ORDINANCE ADOPTING DRAINAGE IMPACT FEES IN ACCORDANCE WITH CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE ("CHAPTER 395"); AMENDING CHAPTER 47 OF THE CODE OF ORDINANCES OF HOUSTON, TEXAS AND CONTAINING FINDINGS AND OTHER PROVISIONS RELATING TO THE FOREGOING SUBJECT; CONTAINING A SAVINGS CLAUSE; AND PROVIDING FOR SEVERABILITY.

\* \* \* \*

WHEREAS, Houston voters approved an amendment to the City Charter known as Proposition 1 on the ballot, commonly referred to as "ReBuild Houston," at an election held on November 2, 2010, to "provide for the enhancement, improvement and ongoing renewal of Houston's drainage and streets by creating a Dedicated Pay-As-You-Go Fund for Drainage and Streets"; and

WHEREAS, the Charter amendment embodied in Proposition 1 was included in the City Charter as Article IX, Section 22, and reads in pertinent part, "All proceeds of developer impact fees, which beginning in fiscal year 2012, and continuing thereafter shall be imposed in an equitable manner as provided by law to recover allocable costs of providing drainage and streets for properties under development"; and

WHEREAS, City Council passed Ordinance No. 2011-0254, effective date April 6, 2011, to create a Municipal Drainage and Utility System and establish a schedule of drainage charges to help fund ReBuild Houston; and

WHERAS, City Council passed Ordinance No. 2011-1168, effective date December 14, 2011, which created the City Fee Schedule and provided for removing fees from the Code of Ordinances in order to increase administrative efficiency and reduce costs to tax payers; and

WHEREAS, City Council passed Ordinance No. 2012-0097, authorizing a professional services agreement with Kimley-Horn and Associates, Inc., countersigned

on February 7, 2012, in part to develop land use assumptions and a capital improvement plan for the calculation of impact fees consistent with Article IX, Section 22 (the "Study"); and

WHEREAS, City Council received the Study, which the City Secretary's Office made available to the public on December 12, 2012; and

WHEREAS, the City published notice of a public hearing on adoption of land use assumptions and a capital improvement plan for possible adoption of impact fees for drainage in the Houston Chronicle on December 16, 2012, in accordance with Chapter 395; and

WHEREAS, City Council held a public hearing on January 16, 2013, and upon adoption of the aforementioned land use assumptions and a capital improvement plan, known internally as the Drainage Impact Fee Improvement Plan and

WHEREAS, City Council adopted the aforementioned land use assumptions and the Drainage Impact Fee Improvement Plan on January 30, 2013; and

WHEREAS, the City published notice of a public hearing on the adoption of drainage impact fees in accordance with Chapter 395 on February 3, 2013 in the Houston Chronicle, in accordance with Chapter 395; and

WHEREAS, the Planning Commission held a special meeting on February 21, 2013 to review and comment upon the drainage impact fees per service unit in each respective service area as proposed by the Study and recommended by the Department of Public Works and Engineering;

**WHEREAS**, on February 26, 2013, the City Secretary received and made available to the public the Planning Commission's special meeting minutes, containing the comments on the drainage impact fees per service unit in each respective service area;

WHEREAS, City Council held a public hearing on the adoption of drainage impact fees on March 6, 2013, in accordance with Chapter 395, City Council now intends to adopt impact fees; and

WHEREAS, City Council intends to adopt the maximum fee per service unit as the actual impact fee per service unit, and therefore, no increases to the actual impact fee per service unit may occur until the City amends the drainage impact fee improvement plan; NOW, THEREFORE,

# BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HOUSTON, TEXAS:

**Section 1.** That the findings contained in the preamble of this Ordinance are determined to be true and correct and are hereby adopted as part of this Ordinance.

**Section 2.** That, based upon Section V.C. of the Study and the recommendations of the Planning Commission and the Department of Public Works and Engineering, City Council hereby adopts the drainage impact fees per service unit in the table below ("service unit rates"):

SERVICE AREA	SERVICE UNIT RATES
Addicks Reservoir	\$0.00
Barker Reservoir	\$0.00
Brays Bayou	\$8.63
Buffalo / White Oak	\$16.38
Clear Creek	\$0.39
Greens Bayou	\$13.41
Hunting Bayou	\$10.24
San Jacinto	\$0.00
Ship Channel	\$0.00
Sims / Vince	\$17.72

**Section 3.** That City Council hereby accepts from the Planning Commission comments concerning the Proposed Amendments, which were placed on file with the City Secretary on February 26, 2013, and are attached hereto as "Exhibit B".

**Section 4.** That the Director of the Finance Department shall amend the City Fee Schedule to reflect the unit service rates established by this Ordinance.

**Section 5.** That Chapter 47 of the Code of Ordinances, Houston, Texas, is hereby amended to add Article XV to read as follows:

# "ARTICLE XV. DRAINAGE IMPACT FEES

**DIVISION 1. GENERAL PROVISIONS** 

# Sec. 47-881. Purpose.

This article is intended to ensure the provision of adequate public drainage facilities to serve new development in the city by requiring each such development to pay its pro rata share of the costs of drainage capital improvements necessitated by and attributable to such new development.

# Sec. 47-882. Authority.

This article is adopted pursuant to Chapter 395 of the Texas Local Government Code and pursuant to the Houston City Charter, Article IX, Section 22. The provisions of this article shall not be construed to limit the power of the city to utilize other methods authorized under state law or pursuant to other city powers to accomplish the purposes set forth herein, either in substitution for or in conjunction with this article.

## Sec. 47-883. Definitions.

As used in this article, the following terms and phrases shall have the following meanings:

Assessment means the determination of the amount of the service unit rate that may be imposed on new development pursuant to this article as determined at the time specified in section 47-891 of this Code.

# Building permit means:

- a. With respect to buildings or premises within the corporate limits of the city, the general permit required by the Construction Code; or
- With respect to buildings or premises outside the corporate limits of the city or for which a general

permit under the Construction Code is not required, a plumbing permit under the Construction Code or under section 47-14 of this Code.

Credit means a certain number of service units attributable to an improved lot with impervious surface for purposes of article XIV of this chapter.

Drainage means water transported by or detained in features and improvements, whether natural or man-made, such as streets, curbs, bridges, catch basins, channels, conduits, creeks, culverts, detention ponds, ditches, draws, flumes, pipes, pumps, sloughs, treatment works, and any appurtenances, that use force or gravity to draw off surface water from land, carry the water away, collect, store, or treat the water, or divert the water into natural or man-made watercourses.

Drainage benefit area means an area within the city's extraterritorial jurisdiction that may reasonably connect to the city's drainage system.

Drainage capital improvement or drainage impact fee improvement means a drainage facility with a life expectancy of three or more years, to be owned or operated by or on behalf of the city.

Drainage capital improvement plan or drainage impact fee improvement plan means the plan adopted by city council at least every ten years, as may be amended from time to time, identifying the drainage facilities and their associated costs, necessitated by and attributable to new development, to be financed in whole or in part through drainage impact fees imposed and collected pursuant to this article.

Drainage facility means an improvement to land designed or utilized, in whole or part, for the purpose of collecting, storing, pumping or conveying drainage, including an existing facility, the capacity of which has been expanded to service new development. Drainage facility includes land, roads, easements or structures and all appurtenances associated with such facilities.

Drainage impact fee means a fee imposed by city council on new development to fund or reimburse the costs of drainage capital improvements necessitated by and attributable to such new development. Drainage impact fees do not include requirements for the dedication or construction of rights-of-way or easements for such facilities, nor payment by persons receiving service from a drainage facility of connection charges imposed to reimburse a property owner for the costs of extending such drainage facility.

Drainage service area means an area designated as such by city council within a certain watershed boundary located within the corporate limits of the city.

Drainage system means the drainage and drainage facilities owned or controlled in whole or in part by the city, including provisions for additions to the system. Drainage system components, including but not limited to streets, sidewalks, other dedicated improvements, and supporting rights-of-way shall not be considered residential or nonresidential property as defined herein.

Impervious surface means any area that has been compacted or covered such that it does not readily absorb water or does not allow water to percolate through to undisturbed underlying soil strata. Surface materials considered impervious shall include, but not be limited to, bricks, pavers, concrete, asphalt, compacted oil-dirt, compacted or decomposed shale, oyster shell, gravel, or granite, and other similar materials. Surface features utilizing such materials and considered impervious shall include, but not be limited to, decks, foundations (whether pier and beam or slab), building roofs, parking and driveway areas, sidewalks, compacted or rolled areas, paved recreation areas, swimming pools, and other features or surfaces that are built or laid on the surface of the land and have the effect of increasing, concentrating, or otherwise altering water runoff so that flows are not readily absorbed.

Improved lot means a lot or a tract of land on which the city has recorded impervious surface as determined under Article XIV of this chapter.

New development means a project involving the construction, reconstruction, redevelopment, conversion, structural alteration, relocation or enlargement of any structure, or any use or extension of the use of land, that requires either the issuance of a building permit or connection to the city's drainage system and has not been exempted from compliance by this article or state law.

Offset means the amount of the reduction of a drainage impact fee, determined under this article or pursuant to administrative guidelines, that is equal to the value of a drainage

facility or portion thereof included in the drainage impact fee improvement plan and is constructed or financed by a property owner without reimbursement from other city funds.

Plat means the plan or map of a subdivision to be filed for record with the county clerk in the county in which the property is located. Plat includes a replat, but excludes a development plat.

Property owner means the owner in fee of a tract or parcel of land upon which new development is to be located, or his authorized representative.

Service unit means 1,000 square feet of impervious surface rounded to the nearest ten square feet for purposes of impact fee calculation.

Service unit rate means the drainage impact fee that the city charges per service unit within a certain drainage service area.

# Sec. 47-884. Drainage impact fees, in general.

- (a) Except as otherwise provided herein, each new development within any of the city's drainage service areas shall pay a drainage impact fee for drainage facilities necessitated by and attributable to that development as provided in division 2 of this article. Drainage impact fees shall be assessed against and collected from new development on the basis of service units and shall vary depending on the drainage service area in which the property is located.
- (b) The maximum drainage impact fee per service unit assessed against a new development is provided in the drainage impact fee improvement plan. The service unit rates shall never exceed the maximum drainage impact fee per service unit.
- (c) The service unit rates shall be published in the city fee schedule and shall be collected from new development as stated in this article. On July 1 of each year beginning on July 1, 2018, and to the extent allowed by subsection (b), the director shall cause the service unit rates in the city fee schedule to be adjusted by an amount equal to the percentage increase (if any) in the designated index for the preceding calendar year multiplied by the service unit rates. The director shall annually calculate the effective service unit rates for each drainage service area on or before June 1 of each year and make all calculations available in his or her office upon request for public inspection.

For purposes of this subsection, the term *designated index* shall mean the United States Producers Price Index for All Commodities (1982=100), as published by the Bureau of Labor Statistics, U.S. Department of Labor. If such index is subject to adjustment later, then the city shall use the adjusted index, together with any correlation factor necessary to relate the later adjusted index to the earlier index, as published by the entity publishing the index, or if such publication is discontinued, the designated index shall then refer to comparable statistics on changes in the cost of living for urban consumers as the same may be computed and published by an agency of the United States or by a responsible financial periodical of recognized authority, which agency or periodical shall be selected by the city.

(d) City council may amend drainage impact fees to be collected from new developments without amending the service unit rates or drainage impact fee improvement plan adopted herein, as long as the impact fees to be collected do not exceed the maximum drainage impact fees per service unit that may be assessed for such facilities.

# Sec. 47-885. Drainage service areas

- (a) The department shall keep, update, and make available to the public maps of the drainage service areas. The drainage service areas may be amended from time to time as part of a new or amended drainage impact fee improvement plan. When the city's corporate limits are altered by general purpose annexation to include land within a natural watershed boundary, the land so annexed shall become part of a drainage service area.
- (b) At the time of assessment, the utility official shall determine the appropriate drainage service area or areas for the new development based on the developer's application and the map(s) attached to the most recent land use assumptions adopted by city council.

# Secs. 47-886--47-890. Reserved.

# DIVISION 2. ASSESSMENT, COLLECTION AND COMPUTATION OF DRAINAGE IMPACT FEES

# Sec. 47-891. Assessment of fees.

Assessment of drainage impact fees against new development shall be based on the drainage impact fee per service unit within the applicable drainage service area, established by city council. Except as otherwise provided herein, the utility official shall assess a drainage

impact fee on any building permit application for new development submitted after 47,1 2014, at the time the building permit application is submitted.

# Sec. 47-892. Time of fee collection.

Drainage impact fees shall be collected at or before the time of issuance of building permits.

# Sec. 47-893. Computation of fees.

The department shall compute the drainage impact fees in the following manner:

- (1) Except as otherwise provided in this section, the drainage impact fee shall be calculated by multiplying the applicable service unit rate by the number of service units generated by the new development, rounded to the nearest hundredth.
- (2) The drainage impact fee for new development on an improved lot shall be reduced by a credit determined by the utility official to be equal to the existing impervious surface on which drainage fees are being paid at the time a building permit application is submitted.
- (3) Development of low and moderate cost single family housing is exempt from payment of impact fees. To qualify for this exemption, a house must be a single family residence located within the city limits having an initial purchase price as certified by the property owner that does not exceed the latest available 12-month listing for median price single family housing in the city as published by the Real Estate Center at Texas A&M University. In the event the initial purchase price exceeds this amount, the property owner making the certification shall pay to the city the full amount of the impact fee as calculated under this section. If publication of the median price for single family housing is discontinued by the Real Estate Center at the Texas A & M University, the mayor is authorized to select another publication that lists the median price of single family houses in the city.

<sup>&</sup>lt;sup>1</sup> The City Secretary shall insert the month and day of this Ordinance's effective date.

- (4) If the new development involves the alteration of existing structures, new impervious surface created by such altered structure or structures shall be converted to additional service units. If the impervious surface for the new development exceeds the existing impervious surface, the amount of the drainage impact fee due shall be the number of additional service units, rounded to the nearest hundredth, multiplied by the drainage impact fee per service unit then in effect. If the impervious surface for the new development is less than or equal to the existing impervious surface, no impact fee is due.
- (5) The amount of each drainage impact fee due shall be reduced by any allowable adjustments in the manner provided in section 47-894 of this Code.
- (6) If the property owner proposes to increase the number of service units for development following payment of the drainage impact fee, the additional drainage impact fees collected for such new service units shall be determined in the same manner as provided in this section.

#### Sec. 47-894. Determination of service units.

- (a) The utility official shall determine the number of service units generated from a new development based on the information contained in the building permit application along with digital map data associated with tax plats and assessment rolls or other similar, reliable data from independent sources authorized by the director.
- (b) If the utility official determines that sufficient information is provided along with the building permit application to demonstrate that no drainage will ever flow off all or a significant portion of the property, the director may approve an adjustment in the number of service units. Before an adjustment is made, the property owner shall covenant not to change the property to allow drainage to flow off the property without first obtaining a building permit and paying impact fees on any new development. The director may develop guidelines to determine the amount of drainage that will flow off the property and what constitutes a significant portion of the property.

# Sec. 47-895. Offsets against drainage impact fees.

(a) A property owner may receive an offset pursuant to a development agreement approved by the city, if

- (1) The property owner constructs or finances a drainage facility included in the drainage impact fee improvement plan;
- (2) The property owner does not receive reimbursement for the drainage facility constructed or financed by the property owner:
- (3) The drainage facility serves only the city drainage system; and
- (4) The offset does not include on-site drainage for the property.
- (b) A drainage facility constructed for an offset pursuant to a development agreement must be constructed within the drainage service area in which the property is located. The offset may be associated with the plat of the property that is to be served by the constructed or financed drainage facility. The amount of the offset shall be determined pursuant to rules established in this section and any administrative guidelines promulgated by the director. In no event shall the offset allowable under this subsection exceed the amount of the drainage impact fees due.
- (c) Any offset associated with new development shall be applied against the drainage impact fee due at the time that the fee for the building permit is collected.
- (d) Any offset provided under this section shall have no effect on on-site drainage requirements associated with the property.

# Sec. 47-896. Development agreements in drainage benefit areas.

If the director determines that adequate capacity exists within the drainage system, a property owner within a drainage benefit area may voluntarily enter into a development agreement to connect to the drainage system. The director may authorize a development agreement to allow the property owner to construct facilities consistent with section 47-895 of this Code, and any associated rules and guidelines, or pay charges equivalent to drainage impact fees. The drainage impact fee improvement plan, as amended in accordance with Chapter 395 of the Local Government Code, shall account for the connections pursuant to development agreements under this section and shall include projections for voluntary connections to the drainage system from the drainage benefit area.

Secs. 47-897--47-900. Reserved.

# **DIVISION 3. ADMINISTRATION**

# Sec. 47-901. Accounting.

- (a) All drainage impact fees collected within a certain drainage service area shall be deposited in a dedicated fund to which interest is allocated in accordance with Section 22, Article IV of the City Charter. All such amounts, together with all interest earned thereon, shall be used solely for the purposes set forth in subsection (b).
- (b) The drainage impact fees collected pursuant to this article shall be used to finance or recoup the costs of any drainage impact fee improvements identified in the drainage impact fee improvement plan for the applicable drainage service area, including but not limited to the construction contract price, surveying and engineering fees, land acquisition costs (including land purchases, court awards and costs, attorneys' fees, and expert witness fees) and fees paid to an independent qualified engineer or financial consultant for preparing or updating the drainage impact fee improvement plan.
- (c) Disbursement of funds shall be authorized by the department at such times as are reasonably necessary to carry out the purposes intended by this article; provided, however, that funds shall be expended within a reasonable period of time, but not to exceed ten years from the date drainage impact fees are deposited in the fund.
- (d) An owner of property for which a drainage impact fee has been paid is entitled to a refund for all or a portion of the fee in the following circumstances:
  - (1) The city denies service to the property on which the impact fees were paid; and
    - a. The city has the drainage facilities to provide service to the property;
    - b. The city has not constructed the drainage facilities within five years of the date the impact fees were collected; or
    - c. The city has not spent the impact fees within 10 years of the date the impact fees were collected.

- (2) After receiving a completed application for an impact fee refund, the department shall issue a refund to the record property owner. The refund shall include interest calculated from the date of collection to the date of refund at the statutory rate provided in Texas Local Government Code Section 395.024, or its successor statute. A drainage impact fee shall be considered expended on a first-in, first-out basis.
- (3) If a refund is due pursuant to paragraph (2), the department shall divide the difference between the amount of expenditures and the amount of the fees collected by the total number of service units for which drainage impact fees have been paid within the service area for the period to determine the refund due per service unit. The refund to the owner shall be calculated by:
  - a. Multiplying the refund due per service unit by the number of service units of the development for which the fee was paid; and
  - b. Determining interest due based on the amount calculated under subsection (d)(3)a.
- (4) Upon completion of all the drainage facilities identified in the drainage impact fee improvement plan for the drainage service area, the department shall recalculate the drainage impact fee per service unit using the actual costs for the drainage facilities. If the maximum drainage impact fee per service unit based upon actual cost is less than the drainage impact fee per service unit paid, the city shall refund the difference if such difference exceeds the drainage impact fee paid by more than ten percent. If the difference is less than ten percent, no refund shall be due. Refund to the record owner shall be calculated by:
  - Multiplying such difference by the number of service units of the development for which the drainage impact fee was paid; and
  - b. Determining interest due based on the amount calculated under subsection (d)(4)a.
- (e) The department shall establish adequate financial and accounting controls to ensure that drainage impact fees disbursed from the fund are utilized solely for the purposes authorized. The department

shall maintain and keep financial records for drainage impact fees that shall show the source and disbursement of all fees collected or expended within a certain drainage service area. The records of the fund into which drainage impact fees are deposited shall be open for public inspection and copying during ordinary business hours.

(f) Nothing in this article shall prevent the city from paying all or part of the drainage impact fees due for a new development pursuant to criteria adopted by city council.

# Sec. 47-902. Impact fee appeals.

- (a) The property owner or applicant for a new development may appeal the following administrative decisions to an administrative hearing official appointed by the director:
  - (1) The applicability of a drainage impact fee to the development;
  - (2) The amount of the drainage impact fee due;
  - (3) The determination of service units;
  - (4) The applicability of any credit or offset to the development;
  - (5) The amount of any credit or offset; or
  - (6) The amount of a refund due, if any.
- (b) The burden of proof shall be upon the applicant to demonstrate that the administrative decision was not made in accordance with this article or applicable state law.
- (c) The applicant shall file a written notice of appeal with the director within 30 days following the date of the decision from which an appeal is made. If the notice of appeal is accompanied by a payment or other sufficient security satisfactory to the department in an amount equal to the original determination of the drainage impact fee due, the development application may be processed while the appeal is pending. In addition to any other amount collected, the director shall collect from the applicant an administrative fee in accordance with Section 1-14 before considering the applicant's appeal.

# Sec. 47-903. Relief procedures.

- (a) Any person who has paid a drainage impact fee, or an owner of land for which a drainage impact fee has been paid, may petition city council to determine whether any duty required by this article or by chapter 395 of the Texas Local Government Code has not been performed within the time so prescribed. The petition shall be in writing and delivered to the city secretary and shall state the nature of the unperformed duties and request that the duties be performed within 60 days of the request. If city council determines that the performance of the duty is required pursuant to this article and is late in being performed, it shall cause performance of the duty to commence within 60 days of the date of the request and to continue until completion. This subsection shall not apply to matters subject to appeal pursuant to section 47-902 of this Code.
- (b) City council may grant a variance from any requirement of this article, upon written request by the property owner subject to the article following a public hearing, but only upon finding that a strict application of such requirement would, when regarded as a whole, result in confiscation of the property.
- (c) If city council grants a variance to the amount of the drainage impact fee due for a new development under this section, it shall cause to be appropriated from other city funds the amount of the reduction in the drainage impact fee to the fund for the drainage service area in which the property is located.

# Sec. 47-904. Storm water drainage letters.

- (a) A storm water drainage letter associated with a new development shall automatically expire unless the developer makes progress towards completion of the new development within two years after the developer obtains the storm water drainage letter. If prior to expiration, the developer presents the utility official with evidence of progress towards completion of the project, then the developer shall have an additional two years to complete the project or make additional progress towards completion of the project.
- (b) Progress towards completion of the project shall consist of one or more of the following:
  - (1) Payment or other provision of consideration authorized under this article for drainage impact fees on the new development;

- (2) Execution of a performance bond, naming the city as obligee, for public infrastructure associated with the new development;
- (3) Provision to the utility official of a copy of a substantially complete application necessary for completion of the new development that the developer has filed and actively pursued with the city or any local, state, or federal agency of competent jurisdiction; or
- (4) Presentation to the utility official of documentation conclusively showing that the developer has spent, in aggregate, more than five percent of the most recent appraised market value of the property associated with the new development towards the development of infrastructure facilities."

**Section 7.** The Department of Public Works and Engineering shall begin collecting drainage impact fees no sooner than one year after the effective date of this Ordinance.

**Section 8.** If any provision, section, subsection, sentence, clause, or phrase of this Ordinance, or the application of same to any person or set of circumstances, is for any reason held to be unconstitutional, void or invalid, the validity of the remaining portions of this Ordinance or their application to other persons or sets of circumstances shall not be affected thereby, it being the intent of the City Council in adopting this Ordinance that no portion hereof or provision or regulation contained herein shall become inoperative or fail by reason of any unconstitutionality, voidness or invalidity of any other portion hereof, and all provisions of this Ordinance are declared to be severable for that purpose.

**Section 9.** This Ordinance shall take effect immediately upon final passage and approval by the Mayor; however, in the event the Mayor fails to sign this Ordinance within five days of its passage and adoption, it shall take effect in accordance with Article VI, Section 6 of the Houston City Charter.

PASSED on first reading this 27th day of March, 2013

# PASSED AND FINALLY APPROVED on second reading this day of april 1, 2013.

Ypril , 2013.	
	Mayor of the City of Houston
Pursuant to Article VI, Section 6, Houst foregoing Ordinance is	ton City Charter, the effective date of the
	City Secretary
Prepared by Legal Dept. ALC; asw 03/12/2013 Assistant C Requested by Daniel W. Krueger, P.E., D Engineering L.D. File No. 0420900113001	ity Attorney Director, Department of Public Works &
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MAYOR PARKER

COUNCIL MEMBERS

BROWN

DAVIS

COHEN

ADAMS

MARTIN

ABSENT-CITY BUSINESS HOANG

PENNINGTON

GONZALEZ

RODRIGUEZ

LASTER

GREEN

COSTELLO

**BURKS** 

NORIEGA
BRADFORD
CHRISTIE

ABSENT DUE TO

BEING ILL

Passed 1st Reading

NO

AYE

Passed 2nd & Final Reading

AYE	NO	4/03/13
		MAYOR PARKER
		COUNCIL MEMBERS
Bered .		BROWN
		DAVIS
V		COHEN
Berlind		ADAMS
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	SSENT DUE TO	BURKS
		NORIEGA
		BRADFORD
		CHRISTIE
CAPTION	ADOPTED	
		MAY 017 Rev. 12/12

# **EXHIBIT A**

# CITY OF HOUSTON DRAINAGE IMPACT FEE STUDY

**DECEMBER 7, 2012** 





# City of Houston Drainage Impact Fee Study

Prepared for the Department of Public Works & Engineering

December 7, 2012

SUBMITTED BY:



Kimley-Horn and Associates, Inc.

