AGENDA

CAPITAL IMPROVEMENT ADVISORY COMMITTEE (CIAC)

AUGUST 24, 2023 @ 7:00 PM

Notice is hereby given that the Capital Improvement Advisory Committee (CIAC) for the City of Parker will meet on Thursday, August 24, 2023 at 7:00 PM at the Parker City Hall, 5700 E. Parker Road, Parker, Texas, 75002. The City's CIAC meeting will be open to the public and live streamed.

Pursuant to Texas Government Code § 551.127, notice is given that it is the intent of the City Council that a quorum of the Council will be physically present for the above-referenced meeting at Parker City Hall, 5700 E. Parker Road, Parker, Texas. Some council members or City employees may participate in this meeting remotely by means of video conference call in compliance with state law.

CALL TO ORDER – Roll Call and Determination of a Quorum

PLEDGE OF ALLEGIANCE

AMERICAN PLEDGE: I pledge allegiance to the flag of the United States of America; and to the republic for which it stands, one nation under God, indivisible with liberty and justice for all.

TEXAS PLEDGE: Honor the Texas flag; I pledge allegiance to thee, Texas, one state under God, one and indivisible.

PUBLIC COMMENTS **The City Council invites any person with business before the Council to speak to the Council. No formal action may be taken on these items at this meeting. Please keep comments to 3 minutes.**

ROUTINE ITEMS

1. WORK SESSION TO DISCUSS LAND USE ASSUMPTIONS ON LAND USE, ZONING, POPULATION, DENSITY SERVICE AREAS, GROWTH PATTERNS, AND BUILD OUT AND RELATED MATTERS RELATED TO LAWFUL IMPACT FEES.
2. CONSIDERATION AND/OR ANY APPROPRIATE ACTION ON WORK SESSION.

FUTURE AGENDA ITEMS

ADJOURN

In addition to any specifically identified Executive Sessions, Council may convene into Executive Session at any point during the open meeting to discuss any item posted on this Agenda. The Open Meetings Act provides specific exceptions to the requirement that a meeting be open. Should Council elect to convene into Executive Session, those exceptions will be specifically identified and announced. Any subsequent action, as a result of this Executive Session, will be taken and recorded in open session.

I certify that this Notice of Meeting was posted on or before August 18, 2023, by 5:00 p.m. at the Parker City Hall, and as a courtesy, this Agenda is also posted to the City of Parker Website at www.parkertexas.us.

The Parker City Hall is Wheelchair accessible. Sign interpretations or other special assistance for disabled attendees must be requested 48 hours in advance by contacting the City Secretary's Office at 972 442 6811.

Date Notice Removed

Patti Scott Grey
City Secretary

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CIAC Agenda Item

Budget Account Code:		Meeting Date:	See above
Budgeted Amount:		Department/ Requestor:	CIAC
Fund Balance-before expenditure:		Prepared by:	Public Works Director Gary Machado
Estimated Cost:		Date Prepared:	August 18, 2023
Exhibits:	1. Ord. No. 746, dated April 4, 2017 2. Res. No. 2023-734 w-attachments, dated June 6, 2023		

AGENDA SUBJECT

1. WORK SESSION TO DISCUSS LAND USE ASSUMPTIONS ON LAND USE, ZONING, POPULATION, DENSITY SERVICE AREAS, GROWTH PATTERNS, AND BUILD OUT AND RELATED MATTERS RELATED TO LAWFUL IMPACT FEES.
2. CONSIDERATION AND/OR ANY APPROPRIATE ACTION ON WORK SESSION.

SUMMARY

The role of the advisory committee is to advise and assist in the preparation of the Land Use Assumptions (LUA) that will, in turn, be used in the preparation of the capital improvements plan (CIP).

The process is to analyze existing conditions:

1. Population, density, zoning classifications, and land use,
2. Determine service area (City Limits/ETJ),
3. Project ten (10) year growth patterns, and
4. Build-out projections

RECOMMENDED ACTION

Inter – Office Use

Approved by:			
ACA/CS:	Patti Scott Grey	Date:	08/18/2023
City Attorney:	Amy J. Stanphill	Date:	08/18/2023
Public Works Director:	Gary Machado	Date:	08/18/2023

ORDINANCE NO. 746

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PARKER, TEXAS ADOPTING WATER IMPACT FEES; SETTING THE ACTUAL AND MAXIMUM IMPACT FEE RATES; PROVIDING FOR IMPACT FEE ACCOUNTS AND USE OF FUNDS; INCLUDING PROCEDURAL PROVISIONS; AND PROVIDING FOR PENALTIES.

WHEREAS, Chapter 395 of the Texas Local Government Code authorizes the City of Parker to adopt impact fees for water facilities; and

WHEREAS, The City Council designated the City's Capital Improvements Advisory Committee to advise the City Council concerning land use assumptions, a capital improvements plan and the amounts of impact fees for water and wastewater facilities; and

WHEREAS, A Water Impact Fee Report, which included Capital Improvement Plans and a Land Use Assumptions Report has been prepared for the City by the Birkhoff, Hendricks, and Carter, LLP; and

WHEREAS, The Capital Improvements Advisory Committee, recommended that the City Council approve the Land Use Assumptions Report and the CIP Report.; and

WHEREAS, The City Council, after a public hearing, approved the Land Use Assumptions Report and the CIP Report by resolution adopted on January 9, 2017; and

WHEREAS, The City Council on February 27, 2017 set April 4, 2017 as the date for a public hearing to discuss the adoption of water impact fees; and

WHEREAS, The City Council finds that the City has fully complied with Chapter 395 of the Texas Local Government Code, as amended, in the notice, adoption, promulgation and methodology necessary to adopt water an impact fees; and

WHEREAS, This ordinance is intended to satisfy all statutory requirements for adopting water and fees;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PARKER, TEXAS AS FOLLOWS:

SECTION 1. That the Code of Ordinances, City of Parker, Texas, is amended by adding Impact Fees, to Chapter 51, Water, to read as follows:

WATER IMPACT FEES

Division 1. General Provisions

Short title.

This article shall be known and cited as the City of Parker Water Impact Fee Ordinance.

Purpose.

The purpose of this article is to help ensure that adequate water facilities are available to serve new growth and development, and to provide for new growth and development to bear a proportionate share of the cost of water and wastewater facilities that serve the new growth and development.

Authority; implementing guidelines.

(a) This article is adopted pursuant to V.T.C.A., Local Government Code Chapter 395.

(b) Guidelines to implement and administer this article may be developed and approved by ordinance or resolution of the city council.

Definitions. In this article:

(a) *Advisory committee* means the capital improvements advisory committee on impact fees in accordance with V.T.C.A., Local Government Code Chapter 395.

(b) *Capital improvement* means a water facility with a life expectancy of three or more years that is owned and operated by or on behalf of the city, whether or not the facility is within the impact fee service area.

(c) *Capital improvements plan* means the plan approved by the city council which describes the water capital improvements or facility expansions and their costs which are necessitated by and attributable to development in the impact fee service area based on the approved land use assumptions. The initial *capital improvements plan* is the Capital Improvements Plan and Report for Water Impact Fees prepared for the City by Birkhoff, Hendricks, and Carter, LLP, which was approved by the city council by resolution dated January 9, 2017.

(d) *City* means the City of Parker, Texas.

(e) *Development* means the subdivision of land, or the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure, or any use or extension of the use of land, any of which increases the number of service units that may be used on the land or in conjunction with the structure. *Development* includes the conversion of an existing use from on-site water facilities to the use of city water facilities.

(f) *Facility expansion* means an expansion of the capacity of any existing water facility for the

purpose of serving development; it does not include the repair, maintenance, modernization, or expansion of an existing water facility to the extent it serves existing development.

(g) *Impact fee* means a fee for water facilities imposed on development in order to generate revenue to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to the development. *Impact fee* does not include:

(1) The dedication of rights-of-way or easements for water facilities;

(2) Construction or dedication of on-site or off-site water facilities under the city's subdivision or other regulations;

(3) Fees placed in trust funds for the purpose of reimbursing developers for oversizing or constructing water facilities;

(4) Pro rata fees for reimbursement of the costs for extending city water; or

(5) Charges for water services to a wholesale customer such as a water district, political subdivision of the state, or other wholesale utility customer.

(h) *Impact fee rate* means the amount of the impact fee Living Unit .

(i) *Impact fee service area* means the area designated in the Water Impact Fee Report adopted by the City Council by Resolution on January 9, 2017 and adopted herein by reference within which impact fees will be collected in connection with development, and for which impact fees will be expended for capital improvements or facility expansions.

(j) *Land use assumptions* means a report describing the impact fee service area and projections of changes in land uses, densities, intensities, and population in the service area. The initial *land use assumptions* are contained in the report on Land Use Assumptions for the Implementation of Water Impact Fees prepared for the city by Birkhoff, Hendricks, and Carter, LLP, which was approved by the city council by resolution dated January 9, 2017.

(k) *Property owner* means any person, corporation, legal entity or agent thereof having a legal or equitable interest in the land for which an impact fee becomes due. *Property owner* includes the developer for a development.

(l) *Service unit* means the applicable standard units of measure shown on the land use equivalency table in the Impact Fees Capital Improvements Plan which can be converted to water meter equivalents, for water facilities, which serves as the standardized measure of consumption, use or generation attributable to the new unit of development. For roadway facilities, the service unit is converted vehicle miles. .

(m) *Water facility* means water meter interceptor or main, pump station, storage tank or other facility included within and comprising an integral component of the City's water storage or distribution system. Water facility includes land, easements or structures associated with such facilities. Water facility excludes site-related facilities.

Water Impact fee service area; applicability of article.

(a) The water impact fee service area is depicted on a map included in the Water Impact Fee Report prepared for the city by Birkhoff, Hendricks, and Carter, LLP. A copy of this map shall be retained on file at Parker City Hall.

(b) This article applies to all development within the impact fee service area. The provisions of this article shall apply uniformly within the impact fee service area.

Land use assumptions and capital improvements plan.

(a) The land use assumptions are incorporated by reference in this article.

(b) The capital improvements plan is incorporated by reference in this article.

Impact fees in relation to other fees and development regulations.

(a) Impact fees established by this article are in addition to water and wastewater meter, tap, or connection fees.

(b) For each development to which impact fees apply, the payment of impact fees as described in this article will constitute a condition of plat, construction permit, utility connection and other development approvals.

(c) This article shall not affect the permissible uses of property, the density of development, public improvement standards and requirements, or any other aspect of city development regulations.

Functions of advisory committee.

The advisory committee may perform the following functions:

(1) Advise and assist the city council and city staff in reviewing, adopting and updating the land use assumptions and the capital improvements plan;

(2) File written comments on the land use assumptions and the capital improvements plan;

(3) Monitor and evaluate implementation of the capital improvements plan;

(4) Advise the city of the need to update or revise the land use assumptions, capital improvements plan and impact fees; and

(5) File periodic reports evaluating the progress of the capital improvements plan and identifying perceived inequities in implementing the plan or administering the impact fees.

Updates to plans and revision of fees.

(a) The city shall update the land use assumptions and capital improvements plan at least every

ten years, and shall recalculate the maximum impact fee rates based on the update, unless the city council determines that an update is not needed under subsection (c). The initial ten-year period will run from the January 9, 2017 date of the city council's adoption of the capital improvements plan.

(b) The city may review its land use assumptions, impact fees, capital improvements plan and other factors such as market conditions more frequently than provided in subsection (a) to determine whether the land use assumptions and capital improvements plan should be updated and the maximum impact fee rates recalculated.

(c) If the city council determines that no changes to the land use assumptions, capital improvements plan or impact fee are needed at the time an update is required under subsection (a), the council will provide notice of this determination as described in V.T.C.A., Local Government Code §395.0575. If no person submits a timely request for an update of the land use assumptions, capital improvements plan or impact fee, no update will be necessary.

(d) The City Council may amend the actual impact fee rates herein at any time without revising the land use assumptions and capital improvements plan. The actual impact fee rates may not, however, exceed the maximum impact fee rates established herein.

Division 2. Water Impact Fees

Actual and maximum impact fee rates.

(a) The actual impact fee rate charged by the city for each category of capital improvements is set as follows:

(1) One Inch Meter: $3,938.95
(2) Two Inch Meter: $15,755.82

(b) The maximum water impact fee rate allowed by state law for capital improvements is calculated in the capital improvements plan to be as follows:

(1) Single Family Residential 1 inch meter (Living Unit Equivalent: 1) : $3,938.95
(2) Single Family Residential 2 inch meter (Living Unit Equivalent: 4): $15,755.82

Determination of impact fee rates.

(a) The impact fee rates will be those in effect at the time an application for a building permit, plumbing permit, or utility connection is submitted to the city, except as provided in subsection (b) below.

(b) For development on property platted or replatted after the original effective date of this article, the impact fee rates will be those in effect at the time the plat or replat of the property was recorded. The applicant for a building or plumbing permit shall submit evidence of the date of plat or replat recording with the application for a building or plumbing permit.

Refunds.

