's Comprehensive Plan and Vision 2020 projected a build-out population of 55,000 within the combined 21 square miles of the City. Growth trends for the current decade are on a similar track with Houston Galveston Area Council (HGAC) projecting a population increase of 9,147 by 2028. The HGAC population projections for the 10-Year Planning Period are presented in Table 3.

TABLE 3
HGAC POPULATION PROJECTIONS

Place	Year	Household Population	% Increase	Population Increase
Friendswood	2015	38,435	-	-
Friendswood	2016	39,066	-	-
Friendswood	2017	39,697	-	-
Friendswood	2018	40,327	-	-
Friendswood	2019	40,958	1.6%	630.8
Friendswood	2020	41,589	1.5%	630.8
Friendswood	2021	42,853	3.0%	1,263.8
Friendswood	2022	44,117	2.9%	1,263.8
Friendswood	2023	45,380	2.9%	1,263.8
Friendswood	2024	46,644	2.8%	1,263.8
Friendswood	2025	47,908	2.7%	1,263.8
Friendswood	2026	48,430	1.1%	522.1
Friendswood	2027	48,952	1.1%	522.1
Friendswood	2028	49,474	1.1%	522.1
		ANNUAL AVERAGE: TOTAL:	2.1%	9,147

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

D. GROWTH RATE

According to the Census Bureau, the City of Friendswood has experienced an average growth rate of 1.54% per year over the last seven years. In turn, HGAC projects the City's average annual growth rate at 2.1% over the next ten years.

The 2008 Impact Fee Study used a 1.9% annual growth rate, which projected a population in 2017 of 42,988. The 2013 Impact Fee Study implemented a slightly more conservative rate of 1.5% and estimated a population in 2017 of 41,144. According to the US Census Bureau, Friendswood's 2017 population was actually estimated at 39,839, which is on target with the 2013 projection. Therefore, the recommendation of this 2018 Updated Study is to maintain the same conservative growth rate for the planning period between 2018 and 2028 at **1.5%**.

This 1.5% Growth Rate is recommended for the projection of population and resulting service units for the calculation of the Impact Fee amount. Table 4 indicates the resulting population projections by year, with a total estimated population growth of **6,492** over the next 10 years.

TABLE 4
1.5% ANNUAL GROWTH RATE PROJECTIONS

Source	Year	Household Population	% Increase	Population Increase
<i>US Census Data</i>	2000	29,037		
	2010	35,805	23.3%	6,768
	2017	39,839	11.3%	4,034
Friendswood	2018	40,436		
Friendswood	2019	41,043		607
Friendswood	2020	41,659		616
Friendswood	2021	42,284		625
Friendswood	2022	42,918		634
Friendswood	2023	43,562		644
Friendswood	2024	44,215		653
Friendswood	2025	44,878		663
Friendswood	2026	45,552		673
Friendswood	2027	46,235		683
Friendswood	2028	46,928		694
		AVERAGE: TOTAL:	1.5%	6,492

III. CAPITAL IMPROVEMENTS PLAN

A. CAPITAL IMPROVEMENTS PROGRAM

Pursuant to the City Charter, the City Manager is required to submit a Capital Improvements Program (PROGRAM) to the City Council. By agreement, this program is to be updated periodically to reflect the completion of projects, the addition of new projects, and to update project costs for financial projection and management efforts. The first PROGRAM was adopted in 1999 and has been updated in 2003, 2007, 2009, 2012, 2014, and 2017.

From the 2017 Update: “The intent of the updated program is to identify, describe, and prioritize the infrastructure needs of the community as it grows and evolves. The overall goal of the CIP is to maintain the same high quality of life for all citizens through the timely anticipation of the City’s needs, planning of improvement projects and determining funding sources as the community grows. The program is also intended to depict financial challenges of the City’s growth and maintenance of infrastructure that characterize the City’s future and the associated funding requirements to meet these objectives. The programming portion includes formulating preliminary plans, projecting estimated project costs, setting priorities, identifying funding sources, and scheduling the implementation of the plans.”

The City of Friendswood adopted their current Capital Improvement Projects Manual in May of 2017 by Resolution R2017-13. This Manual proposed 77 projects for water, wastewater, facilities, drainage, parks, and streets. Within those 77 projects, 7 water and 10 wastewater projects were identified for the next 5 years (2017-2021). Additionally, 23 water and wastewater projects were identified in the “Beyond 5 Year Plan.”

Since the planning period for the Impact Fee adoption process is *10 years*, all of the *eligible* water and wastewater projects from the Capital Improvements Program are included, as well as other projects anticipated within the 10-year range.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

B. PROJECTS

As discussed, the City's Capital Improvements Program (PROGRAM) identified 77 projects for water, wastewater, facilities, drainage, parks, and streets. The Capital Improvements Plan (CIP) contained within this 2018 Updated Impact Fee Study document consists of only *eligible* water and wastewater projects from the City's PROGRAM.

Six (6) water projects and five (5) wastewater projects were identified within the PROGRAM and are included in Table 5. The approximate subtotal costs are \$10.7M for the water projects and \$13.7M for the wastewater projects. Detailed project descriptions can be found in *Section 3. Five Year Water and Sewer Projects* and *Section 5. Beyond Five Year Water and Sewer Projects* of the PROGRAM.

TABLE 5
CAPITAL IMPROVEMENTS PLAN

<u>WATER PROJECTS</u>	<u>APPROXIMATE COST</u>
16" Waterline Phase 3	\$ 2,500,000
Beamer Road Waterline	\$ 2,043,000
City of Houston Raw Water Purchase	\$ 3,500,000
East Side Waterline Loop	\$ 1,354,000
South FM 518 Waterline	\$ 878,000
<u>West Water Interconnect</u>	<u>\$ 418,000</u>
SUBTOTAL WATER	\$ 10,693,000
<u>WASTEWATER PROJECTS</u>	<u>APPROXIMATE COST</u>
Beamer Road Sanitary Sewer	\$ 4,200,000
El Dorado Sanitary Sewer	\$ 3,880,000
FM 528 – Falcon Ridge to Windsong Sanitary Sewer	\$ 1,005,000
FM 528 – Lundy Lane to Tower Estates Sanitary Sewer	\$ 1,585,000
<u>Windsong Sanitary Sewer</u>	<u>\$ 3,061,000</u>
SUBTOTAL WASTEWATER	\$ 13,731,000

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

IV. IMPACT FEES

The impact fee amount per Equivalent Service Unit (ESU) will be determined based on the number of service units projected to be added to the systems over the 10-year planning period. The single-family residence will be considered as the standard service unit.

A. ADMINISTRATIVE ITEMS

1. The impact fee will be *assessed* (subject to future updates) at the time that a plat is filed (where applicable), and *collected* during the building permit process, as identified in the impact fee legislation.
2. Parks and temporary construction trailers will not be assessed any impact fees.
3. Houses and businesses obtaining additional meter(s) for fire line or lawn irrigation purposes only will not pay the impact fee associated with water or wastewater.
4. The Architect or Engineer for the Owner will size the water meter for the development based on industry standards.
5. Governmental buildings and churches will not pay the water and wastewater impact fees based on the proposed assessment method.
6. Schools are exempt from payment of impact fees unless the board of trustees consents to a specific agreement in accordance with Chapter 395, Local Government Code.
7. When an existing water meter is changed out, additional impact fees will only be assessed if the meter size is increased. The fee will be based on the incremental increase in the Service Units.
8. When meters are changed out for the same size meter or a smaller meter, no Impact Fee will be assessed.
9. If an existing home is currently on a private well and/or septic system, and public water or wastewater become available:
 - a. If the homeowner connects within 1 year of the installation of the City services, they will not have to pay impact fees.
 - b. If the homeowner has not connected to City services within 1 year, they will pay the full impact fee at the time of their connection.
10. Impact fees do not include tap or meter fees; these regulations do not waive any tap or meter fees.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

B. EQUIVALENT SERVICE UNITS

The Impact Fee Legislation requires that the study provide a “*definitive table establishing the specific quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions, and an equivalent or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, and industrial.*”

Many municipalities have determined that the method that is the most equitable and easy to administer is based on the water meter size required to support the proposed building or facility. The American Water Works Association has published tables identifying the industry standard rated flow rates for meters of various sizes.

These flow rates are compared to the standard residential meter (1” for Friendswood) as one service unit and provide an equivalency factor to determine the total impact fee. This method is recommended since it provides the most equitable determination of actual *impact* of the development on the water and wastewater systems.

Table 6 establishes Equivalency Factors for water meters based on AWWA hydraulic capacities standard to the engineering industry.

TABLE 6
EQUIVALENT METER TABLE

Actual Meter Size (inches)	AWWA Capacity (GPM)	Equivalency Factor
1	50	1
1-1/2	100	2
2	160	3
3	300	6
4	500	10
6	1000	20
8	1600	32
10	2300	46
12	4300	86

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

Utilizing the 1.5% Growth Rate recommended in Section II. Land Use Assumptions, the number of Equivalent Service Units (ESU) projected to be added from 2018-2028 can be determined.

According to the HGAC data, there were 13,511 total households within the City limits of Friendswood in 2015. With a corresponding 2015 population of 38,435, this equates to a ratio of 2.84 persons per household. In the year 2020, HGAC predicts that Friendswood will have 41,589 people in 14,258 households, representing 2.92 persons per household. Averaging these HGAC data points (2.84 and 2.92) results in a density of 2.88, which directly corresponds with the 2016 Census data of 2.88 persons per household in Friendswood. Previous updates have implemented 2.80, 2.82, and 3.00, indicating that 2.88 persons per household is an appropriate value for this Study.

In addition to Friendswood's residential population, approximately 20% of the water and wastewater usage is represented by non-residential development. Assuming a continued density of 2.88 people per household, and a corresponding increase in commercial development of 20%, the following increase in ESU will provide the basis for determining the maximum allowable impact fee that may be charged by the City:

TABLE 7
EQUIVALENT SERVICE UNITS

Citywide increase in population for planning period (2018-2028):	6,492
Projected increase in Population per Service Unit:	6,492 / 2.88
Projected increase in Residential Service Units:	2,254
Projected increase in Non-Residential Service Units:	451
Equivalent Service Units for planning period (2018-2028) =	2,705 ESU

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

C. MAXIMUM IMPACT FEE DETERMINATION

Chapter 395 of the Local Government Code was amended in 2001 to include that the City must provide for one of the following from Section 395.014 Paragraph (a) (7):

- (A) *a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the Capital Improvements Plan; or*
- (B) *in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.*

The City of Friendswood has elected to follow option (B) and provide the credit equal to 50 percent of the CIP resulting in the following maximum Impact Fees. Therefore:

TABLE 8
MAXIMUM IMPACT FEES

Total Cost of Water Projects from CIP/Increase in Service Units (2018-2028)			
\$10,693,000 / 2,705 = \$ 3,953 / ESU			
Total Cost of Wastewater Projects from CIP/Increase in Service Units (2018-2028)			
\$13,731,000 / 2,705 = \$ 5,076 / ESU			
Maximum Water Impact Fee:	\$ 3,953 x 50%	=	\$ 1,977 / ESU
Maximum Wastewater Impact Fee:	\$ 5,076 x 50%	=	\$ 2,538/ ESU
Maximum Total Impact Fee:	\$ 1,977 + \$2,538	=	\$ 4,515 / ESU

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

V. SUMMARY AND RECOMMENDATIONS

The City of Friendswood, Texas has elected to adopt Water and Wastewater Impact Fees to assist in the financing of Capital Improvements for the systems that are necessitated by growth and development anticipated in the City.

- The Planning Period for this Impact Fee Study is **2018-2028**.
- A growth rate of **1.5%** per year is recommended for projection of population and resulting service units for the calculation of the Impact Fee amount.
- The projected population increase for this Planning Period is **6,492** people.
- The equivalent increase in service units is **2,705 ESU**.
- Total Costs for eligible Water Projects identified in the CIP equate to **\$10,693,000**.
- Total Costs for eligible Wastewater Projects identified in the CIP equate to **\$13,731,000**.

TABLE 9
PREVIOUS IMPACT FEES

Year	Water	Sewer	Total
2003	\$1,892	\$967	\$2,859
2008	\$1,849	\$1,290	\$3,139
2013	\$2,088	\$840	\$2,928

Based on the information presented in this 2018 Impact Fee Study, the Impact Fee Advisory Committee recommends that the City Council adopt the following Impact Fee rates:

RECOMMENDED WATER IMPACT FEE = \$1,977 / ESU

RECOMMENDED WASTEWATER IMPACT FEE = \$2,523 / ESU

RECOMMENDED TOTAL IMPACT FEE = \$4,500 / ESU

Capital Improvement Program 2017 Update



Library



Downtown Street Scape



Water Plant #7



Townes Road



Lake Friendswood



Kenneth Camp Fire Station

Resolution R2017-13 Approved by Friendswood City Council on May 1, 2017

RESOLUTION NO. R2017-13

**A RESOLUTION ADOPTING A CAPITAL
IMPROVEMENT PROJECTS MANUAL CONTAINING A
SUMMARY OF ALL PROPOSED PROJECTS TO BE
ACQUIRED DURING A FIVE YEAR PERIOD, COST
ESTIMATES, METHOD OF FINANCING AND A
RECOMMENDED TIMETABLE FOR CONSTRUCTING
THE IMPROVEMENTS TO BE UNDERTAKEN IN THE
CITY OF FRIENDSWOOD, TEXAS.**

* * * * *

WHEREAS, the City of Friendswood ("City") has determined that there is a need for a comprehensive financial planning document detailing the City's infrastructure needs, priorities, method of financing and the costs and timing of the undertaking for those improvements to be made within the next five years within the City, and such is required by the Subsection (a) of Section 8.03 of Article VIII of the Charter and provided for in Section 395.014 of the Texas Local Government Code; and

WHEREAS, the City of Friendswood has reviewed its existing ordinances and has determined and desires that this information should be contained in one document that is separate from the annual budget so as to allow for examination in greater detail, simplified modification to reflect the changing needs of the community at the direction of the Council, and revision and updating annually; and

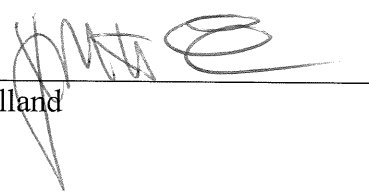
WHEREAS, attached hereto is a manual containing a detailed list of infrastructure needs, priorities, methods of financing and detailed cost estimates programmed for undertaking over a five year period;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FRIENDSWOOD, TEXAS:

Section 1. Pursuant to the Charter of the City, Section 8.03 (a) as amended, the City Council hereby adopts the attached, Exhibit A, **“The City of Friendswood FY 2017 to 2021 Capital Improvement Projects Manual”** as an official document of the City and directs that the information contained and referred to therein shall control and determine the Capital Improvement Project efforts undertaken by the City until such time as the document is amended as called for by this resolution and the City Charter.

Section 2. The Director of Public Works is hereby directed to maintain copies of the **“The City of Friendswood FY 2017 to 2021 Capital Improvement Projects Manual”** and related documents and make them available upon request, for a reasonable fee, to any individual who requests one. The Director is further directed to review and evaluate this data annually and make recommendations to the Council annually for additions and revisions to the plan contained herein.

PASSED, APPROVED AND RESOLVED on this 1st day of May, 2017.



Kevin M. Holland
Mayor

ATTEST:



Melinda Welsh, TRMC
City Secretary

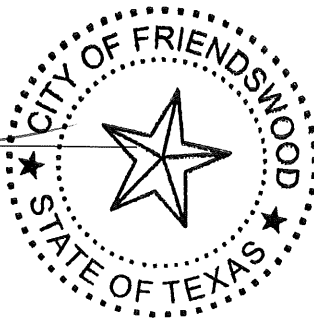


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Resolution 2017-13 approved by Friendswood City Council at the May 1, 2017 Friendswood City Council Meeting.

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Executive Summary

Submitted for City Council's information is the FY 2017 to FY 2021 Capital Improvement Program (CIP) for the City of Friendswood. Currently, there are thirty-three (33) General Government and forty-one (41) Water and Sewer bond identified CIP projects. This submittal represents the sixth update of the CIP since its creation in 1999. City Staff has committed to updating the projects and manual every year.

Once adopted by the City Council, this document will provide Staff a clear direction on the funding and scheduling of remaining projects, which will be a part of long range budgeting plan subject to approval by the City Council. Staff will meet with the City Council in work sessions to seek approval of funding sources, updating project schedules and to seek guidance for every Fiscal Year regarding subsequent implementation phases.

Estimated total funding for individual funding sources and their cumulative totals are given below for the next five-year Capital Improvement Program as well as projects beyond that period (ten to fifteen years). Included in these estimates are two (2) large drainage projects (North Panhandle Detention – 8.2 Million and South Panhandle Detention 23.0 Million) as well as estimates for Brittany Bay Boulevard (15.2 Million) which are part of the Capital Improvements Program, but should be Developer driven.

FUNDING TOTALS FOR FIVE YEAR AND BEYOND CIP

Table 1

FY 2017 - FY 2021 CIP 5-Year Program			
General Government Funds	\$ 39,979,000	-	\$ 44,203,000
Water and Sewer Funds	\$ 34,370,000	-	\$ 35,990,000
Five Year Total	\$ 74,349,000	-	\$ 80,193,000
General Government Funds*	\$ 67,595,000	-	\$ 67,595,000
Water and Sewer Funds*	\$ 46,909,000	-	\$ 46,909,000
Beyond Five Year Total	\$ 114,504,000	-	\$ 114,504,000
GRAND TOTALS	\$ 188,853,000	-	\$ 194,697,000

*In 2017 Dollars

The five-year CIP identified with this update is spread among all categories, with water improvements having a majority of projects scheduled. The driving force for utility projects are generated by population growth requiring more new infrastructure and an existing utility infrastructure that requires maintenance or replacement. Community Development and Public Works focus on implementing the preventive maintenance programs to prolong life of streets.

Friendswood is a City with aging infrastructure. The infrastructure installed by the City or dedicated to the City as a condition of development has a useful life that depreciates annually. Via Governmental Accounting Standards Board (GASB) #34, Staff has determined the value of these fixed assets, their average useful life, the status of depreciation, and estimated the future replacement.

Long range planning and scheduling remains a critical issue at all times. These projects have been identified in various studies and master plans as projects needing attention by the City. City Council and City Staff is currently working diligently on all possible funding sources and planning on these projects.

CITY OF FRIENDSWOOD CAPITAL IMPROVEMENTS PROGRAM UPDATE

1.0 INTRODUCTION

Pursuant to City Charter, the City Manager is required to submit a Capital Improvements Program (CIP) to the City Council. By agreement, this program is to be updated periodically to reflect the completion of projects, the addition of new projects, and to update project costs for financial projection and management efforts. This is the sixth CIP document, the original being created in 1999 and updated in 2003, 2007, 2009, 2012, and 2014.

The intent of the updated program is to identify, describe, and prioritize the infrastructure needs of the community as it grows and evolves. This task includes an effort to increase the accuracy of the program's cost estimate for all prospective projects, but more specifically within the initial five-year period. The overall goal of the CIP is to maintain the same high quality of life for all citizens through the timely anticipation of the City's needs, planning of improvement projects and determining funding sources as the community grows.

The program is also intended to depict financial challenges of the City's growth and maintenance of infrastructure that characterize the City's future and the associated funding requirements to meet these objectives. The programming portion includes formulating preliminary plans, projecting estimated project costs, setting priorities, identifying funding sources, and scheduling the implementation of the plans.

2.0 THE IMPACT OF GROWTH

In the 2000 Census, the population of the City of Friendswood was listed as 29,037. According to current staff estimates, the population has increased to 38,469 as of April 2014. Indications are the City will likely reach its build-out population of 55,000 between 2020 and 2030. Population growth continues to be a primary driving factor in the CIP process, particularly as it relates to utilities.

During the 2003-05 period, capital project focus was primarily on drainage issues, with the completion of four (4) projects which addressed eleven (11) of the twenty (20) identified problem areas from the 1993 Master Drainage Plan. Four (4) others are currently in various stages of resolution. Continued population growth and development pressures shifted the focus for the 2005-06 period to improvements in utility infrastructure. In the 2009-2010 period there were four (4) water and sewer projects in construction, as two (2) sewer projects were completed and one (1) facility was completed. In the 2011-2012 period there were five (5) water and sewer projects in construction. During the 2013 to 2014 period there were seven (7) street projects, three (3) facility projects, six (6) parks projects, one (1) drainage project, and twelve (12) water and sewer projects. Currently there are three (3) drainage projects, four (4) street projects, five

(5) facility projects, eight (8) park projects, seven (7) water projects, and eleven (11) sewer projects.

3.0 THE PLANNING EFFORT & EVOLUTION OF THE DOCUMENT

In Fiscal Year 1999, a Capital Improvements Program was presented to City Council that described the infrastructure growth and maintenance needs of the City through a ten (10) year period. This was the first time that such an extensive and comprehensive plan had been developed. As was noted at that time, the City was facing its heaviest burden of maintaining existing infrastructure, and planning for the construction of new growth-related infrastructure. This remains true today.

In 2002, program categories were determined by the requirements set forth in several of the City's planning documents, most notably the City's Comprehensive Plan and Vision 2020, the City's Strategic Plan. During that same time, the City's CIP was centralized under the Community Development and Public Works Department. Under this centralization, projects sponsored by individual departments were passed to the new Capital Projects Division for incorporation into the new planning document for eventual implementation. With the voter's approval of the General Obligation Bond election in February 2003 the City embarked on the 2003-2008 five-year program guided by Council's reaffirmation of project priorities with drainage issues topping the list.

In implementing the initial projects from the 2003-08, Drainage Program, Staff discovered that preliminary planning documents used to estimate both the scope of work and its costs had not accurately anticipated physical and market conditions for some of the projects. During design phase, engineering additions to the scope of work were required to provide for the unanticipated impact on private properties surrounding a project. For example, if detailed surveying done during the design phase of a drainage project revealed additional areas of concern, the impact of the additional work to the overall scope of work and the affected areas had to be addressed. All of the initial projects fell victim to unprecedented material and labor cost increases experienced throughout the region as a result of market forces.

Staff responded to these issues with a procedure to prioritize the objectives within each project and construct the infrastructure required to achieve those prioritized objectives first. This approach has allowed each project to go forward and provide the central core improvement sought, and to add as many additional secondary and tertiary objectives as approved funding allowed. Thus far, this approach has proven a valid means for meeting the affected project's objectives while coping with rising costs and expanded scope; however, it falls short of the intention of both City Council and Staff for the bond funded projects. These conditions have forced several changes in the process as well as the document.

3.1 Project Environment: Development pressure continues to drive the schedule of many projects and frequently impacts the scope as well. Opportunities to shape and influence private development activities are considered in the planning and estimating phases of the effort. CIP staff is involved in Development Reviews and frequently interface with developer plans at early stages to coordinate efforts and reduce costs that might otherwise be borne solely by the City. This effort helps stabilize and quantify the scope of the project at earlier stages providing

increased confidence in the cost estimates. Staff has successfully integrated developer provided additions to the City's infrastructure to reduce the scope of City funded improvements.

3.2 Strategic Planning: Strategic planning is a part of the above processes and the Preliminary Engineering Reports (PER) for projects. In instances where the scope of a PER can reasonably be expanded to include a strategic examination of a system, or an area to provide guidance for specific planning and programming of recognized needs is being addressed with budgetary constraints in perspective, staff will recommend expanding the scope. This small effort assists in the development and refinement of project scope, and helps to identify opportunities to co-participate with private developers to provide needed infrastructure at a lower or no cost to the City. This information is also fed back into the development review process to assist planning staff in guiding developers as they assess their needs and requirements. The combination of the Master Drainage Plan Phase II, the Pavement Management Master Plan, and the Utility Master Plan has been an immense help in identifying the aging infrastructure and receiving general pricing on construction.

3.3 Project Prioritization: The original CIP Manual, generated in 1999, consisted of forty (40) General Government (GG) bond projects and twelve (12) Revenue (Utility) bond projects. All projects identified were drawn from departmental needs assessments and the City's series of Master Plans, (Vision 2020, Master Drainage Plan Phase I, Parks Master Plan, Streets Master Plan, and the Ground Water Reduction Plan). Initially, these projects were ranked within the sponsoring departments and then Senior Staff ranked those lists to produce a final prioritization of the projects. Much of the original prioritization remained with eight (8) of the original 2003 GO bond projects and seven (7) of the original Utility projects which have been completed, with another two (2) pending bid and two (2) under construction. The 2006 Utility Bond identified eight (8) projects, five (5) of which have been completed and three (3) are under construction.

New projects entering the list are fed into this program structure and the final location among other projects remains a product of departmental needs and "forces at work." Forces at work are increased maintenance requirements and breakdown frequencies and developmental pressures. A final factor influencing the ultimate location of a project in the program is the effort to balance the number and dollar value of the projects within a manageable time frame for the sponsoring department.

Drainage projects have been top priority since Tropical Storm Allison, and with the advent of Hurricanes Katrina, Rita, and Ike have brought these types of projects to the forefront of all capital projects. In the past, and continuing on to this current CIP Manual, hindrances to effective drainage have been established in the engineering criterion. First and foremost, the Design Criteria for drainage in Friendswood accounts for a five (5) year event within the roadside system, and with an overall development designed to account for a one hundred (100) year event. Although this is optimal for new construction, Friendswood has annexed areas that have been sub-par in drainage standards. In efforts to prioritize area flooding, projects were divided into three categories. Priority drainage projects address flooding where there is danger or already have been flooding in or near homes. Secondary drainage projects address flooding that denies access to areas but is not a threat to property. Tertiary drainage projects address areas where the street floods, but no water ever goes over the curb; streets are designed to hold extra capacity of storm water during extreme events.

4.0 CHANGES TO THIS DOCUMENT

4.1 Like its predecessor from 2012, the 2017 CIP incorporates significant changes. Every effort has been made to make this the most useful planning tool available for Council and Staff. This update incorporates Water and Sewer bond projects, and General Government bond projects.

4.2 Project Scope: This update includes a complete re-work of the Description/ Justification discussion for each project. The accuracy of long-range estimates is directly proportional to the completeness of the scope at the time the estimate is performed. An extensive effort to improve scope definition for all projects has been made as a component of this update. The enhanced level of project information directly improves the accuracy of the estimate and helps to guard against “scope creep”. This provides the sponsor department and the planner a better concept of what the project will and will not provide. For these reasons, the estimate will identify if a study was available and, what level of study the estimate is based on. If easements are required for the project, they are roughly quantified and a figure is included for their acquisition. Likewise, survey and other professional services are considered specifically when estimating professional service fees. For these reasons, there are likely to be several different percentage factors used in the estimate for this cost category. It is the intent of staff that when a project becomes part of the five (5) year plan, a more definitive scope will be utilized by contracting Engineering or Architectural Services to provide a Preliminary Report on the project that will include estimated quantities, project, and engineering/architectural costs.