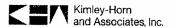
# **Drainage Impact Fee Study** For 2012 - 2022

# Prepared for:

City of Houston, Texas **Department of Public Works and Engineering** 



# Prepared by:

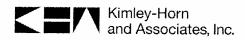


Kimley-Horn and Associates, Inc. 12750 Merit Drive, Suite 1000 Dallas, TX 75251 972.770.1300 Firm Registration No. F-928

Prepared in association with: AECOM Technical Services, Inc. CivilTech Engineering, Inc. Knudson, LP



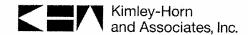






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# **Executive Summary**

# Introduction

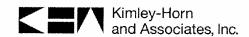
Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. They originated and evolved in Florida, California, and other fast-growing municipalities and counties, primarily in the Southern and Western United States. Across the country, they are used to fund various items, including police and fire facilities, parks, schools, roads, and utilities. In Texas, the legislature has allowed their use for water, wastewater, roadway, and drainage facilities. Since 1990, they have been used to fund public water and wastewater improvements in the City of Houston. They are being proposed for implementation for use in funding drainage infrastructure.

Drainage Impact Fees are a part of the City's ReBuild Houston Initiative, which took effect with the passage of the Proposition 1 Charter Amendment (a Special Election occurred on November 2, 2010 and passed via Ordinance No. 2010-879 on November 15, 2010). The full language is provided below. The drainage impact fee portion of ReBuild Houston is included within Section 22 (b)(i).

Section 22 - Dedicated Pay-As-You-Go Fund for Drainage and Streets.

To provide for the enhancement, improvement and ongoing renewal of Houston's drainage and streets, a dedicated, pay-as-you-go fund entitled the 'Dedicated Drainage and Street Renewal Fund' shall be established, applied and funded as follows:

- (a) The Dedicated Drainage and Street Renewal Fund shall be established as a dedicated, pay-as-you-go source of funding for the City's drainage and streets.
- (b) To ensure the continued availability of the Dedicated Drainage and Street Renewal Fund as a pay-as-you-go source for the capital cost of future drainage and street needs, no more than 25% of each annual appropriation to the Fund may be used for maintenance and operation expenses, except where third party contracts, grants or payments may provide otherwise. The balance shall be used exclusively on a pay-as-you-go basis for capital costs of drainage and streets, including planning, engineering and right-of-way acquisition. The Fund may not be used to pay debt service. Beginning in the budget for fiscal year 2012, the Dedicated Drainage and Street Renewal Fund shall be funded annually in each budget adopted by the city council from the following sources, the first two of which are intended to supplement and not replace historic funding sources and the third and fourth of which are intended to confirm the City's commitment to continue historic funding:
  - (i) All proceeds of developer impact fees, which beginning in fiscal year 2012, and continuing thereafter shall be imposed in an equitable manner as provided by law to recover allocable costs of providing drainage and streets for properties under development.
  - (ii) All proceeds of drainage charges, which beginning in fiscal year 2012, and continuing thereafter shall be imposed in an equitable manner as provided by law to recover allocable costs of providing drainage to benefiting properties, with drainage charges initially set at levels designed to generate at least \$125 million for fiscal year 2012.





- (iii) An amount equivalent to proceeds from \$0.118 of the City's ad valorem tax levy minus an amount equal to debt service for drainage and streets for any outstanding bonds or notes:
  - (A) Issued prior to December 31, 2011, and
  - (B) Bonds or notes issued to refund them.
- (iv) All proceeds from third party contracts, grants or payments of any kind earmarked or dedicated to drainage or streets.
- (c) This Section is subject to modification as permitted by law or termination at the end of fiscal year 2031 (i.e., after 20 years of operation) if during fiscal year 2030 (i.e. 19th year of operation) such modification or termination is authorized by an affirmative vote of two-thirds of the City Council following a public hearing on the matter. If not so terminated, this Section shall continue in full force and effect for successive 20 year periods, subject in each case to modification or termination in the same manner.
- (d) Funding for the Dedicated Drainage and Street Renewal Fund that is not derived from ad valorem taxes levied by the City (i.e., that portion derived from fees, charges and third party payments) shall not be included in those revenues limited by this Charter.

In the most basic terms, impact fees are meant to recover the incremental cost of each new unit of development in terms of new infrastructure needs. In the case of drainage impact fees, the infrastructure need is increased capacity within the City's drainage system. The purpose of this Impact Fee Study is to identify the fee per unit of new development allowed to fund these improvements in accordance with the enabling legislation, Chapter 395 of the Texas Local Government Code.

Impact Fees are a one-time fee and are charged only against new development. They are based on the cost of the improvements to the drainage system, both increasing the capacity of existing systems and constructing new systems, necessary to accommodate new growth. A Drainage Impact Fee would supplement the City's ability to fund drainage improvements; however, it would not replace existing funding mechanisms.

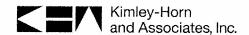
The primary goal of the Impact Fee program is to directly correlate fees with actual impacts and to spread the cost of needed improvements across all new developments. In this way, all new development shares the cost of expanding the drainage system in a predictable and equitable fashion.

# **Impact Fee Basics**

Drainage Impact Fees are determined by several key variables, each described below in greater detail.

# Impact Fee Study

The primary purpose of the Impact Fee Study is to determine the maximum impact fee per unit of new development allowed by state law. The determination of the maximum impact fee contained within this study is not a recommended fee level; the actual fee amount ultimately assessed is at the discretion of the Houston City Council, so long as it does not





exceed the maximum assessable by law as contained within this study. The study looks at a period of 10 years to project new growth and corresponding capacity needs, as required by state law. The study (and corresponding maximum fees) must be updated at least every five years. The study could be updated at any time, however, to accommodate significant changes in any of the key variables of the impact fee equation.

### Service Areas

A Service Area is a geographic area within which a unique maximum impact fee is determined. All fees collected within the Service Area must be spent on eligible improvements within the same Service Area. For Drainage Impact Fees, the Service Area may include all or part of the land within the political subdivision or its extraterritorial jurisdiction (ETJ), but shall not exceed the area actually served by the storm water, drainage, and flood control facilities designated in the capital improvements plan and shall not extend across watershed boundaries.

For the City of Houston, it was determined that the fee would only include land within the City's corporate limits (no ETJ due to ReBuild Houston only including City Limits) and the Service Area boundaries are based on the TSARP (Tropical Storm Allison Recovery Project) Watershed boundaries. It should be noted that Service Areas include both developable and undevelopable land (i.e., lakes, bayous, etc.). The application of all of these provisions resulted in the creation of ten separate Service Areas.

Since each Service Area has a unique maximum impact fee, the maximum assessable perunit fee for an identical property calculated within this study may vary from one Service Area to the next

#### Land Use Assumptions

The Impact Fee determination is required to be based on the projected growth and corresponding capacity needs in a 10-year window. This study considers the years 2012-2022 (1/1/2012 – 12/31/2021). Acknowledging that the parameters of the study (the corporate boundaries most notably) do change over time (and this study needed to take a snapshot at one point in time); this study is based on conditions as they were on January 1, 2012. Within five years of adoption, or sooner if necessary, changes to these study parameters will be included in an update of the Impact Fee Study.

One of the key elements in the determination of the impact fee is the amount of new development anticipated over 10 years. In order to arrive at a reasonable projection of growth, demographic projections developed and adopted by HGAC (Houston-Galveston Area Council) were utilized to develop the Land Use Assumptions. Reasonable estimates of the amount of impervious area to be expected with that new development were also applied. Tables were created to present existing (2012), 10-year (2022), and ultimate (2040) population and employment data, along with impervious area.





# Drainage Impact Fee Improvements Plan (DIFIP) for Impact Fees

The Drainage Impact Fee Improvements Plan (DIFIP), as it is referred to within this study, is the listing of projects described as the Capital Improvements Plan (CIP) within Chapter 395 of the Texas Local Government Code. This naming convention change was done to create a distinct and separate list of projects from the City's CIP. The DIFIP is simply the list of projects eligible for funding through impact fees. Capacity improvements may only include projects that are intended to accommodate future development. Mitigation of existing deficiencies and maintenance activities do not qualify as capacity improvements under impact fee law in Texas.

The cost of the DIFIP is one of the fundamental factors in the calculation of the per-unit impact fee amount. The DIFIP cost was calculated through evaluation of each eligible project. A standard methodology was utilized for estimating project delivery costs once the project scope was defined. Referencing recent drainage projects within Houston and the immediate vicinity, uniform costs were determined for the major items of work, associated construction items, and project delivery costs. It should be noted that these cost projections are based on conceptual level planning and are subject to refinement upon final design.

Only those projects listed in the DIFIP are eligible to utilize future impact fee funds collected from new development. Only the costs associated with providing the additional capacity necessitated by 10 years' growth can be used to calculate the maximum impact fee. In order to calculate the fee, the total cost of the DIFIP was reduced to eliminate (1) the portion of new capacity that will address existing needs, and (2) the portion of new capacity that will not be necessitated until beyond the 10-year growth window.

# Impact Fee Calculation

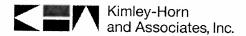
In simplest terms, the maximum impact fee allowable by law is calculated by dividing the total cost of the DIFIP by the number of new units of development. In accordance with state law, both the cost of the DIFIP and the number of new units of development used in the equation are based on the growth and corresponding capacity needs projected to occur within a 10-year window. This calculation is performed for each Service Area individually; each Service Area has a stand-alone DIFIP and 10-year growth projections.

# Collection and Use of Impact Fees

Funds collected within a Service Area can be used only on projects identified within the same Service Area. Fees must be utilized within 10 years of collection, or must be refunded with interest.

#### Adoption Process

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption of Impact Fees. An Advisory Committee is required to review the Land Use Assumptions and DIFIP used in calculating the maximum fee and to provide its finding for consideration by the City Council. The composition of the Advisory Committee is required to adequately represent the building and development communities. The Advisory Committee is proposed to be the Planning Commission in the City of Houston. The City





Council must then conduct a public hearing on the Land Use Assumptions and DIFIP before considering an Impact Fee ordinance.

The Impact Fee ordinance is considered separately from the Land Use Assumptions and DIFIP. The Advisory Committee must review the Impact Fee ordinance and provide its findings to the City Council. Following receipt of the report by the Advisory Committee, the City Council is required to conduct a public hearing on the Impact Fee ordinance prior to adoption.

Following ordinance adoption, the Advisory Committee meets on a semiannual basis and advises the City Council of the need to update the Land Use Assumptions or DIFIP at any time within five years of adoption. Finally, the Advisory Committee oversees the proper administration of the Impact Fee, once in place, and advises the Council as necessary.





# I. INTRODUCTION

Chapter 395 of the Texas Local Government Code (Chapter 395) describes the procedures and regulations that Texas cities must follow in order to create and implement impact fees within a political subdivision. In 2001, Senate Bill 243 (SB 243) was enacted, redefining the Impact Fee according to Chapter 395 as "a charge or assessment imposed by a political subdivision against a new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development."

Accordingly, the City of Houston has developed its Land Use Assumptions and Drainage Impact Fee Improvements Plans (DIFIP) to implement Drainage Impact Fees. The City has retained Kimley-Horn and Associates, Inc., to provide professional engineering services for the development of the drainage impact fee policy. This report includes details of the impact fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the DIFIP, and the Impact Fee calculations.

This report introduces and references two of the basic inputs to the Drainage Impact Fee: the Land Use Assumptions and the Drainage Impact Fee Improvements Plan (DIFIP). Information from these two components is used extensively throughout the remainder of the report. This report consists of a detailed discussion of the methodology for the computation of impact fees. This discussion — Methodology for Drainage Impact Fees and Impact Fee Calculation addresses each of the components of the computation and calculations required for the policy. The components include:

- Service Areas
- Service Units
- Cost Per Service Unit
- Cost of the DIFIP
- Service Unit Calculation
- Maximum Assessable Impact Fee Per Service Unit
- Service Unit Demand Per Unit of Development
- Plan for Awarding the Drainage Impact Fee Credit

Lastly, using the information compiled above, this study details the maximum assessable drainage impact fee per service unit that the City of Houston may apply under Chapter 395.





# II. LAND USE ASSUMPTIONS

### A. PURPOSE AND OVERVIEW

In order to assess the drainage impact fee, Land Use Assumptions must be developed to provide a basis for growth projections within a political subdivision. As defined by Chapter 395, these assumptions include a description of changes in land use, densities, intensities, and populations within the Service Area. These assumptions are also useful to the City of Houston in determining the need and timing of capital improvements to serve future development.

Chapter 395 states that the Drainage Impact Fee and Capital Improvements Plan must contain specific enumeration of "...the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years." In the case of the Drainage Impact Fee, this demand was measured by comparing the existing impervious cover at the location of each improvement with those projected in the 10-year growth and conditions in 2040. Therefore, Land Use Assumptions must be developed for existing, 10-year growth, and conditions anticipated in 2040 within the watershed.

The Land Use Assumptions include the following components:

- **Methodology** An overview of the general methodology used to generate the land use assumptions;
- Impact Fee Service Areas Explanation of the division of Houston into Service Areas for drainage facilities;
- Impervious Cover Data on population and employment within the Service Area for existing conditions (2012), the conditions at the furthest extent of the current HGAC planning window (2040), and growth projections by Service Area over the next ten years (2012 2022); and
- Land Use Data on existing and 2040 land use conditions.

# B. METHODOLOGY

The Land Use Assumptions prepared for the Drainage Impact Fee focused on current impervious cover in the City and anticipated growth in impervious cover. The impervious cover projections that were utilized in this report were done using reasonable and generally accepted planning principles. The following factors were considered in developing these projections:

- Growth trends in households and jobs from 2012 to 2040; and
- Impervious cover of each Service Area.





# C. IMPACT FEE SERVICE AREAS

In order to set the Service Areas, consideration was made to the City of Houston corporate boundary, TSARP (Tropical Storm Allison Recovery Project) Watershed boundaries, and consultation with City staff. The Service Areas contain watersheds that drain to a common outfall point. The geographic boundary of the ten proposed impact fee Service Areas for drainage facilities is shown in **Sheet A1** of **Appendix A**. **Table 1** summarizes the Service Areas along with associated TSARP watersheds. It should be noted that the Clear Creek Service Area excludes area controlled by the Clear Lake Water Authority.

**Table 1: Service Areas** 

Service Area	TSARP Watershed(s)	Area (sf)	Area (acres)	
Addicks Reservior	Addicks Reservior	599,401,371	13,760	
Barker Reservoir	Barker Reservoir	525,759,752	12,070	
Brays Bayou	Brays Bayou	2,722,767,642	62,506	
Buffalo / White Oak	Buffalo Bayou, White Oak Bayou	4,202,288,415	96,471	
Clear Creek	Armand Bayou, Clear Creek	1,050,562,623	24,118	
Greens Bayou	Greens Bayou	1,961,360,260	45,027	
<b>Hunting Bayou</b>	Hunting Bayou	713,952,564	16,390	
San Jacinto	Carpenters Bayou, Cypress Creek, Spring Creek, Willow Creek, Luce Bayou, Little Cypress Creek, Jackson Bayou, San Jacinto River	1,836,978,764	42,171	
Ship Channel	Ship Channel	374,829,944	8,605	
Sims / Vince	Sims Bayou, Vince Bayou	2,376,301,803	54,552	
	TOTAL AREA	16,364,203,138	375,670	

# D. IMPERVIOUS COVER

10-year growth (2022) and 2040 projected impervious information for the City was compiled using data provided by HGAC and the City. HGAC provided information regarding jobs, households, and population starting in the year 2005 and actual / projected demographic information for each year from 2005 to 2040. The information was provided for uniform 100,000 square-foot parcels that cover the entire extent of the region. An evaluation of the job and household growth trends was conducted for 2012 to 2022 and 2012 to 2040.

The City provided an impervious area breakdown of each Service Area in existing conditions (2012) based on the proposed Service Area boundaries. It should be noted that Service Areas include both developable and undevelopable land (i.e., lakes, bayous, etc.). By correlating the relationship between existing impervious cover and current (2012) household and job population for each Service Area and projecting a similar relationship for





future development, a reasonable estimate of 10-year and 2040 impervious cover could be determined. For areas where job or household numbers were projected to decrease, no reduction of impervious area was anticipated. It was not anticipated that a reduction in population or jobs would coincide with the restoration of open space and the removal of impervious area.

**Table 2** summarizes each Service Area's household, employment, and impervious projections for 2012, 2022, and 2040.

**Table 2: Service Area Impervious Projections** 

Service	Year	Total Area		Total Impervious Area		Total Percent	HGAC Projections (Total)	
Area	rear	(ft²)	(acres)	(ft²)	(acres)	Impervious (%)	Households	Jobs
	2012			11,600,825	266	1.94%	2,129	767
Addicks	2022	599,401,371	13,760	13,551,162	311	2.26%	2,499	843
	2040			15,826,322	363	2.64%	2,918	987
	2012			5,898,035	135	1.12%	497	269
Barker	2022	525,759,752	12,070	8,024,934	184	1.53%	690	282
	2040			18,764,495	431	3.57%	1,642	485
D	2012			1,144,876,308	26,283	42.05%	266,624	456,870
Brays	2022	2,722,767,642	62,506	1,222,283,000	28,060	44.89%	280,924	519,973
Bayou	2040			1,333,502,000	30,613	48.98%	294,304	597,742
Buffalo /	2012			1,653,534,157	37,960	39.35%	327,817	871,484
White	2022	4,202,288,415	96,471	1,833,014,500	42,080	43.62%	351,031	955,437
Oak	2040			2,043,199,500	46,905	48.62%	378,455	1,097,062
C)	2012	1,050,562,623	24,118	250,844,388	5,759	23.88%	24,475	33,589
Clear	2022			276,733,800	6,353	26.34%	34,533	38,631
Creek	2040			397,105,200	9,116	37.80%	49,863	54,404
	2012		45,027	505,122,640	11,596	25.75%	56,982	110,149
Greens	2022	1,961,360,260		633,454,200	14,542	32.30%	68,229	124,489
Bayou	2040			815,075,400	18,712	41.56%	88,013	159,443
	2012			252,201,944	5,790	35.32%	26,861	39,430
Hunting	2022	713,952,564	16,390	276,599,400	6,350	38.74%	31,336	49,213
Bayou	2040			353,579,400	8,117	49.52%	37,944	69,953
	2012		42,171	181,706,197	4,171	9.89%	26,066	19,067
San	2022	1,836,978,764		247,171,200	5,674	13.46%	34,300	22,984
Jacinto	2040			332,245,200	7,627	18.09%	46,376	29,994
CL.	2012		8,605	118,988,391	2,732	31.74%	5,571	16,127
Ship	2022	374,829,944		148,063,142	3,399	39.50%	6,876	20,186
Chanel	2040			190,130,611	4,365	50.72%	9,094	25,365
61 /	2012			656,666,633	15,075	27.63%	97,233	98,800
Sims /	2022	2,376,301,803	54,552	870,868,800	19,992	36.65%	108,129	123,386
Vince	2040	-,5.0,501,000		1,106,288,400	25,397	46.56%	131,267	177,048





# III. DRAINAGE IMPACT FEE IMPROVEMENTS PLAN

Chapter 395 of the Texas Local Government Code dictates that impact fees "may be imposed only to pay the costs of constructing capital improvements or facility expansions" within the subject Service Area. A capital improvement, such as a storm water, drainage, or flood control facility that is owned and operated by the political subdivision, must be listed within the Drainage Impact Fee Improvements Plan (DIFIP) in order to be eligible for funding through the drainage impact fee. Drainage needs analyses previously prepared by the City were used to develop the list of projects for the DIFIP.

The City of Houston Comprehensive Drainage Plan (CDP) was used as the primary basis of the DIFIP. The CDP was originally prepared in 1999 and updated in 2003. The CDP identifies numerous drainage projects throughout the City limits based on inadequate or non-existent drainage facilities. Projects included in the CDP have been broken down into categories based on the need that generated the project.

As part of the ReBuild Houston program, areas of the City were prioritized for drainage improvements. These high need areas are referred to as the "5+5" areas. They include areas where specific projects have been adopted over the next 5 years (2012 - 2016), as well as areas where projects are anticipated in the following 5 years (2017 - 2021).

Projects from the CDP were selected for inclusion in the DIFIP through the following selection process:

- 1. All project classifications (from the CDP) were considered for the DIFIP. The following definitions were taken directly from the CDP.
  - a. Category 1 Existing storm sewer systems that have been determined to be inadequate and where flooding complaints have been reported within drainage boundaries.
  - b. Category 2 Converting existing open-ditch systems (non-storm sewer areas) to storm sewer systems where previous flooding complaints have been reported. Proposed storm sewer systems for this category type address the main trunk system requirements only.
  - c. Category 3 Existing storm sewer systems that have been determined to be inadequate and flooding complaints have not been reported within the systems drainage boundary.
  - d. Category 4 Converting existing open-ditch systems (non-storm sewer areas) to storm sewer systems where previous flooding complaints have not been reported. Proposed storm sewer systems for this category type address the main trunk systems only.
  - e. Category 5 Areas currently considered to be undeveloped and having no defined drainage system. For this category type, drainage areas and main (trunk) sewer systems were determined.
  - f. Category A Existing storm sewer systems that have been determined to be adequate. These systems may or may not have reported flooding complaints.





- 2. All Category 5 projects within an impact fee Service Area were considered for the DIFIP, regardless of its location. For the other project categories, only projects located within the City's "5+5" areas were considered for the DIFIP.
- 3. Only projects where a portion of the drainage area is anticipated to experience an increase in development based on HGAC land use projections were included in the DIFIP. This allows the project to incorporate capacity for future development.

Along with the CDP projects described above, sub-regional detention projects were included in the DIFIP. These projects were previously identified in the April 2008 Dodson & Associates, Inc. (Dodson) report titled "City of Houston Sub-Regional Detention Master Plan". Recommended sub-regional detention projects from the Dodson report were selected for inclusion in the DIFIP through the following selection process:

- 1. The recommended sub-regional detention projects within an impact fee Service Area were considered for the DIFIP.
- 2. Only projects where a portion of the drainage area is anticipated to experience an increase in development based on HGAC land use projections were included in the DIFIP. This allows the project to incorporate capacity for future development.

The following three sub-regional detention projects met these criteria and were added to the DIFIP:

- Project 1 East Detention Alternative 1-6 within the Buffalo/White Oak Service Area
- Project 2 Detention Alternative 2-5 within the Greens Bayou Service Area
- Project 9 Detention Alternative 8-3 within the Sims/Vince Service Area

The location of each project in the DIFIP is shown in Sheets A2 – A7 of Appendix A and a list of the projects is included in Appendix C. The list includes one table per Service Area that includes DIFIP projects. Not every Service Area has a project that meet the criteria listed above; therefore, not every Service Area has a DIFIP project. Each table lists the location, length, and size of each CDP project within each Service Area.

The City assigned each of the CDP projects a drainage area identifier, length, and storm sewer size during the preparation of the CDP. These storm sewer sizes were determined based on a preliminary existing conditions analysis only. As part of this report, an analysis was performed to evaluate the selected CDP projects and develop a preliminary estimate for the size of the facilities necessary to accommodate future development. This analysis was done by overlaying HGAC existing (2012) and 2040 land use information with the drainage area of each project. A drainage coefficient was applied to each development parcel within a drainage area to account for its respective development type in both existing (2012) and 2040 conditions. The Rational Method coefficients selected were based on values published in the CDP and are consistent with the land use designation provided by HGAC for each parcel. Table 3 below summarizes the land use designations from HGAC and the corresponding and Rational Method coefficients from the CDP.





Table 3: Land Use Designations and C Values

Land Use	C Value	
Water	1.00	
Roads	0.74	
Commercial	0.80	
Government/Medical/Education	0.80	
Industrial	0.70	
Other	0.80	
Residential*	0.59	
Parks/Open Spaces		
Undevelopable	0.20	
Unknown		
Vacant Developable		

<sup>\*</sup> C Value for residential was based on average of the Single-Family Residential C Value (0.45) and Multi-Family Residential C Value (0.725).