(a) At the written request of an owner of the property on which an impact fee has been paid, the political subdivision shall refund all or part of the impact fee, together with interest calculated from the date of collection to the date of refund, if any of the following apply:

(1) Existing facilities are available to serve the development and service is denied for any reason;
(2) Existing facilities were not available to serve the development when the fee was paid, and the city has failed to commence construction of facilities to provide service within two years of payment of the fee; or

(3) Existing facilities were not available to serve the development when the fee was paid, and the city has failed to make service available within a reasonable period considering the type of facilities to be constructed, but in no event later than five years from the date of payment.

(b) Upon written request of an owner of the property on which an impact fee has been paid, the portion of an impact fee which has not been expended within 10 years from the date of payment shall be refunded. The application for refund under this section shall be submitted within 60 days after the expiration of the ten-year period. Under this subsection, impact fees will be deemed expended on a first-in, first out basis. An impact fee collected under this article will be deemed expended if the total expenditures for capital improvements or facility expansions within 10 years after the date of payment exceeds the total amount of fees collected for the category of improvements or expansions (water or wastewater) during that period.

(c) If a refund is due under subsections (a) or (b), the city shall divide the difference between the amount of expenditures and the amount of the fees collected by the total number of service units identified in the land use assumptions for the service area to determine the refund due per service unit. The refund shall be calculated by multiplying the refund due per service unit by the number of service units for the development for which the fee was paid, and interest due shall be calculated on that amount. Refunds shall be made to the record owner of the property at the time of the refund.

Rebates.

If a building or plumbing permit or an approval of a utility application in a development expires after an impact fee has been paid, and no utility connection has been made under the permit or approval, and a modified or new application has not been filed within six months of the expiration, and the property owner submits a written request to the city within six months of the expiration, the city shall rebate the amount of the impact fee to the record owner of the property at the time of the refund. If no request for a rebate is submitted within this period, no rebate shall become due.

Division 3. Accounting and Use of Impact Fees

Accounting for impact fees.

(a) The city shall establish separate interest-bearing accounts for water system impact fees.

(b) Interest earned on each account shall be credited to that account, and shall be used solely for the purposes authorized in this article.

(c) The city shall establish and maintain financial and accounting controls to ensure that impact fees disbursed from an account are used solely for the purposes authorized in this article. Disbursement of funds shall be authorized by the city at such times as are reasonably necessary to carry out the purposes and intent of this article.

(d) The city shall maintain financial records for each account which show the source and disbursement of all funds. The records shall be open for public inspection during ordinary business hours.

Use of impact fee accounts.

(a) Impact fees collected under this article shall be used to pay or recoup the costs of constructing capital improvements or facility expansions identified in the capital improvements plan. Construction costs include the construction contract price, surveying and engineering costs, and land acquisition costs (including purchase price, court awards and costs, attorney's fees, and expert witness fees).

(b) Impact fees may be used to pay the principal and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of the city to finance capital improvements or facility expansions identified in the capital improvements plan.

(c) Impact fees may be used to pay fees to an independent qualified engineer or financial consultant (i.e., an engineer or consultant who is not an employee of the city) for preparing or updating the capital improvements plan.

(d) Impact fees collected under this article shall not be used to pay for any of the following:

(1) Construction or acquisition of capital improvements or facility expansions other than those identified in the capital improvements plan;

(2) Repair, operation, or maintenance of existing or new capital improvements or facility expansions;

(3) Upgrade, expansion or replacement of existing capital improvements that serve existing uses in order to meet stricter safety, efficiency, environmental or regulatory standards;

(4) Upgrade, expansion, or replacement of existing capital improvements to provide better service to existing uses; or

(5) Administrative and operating costs of the city.

(e) The city may pledge impact fee revenues as security for the payment of debt service on a bond, note, or other obligation issued to finance a capital improvement or facility expansion identified in the capital improvements plan if the city council certifies in an ordinance or resolution that none of the

revenues will be used or expended for an improvement or expansion not identified in the plan.

Exceptions and exemptions.

(a) Impact fees shall not be collected from any local taxing unit, as defined in the state Tax Code that is authorized to impose and is imposing ad valorem taxes on property.

(b) No wastewater impact fee shall be charged for an irrigation meter.

(c) No impact fee shall be charged for a fire line meter that serves only a fire suppression system.

SECTION 2. If any word, phrase, clause, sentence, or paragraph of this ordinance is held to be unconstitutional or invalid by a court of competent jurisdiction, the other provisions of this ordinance will continue in force if they can be given effect without the invalid portion.

SECTION 3. Any person violating any provision of this ordinance commits a misdemeanor and is subject to the penalty provided in the City of Parker Code of Ordinances upon conviction.

SECTION 4. This Ordinance will take effect on the date the requirements in Local Government Code Section 52.011 for publication of notice of its adoption are met. From and after this effective date, the City will compute and collect water and wastewater impact fees as described herein.

APPROVED THIS 4th DAY OF April, 2017.

APPROVED:

Z Marshall, Mayor

CITY OF PARKER COLLIN COUNTY, TEXAS

ATTEST:

Patti Scott Grey, City Secretary

APPROVED AS TO FORM:

Brandon S. Shelby, City Attorney

CITY OF PARKER

City of Parker, Texas
Impact Fee Advisory Committee
5700 E. Parker Road
Parker, Texas 75002

February 23, 2017

Re: Water Impact Fee
Impact Fee Advisory Committee Recommendation

Honorable Mayor Z Marshall and the City of Parker City Council:

The City of Parker Impact Fee Advisory Committee, established in accordance with Section 395.058 of the Texas Local Government Code, met on this date for the purpose of reviewing the 2016 Water Impact Fee.

The Impact Fee Advisory Committee reviewed the 2016-2026 Water Impact Fee Report that includes the maximum water impact fee, prepared by Birkhoff, Hendricks & Carter, L.L.P,. Professional Engineers.

On behalf of the Advisory Committee, we find the maximum water impact fee presented in the 2016-2026 Water Impact Fee Report is in general conformance with the requirements of Texas Local Government Code Chapter 395. The Impact Fee Advisory Committee offers no objections.

Sincerely

Joe Lozano
Vice Chairman, Impact Fee
Advisory Committee

5700 E. Parker Road, Parker, Texas 75002
Office 972-442-6811 * Fax 972-442-2894
www.parkertexas.us

RESOLUTION NO. 2023-734

(PROFESSIONAL ENGINEERING SERVICES WATER IMPACT FEE AGREEMENT)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PARKER APPROVING THE TERMS AND CONDITIONS OF THE PROFESSIONAL ENGINEERING SERVICES AGREEMENT OF THE CITY OF PARKER AND BIRKHOFF, HENDRICKS & CARTER, LLP REGARDING 2023 WATER IMPACT FEE ANALYSIS UPDATE AND RELATED SERVICES; AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Parker has deliberated the attributes and conditions of updating and imposing an impact fee for the municipal water system pursuant to the Texas Local Government Code Chapter 395; and

WHEREAS, the City of Parker requested a proposed contract for the required services of professional engineers from the firm of Birkhoff, Hendricks and Carter, which is attached as Exhibit A (the "Agreement"); and

WHEREAS, the City of Parker finds the services to be provided and the terms and conditions of the Agreement are in the best interest of the City and should be approved;

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

SECTION 1. The terms and conditions of the attached Agreement are approved.

SECTION 2. The Mayor is hereby authorized to execute the Agreement and all other necessary documents in connection therewith on behalf of the City of Parker to fund and proceed with the Agreement.

SECTION 3. That all provisions of the resolutions of the City of Parker in conflict with the provisions of this Resolution be, and the same are hereby, repealed, and all other provisions of the resolution of the City of Parker not in conflict with the provisions of this Resolution shall remain in full force and effect.

DULY RESOLVED by the City Council of the City of Parker, Texas and effective on this the __6th__ day of ____June_____, 2023.

APPROVED:
CITY OF PARKER

Mayor Lee Pettle

ATTEST:

City Secretary Patti Scott Grey

APPROVED AS TO FORM:

Amy J. Stanphill, City Attorney

PROFESSIONAL ENGINEERING SERVICES AGREEMENT

THIS AGREEMENT is made and entered into by and between the **City of Parker, Texas**, hereinafter referred to as "City", and **Birkhoff, Hendricks & Carter, L.L.P.**, hereinafter referred to as "Engineer", to be effective from and after the date as provided herein.

The City desires to engage the services of the Engineer prepare the ***2023 Water Impact Fee Analysis Update,*** hereinafter referred to as the "Project"; and the Engineer desires to render such engineering design services for the City under the terms and conditions provided herein. That for and in consideration of the covenants contained herein, and for the mutual benefits to be obtained hereby, the parties hereto agree as follows:

I. Employment of the Engineer

The City hereby agrees to retain the Engineer to perform professional engineering services in connection with the Project; Engineer agrees to perform such services in accordance with the terms and conditions of this Agreement.

II. Scope of Services

The parties agree that Engineer shall perform such services as expressly set forth and described in Exhibit "A", which is attached hereto and thereby made a part of this Agreement. The parties understand and agree that deviations or modifications, in the form of written changes may be authorized from time to time by the City. Engineer shall have no further obligations or responsibilities for the project except as agreed to in writing. Engineer's services and work product are intended for the sole use and benefit of Client and are non-intended to create any third-party rights or benefits, or for any use by any other entity or person for any other purpose.

Engineer shall perform his or her professional engineering services with the professional skill and care ordinarily provided by competent engineers practicing in North Central Texas and under the same or similar circumstances and professional license. Professional services shall be performed as expeditiously as is prudent, considering the ordinary professional skill and care of a competent engineer.

III. Schedule of Work

The Engineer agrees to commence services immediately upon execution of this Agreement, and to proceed diligently with said service, except for delays beyond the reasonable control of Engineer, to completion, as described in the Completion Schedule attached hereto as Exhibit "B" and thereby made a part of this Agreement.

IV. Compensation and Method of Payment

The parties agree that Engineer shall be compensated for all services provided pursuant to this Agreement in the amount and manner described and set forth in the Payment Schedule attached hereto as Exhibit "C" and thereby made a part of this Agreement. Engineer further agrees that it will prepare and present such monthly progress reports and itemized statements as are described in said Exhibit "C". City agrees to pay invoices upon receipt. Statement for services shall include a line for previous payments, contract amount, and amount due current invoice.

V. Information To Be Provided By The City

The City agrees to furnish, prior to commencement of work, all information requested by Engineer that is available to the City.

VI. Insurance

Engineer agrees to procure and maintain for the duration of the contract Professional Liability Insurance ($3,000,000), Worker's Compensation, General Liability and Automobile Insurance.

VII. Assignment and Subletting

The Engineer agrees that neither this Agreement nor the services to be performed hereunder will be assigned or sublet without the prior written consent of the City. The Engineer further agrees that the assignment or subletting of any portion or feature of the work or materials required in the performance of this Agreement shall not relieve the Engineer from its full obligations to the City as provided by this Agreement.

VIII. Contract Termination

The parties agree that City or the Engineer shall have the right to terminate this Agreement without cause upon thirty (30) days written notice to the other. In the event of such termination without cause, Engineer shall deliver to City all finished or unfinished documents, data, studies, surveys, drawings, maps, models, reports, photographs or other items prepared by Engineer in connection with this Agreement. Engineer shall be entitled to compensation for any and all services completed to the satisfaction of City in accordance with the provisions of this Agreement prior to termination.

IX. Engineer's Opinion of Cost

The parties recognize and agree that any and all opinions of cost prepared by Engineer in connection with the Project represent the best judgment of Engineer as a design professional familiar with the construction industry, but that the Engineer does not guarantee that bids solicited or received in connection with the Project will not vary from the opinion by the Engineer.

X. Construction

On projects that include construction, the Owner recognizes that the Contractor and Subcontractors will be solely in control of the Project site and exclusively responsible for construction means, methods, scheduling, sequencing, jobsite safety, safety programs, and compliance with all construction documents and directions from Owner or Building Officials. Construction contracts are between the Client and the Construction Contractor. Consultant shall not be responsible for construction related damages, losses, costs, or claims; except only to the extent caused by Consultant's sole negligence.

XI. Ownership of Documents

Original drawings, specifications and reports are the property of the Engineer; however, the Project is the property of the City. City shall be furnished with such reproductions of drawings, specifications and reports. Upon completion of the services or any earlier termination of this Agreement under Article VIII, Engineer will revise drawings to reflect changes made during construction as reported by the City and contractor, and will furnish the City with one set of construction record drawings in accordance with terms provided in Exhibit "A" – Engineering Services.

All deliverables shall be furnished, as an additional service, at any other time requested by the City when such deliverables are available in the Engineer's record keeping system.

XII. Complete Contract

This Agreement, including the exhibits hereto numbered "A" through "C "constitutes the entire agreement by and between the parties regarding the subject matter hereof, and supersedes all prior or contemporaneous written or oral understanding. This agreement may only be amended, supplemented, modified, or canceled by a duly executed written agreement.

XIII. Mailing of Notices

Unless instructed otherwise in writing, Engineer agrees that all notices or communications to City permitted or required under this Agreement shall be addressed to City at the following address:

Mr. Luke Olson
City Administrator
City of Parker
5700 E. Parker Rd.
Parker, Texas 75002
Phone: (972) 442-4105
lolson@parkertexas.us

City agrees that all notices or communications to Engineer permitted or required under this Agreement shall be addressed to Engineer at the following address:

John W. Birkhoff, P.E.
Birkhoff, Hendricks & Carter, L.L.P.
11910 Greenville Ave., #600
Dallas, Texas 75243
Phone: (214) 361-7900

All notices or communications are required to be given in writing by one party to the other shall be considered as having been given to the addressee on the third day such notice or communication is posted by the sending party. All notices shall be sent by overnight mail (FedEx) with receipt and signature of delivery.