4.3 Organization: The document has been reorganized in an effort to improve user friendliness. Previously, the contents were arranged only by their relative priority providing no intuitive link to the location of the project description and estimate within the General Government Fund section, or the Water & Sewer Fund section. The revised document is organized by fund type, either a General Government or Water & Sewer. The projects beyond the Five-Year Plan are also separated into these two categories and sorted by projected year of the project. The Five Year planned projects have details, scope, justification, and locations for them. The Beyond Five Year Projects also have these features, but to keep this manual to a manageable size, only project name and a location map are included. As the Projects from the Beyond Five Year Plan fall into the Five Year Plan, they will be added in full.

5.0 BOND ISSUANCE COSTS:

This document DOES include Bond Issuance Costs in the listed project estimates. Actual and final bond sale amounts may vary depending on the number of projects being funded and the timing of the cash requirements; therefore it is impractical for the CIP to estimate bond issuance costs.

6.0 THE CHALLENGE AT A GLANCE

Due to increasing construction costs and an aggressive CIP, the greatest challenge to the City is funding. The following tables present a summary for the plan (Current Five-Year and Five-Year Plus divided into project types):

CIP FY 2017 TOTAL SPENDING

Table 2

Current Five Year Program

2017 – 2021

Drainage	\$ 1,000,000	-	\$ 1,000,000
Facilities	\$ 9,749,000	-	\$ 10,657,000
Parks	\$ 7,518,000	-	\$ 8,309,000
Streets	\$ 19,485,000	-	\$ 20,845,000
Sewer	\$ 418,000	-	\$ 461,000
Water	\$ -	-	\$ -
	\$ 38,170,000	-	\$ 41,272,000

Beyond Five Year Program (2022 - 2032)*

Drainage	\$ 39,258,000
Facilities	\$ 8,449,000
Parks	\$ 14,888,000
Streets	\$ 5,000,000
Sewer	\$ 24,812,000
Water	\$ 22,097,000
	\$ 114,504,000

*In 2017 Dollars

7.0 A SUMMARY OF THE PROGRAM

An analysis of the preceding tables provides a number of quick observations that require specific mention. Approximately forty-nine (49) percent (73.3 million dollars) is planned for improvements to General Government Projects. General Government Projects form the single largest spending category in the Five-Year Plan 2015-2019. The General Governments category includes Drainage, Facilities, Parks, and Streets infrastructure replacement, and upgrades. The spending requirements are based on needs to accommodate growth and maintain the current level of services to neighborhoods where existing streets and drainage are aged and in need of replacement. Utilities, especially water projects, are the second largest category.

Finally, the financial commitment to drainage has lowered to 3.6 percent of the total seventy-three (73) million dollars in spending. This level of commitment has changed with the Master Drainage Plan Phase II and the addition of the previous projects that have not been completed due to depletion of funding. These constitute the Secondary and Tertiary Drainage Projects.

8.0 THE NEXT FIVE YEARS

The Five-Year Plan identified with this update shifts the emphasis to the Water & Sewer category, especially sewer projects which are 28.8 percent of all projects included within the five year plan. As previously discussed, the driving force for spending on water and sewer is generated by growth and an aging utility infrastructure. Long term emphasis has shifted to the aging water and sewer facilities and lines network as the Public Works Department focuses on implementing the preventative maintenance programs (assessment, line, and equipment repairs, etc.) to prolong the life of those utility services. This will require a consistent financial commitment to pre-empt the need for large scale replacement efforts later.

By quick observation, the effort levels in the Five-Year Plan are as balanced as external forces will allow. In addition, City Staff is involved in the accountability of identifying possible needed easements and relocations of public utilities. City Staff recommends that the processes of easement acquisition and/or utility relocations begin two (2) years prior to the design of each project.

9.0 PROJECTS COMPLETED SINCE THE CIP INCEPTION

City of Friendswood

Table 3

Capital Improvement Program - Completed Projects Statistics

PROJECT TYPE	# OF PROJECTS
Drainage	6
Facility	10
Parks	12
Streets	13
Sewer	16
Water	20
General Government Funds	41
Water & Sewer Funds	36
Total of All Capital Improvement Projects	77

<u>DRAINAGE PROJECTS</u>	
PROJECT NAME	COMPLETED
Annalea/Whitehall/Kings Park Drainage Phase 1	2004
Clover Acres Drainage	2007
FM 518 Drainage Phase 1	2010
Glenshannon Drainage Phase 1	2008
Sunmeadow Drainage Phase 1	2005
W. Shadowbend/Woodlawn Drainage Phase 1	2004

<u>FACILITY PROJECTS</u>	
Animal Control Facility	2011
Emergency Generators - Fires Stations #1 & 2	2012
Fire Station #3 Rehabilitation	2012
Fire Station #4	2008
Library Land Acquisition	2000
Library Expansion	
Municipal Court Renovations	2003
Public Safety Building	2006
Public Works Addition	2001
Public Works Security Gate	2010
Public Works Vehicle Storage Building	2004

<u>PARK PROJECTS</u>	
Baker Road	2016
Centennial Park Phase 1	2002
Centennial Park Phase 2 & 3	2006
Downtown Street Pavers	2016
FM 2351 Irrigation	2014
Friendswood Sports Park	2000
Jogging Trail Stevenson Park	2002
Lake Friendswood Phase I	2015
Lake Friendswood Phase II	2016
Renwick Park Lighting	2016
Sportspark	2016
Stevenson Park Bridge	2016
Stevenson Park Trails	2016

<u>STREET PROJECTS</u>	
Activity Building Parking	2003
Additional City Hall Parking	2009
Blackhawk Blvd. - Phase 1	2012
Friendswood Link Road Extension	2008
Friendswood Link Road Phase II	2016
Public Library Parking	2011
Melody Lane	2012
Sunnyview/Skyview	2011
Sunset Drive	2003
Stadium Lane Parking	2011
Traffic Signal at Blackhawk	2012
W. Shadowbend/Woodlawn	2004
Whitaker Drive	2004

Capital Improvements Program - Completed Projects to Date
Water and Sewer Working Capital Projects

<u>SEWER PROJECTS</u>	
Autumn Creek Sewer Line	2000
Beamer Road Lift Station	2011
Beamer Road Sewer	2011
Deepwood Force Main	2009
Deepwood Lift Station	2009
E. Heritage 8" Sanitary Sewer	2001
Emergency Generators Water Plants #1 & Surface Water #2	2012
Friendswood Link/Whittier Oaks FM Replacement	2004
Lift Station #3	2016
Lift Station #6	2014
Longwood Park Sewer	2003
San Joaquin Estates Sewer	2003
SCADA System	2016
South Friendswood Force Main	2009
Sun Meadow Lift Station	2008

<u>WATER PROJECTS</u>	
16" Transmission Water Line (Sunset to WW #4)	2009
16" Waterline (Melody to Sunset)	2001
24" Trunk Line	2003
2nd Surface Water Take Point - Phase 1	2003
2nd Surface Water Take Point - Phase 2	2003
2nd Surface Water Take Point - Tank Addition	2003
Additional Water Purchase	2008
Bay Area Blvd Water Line	2007
Beamer Road Water Line	2011
Blackhawk FM 2351 Waterline	1999
Blackhawk Water Line	2008
Emergency Generators - Lift Stations	2012
Longwood Park Water Line	2004
Neighborhood Water Line Replacements	2006
Water Plant #1 Rehab	2002
Water Plant #2 Rehab	2017
Water Plant #3 Rehab	2003
Water Plant #4 Rehab	2003
Water Plant #5 Rehab	2013
Water Plant #6 Rehab	2012
Water Plant #7 Rehab	2016
WWTP Water Line Loop 8"	2006

General Government Projects - Five Year CIP Plan

TABLE 4

Funded Projects	5 Year Plan (FY2017 - FY2021)
1776 Park Improvements	\$ 430,000 - \$ 473,000
Blackhawk Boulevard Phase II	\$ 7,067,000 - \$ 7,651,000
Mud Gully Detention and Conveyance	\$ 1,000,000 - \$ 1,000,000
Old City Park	\$ 1,102,000 - \$ 1,206,000
Wegner Ditch - Tributary II	
Woodlawn Avenue	\$ 777,000 - \$ 865,000
TOTAL	\$ 10,376,000 - \$ 11,195,000

Unfunded Projects	5 Year Plan (FY2017 - FY2021)
Brittany Bay Boulevard Phase I	\$ 6,141,000 - \$ 6,829,000
Activities Center	\$ 2,394,000 - \$ 2,615,000
Corporal Wesley J. Canning Sportspark	\$ 1,294,000 - \$ 1,417,000
Fire Department Training Field Upgrades	\$ 550,000 - \$ 605,000
Fire Station #2 Reconstruction	\$ 1,871,000 - \$ 2,045,000
Parks and Recreation Building	\$ 1,159,000 - \$ 1,271,000
Park Trail Master Plan	\$ 100,000 - \$ 100,000
Pedestrian Bridge at Brookside Intermediate School	\$ 770,000 - \$ 925,000
Public Safety Building, Phase II	\$ 5,675,000 - \$ 6,762,000
Sidewalk Master Plan	\$ 500,000 - \$ 500,000
Stevenson Park Reclamation	\$ 50,000 - \$ 55,000
Stevenson Park and Swimming Pool Restrooms	\$ 971,000 - \$ 1,158,000
Street Maintenance Master Plan	\$ 5,000,000 - \$ 5,000,000
Sub-regional - Park Lundy Lane Development	\$ 3,128,000 - \$ 3,726,000
TOTAL	\$ 29,603,000 - \$ 33,008,000

PROJECT NAME

SPONSOR DEPARTMENT

1776 Park Improvements

Parks and Recreation

COUNCIL GOAL: #6 Maintain High Level of Public Service

Planning Document: NA

TYPE: Park Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

In an effort to upgrade area parks, and make them more usable to the residents, there are different items being used around the City to enhance existing Parks. Next door to 1776 Park in the Imperial Estates is a new Frisbee Golf course. This project will add a Kayak Launch, Dog Park, and 6' wide trails to the existing amenities at this park.

JUSTIFICATION:

The demand for versatile Parks for all ages and all types of activities, require the City to add and enhance the existing City fields.

Estimated 2017 Costs

Construction Costs: \$304,000

Professional Services: \$90,000

10% Contingency: \$30,000

Testing Services \$6,000

Total Projected Project Cost: \$430,000

PROJECT NAME

SPONSOR DEPARTMENT

Blackhawk Blvd Reconstruction Phase II

Public Works

COUNCIL GOAL: #13 Improve Transportation

Planning Document: NA

TYPE: Streets

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

This project replaces approximately 7,150 linear feet of existing concrete roadway (25-feet wide) that was constructed nearly 35 years ago. The project continues work that was started 3 years before, replacing deteriorated sections of roadway that have succumb to heavy traffic loads and high volumes of vehicles. In addition, the project will also address failed inlet aprons and sidewalk issues throughout the corridor.

JUSTIFICATION:

The City currently maintains this road, but its age and condition warrant significant repair and replacement of specific sections. While this is not a wholesale replacement of the facility, it will extend the life of the facility and put-off replacing the entire road for a number of years.

FUNDING SOURCE:

The identified funding source for this project is the voter approved 2013 Street Bonds.

Estimated 2017 Costs

Construction Costs: \$5,097,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$1,019,000

Professional Services \$849,000

Testing Services \$102,000

Total Projected Project Cost: \$7,067,000

PROJECT NAME

SPONSOR DEPARTMENT

Mud Gully Detention and Conveyance

Public Works

COUNCIL GOAL: #5 Improve Drainage

TYPE: Drainage

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The City of Friendswood, in participation with the Galveston County Consolidated Drainage District, Harris County Flood Control District, Harris County, and Galveston County are undertaking clearing and de-snagging activities along Clear Creek that were made possible by the Mud Gully project that was led by HCFCD.

JUSTIFICATION:

The above improvements would drop the surface elevation of Clear Creek and the Mud Gully and provide benefits to over 700 structures that are within the 100-year flood plain. This is a component of the Clear Creek Federal Flood Control project which is being re-evaluated by the U.S. Army Corps of Engineers.

FUNDING SOURCE:

The funding for this project is from the General Fund Balance.

City of Friendswood Participation:

\$1,000,000

PROJECT NAME**Old City Park****SPONSOR DEPARTMENT****Parks and Recreation**

COUNCIL GOAL: #14 Develop Additional Parks

Planning Document: NA

TYPE: Parks

SUBTYPE: Construction

YEAR PLANNED: 2017

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The proposed plan has identified the requirement to renovate and update Old City Park. The park has been connected to Stevenson Park via a footbridge. Additional amenities include a dog park, 10' wide sidewalk, paved parking for 75 vehicles, new entry road from Briarmeadow and Merriewood, new picnic pavilion, new restroom building, playground equipment, and improved drainage throughout the site.

JUSTIFICATION:

Since 1993, the Parks and Recreation Board have recommended the connection of Old City Park to Stevenson Park via a footbridge. Once connected, additional parking for special events such as, the annual Fourth of July Celebration, Concerts-In-The-Parks, the Halloween Festival, and the Car Show can be accommodated. During the spring and summer soccer seasons, the existing gravel entry road generates extensive amounts of dust and debris that settle on nearby resident's homes and vehicles. Paving the entry way and providing paved parking at the site will resolve this issue and will create a safe environment.

FUNDING SOURCE:

The identified funding source for this project is the voter approved 2013 Park Bods.

Estimated 2017 Costs

Construction Costs: \$801,000

25% Contingency: \$200,000

Professional Services: \$84,000

Testing Services: \$17,000

Total Projected Project Cost: \$1,102,000

PROJECT NAME

SPONSOR DEPARTMENT

Wegner Ditch – Tributary 2

Public Works

COUNCIL GOAL: #5 Improve Drainage

Planning Document: Master Drainage Plan Phase I

TYPE: Drainage

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

In 2004, the Texas Department of Transportation (TXDOT) prepared a comprehensive Drainage Plan for the F.M. 2351 corridor between F.M. 518 and the proposed Brittany Bay Boulevard. The purposes of the study was identify critical drainage issues that would affect the widening of the roadway to 5 lanes and then propose solutions that could be addressed by the various agencies affected by the project. Three problem areas were identified. This project addresses problem area 2 and is joint project between the City, Galveston Consolidated Drainage District, and TXDOT. The project calls for the construction of outfall (box culvert or ditch) located between Garden Street and Sunset Drive. The outfall facility would extend from F.M. 2351 all the way to Cowards Creek, for a distance of 3300 feet.

JUSTIFICATION:

The proposed outfall would address several drainage areas along the F.M 2351 corridor that currently do not have outfall drainage. The benefits would be realized on both sides of F.M. 2351, from Stadium Drive to Oak Drive. In addition, the proposed project would facilitate the development of the roadway and relieve traffic congestion along the corridor within the city limits of Friendswood.

FUNDING SOURCE:

The identified funding source for this project is from the General Fund Balance.

The Galveston County Consolidated Drainage District (GCCDD) is currently constructing this project through a grant with CDBG. The City's cost share was in the amount of \$75,000 for Engineering and Surveying, which was paid in FY 2010.

PROJECT NAME

SPONSOR DEPARTMENT

Woodlawn Avenue

Public Works

COUNCIL GOAL: #13 Improve Transportation

Planning Document: Pavement Management Master Plan

TYPE: Streets

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Currently, the roadway exists from Laurel Drive to F.M. 518 and is approximately 650 feet long. The existing road is 2 lanes of asphalt with an average width of 28 feet and concrete curb and gutter and an associated storm sewer. The ultimate cross-section proposed for this street is a 2-lane, undivided concrete roadway (28-feet wide) with curb and gutter.

JUSTIFICATION:

In 2002, the City performed an inventory of existing asphalt roads throughout the City in an effort to determine which of these roads, based upon their age, existing condition and traffic loads and volumes and other factors would warrant conversion to concrete. Woodlawn Avenue evolved, based upon these criteria, as a prime candidate for conversion. Finally, the conversion of this street to concrete will reduce the maintenance costs, the scope of maintenance activity, and the frequency of maintenance on this highly traveled Collector Street.

FUNDING SOURCE:

The identified funding source for this project is the voter approved 2013 Street Bonds.

Estimated 2017 Costs

Construction Costs: \$569,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$114,000

Professional Services \$83,000

Testing Services \$11,000

Total Projected Project Cost: \$777,000

PROJECT NAME

SPONSOR DEPARTMENT

Brittany Bay Boulevard Phase I

Public Works

COUNCIL GOAL: #13 Improve Transportation

Planning Document: Major Thoroughfare Plan

TYPE: Thoroughfares

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: ST0017

PROJECT DESCRIPTION:

This project would construct a four-lane concrete curb and gutter boulevard section from the Friendswood/League City corporate limits to F.M. 528. In addition, the project includes the construction of an associated underground storm sewer system. The thoroughfare would traverse through the West Ranch and Friendswood Lakes developments on the east side of F.M. 528. Ultimately, this roadway would connect Pearland Parkway in Pearland with Brittany Bay Boulevard in League City.

JUSTIFICATION:

The project will provide an additional north/south corridor through the City, which will help decrease the congestion along both F.M. 518 and Sunset Boulevard. The construction of the Brittany Bay Corridor will also prepare the City for the future development of this section of the City. In addition, the proposed storm sewer should provide improved drainage in the area along the Brittany Bay Boulevard Corridor.

Estimated 2017 Costs

Construction Costs: \$4,646,000

Easement Costs:

Easement Acquisition Services:

15% Contingency \$697,000

Professional Services \$708,000

Testing Services \$91,000

Total Projected Project Cost: \$6,141,000

PROJECT NAME

SPONSOR DEPARTMENT

Activity Center Renovation

Parks and Recreation

COUNCIL GOAL: #9 Develop Civic Center

Planning Document: Parks and Open Space master Plan

TYPE: Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The 1993 Parks and Open Space Master Plan identified the need to provide a modern state of the art facility to handle the recreation needs of a population of 55,000 citizens.

A more detailed scope is expected to be identified during the preliminary study phase of the project. The scope outlined above was based on currently identified needs of the Sponsor Department.

JUSTIFICATION:

The Parks and Open Space Plan identified the need for a Civic Center to meet the needs of a diverse community of 55,000 citizens. The current Activities Center provides a public facility where residents of all ages will be able to come together and socialize, recreate and participate in a wide variety of community events and activities. Currently, the Activities Center is undersized for the population. The City is currently in a feasibility study for options on expansion. The City is looking to renovate the existing building and add another 8,800 SF onto the site and install more parking.

Estimated 2017 Costs

Construction Costs: \$1,744,000

25% Contingency: \$436,000

Professional Services: \$178,000

Testing Services: \$36,000

Total Projected Project Cost: \$2,394,000

PROJECT NAME

SPONSOR DEPARTMENT

Corporal Wesley J Canning
Sportspark

Parks and
Recreation

COUNCIL GOAL: #6 Maintain High Level of Public Service

Planning Document: NA

TYPE: Park Facilities

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

In an effort to obtain additional acreage for much needed ball fields, the City has been working with Galveston County Consolidated Drainage District (GCCDD) to utilize a dry detention for lacrosse fields. GCCDD has graded the Baker Road detention pond for the development of seven (7) lacrosse fields. In order for the fields to be utilized, the City will develop restroom facilities and lighting for the fields

JUSTIFICATION:

The demand for youth ball fields within the City is growing at an alarming rate. Accordingly, this is an opportunity to utilize thirty (30) plus acres that would otherwise sit dormant, for lacrosse fields.

Estimated 2017 Costs

Construction Costs:	\$942,000
25% Contingency	\$236,000
Professional Services	\$96,000
Testing Services	\$20,000

Total Projected Project Cost:	\$1,294,000
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PROJECT NAME

SPONSOR DEPARTMENT

Fire Department Training Field Upgrades

Fire Department

COUNCIL GOAL: #6 Maintain High Level of Public Service

PLANNING DOCUMENT: None

TYPE: Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The project would utilize the existing 1.0 acre site at Fire Station #2 (2601 West Parkwood) in the Sun Meadow area. The project would construct a fire evolution training structure and ancillary facility with a ground level footprint of approximately 1070 sq. ft. and includes a 265 sq. ft. tower structure 30 feet high with 4 decks, steel doors and multiple window openings and open stairways and a residential training section consisting of approximately 500 sq. ft. two story building with steel doors multiple window openings steel shutters and a 2nd floor burn room based on a prepackaged, purpose built structure.

Site improvements include installation of an 8-inch water main and provision of gas main and electrical site upgrades. Requires installation of additional access pavement of approximately 16,200 sq. ft.

A more detailed scope is expected to be identified during the preliminary study phase of the project. The scope outlined above was based on currently identified needs of the Sponsor Department.

JUSTIFICATION:

Appropriate training facilities become more important to maintaining the current level of service provided by the volunteer fire department. The new Headquarters facility will provide classroom facilities but practical field training is a requirement for providing this service. Providing needed training facilities in the City keeps the volunteers here, training in the city, and available to respond to any emergencies and minimize training expenses required to send volunteers outside the city for the training. Current training locations include: La Porte, College Station, and Beaumont.

Estimated 2017 Costs

Construction Costs:	\$450,000
10% Contingency:	\$45,000
Professional Services:	\$50,000
Testing Services:	\$5,000

Total Projected Project Cost: \$550,000

PROJECT NAME

SPONSOR DEPARTMENT

Fire Station #2 Reconstruction

Fire Department

COUNCIL GOAL: #6 Maintain High Level of Public Service

PLANNING DOCUMENT: NA

TYPE: Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The current project consists of a sub-Station sized facility of approximately 2800 sq. ft. situated on approximately 1 acre at 2601 West Parkwood (FM 528). The proposed sub-Station project contains about 2020 square feet of living/ administrative/ workspace and approximately 4625 square feet of apparatus and support space. Structure is planned as a pre-engineered metal building frame and roof designed to current wind-load requirements of 120mph with permanent walls constructed from CMU/ brick veneer and temporary walls from metal panel or composite materials. Site improvements include approximately 24 parking spaces along the perimeters of the access and equipment driveways. The station contains two double-loaded equipment bays, storage, and a utility room. Inside is a day room, dispatch office, small kitchen, locker-room and dorm room for three volunteers. Provisions have been made to include emergency power for the station.

JUSTIFICATION:

The current station is a metal framed building and past its life use. It is not feasible for the building to be brought up to code and useable during emergency services in all types of weather. The decision is to demolish the existing building and construct a new fire station like the Fire Station 4.

Estimated 2017 Costs

Construction Costs:	\$1,363,000
25% Contingency:	\$341,000
Professional Services:	\$139,000
Testing Services:	\$28,000

Total Projected Project Cost:	\$1,871,000
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PROJECT NAME

SPONSOR DEPARTMENT

Parks & Recreation Building Renovation

Parks and Recreation

COUNCIL GOAL: #6 Maintain High Level of Public Service

Planning Document: NA

TYPE: Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The existing Parks and Recreation Building, located at 220 Shadwell, will need major renovation to bring the structure up to current building codes for public use from a single family residential structure.

JUSTIFICATION:

The Building will need renovations to set up as the headquarters for Parks and Recreation to house 5 – 8 employees. The exterior and interior doors will need to be modified. The existing electrical would have to be upgraded. The facility would need to be made ADA accessible.

The first task will require a survey to determine implications of the current and proposed flood zone maps. The adjustments to the structure will necessitate hiring an appropriate professional Survey, Design, and Engineering team.

Estimated 2017 Costs

Construction Costs: \$750,000

25% Contingency: \$192,000

Professional Services: \$163,000

Testing Services: \$37,000

Total Projected Project Cost: \$1,159,000

PROJECT NAME

SPONSOR DEPARTMENT

Park Trails Master Plan

Public Works

COUNCIL GOAL: N/A
Planning Document: N/A
TYPE: Sidewalks
SUBTYPE: Construction

YEAR PLANNED: NYP
PROJECT NUMBER: N/A

PROJECT DESCRIPTION:

This project would construct a series of trails connect all the City parks. The project would use existing routes where possible and construct new routes in the drainage areas.

JUSTIFICATION:

This project is part of the Parks Master Plan.

Estimated 2017 Costs

Construction Costs:	\$100,000
Easement Costs:	
Easement Acquisition Services:	
25% Contingency	
Professional Services	
Testing Services	

Total Projected Project Cost:	\$100,000
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PROJECT NAME

SPONSOR DEPARTMENT

Pedestrian Bridge at Brookside Intermediate

Public Works

COUNCIL GOAL: N/A

Planning Document: N/A

TYPE: Sidewalks

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: N/A

PROJECT DESCRIPTION:

This project would construct a 169 linear Foot pedestrian bridge across the drainage channel from Brookside Intermediate School to the back side of the Galloway school, along the drainage channel.

JUSTIFICATION:

The City was approached by Clear Creek Independent School District (CCISD) about the possibility of installing a pedestrian bridge to make access from the Autumn Creek Subdivisions easier and safer for the children, instead of walking along Bay Area Boulevard to FM 528 and then crossing Bay Area Boulevard and walking along FM 528 to get to Brookside Elementary School.

Estimated 2017 Costs

Construction Costs: \$520,000

Easement Costs:

Easement Acquisition Services:

25% Contingency \$130,000

Professional Services \$116,000

Testing Services \$11,000

Total Projected Project Cost: \$777,000

PROJECT NAME

SPONSOR DEPARTMENT

Public Safety Building, Phase II

Police Department

COUNCIL GOAL: #6 Maintain High Level of Public Service

Planning Document: Community Facilities Plan

TYPE: Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

This project would expand Phase I of the PSB to accommodate the personnel space requirements for a total Police Force of approximately 117 officers and civilian personnel and up to 9 personnel in the FMO. These figures are based on percent growth of the various divisions and would be finalized by a programming study done at the time. The assumptions made by this projection are based on available information and include expansion in Administration areas, including the FMO to total approximately 3,500 sq. ft., in Patrol of 4,700 sq. ft., in CID of approximately 4,300 sq. ft., and another 3,500 sq. ft. in courts area. This estimate includes required expansion of Evidence storage and armory spaces. The Administrative area is planned to be storm hardened to match the existing structure. No additions were foreseen for the Jail area, Records Storage areas at this time. Approximately 100 parking spaces would be added; 40 in secure area and 60 in public.

A more detailed scope is expected to be identified during the preliminary study phase of the project. The scope outlined above was based on currently identified needs of the Sponsor Departments including Municipal Courts.

JUSTIFICATION:

At Build-out the PD expects to have a total personnel accompaniment of approximately 117 officers and civilian personnel. Additionally, the Fire Marshal's Office can be expected to grow by nearly 100%, from four to between 8 and 10. Phase One of the facility was designed with some room for growth through about 2014-16 based on current projections (assuming the departments maintain a 1.5 officers to 1000 population ratio.) This facility will require a major expansion to house these critical functions and to continue to serve as the City's Emergency Operations Center during severe weather events.