Areas designated as "Undevelopable" or "Unknown" by HGAC have the same designation in existing (2012) and 2040 conditions. Therefore, the impact of the undevelopable and unknown areas on the change in C value between existing and future conditions is negligible. The C values for these land uses have been set at 0.20 for the purpose of this analysis.

Weighted C Values for existing (2012) and 2040 conditions were calculated for the individual drainage areas of each project to estimate the potential increase in capacity necessary for future growth for each project. The percent increase in the C value between existing (2012) and 2040 conditions was assumed to be equivalent to the percent increase in pipe capacity necessary to serve 2040 flows. Based on the increased pipe capacity, a new storm sewer size was estimated for each project based on the original sizes included in the CDP. The new storm sewer sizes are reflected in the tables in **Appendix C**.

It should be noted that the Impact Fee DIFIP establishes the list of projects for which Impact Fees may be utilized. Essentially, it establishes a list of projects for which an impact fee funding program can be established. Projects not included in the Impact Fee DIFIP are not eligible to receive impact fee funding. The Impact Fee DIFIP is different from a City's construction CIP, which provides a short-term list of projects for which the City is committed to building. This Impact Fee DIFIP is simply an inventory of future projects needed to serve future development for which the Impact Fee is calculated.





# IV. DRAINAGE IMPACT FEE METHODOLOGY

#### A. SERVICE AREA

The Service Areas used in the Drainage Impact Fee Study are shown in **Appendix A**. These Service Areas cover the entire boundary of the City of Houston as of January 1, 2012.

# **B. SERVICE UNIT**

The service unit is a measure of use of the Capital Improvement facilities within the Service Area. The use of drainage Capital Improvements is measured by the amount of runoff generated. As impervious area increases, the volume and peak rate of runoff increases. Therefore, the use of the Capital Improvements facilities is directly tied to impervious area. For the purposes of the Drainage Impact Fee, a service unit is a measure of the increase in impervious area that occurs within the Service Area.

A service unit will be defined as additional 1,000 square feet of impervious cover. The total number of service units within each Service Area was calculated by estimating the amount of additional impervious area proposed to be added via development within the next 10 years, as derived from the Land Use Assumptions. Establishing service units as a measureable increase in impervious area rather than based on a land use provides a direct measurement of the use of the storm sewer system and allows for an equitable application of the drainage impact fee.

Table 4 summarizes the Service Units for each Service Area.

**Table 4: Service Unit Calculation** 

了是由特殊人工工作的	Column 1	Column 2	Column 3	Column 4	
Service Area	Existing (2012) Impervious Area (sf)	10-Year (2022) Projected Impervious Area (sf)	10-Year Growth (2012 – 2022) (sf)	Number of Service Units (1 Service Unit = 1,000 sf)	
	(from Table 2)	(from Table 2)	(Column 2 – Column 1)	(Column 3/ 1,000 sf)	
Addicks Reservior	11,600,825	13,551,162	1,950,337	1,950.337	
Barker Reservoir	5,898,035	8,024,934	2,126,899	2,126.899	
Brays Bayou	1,144,876,308	1,222,283,000	77,406,692	77,406.692	
Buffalo / White Oak	1,653,534,157	1,833,014,500	179,480,343	179,480.343	
Clear Creek	250,844,388	276,733,800	25,889,412	25,889.412	
Greens Bayou	505,122,640	633,454,200	128,331,560	128,331.560	
Hunting Bayou	252,201,944	276,599,400	24,397,456	24,397.456	
San Jacinto	181,706,197	247,171,200	65,465,003	65,465.003	
Ship Channel	118,988,391	148,063,142	29,074,751	29,074.751	
Sims / Vince	656,666,633	870,868,800	214,202,167	214,202.167	





#### C. COST PER SERVICE UNIT

A fundamental step in the impact fee process is to establish the cost for each service unit. In the case of the drainage impact fee, this is the cost per 1,000 of additional impervious square feet of a proposed development. This cost per service unit is the cost to construct the portion of a drainage facility (size and linear foot) needed to accommodate a proposed development at a level of service corresponding to the City's standards. Although a service unit is based on 1,000 square feet of impervious cover, all development will be assessed the impact fee for each square foot of impervious area proposed. The cost per service unit is calculated for each Service Area based on a specific list of projects within that Service Area.

The second component of the cost per service unit is the number of service units in each Service Area. This number is the measure of the development growth that is projected to occur in the ten-year period. Chapter 395 requires that Impact Fees are assessed only to pay for growth projected to occur within the next ten years, a concept that will be covered in a later section of this report.

#### D. COST OF THE DIFIP

All of the project costs for the drainage system are eligible to be included in the Drainage Impact Fee Improvements Plan. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are "...including and limited to the:

- 1. Construction contract price;
- 2. Surveying and engineering fees;
- 3. Land acquisition costs, including land purchases, court awards and costs, attorney's fees, and expert witness fees; and
- 4. Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvements plan who is not an employee of the political subdivision."

The planning level opinions of probable cost of the CDP projects in the DIFIP are based, in part, on the calculation of a unit cost of construction. This means that a cost per linear foot of storm drainage pipe is calculated based on an average price for the various components of drainage construction. This allows the probable cost to be determined by the type of facility being constructed, the number of pipes, and the length of the project.

Appendix B summarizes unit cost estimates for each proposed storm sewer size identified in the DIFIP projects. The following elements were built in to each pipe size's unit cost per linear foot:

- Removal of existing pipe and pavement (for replacement projects)
- Storm sewer pipe (assuming Reinforced Concrete Pipe)
- Manholes
- Inlets
- Replacement of pavement
- Dewatering





- Trench safety
- Traffic control
- Mobilization
- Engineering
- Contingency

The unit cost for each element was estimated on a per linear foot basis or as a percentage of the total construction cost. The unit cost estimates were created based on current (2012) bid tabulations from the City of Houston, guidance from the City, and experience performing comparable projects in the area. The planning level cost for each project was determined based on the storm sewer's equivalent unit cost.

The costs of the sub-regional detention pond projects were taken directly from the previously referenced April 2008 Dodson Report titled "City of Houston Sub-Regional Detention Master Plan".

#### E. SERVICE UNIT CALCULATION

As mentioned earlier in this report, impact fees may only be assessed for needs associated with development in the upcoming 10-year timeframe. The projects listed in the DIFIP will be constructed to convey both existing and future flows. Therefore, only a portion of the cost of the DIFIP is assessable to the impact fee. A two-step process was used to determine the portion of the DIFIP cost assessable to the impact fee.

1. The individual drainage area of each DIFIP project was evaluated to determine the existing and 2040 Rational Method coefficient. Based on these coefficients, the portion of the projects attributable to future growth was calculated using the following formula:

Cost Attributable to Future Growth = Cost of Project 
$$\times$$
  $\frac{Cfuture - Cexisting}{Cfuture}$ 

2. The cost of each project in the individual service areas was again reduced to account for capacity related to 10-year growth only. This was accomplished using the impervious areas projections from the Land Use Assumptions. The Cost Attributable to Future Growth for each project was combined for a total value for the service area. The portion of the projects attributable to 10-year growth was calculated using the following formula:

$$Percent\ Attributable\ to\ 10\ \ Year\ Growth = \frac{Imp\ Area\ 2022\ - Imp\ Area\ existing}{Imp\ Area\ 2040\ - Imp\ Area\ existing}$$

Cost Attributable to 10 Year Growth

= Cost Attributable to Future Growth

× Percent Attributable to 10 Year Growth





The Cost Attributable to 10-Year Growth represents the portion of the DIFIP projects that can be included within the drainage impact fee calculation. **Table 5** summarizes the percent of project costs are attributable to 10-year growth.

Table 5: Drainage Impact Fee Improvements Projects – Percent Attributable to 10-Year Growth

	Column 1	Column 2	Column 3	Column 4	
Service Area	Existing Condition Impervious Area (sf)	10-Year (2022) Impervious Area (sf)	2040 Impervious Area (sf)	Percent Attributable to 10-Year Growth	
	(from Table 2)	(from Table 2)	(from Table 2)	(Column 2 – Column 1) / (Column 3 – Column 1)	
Addicks Reservoir	11,600,825	13,551,162	15,826,322	46.16%	
Barker Reservoir	5,898,035	8,024,934	18,764,495	16.53%	
Brays Bayou	1,144,876,308	1,222,283,000	1,333,502,000	41.04%	
Buffalo / White Oak	1,653,534,157	1,833,014,500	2,043,199,500	46.06%	
Clear Creek	250,844,388	276,733,800	397,105,200	17.70%	
Greens Bayou	505,122,640	633,454,200	815,075,400	41.40%	
Hunting Bayou	252,201,944	276,599,400	353,579,400	24.07%	
San Jacinto	181,706,197	247,171,200	332,245,200	43.49%	
Ship Channel	118,988,391	148,063,142	190,130,611	40.87%	
Sims / Vince	656,666,633	870,868,800	1,106,288,400	47.64%	

A breakdown of the costs associated with the DIFIP is shown in Appendix C.

Individual project cost projections can be seen in **Appendix C.** It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of project costs that are recoverable through impact fees. Actual project costs are likely to change with time and are dependent on market and economic conditions that cannot be predicted. The Impact Fee DIFIP establishes the list of projects for which Impact Fees may be utilized. Essentially, it establishes a list of projects for which an impact fee funding program can be established. Projects not included in the Impact Fee DIFIP are not eligible to receive impact fee funding. The Impact Fee DIFIP is different from a City's construction CIP, which provides a short-term list of projects for which the City is committed to building. This Impact Fee DIFIP is simply an inventory of projects needed to serve future development for which the Impact Fee is calculated. The cost projections utilized in this study should not be utilized for the City's building program or construction CIP, as they are not based on a detailed design evaluation.





### V. IMPACT FEE CALCULATION

#### A. MAXIMUM ASSESSABLE IMPACT FEE PER SERVICE UNIT

This section presents the maximum assessable impact fee rate calculated for new development. The maximum assessable fee is the total cost attributable to 10-year growth of the DIFIP divided by the total number of service units representing growth attributable to development within the 10-year period. The components of this calculation have been presented in previous sections of this report. The purpose of this section is to outline the computation of the impact fee and demonstrate the guidelines of Chapter 395 have been followed.

The calculations described in Section IV of this report have been performed for every improvement identified in the DIFIP within the Drainage Impact Fee Service Areas. The sum of the Costs Attributable to Growth has been calculated to determine the total cost of the DIFIP within each Service Area. Following this calculation, the Cost Per Service Unit and the Maximum Assessable Impact Fee is calculated. **Table 6** illustrates the steps of this computation.

## B. PLAN FOR AWARDING THE DRAINAGE IMPACT FEE CREDIT

Chapter 395 of the Texas Local Government Code requires the Capital Improvements Plan for Drainage Impact Fees to contain specific enumeration of a plan for awarding the impact fee credit. Section 395.014 of the Code states:

#### "(7) A plan for awarding:

- (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 Houston has determined that the maximum assessable impact fee per service unit shall be 50% of the total projected cost of implementing the Drainage Impact Fee Improvements Plan.

The Total Cost Attributable to 10-Year Growth (LINE 1) is taken from Appendix C. Therefore, based on the approach for determining the credit as described above, LINE 2 of Table 6, the Percent of Fee Recoverable is equal to 50%. LINE 1 is then multiplied by LINE 2 to yield the Maximum Assessable Impact Fee Per Service Area (LINE 3). LINE 4, the Total Number of Service Units for each Service Area was taken from Table 4. LINE 5 calculates the Cost of DIFIP per Service Unit Attributable to 10-Year Growth.





Table 6: Maximum Assessable Drainage Impact Fee Calculation Steps

LINE NO.	LINE DESCRIPTION
1	Total Cost Attributable to 10-Year Growth (From Appendix C)
2	Percent of Fee Recoverable (50%) (From Chapter 395 of Texas Local Government Code)
3	Maximum Assessable Fee per Service Area = (LINE 1 * LINE 2)
4	Total Number of Service Units (From Table 4)
5	Cost of DIFIP per Service Unit Attributable to 10-Year Growth = (LINE 3 / LINE 4)

# C. MAXIMUM ASSESSABLE IMPACT FEE PER SERVICE UNIT

Table 7 summarizes the maximum assessable fee for each Service Area.

Table 7: Drainage Impact Fee Improvements Projects – Maximum Assessable Fee per Service Unit

Service Area	Total Costs Attributable to Future Growth (From Appendix C)	% Attributable to 10-Year Growth (from Table 5)	Total Cost Attributable to 10-Year Growth (LINE 1)	Maximum Assessable Fee per Service Area (LINE 3)	Number of Service Units (LINE 4; from Table 4)	Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5)
Addicks Reservior	\$0	46.16%	\$0	\$0	1,950.337	\$0.00/SU
Barker Reservoir	\$0	16.53%	\$0	\$0	2,126.899	\$0.00/SU
Brays Bayou	\$3,254,287	41.04%	\$1,335,559	\$667,780	77,406.692	\$8.63/SU
Buffalo / White Oak	\$12,769,312	46.06%	\$5,881,545	\$2,940,773	179,480.343	\$16.38/SU
Clear Creek	\$114,691	17.70%	\$20,300	\$10,150	25,889.412	\$0.39/SU
Greens Bayou	\$8,316,233	41.40%	\$3,442,920	\$1,721,460	128,331.560	\$13.41/SU
Hunting Bayou	\$2,076,154	24.07%	\$499,730	\$249,865	24,397.456	\$10.24/SU
San Jacinto	\$0	43.49%	\$0	\$0	65,465.003	\$0.00/SU
Ship Channel	\$0	40.87%	\$0	\$0	29,074.751	\$0.00/SU
Sims / Vince	\$51,472,918	47.64%	\$24,521,698	\$12,260,849	214,202.167	\$57.24/SU





# VI. SAMPLE CALCULATIONS

#### Example 1:

• Development Type - One Unit of Single-Family Housing in Brays Bayou Service Area. 3,200 square feet of increased impervious area is proposed.

	Drainage Impact Fee Calculation Steps – Example 1								
	Determine Development Unit and Impervious Area								
Step 1	Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Service Units: 3,200 square feet = 3.2 SU								
Step	Determine Maximum Assessable Impact Fee Per Service Unit								
2	Brays Bayou Service Area: \$8.63/SU								
	Determine Maximum Assessable Impact Fee								
Step	Impact Fee = # of Service Units * Max. Fee Per Service Unit								
3	Impact Fee = 3.2 SU * \$8.63/SU								
	Maximum Assessable Impact Fee = \$27.62								

#### Example 2:

• Development Type – 5 acre Commercial Development in Sims/Vince Service Area. 175,500 square feet of increased impervious area is proposed.

	Drainage Impact Fee Calculation Steps – Example 2								
	Determine Development Unit and Impervious Area								
Step 1	Development Type: Commercial Development Number of Service Units = 175,500 square feet = 175.5 SU								
Step	Determine Maximum Assessable Impact Fee Per Service Unit								
2	Sims/Vince Service Area: \$57.24/SU								
	Determine Maximum Assessable Impact Fee								
C4	Impact Fee = # of Service Units * Max. Fee Per Service Unit								
Step 3	Impact Fee = 175.5 SU * \$57.24/SU								
	Maximum Assessable Impact Fee = \$10,045.62								





#### VII. CONCLUSION

The City of Houston has established a process to implement the assessment and collection of drainage impact fees through the adoption of an impact fee ordinance that is consistent with Chapter 395 of the Texas Local Government Code.

This report establishes the maximum allowable drainage impact fee that could be assessed by the City of Houston, as shown in the previously referenced **Table 7**. This document serves as a guide to the assessment of drainage impact fees pertaining to future development and the City's need for drainage improvements to accommodate that growth. Following the public hearing process, the City Council may establish an impact fee amount to be assessed (if any) up to the calculated maximum and establish the Drainage Impact Fee Ordinance accordingly.

In conclusion, it is our opinion that the data and methodology used in this analysis are appropriate and consistent with Chapter 395 of the Texas Local Government Code. Furthermore, the Land Use Assumptions and the proposed Drainage Impact Fee Improvements Plan (DIFIP) are appropriately incorporated into the development of the maximum assessable drainage impact fee.





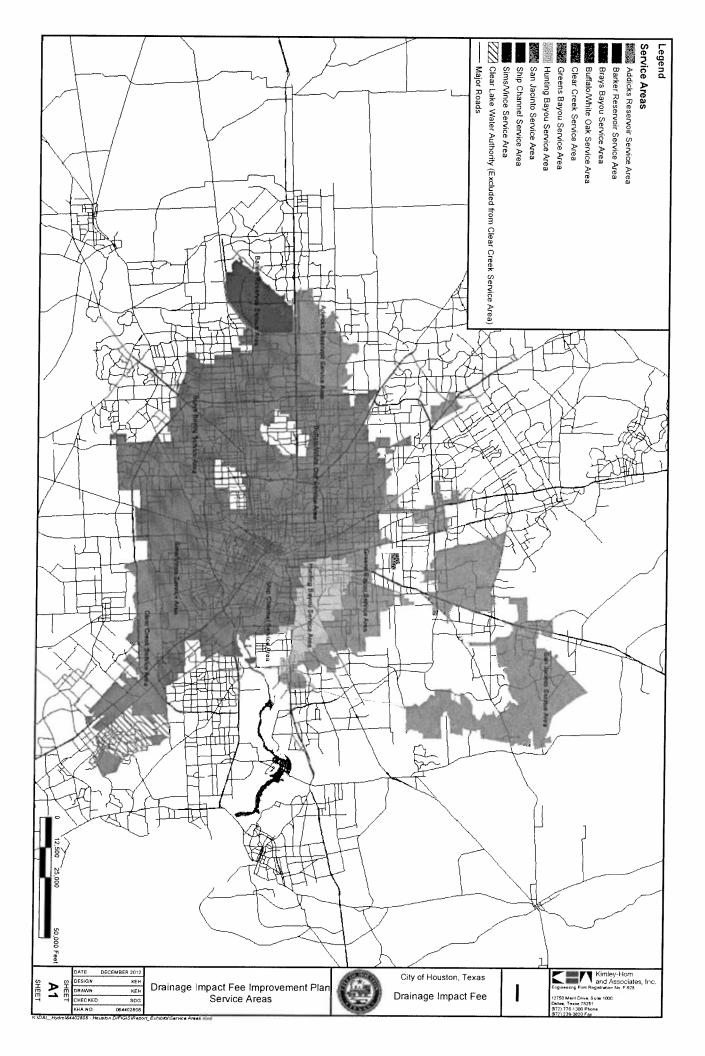
# **APPENDICES**

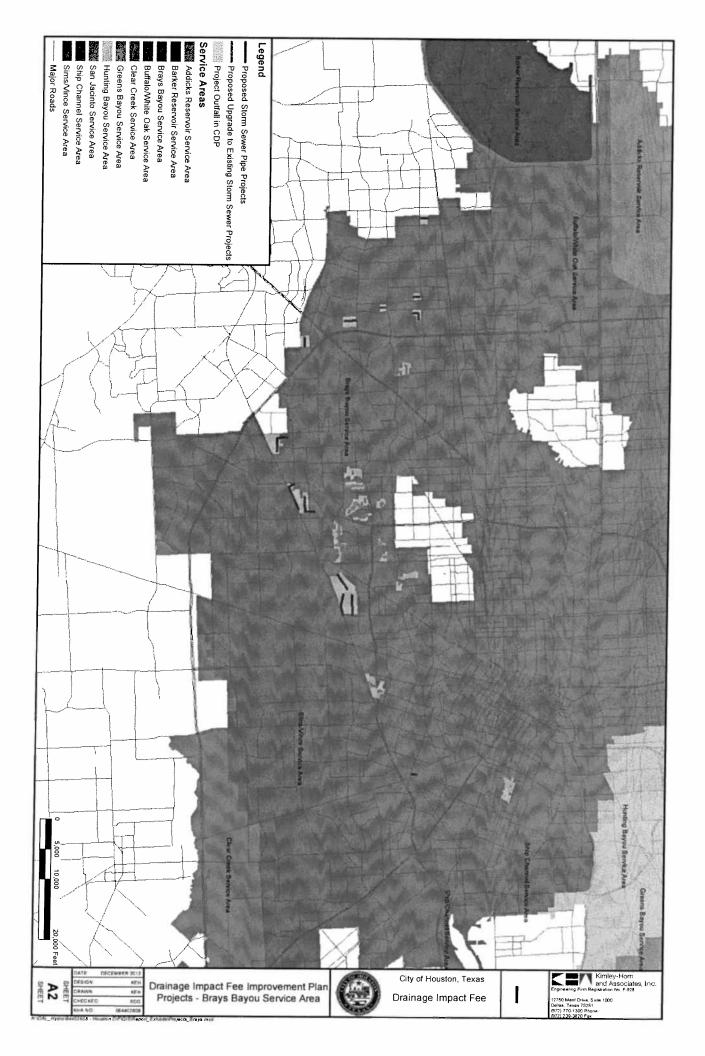
- A. SERVICE AREA MAPPING
- **B. STORM SEWER UNIT COST ESTIMATES**
- C. PLANNING LEVEL OPINIONS OF PROBABLE COST