XIV. Contract Amendments

This Agreement may be amended only by the mutual agreement of the parties expressed in writing.

XV. Effective Date

This Agreement shall be effective from and after execution by both parties hereto, with originals in the hand of both parties.

WITNESS OUR HANDS AND SEALS on the date indicated below.

CITY OF PARKER, TEXAS
A Texas General Law City

By: Lee Pettle

Date: 6/7/2023

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
A Texas Limited Liability Partnership
Texas Board of Professional Engineers and Land Surveyor
Engineering Firm No. 526
Land Surveyors Firm No. 100318-00

By: John W Birkhoff

Date: 5/31/23

ATTEST

By: Tara Scott

EXHIBIT "A"

SCOPE OF SERVICES

2023 WATER IMPACT FEE ANALYSIS

A. Engineering Analysis for the Water Impact Fee Calculation

1. Review the water capital improvement projects included in the 2023 Water Distribution Master Plan and summarize the current status of the program along with a comparison of actual project cost to the estimates used. City to provide final construction payment, Engineer fees paid and easement/ROW cost on Water projects for all completed water projects that City participated in the cost from available City records.

2. Analysis based on a single service area map that is bounded by projected City Limit lines that includes Extra Territorial Jurisdiction (ETJ).

3. Development of a 10-year capital improvement program including Opinion of Probable Construction Cost in 2023 dollars and implementation schedule. The 10-year Capital Improvement Program will be based on land use and growth assumptions provided by the City of Parker.

4. Inventory new and existing water projects eligible for the impact fee program. Specifically excluded from the impact fee analysis is water treatment, pumping and transmission facilities owned and operated by the North Texas Municipal Water District. Include in the Impact Fee is the NTMWD cost to provide a supply line to Central Pump Station.

5. For each water project identified, analyze the capacity currently utilized, total capacity available, and the capacity utilized over the impact fee period.

6. Review of the existing living unit equivalent (LUE) for the water impact fee. Water meter count by size shall be provided by the city.

7. Calculate the water impact fee based on the list of projects eligible for recovery, actual construction cost of existing projects, projected cost of projects on the 10-year C.I.P, living unit equivalent and the utilized capacity of the facilities over the 10-year period. The maximum fee will be based on 50% of the total allowable fees.

8. Coordinate information and findings with City staff.

9. Participate in four public meetings.

B. Impact Fee Deliverables

1. Prepare and deliver one (1) unbound original plan document of the Engineering Analysis for the Impact Fee Report. The report will be capable of reproduction by the City.

2. Prepare and deliver ten (10) bound copies of the Engineering Analysis for the Impact Fee Report, including methodology of the analysis. Six copies for city council and four copies to advisory committee.

3. Present the findings to the City staff, Impact Fee Advisory Committee and/or City Council.

C. City's Responsibility

1. Population Projections: January 2023, January 2033, and Buildout.

2. Land Use Plan adopted by City Council.

3. Land Use Absorption in 10-year period: Residential.

4. Final Payment Records made to Construction Contractors for Water Capital Improvement Projects completed in the past twenty years, that records are available.

5. Water Meter Count by Size and Use.

D. Exclusions

The intent of this scope of services is to include only the services specifically listed herein and none others. Services specifically excluded from this scope of services include, but are not necessarily limited to the following:

1) Legal Services
2) Preparation of Ordinance
3) Public Notice Notifications
4) Scheduling of Advisory Committee and Council Meeting
5) Public Meetings beyond Four
6) Fiduciary responsibility to the City

EXHIBIT "B"

COMPENSATION

2023 WATER IMPACT FEE ANALYSIS

Compensation for engineering services for the Water Impact Fee for this contract shall be based on salary cost times a multiplier of 2.4 (hourly) with software billed at $550.00 per month. The budget of $24,368.00 will not be exceeded without written approval from the City of Parker.

Billings shall be posted monthly based on hours expended on the contract, with payment due within thirty days from the date of the invoice.

WATER IMPACT FEE REPORT
2016 - 2026

Submitted To The City Of

PARKER

Submitted By

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
SPECIALIZING IN CIVIL ENGINEERING FOR MUNICIPALITIES AND GOVERNMENTAL AGENCIES

February 2017

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PROFESSIONAL ENGINEERS

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JOSEPH T. GRAJEWSKI, III, P.E.
DEREK B. CHANEY, P.E.
CRAIG M. KERKHOFF, P.E.

February 16, 2017

Mr. Jeff Flanigan
City Administrator
City of Parker
5700 East Parker Road
Parker, Texas 75002

Re: Water Impact Fee Study
2016 - 2026

Dear Mr. Flanigan:

This report presents the results of the City of Parker's Water Impact Fee Study for the planning years 2016 through 2026. This report includes the updated land use assumptions (prepared by the City's Capital Improvements Advisory Committee), the impact fee Capital Improvements Plan, and the Maximum Impact Fees by meter size for new water accounts. The maximum allowable fee per service unit (for a 1-inch water meter), adjusted to fifty percent (50%) of the calculated maximum are:

Maximum Allowable Water Impact Fee per Service Unit ..... $ 3,938.95

We have enjoyed working with the City on this important study and are available to discuss the findings and conclusions of this updated impact fee further at your convenience. We look forward to our continued working relationship with you and the City of Parker.

Sincerely,

Andrew Mata Jr., P.E.

CITY OF PARKER, TEXAS
WATER IMPACT FEE STUDY
2016 TO 2026

TABLE OF CONTENTS

CITY OF PARKER, TEXAS
WATER IMPACT FEE STUDY
2016 to 2026

A. INTRODUCTION

Chapter 395, of the Local Government Code is an act that provides guidelines for financing capital improvements required by new development in municipalities, counties, and certain other local governments. Under Chapter 395, political subdivisions receive authorization to enact or impose impact fees on land that is located within their political subdivision's corporate boundaries or extraterritorial jurisdictions. No governmental entity or political subdivision can enact or impose an impact fee unless they receive specific authorization by state law or by Chapter 395.

An "Impact Fee" is a charge or assessment imposed by a political subdivision for new development within its service area in order to generate revenue for funding or recouping the costs of capital improvements necessitated by and attributable to the new development.[1] The City of Parker's current water Certificate of Convenient and Necessity (CCN) is CCN No. 10207. The Water Service Area extends to the Extra Territorial Jurisdiction (ETJ) and includes some area located within the City of Wylie. However, the portion of the area located in the City of Wylie was determined by the City's Impact Fee Advisory Committee to be built out and no additional infrastructure would be needed to support additional growth. The first step in determining an impact fee is preparation of land use and growth assumptions for the service area for the next ten years. That step has been completed and provided by the City's Impact Fee Advisory Committee in the Land Use Assumptions Report, dated August 29, 2016. Next, a Capital Improvements Plan must be created to describe the water distribution system infrastructure that will be necessary to serve the anticipated land uses and growth. Following the preparation of the Capital Improvements Plan the Water Impact Fee is calculated.

[1] P. 831, Texas Local Government Code, West's Texas Statutes and Codes, 1998 Edition.

B. WATER IMPACT FEES

The following items can be included in the water impact fee calculation:

1) The portion of the cost of the new infrastructure that is to be paid by the City, including engineering, property acquisition and construction cost.

2) Existing excess capacity in lines and facilities that will serve future growth and which were paid for in whole or part by the City and part by the Developer.

3) Interest and other finance charges on bonds issued by the City to cover its portion of the cost.

These items are summed and the utilized capacity is calculated over the impact fee period. The maximum allowable impact fee per service unit may not exceed fifty percent of the calculated maximum amount of the total utilized capital improvement cost divided by the total number of new standard service units. This maximum allowable impact fee recovers a portion of the City's costs for the construction of facilities to serve the new developments and support new growth. However, the City may recover the maximum fee by crediting the portion of utility service revenue generated by new service units during the 10-year program period.

Chapter 395 requires that an update of the land use assumptions, capital improvements plan, and impact fees be performed every five years, unless it is determined by the political subdivision after a review that such an update is not necessary.

This section of the report constitutes the City's 2016 water portion of the Capital Improvements Plan, and the maximum allowable impact fees. As required by state law, the study period is a ten-year period with 2016 as the base year. The engineering analysis of the water system is based on established land use in the year 2016, projected land use patterns through the year 2026, and on proposed infrastructure.

The engineering analysis portion of the City of Parker's 2016 Impact Fee determines utilized capacity cost of the water distribution system master plan between the years 2016 and 2026.

C. GLOSSARY

1. Advisory Committee means the capital improvements advisory committee established by the City for purposes of reviewing and making recommendations to the City Council on adoption and amendment of the City's impact fee program.

2. Area-related facility means a capital improvement or facility expansion which is designated in the impact fee capital improvements plan and which is not a site-related facility. Area-related facility may include a capital improvement which is located off-site, or within or on the perimeter of the development site.

3. Assessment means the determination of the amount of the maximum impact fee per service unit which can be imposed on new development.

4. Capital improvement means a water facility, wastewater facility or roadway with a life expectancy of three or more years, to be owned and operated by or on behalf of the City.

5. City means the City of Parker, Texas.

6. Credit means the amount of the reduction of an impact fee due, determined under this ordinance or pursuant to administrative guidelines that is equal to the value of area-related facilities provided by a property owner pursuant to the City's subdivision or zoning regulations or requirements, for the same type of facility.

7. Facility expansion means either a water facility expansion, sewer facility expansion or roadway expansion.

8. Final plat approval means the point at which the applicant has complied with all conditions of approval in accordance with the City's subdivision regulations, and the plat has been approved for filing with Collin County.

9. Impact fee means either a fee for water facilities, wastewater facilities or roadway facilities, imposed on new development by the City pursuant to Chapter 395 of the Texas Local Government Code in order to generate revenue to fund or recoup the costs of capital improvements or facility expansion necessitated by and attributable to such new development. Impact fees do not include the dedication of rights-of-way or easements for

such facilities, or the construction of such improvements, imposed pursuant to the City's zoning or subdivision regulations.

10. Impact fee capital improvements plan means either a water capital improvements plan, wastewater capital improvements plan or roadway capital improvements plan, adopted or revised pursuant to the impact fee regulations.

11. Land use assumptions means the projections of population and growth, and associated changes in land uses, densities and intensities over at least a ten-year period, as adopted by the City and as may be amended from time to time, upon which the capital improvements plans are based.

12. Land use equivalency table means a table converting the demands for capital improvements generated by various land uses to numbers of service units, as may be amended from time to time.

13. New development means the subdivision of land; the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure; or any use or extension of the use of land; any of which increases the number of service units.

14. Plat has the meaning given the term in the City's subdivision regulations. Plat includes replat.

15. Platting has the meaning given the term in the City's subdivision regulations. Platting includes replatting.

16. Property owner has the meaning given the term in the City's subdivision regulations. Property owner includes the developer for a new development.

17. Recoupment means the imposition of an impact fee to reimburse the City for capital improvements which the City had previously oversized to serve new development.

18. Service area means either a water service area or wastewater benefit area within the City, within which impact fees for capital improvements or facility expansion will be collected for new development occurring within such area, and within which fees so collected will be expended for those types of improvements or expansions identified in the type of capital

improvements plan applicable to the service area. For roadways, it means a roadway service area within the city limits.

19. Service unit means the applicable standard units of measure shown on the land use equivalency table in the Impact Fees Capital Improvements Plan which can be converted to water meter equivalents, for water or for wastewater facilities, which serves as the standardized measure of consumption, use or generation attributable to the new unit of development. For roadway facilities, the service unit is converted vehicle miles.

20. Site-related facility means an improvement or facility which is for the primary use or benefit of a new development, and/or which is for the primary purpose of safe and adequate provision of water, wastewater or roadway facilities to serve the new development, and which is not included in the impact fees capital improvements plan and for which the property owner is solely responsible under subdivision or other applicable development regulations.

21. Utility connection means installation of a water meter for connecting a new development to the City's water system, or connection to the City's wastewater system.

22. Water facility means a water interceptor or main, pump station, storage tank or other facility included within and comprising an integral component of the City's water storage or distribution system. Water facility includes land, easements or structures associated with such facilities. Water facility excludes site-related facilities.

23. Water facility expansion means the expansion of the capacity of any existing water facility for the purpose of serving new development, but does not include the repair, maintenance, modernization, or expansion of an existing water improvement to serve existing development.

24. Water improvements plan means the adopted plan, as may be amended from time to time, which identifies the water facilities or water expansions and their associated costs which are necessitated by and which are attributable to new development, for a period not to exceed 10 years.

25. Water meter means a device for measuring the flow of water to a development, whether for domestic or for irrigation purposes.

D. LAND USE ASSUMPTIONS SUMMARY

Under Chapter 395, of the Local Government Code, "Land Use Assumptions" includes a description of service area and projected changes in land uses, densities, intensities, and population in the service area for a minimum of a 10-year period. In order to impose an impact fee, the City must adopt an order, ordinance, or resolution that establishes a public hearing date to consider the land use assumptions within the designated service area. After the public hearing on the land use assumptions, the City makes a determination of adoption or rejection of the ordinance, order or resolution approving the land use assumptions that will be utilized to develop the Capital Improvement Plan.

