

NOTICE OF A SPECIAL AND REGULAR MEETING OF THE CITY OF FRIENDSWOOD PLANNING AND ZONING COMMISSION, TO BE HELD THURSDAY, NOVEMBER 15, 2018, BEGINNING AT 7 PM, IN THE COUNCIL CHAMBERS AT CITY HALL LOCATED AT 910 S. FRIENDSWOOD DRIVE, FRIENDSWOOD, TEXAS

SPECIAL MEETING, P&Z ACTING AS THE 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. Consideration 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 November 5, 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 Clear Creek Community Church of Friendswood](#) being a subdivision of 39.41 acres of land out of a call 135.778 acre tract of land located in the Sarah McKissick Survey, A-549, City of Friendswood, Harris County, Texas

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

Monday, December 3 – Joint Public Hearing, special meeting

Thursday, December 6 – regular meeting

Thursday, December 20 – regular meeting

6. Communications

- a. Commissioners

Suggestions for future agenda items and general comments

Updates from liaison assignments

- b. Council Liaison – Sally Branson

- c. Staff

[October 2018 DRC Report](#)

7. Adjournment

Aubrey Harbin, LEED AP
Director of Community Development/City Planner

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretative services must be made 48 hours prior to this meeting. Please contact the City Secretary's Office at (281) 996-3270 for further information.

I, Melinda Welsh, City Secretary of the City of Friendswood, do certify that the ABOVE NOTICE OF MEETING of the Friendswood Planning and Zoning Commission was posted in a place convenient to the general public in compliance with Chapter 551, Texas Government Code on the 8th day of November, 2018, at _____.

Melinda Welsh, City Secretary

<i>All meetings of the Planning & Zoning Commission are open to the public, except when there is a necessity to meet in an Executive Session (closed to the public) under the provisions of Section 551, Texas Government Code. The Planning & Zoning Commission reserves the right to convene into Executive Session to hear any of the above described agenda items that qualifies for an executive session by publicly announcing the applicable section number of the Open Meetings Act.</i>



FRIENDSWOOD PLANNING & ZONING COMMISSION AGENDA ITEM FORM

Subject: 2018 Update Study of Land Use Assumptions, Capital Improvements Plan & Impact Fees

Current Ordinance/Requirement:
Chapter 395 – Local Government Code

SUMMARY / ORIGINATING CAUSE

Impact fees are capital recovery fees used to expand the water and sewer systems to accommodate new growth. In order to assess an impact fee, a City must use land use assumptions to determine population growth and provide details on specific capital improvement projects that will be funded with the fees collected.

The impact fees are paid at the time of building permit issuance and are based on meter size. The City first began charging impact fees in 1990. Chapter 395 of the Local Government Code requires an updated study every five years. The last update was in 2013.

The City hired Daniel Scott Engineering, LLC to update the study for 2018. The draft of the study is provided in the back-up material. As the Capital Improvement Advisory Committee (CAIC), the commission is tasked with providing a written report, which is required before the fifth business day before the Public Hearing that is scheduled for Monday, January 14, 2019.

IMMINENT CONSEQUENCES / BENEFIT TO COMMUNITY

Changing the amount of the impact fees affects the fees that developers are required to pay for new development; however, the funds that are collected go towards expansion of the City's water and sewer system to accommodate for the growth.

RECOMMENDATIONS

The recommended fee in the study are as follows:

\$1,391 - water

\$2,820 – sewer

\$4,211 – total for a one-inch meter.

ATTACHMENTS

[2018 Draft Update Study of Land Use Assumptions Capital Improvements Plan and Impact Fees](#)

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:

DANIEL SCOTT
ENGINEERING, LLC

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TBPE F-9827

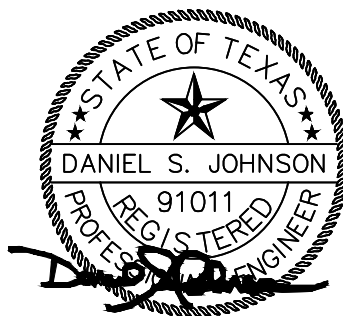
CITY OF FRIENDSWOOD
IMPACT FEE STUDY

ADVISORY COMMITTEE

MEMBER
MEMBER
MEMBER
MEMBER
MEMBER
MEMBER
MEMBER

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

DRAFT



10/30/2018

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

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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

Year	Revision	Resolution	Preparer
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
- 2001 Groundwater Reduction Plan
- 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

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IMPACT FEE STUDY

The City's Comprehensive Plan, Vision 2020, and the Groundwater Reduction Plan projected a build-out population of 57,400 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
US Census Data	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. EXISTING CAPITAL IMPROVEMENTS

1. WATER SUPPLY AND DISTRIBUTION

Historically, water supply for the City of Friendswood was served exclusively by groundwater. However, in 1975, the Harris-Galveston Subsidence District (HGSD) was created by the Texas Legislature for the purpose of preventing land subsidence and increased flooding. Under HGSD's requirements, it was determined that the City's future water supply must be converted from a majority of groundwater use to a majority of surface water use.

In January 2001, a Groundwater Reduction Plan (GRP) was developed by Klotz Associates, Inc. in order to meet the HGSD requirements. The GRP indicated that the total water supply needed for the anticipated buildout population of 57,400 would be 16.8 million gallons per day (MGD):

$$57,400 \times 136 \text{ gallons per person per day} \times 2.16 \text{ peaking factor} = 16.8 \text{ MGD}$$

Further, it determined that, in order to meet groundwater reduction goals, the appropriate mix should be 11.8 MGD surface water and 5.0 MGD groundwater. As such, the City of Friendswood has diligently purchased 12.0 MGD of water treatment capacity from the City of Houston's Southeast Water Purification Plant, La Porte Water Authority, and MUD 55.