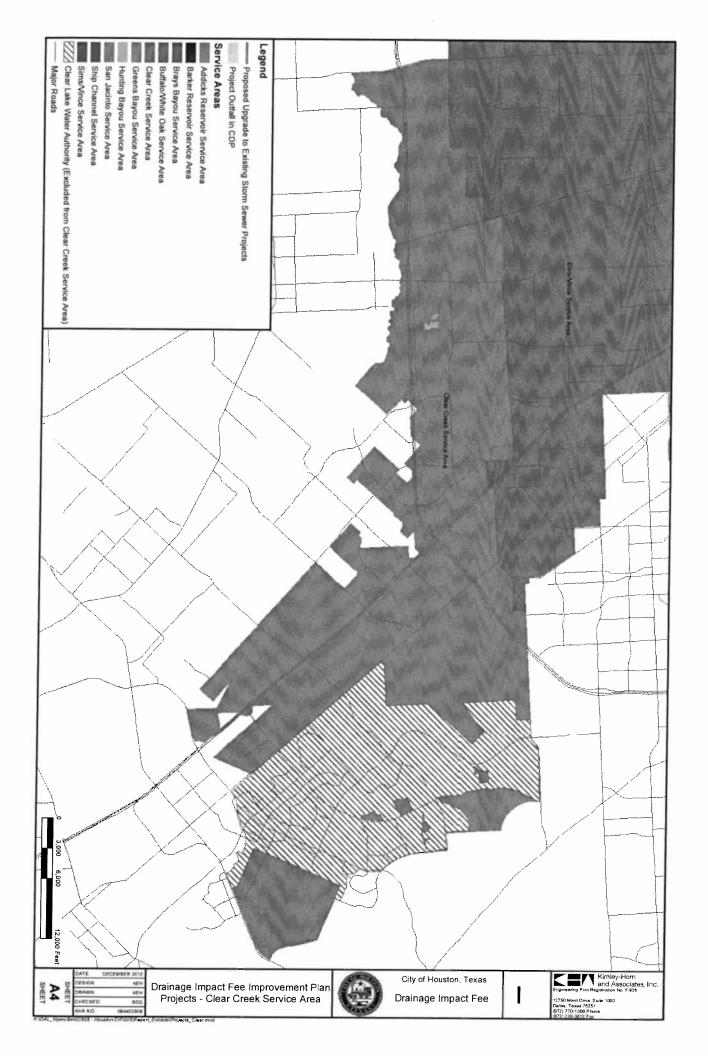


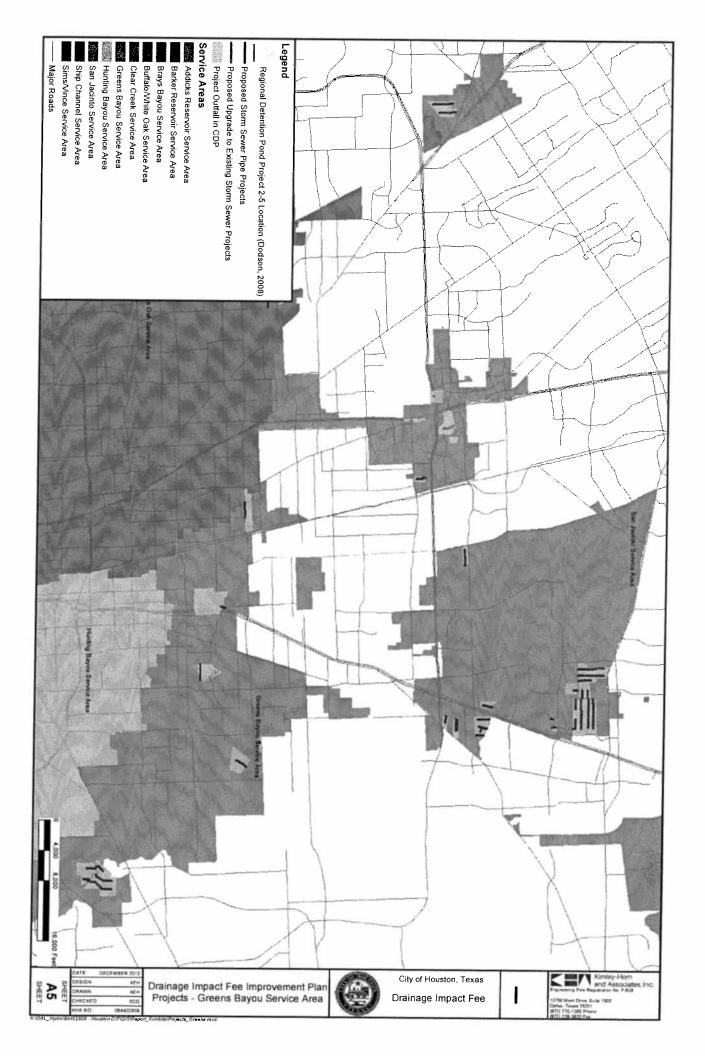
# Appendix A – Service Area Mapping

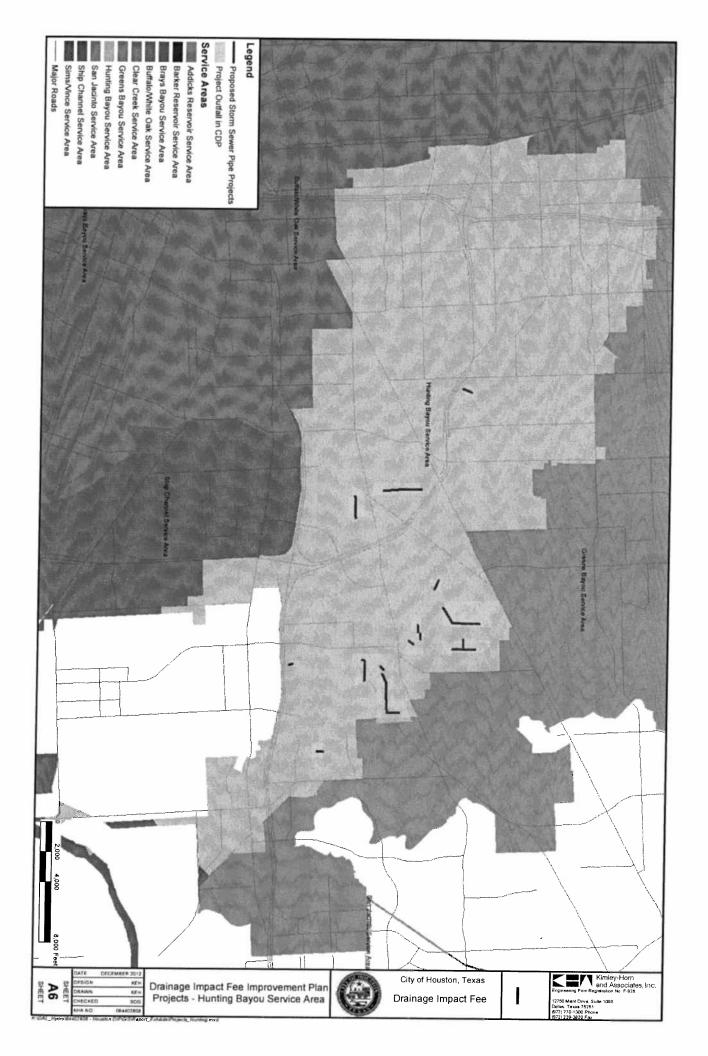


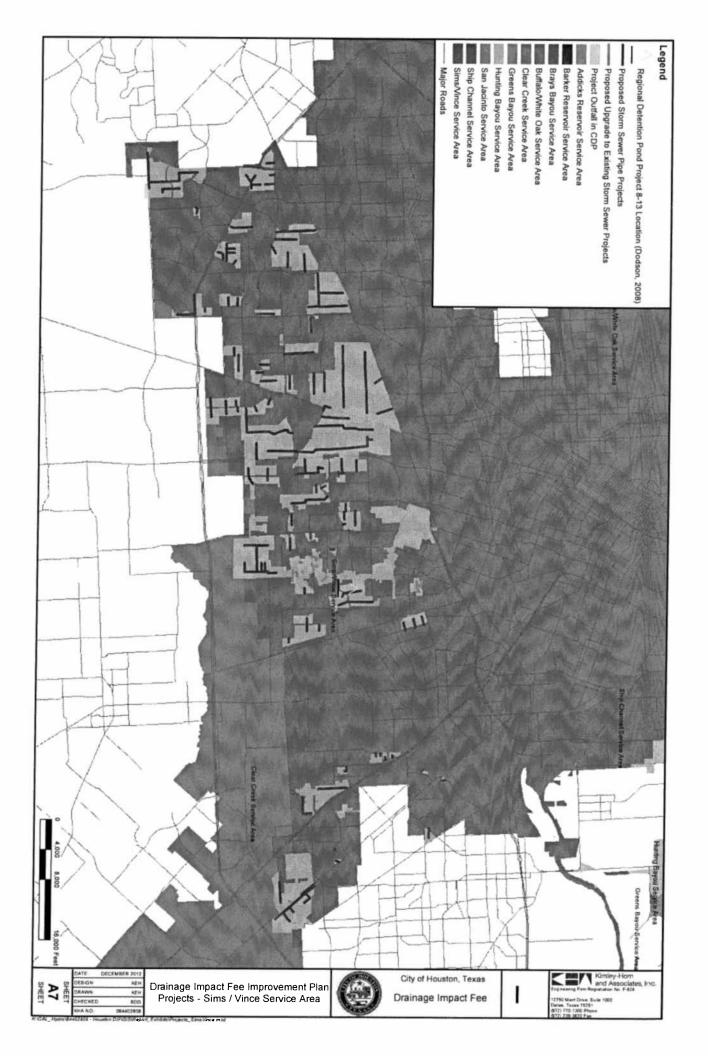
















# Appendix B – Storm Sewer Unit Cost Estimates

# **Storm Sewer Unit Cost Rates**

	·
Pipe Diameter	Mails Cout Box
1	Unit Cost Rate
(in)	(\$/In ft)
24	\$310.00
30	\$340.00
36	\$370.00
42	\$380.00
48	\$440.00
54	\$470.00
60	\$500.00
66	\$540.00
72	\$570.00
78	\$640.00
84	\$730.00
96	\$830.00
108	\$920.00
120	\$1,120.00
132	\$1,280.00
144	\$1,480.00
156	\$1,610.00
168	\$1,860.00
180	\$2,060.00
192	\$2,250.00
204	\$2,640.00
216	\$2,900.00
228	\$3,100.00
240	\$3,420.00
252	\$3,810.00
264	\$4,200.00
276	\$4,460.00
288	\$4,970.00
	, , , , , , , , , , , , , , , , , , , ,

#### Notes:

1. Unit Cost Rates were developed based on City of Houston Bid Tabs for storm sewer projects constructed in 2010 and 2011.

2. Unit Cost Rates include the following:

Removal of existing pipe and pavement

Storm sewer pipe

Manholes

Inlets

Replacement of pavement

Groundwater control

Storm Water Pollution Prevention Plan (SW3P)

Trench safety

Traffic control

Mobilization

Engineering and contingency (20%)

3. Unit Cost Rates do not include the following:

Relocation of existing utilities

Acquisition of additional right-of-way





# **Appendix C – Planning Level Opinions of Probable Cost**

# Brays Bayou Service Area

Project	Outfall	Project Category	Proposed Pipe / Upgrade to	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to
	<del> </del>		Existing		47 LF of 42"	\$17,860	Future Growt \$125
1	D0122	1	U	0.70%	103 LF of 42"	\$39,140	\$274
2	D0124	1	U	0.48%	47 LF of 66"	\$25,380	\$122
	1 5012		0	0.40%	200 LF of 66"	\$108,000	\$518
					195 LF of 42"	\$74,100	\$882
3	D0149	1	U	1.19%	131 LF of 42"	\$49,780	\$592
					98 LF of 42" 251 LF of 36"	\$37,240	\$443 \$1,105
					251 LF of 30"	\$85,340	\$1,391
4	D0155	1	U	1.63%	179 LF of 30"	\$60,860	\$992
-	D0133	1	Ü	1.05%	183 LF of 30"	\$62,220	\$1,014
	<del> </del>				396 LF of 36"	\$146,520	\$2,388
				-	557 LF of 36"	\$206,090	\$412
		İ		-	117 LF of 48" 268 LF of 96"	\$51,480	\$103
				<u> </u>	41 LF of 96"	\$34,030	\$445 \$68
					130 LF of 48"	\$57,200	\$114
				ľ	278 LF of 96"	\$230,740	\$461
		ĺ			64 LF of 36"	\$23,680	\$47
		ŀ			304 LF of 42"	\$115,520	\$231
					401 LF of 72"	\$228,570	\$457
5	D0180	1	υ	0.20%	475 LF of 96"	\$394,250	\$789
				-	298 LF of 42"	\$113,240	\$226
				F	870 LF of 96"	\$722,100	\$1,444
				H	47 LF of 48" 812 LF of 96"	\$20,680	\$41
				<u> </u>	58 LF of 96"	\$48,140	\$1,348 \$96
			1	F	253 LF of 96"	\$209,990	\$420
					301 LF of 36"	\$111,370	\$223
					70 LF of 48"	\$30,800	\$62
					315 LF of 36"	\$116,550	\$233
					308 LF of 48"	\$135,520	\$271
			U	0.25%	53 LF of 54"	\$24,910	\$62
6	00208	,			36 LF of 54"	\$16,920	\$42
0	D0208	1			370 LF of 54"	\$173,900	\$435
					381 LF of 42"	\$144,780	\$362
					319 LF of 42" 243 LF of 60"	\$121,220 \$121,500	\$303 \$498
	- 1				294 LF of 42"	\$111,720	\$458
7	D0212	1	U		309 LF of 54"	\$145,230	\$595
′	00212	1	0	0.41%	244 LF of 30"	\$82,960	\$340
1					300 LF of 54"	\$141,000	\$578
					300 LF of 42"	\$114,000	\$467
					219 LF of 36"	\$81,030	\$97
- 1	1			-	74 LF of 48"	\$32,560	\$39
			1	-	226 LF of 48" 285 LF of 30"	\$99,440	\$119
				F	137 LF of 54"	\$96,900 \$64,390	\$116 \$77
				<u> </u>	310 LF of 96"	\$257,300	\$309
- 1					349 LF of 84"	\$254,770	\$306
	-				359 LF of 54"	\$168,730	\$202
1		1	-		23 LF of 108"	\$21,160	\$25
8	D0220	1	U	0.12%	360 LF of 54"	\$169,200	\$203
Ī					272 LF of 36"	\$100,640	\$121
-				-	302 LF of 72"	\$172,140	\$207
				-	300 LF of 54"	\$141,000	\$169
				-	271 LF of 96" 215 LF of 30"	\$224,930 \$73,100	\$270 \$88
				}	368 LF of 84"	\$268,640	\$322
				-	298 LF of 54"	\$140,060	\$168
1					298 LF of 48"	\$131,120	\$157
					191 LF of 42"	\$72,580	\$87
					312 LF of 36"	\$115,440	\$139
9	D0290	1	U	0.81%	367 LF of 36"	\$135,790	\$1,100
					296 LF of 36"	\$109,520	\$887
	-			<u> </u>	244 LF of 30"	\$82,960	\$149
	Ī		1	-	328 LF of 78"	\$209,920	\$378
			-	<u> </u>	315 LF of 66"	\$170,100	\$306
10	D0320	1	U	0.18%	122 LF of 78" 40 LF of 78"	\$78,080	\$141 \$46
				<u> </u>	135 LF of 78"	\$86,400	\$156
					250 LF of 60"	\$125,000	\$225
i	1		1		304 LF of 54"	\$142,880	\$257

# **Brays Bayou Service Area**

Project	Outfall	Project Category	Proposed Pipe Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth	
					253 LF of 54"	\$118,910	\$214	
10 D0320				350 LF of 66"	\$189,000	\$340		
	1	U	0.18%	250 LF of 36"	\$92,500	\$167		
			1		233 LF of 48"	\$102,520	\$185	
					167 LF of 42"	\$63,460	\$114	
11	D0325	1	U	0.13%	425 LF of 48"	\$187,000	\$243	
				]	159 LF of 42"	\$60,420	\$284	
12	D0601	1	U	0.47%	365 LF of 36"	\$135,050	\$635	
				1	252 LF of 30"	\$85,680	\$403	
13	D0864	1	U	0.18%	124 LF of 36"	\$45,880	\$83	
14	D0880	3	U	0.27%	180 LF of 36"	\$66,500	\$180	
15	D0881	1	U	0.11%	25 LF of 36"	\$9,250	\$10	
				1	246 LF of 48"	\$108,240	\$6,700	
					194 LF of 36"	\$71,780	\$4,443	
16	D0889	1	U	6.19%	68 LF of 48"	\$29,920		
					165 LF of 36"		\$1,852	
***************************************					414 LF of 72"	\$61,050	\$3,779	
						\$235,980	\$14,395	
					263 LF of 72"	\$149,910	\$9,145	
					20 LF of 72"	\$11,400	\$695	
17	D0891	,			24 LF of 72"	\$13,680	\$834	
1/	00891	3	U	6.10%	236 LF of 72"	\$134,520	\$8,206	
		1			335 LF of 72"	\$190,950	\$11,648	
		[			79 LF of 72"	\$45,030	\$2,747	
	1 1				25 LF of 72"	\$14,250	\$869	
					332 LF of 48"	\$146,080	\$8,911	
						178 LF of 60"	\$89,000	\$329
			1 U	0.37%	94 LF of 60"	\$47,000	\$174	
		1			149 LF of 60"	\$74,500	\$276	
18	D1380	1			181 LF of 60"	\$90,500	\$335	
		1			307 LF of 54"	\$144,290	\$534	
					313 LF of 54"	\$147,110	\$544	
		1		ŀ	243 LF of 42"	\$92,340	\$342	
					599 LF of 54"	\$281,530	\$13,964	
19	D8014	5	P	4.96%	657 LF of 60"	\$328,500	\$16,294	
		1	1		747 LF of 84"	\$545,310	\$27,047	
					463 LF of 54"	\$217,610		
20	D8018	5	P	51.80%	480 LF of 54"		\$112,722	
21	D8028	5	Р	0.01%	954 LF of 54"	\$225,600	\$116,861	
				0.0178		\$448,380	\$45	
22	D8033	5	Р	40.62%	421 LF of 42"	\$159,980	\$64,984	
					383 LF of 60"	\$191,500	\$77,787	
23	D8036	5	Р	0.40%	805 LF of 54"	\$378,350	\$1,513	
					1138 LF of 66"	\$614,520	\$2,458	
24	D9026	_			582 LF of 60"	\$291,000	\$56,891	
24	D9026	5	Р	19.55%	1312 LF of 96"	\$1,088,960	\$212,892	
					1511 LF of 120"	\$1,692,320	\$330,849	
		.			1036 LF of 60"	\$518,000	\$25,175	
25	D9036	5	Ρ	4.86%	1155 LF of 72"	\$658,350	\$31,996	
					1884 LF of 96"	\$1,563,720	\$75,997	
26	D9040	5	Р	8.85%	663 LF of 60"	\$331,500	\$29,338	
	55040			0.05%	839 LF of 60"	\$419,500	\$37,126	
27	D9042	5	P	12.44%	739 LF of 36"	\$273,430	\$34,015	
					2383 LF of 96"	\$1,977,890	\$83,863	
28	D9043	5	P	4.24%	1328 LF of 72"	\$756,960	\$32,095	
				F-	408 LF of 54"	\$191,760	\$8,131	
					1344 LF of 54"	\$631,680	\$505	
29	D9044	5	Р	0.08%	1286 LF of 72"			
						\$733,020	\$586	
				<del></del>		\$1,842,600	\$1,474	
30	D9045	5	Р	7 720/		\$1,326,640	\$102,549	
	22073	١ -	r	7.73%	966 LF of 60"	\$483,000	\$37,336	
					1169 LF of 96"	\$970,270	\$75,002	
21	D0045	_		<b>_</b> _	868 LF of 72"	\$494,760	\$236,099	
31	D9046	5	P	47.72%	961 LF of 108"	\$884,120	\$421,902	

Total Costs Attributable to Future Growth (Sum of above project costs)

\$3,141,037 Drainage Impact Fee Study Costs (per Service Area) \$113,250

Total Adjusted Costs Attributable to Future Growth (Sum of above two values)

Percent Attributable to 10-Year Growth (from Table 5) Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7)

Percent of Fee Recoverable (LINE 2 from Table 7)

Maximum Assessable Fee (LINE 3 from Table 7)

Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7)

\$667,780 77,406.692 SU

\$3,254,287

\$1,335,559

41.04%

50%

\$8.63 /SU

Project	Outfall	Project	Proposed Pipe / Upgrade to	Increase in	Project Description	Project	Project Cos Attributable
•		Category	Existing	C Value	r roject bescription	Cost	Future Grow
					297 LF of 78"	\$190,080	\$1,426
					218 LF of 42"	\$82,840	\$621
					185 LF of 42"	\$70,300	\$527
					298 LF of 66"	\$160,920	\$1,207
1	E0082	1	U	0.75%	298 LF of 36"	\$110,260	\$827
					28 LF of 60"	\$14,000	\$105
	l				536 LF of 60"	\$268,000	\$2,010
					296 LF of 72"	\$168,720	\$1,265
					946 LF of 60" 32 LF of 66"	\$473,000	\$3,548
			İ		362 LF of 78"	\$17,280 \$231,680	\$16 \$209
					309 LF of 78"	\$197,760	\$178
2	E0090	1	υ	0.09%	297 LF of 78"	\$190,080	\$178
					46 LF of 78"	\$29,440	\$26
					257 LF of 72"	\$146,490	\$132
					303 LF of 54"	\$142,410	\$128
3	E0156	Α	U	0.56%	136 LF of 48"	\$59,840	\$335
					183 LF of 96"	\$151,890	\$1,975
					335 LF of 96"	\$278,050	\$3,615
				]	359 LF of 96"	\$297,970	\$3,874
- 1					229 LF of 60"	\$114,500	\$1,489
			İ		389 LF of 60"	\$194,500	\$2,529
			ļ	-	300 LF of 60"	\$150,000	\$1,950
1				ŀ	134 LF of 42" 109 LF of 2 - 132"	\$50,920	\$662
- 1				ŀ	113 LF of 60"	\$279,040 \$56,500	\$3,628
				ŀ	247 LF of 42"	\$93,860	\$735 \$1,220
				ŀ	1001 of 132" and 96"	\$2,112,110	\$27,457
					346 LF of 48"	\$152,240	\$1,979
- 1				ľ	401 LF of 48"	\$176,440	\$2,294
				ľ	329 LF of 48"	\$144,760	\$1,882
- 1					61 LF of 48"	\$26,840	\$349
					250 LF of 42"	\$95,000	\$1,235
1				L	569 LF of 54"	\$267,430	\$3,477
	ı	ļ		_	324 LF of 42"	\$123,120	\$1,601
	1	1		<u> </u>	249 LF of 42"	\$94,620	\$1,230
-					789 LF of 42"	\$299,820	\$3,898
- 1				+	200 LF of 54"	\$94,000	\$1,222
				F	838 LF of 54"	\$393,860	\$5,120
1				H	157 LF of 54"	\$73,790	\$959
		1		F	208 LF of 60" 210 LF of 42"	\$104,000 \$79,800	\$1,352 \$1,037
				F	577 LF of 42"	\$219,260	\$2,850
	-			F	71 LF of 48"	\$31,240	\$406
.	50150				272 LF of 48"	\$119,680	\$1,556
4	E0159	1	U	1.30%	68 LF of 54"	\$31,960	\$415
- 1	1	1			511 LF of 96"	\$424,130	\$5,514
1	İ	1			300 LF of 2 - 132"	\$768,000	\$9,984
1		-			322 of 132" and 96"	\$679,420	\$8,832
					254 LF of 78"	\$162,560	\$2,113
				L	25 LF of 78"	\$16,000	\$208
				<u> </u>	476 LF of 96"	\$395,080	\$5,136
		- 1			248 LF of 96"	\$205,840	\$2,676
1				<u> </u>	11 LF of 96"	\$9,130	\$119
	]			-	16 LF of 96"	\$13,280	\$173
1	1			-	343 LF of 78"	\$219,520	\$2,854
			ļ	F	67 LF of 78" 436 LF of 78"	\$42,880	\$557 \$3,628
l			-	<u> </u>	424 LF of 78"	\$279,040	\$3,528
	1		1	<u> </u>	192 LF of 78"	\$122,880	\$1,597
			-		275 LF of 60"	\$137,500	\$1,788
					280 LF of 78"	\$179,200	\$2,330
	-			T	448 LF of 78"	\$286,720	\$3,727
					201 LF of 48"	\$88,440	\$1,150
	-				83 LF of 48"	\$36,520	\$475
	I		and the same of th	_	267 LF of 48"	\$117,480	\$1,527
				L	11 LF of 72"	\$6,270	\$82
				1	11 LF of 72"	\$6,270	\$82
				-	40.15	A	<del></del>
					10 LF of 72"	\$5,700	\$74
					338 LF of 72"	\$192,660	\$2,505

Houston Drainage Impact Fee Study City of Houston, Texas

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
					290 LF of 66"	\$156,600	\$2,036
		l			35 LF of 66"	\$18,900	\$246
					18 LF of 66"	\$9,720	\$126
					331 LF of 66"	\$178,740	\$2,324
					245 LF of 42"	\$93,100	\$1,210
		]			24 LF of 66"	\$12,960	\$168
					571 LF of 78"	\$365,440	\$4,751
					34 LF of 54"	\$15,980	\$208
					14 LF of 60"	\$7,000	\$91
					36 LF of 96"	\$29,880	\$388
					515 LF of 96"	\$427,450	\$5,557
	l				215 LF of 60"	\$107,500	\$1,398
					269 LF of 60"	\$134,500	\$1,749
					593 LF of 2 - 132"	\$1,518,080	\$19,735
					200 LF of 96"	\$166,000	\$2,158
			i		360 LF of 96"	\$298,800	\$3,884
		İ			29 LF of 108"	\$26,680	\$347
					135 LF of 60"	\$67,500	\$878
					156 of 132" and 96"	\$329,160	\$4,279
				ļ	620 LF of 60"	\$310,000	\$4,030
					468 LF of 60"	\$234,000	\$3,042
					94 LF of 42"	\$35,720	\$464
J					165 LF of 42"	\$62,700	\$815
				]	158 LF of 48"	\$69,520	\$904
I	ı				611 of 132" and 120"	\$1,466,400	\$19,063
I				ļ	121 of 132" and 120"	\$290,400	\$3,775
				Į	144 of 132" and 120"	\$345,600	\$4,493
- 1		1		ļ	112 LF of 42"	\$42,560	\$553
- 1	ĺ			L	214 LF of 42"	\$81,320	\$1,057
i	-	1	1		322 LF of 36"	\$119,140	\$1,549
1	1				467 LF of 2 - 132"	\$1,195,520	\$15,542
	1	1		L	215 LF of 60"	\$107,500	\$1,398
1	- 1	1			169 LF of 78"	\$108,160	\$1,406
1				L	342 of 132" and 96"	\$721,620	\$9,381
- 1	I				295 LF of 42"	\$112,100	\$1,457
.				L	220 LF of 36"	\$81,400	\$1,058
4	E0159	1	U	1.30%	171 LF of 36"	\$63,270	\$823
		-		L	358 LF of 36"	\$132,460	\$1,722
	1	l		L	371 LF of 78"	\$237,440	\$3,087
	l				202 LF of 36"	\$74,740	\$972
					89 LF of 2 - 132"	\$227,840	\$2,962
					1032 of 132" and 96"	\$2,177,520	\$28,308
ı		1		L	105 LF of 42"	\$39,900	\$519
ı					201 LF of 30"	\$68,340	\$888
1					181 LF of 30"	\$61,540	\$800
- 1					170 LF of 30"	\$57,800	\$751
1			1		139 LF of 30"	\$47,260	\$614
					187 LF of 42"	\$71,060	\$924
- 1	1	1	1		307 LF of 48"	\$135,080	\$1,756
ı					291 LF of 42"	\$110,580	\$1,438
- 1	1				154 LF of 60"	\$77,000	\$1,001
- 1			-		267 LF of 96"	\$221,610	\$2,881
- 1					197 LF of 96"	\$163,510	\$2,126
- 1					250 LF of 30"	\$85,000	\$1,105
			I		357 of 132" and 96"	\$753,270	\$9,793
	- 1				318 of 132" and 96"	\$670,980	\$8,723
	-			Γ.	766 of 132" and 96"	\$1,616,260	\$21,011
					620 LF of 108"	\$570,400	\$7,415
		l			307 LF of 36"	\$113,590	\$1,477
l				Γ	211 LF of 60"	\$105,500	\$1,372
	1			Γ	176 LF of 96"	\$146,080	\$1,899
					266 LF of 96"	\$220,780	\$2,870
	- 1		-		321 LF of 96"	\$266,430	\$3,464
			- 1	<u> </u>	162 LF of 96"	\$134,460	\$1,748
	Ī				297 LF of 108"	\$273,240	\$3,552
					42 LF of 96"	\$34,860	\$453
					280 LF of 36"	\$103,600	\$1,347
			***		555 LF of 36"	\$205,350	\$2,670
			1		274 LF of 48"	\$120,560	\$1,567
	Ì				275 LF of 36"	\$101,750	\$1,323
					368 LF of 78"	\$235,520	\$3,062
	1				522 LF of 36"	\$193,140	\$2,511
				L			T-1