Estimated 2017 Costs

Construction Costs:	\$4,044,0000
25% Contingency	\$1,011,000
Professional Services	\$539,000
Testing Services	\$81,000

Total Projected Project Cost:	\$5,675,000
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PROJECT NAME

SPONSOR DEPARTMENT

Sidewalk Master Plan

Public Works

COUNCIL GOAL: N/A

Planning Document: N/A

TYPE: Sidewalks

SUBTYPE: Construction

YEAR PLANNED: NYP

PROJECT NUMBER: N/A

PROJECT DESCRIPTION:

This project would construct sidewalks throughout the City starting at high pedestrian areas. The City is proposing to spend \$100,000 a year to replace or install new sidewalks. The priority would be near schools throughout both school districts to make safe passage for children that walk to and from the schools, then it would shift focus to the needs of different subdivisions.

JUSTIFICATION:

The City staff and City Council has been approached by residents on the subject of sidewalks, either new to be installed or fixed or replaced. The City has decided to institute this Sidewalk Master Plan to start the process of tying in sidewalks throughout the City.

Estimated 2017 Costs

Construction Costs: \$500,000

Easement Costs:

Easement Acquisition Services:

25% Contingency

Professional Services

Testing Services

Total Projected Project Cost:

\$500,000

PROJECT NAME

SPONSOR DEPARTMENT

Stevenson Park Reclamation

Parks and Recreation

COUNCIL GOAL: #6 Maintain High Level of Public Service

Planning Document: NA

TYPE: Park Facilities

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The existing Fire Station Site will be unoccupied and the land will revert back to Stevenson Park. In an effort to expand Stevenson Park, the existing building and parking will be demolished and the area will have grass installed.

JUSTIFICATION:

The new Fire Station on Harold Whitaker Drive will become the New Headquarters for the Friendswood Volunteer Fire Department. The City has decided to revert this land that the existing Fire Station 1 is on back to parkland.

Estimated 2017 Costs

Construction Costs: \$40,000

25% Contingency \$10,000

Total Projected Project Cost: \$50,000

PROJECT NAME

SPONSOR DEPARTMENT

**Stevenson Park and Swimming Pool
Restroom Renovations**

Parks and Recreation

COUNCIL GOAL: #6 Maintain High level of Public Services

Planning Document: Parks and Open Space master Plan

TYPE: Facilities

YEAR PLANNED: 2017

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The Project requires the demolition of the existing restrooms and office area and construct new restrooms and office space with new utilities and fixtures. Also, the existing restrooms near the Gazebo will be removed and the restrooms at the Pavilion will be replaced and expanded.

JUSTIFICATION:

Both existing restrooms have had numerous operational problems. The main utilities are undersized and are not known where they are fed. New construction, after the demolition, would verify the conditions of the existing utilities and recommended upgrades.

Estimated 2017 Costs

Construction Costs: \$705,000

25% Contingency: \$176,000

Professional Services: \$76,000

Testing Services: \$14,000

Total Projected Project Cost: \$971,000

PROJECT NAME

SPONSOR DEPARTMENT

Street Pavement Master Plan

Public Works

COUNCIL GOAL: #13 Improve Transportation

Planning Document: Pavement Master Plan 2008

TYPE: Streets

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Currently a number of streets, using various types of pavement, have been identified as being at the end of their useful cycle. City Staff is recommending that a five year plan on replacing the road surfaces identified be implemented.

JUSTIFICATION:

In 2008, the City performed an inventory of existing roads throughout the City in an effort to determine which of these roads, based upon their age, existing condition and traffic loads and volumes and other factors would warrant replacement. The City is planning to complete a new study in the 2017 Fiscal Year.

Estimated 2017 Costs

Construction Costs:	\$5,000,000
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Total Projected Project Cost:	\$5,000,000
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PROJECT NAME

SPONSOR DEPARTMENT

Sub-regional Park – Lundy Lane

Parks and Recreation

COUNCIL GOAL: #14 Develop Additional Parks

Planning Document: Parks and Open Space Master Plan

TYPE: Park

YEAR PLANNED: NYP

SUBTYPE: Construction

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The proposed plan has identified the requirement to expand the park system to include the addition of one fifteen-Acre Park commonly known as a Sub-Regional Park. Using 2013 Park Bonds dedicated for Park Land Purchase, the City Purchased 24 Acres at the corner of Lundy Lane and W. Parkwood Avenue (FM 528). Improvements to this lot will be parking, Picnic Pavilion, Restrooms, 7 fields, lighting, and fencing.

JUSTIFICATION:

The Parks and Open Space Master Plan and the Park Dedication Ordinance identify the need for Community Parks within the city limits of Friendswood at Build Out. The City experiences ever increasing demand for youth sports fields.

Estimated 2017 Costs

Construction Costs: \$1,429,000

25% Contingency: \$357,000

Professional Services: \$154,000

Testing Services: \$29,000

Total Projected Project Cost: \$1,969,000

Water & Sewer Projects - Five Year CIP Plan

TABLE 5

Projects	5 Year Plan
COH Raw Water System Buy-In	\$ 3,500,000 - \$ 3,500,000
Lift Station #22 Reconstruction	\$ 2,372,000 - \$ 2,637,000
Water Plant Number One Tank Rehabilitation	\$ 1,207,000 - \$ 1,339,000
Forty-Two Inch Water Main Replacement	\$ 12,656,000 - \$ 12,656,000
Lift Station #1 Reconstruction	\$ 1,594,000 - \$ 1,774,000
Lift Station #4 Reconstruction	\$ 1,594,000 - \$ 1,774,000
Lift Station #17 Reconstruction	\$ 1,594,000 - \$ 1,774,000
Lift Station #23 Reconstruction	\$ 3,540,000 - \$ 3,935,000
Sanitary Sewer System Assessment Phase IV - Construction	\$ 1,464,000 - \$ 1,464,000
Sanitary Sewer System Assessment Phase V - Design	\$ 100,000 - \$ 100,000
Second Elevated Water Storage Tank Rehabilitation	\$ 954,000 - \$ 1,059,000
Water Plant Number Three Tank Rehabilitation	\$ 636,000 - \$ 706,000
Water Plant Number Four Tank Rehabilitation	\$ 636,000 - \$ 706,000
West Water Interconnect	\$ 418,000 - \$ 461,000
Sanitary Sewer System Assessment Phase VI - Design	\$ 100,000 - \$ 100,000
Sanitary Sewer System Assessment Phase VII - Design	\$ 175,000 - \$ 175,000
Sanitary Sewer System Assessment Phase VIII - Construction	\$ 1,830,000 - \$ 1,830,000
TOTAL	\$ 34,370,000 - \$ 35,990,000

PROJECT NAME

SPONSOR DEPARTMENT

COH Raw Water System Buy-In

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

This is a purchase of raw water capacity from the City of Houston through their centralization of the Raw Water feed system to the Southeast Water Purification Plant. The City of Houston has for years operated and maintained their raw water collection and distribution system used for providing the water supply to treatment facilities individually. A decision was taken recently to share the costs of operations, maintenance, and improvements out among the municipal customer-participants currently acting as co-owners in the treatment and transmission facilities. In order for Houston to continue supplying raw water in future and prevent the sole burden of the cost being shared only by Houston all future co-participants desire more capacity are to share the cost. In order to do this fairly, all raw water supplies are group to create a raw water system with a 200 MGD capacity.

JUSTIFICATION:

This is a component of the Surface Water supply-treatment and distribution system that the City has bought into as an outgrowth of the 2001 Ground Water Reduction Plan. The City of Houston is sharing out the cost of this system with its co-participants.

FUNDING SOURCES:

The identified funding source for this project is the Water & Sewer Working Capital.

Total Projected Friendswood Participation Cost:

\$3,500,000

PROJECT NAME

SPONSOR DEPARTMENT

Lift Station #22 Reconstruction**Public Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2018

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Complete reconstruction of the Lift Station #22 facility. The facility is located in Forest Bend Park. Rehabilitation would include wet well, pumps and controls. The reuse of existing generator may not be possible if the pumps are upgraded. The new installation would replace a facility 33 years old and in deteriorating condition. In general, the project would have within its definition the installation of three submersible sewage pumps of the 25 to 30 HP range, controls and associated instrumentation all in stainless enclosures. Unless provision are to be made for force main relocation, the pumps would have to have a high head capability due to the fact that they discharge into the force main of lift station number 2. This might also signal the use of variable speed drive technology to regulate flow. Controls and associated instrumentation should be in stainless enclosures. A new fence should also be included in this project. The current 480 volts 3 phase 150 amp service and natural gas for the generator is existent at this site.

JUSTIFICATION:

This lift station serves the Forest Bend subdivision and is the third largest lift station in terms of flow in the city. This site is prone to being overworked in heavy rain events. Due to the condition of the lift station and piping changes made in 2009 to its force main, an upgrade of this site is critical. A new facility with an increased pumping capability would service the Forest Bend area with a far greater degree of reliability than the existing site can offer.

Estimated 2017 Costs

Construction Costs:	\$1,800,000
Easement Costs:	
Easement Acquisition Services:	
20% Contingency	\$360,000
Professional Services	\$176,000
Testing Services	\$36,000
Total Projected Project Cost:	\$2,372,000

PROJECT NAME

SPONSOR DEPARTMENT

Water Plant #1 Tank Rehabilitations

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The project includes sand blasting and painting of both ground storage tanks and some minor equipment repairs and replacements.

JUSTIFICATION:

A preventive maintenance program prolongs the life of the facilities. The ground storage tanks require blasting and painting every 10 to 12 years to assure their integrity and usefulness.

Estimated 2017 Costs

Construction Costs: \$950,000

25% Contingency: \$238,000

Professional Services: \$19,000

Testing Services:

Total Projected Project Cost: \$1,207,000

PROJECT NAME

SPONSOR DEPARTMENT

Forty-Two Inch Water Main Replacement

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: 2018

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

This is a co-participation project with the City of Houston and other participants in the upgrade of the main north / south surface water transmission pipeline from the Southeast Water Purification Plant along State Highway 3. Texas Department of Transportation plans to widen State Highway 3 and it will be necessary to remove the existing pipeline from the State right-of-way in preparation for that project. This presents an opportunity to up-size this transmission line when it is removed from the easement. The removal / construction project will be managed by the City of Houston and Participant's cost share will be based on a pro-rata use according to their distribution allocation. There are three different scenarios being discussed regarding additional capacity for League City. The largest proposed line is a 54-inch down to 48-inch from the current 42-inch line. Friendswood's distribution allocation from this line is balanced by its distribution allocation from the 36-inch line on Beamer and potential increases of capacity.

JUSTIFICATION:

The City of Friendswood is a participant in the operation and maintenance of the 42 inch Water Line. That pro-rata participation is reduced by its participation in the Beamer Road 36 inch transmission line. The City is dependent on these as the source of surface water required to meet the Ground Water Reduction Plan as established in 2001, and to meet growing population requirements through build-out. The original 42-inch line was installed in the early 1970's and has been experiencing a larger increase (both size and number) in leaks in recent years.

Total Projected Friendswood 10.9% Shared Cost:

\$12,656,000

PROJECT NAME

SPONSOR DEPARTMENT

Lift Station #1 Reconstruction**Public Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2020

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Complete reconstruction of the Lift Station #1 facility. This is the last lift station in the city using above ground pumps. Reconstruction would include wet well, pumps and controls. The reuse of existing generator may be possible. The new installation would replace a facility 40 years old and in poor condition. The project should have within its definition the installation of two submersible sewage pumps of the 15 to 20 HP range, controls and associated instrumentation should be in stainless enclosures and located above flood level. A new fence should also be included in this project. The current 230 volts 3 phase 150 amp service should be upgraded to 480V if possible and natural gas for the generator is existent at this site.

JUSTIFICATION:

The facility is located in Imperial Estates and serves that area and some areas on the north side of FM2351. This is the last lift station in the city using above ground pumps. Replacement of these units which are now entering their 30th year is advised. The wet well is beginning to deteriorate. A new facility with an increased pumping capability would service the above mentioned area with a far greater degree of reliability than the existing site can offer and eliminate an old and unsightly facility.

Estimated 2017 Costs

Construction Costs: \$1,200,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$240,000

Professional Services \$130,000

Testing Services \$24,000

Total Projected Project Cost: \$1,594,000

PROJECT NAME

SPONSOR DEPARTMENT

Lift Station #4 Reconstruction**Public Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2019

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Complete reconstruction of Lift Station #4 facilities would include wet well, pumps and controls. The reuse of existing generator is possible. The new installation would replace a facility over 40 years old and in deteriorating condition. The project would have within its definition the installation of two submersible sewage pumps of the 20 to 25 HP range. Unless provision are to be made for force main relocation, the pumps would have to have a high head capability due to the fact that they discharge into the force main of lift station number 23. Controls and associated instrumentation should be in stainless enclosures and placed above the flood level. A new fence should also be included in this project. The current 480 volts 3 phase open type, which might limit it to 100 amp service, and natural gas for the generator is existent at this site.

JUSTIFICATION:

This lift station serves the Polly Ranch Subdivision. Though not among the largest facilities in terms of flow, the site is in very poor condition. The facility is also prone to flooding and was partially destroyed by the floods of 2001. A new facility, built with the potential flooding dangers in mind and using the efficiency of modern design and pumping techniques, would greatly increase the reliability of service to the area mentioned above and eliminate an aging and unsightly facility.

Estimated 2017 Costs

Construction Costs: \$1,200,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$240,000

Professional Services \$130,000

Testing Services \$24,000

Total Projected Project Cost: \$1,594,000

PROJECT NAME

SPONSOR DEPARTMENT

Lift Station #17 Reconstruction**Public Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2019

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Complete reconstruction of the Lift Station #17 facilities would include wet well, pumps and controls. The reuse of existing generator is possible. The new installation would replace a facility over 30 years old and in deteriorating condition. In general terms, the project would have within its definition the installation of three submersible sewage pumps of the 15 to 20 HP range, controls and associated instrumentation should be in stainless enclosures and placed above the flood level. A new fence should also be included in this project. The current 480 Volt, 3 Phase 150 amp service and natural gas for the generator is existent at this site.

JUSTIFICATION:

This lift station serves the Wedgewood area bordered by Clear Creek to the west, Blackhawk Boulevard to the east, FM2351 to the north, and Shady Oaks Drive to the south. The facility also receives sewage from lift station number 37 located at our surface water station number 2 plant. It is in terms of flow, within the 10 largest lift station facilities in the city. The facility is also prone to flooding and was partially destroyed by the floods of 2001. A new facility will need to be built with the potential flooding dangers in mind would greatly increase the reliability of service to the areas mentioned above.

Estimated 2017 Costs

Construction Costs: \$1,200,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$240,000

Professional Services \$130,000

Testing Services \$24,000

Total Projected Project Cost: \$1,594,000

PROJECT NAME

SPONSOR DEPARTMENT

Lift Station #23 Reconstruction**Public Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2017

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Complete reconstruction of the Lift Station #23 facility. The facility is located on FM 518. Reconstruction will include wet well, pumps and controls. The reuse of existing generator will not be possible. The new installation would replace a facility 23 years old and in deteriorating condition. In general, the project would have within its definition the installation of three submersible sewage pumps of the 70 HP range, controls and associated instrumentation all in stainless enclosures. The use of variable speed drive technology to regulate flow will be required on this station. A new fence will be included in this project as the wet well and control buildings will be relocated to the unoccupied area adjacent to the station. Due to changes in TCEQ regulations, the existing force main will have to be downsized. The current 480 volts 3 phase 150 amp service and natural gas for the generator is no at the site but is close.

JUSTIFICATION:

This lift station serves the western portion of the City and is the second largest lift station in terms of flow in the city. This site is prone to being overworked in heavy rain events. Due to the condition of the lift station and overflows, an upgrade of this site is critical. A new facility with an increased pumping capability would service the City with a far greater degree of reliability than the existing site can offer.

Estimated 2017 Costs

Construction Costs:	\$2,600,000
Easement Costs:	
Easement Acquisition Services:	
20% Contingency	\$520,000
Professional Services	\$368,000
Testing Services	\$52,000
Total Projected Project Cost:	\$3,540,000

PROJECT NAME

SPONSOR DEPARTMENT

Sanitary Sewer System Assessment Phase IV	Public Works
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COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2018

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Basins Eight and Eighteen was part of the original group of areas experiencing the greatest inflow and infiltration. Basins Eight and Eighteen consist of approximately 75,029 linear feet of gravity sanitary sewer lines and 179 manholes. Basin Eight encompasses the western portion of FM 2351 (Coward Creek subdivision) from Sunset to Hackney and from Falling Leaf to the city limits across from FM 2351. Basin Eighteen encompasses the eastern most portion of the city along Bay Area Boulevard. The subdivisions of Friendswood Oaks and Terra Bella primary areas.

Phase IV will be the construction of the design plans from Phase III.

JUSTIFICATION:

As part of the Sanitary Sewer System Assessment Phase I an overall master plan was developed to further investigate specific basins based on the original flow monitoring data.

Estimated 2017 Costs

Construction Costs: \$1,200,000

Easement Costs:

Easement Acquisition Services:

20% Contingency \$240,000

Professional Services

Testing Services \$24,000

Total Projected Project Cost: \$1,464,000

PROJECT NAME

SPONSOR DEPARTMENT

Sanitary Sewer System Assessment Phase V	Public Works
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COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2018

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Basin One was part of the original group of areas experiencing the greatest inflow and infiltration. Basins Eight and Eighteen were studied as part of Phase II. Basin One consists of approximately 34,750 linear feet of gravity sanitary sewer lines and 270 manholes. Basin One encompasses the northern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to FM 2351 and from Beamer Road to Clear Creek on FM 2351.

JUSTIFICATION:

As part of the Sanitary Sewer System Assessment Phase I an overall master plan was developed to further investigate specific basins based on the original flow monitoring data. Phase V will be the second such in-depth investigation into specific basins.

Estimated 2017 Costs

Construction Costs:

Easement Costs:

Easement Acquisition Services:

20% Contingency \$10,000

Professional Services \$90,000

Testing Services

Total Projected Project Cost: \$100,000

PROJECT NAME

SPONSOR DEPARTMENT

Second Elevated Tank Rehabilitation

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The rehabilitation of the existing elevated storage tank will include the sand blasting and painting of the storage tank and some minor repairs to pumping equipment.

JUSTIFICATION:

A preventive maintenance program would prolong the life of the facilities. The ground storage needs to be painted every 10 to 12 years to assure its integrity and usefulness.

Estimated 2017 Costs

Construction Costs: \$750,000

25% Contingency: \$188,000

Professional Services: \$16,000

Testing Services:

Total Projected Project Cost: \$954,000

PROJECT NAME

SPONSOR DEPARTMENT

Water Plant #3 Tank Rehabilitation

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The project includes sand blasting and painting of the ground storage tank and some minor equipment repairs and replacements.

JUSTIFICATION:

A preventive maintenance program prolongs the life of the facilities. The ground storage tanks require blasting and painting every 10 to 12 years to assure their integrity and usefulness.

Estimated 2017 Costs

Construction Costs: \$500,000

25% Contingency: \$125,000

Professional Services: \$11,000

Testing Services:

Total Projected Project Cost: \$636,000

PROJECT NAME

SPONSOR DEPARTMENT

Water Plant #4 Tank Rehabilitation

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The project includes sand blasting and painting of the ground storage tank and some minor equipment repairs and replacements.

JUSTIFICATION:

A preventive maintenance program prolongs the life of the facilities. The ground storage tanks require blasting and painting every 10 to 12 years to assure their integrity and usefulness.

Estimated 2017 Costs

Construction Costs: \$500,000

25% Contingency: \$125,000

Professional Services: \$11,000

Testing Services:

Total Projected Project Cost: \$636,000

PROJECT NAME

SPONSOR DEPARTMENT

West Water Interconnect

Public Works

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: NA

TYPE: Utility

YEAR PLANNED: NYP

SUBTYPE: Water Distribution Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

The proposed improvements would extend an independent 12" line to interconnect the existing 16" transmission water main line on Wilderness Trails to the 12" main on FM 528.

JUSTIFICATION:

Currently, limited un-looped water lines service various developments throughout the southern region of Friendswood, therefore limiting the availability of needed constant water pressure on the farther western regions of Friendswood. The proposed transmission water main would provide the needed direct constant supply of water to this proposed area, ultimately providing development opportunities along the far western regions of FM 528.

FUNDING SOURCES:

The identified funding source for this project is the Water & Sewer Working Capital.

Estimated 2017 Costs

Construction Costs: \$310,000

20% Contingency: \$62,000

Professional Services: \$40,000

Testing Services: \$6,000

Total Projected Project Cost: \$418,000

PROJECT NAME

SPONSOR DEPARTMENT

Sanitary Sewer System Assessment Phase VI	Public Works
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COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2019

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Basins Five and Twenty are part of the second tier group of areas experiencing the greatest inflow and infiltration. Basins Eight, Eighteen, and One were studied as part of Phase II and Phase V. Basins Five and Twenty consists of approximately 67,770 linear feet of gravity sanitary sewer lines and 352 manholes. Basin Five encompasses the northern portion of the city from FM 2351 to the city limits west of FM 518 down to the drainage ditch east of North Sunset Drive. Basin Twenty encompasses the southern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to Friendswood Link Road and from the city limits down to Clear Creek.

JUSTIFICATION:

As part of the Sanitary Sewer System Assessment Phase I an overall master plan was developed to further investigate specific basins based on the original flow monitoring data. Phase VI will be the third such in-depth investigation into specific basins.

Estimated 2017 Costs

Construction Costs:

Easement Costs:

Easement Acquisition Services:

20% Contingency \$10,000

Professional Services \$90,000

Testing Services

Total Projected Project Cost: \$100,000

PROJECT NAME

SPONSOR DEPARTMENT

**Sanitary Sewer System Assessment
Phase VII**

**Public
Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2020

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Basins One, Five, and Twenty will have comprehensive studies conducted on their systems to determine deficiencies. Based on the results, engineering will need to be designed to correct the areas. Basins One, Five, and Twenty consists of approximately 100,000 linear feet of gravity sanitary sewer lines and 625 manholes. Basin One encompasses the northern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to FM 2351 and from Beamer Road to Clear Creek on FM 2351. Basin Five encompasses the northern portion of the city from FM 2351 to the city limits west of FM 518 down to the drainage ditch east of North Sunset Drive. Basin Twenty encompasses the southern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to Friendswood Link Road and from the city limits down to Clear Creek.

The limits of the areas needed to be designed will become clearer after completion of Phases V and VI.

JUSTIFICATION:

As part of the Sanitary Sewer System Assessment Phase I an overall master plan was developed to further investigate specific basins based on the original flow monitoring data. Phases V and VI will be the second and third such in-depth investigations into specific basins. This will be the second engineering design project for the assessment.

Estimated 2017 Costs

Construction Costs:

Easement Costs:

Easement Acquisition Services:

20% Contingency \$25,000

Professional Services \$150,000

Testing Services

Total Projected Project Cost: \$175,000

PROJECT NAME

SPONSOR DEPARTMENT

**Sanitary Sewer System Assessment
Phase VIII**
**Public
Works**

COUNCIL GOAL: #2 Improve Infrastructure

Planning Document: N/A

TYPE: Utility

YEAR PLANNED: 2021

SUBTYPE: Sanitary Sewer Improvements

PROJECT NUMBER: NYA

PROJECT DESCRIPTION:

Basins One, Five, and Twenty will have comprehensive studies conducted on their systems to determine deficiencies. Based on the results, engineering will need to be designed to correct the areas. Basins One, Five, and Twenty consists of approximately 100,000 linear feet of gravity sanitary sewer lines and 625 manholes. Basin One encompasses the northern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to FM 2351 and from Beamer Road to Clear Creek on FM 2351. Basin Five encompasses the northern portion of the city from FM 2351 to the city limits west of FM 518 down to the drainage ditch east of North Sunset Drive. Basin Twenty encompasses the southern portion of Blackhawk Boulevard (Wedgewood Village) from Cedar Gulley to Friendswood Link Road and from the city limits down to Clear Creek.

The limits of the areas needed to be designed will become clearer after completion of Phases V and VI. Phase VIII will be the construction of the design plans from Phase VII.

JUSTIFICATION:

As part of the Sanitary Sewer System Assessment Phase I an overall master plan was developed to further investigate specific basins based on the original flow monitoring data. Phases V and VI will be the second and third such in-depth investigations into specific basins. This will be the second construction project for the assessment.

Estimated 2017 Costs

Construction Costs:	\$1,500,000
Easement Costs:	
Easement Acquisition Services:	
20% Contingency	\$300,000
Professional Services	
Testing Services	\$30,000
Total Projected Project Cost:	\$1,830,000

TABLE 6

Projects	Beyond 5 Year Plan*
Annalea/Whitehall Drainage Improvements Future Phases	\$ 1,207,000
Brittany Bay Boulevard Phase II	\$ 9,084,000
F.M. 518 Drainage Improvements Phase II	\$ 3,871,000
Fire Station #4 3rd Bay	\$ 917,000
Hike and Bike Connecting Trails	\$ 5,804,000
Northern Panhandle Regional Detention	\$ 8,192,000
Parks Maintenance Building	\$ 2,377,000
Public Works Building	\$ 4,480,000
Records Retention Center	\$ 675,000
Shadowbend Drainage Improvements Future Phases	\$ 438,000
Southern Panhandle Regional Detention	\$ 22,967,000
Street Maintenance Master Plan	\$ 5,000,000
Sunmeadow Drainage Improvements Future Phases	\$ 2,583,000
TOTAL	\$ 67,595,000

***In 2017 Dollars**

TABLE 7

Projects	Beyond 5 Year Plan*
Automated Meter Reading System	\$ 3,030,000
Baker Road, Falling Leaf, Stable - Sewer	\$ 1,203,000
Beamer Road Sanitary Sewer Future Phases	\$ 4,210,000
Beamer Road Water Line Future Phases	\$ 2,043,000
East Water Loop	\$ 1,354,000
El Dorado/Lundy Lane Sanitary Sewer	\$ 3,880,000
FM 528 - Falcon Ridge to Windsong Sanitary Sewer	\$ 1,005,000
FM 528 - Lundy Lane to Tower Estates Sanitary Sewer	\$ 1,585,000
Friendswood Lakes Water Loop	\$ 358,000
San Joaquin Estates Water Line Replacement	\$ 1,913,000
San Joaquin Water Loop	\$ 358,000
Sanitary Sewer System Assesment 10 Year Plan	\$ 7,153,000
Sixteen Inch Transmission Line Phase III	\$ 1,290,000
South FM 518 Water Line	\$ 878,000
South Friendswood Service Area Water Loop	\$ 955,000
Stable Road - Water	\$ 251,000
Water Plant Number Five Tank Rehabilitation	\$ 1,587,000
Water Plant Number Six Tank Rehabilitation	\$ 636,000
Water Plant Number Two Tank Rehabilitation	\$ 636,000
West Transmission Line	\$ 9,064,000
Wilderness Trails Water Loop	\$ 292,000
Windsong Lane - Water	\$ 167,000
Windsong Sanitary Sewer	\$ 3,061,000
TOTAL	\$ 46,909,000

***In 2017 Dollars**

CITY OF FRIENDSWOOD
2013 UPDATE STUDY FOR LAND USE ASSUMPTIONS
CAPITAL IMPROVEMENTS PLAN AND IMPACT FEES
WATER SUPPLY / DISTRIBUTION AND
WASTEWATER TREATMENT / COLLECTION SYSTEMS

June, 2013

Mayor Kevin Holland

City Council

Position 1 – Steve Rockey

Position 2 – Billy J. Enochs (Mayor Pro Tem)

Position 3 – Jim Hill

Position 4 – Patrick J. McGinnis, MD

Position 5 – John H. Scott

Position 6 – Carl Gustafson

City Manager

Roger Roecker

City Secretary

Melinda Welsh, TRMC

City Attorney

Arnold Polanco

Assistant City Manager

Morad Kabiri, P.E., AICP

*This document is released for review
under the authority of James E.
Thompson, P.E., TBPE Reg. #55568,
8/21/2013 FIRM #14865*

CITY OF FRIENDSWOOD
2013 UPDATE STUDY FOR LAND USE ASSUMPTIONS
CAPITAL IMPROVEMENTS PLAN AND IMPACT FEES
WATER SUPPLY / DISTRIBUTION AND
WASTEWATER TREATMENT / COLLECTION SYSTEMS
Impact Fee Advisory Committee

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Vice Chairman:
Mark Tibbitts

Members:
David O'Farrell
Jim Gibson
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Jim Nye
Arthur Triplette, Jr.