As described in the PROGRAM, there are six (6) water projects that will be needed in the next 5 years in order to upgrade, update, and improve the existing Capital Improvements to meet the existing needs of the City. Although these projects cannot be used in the Impact Fee calculation, their inclusion in this Study is a requirement of Section 395.014 (a) (1) and (2) of the Impact Fee Legislation:

TABLE 5
WATER PROJECTS FOR EXISTING NEEDS

<u>WATER PROJECTS</u>	<u>APPROXIMATE COST</u>
1. City of Houston Water Plant Rehabilitation	\$ 3,500,000
2. Water Plant #1 Rehabilitation	\$ 1,339,000
3. 42" Water Main Replacement	\$ 12,545,000
4. Elevated Storage Tank #2 Rehabilitation	\$ 1,059,000
5. Water Plant Tank #3 Rehabilitation	\$ 706,000
6. Water Plant Tank #4 Rehabilitation	\$ 706,000
SUBTOTAL WATER	\$ 19,855,000

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

2. WASTEWATER COLLECTION AND TREATMENT

Since 1979, the City of Friendswood has purchased 4.875 MGD of the 9.25 MGD capacity in the Blackhawk Regional Wastewater Treatment Facility. 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.

In order to serve the anticipated buildout population of 57,400 people, a total capacity of 6.5 MGD will be needed:

$$\begin{aligned} 57,400 \text{ people} / 2.8 \text{ people per connection} &= 20,500 \text{ connections} \\ 20,500 \text{ connections} \times 315 \text{ gallons per connection} &= 6.5 \text{ MGD} \end{aligned}$$

Therefore, a 2.0 MGD Phase III expansion is anticipated to serve new development and was included in the 2013 impact fee calculation. Additionally, the PROGRAM identified 10 wastewater projects needed in the next 5 years in order to upgrade, update, and improve the existing Capital Improvements to meet the existing needs of the City. Although these projects cannot be used in the Impact Fee calculation, their inclusion in this Study is a requirement of Section 395.014 (a) (1) and (2) of the Impact Fee Legislation:

TABLE 6
WASTEWATER PROJECTS FOR EXISTING NEEDS

<u>WASTEWATER PROJECTS</u>	<u>APPROXIMATE COST</u>
1. Lift Station #1 Replacement	\$ 1,594,000
2. Lift Station #4 Replacement	\$ 1,594,000
3. Lift Station #17 Replacement	\$ 1,594,000
4. Lift Station #22Replacement	\$ 2,372,000
5. Lift Station #23 Replacement	\$ 3,540,000
6. Sanitary Sewer System Assessment Phase 4	\$ 1,464,000
7. Sanitary Sewer System Assessment Phase 5	\$ 100,000
8. Sanitary Sewer System Assessment Phase 6	\$ 100,000
9. Sanitary Sewer System Assessment Phase 7	\$ 175,000
<u>10. Sanitary Sewer System Assessment Phase 8</u>	<u>\$ 1,830,000</u>
SUBTOTAL WASTEWATER	\$ 14,363,000

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

C. 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.

Four (4) water projects and five (5) wastewater projects were identified within the PROGRAM for this CIP and are included in Table 7. The approximate subtotal costs are \$6.8M for the water projects and \$13.7M for the wastewater projects.

TABLE 7
CAPITAL IMPROVEMENTS PLAN

<u>WATER PROJECTS</u>	<u>APPROXIMATE COST</u>
1. Sixteen Inch Waterline Phase III	\$ 2,500,000
2. Beamer Road Waterline	\$ 2,043,000
3. East Waterline	\$ 1,354,000
4. South Friendswood Waterline	\$ 878,000
SUBTOTAL WATER	\$ 6,775,000
<u>WASTEWATER PROJECTS</u>	<u>APPROXIMATE COST</u>
1. Beamer Road Sanitary Sewer	\$ 4,200,000
2. El Dorado Sanitary Sewer	\$ 3,880,000
3. FM 528 – Falcon Ridge to Windsong Sanitary Sewer	\$ 1,005,000
4. FM 528 – Lundy Lane to Tower Estates Sanitary Sewer	\$ 1,585,000
5. Windsong Sanitary Sewer	\$ 3,061,000
SUBTOTAL WASTEWATER	\$ 13,731,000

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

D. PROJECT DESCRIPTIONS

Project descriptions for the four (4) water projects and five (5) wastewater projects contained within this CIP were also included within the PROGRAM, and are provided below per the requirement of Section 395.014 (a) (3) of the Impact Fee Legislation:

Water Project #1: Sixteen Inch Waterline Phase III \$ 2,500,000

The proposed improvements would extend waterlines west from Water Plant #4 connecting to existing City waterlines in the western reaches of the City Limits. Currently, limited unlooped waterlines service various developments throughout the western region of Friendswood. This proposed water line loop would open up development opportunities along FM 528 and greatly improve water pressure.

Water Project #2: Beamer Road Waterline \$ 2,043,000

This project consists of the proposed installation of a twelve-inch waterline along Beamer Road from FM2351 to Dixie Farm Road. The proposed improvements will expand those installed in the 2010 Beamer Road utility project funded with U.S. Economic Development Administration Grant. Efforts to attract light industry and office warehouse business and development into this area are largely dependent on availability of City service infrastructure.

Water Project #3: East Waterline \$ 1,354,000

This project consists of the installation of approximately 2,850 linear feet of fourteen-inch waterline that would extend water service to the East Service Area, and then loop the line back into the existing system by installing 6,600 linear feet of twelve-inch waterline to Bay Area Boulevard. This project will provide water to the eastern most area of the City and loop the FM 528 line to the Bay Area Boulevard line.

Water Project #4: South Friendswood Waterline \$ 878,000

This project would extend waterlines south along FM 528 connecting to existing City water-lines in the southern reaches of the City Limits. Currently, limited unlooped water lines service various developments throughout the southern region of Friendswood. The proposed water line loop would open up development opportunities along FM 528.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

Wastewater Project #1: Beamer Road Sanitary Sewer \$ 4,200,000

This project consists of the proposed installation of additional gravity sewer lines along Beamer Road toward Dixie Farm. The proposed improvements will expand those installed in the 2010 Beamer Road utility project funded with U.S. Economic Development Administration Grant. Efforts to attract light industry and office warehouse business and development into this area are largely dependent on availability of City service infrastructure.