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
4	E0159	1	U	1.30%	129 LF of 60"	\$64,500	\$839
				1.50%	61 LF of 78"	\$39,040	\$508
5	E0160	,	.,		196 LF of 36"	\$72,520	\$3,387
2	E0100	3	U	4.67%	300 LF of 36"	\$111,000	\$5,184
6	E0190	1	U	1.50%	319 LF of 36"	\$118,030	\$5,512
	20200	-		1.30%	72 LF of 60" 334 LF of 60"	\$36,000	\$540
					271 LF of 2 - 132"	\$693,760	\$4,309 \$17,899
					264 LF of 2 - 132"	\$675,840	\$17,437
					253 LF of 2 - 132"	\$647,680	\$16,710
					85 of 156" and 132"		\$6,338
					71 of 156" and 132"	\$205,190	\$5,294
					126 of 156" and 132	\$364,140	\$9,395
l					267 LF of 60"	\$133,500	\$3,444
l		1			435 of 168" and 156		\$38,944
		l			656 of 168" and 156		\$58,729
			1		573 of 156" and 132"		\$42,724
			1		131 of 156" and 132" 285 of 156" and 132"		\$9,768
1				ĺ	592 of 156" and 132"		\$21,250 \$44,141
1	1				867 of 156" and 132"		\$64,645
1			l	Ì	450 of 156" and 132'		\$33,553
1	-	1	ĺ		34 of 156" and 132"	\$98,260	\$2,535
				Ī	231 of 156" and 132"		\$17,224
l					279 LF of 60"	\$139,500	\$3,599
	1			L	38 LF of 96"	\$31,540	\$814
-	1			1	227 LF of 48"	\$99,880	\$2,577
				1	190 LF of 96"	\$157,700	\$4,069
	1				191 LF of 96"	\$158,530	\$4,090
	]		1	ŀ	352 LF of 108"	\$323,840	\$8,355
				-	50 LF of 96" 197 LF of 2 - 132"	\$41,500 \$504,320	\$1,071
ĺ			-	r	287 of 168" and 156"	\$995,890	\$13,011 \$25,694
		l		t	74 of 156" and 132"	\$213,860	\$5,518
1				ľ	328 LF of 72"	\$186,960	\$4,824
	- 1				155 LF of 54"	\$72,850	\$1,880
					202 LF of 96"	\$167,660	\$4,326
- 1	- 1		Ī	<u> </u>	219 LF of 96"	\$181,770	\$4,690
7	E0369	.			78 LF of 108"	\$71,760	\$1,851
′	E0369	1	U	2.58%	219 LF of 108"	\$201,480	\$5,198
			1	-	297 LF of 108"	\$273,240	\$7,050
		-	İ	-	204 of 156" and 132" 39 of 156" and 132"	\$589,560	\$15,211
				F	240 LF of 96"	\$112,710 \$199,200	\$2,908 \$5,139
	1			F	61 LF of 96"	\$50,630	\$1,306
	- 1				203 LF of 96"	\$168,490	\$4,347
	l		-		452 LF of 108"	\$415,840	\$10,729
- 1					270 of 132" and 108"	\$594,000	\$15,325
				_	396 of 132" and 108"	\$871,200	\$22,477
				<u></u>	239 of 156" and 132"	\$690,710	\$17,820
- 1					36 of 156" and 132"	\$104,040	\$2,684
-				-	129 of 156" and 132"	\$372,810	\$9,618
					18 of 168" and 156" 285 of 156" and 132"	\$62,460	\$1,611
					17 of 168" and 156"	\$823,650	\$21,250
					72 of 168" and 156"	\$943,840	\$64,190 \$24,351
1	l				50 of 132" and 108"	\$110,000	\$2,838
			1	<u> </u>	48 LF of 2 - 132"	\$122,880	\$3,170
1	İ				88 LF of 108"	\$80,960	\$2,089
			[		260 LF of 120"	\$291,200	\$7,513
				<u></u>	132 LF of 120"	\$147,840	\$3,814
	-			<b></b>	83 of 156" and 132"	\$817,870	\$21,101
			1	<u> </u>	14 of 156" and 132"	\$127,160	\$3,281
				<u> </u>	330 LF of 108"	\$303,600	\$7,833
				<u> </u>	430 LF of 120"	\$481,600	\$12,425
					07 of 156" and 132" 34 of 156" and 132"	\$598,230	\$15,434
					34 of 156" and 132"	\$676,260	\$6,263 \$17,448
1					19 of 156" and 132"	\$632,910	\$16,329
1	1				4 of 156" and 132"	\$213,860	\$5,518
1					34 of 156" and 132"	\$676,260	\$17,448
					3 of 156" and 132"	\$153,170	\$3,952
- 1	i i	- 1	1		93 LF of 96"	\$77,190	\$1,992

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable Future Grow				
					36 of 156" and 132"	\$104,040	\$2,684				
					316 LF of 2 - 132"	\$808,960	\$20,871				
					565 of 156" and 132"		\$42,128				
					278 of 156" and 132"		\$20,728				
					192 of 156" and 132"		\$14,316				
					193 of 156" and 132"						
							\$14,390				
					169 of 156" and 132"		\$12,601				
					308 of 156" and 132"		\$22,965				
					178 of 156" and 132"	\$514,420	\$13,272				
	1				174 LF of 2 - 132"	\$445,440	\$11,492				
					252 LF of 2 - 132"	\$645,120	\$16,644				
					142 LF of 60"	\$71,000					
							\$1,832				
	1				170 LF of 60"	\$85,000	\$2,193				
					182 LF of 60"	\$91,000	\$2,348				
	1				59 LF of 96"	\$48,970	\$1,263				
	1				237 LF of 96"	\$196,710	\$5,075				
					53 LF of 96"	\$43,990	\$1,135				
7	E0369	1 1	U	2.58%	545 of 156" and 132"	\$1,575,050					
							\$40,636				
		1 1			271 of 156" and 132"	\$783,190	\$20,206				
		]			54 of 156" and 132"	\$156,060	\$4,026				
					309 LF of 2 - 132"	\$791,040	\$20,409				
	1				178 LF of 2 - 132"	\$455,680	\$11,757				
	1				43 of 168" and 156"	\$149,210	\$3,850				
	1										
				-	275 of 168" and 156"	\$954,250	\$24,620				
					296 of 156" and 132"	\$855,440	\$22,070				
					31 of 156" and 132"	\$89,590	\$2,311				
		l l	Ī	178 LF of 96"	\$147,740	\$3,812					
		i	ŀ	54 of 168" and 156"	\$187,380						
			-	****		\$4,834					
		1	Ī		132 of 156" and 132"	\$381,480	\$9,842				
					29 of 156" and 132"	\$83,810	\$2,162				
					390 LF of 108"	\$358,800	\$9,257				
		1			414 LF of 108"	\$380,880	\$9,827				
		ĺ			145 LF of 96"	\$120,350	\$3,105				
				F	22 LF of 96"						
		l			·	\$18,260	\$471				
				3.28%	229 LF of 60"	\$114,500	\$3,756				
					223 LF of 60"	\$111,500	\$3,657				
					34 LF of 60"	\$17,000	\$558				
8	E0380	1	U		173 LF of 60"	\$86,500	\$2,837				
	1		i		114 LF of 60"	\$57,000	\$1,870				
					126 LF of 60"						
							- 1		ļ		\$63,000
					140 LF of 66"	\$75,600	\$2,480				
				L	150 LF of 60"	\$75,000	\$450				
					196 LF of 60"	\$98,000	\$588				
		1		Г	88 LF of 60"	\$44,000	\$264				
		l		F	217 LF of 30"	\$73,780	\$443				
		I		F							
			į		271 LF of 36"	\$100,270	\$602				
				ļ	71 LF of 36"	\$26,270	\$158				
					71 LF of 42"	\$26,980	\$162				
1					140 LF of 42"	\$53,200	\$319				
	1			-	17 LF of 48"	\$7,480	\$45				
9	E0403	1	U	0.60%	39 LF of 48"						
ĺ		- 1	-			\$17,160	\$103				
	l		1	<u> </u>	313 LF of 48"	\$137,720	\$826				
	1		1	L	74 LF of 48"	\$32,560	\$195				
-	1				131 LF of 30"	\$44,540	\$267				
			į	Γ	282 LF of 36"	\$104,340	\$626				
		1	ļ	F	275 LF of 48"	\$121,000	\$726				
- 1			1	-							
				<u> </u>	317 LF of 54"	\$148,990	\$894				
- 1					267 LF of 48"	\$117,480	\$705				
l					92 LF of 42"	\$34,960	\$210				
				Γ	157 LF of 48"	\$69,080	\$414				
					320 of 54" and 42"	\$272,000	\$9,928				
				<b>-</b>	234 of 54" and 42"						
	1			<u> </u>		\$198,900	\$7,260				
I	J		J	_	213 of 54" and 42"	\$181,050	\$6,608				
10	E0406	1	U	3.65%	501 of 54" and 42"	\$425,850	\$15,544				
	50	-	·	5.0578	266 of 54" and 42"	\$226,100	\$8,253				
1		1			318 of 54" and 42"	\$270,300	\$9,866				
-	1		İ	H	27 of 54" and 42"						
	1		1	<u> </u>		\$22,950	\$838				
					290 LF of 42"	\$110,200	\$4,022				
					82 of 66" and 42"	\$75,440	\$1,803				
11	E0409	1	U	2.39%	185 of 78" and 42"	\$188,700	\$4,510				
					237 of 78" and 42"	\$241,740	\$5,778				
					280 LF of 54"	\$131,600	\$776				
12	E0509	1	υİ	0.59%							

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable t
12	E0509	1	U	0.59%	860 of 54" and 42"	\$731,000	Future Growt \$4,313
13	E0548	1	U	3.99%	86 LF of 36"	\$31,820	\$1,270
1.7	1.0348	1	U	3.99%	62 LF of 54"	\$29,140	\$1,163
					237 LF of 72"	\$135,090	\$176
	1				177 LF of 42"	\$67,260	\$87
					159 LF of 66"	\$85,860	\$112
					164 LF of 66"	\$88,560	\$115
				-	300 LF of 72"	\$171,000	\$222
					59 LF of 72"	\$33,630	\$44
					84 LF of 42" 214 LF of 48"	\$31,920	\$41
14	E0714	714 1	U	0.13%	54 LF of 48"	\$23,760	\$122 \$31
					227 LF of 48"	\$99,880	\$130
					28 LF of 60"	\$14,000	\$18
					261 LF of 60"	\$130,500	\$170
	1				38 LF of 48"	\$16,720	\$22
					322 LF of 36"	\$119,140	\$155
					67 LF of 36"	\$24,790	\$32
					273 LF of 36"	\$101,010	\$131
15	E0789	1	ť	24.08%	264 LF of 30"	\$89,760	\$21,614
					280 LF of 30"	\$95,200	\$22,924
					186 LF of 30"	\$63,240	\$2,125
				-	278 LF of 36" 193 LF of 30"	\$102,860	\$3,456
				-	234 LF of 42"	\$65,620	\$2,205 \$2,988
16	E0790	1	υ	3.36%	190 LF of 30"	\$64,600	\$2,171
			1	r	91 LF of 60"	\$45,500	\$1,529
				T T	286 LF of 48"	\$125,840	\$4,228
				Ī	281 LF of 36"	\$103,970	\$3,493
					279 LF of 42"	\$106,020	\$3,562
17	E5028	4	Р	2.00%	394 LF of 48"	\$173,360	\$3,467
18	E5029	2	Р	1.55%	186 LF of 48"	\$81,840	\$1,269
10	55031				365 LF of 42"	\$138,700	\$2,150
19	E5031	2	Р	1.09%	383 LF of 48"	\$168,520	\$1,837
20	E5045	2	Р	0.75%	350 LF of 36"	\$129,500	\$971
	250 15	-	'	0.73%	248 LF of 42" 152 LF of 48"	\$94,240	\$707
					314 LF of 42"	\$66,880 \$119,320	\$502 \$1,515
21	E5047	2	Р	1.27%	328 LF of 48"	\$144,320	\$1,833
22	E5048	4	Р	0.47%	416 LF of 48"	\$183,040	\$860
					102 LF of 36"	\$37,740	\$1,245
23	E5049	2	Р	3.30%	265 LF of 36"	\$98,050	\$3,236
		-	·	3.30%	500 LF of 42"	\$190,000	\$6,270
					215 LF of 54"	\$101,050	\$3,335
24	E5052	,			382 LF of 60"	\$191,000	\$7,640
24	25052	2	Р	4.00%	371 LF of 66"	\$200,340	\$8,014
25	E5071	5	Р	26 500/	325 LF of 72"	\$185,250	\$7,410
26	E5072	5	P	26.50% 3.22%	153 LF of 36" 412 LF of 54"	\$56,610	\$15,002
27	E5081	5	P	37.22%	392 LF of 48"	\$193,640	\$6,235
				37.2270	294 LF of 54"	\$172,480 \$138,180	\$64,197 \$4,532
20	55000				369 LF of 42"	\$140,220	\$4,599
28	E5082	5	P	3.28%	272 LF of 48"	\$119,680	\$3,926
				<u> </u>	163 LF of 54"	\$76,610	\$2,513
1					500 LF of 42"	\$190,000	\$52,307
29	E5083	5	Р	27.53%	500 LF of 48"	\$220,000	\$60,566
					500 LF of 60"	\$250,000	\$68,825
1					246 LF of 60"	\$123,000	\$7,577
30	E5084	5	Р	6.16%	261 LF of 60"	\$130,500	\$8,039
ſ				_	500 LF of 48"	\$220,000	\$13,552
31	E5101	-		0.0001	500 LF of 42"	\$190,000	\$11,704
-31	101	5	Р	8.26%	500 LF of 42"	\$190,000	\$15,694
			j	$\vdash$	369 LF of 108"	\$339,480	\$38,090
ĺ		l		-	289 LF of 108"	\$265,880	\$29,832
l			j	<u> </u>	500 LF of 108" 500 LF of 108"	\$460,000	\$51,612
	1		1	-	500 LF of 108"	\$460,000	\$51,612
32	E5105	5	Р	11.22%	321 LF of 108"	\$295,320	\$51,612 \$33,135
				-	193 LF of 108"	\$177,560	\$19,922
					148 LF of 108"	\$136,160	\$15,277
			1		321 LF of 108"	\$295,320	\$33,135
	1	ĺ			290 LF of 108"	\$266,800	\$29,935
					***************************************	\$460,000	\$51,612

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Co
		<b> </b>			206 LF of 108"	\$189,520	Future Grov \$21,264
					162 LF of 108"	\$149,040	\$16,722
					500 LF of 78"	\$320,000	\$35,904
22	55.105	-			500 LF of 78"	\$320,000	\$35,904
32	E5105	5	Р	11.22%	500 LF of 96"	\$415,000	\$46,563
					500 LF of 78"	\$320,000	\$35,904
		l			500 LF of 108"	\$460,000	\$51,612
				l	63 LF of 108"	\$57,960	
					264 LF of 78"	\$168,960	\$6,503
				}			\$1,301
					95 LF of 66"	\$51,300	\$395
33	E5112	2	P	0.77%	317 LF of 78"	\$202,880	\$1,562
					297 LF of 78"	\$190,080	\$1,464
	l				281 LF of 96"	\$233,230	\$1,796
	<del> </del>				307 LF of 66"	\$165,780	\$1,277
					302 LF of 78"	\$193,280	\$69,388
34	FE113	_	_		225 LF of 78"	\$144,000	\$51,696
34	E5113	5	P	35.90%	500 LF of 54"	\$235,000	\$84,365
				Ļ	500 LF of 48"	\$220,000	\$78,980
					500 LF of 42"	\$190,000	\$68,210
				L	321 LF of 42"	\$121,980	\$12
					105 LF of 42"	\$39,900	\$4
			İ		324 LF of 54"	\$152,280	\$15
			1	Γ	487 LF of 66"	\$262,980	\$26
35	E5116	5	Р	0.01%	373 LF of 78"	\$238,720	\$24
					337 LF of 66"	\$181,980	\$18
		- 1	1	<u> </u>	149 LF of 54"	\$70,030	\$7
1				<u> </u>	436 LF of 42"	\$165,680	\$17
				· -	243 LF of 54"	\$114,210	\$11
					358 LF of 66"		
36	E5118	5	Р	22.70%		\$193,320	\$43,884
				<del></del>	386 LF of 54"	\$181,420	\$41,182
37	E5129	5	Р	0.129/	80 LF of 42"	\$30,400	\$40
3/	E3129	,	۲	0.13%	146 LF of 42"	\$55,480	\$72
					500 LF of 36"	\$185,000	\$241
38	E5136	5	Р	0.09%	500 LF of 42"	\$190,000	\$171
					215 LF of 48"	\$94,600	\$85
	ĺ		.   .	L	500 LF of 42"	\$190,000	\$40,204
39	E5139	5	5 P	21.16%	215 LF of 66"	\$116,100	\$24,567
					500 LF of 48"	\$220,000	\$46,552
l					500 LF of 54"	\$235,000	\$71,487
- 1				20.22	381 LF of 48"	\$167,640	\$50,996
40	E5160		Р	30.42%	1418 LF of 60"	\$709,000	\$215,678
[	i			<u></u>	1319 LF of 84"	\$962,870	\$292,905
	1				1115 LF of 108"	\$1,025,800	\$312,048
					500 LF of 78"	\$320,000	\$32
	1			-	438 LF of 66"	\$236,520	\$24
	1			0.01%	500 LF of 96"	\$415,000	
		1	1				\$42
41	E5164	5	P		500 LF of 120"	\$560,000	\$56
		_	' 1		239 LF of 120"	\$267,680	\$27
	1				500 LF of 72"	\$285,000	\$29
				⊢	500 LF of 132"	\$640,000	\$64
			I		230 LF of 132"	\$294,400	\$29
					500 LF of 108"	\$460,000	\$46
	-				258 LF of 84"	\$188,340	\$1,092
.					307 LF of 78"	\$196,480	\$1,140
12	E5168	4	Р	0.58%	500 LF of 78"	\$320,000	\$1,856
		1		L	500 LF of 66"	\$270,000	\$1,566
					500 LF of 66"	\$270,000	\$1,566
					295 LF of 108"	\$271,400	\$4,994
		-			500 LF of 96"	\$415,000	\$7,636
3	E5169	5	Р	1 0 407	305 LF of 108"	\$280,600	\$5,163
·	-5103	-	r	1.84%	268 LF of 108"	\$246,560	\$4,537
					500 LF of 78"	\$320,000	\$5,888
1			1	<b> </b>	500 LF of 66"	\$270,000	\$4,968
					316 LF of 96"	\$262,280	
				-			\$13,298
		-		<u> </u>	223 LF of 96"	\$185,090	\$9,384
4	E5170	5	Р	5.07%	500 LF of 78"	\$320,000	\$16,224
- 1		-			164 LF of 96"	\$136,120	\$6,901
		-		ļ	500 LF of 66"	\$270,000	\$13,689
					500 LF of 78"	\$320,000	\$16,224
-				<u></u>	140 LF of 96"	\$116,200	\$337
5	E5171	5	Р	0.29%	322 LF of 78"	\$206,080	\$598
		-		25/0	441 LF of 66"	\$238,140	\$691
1	1	1	1		465 LF of 54"	\$218,550	\$634

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
					500 LF of 108"	\$460,000	\$9,292
					500 LF of 42"	\$190,000	\$3,838
4.0		_	_		500 LF of 78"	\$320,000	\$6,464
46	E5172	5	Р	2.02%	500 LF of 78"	\$320,000	\$6,464
					500 LF of 66"	\$270,000	\$5,454
					500 LF of 48"	\$220,000	\$4,444
	<del> </del>				500 LF of 96" 500 LF of 120"	\$415,000	\$8,383
47	E5175	5	P	3.15%	500 LF of 108"	\$560,000	\$17,640
	23273	J	'	3.1378	368 LF of 132"	\$471,040	\$14,490 \$14,838
***************************************	<b>†</b>				408 LF of 132"	\$522,240	\$209
				<u> </u>	446 LF of 120"	\$499,520	\$200
48	E5176	5	Р	0.04%	500 LF of 108"	\$460,000	\$184
	40 23170				500 LF of 96"	\$415,000	\$166
				ŀ	435 LF of 96"	\$361,050	\$144
					368 LF of 96"	\$305,440	\$7,636
				ŀ	330 LF of 96"	\$273,900	\$6,848
				r	314 LF of 96"	\$260,620	\$6,516
40   55477	_	_		489 LF of 96"	\$405,870	\$10,147	
49	E5177	5	Р	2.50%	445 LF of 78"	\$284,800	\$7,120
					335 LF of 66"	\$180,900	\$4,523
				283 LF of 66"	\$152,820	\$3,821	
				ſ	397 LF of 66"	\$214,380	\$5,360
					450 LF of 54"	\$211,500	\$33,502
50	E5183	5	Р	15.84%	293 LF of 48"	\$128,920	\$20,421
				Ī	242 LF of 48"	\$106,480	\$16,866
51	E5184	5	P	36.75%	313 LF of 42"	\$118,940	\$43,710
52	E5185	5	P	47.86%	351 LF of 42"	\$133,380	\$63,836
					500 LF of 66"	\$270,000	\$44,523
				Γ	500 LF of 78"	\$320,000	\$52,768
i			İ	Γ	87 LF of 78"	\$55,680	\$9,182
					173 LF of 78"	\$110,720	\$18,258
	1				500 LF of 66"	\$270,000	\$44,523
53 E5191	E5191	5	Р	16.49%	500 LF of 66"	\$270,000	\$44,523
				_	500 LF of 54"	\$235,000	\$38,752
					500 LF of 96"	\$415,000	\$68,434
I					364 LF of 66"	\$196,560	\$32,413
- 1					500 LF of 96"	\$415,000	\$68,434
					500 LF of 96"	\$415,000	\$68,434
1	-			<u>L</u>	525 LF of 54"	\$246,750	\$32,645
					282 LF of 96"	\$234,060	\$30,966
54	E5192	5	P	13.23%	676 LF of 66"	\$365,040	\$48,295
				-	555 LF of 78"	\$355,200	\$46,993
					478 LF of 96"	\$396,740	\$52,489
			1	L	390 LF of 42"	\$148,200	\$2,104
55	E5196	5	Р	1.42%	399 LF of 48"	\$175,560	\$2,493
1	1			-	463 LF of 42"	\$175,940	\$2,498
	14/0475				91 LF of 42"	\$34,580	\$491
56	W0135	3	U	0.18%	177 LF of 36"	\$65,490	\$118
				-	234 LF of 48"	\$102,960	\$350
				-	127 LF of 60"	\$63,500	\$216
1				-	121 LF of 60"	\$60,500	\$206
	Ì			<u> </u>	136 LF of 60"	\$68,000	\$231
	1		- 1	<u> </u>	347 LF of 60"	\$173,500	\$590
				<u> </u>	132 LF of 60"	\$66,000	\$224
				⊢	37 LF of 60"	\$18,500	\$63
- [				ļ	240 LF of 60"	\$120,000	\$408
- 1	1			-	271 LF of 48"	\$119,240	\$405
1				<u> </u>	310 LF of 54"	\$145,700	\$495
				<u> </u>	166 LF of 36"	\$61,420	\$209
57	W0155	3	U	0.34%	95 LF of 36"	\$35,150	\$120
-	1		1	F	116 LF of 36"	\$42,920	\$146
				-	101 LF of 36"	\$37,370	\$127
- 1		1	1	-	34 LF of 48"	\$14,960	\$51
				<u> </u> -	270 LF of 48" 117 LF of 42"	\$118,800	\$404
]				-		\$44,460	\$151
				<u> </u>	88 LF of 36"	\$32,560	\$111
1	1			<u> </u>	34 LF of 36"	\$12,580	\$43
1	- 1			-	229 LF of 42"	\$87,020	\$296
			1	ļ	376 LF of 54"	\$176,720	\$601
ĺ		1			4031E ~ £ 40" '	C176 000 1	¢cn4
					402 LF of 48" 81 LF of 36"	\$176,880	\$601 \$102