The Land Use Assumptions used in this impact fee process were prepared by the City of Parker's Impact Fee Advisory Committee, and are presented in the following document, titled "Land Use Assumptions Report of the Capital Improvements Advisory Committee of the City of Parker".

CITY OF PARKER

Land Use Assumptions Report of the Capital Improvements Advisory Committee of the City of Parker

Revision C - August 29, 2016

Contents

List of Tables

List of Figures

Executive Summary

The Capital Improvements Advisory Committee (the "Committee") was appointed by the City of Parker City Council to review the subjects identified below and render an opinion on the land use assumptions necessary for the City to create and adopt lawful impact fees for the City of Parker public water system. The Committee has reviewed the Comprehensive Plan, the land use data, the current development within Parker, the current zoning within Parker, and the existing water plans for future growth and development. The Committee's report on the Land Use Assumptions required by Texas Local Government Code with relation to the Committee's work on impact fee research is contained within.

Members of this Committee include regular members of the Planning and Zoning Commission, experienced developers within the City of Parker, its ETJ, and key City personnel.

Table 1 - Capital Improvements Advisory Committee Members

Name	Role
Russell Wright	P&Z Chairman
Joe Lozano	P&Z Vice-Chairman
Cleburne Raney	P&Z Member
Jasmat Sutaria	P&Z Member
Wei Wei Jeang	P&Z Member
JR Douglas	P&Z Alternate, Developer
Steve Sallman	Developer/ETJ Owner
Jim Shepherd	City Attorney
Jeff Flanigan	City Administrator
Patti Scott Grey	City Secretary

Analysis of Existing Conditions

Each member of the Committee is personally familiar with the existing development within the City of Parker. The areas of the City of Parker that are not yet developed were presented by the City Administrator and the relevant maps and data were reviewed. This data review included the population (Exhibit 1), existing zoning (Exhibit 2), and the Comprehensive Plan (Exhibit 3), current Development Map (Exhibit 4), and the Water Master Plan Map (Exhibit 5) for the City as it relates to the undeveloped areas of Parker and it's ETJ.

Determination of Service Area

The City Council's charge to the Committee was to render an opinion on the land use assumptions necessary for the City to create and adopt lawful impact fees for the City of Parker public water system. The Committee reviewed the requirements to exclude the provisions and related costs to current development and concentrated on the capital improvements necessary to serve future development based on the existing conditions noted above, and the anticipated use of the comprehensive plan and related development plans of the City, all as required by the Texas Local Government Code. The service area for a water impact fee would be the entire City and its ETJ with respect to new development in any portion of this area.

There is a portion of the City's water service area (CCN, Certificate of Convenience and Necessity) that lies within the City of Wylie. This was discussed as whether it should be included in the impact fee Service Area. The City Administrator noted that the water infrastructure in that area is already built out to specifications that would not necessitate additional infrastructure capital improvements. Therefore, it was concluded by the committee to not include this area within the Service Area.

Additionally, The City has a Special Activities area of approximately 188 acres (Southfork Ranch) which, at some point in the future, could be developed and subsequently subdivided. While there are no specific plans at the time of this writing, it is important to include this area for any future plans.

Growth Projections

Based on the review of the factors set forth in the sections above, *Analysis of Existing Conditions* and *Determination of Service Area,* the Committee projected the 10 year growth patterns as they relate to water system capital improvements are as set forth in Table 6 - Land Use Assumptions (Exhibit A). The Committee's findings are based on the following discussions and calculations.

Density Calculations

The Committee agrees with the Comprehensive Plan of Parker with regard to the future development of Parker and its ETJ. Consequently, for those areas zoned SF-Single Family, the Committee has projected single family residential units on lots of two acres, with three residents per household. For those areas projected to be zoned SFT-Single Family Transitional, the Committee anticipates 1 acre minimum lots, with a 1.5 acre average size of lots in the subdivision. The population estimate for SFT is also three residents per unit. Additional zoning categories such as Special Activities, Agricultural, Manufactured Housing and non-conforming uses, were all considered in the analysis.

The raw data in Table 2 was used as the basis of the analysis. The Meters column indicates the number of water meters the City was billing in that year. The Estimated Residents (Est. Residents) is based on the assumption of three residents per household, as indicated above. The % Change is expressed as the delta (change in number of meters) from the prior year divided by the number of meters in the prior year, e.g. 98/688=14.2%.

Table 2 - Historical Water Meters (i.e. Service Units) for 2000 - Jan 2016

Year	Meters	Est. Residents	Delta	% Change	Std. Dev.
2000	688	2064	688.0		
2001	786	2358	98.0	14.2%	5.1%
2002	938	2814	152.0	19.3%	4.6%
2003	1022	3066	84.0	9.0%	2.1%
2004	1075	3225	53.0	5.2%	1.4%
2005	1121	3363	46.0	4.3%	
2006	1180	3540	59.0	5.3%	
2007	1210	3630	30.0	2.5%	
2008	1258	3774	48.0	4.0%	
2009	1273	3819	15.0	1.2%	
2010	1295	3885	22.0	1.7%	
2011	1320	3960	25.0	1.9%	
2012	1351	4053	31.0	2.3%	
2013	1385	4155	34.0	2.5%	
2014	1404	4212	19.0	1.4%	
2015	1435	4305	31.0	2.2%	
2016	1501	4503	66.0	4.6%	

Referring to the standard deviation of a sample[1] Table 2, we can see the standard deviation for years 2001 and 2002 are significantly greater than several of the later years, so it was concluded that this extreme rate of growth for the City of Parker will likely not repeat itself. However, the Committee concluded the economic factors of many companies moving into the surrounding areas will likely increase

[1] Excel function STDEV.S is used to calculate the standard deviation of a sample.

the growth rate for the next several years, which might indicate above average growth for four to five years (5-6%), followed by slower growth (2-3%). In its final estimation, the committee agreed that 5% growth for the next five years (2017-2021) followed by 3% growth for the following five years (2022-2026) was a reasonable compromise.

When the absolute number of water meters is graphed over the years for which data exists, a curve as shown in Figure 1 develops. For comparison purposes, linear and 3rd order polynomial trend lines are added, along with their respective formulae.

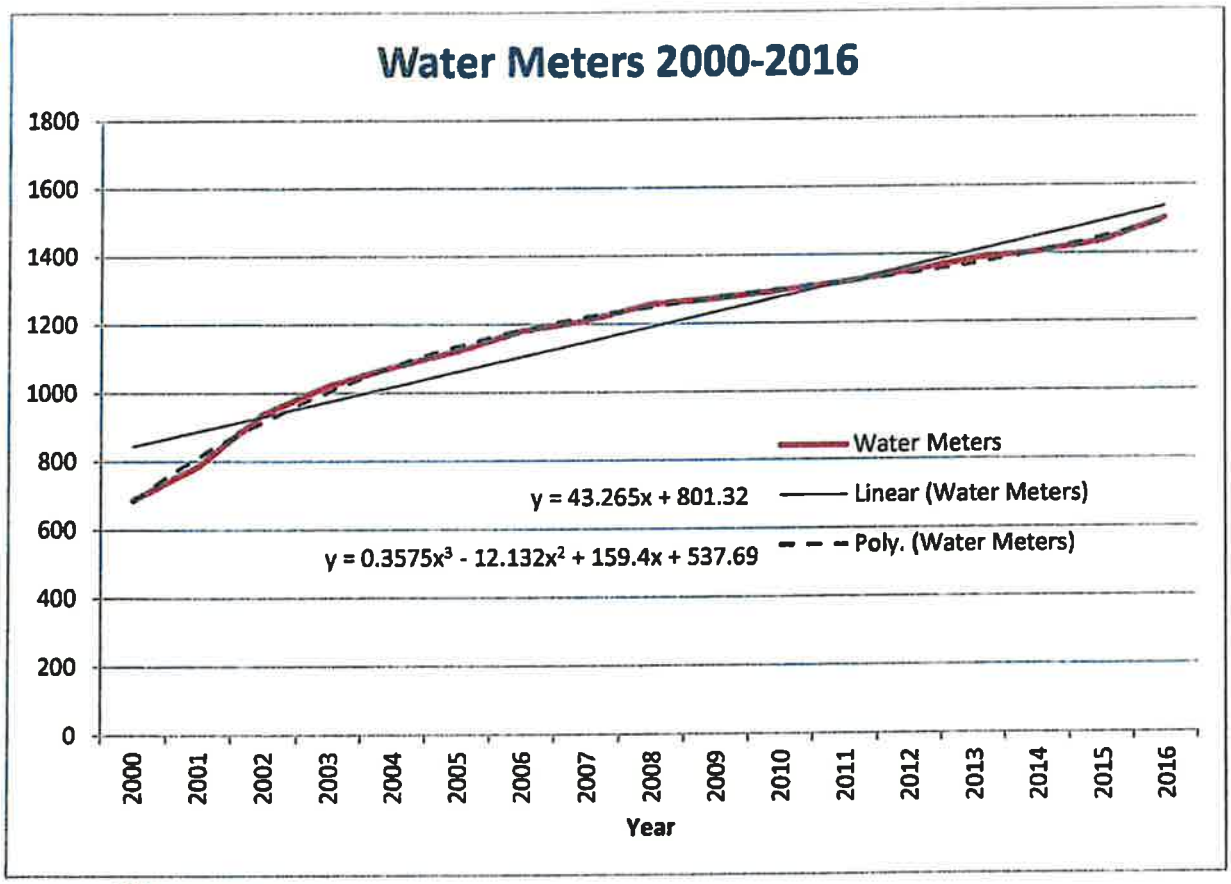


Figure 1 - Water Meter Graph

Figure 2 shows a graphical representation of the tabular data in Table 2. Since there was no detailed recording of service unit numbers prior to the year 2000, it is difficult to determine if the upward trend of the graph is representative of the years prior to 2000. However, as stated earlier, this could represent the beginning of an upward "growth spurt" for the City and this upward trend has been considered in the analysis of the overall growth projections.

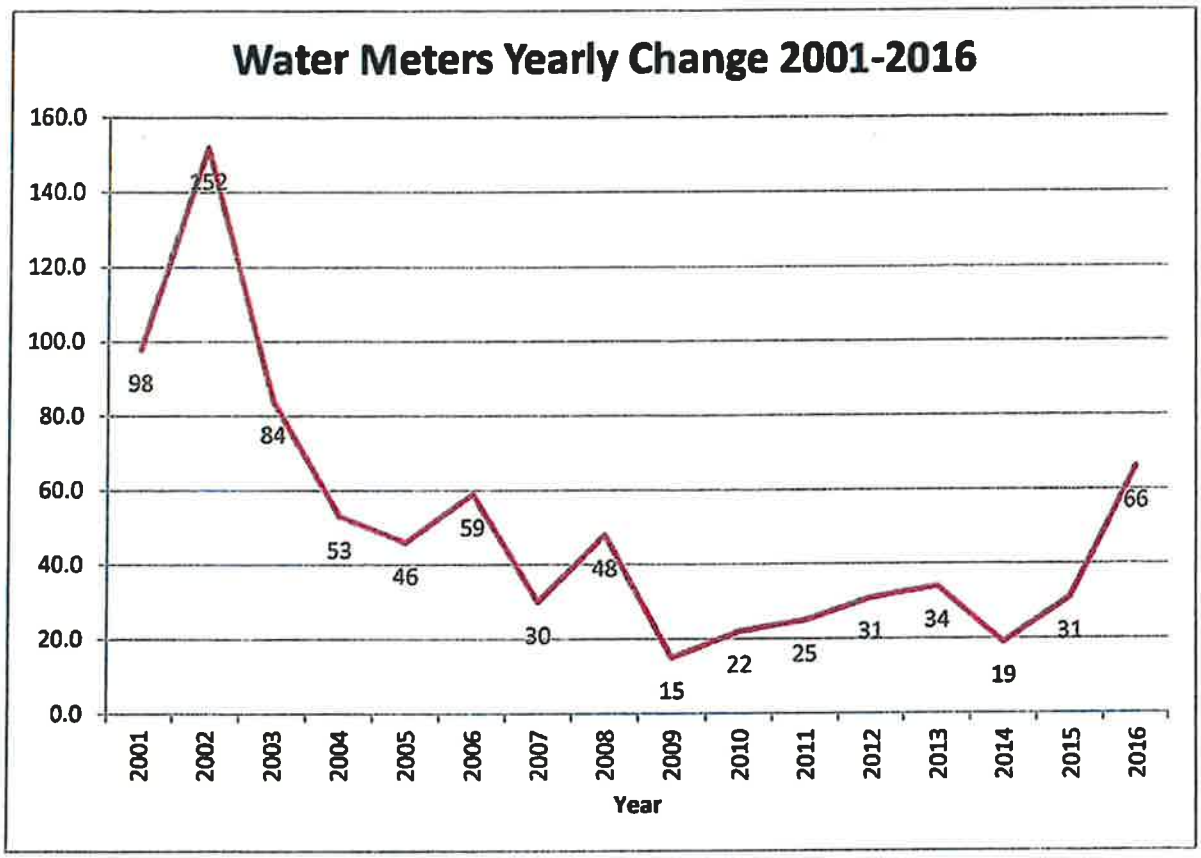


Figure 2 - Water Meters Delta from Prior Year

For selected time periods, average year on year growth rates can be established. Several time periods were used (refer to Table 3) to show the difference in growth rate when some of the outlying data is included or excluded.