Wastewater Project #2: El Dorado Sanitary Sewer \$ 3,880,000

This project will include approximately 2,500 feet of six-inch force main, 5,000 feet of twelve-inch gravity sewer, 1,500 feet of fifteen-inch gravity sewer, and twenty manholes. The lift station will be located in the vicinity of the intersection of Lundy Lane and El Dorado Lane. Easements must be obtained for construction and installation of the Lift Station. Currently this area consists of 36 large lots and large acreage tracts, and is served by individual septic systems.

Wastewater Project #3: \$ 1,005,000
FM528 - Falcon Ridge to Windsong Sanitary Sewer

The purpose of this project is to provide sanitary sewer to the non-serviced area along FM 528 from Falcon Ridge to Windsong. The project will require construction of a Lift Station, approximately 5,700 feet of eight-inch force main, 4,800 feet of ten-inch gravity line and fourteen manholes. Easements must be obtained for construction and installation of the force main.

Wastewater Project #4: \$ 1,585,000
FM528 – Lundy Lane to Tower Estates Sanitary Sewer

The construction of a new sanitary sewer is required to provide services to the currently non-serviced areas along FM 528 from Lundy Lane to Tower Estates. The project will consist of approximately 3,000 feet of ten-inch gravity line, 800 feet of eight-inch line, and ten manholes.

Wastewater Project #5: Windsong Sanitary Sewer \$ 3,061,000

This project will provide sanitary sewer to the non-serviced area on Windsong to FM 528. The project will also include the Wind Creek and Windwood Lane areas. This project will consist of the construction of a Lift Station, in the vicinity of Windsong and Wind Creek Lane, approximately 3,000 feet of 6-inch force main, 6,450 feet of 8-inch gravity line and 18 manholes. In addition, a utility easement will be required for the construction of the Lift Station. Currently, the area is served by individual septic systems.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

E. EQUIVALENT SERVICE UNITS

In Section 395.014 (a) (4), 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 8 establishes Equivalency Factors for water meters based on AWWA hydraulic capacities standard to the engineering industry:

TABLE 8
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

As of October 2018, the Utility Billing Department reported a total of 12,614 existing residential water meters in the City of Friendswood. As shown in Table 9, the majority of those meters (12,513/12,614 = 99%) are 1" in size or smaller, and therefore represent a 1:1 equivalency. However, there are also 101 residential meters that are larger than 1".

Using the Equivalency Factors determined in Table 8 above, these 12,614 residential meters represent a total of 12,760 equivalent meters:

TABLE 9
CURRENT RESIDENTIAL METER SUMMARY

Meter Size (inches)	Equivalency Factor	Residential Water Meters	Equivalent Meters
1*	1	12,513	12,513
1-1/2	2	66	132
2	3	34	109
3	6	1	6
4	10		0
6	20		0
8	32		0
10	46		0
12	86		0
Total		12,614	12,760

* Includes 3/4", 5/8", and 1" water meters.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

In addition to the residential water meters, the Utility Billing Department also identified 558 existing non-residential water meters in the City of Friendswood. As shown in Table 10, the majority of those meters (339/558 = 60%) are 1" in size or smaller, and therefore represent a 1:1 equivalency. However, there are also 219 non-residential meters that are larger than 1".

Using the Equivalency Factors determined in Table 8 above, these 558 non-residential meters represent a total of 1,140 equivalent meters:

TABLE 10
CURRENT NON-RESIDENTIAL METER SUMMARY

Meter Size (inches)	Equivalency Factor	Non-Residential Water Meters	Equivalent Meters
1*	1	339	339
1-1/2	2	50	100
2	3	141	451
3	6	18	108
4	10	7	70
6	20	2	40
8	32	1	32
10	46		0
12	86		0
Total		558	1,140

* Includes 3/4", 5/8", and 1" water meters.

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

By combining the *Total Actual* and *Total Equivalent* meter data from Tables 9 and 10 for residential and non-residential water meters, Table 11 shows that approximately 8% of the current demand can be attributed to that of non-residential usage:

TABLE 1 1
CURRENT WATER METER SUMMARY

	Residential Water Meters	Non-Residential Water Meters	Total Water Meters
Total Actual Meters	12,614	558	13,172
Total Equivalent Meters	12,760	1,140	13,900
Percentage of Equivalent Meters	92%	8%	100%

In November 1998, when Vision 2020 was prepared by Kenneth Balk & Associates, the non-residential land usage at the time was observed as 8% (536 acres out of 6,759 acres). While the Vision Summary was to “*develop undeveloped land in Friendswood in general conformance to the existing zoning plan with regard to the split between residential and non-residential land as 73% Residential and 27% Commercial and Light Industrial,*” Friendswood is still predominantly a residential community.

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 to 2028 can be determined per Section 395.014 (a) (5) the Impact Fee Legislation.

