

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;

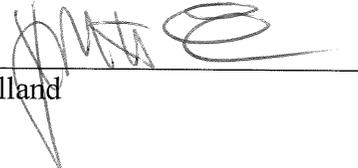
NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FRIENDSWOOD, TEXAS:

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

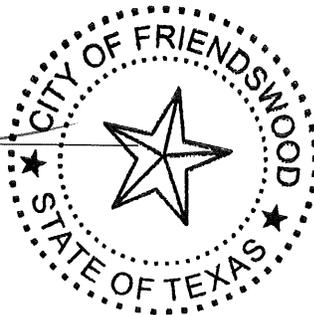


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Executive Summary

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

DRAINAGE PROJECTS	
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

FACILITY PROJECTS	
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

PARK PROJECTS	
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

STREET PROJECTS	
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 HCFCF.

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

SPONSOR DEPARTMENT

Old City Park

Parks and Recreation

COUNCIL GOAL: #14 Develop Additional Parks

Planning Document: NA

TYPE: Parks

YEAR PLANNED: 2017

SUBTYPE: Construction

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 Briar Meadow 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-foot 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

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

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

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

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

Total Projected Project Cost: \$5,000,000

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 Assesment Phase IV - Construction	\$ 1,464,000 - \$ 1,464,000
Sanitary Sewer System Assesment 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 Assesment Phase VI - Design	\$ 100,000 - \$ 100,000
Sanitary Sewer System Assesment Phase VII - Design	\$ 175,000 - \$ 175,000
Sanitary Sewer System Assesment 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**

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**

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**

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**