Table 3 - Selected Year on Year Growth Rates

Period	# Periods	Avg. YoY Growth Rate
2001-2016	16	5.1%
2003-2016	14	3.4%
2001-2011	10	6.2%
2003-2013	10	3.6%

Build Out

Table 4 shows the analysis of the estimated number of lots, which correspond directly to service units in the City, for areas covered by zoning or development agreements and all undeveloped land. The estimated lots for those areas already approved are actual numbers. For the undeveloped areas a factor of 0.9[2] is used to allow for those areas dedicated for roads, rights-of-way and other unusable areas.

[2] Formula used: Number of acres * Lots/Acre * 0.9

Table 4 - Future Service Area Impact

Future Service Area	Acres	Lots/Acre	Est. Lots/Service Units	Est. Residents
Approved by Zoning or Development Agreement	1500	0.646	969	2907
Undeveloped in ETJ	720	1	648	1944
Undeveloped Zoned SF	500	0.5	225	675
Undeveloped Zoned SFT	400	0.67	241	724
Current Special Activities Area[3]	188	2		
Totals	3120	NA	2083	6250

Add plus existing homes.

The current number of residents and population within Parker and its anticipated growth patterns over the next 10 years are as set forth in Table 6 - Land Use Assumptions (Exhibit A). The projections shown in Table 6 provide Parker's ultimate build-out growth projections, including existing development within Parker, anticipated future development on currently undeveloped land within Parker, and development in the extra-territorial jurisdiction (ETJ).

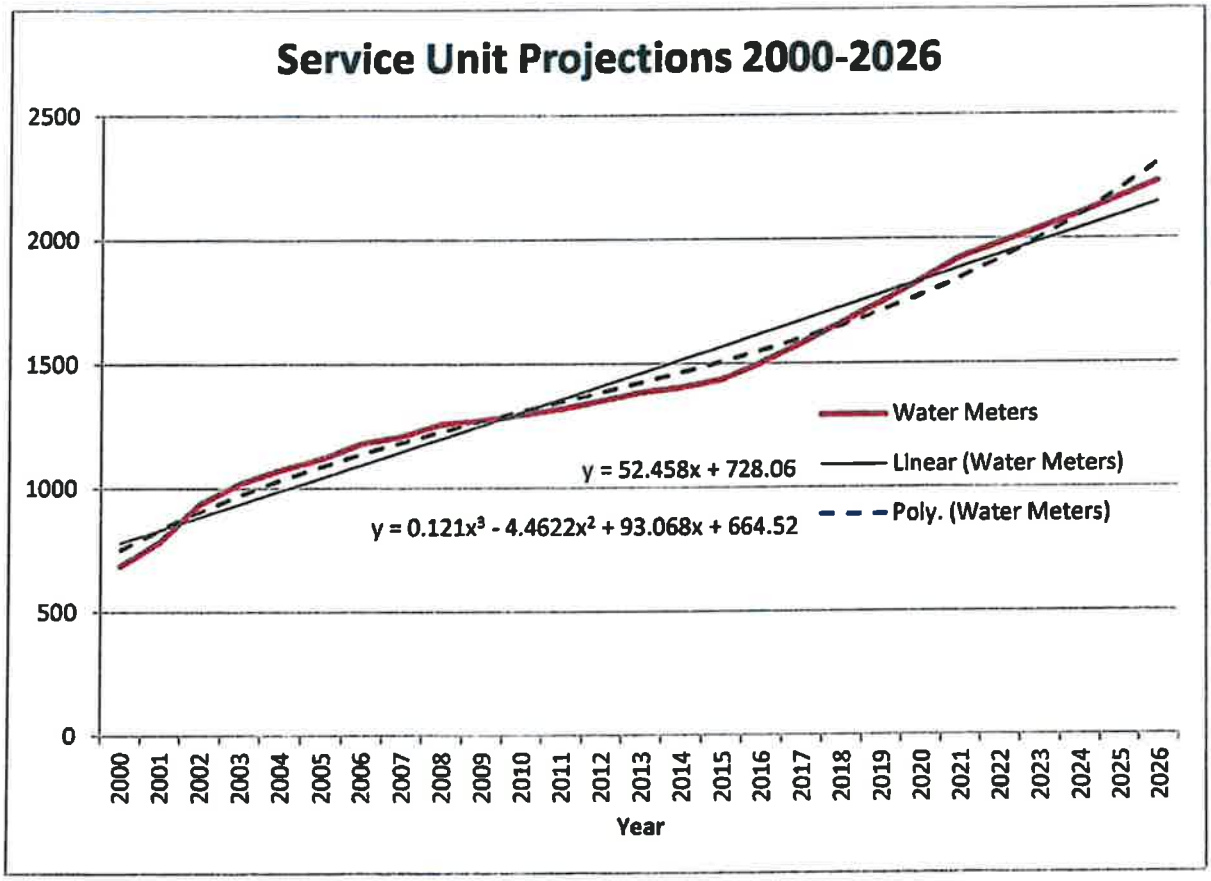


Figure 3 - Service Unit Projection Graph

[3] Southfork Ranch is a Special Activities area that is included in the table but not included in calculations.

Table 5 - Actual and Estimated Service Units

Year	Meters	Linear equation	Poly equation
2000	688	845	685
2001	786	888	811
2002	938	931	916
2003	1022	974	1004
2004	1075	1018	1076
2005	1121	1061	1135
2006	1180	1104	1182
2007	1210	1147	1219
2008	1258	1191	1250
2009	1273	1234	1276
2010	1295	1277	1299
2011	1320	1320	1321
2012	1351	1364	1345
2013	1385	1407	1372
2014	1404	1450	1406
2015	1435	1493	1447
2016	1501	1537	1498
2017	1581	1580	1561
2018	1660	1623	1639
2019	1743	1666	1733
2020	1830	1710	1846
2021	1922	1753	1979
2022	1979	1796	2136
2023	2039	1839	2317
2024	2100	1883	2526
2025	2163	1926	2764
2026	2228	1969	3034

Table 6 - Land Use Assumptions (Exhibit A)

	2016 (Current)	2021	2026	Buildout
Homes	1,501	1,922	2,228	4,000[4]
Mfg'dHousing	75[5]	75	75	75
Commercial	0	10	20	20
Public	0	0	0	0
Totals	1,576	2,007	2,323	4,095
Population	4,503	6,021	6,969	12,000

[4] Buildout based on total population of 12,000

[5] 75 manufactured houses, 75 houses in CCN (not in City) is a wash

EXHIBIT 1

Year	January Water Meters	x 3 per household
2000	688	2064
2001	786	2358
2002	938	2814
2003	1022	3066
2004	1075	3225
2005	1121	3363
2006	1180	3540
2007	1210	3630
2008	1258	3774
2009	1273	3819
2010	1295	3885
2011	1320	3960
2012	1351	4053
2013	1385	4155
2014	1404	4212
2015	1435	4305
2016	1501	4503