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 8% 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 non-residential development of 8%, the following increase in ESU will provide the basis for determining the maximum allowable impact fee that may be charged by the City:

CITY OF FRIENDSWOOD
IMPACT FEE STUDY

TABLE 12
EQUIVALENT SERVICE UNITS

Projected increase in population for planning period (Table 4):	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 (8%):	180
Equivalent Service Units for planning period (2018-2028) =	2,434 ESU

DRAFT

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 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. 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 13
MAXIMUM IMPACT FEES

Total Cost of Water Projects	(Table 7)	=	\$ 6,775,000
Total Cost of Wastewater Projects	(Table 7)	=	\$ 13,731,000
Increase in Service Units	(Table 12)	=	2,434
Total Cost of Water Projects from CIP/Increase in Service Units (2018-2028)			
	$\$6,775,000 / 2,434$	=	\$ 2,783 / ESU
Total Cost of Wastewater Projects from CIP/Increase in Service Units (2018-2028)			
	$\$13,731,000 / 2,434$	=	\$ 5,641 / ESU
Maximum Water Impact Fee:	$\$ 2,783 \times 50\%$	=	\$ 1,391 / ESU
Maximum Wastewater Impact Fee:	$\$ 5,641 \times 50\%$	=	\$ 2,820/ ESU
Maximum Total Impact Fee:	$\$ 1,391 + \$2,820$	=	\$ 4,211 / 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 to 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 **2,434 ESU**.
- The Total Costs for eligible Water Projects identified in the CIP equate to **\$6,775,000**.
- The Total Costs for eligible Wastewater Projects in the CIP equate to **\$13,731,000**.
- The Maximum Water Impact Fee is **\$1,391** per ESU.
- The Maximum Wastewater Impact Fee is **\$2,820** per ESU.

TABLE 14
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

The City of Friendswood has traditionally adopted the maximum calculated Impact Fee, as recommended by the Advisory Committee. While a community can elect to adopt a *lesser* amount than the maximum calculated Impact Fee, they cannot adopt a *greater* amount.

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	=	\$? / ESU
RECOMMENDED WASTEWATER IMPACT FEE	=	\$? / ESU
RECOMMENDED TOTAL IMPACT FEE	=	\$? / ESU

Clear Creek Community Church Preliminary Plat

Phase one of development to plat parcels for the church, a commercial reserve, and a detention reserve in accordance with Planned Unit Development (PUD) described in Ordinance 2015-18.

1. [Compliance Memo](#)
2. [Preliminary Plat pg 1](#)
3. [Preliminary Plat pg 2](#)
4. [Partial Plat Owner acknowledgement](#)

Memo

To: Planning and Zoning Commission

From: Becky Summers, Development Coordinator

Date: November 7, 2018

Re: Clear Creek Community Church
Preliminary Plat

Project Description: Property located across from Townes Road on FM 528, adjacent to Clear Creek. Phase one of development to plat parcels for the church, a commercial reserve, and a detention reserve.

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.

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

FIELD NOTES FOR 39.41 ACRES

Being a tract containing 39.41 acres of land located in the Sarah McKissick Survey, Abstract No. 549, in Harris County, Texas. Said 39.41 acres being a portion of a call 135.778 acre tract of land recorded in the name of Clear Creek Community Church under Harris County Clerk's File (H.C.C.F.) No. 20150231965. Said 39.41 acres of land being more particularly described by metes and bounds as follows (Bearings are referenced to the Texas Coordinate System of 1983, South Central Zone, as derived from GPS observations):

COMMENCING at a 5/8 inch capped iron rod stamped "KRE&S RPLS 3974" found at the northeast corner of said 135.778 acre tract, the northwest corner of a call 28.9270 acre tract of land recorded in the name of Clear Creek Independent School District under H.C.C.F. No. P598260, and being on the south Right-of-Way (R.O.W.) line of E. Parkwood Avenue (F.M. 528) based on a width of 120 feet;

THENCE, with said south R.O.W. line and the north line of said 135.778 acre tract, South 81 degrees 12 minutes 37 seconds West, a distance of 1,682.02 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set at the POINT OF BEGINNING;

THENCE, through and across said 135.778 acre tract, the following six (6) courses:

- 1.) South 08 degrees 47 minutes 23 seconds East, a distance of 480.92 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set;
- 2.) North 81 degrees 15 minutes 55 seconds East, a distance of 541.04 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set;
- 3.) South 08 degrees 47 minutes 23 seconds East, a distance of 190.02 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set;;
- 4.) South 81 degrees 15 minutes 55 seconds West, a distance of 524.86 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set;
- 5.) South 08 degrees 47 minutes 23 seconds East, a distance of 888.14 feet to a 5/8 inch capped iron rod stamped "GBI Partners" set;
- 6.) South 81 degrees 12 minutes 37 seconds West, a distance of 241.97 feet to a point at the call meander line of mean higher high water for Clear Creek as shown on that certain Shoreline Location Survey prepared by Stephen C. Blaskey, LSLS, dated October 09, 2015 and file with the Texas General Land Office;

THENCE, with said meander line, the following thirty nine (39) courses:

- 1.) North 13 degrees 22 minutes 21 seconds West, a distance of 9.00 feet;
- 2.) North 15 degrees 04 minutes 35 seconds East, a distance of 70.83 feet;
- 3.) North 31 degrees 32 minutes 46 seconds West, a distance of 52.49 feet;
- 4.) North 21 degrees 40 minutes 27 seconds West, a distance of 75.23 feet;
- 5.) North 29 degrees 57 minutes 57 seconds West, a distance of 10.93 feet;
- 6.) North 35 degrees 55 minutes 50 seconds West, a distance of 91.39 feet;
- 7.) North 34 degrees 06 minutes 54 seconds West, a distance of 167.52 feet;
- 8.) North 31 degrees 24 minutes 11 seconds West, a distance of 130.62 feet;
- 9.) North 32 degrees 06 minutes 13 seconds West, a distance of 39.58 feet;
- 10.) North 54 degrees 32 minutes 48 seconds West, a distance of 107.37 feet;
- 11.) North 55 degrees 07 minutes 18 seconds West, a distance of 49.50 feet;
- 12.) North 77 degrees 07 minutes 45 seconds West, a distance of 53.79 feet;
- 13.) South 83 degrees 35 minutes 15 seconds West, a distance of 67.43 feet;
- 14.) South 71 degrees 19 minutes 06 seconds West, a distance of 44.06 feet;
- 15.) South 61 degrees 14 minutes 34 seconds West, a distance of 32.74 feet;
- 16.) South 48 degrees 48 minutes 59 seconds West, a distance of 24.23 feet;
- 17.) South 39 degrees 23 minutes 16 seconds West, a distance of 61.97 feet;
- 18.) South 36 degrees 54 minutes 09 seconds West, a distance of 59.55 feet;
- 19.) South 01 degrees 44 minutes 03 seconds East, a distance of 46.60 feet;
- 20.) South 13 degrees 56 minutes 21 seconds West, a distance of 62.30 feet;
- 21.) South 39 degrees 51 minutes 34 seconds West, a distance of 27.94 feet;
- 22.) South 00 degrees 50 minutes 58 seconds East, a distance of 62.73 feet;
- 23.) South 30 degrees 54 minutes 43 seconds West, a distance of 24.61 feet;
- 24.) South 41 degrees 36 minutes 15 seconds West, a distance of 68.29 feet;
- 25.) South 10 degrees 39 minutes 32 seconds West, a distance of 66.62 feet;
- 26.) South 54 degrees 52 minutes 04 seconds West, a distance of 50.26 feet;
- 27.) South 63 degrees 25 minutes 34 seconds West, a distance of 86.90 feet;
- 28.) South 83 degrees 46 minutes 39 seconds West, a distance of 75.20 feet;
- 29.) North 87 degrees 25 minutes 57 seconds West, a distance of 99.79 feet;
- 30.) North 77 degrees 35 minutes 46 seconds West, a distance of 79.20 feet;
- 31.) North 84 degrees 16 minutes 32 seconds West, a distance of 91.05 feet;
- 32.) North 86 degrees 52 minutes 46 seconds West, a distance of 118.87 feet;
- 33.) North 74 degrees 06 minutes 45 seconds West, a distance of 92.65 feet;
- 34.) North 70 degrees 04 minutes 11 seconds West, a distance of 65.69 feet;
- 35.) North 40 degrees 25 minutes 19 seconds West, a distance of 35.00 feet;
- 36.) North 54 degrees 13 minutes 54 seconds West, a distance of 42.76 feet;
- 37.) North 48 degrees 01 minutes 05 seconds West, a distance of 57.76 feet;
- 38.) North 39 degrees 15 minutes 00 seconds West, a distance of 76.59 feet;
- 39.) North 23 degrees 52 minutes 46 seconds West, a distance of 21.17 feet to the northwest line of said 135.778 acre tract and the southeasterly R.O.W. line of said E. Parkwood Avenue (width varies);

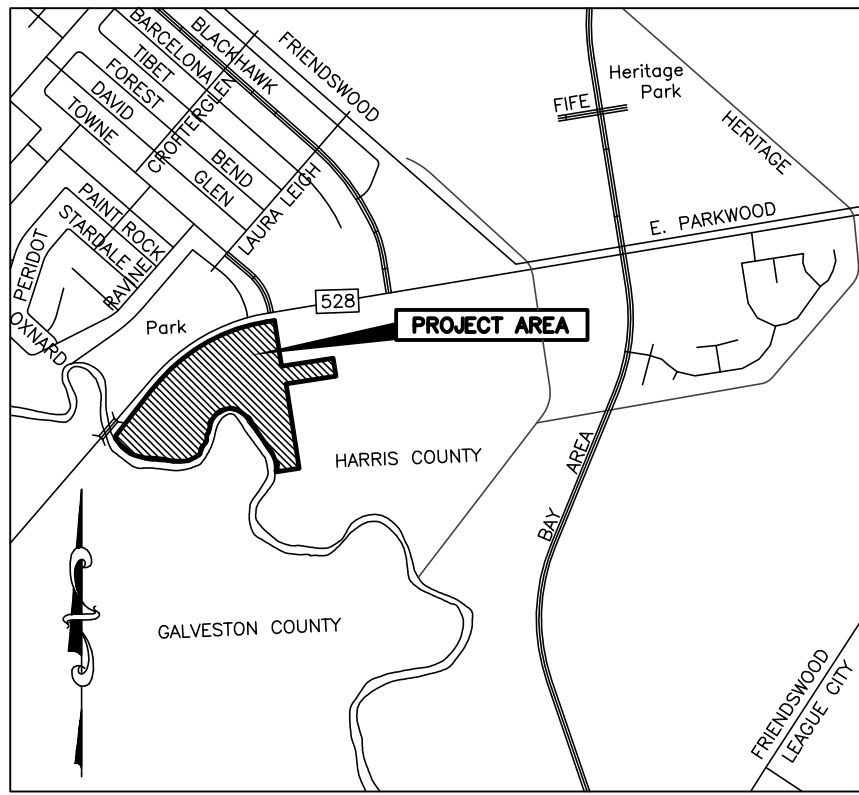
THENCE, with the northwest and north line of said 135.778 acre tract and the southeasterly and south R.O.W. line of said E. Parkwood Avenue, the following five (5) courses:

- 1.) North 41 degrees 14 minutes 53 seconds East, a distance of 12.41 feet to a point from which a found 3/8 inch capped iron rod bears South 67 degrees 04 minutes 44 seconds East, a distance of 0.56 feet;
- 2.) North 37 degrees 54 minutes 45 seconds East, a distance of 601.55 feet to a TXDOT disc found;
- 3.) North 41 degrees 12 minutes 07 seconds East, a distance of 145.69 feet to a TXDOT disc found at a point of curvature to the right;
- 4.) 1,284.89 feet, along the arc of said curve having a radius of 1,840.08 feet, a central angle of 40 degrees 00 minutes 30 seconds and a chord which bears North 61 degrees 12 minutes 22 seconds East, a distance of 1,258.94 feet to a TXDOT disc found at a point of tangency;
- 5.) North 81 degrees 12 minutes 37 seconds East, a distance of 90.40 feet to the POINT OF BEGINNING and containing 39.41 acres of land.

I, Kyle B. Duckett, do hereby certify that all existing encumbrances, such as various types of easements both public and private, fee strips and all significant topographical features which would affect the physical development of the property illustrated on this plat are accurately identified and located and further certify that this plat represents all of the contiguous land which the owner (or subdivider) owns or has a legal interest in.