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	n Project Cost	Project Cos Attributable Future Grow
					64 LF of 42"	\$24,320	\$83
	l	1			130 LF of 48"	\$57,200	\$194
					122 LF of 48"	\$53,680	\$183
F 71	1410455				49 LF of 48"	\$21,560	\$73
57	W0155	3	U	0.34%	28 LF of 96"	\$23,240	\$79
					361 LF of 42"	\$137,180	\$466
					154 LF of 108"	\$141,680	\$482
					56 LF of 84"	\$40,880	\$139
58	W0308	A	U	2.240/	136 LF of 60"	\$68,000	\$231
	W0308	<del></del>	U	2.24%	23 LF of 96"	\$19,090	\$428
					208 LF of 54"	\$97,760	\$1,056
					281 LF of 30" 284 LF of 60"	\$95,540	\$1,032
					237 LF of 54"	\$142,000	\$1,534
					320 LF of 54"	\$111,390	\$1,203
					434 LF of 54"	\$150,400	\$1,624
					57 LF of 54"	\$203,980	\$2,203 \$289
		ĺ		- 1	41 LF of 54"	\$19,270	\$208
				ŀ	83 LF of 42"	\$31,540	\$341
				ľ	275 LF of 42"	\$104,500	\$1,129
			]	f	224 LF of 42"	\$85,120	\$919
ĺ			l	ŀ	328 LF of 36"	\$121,360	\$1,311
1			I	f	113 LF of 42"	\$42,940	\$464
		1		ľ	198 LF of 42"	\$75,240	\$813
59	W0381	3			84 LF of 42"	\$31,920	\$345
39	WU381	3	U	1.08%	331 LF of 42"	\$125,780	\$1,358
					278 LF of 66"	\$150,120	\$1,621
l				T	280 LF of 72"	\$159,600	\$1,724
					58 LF of 96"	\$48,140	\$520
				Γ	62 LF of 30"	\$21,080	\$228
	1			315 LF of 24"	\$97,650	\$1,055	
				97 LF of 30"	\$32,980	\$356	
				308 LF of 66"	\$166,320	\$1,796	
		1		656 LF of 72"	\$373,920	\$4,038	
				59 LF of 42"	\$22,420	\$242	
				_	293 LF of 60"	\$146,500	\$1,582
				_	30 LF of 54"	\$14,100	\$152
- 1				L	97 LF of 54"	\$45,590	\$492
1	- 1			L	352 LF of 60"	\$176,000	\$1,901
					81 LF of 48"	\$35,640	\$385
				-	287 LF of 42"	\$109,060	\$65
- 1	1			<u></u>	265 LF of 42"	\$100,700	\$60
	-			-	267 LF of 42"	\$101,460	\$61
					217 LF of 42"	\$82,460	\$49
			-	<u> </u>	72 LF of 30"	\$24,480	\$15
			ĺ	$\vdash$	115 LF of 30"	\$39,100	\$23
				ļ	332 LF of 60"	\$166,000	\$100
1				-	134 LF of 54"	\$62,980	\$38
				<u> </u>	409 LF of 42"	\$155,420	\$93
				-	36 LF of 54"	\$16,920	\$10
				<del> </del>	272 LF of 42" 298 LF of 54"	\$103,360	\$62
I				-	204 LF of 54"	\$140,060	\$84
				-	17 LF of 54"	\$95,880	\$58
i			Ī	<u> </u>	35 LF of 72"	\$7,990	\$5
		1		<u> </u>	284 LF of 72"	\$19,950 \$161,880	\$12
0 1	W0392	1	U	0.06%	263 LF of 72"	\$149,910	\$97
	1			····	97 LF of 66"	\$52,380	\$90
				<u> </u>	153 LF of 66"		\$31
				-	405 LF of 96"	\$82,620	\$50
- 1	1			-	563 LF of 72"	\$320,910	\$202
				-	365 LF of 72"		\$193
				$\vdash$	252 LF of 72"	\$208,050	\$125
- 1			1	$\vdash$	71 LF of 42"		\$86
l			1	<del> </del>	305 LF of 60"	\$26,980	\$16
				-	100 LF of 60"	\$152,500	\$92
	1			$\vdash$	213 LF of 96"	\$50,000	\$30
	1			<del> </del>	393 LF of 96"	\$176,790 \$326,190	\$106
1				2	10 of 156" and 78"	\$697,500	\$196
-	-			13	204 LF of 42"	\$77,520	\$419
			1		285 LF of 30"	\$96,900	\$47
				-	436 LF of 42"	\$165,680	\$58 \$99
ı	1	1	1	<b>-</b>	26 LF of 42"	\$9,880	\$99

Project	Outfall	Project Category	Proposed Pipe / Upgrade to	Increase in C Value	Project Description	Project Cost	Project Co Attributable
	<del> </del>	<del>                                     </del>	Existing	-	77 LF of 42"		Future Grov
	1	1				\$29,260	\$18
		1			51 LF of 78" 35 LF of 42"	\$32,640	\$20
		-			445 LF of 30"	\$13,300	\$8
60	W0392	1	U	0.06%		\$151,300	\$91
		_	Ŭ	0.00%	304 LF of 30" 93 LF of 30"	\$103,360	\$62
						\$31,620	\$19
	İ			l }	185 LF of 96"	\$153,550	\$92
				}	263 LF of 96"	\$218,290	\$131
	<del> </del>				220 LF of 42"	\$83,600	\$50
				}	477 LF of 156"	\$767,970	\$9,907
					315 LF of 156"	\$507,150	\$6,542
					74 LF of 30" ·	\$25,160	\$325
					385 LF of 60"	\$192,500	\$2,483
				-	413 LF of 60"	\$206,500	\$2,664
			İ	-	441 LF of 54"	\$207,270	\$2,674
				' <u> </u>	375 LF of 42"	\$142,500	\$1,838
- 1				-	519 LF of 42"	\$197,220	\$2,544
61	W0404	1	u	1.29%	385 LF of 42"	\$146,300	\$1,887
Ŭ.	110404	1	١ ٠	1.25%	589 LF of 42" 65 LF of 36"	\$223,820	\$2,887
				-		\$24,050	\$310
				-	139 LF of 48"	\$61,160	\$789
-			J	F	427 LF of 48"	\$187,880	\$2,424
		1		F	28 LF of 42"	\$10,640	\$137
				H	107 LF of 144"	\$158,360	\$2,043
			I	-	41 LF of 144"	\$60,680	\$783
-				-	283 LF of 54"	\$133,010	\$1,716
				-	517 LF of 216"	\$1,499,300	\$19,341
					589 LF of 36"	\$217,930	\$2,811
				F	20 LF of 72"	\$11,400	\$447
		1			143 LF of 72"	\$81,510	\$3,195
	-	1			170 LF of 72"	\$96,900	\$3,798
	ı				146 LF of 72"	\$83,220	\$3,262
1				-	195 LF of 48"	\$85,800	\$3,363
62 W0434	3	U	3.92%	36 LF of 48" 102 LF of 48"	\$15,840	\$621	
			5.5270	323 LF of 42"	\$44,880	\$1,759	
			-	101 LF of 36"	\$122,740	\$4,811	
- 1	I			F	185 LF of 78"	\$118,400	\$1,465
	J		1	-	130 LF of 48"	\$57,200	\$4,641
				F	146 LF of 54"	\$68,620	\$2,242
				<u> </u>	46 LF of 54"	\$21,620	\$2,690
					290 LF of 66"	\$156,600	\$848
			į	<u> </u>	36 LF of 54"	\$16,920	\$1,785 \$193
- 1	1				130 LF of 48"	\$57,200	\$652
-			l	-	224 LF of 54"	\$105,280	\$1,200
				<u></u>	204 LF of 48"	\$89,760	\$1,023
63	W0507	3	υ	1.14%	34 LF of 48"	\$14,960	\$171
					198 LF of 42"	\$75,240	\$858
	İ	1			221 LF of 36"	\$81,770	\$932
					389 LF of 42"	\$147,820	\$1,685
			I		411 LF of 42"	\$156,180	\$1,780
1					317 LF of 36"	\$117,290	\$1,780
					278 LF of 30"	\$94,520	\$66
- 1			1	<u> </u>	285 LF of 30"	\$96,900	\$68
					65 LF of 24"	\$20,150	\$14
64	W0564	1	U	0.07%	623 LF of 48"	\$274,120	\$192
- 1	I				273 LF of 30"	\$92,820	\$65
					222 LF of 36"	\$82,140	\$57
					421 LF of 30"	\$143,140	\$730
ce	WOE71	.		25401	573 LF of 42"	\$217,740	\$1,110
65	W0571	1	U	0.51%	38 LF of 30"	\$12,920	\$66
					267 LF of 30"	\$90,780	\$463
56	W0656	3	U	0.69%	319 LF of 36"	\$118,030	\$814
T					294 LF of 36"	\$108,780	\$577
- 1		1			279 LF of 36"	\$103,230	\$547
					183 LF of 42"	\$69,540	\$369
					280 LF of 54"	\$131,600	\$697
57   N	W0679	1	U	0.53%	400 LF of 48"	\$176,000	\$933
·   '		-	٠	U.J.3/0	230 LF of 36"	\$85,100	\$451
	1				272 LF of 48"	\$119,680	\$634
I					462 LF of 54"	\$217,140	\$1,151
1					376 LF of 120"	\$421,120	\$2,232
i	- 1	- 1			265 LF of 54"	\$124,550	\$660

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cos Attributable Future Grow
	-	<del> </del>	Existing		290 LF of 60"	\$145,000	\$769
					366 LF of 60"	\$183,000	\$970
67	W0679	1	U	0.53%	290 LF of 54"	\$136,300	\$722
					353 LF of 120"	\$395,360	\$2,095
	1				188 LF of 54"	\$88,360	\$1,060
					191 LF of 30"	\$64,940	\$779
				h	84 LF of 42"	\$31,920	\$383
				<del> </del>			
				<u> </u>	808 LF of 66"	\$436,320	\$5,236
68	W0681	1	U	1.20%	478 LF of 60"	\$239,000	\$2,868
	]			l	709 LF of 66"	\$382,860	\$4,594
				Į.	49 LF of 60"	\$24,500	\$294
					263 LF of 60"	\$131,500	\$1,578
				ļ	244 LF of 42"	\$92,720	\$1,113
	ļ				245 LF of 48"	\$107,800	\$1,294
				L	249 LF of 66"	\$134,460	\$995
				L	243 LF of 48"	\$106,920	\$791
					299 LF of 48"	\$131,560	\$974
				Γ	179 LF of 60"	\$89,500	\$662
				Γ	73 LF of 60"	\$36,500	\$270
				Г	246 LF of 60"	\$123,000	\$910
		ĺ	l	r	251 LF of 60"	\$125,500	\$929
			1	F	253 LF of 54"	\$118,910	\$880
69	W0682	1	U	0.74%	114 LF of 42"	\$43,320	\$321
			-	T	246 LF of 60"	\$123,000	\$910
				F	486 LF of 48"	+	
1			]	-		\$213,840	\$1,582
				-	257 LF of 54"	\$120,790	\$894
1		1		-	251 LF of 60"	\$125,500	\$929
- 1				-	245 LF of 60"	\$122,500	\$907
				-	969 LF of 66"	\$523,260	\$3,872
		1		L	545 LF of 78"	\$348,800	\$2,581
					412 LF of 78"	\$263,680	\$1,951
		1	L	305 LF of 48"	\$134,200	\$1,221	
1		l		L	275 LF of 42"	\$104,500	\$951
- 1			1	Ĺ	272 LF of 30"	\$92,480	\$842
					81 LF of 42"	\$30,780	\$280
			1		312 LF of 30"	\$106,080	\$965
- 1	Ī				289 LF of 42"	\$109,820	\$999
- 1	J				341 LF of 144"	\$504,680	\$4,593
				F	420 LF of 96"	\$348,600	\$3,172
	i			<u> </u>	196 LF of 30"	\$66,640	\$606
				<b>-</b>	357 LF of 96"	\$296,310	
	İ	l			190 LF of 66"		\$2,696
1				<u> </u>		\$102,600	\$934
i	1	1			263 LF of 30"	\$89,420	\$814
	i				220 LF of 30"	\$74,800	\$681
					222 LF of 30"	\$75,480	\$687
					195 LF of 30"	\$66,300	\$603
				<u> </u>	44 LF of 30"	\$14,960	\$136
1			1		254 LF of 30"	\$86,360	\$786
				_	231 LF of 42"	\$87,780	\$799
			1		67 LF of 36"	\$24,790	\$226
					316 LF of 42"	\$120,080	\$1,093
70	W0686	1	U	0.91%	66 LF of 42"	\$25,080	\$228
~		1	°	0.91%	107 LF of 42"	\$40,660	\$370
-	- 1				310 LF of 42"	\$117,800	\$1,072
	-	l		<u></u>	304 LF of 30"	\$103,360	\$941
				<u> </u>	318 LF of 30"	\$108,120	\$984
f	-			<u> </u>	271 LF of 42"	\$102,980	\$937
	- 1		į	<b>—</b>	342 LF of 30"	\$116,280	\$1,058
		-		<b>—</b>	231 LF of 42"		
				<u> </u>		\$87,780	\$799
				<u> </u>	278 LF of 54"	\$130,660	\$1,189
				<u> </u>	275 LF of 30"	\$93,500	\$851
	1			<u> </u>	252 LF of 36"	\$93,240	\$848
1				$\vdash$	264 LF of 42"	\$100,320	\$913
İ				<u></u>	354 LF of 108"	\$325,680	\$2,964
]		1	1		325 LF of 108"	\$299,000	\$2,721
	1	l			316 LF of 108"	\$290,720	\$2,646
- 1	1	1			297 LF of 30"	\$100,980	\$919
1					347 LF of 96"	\$288,010	\$2,621
					287 LF of 42"	\$109,060	\$992
			1				, A-
			1		281 LF of 30"	\$95.540	\$869
				-	281 LF of 30" 333 LF of 72"	\$95,540	\$869 \$1.727
					281 LF of 30" 333 LF of 72" 328 LF of 96"	\$95,540 \$189,810 \$272,240	\$869 \$1,727 \$2,477

roject	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cos Attributable
		<del> </del>	Existing		324 LF of 48"		Future Grow
					310 LF of 60"	\$142,560 \$155,000	\$1,297
					230 LF of 168"	\$427,800	\$1,411 \$3,893
					230 LF of 168"	\$427,800	\$3,893
					235 LF of 168"	\$437,100	\$3,978
					229 LF of 156"	\$368,690	\$3,355
					243 LF of 30"	\$82,620	\$752
				ľ	23 LF of 30"	\$7,820	\$71
				ľ	246 LF of 30"	\$83,640	\$761
				Ī	33 LF of 30"	\$11,220	\$102
				ľ	313 LF of 108"	\$287,960	\$2,620
				ŀ	327 LF of 48"	\$143,880	\$1,309
				ŀ	289 LF of 42"	\$109,820	\$999
					285 LF of 42"	\$108,300	\$986
				ľ	269 LF of 30"	\$91,460	\$832
				F	334 LF of 30"	\$113,560	\$1,033
				r	315 LF of 42"	\$119,700	\$1,089
			İ	r	74 LF of 30"	\$25,160	\$229
	l			r	168 LF of 30"	\$57,120	\$520
				r	194 LF of 30"	\$65,960	\$600
				<u> </u>	218 LF of 36"	\$80,660	\$734
			ĺ	ŀ	285 LF of 54"	\$133,950	\$1,219
1				h h	277 LF of 48"	\$121,880	\$1,109
1	I			-	250 LF of 48"	\$110,000	\$1,001
	1	1		T	286 LF of 30"	\$97,240	\$885
ĺ		I		r	257 LF of 36"	\$95,090	\$865
ļ		1		F	174 LF of 36"	\$64,380	\$586
			i		84 LF of 42"	\$31,920	\$290
-					334 LF of 48"	\$146,960	\$1,337
- 1					234 LF of 42"	\$88,920	\$809
1					313 LF of 30"	\$106,420	\$968
					344 LF of 60"	\$172,000	\$1,565
	1	1		<u></u>	313 LF of 54"	\$147,110	\$1,339
	-		İ		62 LF of 54"	\$29,140	\$265
- 1	1				191 LF of 54"	\$89,770	\$817
- 1	1				245 LF of 42"	\$93,100	\$847
0	W0686	1	U	0.91%	342 LF of 48"	\$150,480	\$1,369
	l		1		277 LF of 42"	\$105,260	\$958
- 1			1		205 LF of 30"	\$69,700	\$634
					218 LF of 30"	\$74,120	\$674
	i			T	67 LF of 30"	\$22,780	\$207
- 1	- 1				252 LF of 30"	\$85,680	\$780
	l		i	<u> </u>	196 LF of 36"	\$72,520	\$660
- 1					191 LF of 36"	\$70,670	\$643
	1				307 LF of 42"	\$116,660	\$1,062
				H	300 LF of 72"	\$171,000	\$1,556
	1				28 LF of 72"	\$15,960	\$145
					250 LF of 78"	\$160,000	\$1,456
					272 LF of 84"	\$198,560	\$1,807
- 1		1			271 LF of 66"	\$146,340	\$1,332
		1			281 LF of 66"	\$151,740	\$1,381
					267 LF of 60"	\$133,500	\$1,215
					232 LF of 72"	\$132,240	\$1,203
			-		235 LF of 72"	\$133,950	\$1,219
		1			346 LF of 60"	\$173,000	\$1,574
					246 LF of 30"	\$83,640	\$761
					270 LF of 66"	\$145,800	\$1,327
				<u> </u>	48 LF of 36"	\$17,760	\$162
					279 LF of 66"	\$150,660	\$1,371
					266 LF of 60"	\$133,000	\$1,210
				-	255 LF of 60"	\$127,500	\$1,160
	]				244 LF of 54"	\$114,680	\$1,044
					250 LF of 54"	\$117,500	\$1,044
	- 1		J		243 LF of 42"	\$92,340	\$840
			1			\$100,320	\$913
				-		\$140,360	\$1,277
l						\$123,500	\$1,124
	1		1	<del> </del>		\$120,990	\$1,124
				<u> </u>		\$229,950	\$2,093
			1	<u> </u>		\$135,960	\$1,237
						\$169,500	\$1,237
			1	<u> </u>		\$166,760	\$1,542
- 1	- 1	1	ı		2.02.0,40	7200,700	71,JIO

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growt
					271 LF of 42"	\$102,980	\$937
	1	1			339 LF of 54"	\$159,330	\$1,450
					30 LF of 54"	\$14,100	\$128
	1				323 LF of 60"	\$161,500	\$1,470
					350 LF of 60"	\$175,000	\$1,593
					346 LF of 54"	\$162,620	\$1,480
					285 LF of 30"	\$96,900	\$882
					661 LF of 78"	\$423,040	\$3,850
					279 LF of 54"	\$131,130	\$1,193
				1	343 LF of 96"	\$284,690	\$2,591
				1	940 LF of 108"	\$864,800	\$7,870
	1			1	372 LF of 42"	\$141,360	\$1,286
	1				704 LF of 54"	-	\$3,011
						\$330,880	
					220 LF of 156"	\$354,200	\$3,223
					357 LF of 66"	\$192,780	\$1,754
					275 LF of 54"	\$129,250	\$1,176
					225 LF of 48"	\$99,000	\$901
					273 LF of 30"	\$92,820	\$845
					328 LF of 42"	\$124,640	\$1,134
70	W0686	1	U	0.045/	331 LF of 48"	\$145,640	\$1,325
, 0	******	-	U	0.91%	290 LF of 48"	\$127,600	\$1,161
		1			548 LF of 42"	\$208,240	\$1,895
		l			286 LF of 72"	\$163,020	\$1,483
				ŀ	238 LF of 30"		
				}		\$80,920	\$736
					284 LF of 42"	\$107,920	\$982
				}	316 LF of 78"	\$202,240	\$1,840
				1	130 LF of 30"	\$44,200	\$402
					216 LF of 30"	\$73,440	\$668
				L	263 LF of 36"	\$97,310	\$886
				[	300 LF of 42"	\$114,000	\$1,037
				Γ	287 LF of 132"	\$367,360	\$3,343
	1 1	1			350 LF of 54"	\$164,500	\$1,497
			1		277 LF of 132"	\$354,560	\$3,226
					326 LF of 144"	\$482,480	\$4,391
					289 LF of 168"	<del></del>	
				F		\$537,540	\$4,892
	l i			-	238 LF of 144"	\$352,240	\$3,205
					96 LF of 36"	\$35,520	\$323
			-	L	271 LF of 36"	\$100,270	\$912
				L	485 LF of 48"	\$213,400	\$1,942
					289 LF of 48"	\$127,160	\$1,157
71	W1004	2	Р	3.27%	1392 LF of 54"	\$654,240	\$21,394
- 1					471 LF of 66"	\$254,340	\$16,354
ļ		]			970 LF of 66"	\$523,800	\$33,680
72	W1005	2	Р	6.43%	519 LF of 48"	\$228,360	\$14,684
I		- 1	1	-	1018 LF of 84"	\$743,140	
			1	-			\$47,784
73	W1026	2	D	1.040/	2020 LF of 120"	\$2,262,400	\$145,472
/3	W1026		P	1.94%	1493 LF of 66"	\$806,220	\$15,641
- 1				<u>_</u>	912 LF of 120"	\$1,021,440	\$54,545
			1	L	1592 LF of 60"	\$796,000	\$42,506
74	W1050	5	Р	5.34%	5 LF of 120"	\$5,600	\$299
		- 1	.	0.01,0	1763 LF of 72"	\$1,004,910	\$53,662
	1			Γ	5 LF of 84"	\$3,650	\$195
				r	832 LF of 84"	\$607,360	\$32,433
					1637 LF of 60"	\$818,500	\$819
- 1				F	2 LF of 60"	\$1,000	\$1
75	W1051	5	Р	0.10%	459 LF of 78"		
-		-	1	J.10/8		\$293,760	\$294
				ļ	1518 LF of 48"	\$667,920	\$668
76	WIDES			2.522	579 LF of 66"	\$312,660	\$313
76	W1052	5	P	3.50%	830 LF of 48"	\$365,200	\$12,782
- 1				L	1277 LF of 72"	\$727,890	\$63,035
77	W1070	5	Р	8.66%	1360 LF of 78"	\$870,400	\$75,377
		-	, 1	3.0076	1293 LF of 120"	\$1,448,160	\$125,411
					1273 LF of 66"	\$687,420	\$59,531
78	W1072	5	Р	11.08%	889 LF of 54"	\$417,830	\$46,296
79	W1073	5	Р	1.41%	797 LF of 54"	\$374,590	\$5,282
80	W1074	5	P	7.40%	865 LF of 54"	\$406,550	\$30,085
					971 LF of 54"		
81	W1080	5	P	32.91%		\$456,370	\$150,191
		-	· 1	JE.J170		\$3,799,040	\$1,250,264
					902 LF of 72"	\$514,140	\$169,203
00		_			818 LF of 60"	\$409,000	\$532
82	W1081	5	P	0.13%	1290 LF of 108"	\$1,186,800	\$1,543
	- 1	1		ſ	714 LF of 60"	\$357,000	\$464
83	W1083	5					