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I. EXECUTIVE SUMMARY

This study is the 2013 Update of the original study which the City of Friendswood (City) performed in 1990 to establish impact fees for water supply and distribution and wastewater collection and treatment facilities. Fees were established in accordance with the original state Impact Fee Legislation (VTCA Local Government Code Section 395.001 et seq.) and have previously been updated in 1993, 1997, 2000, 2003 and 2008. The law provides for municipalities and certain other political subdivisions to assess and collect impact fees for the infrastructure required to serve new development. Fees collected are used to fund new infrastructure and expansions to existing infrastructure that are required to serve the needs of the new development and cannot be used to serve existing development. The legislation includes guidelines for use when determining if a particular project is eligible for impact fees and the method of calculating the maximum allowable impact fee that can be established.

The City's fees have previously been adopted and subsequently updated for city-wide water supply capacity, specific area water distribution systems, city-wide wastewater treatment capacity, and specific area wastewater collection systems.

In 2008, HDR/Claunch & Miller, Inc. (HDR) prepared an update that included a review of current water demand and wastewater flow data, population projections, land use assumptions and area growth trends. The update also included as-built costs for recently constructed systems improvements and other updated cost data that were utilized to determine the maximum allowable impact fees to be assessed and collected. Future water and wastewater capital projects that were identified in the most current Capital Improvement Plan (CIP) were also included in the calculation of the impact fee.

The state law originally required that impact fees be reviewed and updated at least every three years from the adoption date; however, the legislation was amended to revise the maximum period to five years between required updates.

Assessing Impact Fees based on Water Meter Size:

Many municipalities choose to assess impact fee amounts for water and sewer capital improvements based on the size of the water meter purchased to serve the development. A water meter of a particular size will allow a definite water flow that will provide adequate service to the user. The larger the water meter, the larger the flow rate for which the meter is rated. The American Water Works Association, one of the leaders in technical research in the water and wastewater utility industries, has published tables identifying the rated water flow rates through meters of various sizes. When an engineer sizes a water meter for a particular development, he determines the number of water closets, water fountains, sinks, and other types of fixture units and uses the number of fixture units and associated average demands to select the proper water meter size.

Essentially those "industry standard" flow rates are compared to the flow rates for the meter serving a single family home (in Friendswood – 1 inch) to determine the

equivalent number of service units for which the impact fee is ultimately charged. For example, if a 1" meter is rated for 25 gpm and a 2" simple meter is rated for 75 gpm, then the purchase of a 2" meter to serve a development would result in the assessment of an impact fee for 3 service units ($75 \text{ gpm} / 25 \text{ gpm} = 3$).

Assessing Impact Fees based on general consumption/ wastewater flow tables:

Agencies such as Texas Commission of Environmental Quality (TCEQ), City of Houston (COH) and others have developed tables identifying water use and wastewater flows for various types of commercial, institutional, and industrial development based on available research data (water meter records and wastewater flow tests) that they have on various types of development. Depending on the size of a proposed development of a specific type, water demands and wastewater flows can be developed from the tables and compared to those generated by the single family residence. The ratio of the proposed water demands and wastewater demands to those for the typical single family residence become the multiplying factor for the impact fee charged for residential development to determine the impact fee to be assessed a particular development.

Discussion of the use of these methods to develop water and sewer utility impact fees:

Communities use these types of methods as well as others to calculate the maximum allowable impact fee to be assessed to a particular development. The use of either of the above described methods are based on using industry standards to compare different types of development and their associated water demands and wastewater flows.

Using either assessment method does not assure that the consumption and flow generation of a particular development will not vary significantly from the values that form the averages that are used to calculate fees. Even if average values are determined for a specific city using historical data for that particular city, the water demands and wastewater flows for a particular development typically vary significantly from the city averages.

For the selection of a water meter, there are other factors than impact fees that determine the meter size that an owner may want for their development (i.e. keep pressures at desired levels). While it is probable that actual water and wastewater records will result in numbers that vary significantly from those developed by area agencies, as they are more general and use many samples to develop their numbers - those samples may have significantly different characteristics such as size, location, amount of water use in the area, fire protection, irrigation patterns, and others.

Using either approach, a review of several months records of an individual development may result in different numbers than the industry averages used to calculate the impact fees. Since both methods are successfully used in the vicinity, and either approach would produce a more equitable fee in most cases (than would the current approach) for small commercial developments on larger tracts, the City adopted the water meter approach in the 2003 Update for ease of administration and uniformity. The City staff has indicated a

preference for the water meter approach because of the ease of administration, and developers would also benefit from the simplicity in that approach.

The city-wide fees determined per Service Unit (SU) for the 2008 update were:

1.	Water Supply and Distribution	\$ 1,849
2.	Wastewater Collection and Treatment	<u>\$ 1,290</u>
	Total City-Wide Impact Fees	\$ 3,139

The proposed fees determined in this 2013 update are:

1.	Water Supply and Distribution	\$2,088
2.	Wastewater Collection and Treatment	<u>\$ 840</u>
	Total City-Wide Impact Fees	\$2,928

The approach to assessing the impact fee is dependent on the size of the water meter serving the proposed development which will be more equitable than the current system in allocating capital improvement costs to serve commercial development on relatively large tracts of land. (See Appendix B)

Administration Items:

1. The impact fee will be assessed at the time that a plat is filed (where applicable) and collected during the building permit process as identified in the impact fee legislation.
2. Parks, and construction trailers will not be assessed any impact fees.
3. Houses and businesses obtaining additional meter(s) for fire line or lawn irrigation purposes only, will not pay the impact fee associated with water or wastewater unless a new tap to the City main is required.
4. The Architect or Engineer for the Owner will size the water meter for the development based on industry standards.
5. Governmental buildings and churches will pay the water and sewer impact fees based on the proposed assessment method.
6. When an existing water meter is changed out, additional impact fees will be assessed if the meter size is increased. The fee will be based on the incremental increase in the Service Units calculated per Appendix B.
7. When meters are changed out for the same size meter or a smaller meter, no fee will be assessed.

II. INTRODUCTION AND BACKGROUND

State law allows municipalities to establish impact fees to fund the cost of capital improvements necessitated by new development. Current Chapter 395 of the Local Government Code (VTCA Local Government Code, Chapter 395) contains the requirements and procedures for the establishment of impact fees. (Appendix A)

The City of Friendswood has established impact fees to recover the costs of water supply and distribution and wastewater treatment and collection. These impact fees were first adopted on June 4, 1990 by Resolution No. 90-22, in accordance with the provisions of the, then current State law.

Impact fees were originally established for the following items:

- City-wide Water Supply Facilities

- City-wide Wastewater Treatment Facilities

- City-wide Impact Fee/CIP Study

- Service Area Water Distribution:

- Melody Lane Water System

- Bay Area Boulevard Water System

- Central Service Area Water System

- Service Area Wastewater Collection:

- Melody Lane Wastewater System

- Central Service Area Wastewater System (Segments A-E)

On January 7, 1991, an amendment (R91-4) to the Impact Fee Resolution was adopted by the City to create the Mills, Murphy, and Briar Meadow Avenue Wastewater Collection System service area and establish an impact fee therefor.

In 1993, the 1990 Impact Fees were reviewed, as required by State law. The Updated Study for Land Use Assumptions, Capital Improvements Plan and Impact Fees, dated March 10, 1993 reviewed the previously established impact fees with regard to water demand, wastewater flow and revisions and extensions to the service areas. Adjustments to the various components of the impact fees were recommended and adopted by the City based on the 1993 Update Study, under Resolution No. R1993-24.

Significant modifications were made to the Central Service Area during the 1993 Update Study. This area, renamed the South Friendswood Service Area, was greatly expanded and the proposed collection system was redesigned. Costs for various other impact fee components and areas were recalculated and updated in the 1993 study to reflect current conditions as well.

The second Update Study was prepared by CMI in 1996 – 1997 with the result being that two service areas were deleted from the program and the fee calculation for the South Friendswood Service Area was simplified for administration.

The 2000 Update Study added one specific water distribution service area and one specific wastewater collection service area.

The 2003 and 2008 Update Studies were produced to recognize new Capital Improvement Projects that have system-wide benefits and to meet the needs of new development that occurs anywhere within the city. The 2003 study also simplified the overall assessment and collection process for the City staff by grouping all water and wastewater impact fees into city-wide fees for either water supply and distribution or wastewater collection and treatment. The assessment method was changed to correlate Service Units with water meter size. This method allows for the fees assessed to more closely reflect water demand and wastewater flows than the previous method of assessing the fees on an acreage basis for particular development types (which allows for a relatively high assessment for a commercial establishment on a site of several acres).

The 2013 Update Study is being prepared to meet the requirements of the legislature to update the Study at least every five years. The 2013 Update Study will recognize new Capital Improvement Projects that will have system-wide benefits and to meet the needs of new development that occurs anywhere within the city. The study will also update the cost for capital projects that have been completed in the last five years and update land use assumptions and population projections.

The Texas Impact Fee Legislation provides for assessing the impact fee before or at the time of recordation of the final plat. In cases where new development occurs without platting, the impact fee may be assessed at any time during the development and building process.

Per the legislation, collection of the impact fees can occur:

1. When the final plat is recorded, if the development is platted, or
2. When connections are made to the City's water and wastewater system, or
3. At the time the City issues either a building permit or certificate of occupancy.

After assessment of impact fees attributable to a specific project or the execution of an agreement for payment of impact fees, no additional impact fees may be assessed to the particular property for that project unless the number of Service Units (SU) is increased (a larger meter is installed to replace the existing meter), in which case the additional fees to be imposed shall apply only to the additional service units.

If a property owner pays an impact fee and the construction of the capital improvement, for which the fee was paid, is neither under construction within two (2) years after payment nor complete for service within five (5) years after payment, the property owner may request a refund of the fee.

III. REVIEW OF LAND USE ASSUMPTIONS – CITY GROWTH RATES

Land use assumptions adopted in the previous impact fee studies, prior to 2003, fell into two (2) categories. For the city-wide impact fees (surface water supply and wastewater treatment), growth rates for the city were projected for the 10-year planning period.

For the individual service area based impact fees, specific assumptions about land use types and connection counts were made to reflect the planned or anticipated development in each area.

The 2003 and 2008 Update Studies grouped all proposed impact fees into two (2) city-wide components and thus an evaluation of the city-wide growth rates was the focus and the previously identified specific service areas were no longer analyzed.

Previous Studies:

The original 1990 Impact Fee Study assumed a 5% annual growth rate throughout the 10-year planning period. The 1990 population of the City was estimated to be 22,500 people with 7,662 equivalent connections. At the end of the planning period (January 2000), the population was projected to be 36,650 people with 12,481 equivalent connections.

The 1993 Updated Study adopted population projections developed in two (2) reports prepared by City staff and Wayne Smith & Associates. Those reports utilized Houston-Galveston Area Council of Governments (HGAC) population projections and the City Zoning Map to produce land use and population projections for the entire City. Based on this data, the 1993 Update Study utilized population projections of 30,850 for 1995, 38,900 for 2000 and 43,724 for 2003.

In 1996, Claunch & Miller, Inc. analyzed data from three (3) additional sources for the Second Update Study. Data was again obtained from HGAC, a study prepared by J.T. Duncan and Associates, and data provided by the City records for dwelling units constructed.

It was determined that a growth rate of 3.6% derived from City records was possibly the most accurate and reasonable figure available, as it was based on the 1990 Census count plus detailed records of new residential electrical connections made since then, whereas all of the other figures were based on projections of historical trends or assumed growth rates. The 3.6% annual growth rate produced a January 1996 population projection of 27,835 and a 2006 population projection of 40,175.

The 2000 Update Study revisited HGAC, Texas Water Development Board (TWDB), and City records on dwelling construction. The dwelling construction data from 1997 through 1999 utilized with data previously gathered for the period from 1990-1996 indicated an average annual population growth rate of approximately 3.3%.

Based on the City supplied connection numbers by development type and the recommended annual growth rate of 3.3%, the projected Service Unit totals at the end of the 10-year planning period (2010) were 14,164 water service units and 13,709 wastewater service units.

For the 2003 Update Study projections from the various entities as well as City records were again revisited. Census data was also available from the 2000 and previous decades as follows:

Table 1

<u>Year</u>	<u>Population</u>	<u>% increase</u>	<u>annual % increase</u>
1970	5,675	-	
1980	10,719	88.9%	8.9%
1990	22,814	112.8%	11.3%
2000	29,037	27.3%	2.7%

Based on the current trends in 2003 it was agreed that the same 3.3% annual growth rate would be utilized. Population and water / sewer connections projected for the 10 year planning period were determined as follows:

Table2

<u>Year</u>	<u>Population</u>	<u>PPC</u>	<u>Connections</u>
2013	45,460	2.8	16,236

For the 2008 update, a conservative growth rate of 1.9% was adopted which was consistent with current trends and HGAC projections. Based on this 1.9% growth rate the projected population for 2018 (end of the 10 year planning period) was 43,805 with 15,998 connections.

Current Study:

Based on the City supplied connection numbers for residential units and population data, the population for the last five (5) years was as follows:

Table 3

<u>Year</u>	<u>Connections</u>	<u>Population</u>	<u>Persons/Connection</u>
2008	11,974	35,922	3.00
2009	12,088	36,299	3.00
2010	12,289	36,966	3.01

2011	12,511	37,441	2.99
2012	12,731	37,995	2.98

Based on these records, the actual growth rate for the past five (5) years averaged approximately 1.1%.

Other sources for population projections were also investigated for the 10 year study period. The Houston Galveston Area Council predicts an average growth rate of 1.48% for the community for the period from 2013 to 2023. The Texas Water Development Board provides predictions of population for planning purposes for 10 year periods. The TWDB growth rate projection for the period from 2010 to 2020 is 0.9%. The 2008 study reported that the City of Friendswood Planning Department provided projections through 2020 when the city population is predicted to reach approximately 45,486. The growth rate for the City supplied projections equates to a future growth rate of approximately 1.2%.

Recent trends show an increase in home building activity. The City's Water Billing records show an increase in connections from March 2012 to March 2013 of 233 connections or an increase of nearly 1.9%. It is recommended that a conservative growth rate of 1.5% be utilized for this 2013 Update Study which is more consistent with current trends for the City and the HGAC projections. Using the 1.5% growth rate results in the following projected connections for the 10-year planning period:

Table 4

<u>Year</u>	<u>Connections</u>	<u>Population(3.0/connection)</u>
2013	12,922	38,766
2014	13,115	39,344
2015	13,312	39,935
2016	13,512	40,535
2017	13,715	41,144
2018	13,920	41,762
2019	14,129	42,386
2020	14,341	43,023
2021	14,556	43,668
2022	14,774	44,323
2023	14,996	44,987

IV. DEVELOPMENT OF CITYWIDE WATER SUPPLY AND DISTRIBUTION IMPACT FEE

1. Water Supply, Storage, Transmission, Pumping, and Distribution Projects

This City-wide water supply and distribution impact fee is composed of the following components:

1. Surface Water Capacity
2. Surface Water Transmission, Pumping and Storage Facilities
3. Water Distribution System Improvements

Surface Water Capacity

Under the Harris-Galveston Coastal Subsidence District's requirements, the City's future water supply must be converted from a majority of ground water use to a majority of surface water use.

The City of Friendswood initially purchased 3.0 mgd of treatment capacity in the City of Houston's Southeast Water Purification Plant. Additional purchases have included 1.0 mgd from the La Porte Water Authority, 0.5 mgd from MUD 55, 1.5 mgd and more recently 6.0 mgd from the Southeast Water Purification Plant (SEWPP).

The 2002 Groundwater Reduction Plan (GRP) developed to meet the needs of the Harris / Galveston Coastal Subsidence District requirements indicated the ultimate maximum day conditions for the City would be approximately 17.0 mgd and that to meet ground water reduction goals, the appropriate mix should be 12.0 mgd surface water and 5.0 mgd groundwater.

The recent purchase of 6 MGD will provide the total of 12.0 mgd surface water for ultimate development of the City. Total available to the ultimate 57,400 population of the City would be the 12.0 mgd surface water along with 5.0 mgd groundwater. The cost for the 6.0 MGD purchased in the SEWPP was included in the 2008 report and will be also included in this impact fee study update.

Surface Water Transmission, Pumping and Storage Facilities

The surface water transmission, pumping and storage projects that have been completed to date along with those anticipated in the near future based on the current Capital Improvement Program (CIP) are estimated to be sufficient for the city's requirements through the ultimate build out level, or approximately 20,500 Service Units. A summary of all surface water supply, storage, transmission, and pumping projects included in the impact fee calculation are included as Appendix C.

Water Distribution System Improvements

Appendix C includes water distribution facilities included in the water supply and distribution system impact fee component. Several of the projects were previously identified as projects for specific service areas in studies prior to the 2003 Update Study. These projects have now been combined with all other projects for simplicity of administration so that a city-wide water supply and distribution fee could be developed.

2. Service Unit Basis

The 1990 Impact Fee Study and the 1993 Update Study calculated the surface water supply capacity in terms of Service Units based on historical water usage and connection counts. *Table 5* below shows the data used to compute these figures, along with 1996, 2000 – 2002, 2007 and 2012 data.

Table 5
Surface Water Capacity

<u>Study Year</u>	<u>Water Consumption</u>	<u>Service Units</u>	<u>Consumption Surface Water Per S.U.</u>	<u>Unit Capacity</u>
1990	2.8 mgd	7,662	365 gpd	10,261
1993	2.89 mgd	8,621	335 gpd	11,196
1996	2.97 mgd	9,337	318 gpd	11,789
2000	3.73 mgd	10,238	365 gpd	20,548
2001	3.42 mgd	10,955	312 gpd	“
2002	3.49 mgd	11,218	312 gpd	“
2007	3.56 mgd	11,758	303 gpd	“
2012	5.17 mgd	12,731	406 gpd	“

(initial 3.0 mgd surface water capacity increased to 6.0 mgd capacity in 2000 by purchases)

In 1996, CMI standardized the surface water supply impact fee calculations by defining a previously fluctuating surface water supply service unit (based on yearly water consumption fluctuations) at 365 gpd consumption, which was the value used in the original Impact Fee Study. This value is a reasonable consumption rate for a typical single family residence and is somewhat conservative based on analysis of water usage figures supplied by the City for the period FY 1993 through FY 2002.

Over the two years preceding this 2013 update the City experienced a near record drought causing water consumption citywide to be much higher than normal. It is recommended

that these years be recognized as extreme and that previously used planning factors be utilized for purposes of this update.

The 2002 GRP indicated that the average demand per Service Unit should be 136 gpd X 2.8 ppc, or 381 gpd.

Use of a value of 381 gpd per Service Unit means that the previous 6.0 mgd capacity owned in the two (2) surface water treatment facilities equated to 19,685 SU (versus the 20,500 ultimate anticipated Service Units) when the 80% surface water/20% groundwater mix is factored in. The additional groundwater recently purchased will more than cover the additional 815 connections that will ultimately need to be served.

The Groundwater Reduction Plan used a peak daily demand rather than an average daily demand to determine the amount of future surface water purchases to meet the needs of existing and future development.

The recommended 381 gpd per Service Unit is lower than the previously defined 450 gpd defined for the Service Unit, however, there are valid reasons for a more conservative figure to be used for distribution system design. In addition, the 1990 Impact Fee Study acknowledged that the 450 gpd utilization rate was higher than other commonly recognized rates.

For planning purposes, it is helpful to equate various types and densities of development in terms of their water and sewer capacity requirements. The Texas Impact Fee legislation requires that a standardized measure of consumption, use, generation or discharge attributable to an individual unit of development be used in the computation of impact fees.

Previously, the water consumption for different land use types were compared to that of the single family residential connection (Service Unit) to develop equivalent service units for areas of development. To simplify administration of the impact fee program, required water meter sizes are now proposed to determine the equivalent number of Service Units for a particular development.

An equivalent Service Unit table for various water meter sizes is included as Appendix "B".

3. Projected Service Units

The existing surface water transmission, pumping, and storage components above are each adequate to serve the 12,731 existing SU (5.17 mgd average 2012 daily demand / 381 gpd per Service Unit). The existing and proposed surface water transmission, pumping, and storage components will provide adequate transmission, storage, and pumping capacity for the City's needs beyond the end of the 10-year planning period in

2023.

Table 6

	<u>Total Capacity SU</u>	<u>Remaining SU</u>
Surface Water Facility Capacity	20,500	7,769

Based on the 1.5% annual growth rate projection and the existing 12.0 mgd of total available surface water capacity, the City's available Surface Water Capacity will more than serve the needs of the development projected through the year 2018.

4. Calculation of Updated City-Wide Water Supply & Distribution Impact Fee

Using the updated total costs for previous projects along with the costs for the anticipated projects to be completed within the next ten (10) years (per the current CIP provided by the City) for the various components of the Surface Water Supply & Distribution System, the Water Supply & Distribution Impact Fee is as follows:

Table 7
Water Supply and Distribution Maximum Impact Fee Calculation

Item	Cost**	Capacity	Impact Fee
1. Surface Water Capacity (12.0 mgd)	\$33,993,938	20,500 SU	\$1658
2. Transmission, Pumping & Storage Facilities	\$22,905,150	20,500 SU	\$1117
3. System Wide Components	\$12,213,830	20,500 SU	\$ 596
4. Water Distribution	\$16,165,613	20,500 SU	\$ 789
5. Impact Fee Studies (through 2023)	\$ 120,000	7,334 SU*	\$ 16
		Total:	\$4176

* (14,996(2023 SU) – 7662 (1990 SU))

** - See Appendix C for further details in individual cost

8. DEVELOPMENT OF CITY-WIDE WASTEWATER COLLECTION AND TREATMENT IMPACT FEE

1. Wastewater Treatment and Collection Projects

The City of Friendswood has purchased 4.875 MGD of capacity in the Blackhawk Regional Wastewater Treatment Plant. Of the City's total capacity, 2.5 MGD was purchased in the Phase I construction to serve existing development. An additional 2.375 MGD was purchased in the Phase II expansion project to serve new development, and has previously been subject to the impact fee. A 2.0 MGD expansion is anticipated to be required to serve new development within the 10-year planning period and has been included in the impact fee calculation.

A wastewater treatment plant rehabilitation project is anticipated during the next 10 year planning period and has also been included in the impact fee calculation.

The following new additional projects and cost adjustments have been added as system wide wastewater system costs and will be incorporated into the impact fee calculation:

(See Appendix D for a complete project list.)

Table 8

Deepwood Force Main	\$1,153,727
Deepwood Lift Station Expansion	\$490,821
Beamer Road Sanitary Sewer (Phase I)	\$1,017,518
FM 528 Trunk Sewer (Lundy Land – Tower Estates)	\$322,379
Lift Station #3 Replacement	\$735,000
Lift Station #6 Replacement	\$458,500
Lift Station #18 Replacement	\$458,500
FM 528-Falcon Ridge to Windsong Sanitary Sewer	\$706,000
Windsong Lift Station and Force Main	\$2,152,000
Impact Fee Studies (50% X \$240,000 – through 2023)	\$120,000

2. Service Unit Basis

In 1991 and 1992, a detailed analysis of the existing wastewater flows was undertaken as a part of the planning effort for the South Friendswood Service Area. This study found that the average daily dry weather flow was 82 gpd per capita or 246 gpd per Service Unit for wastewater treatment capacity. The peak 2-hour flow was found to be 4.2 times the average daily flow or 1,033 gpd per service unit, which was rounded up to 1,050 gpd for planning purposes for the wastewater collection system.

It is recommended that the previously defined wastewater treatment capacity Service Unit of 246 gpd, from a typical single family residence, and wastewater collection system Service Unit of 1,050 gpd be maintained for use in this study for consistency. These figures are based on the previous flow study data and bear a reasonable relationship to the consumption rate used to define the Service Unit.

For planning purposes, it is helpful to equate various types and densities of development in terms of their water and sewer capacity requirements. The Texas Impact Fee legislation requires that a standardized measure of consumption, use, generation or discharge attributable to an individual unit of development be used in the computation of impact fees.

Previously, the wastewater generation for different land use types were compared to that of the single family residential connection (Service Unit) to develop equivalent Service Units for areas of development. To simplify administration of the impact fee program, required water meter sizes are now proposed to determine the equivalent number of Service Units for a particular development.

3. Projected Service Units

Based on the Service Unit definition provided above, the 2.375 MGD of wastewater treatment capacity in the Blackhawk Regional Plant equates to 9,654 Service Units. In the previous impact fee studies wastewater treatment costs and costs for additional trunk sewers and lift stations were distributed over these 9,654 Service Units to develop a city-wide wastewater impact fee. The rationale was that these cost were adequate to serve only these projected Service Units.

With the planned 2.0 MGD plant expansion and other system wide improvements proposed in the current CIP the City will have adequate capacity to serve the 20,500 Service Units anticipated at complete build-out. Therefore, the projected costs will be distributed over the ultimate 20,500 Service Units.