Kyle B. Duckett
Registered Professional Land Surveyor
Texas Registration No. 6340



VICINITY MAP
SCALE: 1" = 2,000'

PRELIMINARY PLAT OF
**CLEAR CREEK
COMMUNITY CHURCH
OF FRIENDSWOOD**

BEING A SUBDIVISION OF 39.41 ACRES OF LAND
OUT OF A CALL 135.778 ACRE TRACT OF LAND
LOCATED IN THE
SARAH MCKISSICK SURVEY, A-549
CITY OF FRIENDSWOOD
HARRIS COUNTY, TEXAS

3 RESTRICTED RESERVES

NOVEMBER 05, 2018



GBI PARTNERS, L.P.
LAND SURVEYING CONSULTANTS
13340 S. GESSNER RD. • MISSOURI CITY, TX 77489
PHONE: 281-499-4539 • www.gbisurey.com
TBPLS FIRM # 10130300

OWNER:
CLEAR CREEK COMMUNITY CHURCH
999 EGRET BAY BLVD. N.
LEAGUE CITY, TEXAS 77573

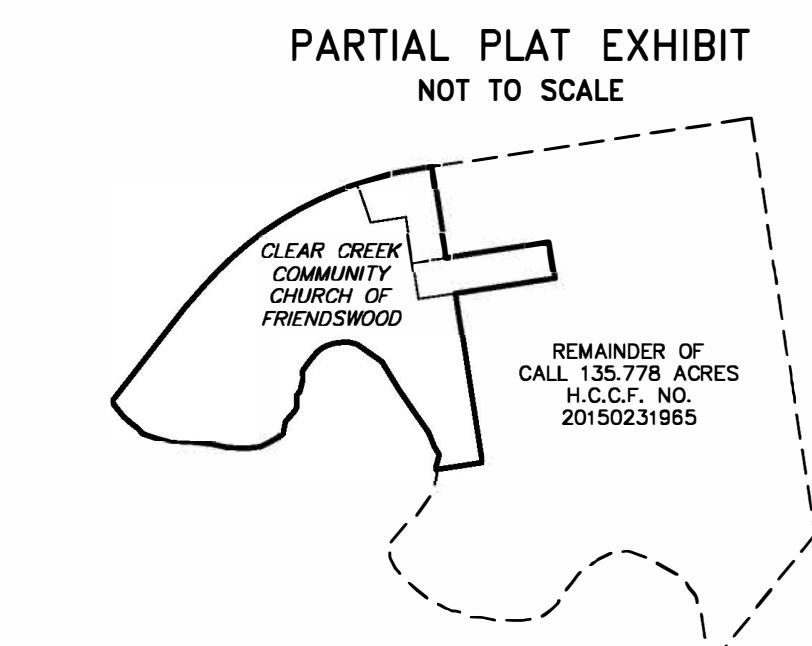
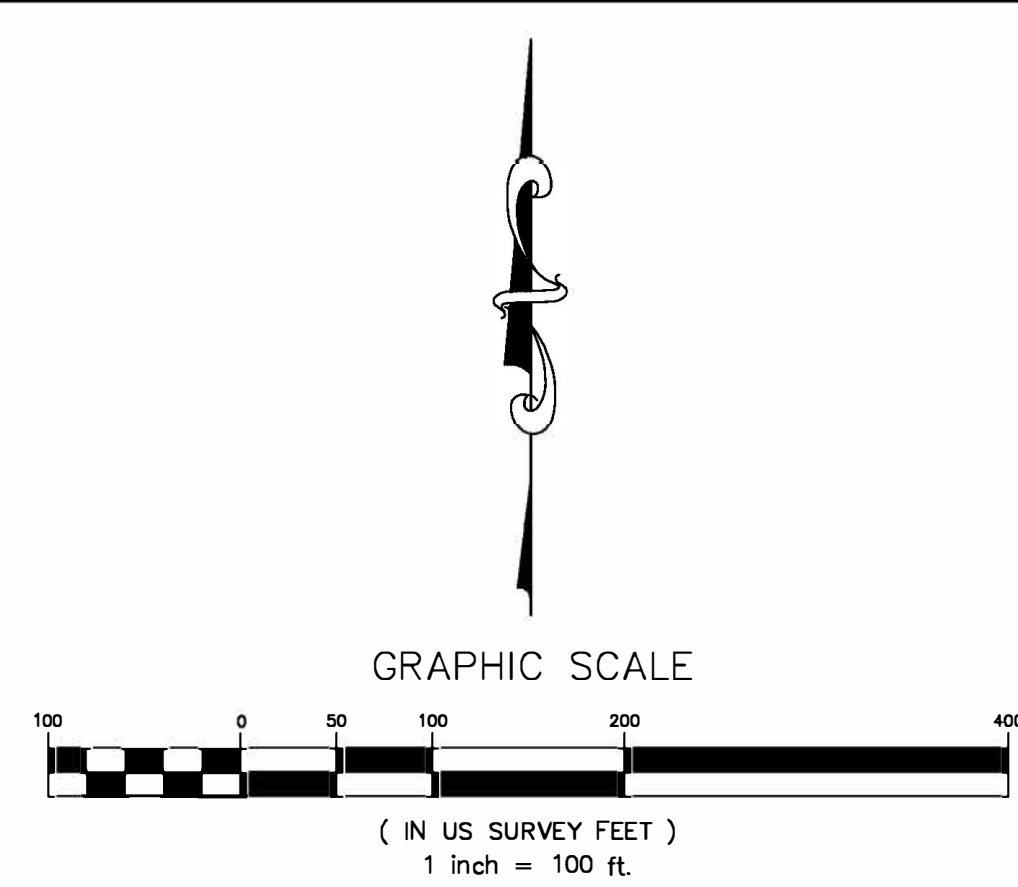
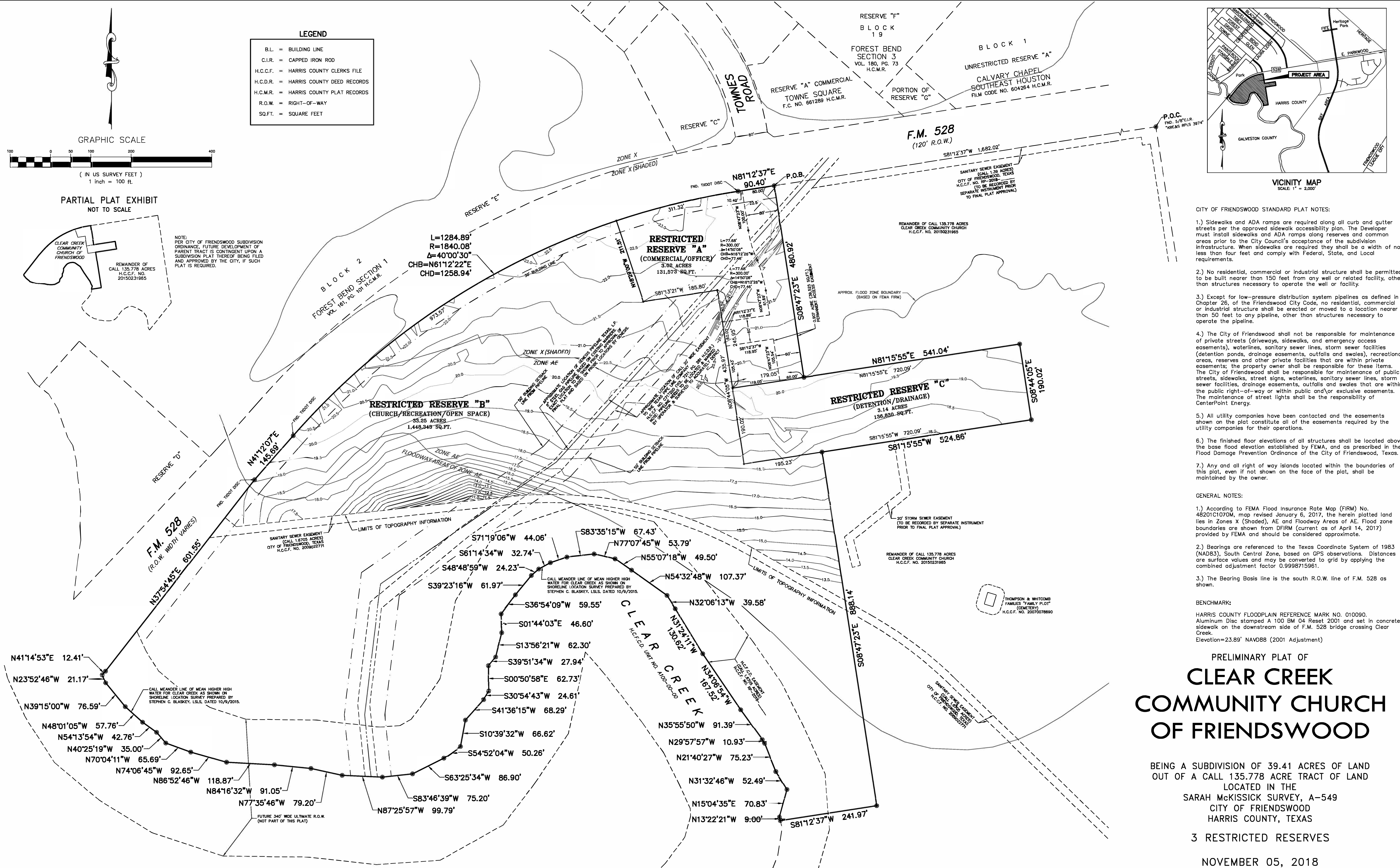
MARK CARDEN, EXECUTIVE PASTOR
281-338-5433