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
83	W1083	5	Р	13.01%	1548 LF of 84"	\$1,130,040	\$147,018
	***************************************		'	13.01/6	945 LF of 108"	\$869,400	\$113,109
84	W1085	5	Р	7.35%	656 LF of 54"	\$308,320	\$22,662
	***************************************	,			649 LF of 60"	\$324,500	\$23,851
85	W1086	5	Р	26.67%	847 LF of 48"	\$372,680	\$99,394
	**1000		'		1065 LF of 78"	\$681,600	\$181,783
86	86 W1087 5	5	Р	23.38%	819 LF of 48"	\$360,360	\$84,252
		'	25.30%	397 LF of 66"	\$214,380	\$50,122	
87	W1090	5	Р	16.46%	1608 LF of 66"	\$868,320	\$142,925
0,	VV 1030		r	10.40%	779 LF of 66"	\$420,660	\$69,241
88	W1092	5	Р	33.33%	2016 LF of 96"	\$1,673,280	\$557,704
	VV1032			33.33%	2223 LF of 2 - 132"	\$5,690,880	\$1,896,770
89	W1093	5	Р	24.38%	1797 LF of 60"	\$898,500	\$219,054
	.,,,,,,,,,			24.30%	2489 LF of 72"	\$1,418,730	\$345,886
90	E5118	5	N/A	22.70%	Project 1East Detention Alternative 1-6	\$453,352	\$102,911

Total Costs Attributable to Future Growth (Sum of above project costs) \$12,656,062 \$113,250

Drainage Impact Fee Study Costs (per Service Area)

Total Adjusted Costs Attributable to Future Growth (Sum of above two values) \$12,769,312

Percent Attributable to 10-Year Growth (from Table 5) 46.06%

Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7) \$5,881,545 Percent of Fee Recoverable (LINE 2 from Table 7) 50%

Maximum Assessable Fee (LINE 3 from Table 7) \$2,940,773

Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) 179,480.343 SU

Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7) \$16.38 /SU

Houston Drainage Impact Fee Study City of Houston, Texas

## **Clear Creek Service Area**

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
					94 LF of 36"	\$34,780	\$73
		1			220 LF of 36"	\$81,400	\$171
	l			193 LF of 42"	\$73,340	\$154	
				U 0.21% 39 LF of 42" \$14,820 223 LF of 36" \$82,510 466 LF of 48" \$205,040 250 LF of 42" \$95,000 18 LF of 42" \$6,840	39 LF of 42"	\$14,820	\$31
1	A0083	1			223 LF of 36"	\$82,510	\$173
_		-			\$205,040	\$431	
					250 LF of 42"	\$95,000	\$200
					\$14		
					245 LF of 30"	\$83,300	\$175
					24 LF of 42"	\$9,120	\$19

Total Costs Attributable to Future Growth (Sum of above project costs) \$1,441 Drainage Impact Fee Study Costs (per Service Area) \$113,250 Total Adjusted Costs Attributable to Future Growth (Sum of above two values) \$114,691 Percent Attributable to 10-Year Growth (from Table 5) 17.70% Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7) \$20,300 Percent of Fee Recoverable (LINE 2 from Table 7) 50% Maximum Assessable Fee (LINE 3 from Table 7) \$10,150 Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) 25,889.412 SU Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7) \$0.39 /SU

## **Greens Bayou Service Area**

1	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
1	<del> </del>			1	98 LF of 30"	\$33,320	\$3,589
	P0144	5	U	10.77%	63 LF of 30"	\$21,420	\$2,307
					205 LF of 60"	\$102,500	\$3,311
					214 LF of 60"	\$107,000	\$3,456
2	P0163	5	U	3.23%	45 LF of 78"	\$28,800	\$930
					257 LF of 84"	\$187,610	\$6,060
				l	227 LF of 60"	\$113,500	\$3,666
3	P0169	5	U	29.67%	41 LF of 48"	\$18,040	\$5,352
4	P1024	5	Р	6.27%	547 LF of 48"	\$240,680	\$15,091
4	P1024	5	P	0.27%	346 LF of 54"	\$162,620	\$10,196
5	P1025	5	Р	12.14%	635 LF of 60"	\$317,500	\$38,545
	, 1023			12.14/0	931 LF of 48"	\$409,640	\$49,730
					663 LF of 48"	\$291,720	\$24,329
6	P1032	5	Р	8.34%	558 LF of 60"	\$279,000	\$23,269
					567 LF of 72"	\$323,190	\$26,954
				1 L	698 LF of 48"	\$307,120	\$24,109
				1 4	716 LF of 60"	\$358,000	\$28,103
7	P1033	5	Р	7.85%	813 LF of 66"	\$439,020	\$34,463
				1	716 LF of 72"	\$408,120	\$32,037
				ļ	556 LF of 78"	\$355,840	\$27,933
				1	861 LF of 48"	\$378,840	\$61,410
				I 4	836 LF of 60"	\$418,000	\$67,758
8	P1034	5	P	16.21%	757 LF of 66"	\$408,780	\$66,263
					495 LF of 78"	\$316,800	\$51,353
					577 LF of 96"	\$478,910	\$77,631
9	P1039	5	P	12.43%	829 LF of 36"	\$306,730	\$38,127
	12000			12:13/0	481 LF of 42"	\$182,780	\$22,720
					1204 LF of 60"	\$602,000	\$243,930
10	10 P1061	5	5 P	40.52%	1337 LF of 78"	\$855,680	\$346,722
10	12001		· ·	10.5270	314 LF of 108"	\$288,880	\$117,054
					693 LF of 96"	\$575,190	\$233,067
			L	1153 LF of 66"	\$622,620	\$258,138	
11 P1066	5	P	41.46%	357 LF of 96"	\$296,310	\$122,850	
					1014 LF of 96"	\$841,620	\$348,936
12	P1067	5	Р	64.78%	760 LF of 66"	\$410,400	\$265,857
			·	0117070	518 LF of 78"	\$331,520	\$214,759
13	P1124	4	P	2.37%	269 LF of 108"	\$247,480	\$5,865
					357 LF of 2 - 156"	\$1,149,540	\$27,244
14	P1134	1	Р	4.08%	1093 LF of 60"	\$546,500	\$22,297
					1006 LF of 48"	\$442,640	\$18,060
15	P1170	5	P	55.29%	327 LF of 54"	\$153,690	\$84,975
16	P1172	5	Р	0.16%	963 LF of 96"	\$799,290	\$1,279
					666 LF of 108"	\$612,720	\$980
17	P1180	5	Р	61.66%	381 LF of 84"	\$278,130	\$171,495
					878 LF of 72"	\$500,460	\$308,584
18	P1181	5	Р	63.73%	679 LF of 60"	\$339,500	\$216,363
	24407	_	_		538 LF of 84"	\$392,740	\$15,592
19	P1187	5	P	3.97%	1551 LF of 66"	\$837,540	\$33,250
					680 LF of 48"	\$299,200	\$11,878
.	244==	_	_	45.55	597 LF of 72"	\$340,290	\$57,271
20	P1188	5	Р	16.83%	955 LF of 66"	\$515,700	\$86,792
				ļ	692 LF of 54"	\$325,240	\$54,738
٦,	01100	_	_	10.000	567 LF of 66"	\$306,180	\$60,930
21	P1198	5	Р	19.90%	856 LF of 54"	\$402,320	\$80,062
					770 LF of 42"	\$292,600	\$58,227
22	P1210	5	Р	61.00%	654 LF of 30"	\$222,360	\$135,640
					424 LF of 30"	\$144,160	\$87,938
_	D1011	_	_	- L	551 LF of 48"	\$242,440	\$150,264
	P1211	5	Р	61.98%	625 LF of 60"	\$312,500	\$193,688
23					673 LF of 72"	\$383,610	\$237,761
		- 1	Р	50.96%	892 LF of 48"	\$392,480	\$200,008
	P1212	5			723 LF of 66"	\$390,420	\$198,958
23	P1212	5		,			\$178,981
23			_		680 LF of 48"	\$299,200	
23	P1212 P1214	5	p	59.82%	408 LF of 60"	\$204,000	\$122,033
23 24 25	P1214	5			408 LF of 60" 191 LF of 66"	\$204,000 \$103,140	\$122,033 \$61,698
23 24 25 26	P1214 P1221	5	Р	6.39%	408 LF of 60" 191 LF of 66" 588 LF of 48"	\$204,000 \$103,140 \$258,720	\$122,033 \$61,698 \$16,532
23 24 25 26 27	P1214 P1221 P1222	5 5 5	P P	6.39% 33.40%	408 LF of 60" 191 LF of 66" 588 LF of 48" 309 LF of 30"	\$204,000 \$103,140 \$258,720 \$105,060	\$122,033 \$61,698 \$16,532 \$35,090
23 24 25 26	P1214 P1221	5	Р	6.39%	408 LF of 60" 191 LF of 66" 588 LF of 48" 309 LF of 30" 584 LF of 30"	\$204,000 \$103,140 \$258,720 \$105,060 \$198,560	\$122,033 \$61,698 \$16,532 \$35,090 \$47,376
23 24 25 26 27 28	P1214 P1221 P1222 P1226	5 5 5	P P P	6.39% 33.40% 23.86%	408 LF of 60"  191 LF of 66"  588 LF of 48"  309 LF of 30"  584 LF of 30"  1281 LF of 60"	\$204,000 \$103,140 \$258,720 \$105,060 \$198,560 \$640,500	\$122,033 \$61,698 \$16,532 \$35,090 \$47,376 \$241,981
23 24 25 26 27	P1214 P1221 P1222	5 5 5	P P	6.39% 33.40%	408 LF of 60"  191 LF of 66"  588 LF of 48"  309 LF of 30"  584 LF of 30"  1281 LF of 60"  385 LF of 66"	\$204,000 \$103,140 \$258,720 \$105,060 \$198,560 \$640,500 \$207,900	\$122,033 \$61,698 \$16,532 \$35,090 \$47,376 \$241,981 \$78,545
23 24 25 26 27 28	P1214 P1221 P1222 P1226	5 5 5	P P P	6.39% 33.40% 23.86%	408 LF of 60"  191 LF of 66"  588 LF of 48"  309 LF of 30"  584 LF of 30"  1281 LF of 60"	\$204,000 \$103,140 \$258,720 \$105,060 \$198,560 \$640,500	\$122,033 \$61,698 \$16,532 \$35,090 \$47,376 \$241,981

Houston Drainage Impact Fee Study
City of Houston, Texas Appendix C
December 2012

### **Greens Bayou Service Area**

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth				
					1799 LF of 78"	\$1,151,360	\$213,117				
31	P1229	5	Р	18.51%	1075 LF of 96"	\$892,250	\$165,155				
					311 LF of 120"	\$348,320	\$64,474				
32	P1230	5	Р	16.76%	264 LF of 60"	\$132,000	\$22,123				
32	11230	٦	ſ	10.70%	885 LF of 54"	\$415,950	\$69,713				
33	P1231	e .	. 5	-	c	c	р	4.00%	302 LF of 60"	\$151,000	\$6,040
	33   1231   3	,	ſ	4.00%	829 LF of 48"	\$364,760	\$14,590				
		32 5	Р	8.17%	1121 LF of 72"	\$638,970	\$52,204				
					867 LF of 96"	\$719,610	\$58,792				
34	P1232				452 LF of 96"	\$375,160	\$30,651				
					1111 LF of 54"	\$522,170	\$42,661				
					274 LF of 108"	\$252,080	\$20,595				
					886 LF of 60"	\$443,000	\$183,845				
					1677 LF of 78"	\$1,073,280	\$445,411				
35	P1233	5	Р	41.50%	773 LF of 96"	\$641,590	\$266,260				
				ľ	207 LF of 108"	\$190,440	\$79,033				
					386 LF of 120"	\$432,320	\$179,413				
36	P0081	1	N/A	1.97%	Project 2 Detention Alternative 2-5	\$640,225	\$12,612				

Total Costs Attributable to Future Growth (Sum of above project costs) \$8,202,983 Drainage Impact Fee Study Costs (per Service Area) \$113,250 Total Adjusted Costs Attributable to Future Growth (Sum of above two values) \$8,316,233 Percent Attributable to 10-Year Growth (from Table 5) 41.40% Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7) \$3,442,920 Percent of Fee Recoverable (LINE 2 from Table 7) 50% Maximum Assessable Fee (LINE 3 from Table 7) \$1,721,460 Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) 128,331.560 SU Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7) \$13.41 /SU

### **Hunting Bayou Service Area**

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
1	H1068	5	Р	4.25%	570 LF of 54"	\$267,900	\$11,386
2	H1078	5	Р	66.07%	659 LF of 54"	\$309,730	\$204,639
					1218 LF of 120"	\$1,364,160	\$521,518
3	H1079	5	Р	38.23%	793 LF of 96"	\$658,190	\$251,626
					912 LF of 78"	\$583,680	\$223,141
4	H1084	5	Р	54.68%	403 LF of 54"	\$189,410	\$103,569
5	H1085	5	Р	7.18%	398 LF of 54"	\$187,060	\$13,431
6	H1086	5	Р	8.35%	498 LF of 54"	\$234,060	\$19,544
					786 LF of 66"	\$424,440	\$722
7	H1092	5	5 P	0.17%	750 LF of 72"	\$427,500	\$727
					957 LF of 48"	\$421,080	\$716
			P	19.84%	391 LF of 60"	\$195,500	\$38,787
8	H1098	5			603 LF of 66"	\$325,620	\$64,603
					528 LF of 48"	\$232,320	\$46,092
9	H1101	5	P	26.55%	287 LF of 48"	\$126,280	\$33,527
					1049 LF of 54"	\$493,030	\$7,642
10	H1102	5	Р	1.55%	651 LF of 84"	\$475,230	\$7,366
10	*******		P	1.55%	1154 LF of 96"	\$957,820	\$14,846
					601 LF of 108"	\$552,920	\$8,570
	ĺ				441 LF of 66"	\$238,140	\$19,980
11	H1103	5	Р	8.39%	157 LF of 48"	\$69,080	\$5,796
	111103	1	· ·	0.39%	538 LF of 54"	\$252,860	\$21,215
					556 LF of 42"	\$211,280	\$17,726
12	H1115	5	Р	0.15%	441 LF of 60"	\$220,500	\$331
13	H1123	5	Р	66.07%	248 LF of 48"	\$109,120	\$72,096
					687 LF of 66"	\$370,980	\$95,268
14	H1145	5	Р	25.68%	833 LF of 48"	\$366,520	\$94,122
					655 LF of 42"	\$248,900	\$63,918

Total Costs Attributable to Future Growth (Sum of above project costs)

\$1,962,904 Drainage Impact Fee Study Costs (per Service Area) \$113,250

Total Adjusted Costs Attributable to Future Growth (Sum of above two values) \$2,076,154

Percent Attributable to 10-Year Growth (from Table 5) 24.07%

Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7) \$499,730 Percent of Fee Recoverable (LINE 2 from Table 7) 50%

Maximum Assessable Fee (LINE 3 from Table 7) \$249,865

Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) 24,397.456 SU

Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7) \$10.24 /SU

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth								
			Existing		274 LF of 42"	\$104,120	\$5,810								
				1	242 LF of 30"	\$82,280	\$4,591								
					305 LF of 42"	\$115,900	\$6,467								
					236 LF of 42"	\$89,680	\$5,004								
	1				86 LF of 54"	\$40,420	\$2,255								
					275 LF of 42"	\$104,500	\$5,831								
				l 1	280 LF of 48"	\$123,200	\$6,875								
					340 LF of 42"	\$129,200	\$7,209								
					406 LF of 54"	\$190,820	\$10,648								
					203 LF of 120"	\$227,360	\$12,687								
					216 LF of 120"	\$241,920	\$13,499								
					309 LF of 48"	\$135,960	\$7,587								
					186 LF of 120"	\$208,320	\$11,624								
				l }											
				l	72 LF of 66"	\$38,880	\$2,170								
1	C0052	1	υ	5.58%	106 LF of 66"	\$57,240	\$3,194								
				ļ .	230 LF of 48"	\$101,200	\$5,647								
					251 LF of 42"	\$95,380	\$5,322								
				ļ	237 LF of 42"	\$90,060	\$5,025								
					68 LF of 96"	\$56,440	\$3,149								
					54 LF of 48"	\$23,760	\$1,326								
					156 LF of 78"	\$99,840	\$5,571								
					236 LF of 48"	\$103,840	\$5,794								
					58 LF of 48"	\$25,520	\$1,424								
					156 LF of 48"	\$68,640	\$3,830								
					32 LF of 48"	\$14,080	\$786								
					96 LF of 48"	\$42,240	\$2,357								
				ľ	117 LF of 54"	\$54,990	\$3,068								
				ľ	30 LF of 66"	\$16,200	\$904								
					64 LF of 48"	\$28,160	\$1,571								
				·	33 LF of 48"	\$14,520	\$810								
					219 LF of 72"	\$124,830	\$250								
				F	352 LF of 66"	\$190,080	\$380								
2	2 C0247	1	U	0.20%	230 LF of 66"		\$248								
-	CU247				······	\$124,200									
					275 LF of 72"	\$156,750	\$314								
	60215	- 1		2.100/	113 LF of 72"	\$64,410	\$129								
3	C0315	1	U	2.19%	327 LF of 72"	\$186,390	\$4,082								
		1			583 LF of 30"	\$198,220	\$694								
					149 LF of 36"	\$55,130	\$193								
					771 LF of 48"	\$339,240	\$1,187								
4	C0380	1	1	1	1	1	1	1	1	1	U	0.35%	270 LF of 48"	\$118,800	\$416
	i					564 LF of 36"	\$208,680	\$730							
						270 LF of 42"	\$102,600	\$359							
					144 LF of 36"	\$53,280	\$186								
5	C0383	1	Ŭ	3.13%	158 LF of 66"	\$85,320	\$2,671								
6	C0549	3	U	2.20%	236 LF of 30"	\$80,240	\$1,765								
7	C1030	5	P	27.600/	90 LF of 36"	\$33,300	\$12,547								
′	C1029	2	r	37.68%	428 LF of 36"	\$158,360	\$59,670								
		_		2.5.50	318 LF of 66"	\$171,720	\$962								
8	C1030	5	Р	0.56%	949 LF of 54"	\$446,030	\$2,498								
					262 LF of 42"	\$99,560	\$10								
9	C1041	5	Р	0.01%			\$2								
					63 LF of 42"	\$23,940 t									
10	C1049	5	P	3,49%	63 LF of 42" 503 LF of 42"	\$23,940 \$191,140									
10	C1049 C1051	5 2	P P	3.49% 10.80%	503 LF of 42"	\$191,140	\$6,671								
11	C1049 C1051	5 2	P P	3.49% 10.80%	503 LF of 42" 49 LF of 60"	\$191,140 \$24,500	\$6,671 \$2,646								
					503 LF of 42" 49 LF of 60" 821 LF of 132"	\$191,140 \$24,500 \$1,050,880	\$6,671 \$2,646 \$21,753								
					503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72"	\$191,140 \$24,500 \$1,050,880 \$369,360	\$6,671 \$2,646 \$21,753 \$7,646								
11	C1051	2	Р	10.80%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113								
11	C1051	2	Р	10.80%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958								
11	C1051 C1054	2	P	2.07%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678								
11	C1051	2	Р	10.80%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224								
11 12 13	C1051 C1054 C1057	2 2 5	P P	2.07% - 7.08%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"  157 LF of 54"  308 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249								
11 12 13	C1051 C1054 C1057 C1066	2 2 5 5	P P P	10.80% 2.07% 7.08%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"  157 LF of 54"  308 LF of 54"  404 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171								
11 12 13 14 15	C1051 C1054 C1057 C1066 C1067	2 2 5 5 5	P P	7.08% -0.09% 5.00%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 404 LF of 54" 331 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282								
11 12 13 14 15 16	C1051 C1054 C1057 C1066	2 2 5 5 5 5	P P P P P P	10.80% 2.07% 7.08%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 331 LF of 54" 331 LF of 48" 304 LF of 42"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$13,790 \$144,760 \$189,880 \$145,640 \$115,520	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562								
11 12 13 14 15	C1051 C1054 C1057 C1066 C1067	2 2 5 5 5	P P P P	7.08% -0.09% 5.00%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 404 LF of 54" 331 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282								
11 12 13 14 15 16 17	C1051 C1054 C1057 C1066 C1067 C1070 C1071	2 2 5 5 5 5 5	P P P P P P	7.08% 7.08% 0.09% 5.00% 31.65% 0.06%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 331 LF of 54" 331 LF of 48" 304 LF of 42"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$13,790 \$144,760 \$189,880 \$145,640 \$115,520	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562								
11 12 13 14 15 16	C1051 C1054 C1057 C1066 C1067 C1070	2 2 5 5 5 5	P P P P P P	7.08% 	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"  157 LF of 54"  404 LF of 54"  331 LF of 48"  304 LF of 42"  300 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85								
11 12 13 14 15 16 17 18	C1051 C1054 C1057 C1066 C1067 C1070 C1071 C1104	2 2 5 5 5 5 5 5	P P P P P P P P	7.08% 7.08% 7.08% 0.09% 5.00% 31.65% 0.06% 64.10%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"  157 LF of 54"  404 LF of 54"  331 LF of 48"  304 LF of 42"  300 LF of 54"  265 LF of 78"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000 \$169,600	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$108,714								
11 12 13 14 15 16 17	C1051 C1054 C1057 C1066 C1067 C1070 C1071	2 2 5 5 5 5 5	P P P P P P	7.08% 7.08% 0.09% 5.00% 31.65% 0.06%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 304 LF of 54" 304 LF of 54" 300 LF of 55" 800 LF of 55" 81 LF of 60" 283 LF of 60"	\$191,140 \$24,500 \$1,050,880 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$149,640 \$115,520 \$141,000 \$169,600 \$435,500 \$152,820	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$10,8714 \$279,156 \$91,325								
11 12 13 14 15 16 17 18	C1051  C1054  C1057  C1066  C1067  C1070  C1071  C1104  C1106	2 2 5 5 5 5 5 5 5	P P P P P P P P	7.08% 7.08% 7.08% 0.09% 5.00% 31.65% 0.06% 64.10% 59.76%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 331 LF of 54" 331 LF of 54" 330 LF of 65" 850 LF of 60"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$1,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000 \$169,600 \$435,500 \$152,820 \$425,000	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$108,714 \$279,156 \$91,325 \$253,980								
11 12 13 14 15 16 17 18	C1051 C1054 C1057 C1066 C1067 C1070 C1071 C1104	2 2 5 5 5 5 5 5	P P P P P P P P	7.08% 7.08% 7.08% 0.09% 5.00% 31.65% 0.06% 64.10%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 304 LF of 54" 300 LF of 54" 265 LF of 78" 871 LF of 60" 283 LF of 66" 850 LF of 60"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$15,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000 \$435,500 \$435,500 \$425,000 \$193,860	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$108,714 \$279,156 \$91,325 \$253,980 \$119,941								
11 12 13 14 15 16 17 18	C1051  C1054  C1057  C1066  C1067  C1070  C1071  C1104  C1106	2 2 5 5 5 5 5 5 5	P P P P P P P P	7.08% 7.08% 7.08% 0.09% 5.00% 31.65% 0.06% 64.10% 59.76%	503 LF of 42"  49 LF of 60"  821 LF of 132"  648 LF of 72"  1342 LF of 120"  987 LF of 96"  381 LF of 54"  157 LF of 54"  404 LF of 54"  300 LF of 54"  300 LF of 54"  265 LF of 78"  871 LF of 60"  283 LF of 60"  359 LF of 60"  359 LF of 66"  702 LF of 54"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$15,003,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000 \$435,500 \$152,820 \$425,000 \$193,860 \$329,940	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$108,714 \$279,156 \$91,325 \$253,980 \$119,941 \$204,134								
11 12 13 14 15 16 17 18	C1051  C1054  C1057  C1066  C1067  C1070  C1071  C1104  C1106	2 2 5 5 5 5 5 5 5	P P P P P P P P	7.08% 7.08% 7.08% 0.09% 5.00% 31.65% 0.06% 64.10% 59.76%	503 LF of 42" 49 LF of 60" 821 LF of 132" 648 LF of 72" 1342 LF of 120" 987 LF of 96" 381 LF of 54" 157 LF of 54" 308 LF of 54" 304 LF of 54" 300 LF of 54" 265 LF of 78" 871 LF of 60" 283 LF of 66" 850 LF of 60"	\$191,140 \$24,500 \$1,050,880 \$369,360 \$15,503,040 \$819,210 \$179,070 \$73,790 \$144,760 \$189,880 \$145,640 \$115,520 \$141,000 \$435,500 \$435,500 \$425,000 \$193,860	\$6,671 \$2,646 \$21,753 \$7,646 \$31,113 \$16,958 \$12,678 \$5,224 \$10,249 \$171 \$7,282 \$36,562 \$85 \$108,714 \$279,156 \$91,325 \$253,980 \$119,941								

Houston Drainage Impact Fee Study
City of Houston, Texas
Appendix C
December 2012