4. Calculation of updated city-wide Wastewater Collection and Treatment Fee

The updated Wastewater Collections / Treatment Impact Fee is as follows:

Table 9

<u>Items</u>	<u>Cost</u>	<u>Capacity</u>	<u>Impact Fee</u>
1. Wastewater Treatment Capacity (With Future 2.0 MGD and Rehab)	\$13,500,000	20,500	\$ 659
2. Additional System Wide Projects	\$20,573,300	20,500	\$1004
3. Impact Fee Study Costs	<u>\$ 120,000</u>	<u>7,334</u>	<u>\$ 16</u>
Maximum Total Wastewater Collection / Treatment			\$1,679

9.0 RECOMMENDATIONS & CONCLUSIONS

The City simplified the impact fee assessment process in 2003 by incorporating water and wastewater impact fees for existing service areas within the city into a city-wide impact fee that included the costs of all Capital Improvements that will serve future development.

The City changed the approach of assessing impact fees to recognizing the water meter size of a proposed development as the way to determine the number of Service Units for which the development will be assessed the fee. (See Appendix B) These assessment methods have proven to be successful over this 5-year update period and it is recommended that the City continue in this manner.

Research indicates that the City should recognize approximately 20,500 Service Units at ultimate development of the City and that the projected number of service units at the end of the 10-year planning period in 2023 should be 14,996.

Chapter 395 of the Local Government Code was amended in 2001 to include that the City must provide a credit for the following:

Section 395.014 Paragraph a (7)

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the Capital Improvements Plan; or

(B) in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.

The City of Friendswood has elected to provide the credit equal to 50 percent of the CIP resulting in the following recommended Impact Fees:

Capital Improvement Costs for new development distributed over the new development to be served indicates that the maximum allowable water and wastewater impact fee to be assessed future development would be $\$5,855/2 = \$2,928$.

The two components of the total fee to be assessed are:

1.	Water Supply and Distribution-	\$2,088
2.	Wastewater Collection and Treatment-	\$ 840
Total:		\$2,928

APPENDIX “B”

SUMMARY OF SERVICE UNIT EQUIVALENTS CITY OF FRIENDSWOOD WATER AND WASTEWATER IMPACT FEES

<u>Meter size and Type</u>		<u>Service Units</u>
1”	simple	1
1 ½”	simple	2
1 ½”	turbine	2
2”	simple	3
2”	compound	3
2”	turbine	4
3”	compound	6
3”	turbine	10
4”	compound	10
4”	turbine	17
6”	compound	20
8”	compound	32
6”	turbine	37
10”	compound	46
8”	turbine	64
10”	turbine	100
12”	turbine	132

1’ meter is the smallest acceptable meter. In any situation where a meter smaller than 1” is installed, the 1” fee will be charged.

APPENDIX “E”

Review of Historical Impact Fee Charges (per Service Unit-Single Family Connection)

<u>IMPACT FEE COMPONENT</u>	<u>1997</u>	<u>2000</u>	<u>2003</u>	<u>2008</u>	<u>2013</u>
City Wide Impact Fees	\$850	\$1,448	\$2,859	\$3,139	\$2,928
<u>Water Distribution</u>					
Bay Area Boulevard S.A.	\$391	\$328			
South Friendswood S.A.	\$248	\$245			
Moore/Mandale Road S.A.		\$806			
<u>Wastewater Collection</u>					
Mills, Murphy, Briarmeadow S.A.	\$2,532	\$2,532			
South Friendswood S.A.	\$488	\$479			
Autumn Creek S.A.		\$246			
TOTAL FEE PER SERVICE UNIT	\$850-	\$1,448-	\$2,859	\$3,139	\$2,928
	\$3,382	\$3,980			



PLANNING & ZONING COMMISSION

**MINUTES OF A
REGULAR MEETING
HELD THURSDAY, SEPTEMBER 20, 2018
AT 7:00 PM**

**CITY HALL
CITY COUNCIL CHAMBERS
910 S. FRIENDSWOOD DRIVE
FRIENDSWOOD, TEXAS**

Regular Meeting

1. The regular meeting was called to order at 7:00 pm with the following people in attendance:

Chairman Joe Matranga
Commissioner Eric Guenther
Commissioner Dick Clark
Becky Summers, Development Coordinator
Aubrey Harbin, City Planner/Director of CDD

Commissioner Brett Banfield
Commissioner Lisa Lundquist

Absent: Sasson, Fischer, Perry

2. Communication from the public/committee liaisons
(To comply with provisions of the Open Meetings Act, the Commission may not deliberate on subjects discussed under this agenda item. However, the Commission may direct such subjects be placed on a later regular Commission agenda for discussion and/or possible action.)

None.

Action Items

According to the Planning and Zoning Rules of Procedure (R2010-09), all action of the Commission shall be made by an affirmative vote of four (4) or more members of the Commission present at such Commission meetings.

3. Consent agenda
These items are considered routine or ministerial in nature and will be enacted with one motion. There will be no separate discussion of items unless a commissioner or citizen so requests in which case the item would be removed from the consent agenda and considered separately.

A. Minutes from September 10, 2018

B. Final Plat of Flying Leaf Estates

Motion to approve: Banfield

Second: Lundquist

Vote: 5 to 0 Unanimous

Motion Passed

Action Items

According to the Planning and Zoning Rules of Procedure (R2010-09), all action of the Commission shall be made by an affirmative vote of four (4) or more members of the Commission present at such Commission meetings.

4. Consideration and possible action regarding **site plan approval for Shadowbend Office Park to be located at 103 and 105 E. Shadowbend**

Motion to approve: Banfield

Second: Clark

Vote: 5 to 0 Unanimous

Motion Passed

Harbin stated the proposed site plan was to construct two new office buildings, 5,000 square feet each, located in the Downtown District. She said the plans met all Downtown District criteria such as installing the benches, lights, and brick paved sidewalks plus fenestration and landscaping requirements.

Banfield expressed his appreciation the parking area was not fronting Friendswood Drive.

Clark asked if the dumpster was facing the street to which Wayne Berkenmeier (owner) explained the dumpster would be surrounded by a CMU wall with metal gates to screen the dumpster.

Lundquist asked which building side was facing Friendswood Drive. Berkenmeier said the front of the building faced the parking lot so the back of the building faced Friendswood Drive. Summers stated the back of the building along Friendswood Drive met the 40% fenestration requirement.

Matranga asked if a new power pole was being installed for the project. Berkenmeier said there was an existing pole and Harbin explained the additional power pole was necessary per Texas New Mexico Power Company. She said the service lines would all be underground.

Matranga asked if the dumpster could be moved further back onto the property. Berkenmeier explained moving the dumpster would eliminate required parking spaces.

Matranga asked about what type of trees would be used along the roadways. Berkenmeier said he would install any type of tree the Commission wanted but those on the plan were chosen by his architect.

5. Consideration and possible action regarding future Planning and Zoning Commission meeting dates

Motion to move Oct 1 meeting back to Oct 4: Lundquist

Second: Guenther
Vote: 5 to 0 Unanimous

Motion Passed

Thursday, October 4 – Regular Meeting
Thursday, October 18 – No Meeting – APA Conference

Harbin said the Joint Public Hearing item had been withdrawn and asked the Commission if they would like to move the meeting back to the regular night.

Motion to move Oct 1 meeting to Oct 4: Sasson
Second: Lundquist
Vote: 5 to 0 Unanimous

Motion Passed

6. Communications from the Commission
 - a. Commissioners- Lundquist asked about attending Keep Friendswood Beautiful meetings and Harbin said she would send her the information.
 - b. Council Liaison – Not present.
 - c. Staff – Harbin reminded the Commissioners to let her know if they would like to attend the APA Conference in October.
7. The meeting was adjourned at 7:16 pm.

These minutes respectfully submitted by:

Becky Summers

Becky Summers
Development Coordinator/P&Z Secretary

Preliminary Plat of Georgetown Boulevard Street Dedication Section 2

This is the boulevard street that will serve the Georgetown Subdivision (572 lots). Phase 1 of the Georgetown Boulevard Street Dedication is being platted through the City of Alvin/Brazoria County.

1. [Compliance memo](#)
2. [Preliminary plat pg 1](#)
3. [Preliminary plat pg 2](#)

Memo

To: Planning and Zoning Commission

From: Becky Summers, Development Coordinator

Date: October 1, 2018

Re: Georgetown Boulevard Street Dedication Phase 2
Preliminary Plat

Project Description: Phase 1 street dedication is being platted through the City of Alvin.

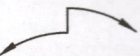
The plan has been reviewed by staff in the following departments: Planning, Public Works/Engineering, Fire Marshal, and Police Department. The proposed project appears to be in compliance with current City codes with the following exceptions:

- 1) Remove Zoning Information and regulation matrix (not applicable to street dedication)

The plan is subject to review and approval by the Planning and Zoning Commission.

Date: Sep 23, 2018, 11:32am User ID: LMorales
File: K:\projects\408\23\20\2-0 Design\2-3 Plot\2-3-1 Preliminary\Sec 2 Street Dedication (Friendswood)\4082320_Prelim (Blvd Sec 2).dwg

NOTES:

- ONE-FOOT RESERVE DEDICATED FOR BUFFER PURPOSES TO THE PUBLIC IN FEE AS A BUFFER SEPARATION BETWEEN THE SIDE OR END OF THE STREET WHERE SUCH STREETS ABUT ADJACENT PROPERTY, THE CONDITION OF SUCH DEDICATION BEING THAT WHEN THE ADJACENT PROPERTY IS SUBDIVIDED OR RE-SUBDIVIDED IN A RECORDED PLAT, THE ONE-FOOT RESERVE SHALL THEREUPON BECOME VESTED IN THE PUBLIC FOR STREET RIGHT-OF-WAY PURPOSES AND THE FEE TITLE THERETO SHALL REVERT TO AND REVEST IN THE DEDICATOR, HIS HEIRS, ASSIGNS OR SUCCESSORS.
- THE COORDINATES SHOWN HEREON ARE STATE PLANE GRID COORDINATES, REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD-83; AND MAY BE CONVERTED TO SURFACE VALUES BY DIVIDING THE COMBINED SCALE FACTOR OF 0.999880014.
- BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD-83.
- THIS PLAT WAS PREPARED FROM INFORMATION FURNISHED BY _____ TITLE COMPANY, EFFECTIVE DATE _____
- ALL EASEMENTS ARE CENTERED ON LOT LINES, UNLESS OTHERWISE INDICATED.
- THE RADIUS ON ALL BLOCK CORNERS IS TWENTY FIVE (25) FEET UNLESS OTHERWISE NOTED.
-  INDICATES STREET NAME CHANGE SYMBOL.
- DIMENSIONS SHOWN ARE SURFACE.
- PROPERTY CORNERS ARE MONUMENTED WITH CAP OR DISK MARKED "PAPE-DAWSON", UNLESS NOTED OTHERWISE.
- PRELIMINARY PLATS ARE NOT ELIGIBLE, NOR AUTHORIZED, TO BE RECORDED IN ANY COUNTY RECORDS AND THAT FILING OF A PRELIMINARY PLAT SHALL BE PRIMA FACIE EVIDENCE OF A FRAUDULENT FILING UNDER THE TEXAS PROPERTY CODE SUBJECT TO THE PENALTIES THEREUNDER.
- SIDEWALKS AND ADA RAMPS ARE REQUIRED ALONG ALL CURB AND GUTTER STREETS PER THE APPROVED SIDEWALK ACCESSIBILITY PLAN. THE DEVELOPER MUST INSTALL SIDEWALKS AND ADA RAMPS ALONG RESERVES AND COMMON AREAS PRIOR TO THE CITY COUNCIL'S ACCEPTANCE OF THE SUBDIVISION INFRASTRUCTURE. WHEN SIDEWALKS ARE REQUIRED THEY SHALL BE A WIDTH OF NO LESS THAN FOUR FEET AND COMPLY WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- NO RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL STRUCTURE SHALL BE PERMITTED TO BE BUILT NEARER THAN 150 FEET FROM ANY WELL OR RELATED FACILITY, OTHER THAN STRUCTURES NECESSARY TO OPERATE THE WELL OR FACILITY.
- EXCEPT FOR LOW-PRESSURE DISTRIBUTION SYSTEM PIPELINES AS DEFINED IN CHAPTER 26, OF THE FRIENDSWOOD CITY CODE, NO RESIDENTIAL, COMMERCIAL OR INDUSTRIAL STRUCTURE SHALL BE ERCTED OR MOVED TO A LOCATION NEARER THAN 50 FEET TO ANY PIPELINE, OTHER THAN STRUCTURES NECESSARY TO OPERATE THE PIPELINE.
- THE CITY OF FRIENDSWOOD SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE STREETS (DRIVEWAYS, SIDEWALKS, AND EMERGENCY ACCESS EASEMENTS), WATERLINES, SANITARY SEWER LINES, STORM SEWER FACILITIES (DETENTION PONDS, DRAINAGE EASEMENTS, OUTFALLS, AND SALES), RECREATIONAL AREAS, RESERVES AND OTHER PRIVATE FACILITIES THAT ARE WITHIN PRIVATE EASEMENTS; THE HOA SHALL BE RESPONSIBLE FOR THESE ITEMS. THE CITY OF FRIENDSWOOD SHALL BE RESPONSIBLE FOR MAINTENANCE OF PUBLIC STREETS, SIDEWALKS, STREET SIGNS, WATERLINES, SANITARY SEWER LINES, STORM SEWER FACILITIES, DRAINAGE EASEMENTS, OUTFALLS AND SWALES THAT ARE WITHIN THE PUBLIC RIGHT-OF-WAY OR WITHIN PUBLIC AND/OR EXCLUSIVE EASEMENTS. THE MAINTENANCE OF STREET LIGHTS SHALL BE THE RESPONSIBILITY OF TEXAS NEW MEXICO POWER COMPANY.
- ALL UTILITY COMPANIES HAVE BEEN CONTACTED AND THE EASEMENTS SHOWN ON THE PLAT CONSTITUTE ALL OF THE EASEMENTS REQUIRED BY THE UTILITY COMPANIES FOR THEIR OPERATIONS.
- THE FINISHED FLOOR ELEVATIONS OF ALL STRUCTURES SHALL BE LOCATED ABOVE THE BASE FLOOD ELEVATION ESTABLISHED BY FEMA, AND AS PRESCRIBED IN THE FLOOD DAMAGE PREVENTION ORDINANCE OF THE CITY OF FRIENDSWOOD, TEXAS.
- ANY AND ALL RIGHT OF WAY ISLANDS LOCATED WITHIN THE BOUNDARIES OF THIS PLAT, EVEN IF NOT SHOWN ON THE FACE OF THE PLAT, SHALL BE MAINTAINED BY THE HOA.

GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT'S NOTES:

- BUILDINGS, FENCES OR OTHER STRUCTURES SHALL NOT BE ERCTED IN GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT RIGHT-OF-WAYS OR DRAINAGE EASEMENTS.
- THE DETENTION POND AND ALL LANDSCAPING RESERVES ARE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION, ITS SUCCESSORS, OR ASSIGNS.
- NO BUILDING PERMIT SHALL BE ISSUED FOR ANY LOT WITHIN THIS SUBDIVISION UNTIL A DETENTION AND DRAINAGE PLAN HAS BEEN APPROVED BY THE GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT.
- ADDITIONAL DRAINAGE EASEMENTS MAY BE REQUIRED AT THE TIME A DRAINAGE PLAN IS SUBMITTED TO THE GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT FOR APPROVAL.
- PLANTINGS, FLOWER BEDS, OR OTHER LANDSCAPING IS NOT PERMITTED IN SIDE LOT DRAINAGE OR DETENTION EASEMENTS.
- NO BUILDING PERMIT SHALL BE APPLIED FOR UNTIL ALL DRAINAGE AND DETENTION FACILITIES ARE CONSTRUCTED, INSPECTED AND APPROVED BY THE DISTRICT.

ZONING INFORMATION

THIS PROPERTY IS ZONED "SFR" FOR SINGLE FAMILY RESIDENTIAL ACCORDING TO THE CITY MANAGER'S OFFICE OF FRIENDSWOOD AT 281-998-3250. THE FOLLOWING INFORMATION WAS OBTAINED.

REGULATION MATRIX—RESIDENTIAL DISTRICTS

Circled letters (letters in parentheses) refer to paragraphs in section 7-Q.3.

		Yards - Minimum Feet													
	Units per Acre	Lot Area Square Feet	Lot Width	Front	Rear (a)	Interior (d)	Side			Height Maximum Feet (b and e)	Parking Required Unit	Zero Lot Lines Y or No	Maximum Lot Coverage		
							Backyard	Backyard	Backyard						
SFR Single-Family Residential	2.7	11,600	90 A	25 B	25	10 F	25 A	20 C	40	K	No	35%			
SFR Single-Family Residential	2.7	15,600	120 A	25 B	25	10	25 B	20 C	40	K	No	35%			
SFR-E Single-Family Residential Estate	0.5	87,120	150 A	75	25	25	35	35	40	K	No	20%			
MFR-L Multifamily - Low	6 G	7,260 G	45 G	25 B	25	10 E, I	25 B	20 C	40	K	No	50%			
MFR-M Multifamily - Medium	9	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%			
MFR-H Multifamily - Highest	12	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%			
MHR Mobile Home A-1	10	—	—	25 B	25	10 I	30	25 B	20	K	No	50%			
MFR-GHD Garden Home District	—	—	—	25 B	25	10 I	25 B	20 C	40	K	No	10%			
	6	6,000	60	20 B, H	20	0 D, J	5 B, H	4 C, H	40	K	Yes D	50%			

METES AND BOUNDS DESCRIPTION OF

A 3.809 ACRE, OR 165,932 SQUARE FEET MORE OR LESS TRACT OF LAND, BEING A PORTION OF A "TRACT 1", A CALLED 177.58 ACRE TRACT OF LAND CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC., AND DESCRIBED IN CLERK'S FILE NO. 9523753 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, WITH 25% INTEREST SUBSEQUENTLY CONVEYED TO THE ESTATE OF GEORGE A. BOFYSL, JR., DECEASED AS DESCRIBED IN CLERK'S FILE NO. 2012042830 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, AND A PORTION OF A CALLED 0.8878 ACRE TRACT OF LAND "SOUTH ACCESS TRACT" WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, AND A PORTION OF A CALLED 15.0859 ACRE TRACT OF LAND, CONVEYED TO GEORGE A. BOFYSL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 8612043 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, OUT OF BLOCK 1, SECTION 23 OF THE I&GN RR CO. SURVEY, ABSTRACT NO. 624, AND SECTION 22 OF THE HOOPER AND WADE SURVEY, ABSTRACT 491, IN GALVESTON COUNTY, TEXAS; SAID 3.809 ACRE TRACT OF LAND BEING MORE FULLY DESCRIBED AS FOLLOWS, WITH BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, ESTABLISHED FOR THE SOUTH CENTRAL ZONE, FROM THE NORTH AMERICAN DATUM OF 1983 (NA2011), EPOCH 2010.00:

COMMENCING: AT A 5/8 INCH IRON ROD FOUND ON THE SOUTH LINE OF A CALLED 10.6202 ACRE TRACT OF LAND CONVEYED TO GEORGE A. BOFYSL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 8612041 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, A WEST LINE OF SAID 177.58 ACRE TRACT, AND THE NORTHEAST CORNER OF A CALLED 1.1653 ACRE TRACT OF LAND "NORTH ACCESS TRACT"; WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS;

THENCE: S 03°15'11" E, DEPARTING THE SOUTH LINE OF SAID 10.6202 ACRE TRACT, ALONG AND WITH THE COMMON LINE BETWEEN SAID 1.1653 ACRE TRACT AND SAID 177.58 ACRE TRACT, PASSING A POINT FOR THE SOUTHEAST CORNER OF SAID 1.1653 ACRE TRACT AT DISTANCE OF 61.48 FEET, AND CONTINUING ALONG AND WITH WEST LINE OF SAID 177.58 ACRE TRACT AND THE EAST LINE OF SAID 15.0859 ACRE TRACT, FOR A TOTAL DISTANCE 681.45 FEET TO A 1/2 INCH IRON ROD FOUND AT THE NORTHEAST CORNER OF SAID 0.8878 ACRE TRACT OF LAND;

THENCE: S 25°22'52" W, DEPARTING THE WEST LINE OF SAID 177.58 ACRE TRACT AND THE EAST LINE OF SAID 15.0859 ACRE TRACT, OVER AND ACROSS SAID 0.8878 ACRE TRACT, A DISTANCE OF 54.94 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED 3.809 ACRE TRACT;

THENCE: OVER AND ACROSS SAID 0.8878 ACRE TRACT AND SAID 177.58 ACRE TRACT THE FOLLOWING COURSES AND DISTANCES:

S 25°22'52" W, A DISTANCE OF 20.00 FEET TO A POINT, SOUTHEASTERLY, ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIAL BEARING OF S 25°22'52" W, A RADIUS OF 540.00 FEET, A CENTRAL ANGLE OF 08°02'14", A CHORD BEARING AND DISTANCE OF S 62°06'00" E, 47.46 FEET, FOR AN ARC LENGTH OF 47.48 FEET TO A POINT,

S 59°34'53" E, A DISTANCE OF 130.77 FEET TO A POINT, SOUTHEASTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 560.00 FEET, A CENTRAL ANGLE OF 33°42'52", A CHORD BEARING AND DISTANCE OF S 76°26'19" E, 324.79 FEET, FOR AN ARC LENGTH OF 329.52 FEET TO A POINT, N 86°42'15" E, A DISTANCE OF 390.73 FEET TO A POINT,

NORTHEASTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 860.00 FEET, A CENTRAL ANGLE OF 12°08'23", A CHORD BEARING AND DISTANCE OF N 80°38'04" E, 181.88 FEET, FOR AN ARC LENGTH OF 182.22 FEET TO A POINT, N 74°33'52" E, A DISTANCE OF 125.81 FEET TO A POINT,

NORTHEASTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 940.00 FEET, A CENTRAL ANGLE OF 13°26'12", A CHORD BEARING AND DISTANCE OF N 81°16'58" E, 219.94 FEET, FOR AN ARC LENGTH OF 220.44 FEET TO A POINT, N 88°00'04" E, A DISTANCE OF 64.99 FEET TO A POINT, S 01°59'56" E, A DISTANCE OF 80.00 FEET TO A POINT,

S 88°00'04" W, A DISTANCE OF 64.99 FEET TO A POINT, SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 860.00 FEET, A CENTRAL ANGLE OF 13°26'12", A CHORD BEARING AND DISTANCE OF S 81°16'58" W, 201.22 FEET, FOR AN ARC LENGTH OF 201.68 FEET TO A POINT, S 74°33'52" W, A DISTANCE OF 125.81 FEET TO A POINT, SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 940.00 FEET, A CENTRAL ANGLE OF 12°08'23", A CHORD BEARING AND DISTANCE OF S 80°38'04" W, 198.79 FEET, FOR AN ARC LENGTH OF 199.17 FEET TO A POINT,

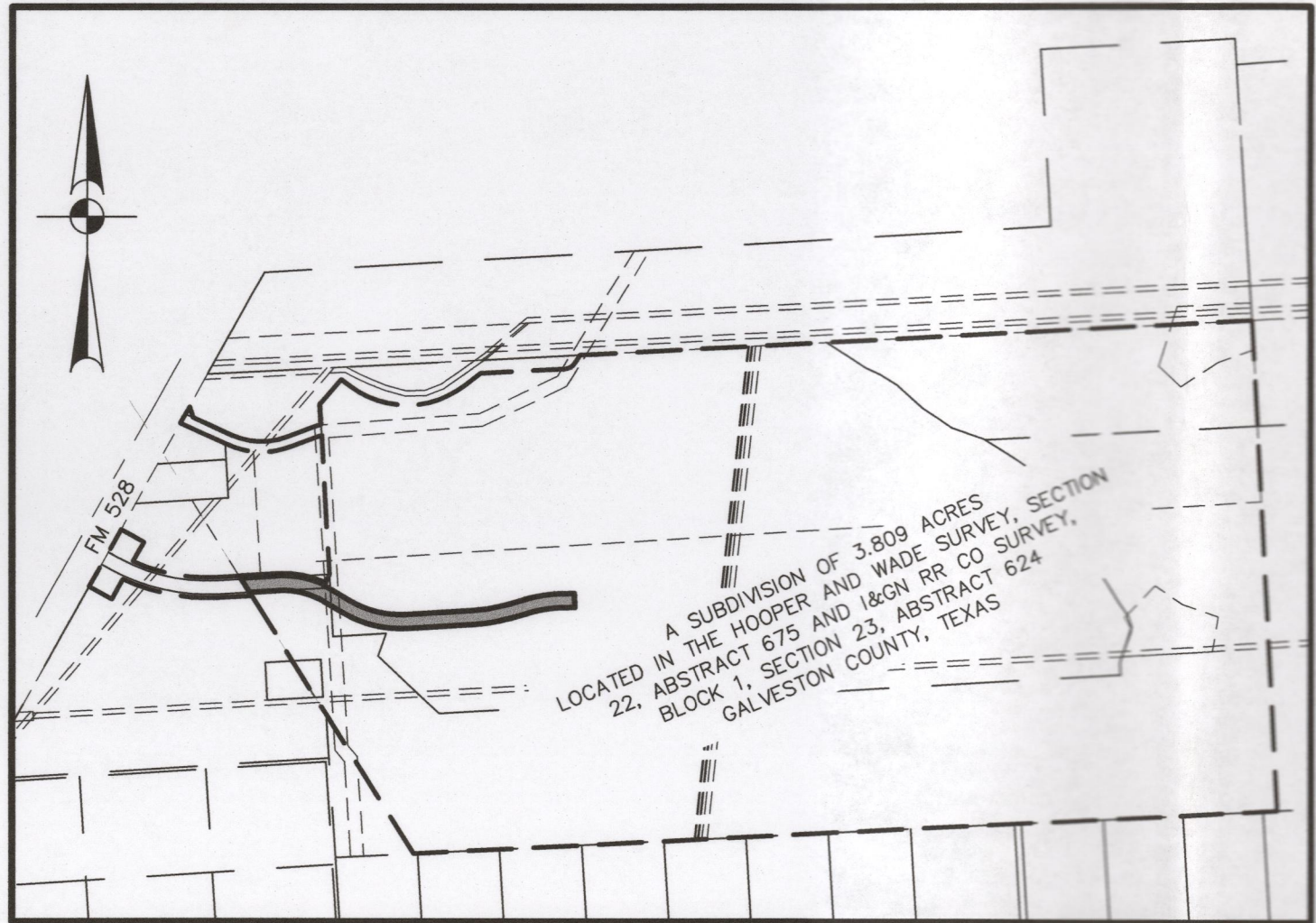
S 86°42'15" W, A DISTANCE OF 390.73 FEET TO A POINT, NORTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 640.00 FEET, A CENTRAL ANGLE OF 33°42'52", A CHORD BEARING AND DISTANCE OF N 76°26'19" W, 371.18 FEET, FOR AN ARC LENGTH OF 376.59 FEET TO A POINT, N 59°34'53" W, A DISTANCE OF 130.77 FEET TO A POINT,

NORTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 460.00 FEET, A CENTRAL ANGLE OF 33°44'27", A CHORD BEARING AND DISTANCE OF N 76°27'06" W, 266.99 FEET, FOR AN ARC LENGTH OF 270.89 FEET TO A POINT ON THE SOUTH LINE OF SAID 0.8878 ACRE TRACT;

THENCE: S 86°40'40" W, ALONG AND WITH THE SOUTH LINE OF SAID 0.8878 ACRE TRACT, A DISTANCE OF 167.50 FEET TO A POINT, THENCE: N 32°06'20" W, ALONG AND WITH THE WEST LINE OF SAID 0.8878 ACRE TRACT, A DISTANCE OF 114.10 FEET TO A POINT,

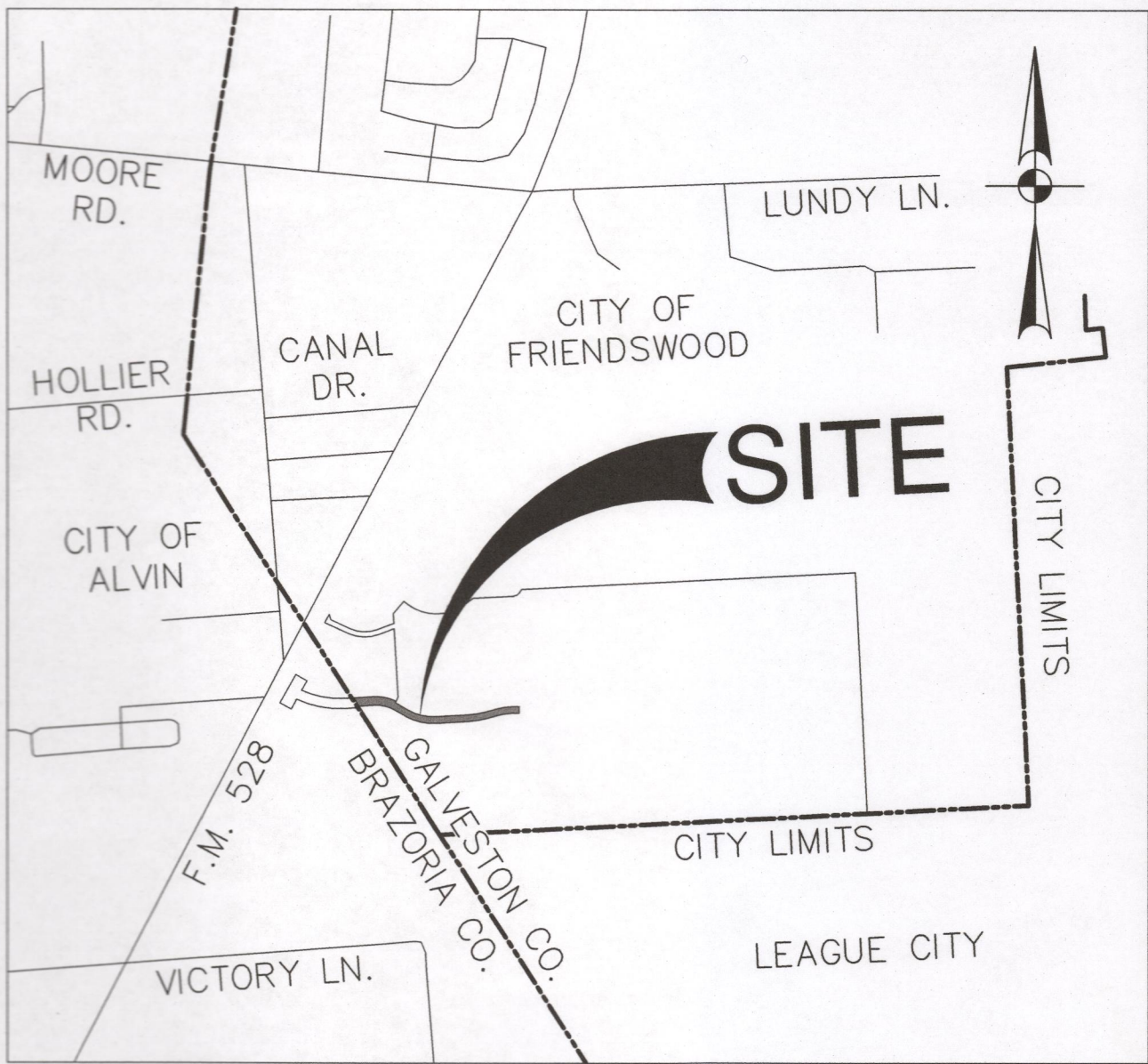
THENCE: OVER AND ACROSS SAID 15.0859 ACRE TRACT AND SAID 0.8878 ACRE TRACT THE FOLLOWING COURSES AND DISTANCES:

N 86°40'40" E, A DISTANCE OF 222.44 FEET TO A POINT, THENCE: SOUTHEASTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 560.00 FEET, A CENTRAL ANGLE OF 28°42'12", A CHORD BEARING AND DISTANCE OF S 78°58'14" E, 277.62 FEET, FOR AN ARC LENGTH OF 280.54 FEET TO THE POINT OF BEGINNING, AND CONTAINING 3.809 ACRES IN GALVESTON COUNTY, TEXAS.



PARTIAL PLAT EXHIBIT

SCALE 1"=1000'



VICINITY MAP
SCALE 1"=2000'
MAP REF: KEY MAP #656 B,C

LEGEND

- FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
- ACRE SET 5/8" IRON ROD (PD)
- SET 1/2" IRON ROD (PD)-ROW
- AC = ACRE
- AE = AERIAL EASEMENT
- SSE = SANITARY SEWER EASEMENT
- STM SE = STORM SEWER EASEMENT
- WLE = WATER LINE EASEMENT
- DE = DRAINAGE EASEMENT
- UE = UTILITY EASEMENT
- EE = ELECTRICAL EASEMENT
- BL = BUILDING LINE
- R = RADIUS
- ROW = RIGHT-OF-WAY
- SF = SQUARE FEET
- IR = IRON ROD
- FO = FOUND
- COS = COMPENSATING OPEN SPACE
- GCMR = GALVESTON COUNTY MAP RECORDS
- GCOR = GALVESTON COUNTY DEED RECORDS
- GCOPRRP = GALVESTON COUNTY PUBLIC RECORDS OF REAL PROPERTY
- GCFCO = GALVESTON COUNTY FLOOD CONTROL DISTRICT
- OPRRPGC = OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY TEXAS
- GCCF = GALVESTON COUNTY CLERK'S FILE NUMBER

PRELIMINARY PLAT
GEORGETOWN
BOULEVARD STREET
DEDICATION SEC 2

A SUBDIVISION OF 3.809 ACRES
LOCATED IN THE HOOPER AND WADE SURVEY, SECTION 22,
ABSTRACT 675 AND I&GN RR CO. SURVEY,
BLOCK 1, SECTION 23, ABSTRACT 624
GALVESTON COUNTY, TEXAS

1 RESERVE 1 BLOCK
SCALE: 1"= 100' SEPTEMBER 24, 2018

OWNER:
CHRIS LINDHORST
D.R.HORTON-TEXAS, LTD.,
A TEXAS LIMITED LIABILITY PARTNERHIP
14100 SW FREEWAY, SUITE 500
SUGAR LAND, TEXAS 77478
(281) 566-2100

ENGINEER:
PAPE-DAWSON ENGINEERS
MICHAEL PREISS, P.E.
VICE PRESIDENT-HOUSTON

SURVEYOR:
PAPE-DAWSON ENGINEERS
RICHARD CHARITAT, R.P.L.S.
HOUSTON SURVEY DEPARTMENT MANAGER

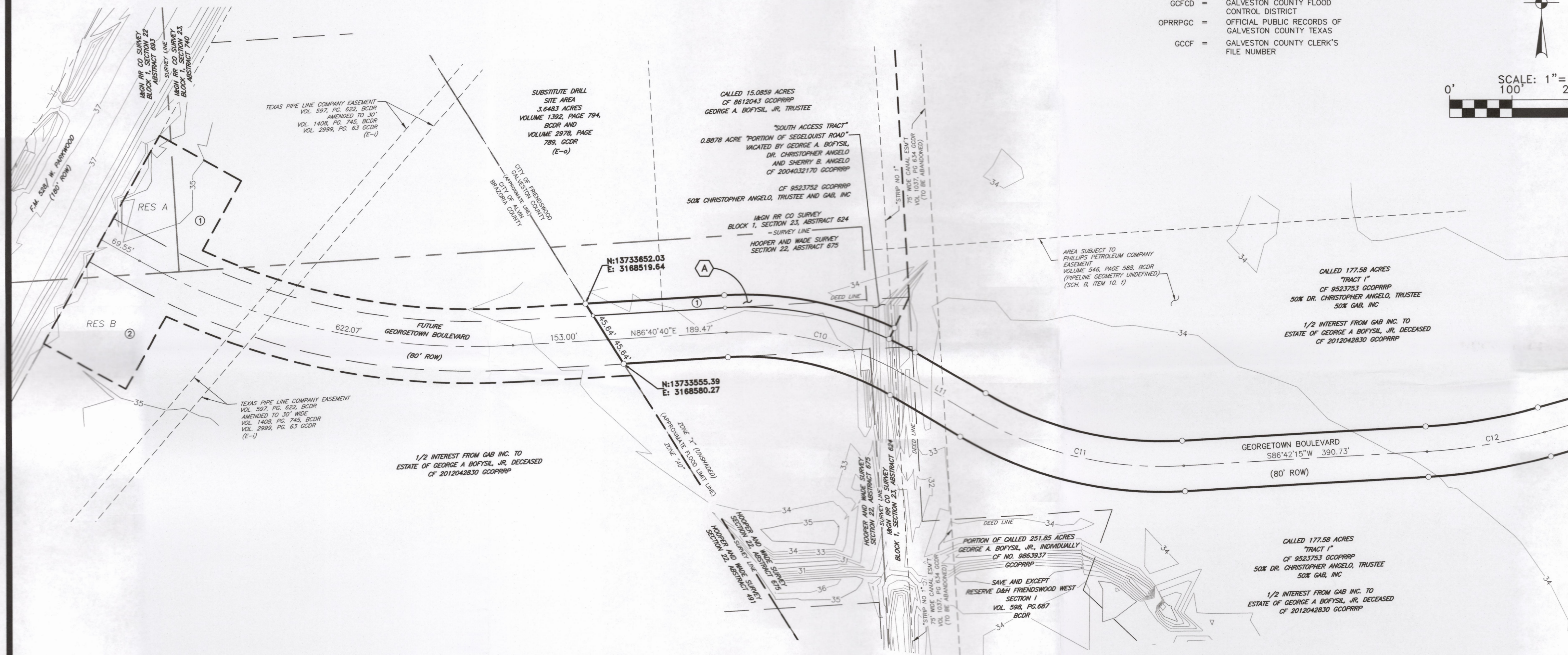
**PAPE-DAWSON
ENGINEERS**

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10356 RICHMOND AVE., STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10193974

9/24/18

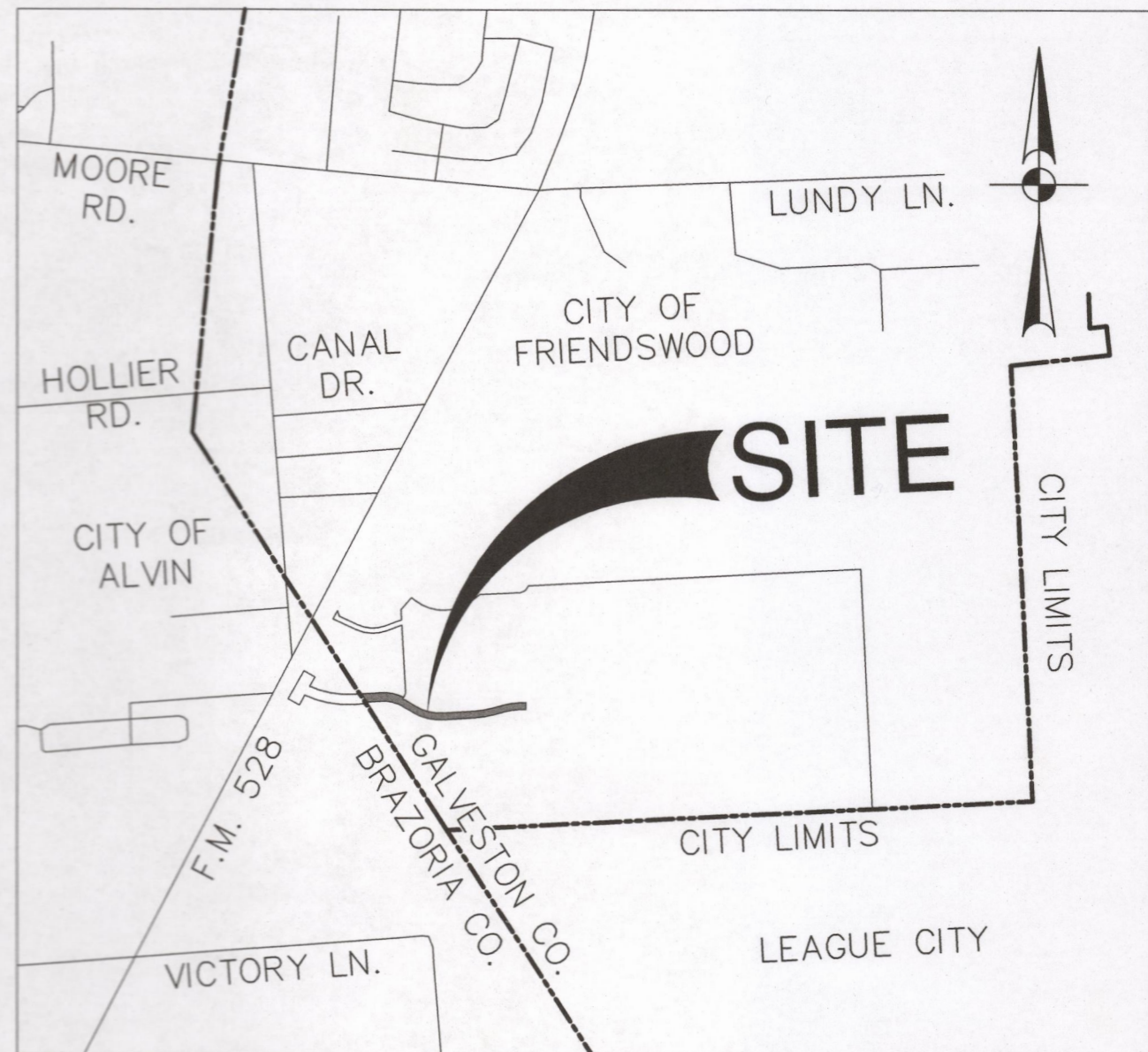
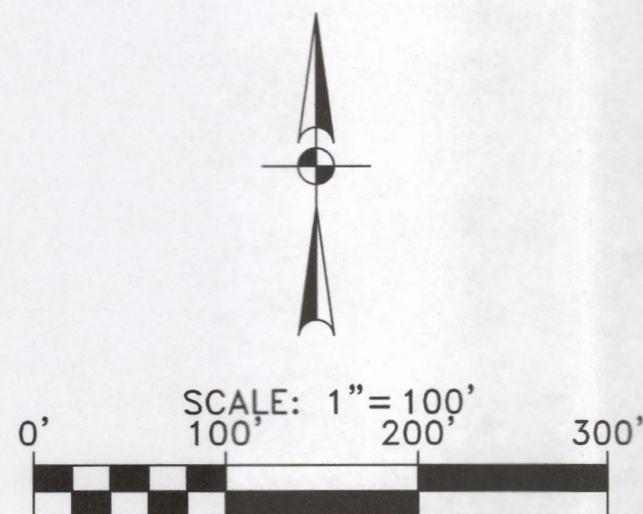
Planning
Public Works

Date: Sep 23, 2018, 11:29am User ID: L Morales
File: K:\Projects\406\23\20\2-0 Design\2-3 Plat\2-3-1 Preliminary\Sec 2 Street Dedication (Friendwood)\4062320_Prelim (Blvd Sec 2).dwg



LEGEND

- FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
- ACRE SET 5/8" IRON ROD (PD)
- SET 1/2" IRON ROD (PD)-ROW
- AC = ACRE
- AE = AERIAL EASEMENT
- SSE = SANITARY SEWER EASEMENT
- STM SE = STORM SEWER EASEMENT
- WLE = WATER LINE EASEMENT
- DE = DRAINAGE EASEMENT
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- SF = SQUARE FEET
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- GCMR = GALVESTON COUNTY MAP RECORDS
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- GCFCD = GALVESTON COUNTY FLOOD CONTROL DISTRICT
- OPRRPGC = OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY TEXAS
- GCCF = GALVESTON COUNTY CLERK'S FILE NUMBER



VICINITY MAP
SCALE 1"=2000'
MAP REF: KEY MAP #656 B,C

RESTRICTED RESERVE "A"
(RESTRICTED TO LANDSCAPE OR
OPEN SPACE PURPOSES ONLY)
0.226 AC. 9,850 SQ.FT.

PRELIMINARY PLAT GEORGETOWN BOULEVARD STREET DEDICATION SEC 2

A SUBDIVISION OF 3.809 ACRES
LOCATED IN THE HOOPER AND WADE SURVEY, SECTION 22,
ABSTRACT 675 AND 1&GN RR CO SURVEY,
BLOCK 1, SECTION 23, ABSTRACT 624
GALVESTON COUNTY, TEXAS

1 RESERVE 1 BLOCK
SCALE: 1"= 100' SEPTEMBER 24, 2018

OWNER:
CHRIS LINDHORST
D.R.HORTON-TEXAS, LTD.,
A TEXAS LIMITED LIABILITY PARTNERSHIP
14100 SW FREEWAY, SUITE 500
SUGAR LAND, TEXAS 77478
(281) 566-2100

ENGINEER:
PAPE-DAWSON ENGINEERS
MICHAEL PREISS, P.E.
VICE PRESIDENT-HOUSTON

SURVEYOR:
PAPE-DAWSON ENGINEERS
RICHARD CHARITAT, R.P.L.S.
HOUSTON SURVEY DEPARTMENT MANAGER

**PAPE-DAWSON
ENGINEERS**

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE., STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10193974

CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	940.00'	13°26'56"	N81°16'58"E	219.94'	220.44'
C2	860.00'	13°26'12"	S81°16'58"W	201.22'	201.68'
C3	940.00'	12°08'23"	S80°38'04"W	198.79'	199.17'
C4	640.00'	33°42'52"	N76°26'19"W	371.18'	376.59'
C5	460.00'	33°44'27"	N76°27°06"W	266.99'	270.89'
C6	560.00'	28°42'12"	S78°58'14"E	277.62'	280.54'
C7	540.00'	5°02'14"	S62°06'00"E	47.46'	47.48'
C8	560.00'	33°42'52"	S76°26'19"E	324.79'	329.52'
C9	860.00'	12°08'23"	N80°38'04"E	181.88'	182.22'
C10	500.00'	33°44'27"	N76°27°06"W	290.21'	294.44'
C11	600.00'	33°42'52"	S76°26'19"E	347.98'	353.06'
C12	900.00'	12°08'23"	N80°38'04"E	190.33'	190.69'
C13	900.00'	13°26'12"	S81°16'58"W	210.58'	211.06'
C14	540.00'	33°44'27"	N76°27°06"W	313.42'	318.00'

LINE TABLE		
LINE #	BEARING	LENGTH
L1	S88°00'04"W	64.99'
L2	S1°59'56"E	80.00'
L3	S88°00'04"W	64.99'
L4	S74°33'52"W	125.81'
L5	N59°34'53"W	130.77'
L6	S86°40'40"W	167.50'
L8	S25°22'52"W	20.00'
L9	S59°34'53"E	130.77'
L10	N74°33'52"E	125.81'
L11	S59°34'53"E	130.77'
L12	S74°33'52"W	125.81'
L13	N88°00'04"E	64.99'

Preliminary Plat of Georgetown Section 1

This is the first section of the Georgetown development consisting of 33 residential lots.

1. [Compliance memo](#)
2. [Preliminary plat pg 1](#)
3. [Preliminary plat pg 2](#)

Memo

To: Planning and Zoning Commission
From: Becky Summers, Development Coordinator
Date: October 1, 2018
Re: Georgetown Section 1
Preliminary Plat

Project Description: Section 1 of the subdivision will contain 33 lots.

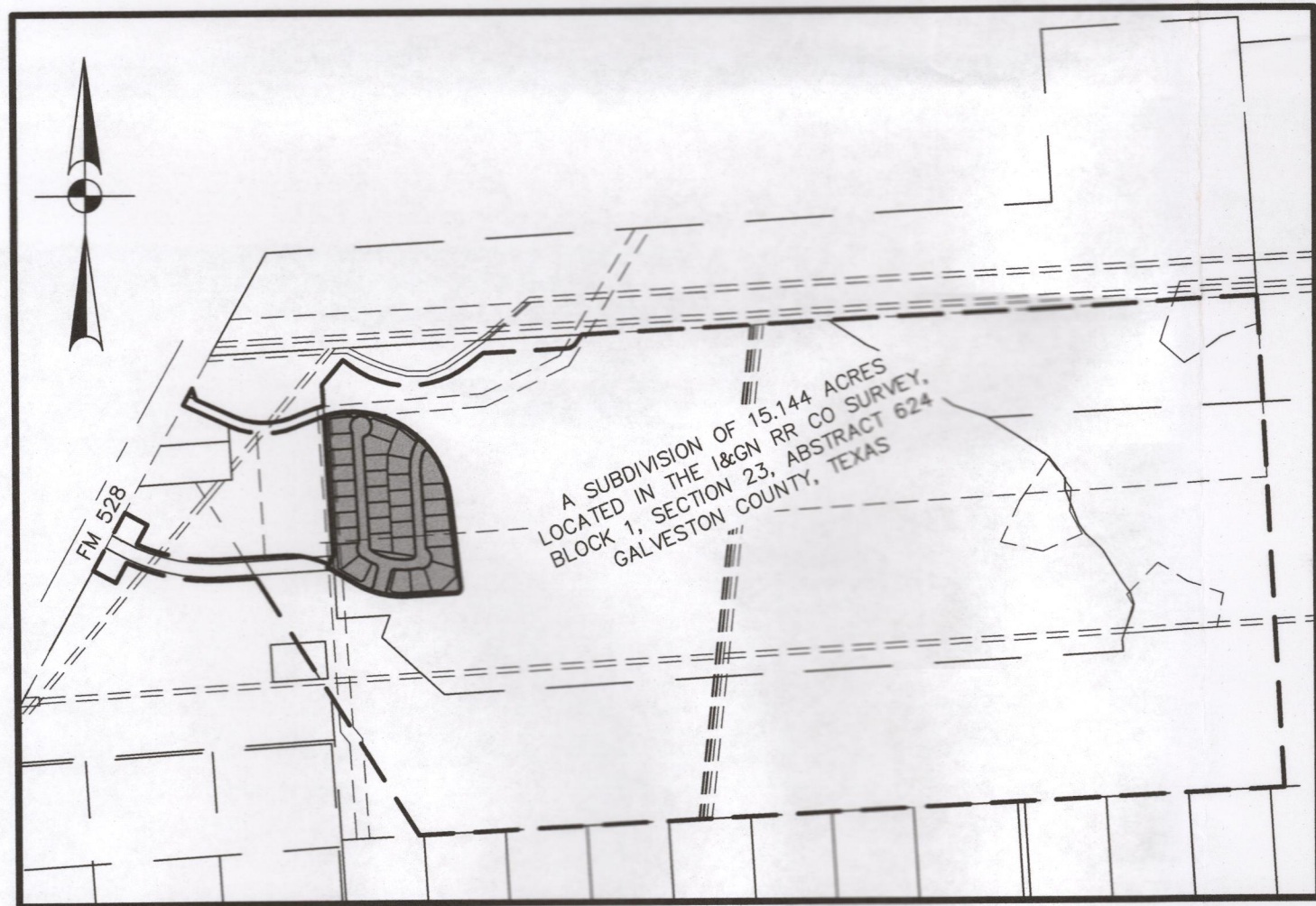
The plan has been reviewed by staff in the following departments: Planning, Public Works/Engineering, Fire Marshal, Parks, and Police Department. The proposed project appears to be in compliance with current City codes with the following exceptions:

- 1) Remove Zoning Information and portion of regulation matrix not SFR 11,600.
- 2) Add explanations for letter references A, B, C, K.
- 3) Specify reserve areas requiring sidewalks.

The plan is subject to review and approval by the Planning and Zoning Commission.