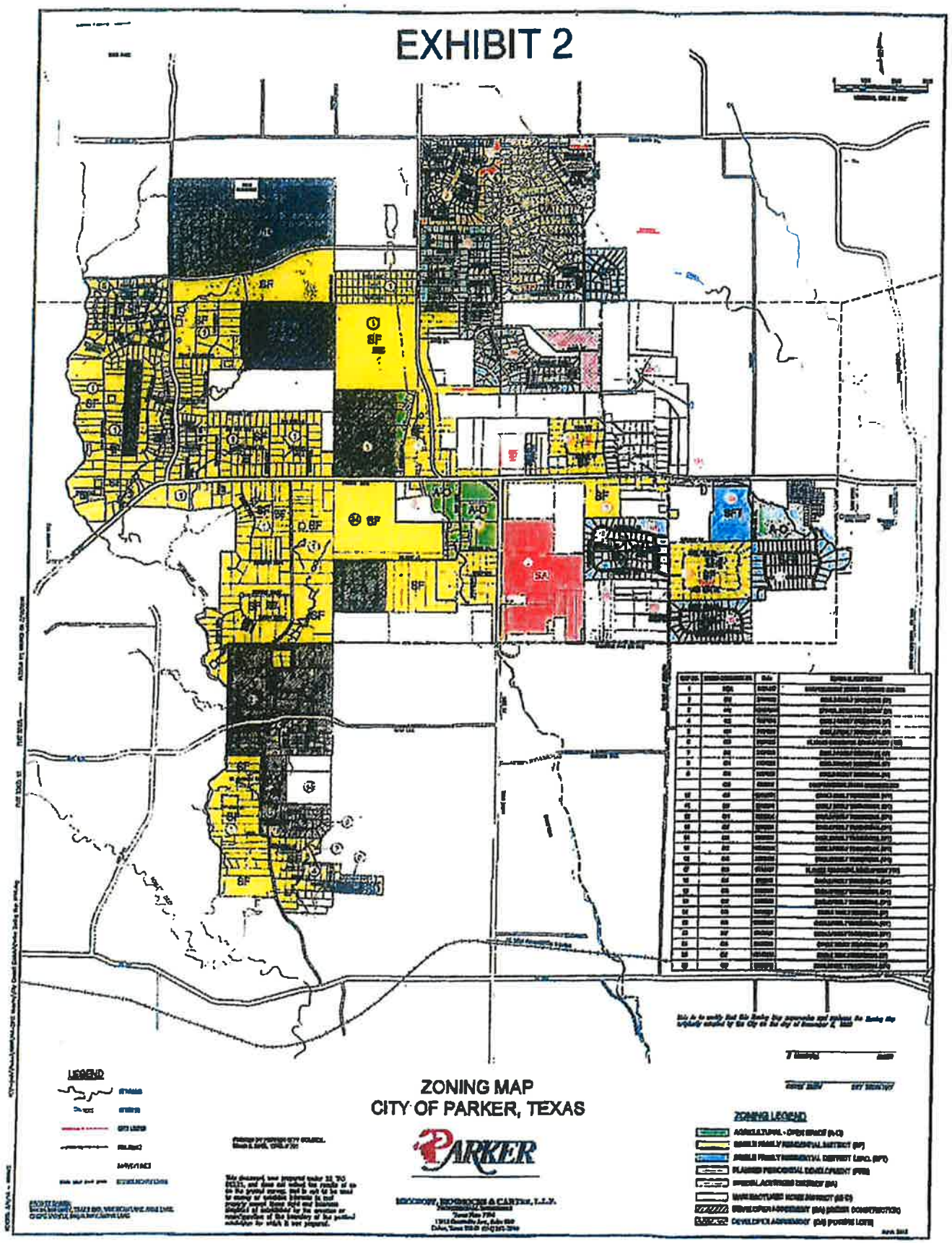


EXHIBIT 2
ZONING MAP
CITY OF PARKER, TEXAS
PARKER
LEGEND
ZONING LEGEND

EXHIBIT 3

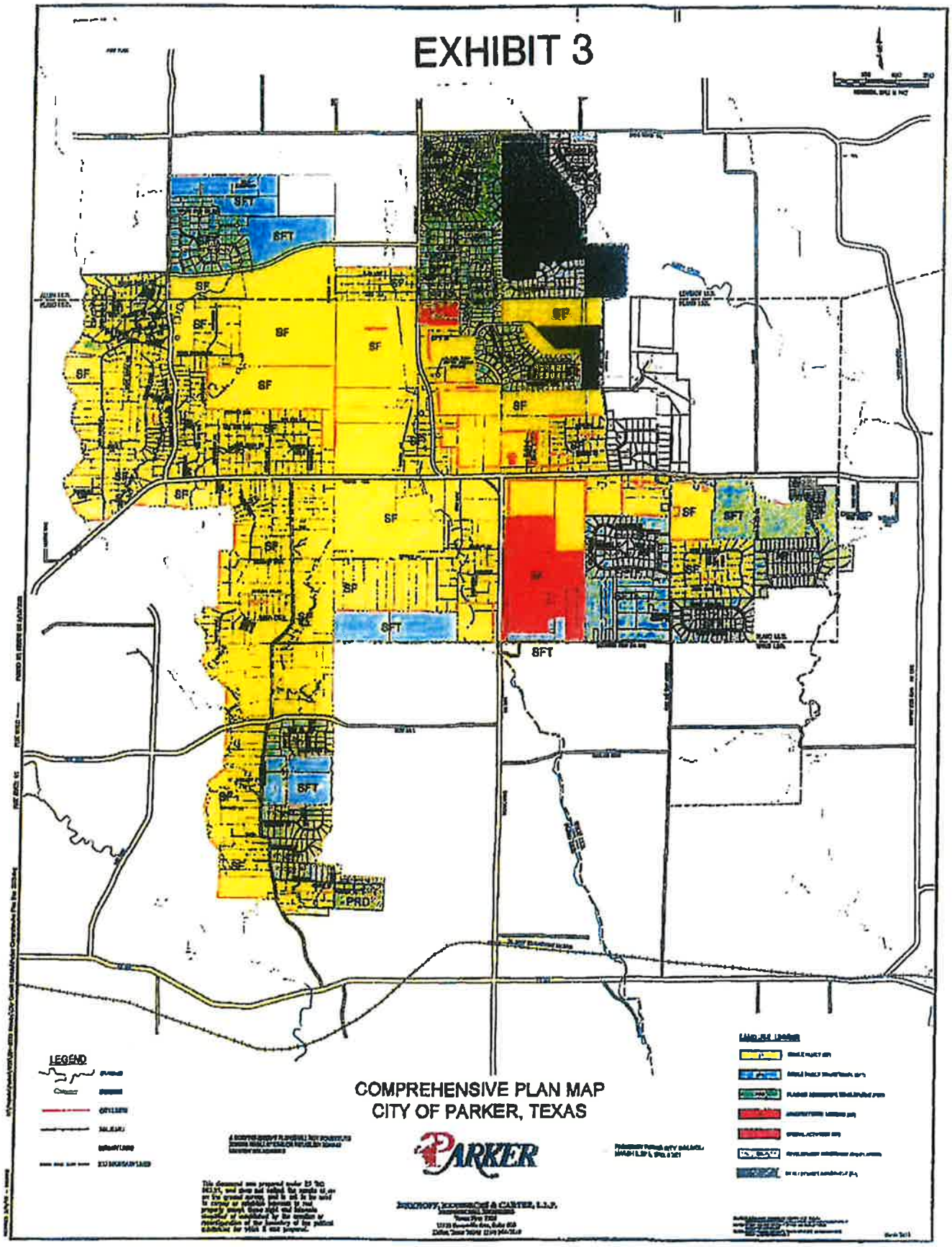

SF
SFT
PRD
LEGEND
COMPREHENSIVE PLAN MAP
CITY OF PARKER, TEXAS
PARKER

EXHIBIT 4

Approved By Zoning or Development Agreement	1500 acres +/-	969 Lots
Undeveloped in ETJ	720 acres +/-	
Undeveloped Zoned SF	500 acres +/-	
Undeveloped zoned SFT	400 acres +/-	

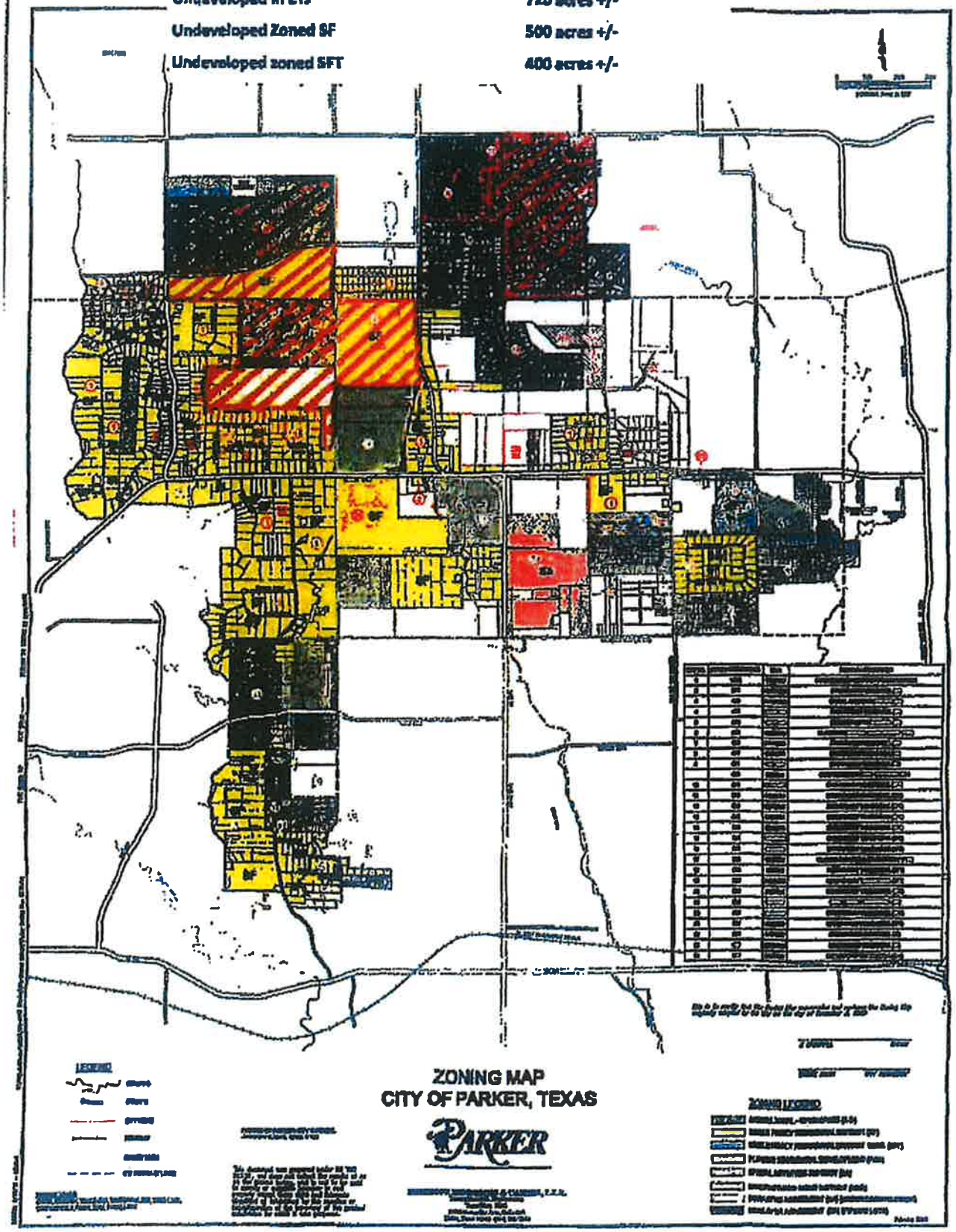
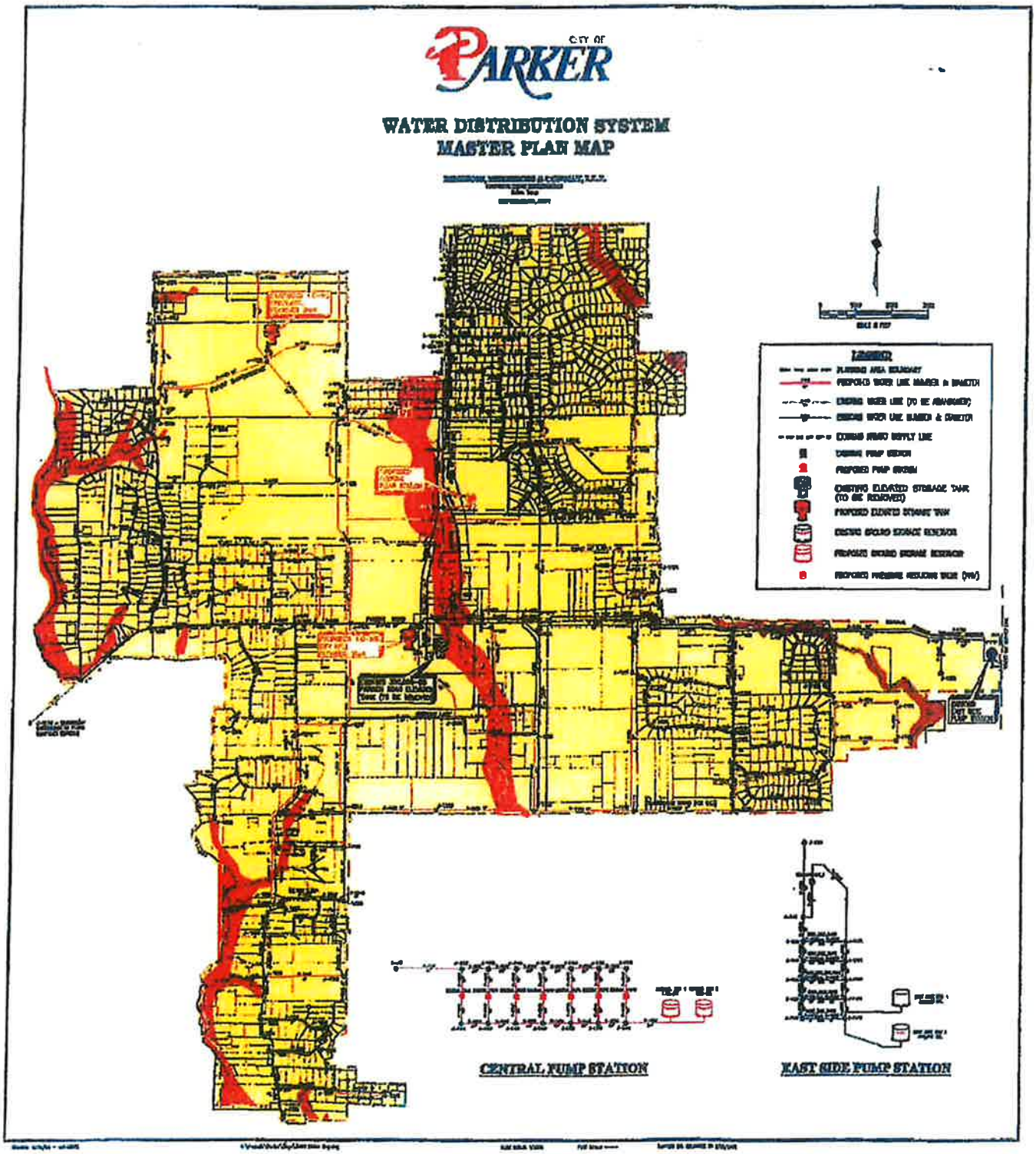


EXHIBIT 5


CITY OF
PARKER
WATER DISTRIBUTION SYSTEM
MASTER PLAN MAP
LEGEND
CENTRAL PUMP STATION
EAST SIDE PUMP STATION

E. DEFINITION OF A WATER SERVICE UNIT

Chapter 395 of the Local Government Code requires that impact fees be based on a defined service unit. A "service unit" means a standardized measure of consumption, use generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards. The City of Parker has previously defined a water service unit to be a 1-inch water meter and has referred to these service units as Single Family Living Unit Equivalents (SFLUE). The service unit is based on the continuous duty capacity of a 1-inch water meter. This is the typical meter used for a single family detached dwelling within the City, and therefore is considered to be equivalent to one "living unit". Other meter sizes can be compared to the 1-inch meter through a ratio of water flows as published by the American Water Works Association and shown in Table No. 1 below. This same ratio is then used to determine the proportional water and sewer impact fee amount for each water meter size.

TABLE NO. 1
LIVING UNIT EQUIVALENCIES
FOR VARIOUS TYPES AND SIZES OF WATER METERS

Meter Type	Meter Size	Continuous Duty Maximum Rate [a]	Living Unit Per Meter Size
Simple	1"	25	1.0
Simple	2"	80	3.2
Compound	2"	80	3.2
Turbine	2"	100	4.0

[a] *Source: AWWA Standard C700 - C702*

F. CALCULATION OF WATER LIVING UNIT EQUIVALENTS 2016-2026

The City of Parker provided the existing water meter count by size category as of August 2016. In total, there are 1,501 water meters serving the existing population of 4,503 residents and businesses in the Water Service Area. Table No. 2 shows the number of existing meters, the living unit equivalent factor, and the total number of living unit equivalents (LUE's) for water accounts. As shown in Table No. 2, the new LUE's during the impact fee period total 1,129.

TABLE NO. 2
WATER LIVING UNIT EQUIVALENTS BY METER SIZE

	2016			2026				New
Meter Size	Number of Water Meters	Living Unit Equivalent Ratio for 1" Used	Total Number of Living Units	Future Meter Size	Number of Water Meters	Living Unit Equivalent Ratio for 1" Used	Total Number of Living Units	Living Units During Impact Fee Period
5/8" x 3/4"	500	1.0	500	1"	742	1.0	742	242
1"	725	1.0	725	1"	1,076	1.0	1,076	351
2"	276	4.0	1,104	2"	410	4.0	1,640	536
Totals	**1,501**		**2,329**		**2,228**		**3,458**	**1,129**

G. WATER DISTRIBUTION SYSTEM

Computer models for the years 2016 and 2026 were prepared based on the City's Water Distribution System Master Plan. The models were developed from residential population projections as provided in the Land Use Assumptions Report, prepared by the City of Parker's Impact Fee Advisory Committee. The land areas follow closely to the construction of major facilities in the system as outlined in the Water Distribution Report. These facilities include major distribution lines, pressure reducing valves, pump stations, and ground storage reservoirs.

All computer models were run for a 72-hour Extended Period Simulation to insure proper sizing of the facilities to meet peak demand periods.

G.1 Existing Pump Stations, Ground Storage Reservoirs & Elevated Storage Tanks

The existing water distribution system includes the facilities as shown in Table No. 3 and Table No. 4 below.