Sims	Sims/Vince Service Area							
Project	Outfall	Project Category	Proposed Pipe / Upgrade to	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to	
	C1434		Existing	15.010/	EC3   E - F C0"	¢381 500	Future Growth	
22	C1121	5	Р	15.91%	563 LF of 60" 846 LF of 72"	\$281,500	\$44,787 \$247,331	
23	C1122	5	Р	51.29%	1022 LF of 96"	\$848,260	\$435,073	
23	C1122	'	r	31.2376	235 LF of 120"	\$263,200	\$134,995	
		ļ			1030 LF of 108"	\$947,600	\$566,854	
24	24 C1123	5	P	59.82%	1082 LF of 96"	\$898,060	\$537,219	
24	C1123		'	33.0270	947 LF of 60"	\$473,500	\$283,248	
					95 LF of 48"	\$41,800	\$29,841	
25	C1143	5	P	71.39%	366 LF of 48"	\$161,040	\$114,966	
	<u> </u>	<del> </del>			635 LF of 48"	\$279,400	\$99,634	
26	C1145	5	Р	35.66%	148 LF of 66"	\$79,920	\$28,499	
					534 LF of 60"	\$267,000	\$27,127	
27	C1146	5	Р	10.16%	260 LF of 72"	\$148,200	\$15,057	
	C1140		'	10.10/6	780 LF of 60"	\$390,000	\$39,624	
					787 LF of 84"	\$574,510	\$120,992	
					940 LF of 120"	\$1,052,800	\$221,720	
					674 LF of 120"	\$754,880	\$158,978	
					1217 LF of 60"	\$608,500	\$128,150	
					791 LF of 108"	\$727,720	\$153,258	
					715 LF of 48"	\$314,600	\$66,255	
				}		\$894,880	\$188,462	
20	C1147	2	Р	21.06%	799 LF of 120" 778 LF of 108"	\$715,760	\$150,739	
28	C1147		r	21.00%			\$138,979	
					904 LF of 84"	\$659,920		
					1101 LF of 42"	\$418,380	\$88,111	
					2329 LF of 2 - 132"		\$1,255,648 \$108,973	
					462 LF of 120"	\$517,440		
					1167 LF of 42"	\$443,460	\$93,393	
					605 LF of 156"	\$974,050	\$205,135	
					1165 LF of 2 - 132"	\$2,982,400	\$628,093	
29	C1150	5	Р	10.35%	1232 LF of 48"	\$542,080	\$56,105	
					210 LF of 60"	\$105,000	\$10,868	
					2009 LF of 108"	\$1,848,280	\$125,498	
30	C1151	5	Р	6.79%	1774 LF of 132"	\$2,270,720	\$154,182	
					1469 LF of 108"	\$1,351,480	\$91,765	
31	C1153	5	Р	48.40%	273 LF of 54"	\$128,310	\$62,102	
32	C1154	5	Р	60.41%	926 LF of 60"	\$463,000	\$279,698	
					115 LF of 60"	\$57,500	\$34,736	
		_			156 LF of 66"	\$84,240	\$31,919	
33	C1155	5	P	37.89%	607 LF of 48"	\$267,080	\$101,197	
					205 LF of 42"	\$77,900	\$29,516	
		_	_		843 LF of 60"	\$421,500	\$25,079	
34	C1156	5	Р	5.95%	934 LF of 78"	\$597,760	\$35,567	
					115 LF of 96"	\$95,450	\$5,679	
35	C1161	5	P	0.18%	159 LF of 54"	\$74,730	\$135	
					504 LF of 54"	\$236,880	\$426	
36	C1162	5	Р	19.79%	788 LF of 96"	\$654,040	\$129,435	
					148 LF of 96"	\$122,840	\$24,310	
					1160 LF of 120"	\$1,299,200	\$563,723	
					1868 LF of 72"	\$1,064,760	\$461,999	
37	C1165	5	Р	43.39%	1920 LF of 78"	\$1,228,800	\$533,176	
					1034 LF of 168"	\$1,923,240	\$834,494	
					239 LF of 168"	\$444,540	\$192,886	
[				L	683 LF of 144"	\$1,010,840	\$349,650	
38	C1167	5	Р	34.59%	1161 LF of 96"	\$963,630	\$333,320	
30	/	-	'	/0	1141 LF of 54"	\$536,270	\$185,496	
					989 LF of 132"	\$1,265,920	\$437,882	
- T	7			Ţ	1348 LF of 96"	\$1,118,840	\$289,332	
39	C1168	5	P	25.86%	1267 LF of 132"	\$1,621,760	\$419,387	
33	01100	,	,		1694 LF of 66"	\$914,760	\$236,557	
	l				117 LF of 144"	\$173,160	\$44,779	
					1524 LF of 108"	\$1,402,080	\$415,997	
ļ				Ī	1416 LF of 156"	\$2,279,760	\$676,405	
]	İ			Ī	2410 LF of 216"	\$6,989,000	\$2,073,636	
I				Ī	346 LF of 228"	\$1,072,600	\$318,240	
45		_ ا	_	20 677/	901 LF of 108"	\$828,920	\$245,941	
40	C1170	5	Р	29.67%	644 LF of 108"	\$592,480	\$175,789	
	ļ			Ī	342 LF of 42"	\$129,960	\$38,559	
İ	-			ŀ	1202 LF of 168"	\$2,235,720	\$663,338	
	1			t	1012 LF of 144"	\$1,497,760	\$444,385	
	1			ŀ	1393 LF of 180"	\$2,869,580	\$851,404	
					743 LF of 108"	\$683,560	\$255,310	
41	C1172	5	Р	37.35%	621 LF of 108"	\$571,320	\$213,388	
42	C1177	5	P	32.53%	1854 LF of 78"	\$1,186,560	\$385,988	
			·				,	

Houston Drainage Impact Fee Study
City of Houston, Texas December 2012

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cos Attributable Future Grow
			EXISTING		951 LF of 108"	\$874,920	\$284,611
		Ì			1075 LF of 144"	\$1,591,000	\$517,552
42	C1177	5	Р	32.53%	1014 LF of 156"	\$1,632,540	\$531,065
72-		-	'	32.5570	785 of 108" and 96"	\$1,373,750	\$446,881
					290 of 108" and 96"	\$507,500	\$165,090
		<del> </del>				+	
			1	555 LF of 108"	\$510,600	\$26,960	
43	3 C1178	5	P	5.28%	207 LF of 132"	\$264,960	\$13,990
					1037 LF of 60"	\$518,500	\$27,377
					783 LF of 84"	\$571,590	\$30,180
					1025 LF of 60"	\$512,500	\$223,296
			_		840 LF of 72"	\$478,800	\$208,613
44	C1180	5	Р	43.57%	687 LF of 96"	\$570,210	\$248,440
					173 LF of 108"	\$159,160	\$69,346
						1	
					462 LF of 54"	\$217,140	\$31,246
45	C1181	5	P	14.39%	1203 LF of 66"	\$649,620	\$93,480
					140 LF of 66"	\$75,600	\$10,879
					919 LF of 60"	\$459,500	\$200,480
					879 LF of 72"	\$501,030	\$218,599
				1 }		+	~~~~~
46	C1183	5	Р	43.63%	303 LF of 132"	\$387,840	\$169,215
					504 LF of 120"	\$564,480	\$246,283
					334 LF of 132"	\$427,520	\$186,527
					918 LF of 108"	\$844,560	\$368,482
					1072 LF of 66"	\$578,880	\$46,658
47	C1185	5	Р	8.06%	902 LF of 48"	-	\$31,989
				<b></b>		\$396,880	
48	C1189	5	Р	18.95%	954 LF of 60"	\$477,000	\$90,392
,,,	0	-		20.55%	243 LF of 60"	\$121,500	\$23,024
40	04400	-	_	44 570/	211 LF of 72"	\$120,270	\$49,936
49	C1190	5	Р	41.52%	616 LF of 60"	\$308,000	\$127,882
					111 LF of 72"	\$63,270	\$21,512
	04400	_   _	_	24.000/	<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	+	
50	0   C1199	199 5	Р	34.00%	1175 LF of 72"	\$669,750	\$227,715
					822 LF of 48"	\$361,680	\$122,971
					144 LF of 30"	\$48,960	\$13,968
51 C1201	5	Р	28.53%	1494 LF of 66"	\$806,760	\$230,169	
				1136 LF of 96"	\$942,880	\$269,004	
					<del></del>		
				276 LF of 66"	\$149,040	\$42,521	
					2122 LF of 66"	\$1,145,880	\$326,920
52	C1211	5	Р	23.61%	112 LF of 54"	\$52,640	\$12,428
32	C1211	211 3	r	23.01%	365 LF of 54"	\$171,550	\$40,503
					153 LF of 54"	\$71,910	\$33,064
53	C1213	5	Р	45.98%	571 LF of 54"	\$268,370	\$123,397
5.4	C1316	5	P	22.47%	944 LF of 48"	\$415,360	\$93,331
54	C1216	3	r	22.4770		<del></del>	
					177 LF of 60"	\$88,500	\$13,841
55	C1221	5	Р	15.64%	965 LF of 54"	\$453,550	\$70,935
22	C1221	,	r		834 LF of 54"	\$391,980	\$61,306
	1			ľ	432 LF of 42"	\$164,160	\$25,675
					92 LF of 132"	\$117,760	\$4,581
	1						
				L	509 LF of 144"	\$753,320	\$29,304
		1		L	1108 LF of 132"	\$1,418,240	\$55,170
	1			Γ	130 LF of 144"	\$192,400	\$7,484
- 1	1	1		F	397 LF of 120"	\$444,640	\$17,296
	Ī	I		ŀ	2578 LF of 156"	\$4,150,580	\$161,458
			l	F	*****		
		_	_	, , , , , L	1396 LF of 60"	\$698,000	\$27,152
56	C1224	5	P	3.89%	1068 LF of 96"	\$886,440	\$34,483
					529 LF of 42"	\$201,020	\$7,820
ł			l	Γ	1093 LF of 60"	\$546,500	\$21,259
	1			F	723 LF of 96"	\$600,090	\$23,344
1	I	1		F	889 LF of 66"	\$480,060	\$18,674
l	I	1		H			·····
I	1	ļ		_	1119 LF of 96"	\$928,770	\$36,129
		ļ			723 LF of 132"	\$925,440	\$36,000
-				Γ	443 LF of 120"	\$496,160	\$19,301
57	C1227	5	Р	21.82%	1068 LF of 54"	\$501,960	\$109,528
58	C1229	5	P	15.34%	1114 LF of 84"	\$813,220	\$124,748
20	C1223	ا ر	r	13.3476			
				L	915 LF of 96"	\$759,450	\$139,055
59	C1230	5	Р	18.31%	227 LF of 108"	\$208,840	\$38,239
ا دد	C1230	ر	F	10.3170	851 LF of 54"	\$399,970	\$73,235
1	ļ			F	763 LF of 66"	\$412,020	\$75,441
					916 LF of 54"	\$430,520	\$6,199
l	- 1	l		-	····		
- 1	1			L	916 LF of 72"	\$522,120	\$7,519
60	C1231	5	Р	1.44%	1680 LF of 96"	\$1,394,400	\$20,079
50	C1231	٠	'	1.77/0	154 LF of 108"	\$141,680	\$2,040
ı				T T	750 LF of 42"	\$285,000	\$4,104
		İ		F	779 LF of 84"	\$568,670	\$8,189
	1	1			775 LI 0104	7500,070	70,10J

Houston Drainage Impact Fee Study
City of Houston, Texas
December 2012

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable t Future Growt
61	C1234	5	Р	11.76%	604 LF of 54"	\$283,880	\$33,384
					796 LF of 42" 396 LF of 54"	\$302,480	\$35,572 \$819
62	C1239	5	P	0.44%	126 LF of 72"	\$71,820	\$316
					1092 LF of 48"	\$480,480	\$34,931
				1	1084 LF of 48"	\$476,960	\$34,675
					522 LF of 60"	\$261,000	\$18,975
63	C1241	5	Р	7.27%	277 LF of 96"	\$229,910	\$16,714
					830 LF of 96"	\$688,900	\$50,083
					662 LF of 48"	\$291,280	\$21,176
			***************************************		621 LF of 96"	\$515,430	\$172,102
					657 LF of 72"	\$374,490	\$125,042
64	C1243	5	Р	33.39%	416 LF of 72"	\$237,120	\$79,174
					449 LF of 54"	\$211,030	\$70,463
					597 LF of 108"	\$549,240	\$183,391
65	C1254	5	Р	13.86%	927 LF of 54"	\$435,690	\$60,387
					159 LF of 72"	\$90,630	\$11,510
66	C1256	5	Р	12.70%	524 LF of 54"	\$246,280	\$31,278
					502 LF of 48"	\$220,880	\$28,052
67	C1260	5	Р	24.57%	545 LF of 42"	\$207,100	\$50,884
					1218 LF of 48"	\$535,920	\$95,715
					471 LF of 96"	\$390,930	\$69,820
68	C1263	5	Р	17.86%	397 LF of 78"	\$254,080	\$45,379
					1098 LF of 60"	\$549,000	\$98,051
					992 LF of 60"	\$496,000	\$88,586
69	C1268	5	P	15.45%	514 LF of 48"	\$226,160	\$34,942
					1202 LF of 144"	\$1,778,960	\$549,877
70	C1269	5	P	30.91%	1095 LF of 120"	\$1,226,400	\$379,080
, ,	01203		,		1002 LF of 108"	\$921,840	\$284,941
					1405 LF of 96"	\$1,166,150	\$360,457
71	C1271	5	Р	18.18%	614 LF of 66"	\$331,560	\$60,278
					283 LF of 66"	\$152,820	\$27,783
72	C1272	5	Р	47.98%	904 LF of 108"	\$831,680	\$399,040
					759 LF of 72"	\$432,630	\$207,576
73	C1273	5	Р	9.07%	693 LF of 54"	\$325,710	\$29,542
				510770	181 LF of 54"	\$85,070	\$7,716
		5	Р	35.48%	797 LF of 72"	\$454,290	\$161,182
74	C1276				1359 LF of 72"	\$774,630	\$274,839
			, i		2575 LF of 72"	\$1,467,750	\$520,758
					2543 LF of 144"	\$3,763,640	\$1,335,339
75	C1278	5	Р	38.63%	1061 LF of 66"	\$572,940	\$221,327
					551 LF of 66"	\$297,540	\$128,269
					1297 LF of 96"	\$1,076,510	\$464,083
76	C1280	5	Р	43.11%	1799 LF of 144"	\$2,662,520	\$1,147,812
					1092 LF of 144"	\$1,616,160	\$696,727
				_	1810 LF of 96"	\$1,502,300	\$647,642
					1475 LF of 144"	\$2,183,000	\$941,091
1				-	879 LF of 72"	\$501,030	\$121,700
				-	841 LF of 108"	\$773,720	\$187,937
77	C1281	5	Р	24.29%	801 LF of 132"	\$1,025,280	\$249,041
l				-	1413 LF of 144"	\$2,091,240	\$507,962
- 1					860 LF of 180"	\$1,771,600	\$430,322
					328 LF of 192" 301 LF of 156"	\$738,000	\$179,260 \$223,405
	1			-		\$484,610	<del>-</del>
78	C1284	5	Р	46.10%	1050 LF of 132" 1035 LF of 96"	\$1,344,000	\$619,584
l	1			-		\$859,050	\$396,022
					616 LF of 84" 244 LF of 144"	\$449,680 \$361,120	
70	C1285	5	Р	24.45%	668 LF of 132"	\$855,040	\$88,294 \$209,057
79	C1283	3	٢	44.43%	1136 LF of 96"	\$942,880	\$209,037
80	C1286	5	Р	21.38%	1016 LF of 120"	\$1,137,920	\$230,334
81	C1289	5	P	23.48%	2024 LF of 60"	\$1,012,000	\$237,618
01	C1203				1417 LF of 54"	\$665,990	\$55,410
82	C1290	5	Р	8.32%	1301 LF of 96"	\$1,079,830	\$89,842
					1173 LF of 156"	\$1,888,530	\$85,173
		1		-	919 LF of 156"	\$1,479,590	\$66,730
- 1	į		l	-	841 LF of 96"	\$698,030	\$31,481
-	1			-	707 LF of 156"	\$1,138,270	\$51,336
83	C1291	5	Р	4.51%	1171 LF of 156"	\$1,885,310	\$85,027
55		_	·		386 LF of 66"	\$208,440	\$9,401
1	I			F	902 LF of 96"	\$748,660	\$33,765
	I	l		H	1441 LF of 96"	\$1,196,030	\$53,763
		ĺ		F.	1504 of 132" and 120"	\$3,609,600	\$162,793

Project	Outfall	Project Category	Proposed Pipe / Upgrade to Existing	Increase in C Value	Project Description	Project Cost	Project Cost Attributable to Future Growth
83	C1291	5	Р	4.51%	1864 LF of 72"	\$1,062,480	\$47,918
84	C1295	5	Р	15.29%	1177 LF of 66"	\$635,580	\$97,180
85	C1296	5	Р	21.39%	1151 LF of 84"	\$840,230	\$179,725
86	C1297	5	Р	13.42%	745 LF of 60"	\$372,500	\$49,990
87	C1298	5	Р	35.02%	715 LF of 66"	\$386,100	\$135,212
88	C1299	5	Р	15.64%	857 LF of 66"	\$462,780	\$72,379
89	C1300	5	P	2.38%	550 LF of 54"	\$258,500	\$6,152
					874 LF of 60"	\$437,000	\$115,936
					331 LF of 96"	\$274,730	\$72,886
	04.004	_		20 520/	1902 LF of 132"	\$2,434,560	\$645,889
90	C1301	5	Р	26.53%	1015 LF of 132"	\$1,299,200	\$344,678
					230 LF of 132"	\$294,400	\$78,104
					643 LF of 60"	\$321,500	\$85,294
91	C1302	5	Р	50.14%	2072 LF of 36"	\$766,640	\$384,393
92	C1304	5	Р	11.61%	673 LF of 72"	\$383,610	\$44,537
93	C1305	5	P	9.92%	705 LF of 60"	\$352,500	\$34,968
94	C1307	5	Р	58.75%	512 LF of 108"	\$471,040	\$276,736
95	C1308	5	Р	3.76%	1107 LF of 78"	\$708,480	\$26,639
96	C1309	5	Р	17.29%	915 LF of 72"	\$521,550	\$90,176
97	C1310	5	Р	22.43%	757 LF of 96"	\$628,310	\$140,930
			_		1285 LF of 96"	\$1,066,550	\$16,532
98 C1311	5	P	1.55%	637 LF of 66"	\$343,980	\$5,332	
	04040	5	р	15.010/	1633 LF of 132"	\$2,090,240	\$313,745
99	C1312	5	Р	15.01%	715 LF of 96"	\$593,450	\$89,077
		5		4.79%	1030 LF of 108"	\$947,600	\$45,390
100	C1316		Р		1122 LF of 78"	\$718,080	\$34,396
					1144 LF of 132"	\$1,464,320	\$70,141
101	C1324	5	Р	60.78%	724 LF of 84"	\$528,520	\$321,234
102	C1325	5	Р	36.72%	780 LF of 108"	\$717,600	\$263,503
103	C1326	5	P	20.17%	482 LF of 54"	\$226,540	\$45,693
104	C1329	5	Р	20.45%	752 LF of 78"	\$481,280	\$98,422
		_	_		384 LF of 60"	\$192,000	\$93,254
105	C1334	5	Р	48.57%	347 LF of 78"	\$222,080	\$107,864
106	C1336	5	Р	4.30%	1458 LF of 96"	\$1,210,140	\$52,036
107	C1339	5	Р	45.69%	1660 LF of 120"	\$1,859,200	\$849,468
					243 LF of 36"	\$89,910	\$90
					274 LF of 48"	\$120,560	\$121
108	C1340	5	Р	0.10%	386 LF of 36"	\$142,820	\$143
					295 LF of 60"	\$147,500	\$148
-	İ				226 LF of 60"	\$113,000	\$113
					2019 LF of 78"	\$1,292,160	\$573,073
109	C1342	.342 5	Р	44.35%	1555 LF of 60"	\$777,500	\$344,821
			_		627 LF of 2 - 120"	\$1,404,480	\$258,143
110	C1343	5	Р	18.38%	1410 LF of 96"	\$1,170,300	\$215,101
111	C0051	1 5	N/A	50.47%	Project 8 Detention Alternative 8-13	\$2,293,144	\$1,157,350

\$51,359,668 Total Costs Attributable to Future Growth (Sum of above project costs) Drainage Impact Fee Study Costs (per Service Area) \$113,250 Total Adjusted Costs Attributable to Future Growth (Sum of above two values) \$51,472,918 Percent Attributable to 10-Year Growth (from Table 5) 47.64% Total Costs Attributable to 10-Year Growth (LINE 1 from Table 7) \$24,521,698 Percent of Fee Recoverable (LINE 2 from Table 7) 50% \$12,260,849 Maximum Assessable Fee (LINE 3 from Table 7) Total Number of Service Units (LINE 4 from Table 7; Column 4 from Table 4) 214,202.167 SU

Cost of DIFIP per Service Unit Attributable to 10-Year Growth (LINE 5 from Table 7)

\$57.24 /SU

# **EXHIBIT B**

# PLANNING COMMISSION COMMENTS CONCERNING THE PROPOSED AMENDMENTS

**FEBRUARY 26, 2013** 

# Interoffice

Correspondence

To:

Anna Russell

City Secretary

From:

**Deputy Director** 

Planning and Development Services Division

Date:

February 26, 2013

Cc:

Daniel W. Krueger, P.E.

Augustus L. Campbell

Subject:

Minutes of the Houston Planning

Commission acting as the Capital Improvements Advisory Committee

The Houston Planning Commission, acting as the Capital Improvements Advisory Committee in accordance with Ordinance 2013-0060, met on Thursday, February 21, 2013 for the consideration of the maximum impact fee rate calculations established within the Drainage Impact Fee Study Report.

Please find the attached <u>Minutes of the Houston Planning Commission Special Meeting.</u> We request that you forward an electronic copy to Mayor Parker and City Council. A copy of the minutes should be placed on file in your office for public review as required by Texas Local Government Code Chapter 395. This copy should be available for the public to review on Tuesday, February 26, 2013 which precedes a public hearing on Wednesday, March 6, 2013 at 9:00 AM.

Thank you for your assistance. Should you have any questions, please contact me at 832-395-2705 or Rudy Moreno at 832-394-8986.

Mark L. Loethen, P.E., CFM, PTOE

MLL:RM:jd

Attachment:

Minutes of the Houston Planning Commission Special Meeting

### Minutes of the Houston Planning Commission Special Meeting

(A CD of the full proceedings is on file in the Planning and Development Department)

February 21, 2013
Meeting to be held in
Mayor's Conference Room, Basement, City Hall
1:30 p.m.

### Call to order:

## Chair, Mark Kilkenny called the meeting to order at 1:33 p.m. with a quorum present.

Mark A. Kilkenny, Chair

M. Sonny Garza Arrived at 1:37 p.m. during item I

Susan Alleman

Christopher B. Amandes Absent

Keiji Asakura Fernando Brave

Kenneth Bohan Absent

Antoine Bryant

Lisa Clark

Brandon Dudley Absent

Truman C. Edminster III

James R. Jard

Paul R. Nelson Absent

Linda Porras-Pirtle Algenita Segars

Eileen Subinsky Absent

Blake Tart III Arrived at 1:35 p.m. during item I

Shaukat Zakaria Absent
Mark Mooney for Absent

The Honorable Ed Chance

Richard W. Stolleis for Absent

The Honorable Grady Prestage

Jackie Freeman for Absent

The Honorable Ed Emmett

### **EXOFFICIO MEMBERS**

Carol A. Lewis
Daniel W. Krueger, P.E.
Dawn Ullrich
George Greanias

#### **DIRECTOR'S REPORT**

No report was given.

I. PRESENTATION AND CONSIDERATION OF THE MAXIMUM IMPACT FEE RATE CALCULATIONS ESTABLISHED WITHIN THE DRAINAGE IMPACT FEE STUDY REPORT The report was presented by Mark Loethen, Deputy Director, Public Works and Engineering Department.

Commission action: Approved the Maximum Impact Fee Rate Calculations established within the Drainage Impact Fee Study and forwarded the report to City Council for approval.

Motion: Brave

Second: Tartt

Vote: Unanimous

Abstaining: None

II. PLEASE EXCUSE THE ABSENCES OF COMMISSIONER BRANDON DUDLEY

Commissioner Dudley's absences were excused.

Motion: Segars

Second: Asakura

Vote: Unanimous

Abstaining: None

III. PUBLIC COMMENT NONE

IV. ADJOURNMENT

There being no further business brought before the Commission Chair, Mark Kilkenny adjourned the meeting at 2:15 p.m.

Motion: Bryant

Second: Clark

Vote: Unanimous

Abstaining: None

Mark Kilkenny, Chair Marlene Gafrick, Secretary