LOT TABLE			
BLOCK	LOT	SQUARE FEET	Acres
1	1	14,312	0.33
1	2	14,070	0.32
1	3	11,697	0.27
1	4	11,700	0.27
1	5	11,700	0.27
1	6	11,700	0.27
1	7	11,700	0.27
1	8	11,700	0.27
1	9	11,700	0.27
1	10	12,423	0.29
1	11	14,080	0.32
1	12	15,011	0.35
1	13	12,033	0.28
1	14	11,700	0.27
1	15	11,700	0.27
1	16	11,700	0.27
1	17	11,700	0.27
1	18	13,354	0.31
1	19	13,025	0.30
1	20	11,700	0.27
1	21	11,700	0.27
1	22	11,700	0.27
1	23	11,857	0.27
1	24	13,094	0.30
1	25	18,009	0.41
2	1	13,466	0.31
2	2	13,059	0.30
2	3	20,804	0.48
2	4	13,957	0.32
2	5	13,571	0.31
2	6	13,122	0.30
2	7	12,673	0.29
2	8	11,999	0.28

LOT SUMMARY TABLE	
AVG LOT AREA	12,961 SQ FT



PARTIAL PLAT EXHIBIT
SCALE 1"=1000'

METES AND BOUNDS DESCRIPTION OF

A 15.144 ACRE, OR 659,666 SQUARE FEET MORE OR LESS TRACT OF LAND, BEING A PORTION OF A "TRACT 1", A CALLED 177.58 ACRE TRACT OF LAND CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC., AND DESCRIBED IN CLERK'S FILE NO. 9523753 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, WITH 25% INTEREST SUBSEQUENTLY CONVEYED TO THE ESTATE OF GEORGE A. BOFYSIL, JR., DECEASED AS DESCRIBED IN CLERK'S FILE NO. 2012042830 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, AND A PORTION OF A CALLED 0.8878 ACRE TRACT OF LAND "SOUTH ACCESS TRACT" WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, OUT OF BLOCK 1, SECTION 23 OF THE I&GN RR CO. SURVEY, ABSTRACT NO. 624, IN GALVESTON COUNTY, TEXAS, SAID 15.144 ACRE TRACT OF LAND BEING MORE FULLY DESCRIBED AS FOLLOWS, WITH BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, ESTABLISHED FOR THE SOUTH CENTRAL ZONE, FROM THE NORTH AMERICAN DATUM OF 1983 (NA2011), EPOCH 2010.00:

COMMENCING: AT A 5/8 INCH IRON ROD FOUND ON THE SOUTH LINE OF A CALLED 10.6202 ACRE TRACT OF LAND CONVEYED TO GEORGE A. BOFYSIL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 8612041 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, A WEST LINE OF SAID 177.58 ACRE TRACT, AND THE NORTHEAST CORNER OF A CALLED 1.1653 ACRE TRACT OF LAND "NORTH ACCESS TRACT", WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS;

THENCE: S 03°15'11" E, DEPARTING THE SOUTH LINE OF SAID 10.6202 ACRE TRACT, ALONG AND WITH THE COMMON LINE BETWEEN SAID 1.1653 ACRE TRACT AND SAID 177.58 ACRE TRACT, A DISTANCE OF 61.48 FEET TO A POINT FOR THE SOUTHEAST CORNER OF SAID 1.1653 ACRE TRACT AND THE POINT OF BEGINNING OF THE HEREIN DESCRIBED 15.144 ACRE TRACT;

THENCE: DEPARTING SAID COMMON LINE, OVER AND ACROSS SAID 177.58 ACRE TRACT THE FOLLOWING COURSES AND DISTANCES:

SOUTHEASTERLY, ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIAL BEARING OF S 16°29'30" E, A RADIUS OF 565.00 FEET, A CENTRAL ANGLE OF 100°04'02", A CHORD BEARING AND DISTANCE OF S 56°27'29" E, 866.06 FEET, FOR AN ARC LENGTH OF 986.77 FEET TO A POINT, S 06°25'28" E, A DISTANCE OF 512.21 FEET TO A POINT,

SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET, A CENTRAL ANGLE OF 93°07'43", A CHORD BEARING AND DISTANCE OF S 40°08'24" W, 36.31 FEET, FOR AN ARC LENGTH OF 40.64 FEET TO A POINT,

S 86°42'15" W, A DISTANCE OF 272.49 FEET TO A POINT,

NORTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 560.00 FEET, A CENTRAL ANGLE OF 33°42'52", A CHORD BEARING AND DISTANCE OF N 76°26'19" W, 324.79 FEET, FOR AN ARC LENGTH OF 329.52 FEET TO A POINT,

N 59°34'53" W, A DISTANCE OF 130.77 FEET TO A POINT,

NORTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 540.00 FEET, A CENTRAL ANGLE OF 05°02'14", A CHORD BEARING AND DISTANCE OF N 62°08'00" W, 47.46 FEET, FOR AN ARC LENGTH OF 47.48 FEET TO A POINT,

N 25°22'52" E, A DISTANCE OF 74.94 FEET TO A 1/2 INCH ROD FOUND ON THE WEST LINE OF SAID 177.58 ACRE TRACT AT THE NORTHEAST CORNER OF A CALLED 0.8878 ACRE TRACT OF LAND "SOUTH ACCESS TRACT" WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS;

THENCE: N 03°15'11" W, ALONG AND WITH THE WEST LINE OF SAID 177.58 ACRE TRACT AND THE EAST LINE OF A CALLED 15.0859 ACRE TRACT OF LAND, CONVEYED TO GEORGE A. BOFYSIL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 8612043 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, A DISTANCE OF 799.97 FEET TO THE POINT OF BEGINNING, AND CONTAINING 15.144 ACRES IN GALVESTON COUNTY, TEXAS.

NOTES:

- ONE-FOOT RESERVE DEDICATED FOR BUFFER PURPOSES TO THE PUBLIC IN FEE AS A BUFFER SEPARATION BETWEEN THE SIDE OR END OF THE STREET WHERE SUCH STREETS ABUT ADJACENT PROPERTY, THE CONDITION OF SUCH DEDICATION BEING THAT WHEN THE ADJACENT PROPERTY IS SUBDIVIDED OR RE-SUBDIVIDED IN A RECORDED PLAT, THE ONE-FOOT RESERVE SHALL THEREUPON BECOME VESTED IN THE PUBLIC FOR STREET RIGHT-OF-WAY PURPOSES AND THE FEE TITLE THERETO SHALL REVERT TO AND REVEST IN THE DEDICATOR, HIS HEIRS, ASSIGNS OR SUCCESSORS.
- THE COORDINATES SHOWN HEREON ARE STATE PLANE GRID COORDINATES, REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD-83, AND MAY BE CONVERTED TO SURFACE VALUES BY DIVIDING THE COMBINED SCALE FACTOR OF 0.999880014.
- BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD-83.
- THIS PLAT WAS PREPARED FROM INFORMATION FURNISHED BY _____ TITLE COMPANY, EFFECTIVE DATE _____
- ALL EASEMENTS ARE CENTERED ON LOT LINES, UNLESS OTHERWISE INDICATED.
- THE RADIUS ON ALL BLOCK CORNERS IS TWENTY FIVE (25) FEET UNLESS OTHERWISE NOTED.
- INDICATES STREET NAME CHANGE SYMBOL.
- DIMENSIONS SHOWN ARE SURFACE.
- PROPERTY CORNERS ARE MONUMENTED WITH CAP OR DISK MARKED "PAPE-DAWSON", UNLESS NOTED OTHERWISE.
- PRELIMINARY PLATS ARE NOT ELIGIBLE, NOR AUTHORIZED, TO BE RECORDED IN ANY COUNTY RECORDS AND THAT FILING OF A PRELIMINARY PLAT SHALL BE PRIMA FACIE EVIDENCE OF A FRAUDULENT FILING UNDER THE TEXAS PROPERTY CODE SUBJECT TO THE PENALTIES THEREUNDER.
- SIDEWALKS AND ADA RAMPS ARE REQUIRED ALONG ALL CURB AND GUTTER STREETS PER THE APPROVED SIDEWALK ACCESSIBILITY PLAN. THE DEVELOPER MUST INSTALL SIDEWALKS AND ADA RAMPS ALONG RESERVES AND COMMON AREAS PRIOR TO THE CITY COUNCIL'S ACCEPTANCE OF THE SUBDIVISION INFRASTRUCTURE. WHEN SIDEWALKS ARE REQUIRED THEY SHALL BE A WIDTH OF NO LESS THAN FOUR FEET AND COMPLY WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- NO RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL STRUCTURE SHALL BE PERMITTED TO BE BUILT NEARER THAN 150 FEET FROM ANY WELL OR RELATED FACILITY, OTHER THAN STRUCTURES NECESSARY TO OPERATE THE WELL OR FACILITY.
- EXCEPT FOR LOW-PRESSURE DISTRIBUTION SYSTEM PIPELINES AS DEFINED IN CHAPTER 26, OF THE FRIENDSWOOD CITY CODE, NO RESIDENTIAL, COMMERCIAL OR INDUSTRIAL STRUCTURE SHALL BE ERRECTED OR MOVED TO A LOCATION NEARER THAN 50 FEET TO ANY PIPELINE, OTHER THAN STRUCTURES NECESSARY TO OPERATE THE PIPELINE.
- THE CITY OF FRIENDSWOOD SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE STREETS (DRIVEWAYS, SIDEWALKS, AND EMERGENCY ACCESS EASEMENTS), WATERLINES, SANITARY SEWER LINES, STORM SEWER FACILITIES, DETENTION PONDS, DRAINAGE EASEMENTS, OUTFALLS, AND SALES), RECREATIONAL AREAS, RESERVES AND OTHER PRIVATE FACILITIES THAT ARE WITHIN PRIVATE EASEMENTS; THE HOA SHALL BE RESPONSIBLE FOR THESE ITEMS. THE CITY OF FRIENDSWOOD SHALL BE RESPONSIBLE FOR MAINTENANCE OF PUBLIC STREETS, SIDEWALKS, STREET SIGNS, WATERLINES, SANITARY SEWER LINES, STORM SEWER FACILITIES, DRAINAGE EASEMENTS, OUTFALLS AND SALES THAT ARE WITHIN THE PUBLIC RIGHT-OF-WAY OR WITHIN PUBLIC AND/OR EXCLUSIVE EASEMENTS. THE MAINTENANCE OF STREET LIGHTS SHALL BE THE RESPONSIBILITY OF TEXAS NEW MEXICO POWER COMPANY.
- ALL UTILITY COMPANIES HAVE BEEN CONTACTED AND THE EASEMENTS SHOWN ON THE PLAT CONSTITUTE ALL OF THE EASEMENTS REQUIRED BY THE UTILITY COMPANIES FOR THEIR OPERATIONS.
- THE FINISHED FLOOR ELEVATIONS OF ALL STRUCTURES SHALL BE LOCATED ABOVE THE BASE FLOOD ELEVATION ESTABLISHED BY FEMA, AND AS PRESCRIBED IN THE FLOOD DAMAGE PREVENTION ORDINANCE OF THE CITY OF FRIENDSWOOD, TEXAS.
- ANY AND ALL RIGHT OF WAY ISLANDS LOCATED WITHIN THE BOUNDARIES OF THIS PLAT, EVEN IF NOT SHOWN ON THE FACE OF THE PLAT, SHALL BE MAINTAINED BY THE HOA.

GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT'S NOTES:

- BUILDINGS, FENCES OR OTHER STRUCTURES SHALL NOT BE ERRECTED IN GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT RIGHT-OF-WAYS OR DRAINAGE EASEMENTS.
- THE DETENTION POND AND ALL LANDSCAPING RESERVES ARE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION, ITS SUCCESSORS, OR ASSIGNS.
- NO BUILDING PERMIT SHALL BE ISSUED FOR ANY LOT WITHIN THIS SUBDIVISION UNTIL A DETENTION AND DRAINAGE PLAN HAS BEEN APPROVED BY THE GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT.
- ADDITIONAL DRAINAGE EASEMENTS MAY BE REQUIRED AT THE TIME A DRAINAGE PLAN IS SUBMITTED TO THE GALVESTON COUNTY CONSOLIDATED DRAINAGE DISTRICT FOR APPROVAL.
- PLANTINGS, FLOWER BEDS, OR OTHER LANDSCAPING IS NOT PERMITTED IN SIDE LOT DRAINAGE OR DETENTION EASEMENTS.
- NO BUILDING PERMIT SHALL BE APPLIED FOR UNTIL ALL DRAINAGE AND DETENTION FACILITIES ARE CONSTRUCTED, INSPECTED AND APPROVED BY THE DISTRICT.

ZONING INFORMATION

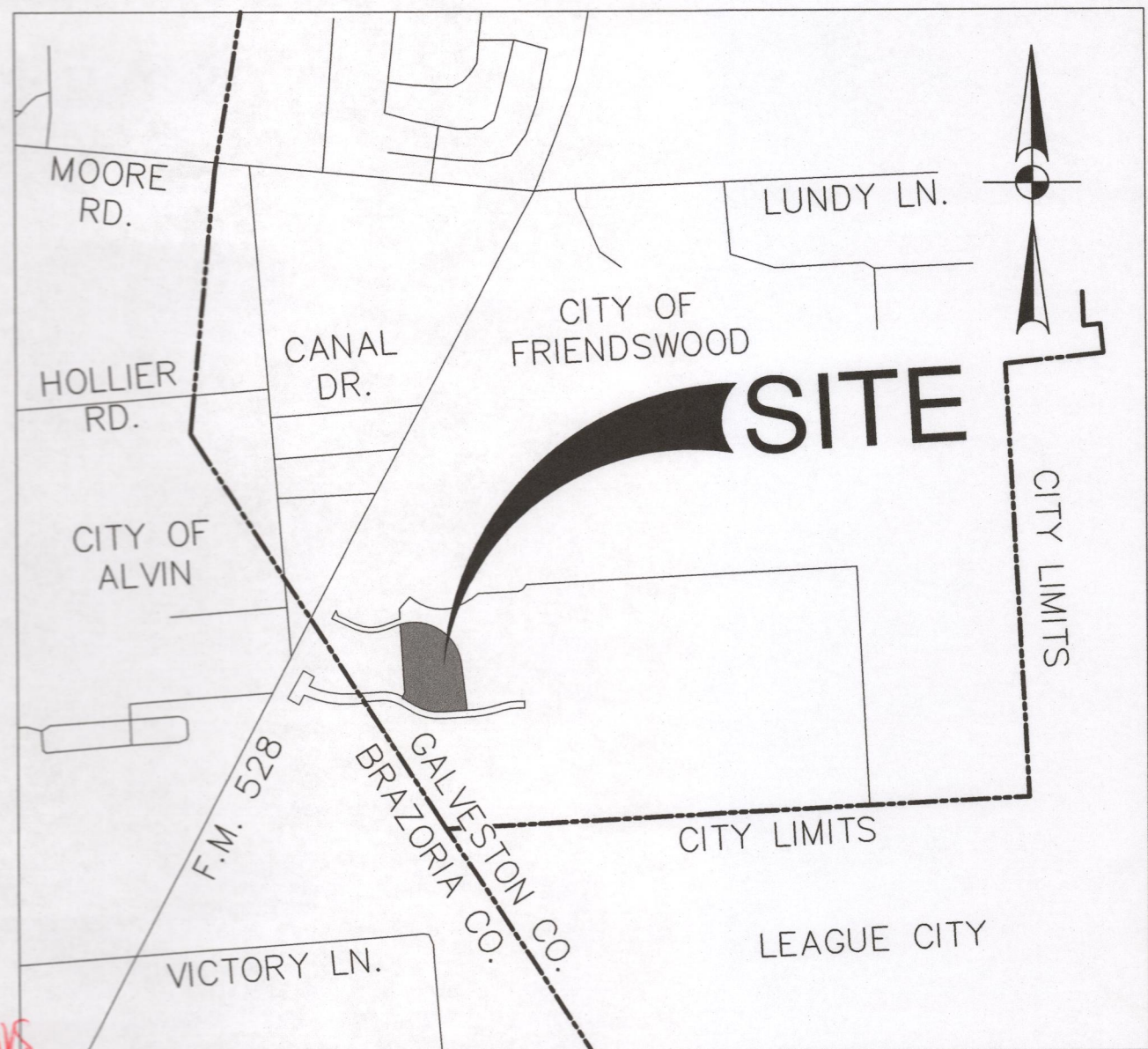
THIS PROPERTY IS ZONED "SFR" FOR SINGLE FAMILY RESIDENTIAL ACCORDING TO THE CITY MANAGER'S OFFICE OF FRIENDSWOOD AT 281-904-3250. THE FOLLOWING INFORMATION WAS OBTAINED.

REGULATION MATRIX—RESIDENTIAL DISTRICTS

Circled letters (letters in parentheses) refer to paragraphs in section 7-Q.3.

	Units per Acre	Lot Area Minimum Square Feet	Lot Width	Yards - Minimum Feet									Height Maximum Feet (b and e)	Parking Requirement Unit	Zero Lot Lines Y or No	Maximum Lot Coverage
				Front	Rear (a)	Interior (d)	Side									
							Backyard (f)	Backyard (g)								
									Side Yard	Rear Yard						
SFR Single-Family Residential	2.7	11,600	90 A	25 B	25	10 F	25 A	20 C	40	K	No	35%				
SFR Single-Family Residential	2.7	15,600	120 A	25 B	25	10	25 B	20 C	40	K	No	35%				
SFR-E Single-Family - Residential Estate	0.5	87,120	150 A	75	25	25	35	35	40	K	No	20%				
MFR-L Multifamily - Low	6 G	7,260 G	45 G	25 B	25	10 E, I	25 B	20 C	40	K	No	50%				
MFR-M Multifamily - Medium	9	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%				
MFR-H Multifamily - Highest	12	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%				
MHR Mobile Home A-1	10	—	—	25 B	25	10 I	30	25 B	20	K	No	50%				
MFR-GHD Garden Home District	6	6,000	60	20 B, H	20	0 D, J	5 B, H	4 C, H	40	K	Yes D	50%				

A.
B.
C.
K.



VICINITY MAP
SCALE 1"=2000'
MAP REF: KEY MAP #656 B,C

LEGEND

- FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
- ACRE SET 5/8" IRON ROD (PD)
- SET 1/2" IRON ROD (PD)—ROW
- AC = ACRE
- AE = AERIAL EASEMENT
- SSE = SANITARY SEWER EASEMENT
- STM SE = STORM SEWER EASEMENT
- WLE = WATER LINE EASEMENT
- DE = DRAINAGE EASEMENT
- UE = UTILITY EASEMENT
- EE = ELECTRICAL EASEMENT
- BL = BUILDING LINE
- R = RADIUS
- ROW = RIGHT-OF-WAY
- SF = SQUARE FEET
- IR = IRON ROD
- FD = FOUND
- COS = COMPENSATING OPEN SPACE
- GMAR = GALVESTON COUNTY MAP RECORDS
- GCDR = GALVESTON COUNTY DEED RECORDS
- GOCDRPP = GALVESTON COUNTY PUBLIC RECORDS OF REAL PROPERTY
- GOCD = GALVESTON COUNTY FLOOD CONTROL DISTRICT
- ORPPRC = OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY TEXAS
- GCCF = GALVESTON COUNTY CLERK'S FILE NUMBER

PRELIMINARY PLAT GEORGETOWN SEC 1

A SUBDIVISION OF 15.144 ACRES
LOCATED IN THE I&GN RR CO SURVEY,
BLOCK 1, SECTION 23, ABSTRACT 624
GALVESTON COUNTY, TEXAS
33 LOTS 3 RESERVES 2 BLOCKS
SCALE: 1"= 100' SEPTEMBER 24, 2018

OWNER:
CHRIS LINDHORST
D.R.HORTON-TEXAS, LTD.,
A TEXAS LIMITED LIABILITY PARTNERHIP
14100 SW FREEWAY, SUITE 500
SUGAR LAND, TEXAS 77478
(281) 566-2100

ENGINEER:
PAPE-DAWSON ENGINEERS
MICHAEL PREISS, P.E.
VICE PRESIDENT-HOUSTON

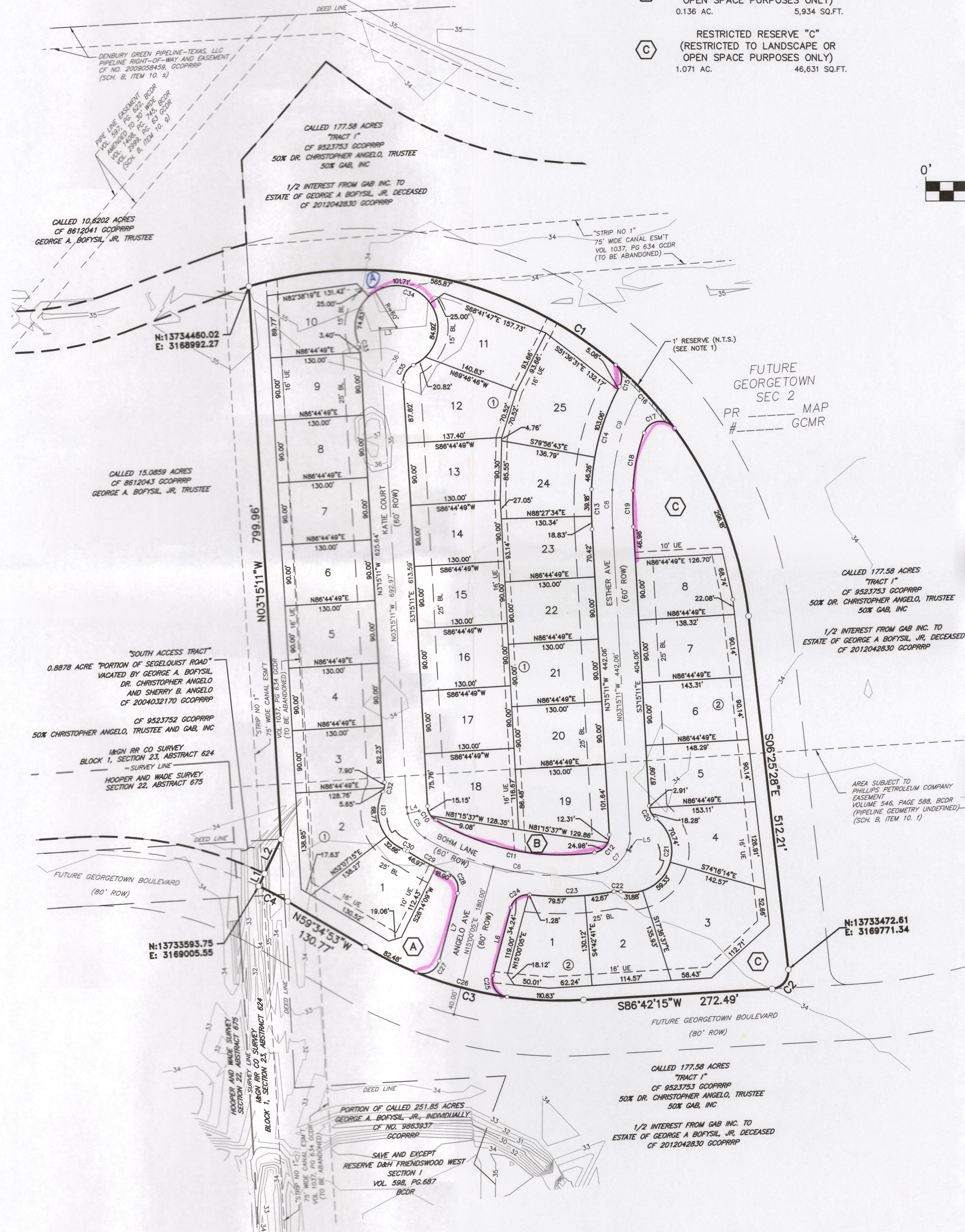
SURVEYOR:
PAPE-DAWSON ENGINEERS
RICHARD CHARITAT, R.P.L.S.
HOUSTON SURVEY DEPARTMENT MANAGER

**PAPE-DAWSON
ENGINEERS**

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE., STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #01919374

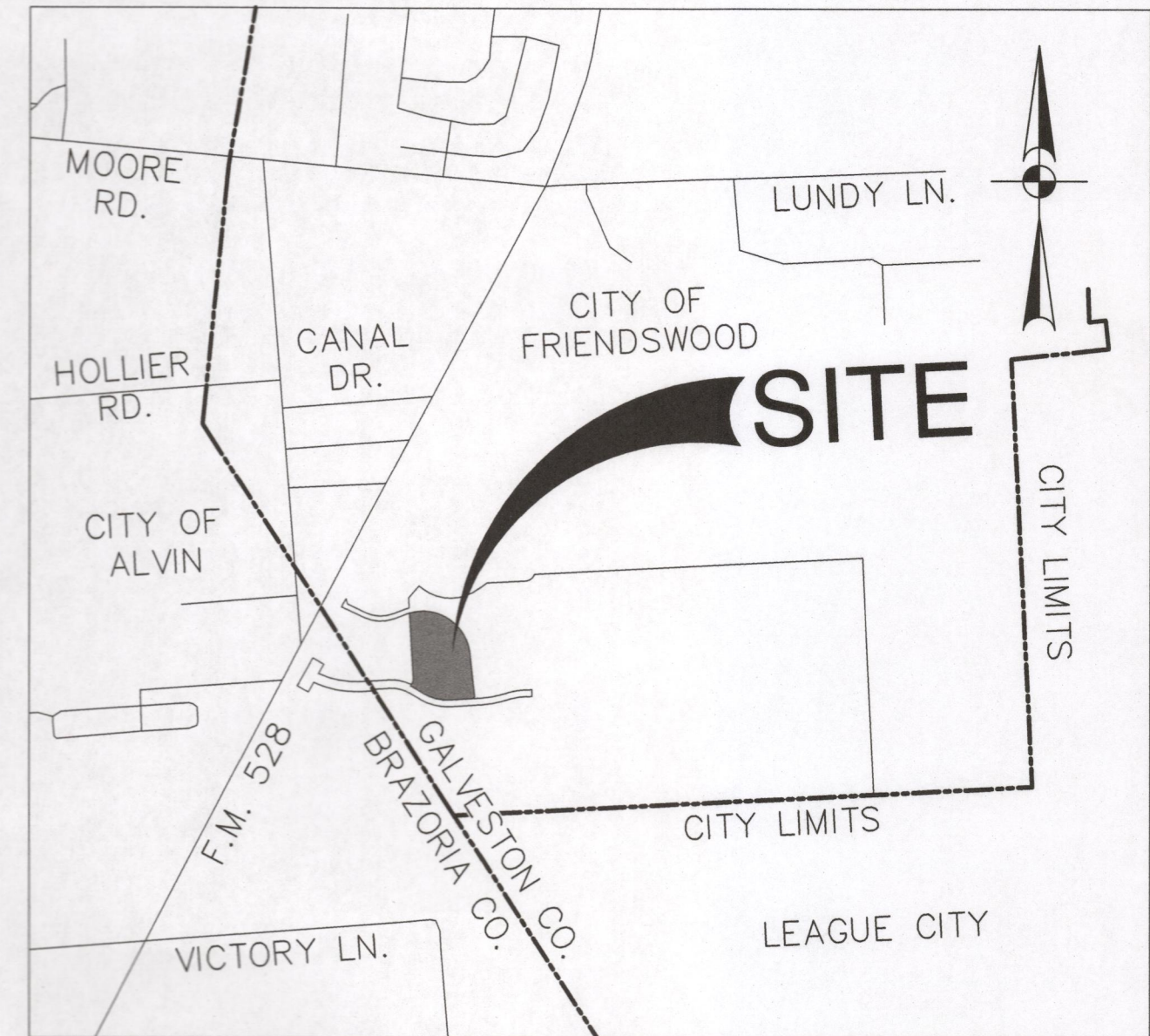
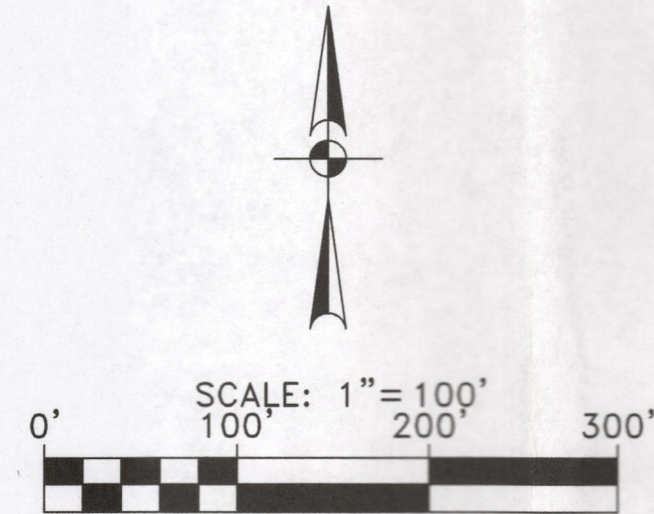
CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	565.00'	100°04'02"	S56°27'29"E	866.06'	986.77'
C2	25.00'	93°07'43"	S40°08'24"W	36.31'	40.64'
C3	560.00'	33°42'52"	N76°26'19"W	324.79'	329.52'
C4	540.00'	5°02'14"	N62°06'00"W	47.46'	47.48'
C5	55.00'	55°30'53"	S31°00'38"E	51.23'	53.29'
C6	380.00'	39°04'17"	S78°18'13"E	254.14'	259.13'
C7	55.00'	85°24'50"	N39°27'14"E	74.61'	81.99'
C8	600.00'	5°16'33"	S0°36'54"E	55.23'	55.25'
C9	300.00'	28°58'33"	S16°30'39"W	150.11'	151.72'
C10	25.00'	55°30'53"	S31°00'38"E	23.29'	24.22'
C11	350.00'	39°04'17"	S78°18'13"E	234.08'	238.67'
C12	25.00'	85°24'50"	N39°27'14"E	33.91'	37.27'
C13	630.00'	5°16'33"	N0°36'54"W	57.99'	58.01'
C14	330.00'	26°48'28"	N15°25'36"E	153.00'	154.40'
C15	25.00'	77°56'16"	N10°08'18"W	31.44'	34.01'
C16	565.00'	12°38'53"	S42°47'01"E	124.47'	124.72'
C17	25.00'	123°31'10"	S81°46'51"W	44.05'	53.90'
C18	270.00'	17°59'53"	S11°01'19"W	84.47'	84.81'
C19	570.00'	5°16'33"	S0°36'54"E	52.47'	52.49'
C20	25.00'	48°33'57"	S27°32'09"E	20.56'	21.19'
C21	60.00'	154°38'57"	S25°30'21"W	117.08'	161.95'
C22	25.00'	23°30'18"	N88°55'20"W	10.18'	10.26'
C23	410.00'	17°04'57"	S87°52'00"W	121.79'	122.24'
C24	25.00'	81°24'23"	S55°42'17"W	32.61'	35.52'
C25	25.00'	96°58'40"	S33°29'15"E	37.44'	42.31'
C26	560.00'	13°57'24"	N74°59'55"W	136.07'	136.41'
C27	25.00'	96°58'42"	N63°29'26"E	37.44'	42.31'
C28	25.00'	81°24'23"	N25°42'06"W	32.61'	35.52'
C29	410.00'	9°12'17"	N61°48'09"W	65.80'	65.87'
C30	25.00'	11°52'02"	N63°08'02"W	5.17'	5.18'
C31	60.00'	96°51'30"	N20°38'18"W	89.78'	101.43'
C32	25.00'	31°02'38"	N12°16'08"E	13.38'	13.55'
C33	25.00'	20°29'42"	N13°30'02"W	8.99'	8.94'
C34	60.00'	269°33'12"	S68°58'17"E	85.18'	282.28'
C35	25.00'	69°03'31"	S31°16'34"W	28.34'	30.13'

LINE TABLE		
LINE #	BEARING	LENGTH
L1	N25°22'52"E	20.00'
L2	N25°22'52"E	54.94'
L3	S86°44'49"W	24.62'
L4	S77°11'23"W	17.30'
L5	N67°40'44"W	4.58'
L6	S15°00'05"W	100.92'
L7	N15°00'05"E	100.92'



RESERVES

- A** RESTRICTED RESERVE "A"
(RESTRICTED TO LANDSCAPE OR
OPEN SPACE PURPOSES ONLY)
1.134 AC. 49,400 SQ.FT.
- B** RESTRICTED RESERVE "B"
(RESTRICTED TO LANDSCAPE OR
OPEN SPACE PURPOSES ONLY)
0.136 AC. 5,934 SQ.FT.
- C** RESTRICTED RESERVE "C"
(RESTRICTED TO LANDSCAPE OR
OPEN SPACE PURPOSES ONLY)
1.071 AC. 46,631 SQ.FT.