TABLE NO. 3
WATER DISTRIBUTION SYSTEM
EXISTING PUMP STATIONS & GROUND STORAGE

Pump Station	Number Of Pumps	Rated Capacity (MGD)	Number of Ground Storage Reservoirs	Total Ground Storage Available (MG))
East Side Pump Station	4	3.60	2	0.5
Total:	**4**	**3.60**	**2**	**0.5**

TABLE NO. 4
WATER DISTRIBUTION SYSTEM
EXISTING ELEVATED STORAGE

Pump Station	Capacity (MG)
City Hall Elevated Storage Tank	1.0
Total:	**1.0**

The pump stations and ground storage facilities were analyzed on the maximum daily demand, while elevated storage acts dynamically and therefore was analyzed utilizing the difference between the Maximum Hourly Demand and the Maximum Daily Demand.

G.2 Distribution Lines

The distribution lines consist of all lines within the service area planning boundary supplying water to customers in the City of Parker. Lines vary in size from 3/4-inch service lines to 18-inch transmission lines. Unless a smaller diameter water line is expected to be constructed by the City of Parker, only those proposed water lines 8-inches in diameter or larger were considered in the Impact Fee calculations. The cost of water lines includes construction cost, appurtenances (water valves, fire hydrants, taps, etc.), utility relocations, purchase of easements and engineering costs. Financing cost is included for each project assuming a bond rate of 5% over a 20-year term.

Unit cost for water lines 12-inches in diameter or larger, which are anticipated to be constructed by private development, include the City's oversize cost participation only. City initiated water lines include the full cost of the proposed facility. Developer initiated water line projects which are 8-inches or less in diameter are not included in this Impact Fee analysis, unless otherwise shown on the CIP map. The cost for these size lines are the responsibility of the developer.

H. CAPITAL IMPROVEMENT PLAN

H.1 Executive Summary

The City of Parker owns and operates their water distribution system comprised of a pumping station, ground storage facilities, elevated storage facility and pipeline infrastructure. This system is being improved and expanded to meet the needs of the water demands imposed by the current residents and future residents of Parker, Texas. A schedule for future improvements and investments in the water distribution system is known as the Capital Improvements Plan. Chapter 395 of the Texas Local Government Code requires the political subdivision create its Capital Improvement Plan to impose impact fees. The Capital Improvement Plan and its costs are required for the calculation of the water impact fee. Birkhoff, Hendricks, and Carter, with assistance of City staff, created the Capital Improvements Plan. Only projects from the Capital Improvement Plan that are required to provide capacity to serve growth during the impact fee (2016-2026) period can be included in the impact fee calculation.

H.2 Introduction

In accordance with Chapter 395 of the Texas Local Government Code, the City of Parker has retained Birkhoff, Hendricks & Carter, L.L.P. to establish the Capital Improvement Plan in conjunction with the Water Impact Fee Study. This section establishes the engineering basis for the capital projects and costs which are included in the water impact fee calculations.

The Capital Improvements Plan consists of the necessary water distribution system improvements to support the projected water demands placed on the distribution system due to future growth. The growth projections were obtained from the Land Use Assumptions Report for the Water Impact Fee prepared by the City of Parker Impact Fee Advisory Committee, dated August 29, 2016.

H.3 Facility Capacity Requirements

H.3.1 General

This section of the report discusses the capacity of those facilities that are required to be included in the Impact Fee Capital Improvements Plan and are also eligible in the calculation of the impact fee. The capacities evaluated are the existing available capacities and the increased capacities due to projected growth. These increased capacities serve the growth projected during the impact fee period.

H.3.2 Water Usage

The water distribution system must be improved in accordance with this Capital Improvement Plan in order to support the water demands imposed on the system by the projected growth the City is envisioning within the next 10-year period. The City's existing 2016 residential population is approximately 4,503 residents. In year 2026 the City projects the residential population to grow to approximately 6,969 residents. The City of Parker updated the Water Distribution System Master Plan in February 2016. The Master Plan reports that based on information provided by the City, the residential per capita water usage rate for maximum daily demand is 571 gallons per capita per day (gpcd). Table No. 5 illustrates the water demand rates used to calculate the water demands for the projected population.

TABLE NO. 5
2016 DESIGN WATER DEMAND RATES

Land Use	Maximum Daily Demand Rate	Maximum Hourly Demand Rate
Residential	571 g.p.c.d.	1,091 g.p.c.d.
Commercial	1,500 g.p.a.d.	1,950 g.p.a.d.

g.p.c.d. – gallons per capita per day
g.p.a.d. – gallons per acre per day
residential peaking factor 1.91

Table No. 6 summarizes the calculated water demands for year 2016 and 2026, within the City's planning area.

TABLE NO. 6
WATER DEMANDS

Water Demand Capacities	Maximum Daily Demand (MGD)	Maximum Hourly Demand (MGD)
2016 Water Demands	3.334	5.521
2026 Water Demands	4.742	8.209
Additional Capacity Required:	**1.408**	**2.688**

H.3.3 Water Supply

The City currently receives treated water supply from the North Texas Municipal Water District (NTMWD) at the East Side Pump Station delivery point located at the southwest corner of the Parker Road and F.M. 1378 intersection. The East Side Pump Station delivery point has capacity to receive up to 3.50 MGD supply rate. It does not have enough capacity to support the additional supply required for the growth within the next ten year period. This site also does not have sufficient area for expansions. Based on the growth projections and the calculated water demands, a second delivery point for water supply will be needed to meet the new water demands. This new delivery point will be the Central Pump Station delivery point. The locations of the existing and proposed delivery points are shown on the Capital Improvement Plan Map included in this report. Table No. 7 summarizes the maximum day supply capacity requirements at each delivery point within the next ten year impact fee period.

TABLE NO. 7
WATER SUPPLY

Water Supply Capacities	East Side Supply (MGD)	Central Supply (MGD)
2016 NTMWD Supply	3.50	0.00
2026 NTMWD Supply	3.50	1.75
Additional Supply Capacity Required:	**0.00**	**1.75**

H.3.4 Water Distribution System

The City's existing water distribution system can support the water demands applied to the system from the existing residential population. As the City grows within the next ten-year period, additional water distribution system facilities will need to be constructed to support water demand created from new growth. In addition to facilities, the water distribution system will require additional water lines.

The design of the proposed water distribution system is based on three separate demand conditions. The first condition is based on the maximum daily demand. This demand is the rate at which water is supplied and the rate which pump stations must be sized to deliver water to the system. The second condition is the maximum hourly demand rate on the day of maximum demand. Maximum hourly demand rate is used to size distribution lines and to determine the volume of elevated storage. The third condition used is the minimum hourly demand rate on the day of maximum demand. This rate is used to analyze the refill rates of elevated storage tanks. These three demand conditions were modeled over a three-day period with an Extended Period Simulation (EPS) in the hydraulic water model utilizing the H2O NET water model software.

The existing and proposed distribution lines along with facilities are shown on the Capital Improvement Plan Map presented in this section of the Impact Fee Report. The 72-hour EPS model was utilized with the use of a diurnal curve obtained from the 2016 Master Plan Update model for the 2016 and 2026 hydraulic models. Table No. 8 summarizes the maximum hourly demands that the proposed distribution system will need to support.

TABLE NO. 8
WATER LINE DEMANDS

Waterline Capacities	Maximum Hourly Demand (MGD)
2016 Waterline Demands	5.521
2026 Waterline Demands	8.209
Addition Waterline Capacity Required:	**2.688**

H.3.5 High Service Pump Stations

The City currently meets its pumping system demand requirements with the existing East Side Pump Station. This pump station has a firm pumping capacity of 3.60 MGD with the largest pump on standby to meet the Texas Commission on Environmental Quality (TCEQ) regulations. In order to meet the projected maximum daily demands, a second pump station with an initial firm capacity of 1.75 MGD will be required to be in service by year 2020 to meet the additional maximum daily demands. Table No. 9 summarizes the pump station capacities.

TABLE NO. 9
PUMP STATIONS

Pump Station Capacities	East Side Pump Station (MGD)	Central Pump Station (MGD)
2016 Pumping Capacity	3.50	0.00
2026 Pumping Capacity	0.00	1.75
Additional Pumping Capacity Required:	**0.00**	**1.75**

H.3.6 Ground Storage Reservoirs

Ground Storage within the system is necessary to provide a dependable supply and during periods of interruption in supply. The volume of ground storage was designed for a 6-hour drawdown for the maximum demand pumping. The East Side Pump Station currently has a 200,000-gallon and a 300,000-gallon ground storage reservoir. These two existing reservoirs serve the East Side delivery point and pump station.

The new delivery point will require additional ground storage to meet TCEQ regulations and to provide a dependable supply to the Central Pump Station. Table No. 10 illustrates the ground storage capacity requirements. The ground storage reservoir at the Central Pump Station will need to be constructed congruently with the proposed pump station.

TABLE NO. 10
GROUND STORAGE RESERVOIR REQUIREMENTS

Ground Storage Capacities	Ground Storage Added (MG)	Ground Storage Available (MG)
2016 Ground Storage Capacity	0.00	0.50
2026 Ground Storage Capacity	0.75	0.75
Reservoir Capacity Required:	**0.75**	**1.25**

H.3.7 Elevated Storage Tanks

Elevated storage within the system is required by TCEQ to maintain system pressure. In the Parker system, elevated storage is sized to meet the maximum hourly demands working in conjunction with the pump stations, while maintaining system pressures.

The City currently has one 1.0-MG elevated storage tank located on Parker Road, adjacent to City Hall, with a high water level at 800-ft above mean sea level (MSL). Table No. 11 summarizes the elevated storage requirements to meet maximum hourly demand rates within the 10-year study period.

TABLE NO. 11
ELEVATED STORAGE TANK REQUIREMENTS

Elevated Storage Capacities	Elevated Storage Added (MG)	Elevated Storage Available (MG)
2016 Elevated Storage Capacities	0.00	1.00
2026 Elevated Storage Capacities	0.00	1.00
Elevated Storage Capacity Required:	**0.00**	**1.00**

H.4 Facilities – Utilized Capacity

Utilized capacity for the water distribution system was calculated based on the size of water line required for each model year (2016, 2026 and build-out). Master planning of the water distribution system is based on the 72-hour extended period simulation (EPS). The pump stations' capacities are generally based on the maximum daily system demand while transmission and distribution facilities are sized based on either the maximum hourly demand or the minimum hourly demand, whichever demand is greater for a particular water line. Often times, the capacity of a water line is determined by the flows generated by the minimum hourly demand. The minimum hourly flows are usually higher in those lines which are used to refill elevated storage. Table No. 12 below shows the unit flows used for analysis of each element of the distribution system.

TABLE NO. 12
WATER DISTRIBUTION SYSTEM ANALYSIS
BASIS OF DEMAND CALCULATION

Type of Facilities	Demand Type	Impact Fee Per Capita Use
Pumping	Maximum Day	571 gallons/day
Distribution System	Maximum Hour	1,091 gallons/day
Ground Storage	Maximum Day x 6/24 Hours	
Elevated Storage	Maximum Hour - Maximum Day x 6/24 Hours	

For each line segment in the water distribution model, the build-out flow rate in any given line was compared to the flow rate in the same line for the 2016 and the 2026 models. The utilized capacity was then calculated for each year based on the build-out being 100% capacity. The utilized capacity during the Impact Fee period is the difference between the year 2016 percent utilized and the year 2026 percent utilized. The utilized capacity for each water distribution facility, both existing and proposed, is presented in detail in the Impact Fee Capacity Calculation Tables. Table No. 14 on page 27 summarizes the project cost and utilized cost over the impact fee period of 2016 - 2026 for each element of the Water Distribution System.

H.4.1 General

This section of the report discusses the water distribution system utilized facilities that are eligible to be included in the Impact Fee Capital Improvements Plan and are also eligible in the calculation of the impact fee. The Capital Improvements Plan makes improvements the water distribution system in order to meet and support the additional water demands created by the projected growth during the 10-year impact fee period. Only the infrastructure and facility projects identified in the Capital Improvements Plan can be eligible for impact fee funding.

H.4.2 Water Supply

The City will continue to receive water supply from the North Texas Municipal Water District. The new delivery point will be the Central Pump Station delivery point. For the year 2016, the utilized capacity is 0% since it is not constructed yet. For the year 2026, the utilized capacity was calculated by dividing the 2026 maximum daily demand by the buildout maximum daily demand, then subtracting the utilized capacities (2026-2016). Its utilized capacity during the 10-year period is approximately 62.0%.

2016 Utilized Capacity = 0.0%
2026 Utilized Capacity = 2026 Max Daily Demand / Buildout Max Daily Demand

2026 Utilized Capacity = 4.742 MGD / 7.645 MGD x 100%
= 62.0%

Utilized Capacity during Capital Recovery Fee (CRF) Period = 62.0% - 0.0% = 62.0%

H.4.3 Water Distribution System

The utilized capacity of the water distribution system water lines is associated with waterlines that are 8-inches in diameter or larger. The water distribution system was modeled in the hydraulic modeling software for the existing year 2016 water model, the 10-year 2026 water model, and the buildout water model. The utilized capacity for the new waterlines was obtained by comparing the maximum hourly flows in the new pipes, between the three water models. For the year 2016, the utilized capacity

of the new pipes was 0.0% since they are not serviced yet. For the year 2026, the utilized capacity was calculated by dividing the year 2026 pipe flow with the buildout pipe flow, both obtained from the hydraulic water model pipe line flows. The following are the proposed distribution lines that are shown on the Capital Improvement Plan Map in report.