SURVEYOR:
GBI PARTNERS, L.P.
13340 S. GESSNER RD.
MISSOURI CITY, TEXAS 77573

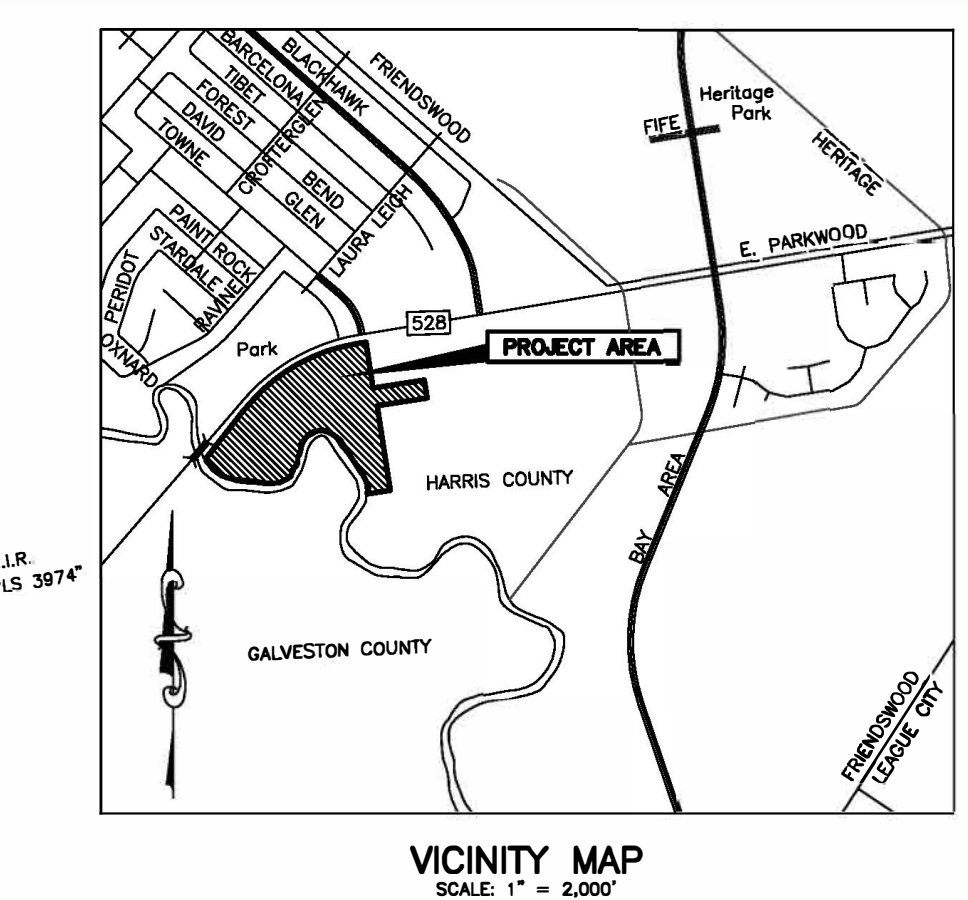
KYLE B. DUCKETT, R.P.L.S.
281-499-4539

ENGINEER:
SHELMARK ENGINEERING, LLC
921 FM 517 ROAD EAST
DICKINSON, TEXAS 77539

EDGARD FIGUEROA
409-935-9986



NOTE: PER CITY OF FRIENDSWOOD SUBDIVISION ORDINANCE, FUTURE DEVELOPMENT OF PARENT TRACT IS CONTINGENT UPON A SUBDIVISION PLAT THEREOF BEING FILED AND APPROVED BY THE CITY, IF SUCH PLAT IS REQUIRED.



- CITY OF FRIENDSWOOD STANDARD PLAT NOTES:
- 1.) 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.
 - 2.) 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.
 - 3.) 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 erected or moved to a location nearer than 50 feet to any pipeline, other than structures necessary to operate the pipeline.
 - 4.) 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 swales), recreational areas, reserves and other private facilities that are within private easements; the property owner 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 CenterPoint Energy.
 - 5.) 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.
 - 6.) 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.
 - 7.) 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 owner.
- GENERAL NOTES:
- 1.) According to FEMA Flood Insurance Rate Map (FIRM) No. 48201C1070M, map revised January 6, 2017, the herein platted land lies in Zones X (Shaded), AE and Floodway Areas of AE. Flood zone boundaries are shown from DFIRM (current as of April 14, 2017) provided by FEMA and should be considered approximate.
 - 2.) Bearings are referenced to the Texas Coordinate System of 1983 (NAD83), South Central Zone, based on GPS observations. Distances are surface values and may be converted to grid by applying the combined adjustment factor 0.9998715961.
 - 3.) The Bearing Basis line is the south R.O.W. line of F.M. 528 as shown.
- BENCHMARK:
- HARRIS COUNTY FLOODPLAIN REFERENCE MARK NO. 010090.
Aluminum Disc stamped A 100 BM 04 Reset 2001 and set in concrete sidewalk on the downstream side of F.M. 528 bridge crossing Clear Creek.
Elevation=23.89' NAVD88 (2001 Adjustment)

PRELIMINARY PLAT OF
**CLEAR CREEK
COMMUNITY CHURCH
OF FRIENDSWOOD**

BEING A SUBDIVISION OF 39.41 ACRES OF LAND
OUT OF A CALL 135.778 ACRE TRACT OF LAND
LOCATED IN THE
SARAH McKISSICK SURVEY, A-549
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3 RESTRICTED RESERVES

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SURVEYOR:
GBI PARTNERS, L.P.
13340 S. GESSNER RD.
MISSOURI CITY, TEXAS 77489

ENGINEER:
SHELMARK ENGINEERING, LLC
921 FM 517 ROAD EAST
DICKINSON, TEXAS 77539

MARK CARDEN, EXECUTIVE PASTOR
281-338-5433

KYLE B. DUCKETT, R.P.L.S.
281-499-4539

EDGARD FIGUEROA
409-935-9986

City of Friendswood

Partial Plat Approval Statement

(in accordance with the City of Friendswood Subdivision Ordinance Appendix B
Section I. b. 4.)

I, Mark Carden, Executive Pastor of Clear Creek Community Church, owner of the remainder of a 135.778 acre tract that is currently being partially subdivided as Clear Creek Community Church of Friendswood (plat name), confirm that the development of the portion of the tract not included within the plat boundaries would be contingent upon a subdivision plat being filed and approved by the City, if such plat is required, in accordance with the rules and regulations of the City governing plats and the subdivision of the land in effect at the time the application for plat approval for such portion is sought.

Mark Carden, Exec. Pastor
Owner

10.10.18
Date

State of Texas
County of Texas

This instrument was acknowledged before me on October 10, 2018, by Mark Carden (applicant).

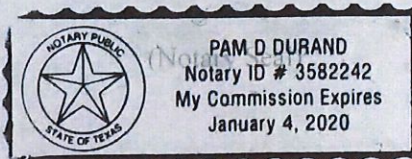
☒ Personally Known

Produced Identification
ID Number and Type of ID _____

Pamela P. Durand
Signature of Notary

PAMELA P. DURAND
Printed Name

Notary Public, State of Texas



Memo

To: Planning & Zoning Commission
 From: Aubrey Harbin, Director of Community Development/Planner
 Date: November 13, 2018
 Re: DRC Report

The following DRC Meetings were held in **October 2018**.

Project	Current Zoning	Zone Change Required? Y/N	Issues discussed	Location
209 E Spreading Oaks Subdivide lot into two residential lots	Single Family Residential (SFR)	No	Plat required; park dedication fee required at time of building permit; water and sewer services are available; 4-foot sidewalk required; fire hydrant required within 500 feet; verify with GCCDD if eligible for regional detention	

301 Clearview Ave. Build new home	Single Family Residential (SFR)	No	Preliminary and Final plats required – right-of-way required to be dedicated for Quaker Dr; park dedication fee required at time of building permit; water is available; sewer – may be able to extend from Clearview – PW will verify; 4-foot sidewalk required; verify with GCCDD if eligible for regional detention	
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