VICINITY MAP
SCALE 1"=2000'
MAP REF: KEY MAP #656 B,C

LEGEND

- FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
- ACRE SET 5/8" IRON ROD (PD)
- SET 1/2" IRON ROD (PD)-ROW
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- AE = AERIAL EASEMENT
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- GCDR = GALVESTON COUNTY DEED RECORDS
- GCOPRRP = GALVESTON COUNTY PUBLIC RECORDS OF REAL PROPERTY
- GCFCD = GALVESTON COUNTY FLOOD CONTROL DISTRICT
- OPRRPGC = OFFICIAL PUBLIC RECORDS OF GALVESTON COUNTY TEXAS
- GCCF = GALVESTON COUNTY CLERK'S FILE NUMBER

PRELIMINARY PLAT GEORGETOWN SEC 1

A SUBDIVISION OF 15.144 ACRES
LOCATED IN THE I&GN RR CO SURVEY,
BLOCK 1, SECTION 23, ABSTRACT 624
GALVESTON COUNTY, TEXAS

33 LOTS 3 RESERVES 2 BLOCKS
SCALE: 1"= 100 SEPTEMBER 24, 2018

OWNER:
CHRIS LINDHORST
D.R.HORTON-TEXAS, LTD.,
A TEXAS LIMITED LIABILITY PARTNERSHIP
14100 SW FREEWAY, SUITE 500
SUGAR LAND, TEXAS 77478
(281) 566-2100

ENGINEER:
PAPE-DAWSON ENGINEERS
MICHAEL PREISS, P.E.
VICE PRESIDENT-HOUSTON

SURVEYOR:
PAPE-DAWSON ENGINEERS
RICHARD CHARITAT, R.P.L.S.
HOUSTON SURVEY DEPARTMENT MANAGER

**PAPE-DAWSON
ENGINEERS**

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE., STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBP FIRM REGISTRATION #470 | TBP FIRM REGISTRATION #10189874

Preliminary Plat of Georgetown Section 2

This is the first section of the Georgetown development consisting of 68 residential lots.

1. [Compliance memo](#)
2. [Preliminary plat pg 1](#)
3. [Preliminary plat pg 2](#)

Memo

To: Planning and Zoning Commission
From: Becky Summers, Development Coordinator
Date: October 1, 2018
Re: Georgetown Section 2
Preliminary Plat

Project Description: Section 2 of the subdivision will contain 68 lots.

The plan has been reviewed by staff in the following departments: Planning, Public Works/Engineering, Fire Marshal, Parks, and Police Department. The proposed project appears to be in compliance with current City codes with the following exceptions:

- 1) Remove Zoning Information and portion of regulation matrix not SFR 11,600.
- 2) Add explanations for letter references A, B, C, K.
- 3) Specify reserve areas requiring sidewalks.
- 4) Add note to restrict driveway access on corner lots.
- 5) Draw and label actual pipeline location; specify 50' pipeline BL.

The plan is subject to review and approval by the Planning and Zoning Commission.

Date: Sep 23, 2018, 10:18am User ID: LMorales
File: K:\projects\406\23\30\2-0 Design\2-3-1 Preliminary\4062330_Prelim (Sec 2).dwg

CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	625.00'	98°46'35"	N55°48'46"W	948.92'	1077.48'
C2	550.00'	74°19'07"	N89°25'45"E	664.44'	713.41'
C3	75.00'	53°55'22"	N60°03'51"E	68.01'	70.58'
C4	940.00'	13°26'12"	S81°16'58"W	219.94'	220.44'
C5	860.00'	12°08'23"	S80°38'04"W	181.88'	182.22'
C6	25.00'	86°52'17"	N49°51'36"W	34.38'	37.90'
C7	500.00'	18°00'18"	S5°42'24"W	156.48'	157.12'
C8	600.00'	30°27'56"	N0°31'25"W	315.29'	319.03'
C9	900.00'	12°47'42"	S9°21'32"E	200.56'	200.98'
C10	600.00'	34°39'45"	S69°42'26"W	357.47'	362.98'
C11	620.00'	13°38'06"	N80°12'45"E	146.84'	147.18'
C12	600.00'	13°38'38"	S80°14'00"W	142.54'	142.88'
C13	300.00'	9°07'34"	N88°22'54"W	47.73'	47.78'
C14	300.00'	36°32'05"	S68°46'16"W	188.07'	191.30'
C15	300.00'	20°04'59"	N76°59'49"E	104.62'	105.15'
C16	600.00'	20°06'00"	S77°00'20"W	209.41'	210.49'
C17	55.00'	99°07'34"	N43°22'54"W	83.72'	95.15'
C18	25.00'	49°40'47"	S25°39'50"W	21.00'	21.68'
C19	60.00'	279°21'34"	N39°29'46"W	77.65'	292.54'
C20	25.00'	49°40'47"	N75°20'37"E	21.00'	21.68'
C21	330.00'	36°32'05"	N68°46'16"E	206.88'	210.43'
C22	270.00'	20°04'59"	N76°59'49"E	94.16'	94.64'
C23	630.00'	20°06'00"	N77°00'20"E	219.88'	221.01'
C24	25.00'	17°11'54"	N78°27'23"E	7.48'	7.50'
C25	60.00'	146°33'09"	S36°52'00"E	114.92'	153.47'
C26	25.00'	30°13'42"	S21°17'44"W	13.04'	13.19'
C27	25.00'	90°00'00"	S38°49'07"E	35.36'	39.27'
C28	270.00'	9°07'34"	N88°22'54"W	42.96'	43.01'
C29	570.00'	13°38'38"	S80°14'00"W	135.41'	135.73'
C30	650.00'	7°48'58"	S77°19'11"W	88.60'	88.67'
C31	25.00'	96°59'03"	S32°44'08"W	37.44'	42.32'
C32	630.00'	30°27'56"	S0°31'25"E	331.05'	334.99'
C33	470.00'	18°00'18"	S5°42'24"W	147.09'	147.69'
C34	25.00'	88°42'11"	S47°38'50"E	34.95'	38.70'
C35	25.00'	85°41'21"	N40°28'34"E	34.00'	37.39'
C36	540.00'	17°04'40"	N6°10'13"E	160.36'	160.95'
C37	570.00'	30°27'56"	N0°31'25"W	299.52'	303.08'
C38	25.00'	77°12'18"	N54°21'32"W	31.20'	33.69'
C39	570.00'	26°54'46"	S73°34'56"W	265.28'	267.74'
C40	25.00'	67°35'14"	S26°19'56"W	27.81'	29.49'
C41	60.00'	273°44'15"	N50°35'33"W	82.04'	286.66'
C42	25.00'	29°44'58"	N71°24'05"E	12.84'	12.98'
C43	630.00'	30°54'15"	N71°58'44"E	335.71'	339.81'
C44	25.00'	98°36'30"	N38°07'37"E	37.91'	43.03'
C45	930.00'	8°12'57"	N7°04'10"W	133.24'	133.36'
C46	25.00'	90°00'00"	N47°57'41"W	35.36'	39.27'
C47	270.00'	36°32'05"	S68°46'16"W	169.26'	172.17'
C48	25.00'	99°07'34"	N43°22'54"W	38.06'	43.25'
C49	570.00'	20°06'00"	S77°00'20"W	198.94'	199.96'
C50	330.00'	14°28'40"	S74°11'40"W	83.16'	83.39'
C51	25.00'	84°23'42"	S39°14'10"W	33.58'	36.82'
C52	870.00'	9°10'03"	S7°32'43"E	139.05'	139.20'
C53	25.00'	85°26'54"	S54°51'11"E	33.92'	37.28'
C54	590.00'	9°00'41"	N77°55'02"E	92.70'	92.79'
C55	630.00'	13°38'38"	N80°14'00"E	149.67'	150.02'
C56	330.00'	4°13'31"	N89°10'05"E	24.33'	24.34'
C57	25.00'	85°05'58"	N48°43'52"E	33.81'	37.13'

LOT TABLE			
BLOCK	LOT	SQUARE FEET	ACRES
1	1	14,514	0.33
1	2	12,989	0.30
1	3	12,154	0.28
1	4	12,476	0.29
1	5	12,303	0.28
1	6	12,388	0.28
1	7	13,865	0.32
1	8	12,268	0.28
1	9	12,024	0.28
1	10	12,847	0.30
1	11	11,701	0.27
1	12	11,704	0.27
1	13	11,892	0.27
1	14	12,459	0.29
1	15	14,801	0.34
2	1	15,377	0.35
2	2	16,656	0.38
2	3	17,749	0.41
2	4	14,617	0.34
2	5	15,123	0.35
2	6	14,224	0.33
2	7	13,431	0.31
2	8	14,277	0.33
2	9	13,076	0.30
2	10	15,070	0.35
2	11	13,589	0.31
2	12	12,374	0.28
2	13	13,876	0.32
2	14	16,657	0.38
2	15	14,092	0.32
2	16	13,134	0.30
2	17	13,745	0.32
2	18	12,566	0.29
2	19	14,168	0.33
2	20	14,329	0.33
2	21	12,048	0.28
2	22	11,699	0.27
2	23	11,699	0.27
2	24	11,697	0.27
2	25	13,978	0.32
2	26	15,645	0.36
2	27	13,602	0.31
2	28	12,298	0.28
2	29	11,699	0.27
2	30	11,699	0.27
2	31	11,699	0.27
2	32	11,699	0.27
2	33	12,678	0.29
2	34	24,081	0.55
2	35	13,504	0.31
2	36	13,000	0.30
2	37	16,875	0.39
3	1	14,423	0.33
3	2	11,700	0.27
3	3	11,700	0.27
3	4	12,212	0.28
3	5	12,798	0.29
3	6	12,288	0.28
3	7	11,900	0.27
3	8	14,270	0.33
3	9	15,147	0.35
3	10	12,334	0.28
3	11	13,321	0.31
3	12	12,589	0.29
3	13	11,700	0.27
3	14	11,700	0.27
3	15	11,700	0.27
3	16	16,344	0.38

LOT SUMMARY TABLE	
AVG LOT AREA	13,446 SQ FT

ZONING INFORMATION

THIS PROPERTY IS ZONED "SFR" FOR SINGLE FAMILY RESIDENTIAL ACCORDING TO THE CITY MANAGER'S OFFICE OF FRIENDSWOOD AT 281-996-3290. THE FOLLOWING INFORMATION WAS OBTAINED.

REGULATION MATRIX—RESIDENTIAL DISTRICTS

Circled letters (letters in parentheses) refer to paragraphs in section 7-Q.3.

				Yards - Minimum Feet						Height Maximum Feet (b and e)	Parking Require ment Unit	Zero Lot Lines Y or No	Maximum Lot Coverage
				Front	Rear (a)	Side							
						Interior (d)	Exterior (Corner Lot)						
							Backing Up to an Abutting Side Yard	Backing Up to an Abutting Rear Yard					
	Units per Acre	Lot Area Minimum Square Feet	Lot Width										
SFR Single-Family Residential	2.7	11,600	90 A	25 B	25	10 F	25 A	20 C	40	K	No	35%	
SFR Single-Family Residential	2.7	15,600	120 A	25 B	25	10	25 B	20 C	40	K	No	35%	
SFR-E Single-Family - Residential Estate	0.5	87,120	150 A	75	25	25	35	35	40	K	No	20%	
MFR-L Multifamily - Low	6 G	7,260 G	45 G	25 B	25	10 E, I	25 B	20 C	40	K	No	50%	
MFR-M Multifamily - Medium	9	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%	
MFR-H Multifamily - Highest	12	—	—	25 B	0	10 E, I	25 B	20 C	40	K	No	50%	
MHR Mobile Home A-1	10	—	—	25 B	25	10 I	30	25 B	20	K	No	50%	
MFR-GHD Garden Home District	—	—	—	25 B	25	10 I	25 B	20 C	40	K	No	10%	
MFR-GHD Garden Home District	6	6,000	60	20 B, H	20	0 D, J	5 B, H	4 C, H	40	K	Yes D	60%	

Add letter references A, B, C, K

METES AND BOUNDS DESCRIPTION OF

A 40.675 ACRE, OR 1,771,800 SQUARE FEET MORE OR LESS TRACT OF LAND, BEING A PORTION OF A "TRACT 1", A CALLED 177.58 ACRE TRACT OF LAND CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC., AND DESCRIBED IN CLERK'S FILE NO. 9523753 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, WITH 25% INTEREST SUBSEQUENTLY CONVEYED TO THE ESTATE OF GEORGE A. BOFYSL, JR., DECEASED AS DESCRIBED IN CLERK'S FILE NO. 2010242830 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, BEING OUT OF BLOCK 1, SECTION 23 OF THE I&GN RR CO. SURVEY, ABSTRACT NO. 624, IN GALVESTON COUNTY, TEXAS; SAID 40.675 ACRE TRACT OF LAND BEING MORE FULLY DESCRIBED AS FOLLOWS, WITH BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, ESTABLISHED FOR THE SOUTH CENTRAL ZONE, FROM THE NORTH AMERICAN DATUM OF 1983 (NA2011), EPOCH 2010.00:

BEGINNING: AT A 5/8 INCH IRON ROD FOUND ON THE NORTH LINE OF SAID 177.58 ACRE TRACT, AT THE NORTHEAST CORNER OF A CALLED 10.6202 ACRE TRACT OF LAND CONVEYED TO GEORGE A. BOFYSL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 8612041 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS; FROM WHICH A COPPERWELD FOUND ON THE SOUTHEAST RIGHT-OF-WAY LINE OF F.M. 528, A 180-FOOT WIDE RIGHT-OF-WAY, AT THE SOUTHWEST CORNER OF A CALLED 106.089 ACRE TRACT OF LAND, CONVEYED TO GEORGE A. BOFYSL, JR., TRUSTEE AND DESCRIBED IN CLERK'S FILE NO. 9612253 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS, THE NORTHWEST CORNER OF SAID 10.6202 ACRE TRACT BEARS S 87°03'17" W, A DISTANCE OF 2148.34 FEET;

THENCE: N 87°03'17" E, ALONG AND WITH THE COMMON LINE BETWEEN SAID 106.089 ACRE TRACT AND SAID 177.58 ACRE TRACT, A DISTANCE OF 929.59 FEET TO A POINT; FROM WHICH A CAR AXLE FOUND FOR THE SOUTHEAST CORNER OF SAID 106.089 ACRE TRACT BEARS N 87°03'17" E, A DISTANCE OF 2981.55 FEET;

THENCE: DEPARTING SAID COMMON LINE, OVER AND ACROSS SAID 177.58 ACRE TRACT THE FOLLOWING COURSES AND DISTANCES:

S 06°10'53" W, A DISTANCE OF 678.26 FEET TO A POINT,

N 84°31'04" W, A DISTANCE OF 201.94 FEET TO A POINT,

S 87°04'30" W, A DISTANCE OF 269.11 FEET TO A POINT,

S 82°00'27" W, A DISTANCE OF 85.72 FEET TO A POINT,

S 73°36'01" W, A DISTANCE OF 185.62 FEET TO A POINT,

S 07°26'08" E, A DISTANCE OF 78.98 FEET TO A POINT,

S 00°14'57" E, A DISTANCE OF 111.53 FEET TO A POINT,

S 06°18'25" W, A DISTANCE OF 95.33 FEET TO A POINT,

S 13°29'42" W, A DISTANCE OF 104.95 FEET TO A POINT,

S 06°13'46" W, A DISTANCE OF 175.75 FEET TO A POINT,

S 01°59'56" E, A DISTANCE OF 123.71 FEET TO A POINT,

S 88°00'04" W, A DISTANCE OF 180.32 FEET TO A POINT,

SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 940.00 FEET, A CENTRAL ANGLE OF 13°26'12", A CHORD BEARING AND DISTANCE OF S 81°16'58" W, 219.94 FEET, FOR AN ARC LENGTH OF 220.44 FEET TO A POINT,

S 74°33'52" W, A DISTANCE OF 125.81 FEET TO A POINT,

SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 860.00 FEET, A CENTRAL ANGLE OF 12°08'23", A CHORD BEARING AND DISTANCE OF S 80°38'04" W, 181.88 FEET, FOR AN ARC LENGTH OF 182.22 FEET TO A POINT,

S 86°42'15" W, A DISTANCE OF 8.08 FEET TO A POINT,

NORTHWESTERLY, ALONG A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET, A CENTRAL ANGLE OF 86°52'17", A CHORD BEARING AND DISTANCE OF N 49°51'36" W, 34.38 FEET, FOR AN ARC LENGTH OF 37.90 FEET TO A POINT,

N 06°25'28" W, A DISTANCE OF 518.23 FEET TO A POINT

NORTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 625.00 FEET, A CENTRAL ANGLE OF 98°46'35", A CHORD BEARING AND DISTANCE OF N 55°48'46" W, 948.92 FEET, FOR AN ARC LENGTH OF 1077.48 FEET TO A FOUND 5/8 INCH IRON ROD ON THE COMMON LINE BETWEEN SAID 10.6202 ACRE TRACT AND SAID 177.58 ACRE TRACT, AT THE NORTHEAST CORNER OF A CALLED 1.1653 ACRE TRACT OF LAND "NORTH ACCESS TRACT", WITH 50% INTEREST CONVEYED TO DR. CHRISTOPHER ANGELO, TRUSTEE AND GAB, INC. AND DESCRIBED IN CLERK'S FILE NO. 9523752 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY, TEXAS;

THENCE: ALONG AND WITH THE COMMON LINE BETWEEN SAID 10.6202 ACRE TRACT AND SAID 177.58 ACRE TRACT THE FOLLOWING COURSES AND DISTANCES:

N 03°15'11" W, A DISTANCE OF 121.05 FEET TO A FOUND 1/2 INCH IRON ROD,

N 40°49'00" E, A DISTANCE OF 186.90 FEET TO A FOUND 5/8 INCH IRON ROD,

S 53°19'47" E, A DISTANCE OF 65.07 FEET TO A FOUND 5/8 INCH IRON ROD,

NORTHEASTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIAL BEARING OF N 36°35'18" E, A RADIUS OF 550.00 FEET, A CENTRAL ANGLE OF 74°19'07", A CHORD BEARING AND DISTANCE OF N 69°25'45" E, 664.44 FEET, FOR AN ARC LENGTH OF 713.41 FEET TO A POINT,

N 52°16'12" E, A DISTANCE OF 112.38 FEET TO A POINT,

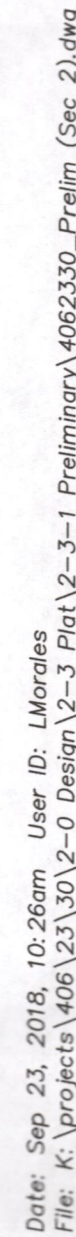
N 87°02'19" E, A DISTANCE OF 482.56 FEET TO A POINT,

NORTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIAL BEARING OF N 02°58'28" W, A RADIUS OF 75.00 FEET, A CENTRAL ANGLE OF 53°55'22", A CHORD BEARING AND DISTANCE OF N 60°03'51" E, 68.01 FEET, FOR AN ARC LENGTH OF 70.58 FEET TO A POINT,

N 33°47'04" E, A DISTANCE OF 54.69 FEET TO THE POINT OF BEGINNING, AND CONTAINING 40.675 ACRES IN GALVESTON COUNTY, TEXAS.

LINE TABLE		
LINE #	BEARING	LENGTH
L1	N33°47'04"E	54.69'
L2	S82°00'27"W	85.72'
L3	S7°26'08"E	78.98'
L4	S6°18'25"W	95.33'
L5	S86°42'15"W	8.08'
L6	S53°19'47"E	65.07'
L7	S3°17'45"E	46.79'
L8	N37°37'26"W	17.27'

LINE TABLE		
LINE #	BEARING	LENGTH
L9	N87°02'19"E	70.29'
L10	N66°57'20"E	57.86'
L11	N52°23'38"E	4.36'
L12	N50°30'14"E	45.55'
L13	N66°57'20"E	57.86'
L14	S83°49'07"E	105.00'
L15	S15°45'23"E	39.04'
L16	S3°17'45"E	53.93'

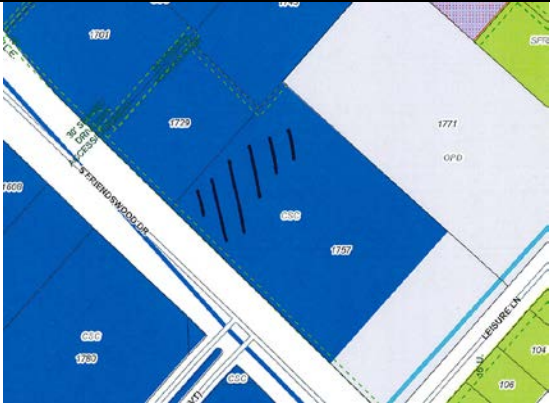


Memo

To: Planning & Zoning Commission
 From: Aubrey Harbin, Director of Community Development/Planner
 Date: October 4, 2018
 Re: DRC Report

The following DRC Meetings were held in September 2018.

Project	Current Zoning	Zone Change Required? Y/N	Issues discussed	Location
3099 W Parkwood Ave Add 60x60 building and parking area at Pearland Shooting Club	Light Industrial (LI)	Specific Use Permit (SUP)	Adding a building requires the zoning to be brought into compliance, which requires a Specific Use Permit (SUP); no additional landscaping or screening will be required for the new building; new parking will be required – 1 parking space per 200 square feet of indoor facilities; utilities – existing well and septic services exist on the property; eligible to purchase regional detention for added impervious cover; not located in any hazardous flood zones; kitchen suppression system will be required and fire sprinkler may be required (based on occupant load)	

Georgetown Subdivision (572 lots/approx. 350 acres) Main entrance to the subdivision is in Alvin; but all lots are located within Friendswood City Limits	SFR	No	Preliminary & Final Plats required – tree survey required for common areas; Utility Services Agreement with City Council – required to be updated and executed; three off-site water line extensions required prior to acceptance of first section; site plan requirements apply for private recreation center; for single family homes – min. landscape req. is 1 tree per lot; Park Dedication Fee of \$600/dwelling unit is due when bldg. permit is issued; on-site detention required; approval by GCCDD required; driveways and other improvements in FM 528 right-of-way require TxDOT permits; min. 50-ft setback req. from pipelines for habitable structures; sign permits required for subdivision signs within City of Friendswood	
1757 S. Friendswood Dr. Proposed Chick-Fil-A – fast food	CSC	No	Site plan approval required by P&Z; Community Overlay District (COD) requirements apply; drainage and utilities are existing for the property – tie ins and sizing information required at time of permitting; grease trap required; fire sprinkler and fire alarm system required; submit plans to Galveston County Health District for review and approval	
1701 S. Friendswood Dr. Proposed quick lube and fast food establishment	CSC	No	Site plan approval required by P&Z; Community Overlay District (COD) requirements apply; drainage and utilities are existing for the property – tie ins and sizing information required at time of permitting; grease trap required; fire sprinkler and fire alarm system required; submit plans to Galveston County Health District for review and approval	

407 S. Friendswood Dr. Proposed addition to existing building – approx. 1773 square feet	DD	No	Site plan approval required by P&Z; Downtown District fenestration requirements and building façade materials apply to building addition; fees waived due to DD zoning; parking calculations required to verify adequate parking for building; water and sewer are existing; regional detention may be available – submit to Galveston County Consolidated Drainage District; TxDOT permits required for any work within FM 518 right-of-way;	
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