1) **Dillehay Drive 18-Inch Water Line**: This waterline project consists of approximately 2,490 linear feet of 18-inch waterline beginning at the new Central Pump station, bearing south along Dillehay Drive and terminating at Parker Road by connecting to an existing 12-inch waterline. **Its utilized capacity during CRF period was calculated to be 100%.**

   Dillehay Drive 18-Inch Water Line: This waterline project consists of approximately 1,635 linear feet of 18-inch waterline beginning at the new Central Pump station, bearing north along Dillehay Drive and terminating just north of Curtis Road by connecting to the existing 16-inch waterline. **Its utilized capacity during the CFR period was calculated to be 71.0%.**

2) **Chaparral Elevated Storage Tank Waterline**: This waterline project consists of approximately 385 linear feet of 16-inch waterline from the new elevated tank to connect to the existing 16-inch waterline. **Its utilized capacity during the CFR period was calculated to be 62.0%.**

3) **Bois-D-Arc Lane 8-inch Waterline**: This waterline project consists of approximately 1,670 linear feet of 8-inch waterline required along Bois-O-Arc Road for the new pressure reducing valve vault to be in place and operational within the next 10 years. **Its utilized capacity during the CFR period was calculated to be 62.0% utilized by the year 2026.**

H.4.4 High Service Pump Stations

The new Central Pump Station will have an initial firm pumping capacity of 1.75 MGD to meet the additional water demands within the next ten-year period. For the year 2016, the utilized capacity is 0.0% since it is not constructed yet. For the year 2026 the utilized capacity was calculated by dividing the 2026 maximum daily

demand by the buildout maximum daily demand, then subtracting the utilized capacities (2026-2016). Its utilized capacity during the 10-year period is approximately 62.0%.

2016 Utilized Capacity = 0.0%

2026 Utilized Capacity = 2026 Max Daily Demand / Buildout Max Daily Demand
2026 Utilized Capacity = 4.742 MGD / 7.645 MGD x 100%
= 62.0%

Utilized Capacity during Capital Recovery Fee (CRF) Period = 62.0% - 0.0% = 62.0%

H.4.5 Ground Storage Reservoirs

The new Central delivery point and pump station will required additional ground storage to meet TCEQ regulations and to provide a dependable supply for the Central Pump Station. The utilized capacity for the Central Ground Storage Reservoir was calculated the same as for the pump station utilized capacity above which is based on the maximum daily demands and calculating the differences between the 10-year period, then subtracting the utilized capacities (2026-2016). Its utilized capacity during the 10-year period is approximately 62.0%.

2016 Utilized Capacity = 0.0%

2026 Utilized Capacity = 2026 Max Daily Demand / Buildout Max Daily Demand
2026 Utilized Capacity = 4.742 MGD / 7.645 MGD x 100%
= 62.0%

Utilized Capacity during Capital Recovery Fee (CRF) Period = 62.0% - 0.0% = 62.0%

H.4.6 Elevated Storage Tanks

The existing 1.0 MG Elevated Tank has the capacity to support maximum hourly demands imposed by the projected growth within the next ten years. The utilized capacity for the elevated tank was calculated based on the maximum hourly demands and finding the differences between the 10-year periods. For the year (2016 and

2026) the utilized capacity of the elevated storage tank was calculated by subtracting the max hour demand from the max day demand and dividing the difference by 4 (4 is a constant rate 4-MGD/1-MG) to convert from rate to volume. The 2026 required volume was then divided by the buildout volume required to obtain the utilized capacity. Its utilized capacity during the 10-year period is approximately 32.0%.

2016 Utilized Capacity = (2016 Max Hour Demand – Max Day Demand) / 4
= (5.521 MGD– 3.334 MGD)/ 4
= 2.190 MGD/ 4
= 0.55 MG

2016 Utilized Capacity = 2016 Required Volume / Available Volume
= 0.55 MG/ 1.0 MG x 100%
= 55%

2026 Utilized Capacity = (2026 Max Hour Demand – Max Day Demand) / 4
2026 Utilized Capacity = (8.209 MGD– 4.742 MGD)/4
= 3.467 / 4
= 0.87 MG

2026 Utilized Capacity = 2026 Required Volume / Available Volume
2026 Utilized Capacity = 0.87 MG / 1.0 MG x 100%
= 87%

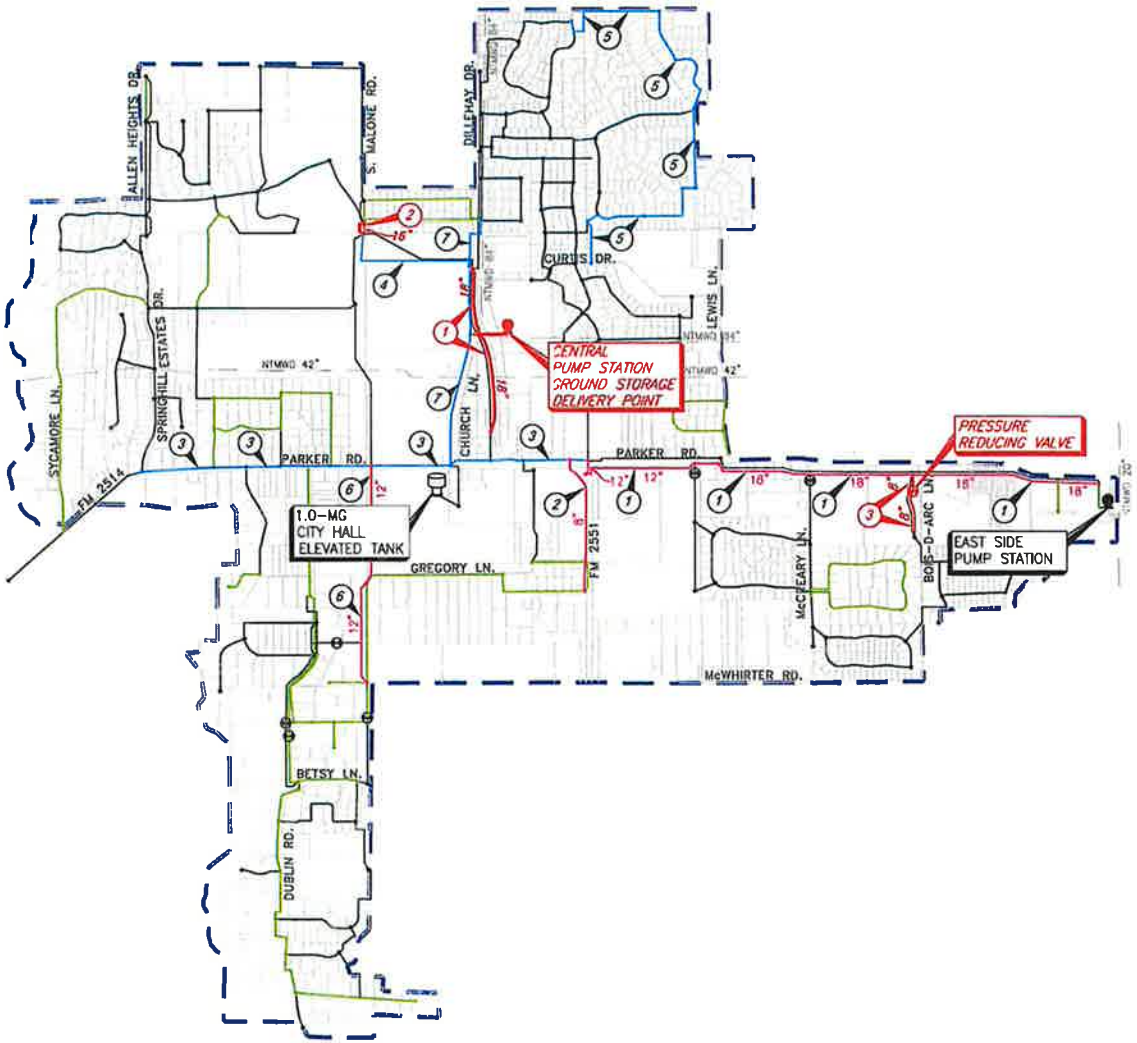
Utilized Capacity during Capital Recovery Fee (CRF) Period = 32%

H.4.7 Capital Improvement Plan Map

The Capital Improvements required within the 10-year period to support the City's projected growth are shown in Figure No. 1 on the following page.

H.5 Capital Improvement Plan Map

See Attached Map.



WATER DISTRIBUTION SYSTEM 2016-2026 WATER IMPACT FEE CAPITAL IMPROVEMENT PLAN AND RECOVERY WATERLINE MAP

LEGEND

- PLANNING AREA BOUNDARY
- EXISTING WATER LINE (NO IMPACT FEE)
- EXISTING WATER LINE (IMPACT FEE)
- PROPOSED WATER LINE (IMPACT FEE)
- CITY PARTICIPATED IN OVERSIZE COST (IMPACT FEE)
- CITY PURCHASED FROM PECAN ORCHARD (IMPACT FEE)
- EXISTING NTMWD SUPPLY LINE
- EXISTING PUMP STATION
- PROPOSED PUMP STATION
- EXISTING ELEVATED STORAGE TANK
- EXISTING PRESSURE REDUCING VALVE
- PROPOSED PRESSURE REDUCING VALVE
- (1) EXISTING WATER LINE (IMPACT FEE)
- (1) PROPOSED WATER LINE PROJECTS

N

0 1500 3000 4500

HORIZONTAL SCALE IN FEET

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
DALLAS, TEXAS

FEBRUARY, 2017

REVISED: 2/13/17 – JWY H:\Projects\H2ONET\Parker\20111133 Water Impact Fee\Maps\2016-2026 Water CIP Map.dwg PLOT SCALE: 1:3 PLOTTED BY: JWY ON 2/15/2017

H.6 Capital Improvement Plan Schedule

The following table No. 13 illustrates the projected Capital Improvement Plan schedule. This schedule correlated to the projected growth in the Land Use Assumptions report. The City will need to evaluate the yearly growth projections to determine if the schedule below needs to be revised accordingly to development growth.

TABLE NO. 13
CAPITAL IMPROVEMENTS PLAN SCHEDULE

Facility	Start Design	Start Construction	In Service
Central Pump Station	Mid 2017	Mid 2018	2020
Water Supply and Distribution Lines	Early 2017	Mid 2018	2020
Central 0.75 MG Ground Storage No. 1	Mid 2017	Mid 2018	2020
NTMWD Metered Station	Mid 2017	Mid 2028	2020

H.7 Capital Improvement Plan Cost

In order to meet the demands of the anticipated growth over the next 10-years, as provided in the Land Use Assumption Report, certain water distribution system improvements are required. These recommended improvements form the basis for the Water Distribution System Impact Fee Calculation and totals $6,542,700. Adding the cost of financing brings the total 10-year Water Distribution System Capital Improvement cost to $10,468,611. Table No. 15 represents a summary of the existing and proposed facilities capital costs within the planning period.

The existing facilities that were determined to be impact fee eligible due to available capacity that can be utilized to support growth were included in the impact fee calculations. The actual cost of construction for these facilities were used in the calculations when known. Existing eligible infrastructure without available project costs were estimated based on average unit cost.

The average unit cost for the proposed capital improvement projects and the existing facilities was derived from a limited survey of projects, which bid recently, plus an estimated cost for engineering, easements and debt service. The cost and the utilized capacity of the proposed water lines, pump stations, ground storage reservoirs elevated storage tanks and existing facility proposed improvements during the impact fee period are included in Table No. 14.

TABLE No. 14
CITY OF PARKER, TEXAS
2016 IMPACT FEE
WATER DISTRIBUTION SYSTEM
10-YEAR CAPITAL IMPROVEMENT PLAN

PROPOSED WATER LINES

Project No. (3)	Project	Size	Opinion of Project Cost (1)	Debt Service (2)	Total Project Cost
1	Dillehay Drive 18-Inch Water Line	18"	$ 577,500	$ 349,302	$ 926,802
2	Chaparral Elevated Storage Tank 16-Inch Water Line	16"	$ 46,200	$ 27,944	$ 74,144
3	Bois-D-Arc Lane 8-Inch Water Line	8"	$ 167,000	$ 101,010	$ 268,010
	Subtotal: Proposed Water Lines		**$ 790,700**	**$ 478,256**	**$ 1,268,956**

SUPPLY, PUMPING, STORAGE FACILITIES AND FACILITY IMPROVEMENTS

Project No. (4)	Project	Capacity	Opinion of Project Cost (1)	Debt Service (2)	Total Project Cost
4	Central Pump Station - 1.75 MGD P.S.	1.75 MGD	$ 3,150,000	$ 1,905,283	$ 5,055,283
5	Central Pump Station - 0.75 MG G.S.R.	0.75 MG	$ 990,000	$ 598,803	$ 1,588,803
6	NTMWD Delivery Point No. 2	5 MGD	$ 1,320,000	$ 798,404	$ 2,118,404
7	Bois-D-Arc Lane 8-Inch Pressure Reducing Valve	-----	$ 240,000	$ 145,164	$ 385,164
	Subtotal, Supply, Pumping and Storage Facilities:		**$ 5,700,000**	**$ 3,447,655**	**$ 9,147,655**

PLANNING EXPENSES

Project No.	Project	Opinion of Cost (1)(b)	Debt Service (2)	Total Project Cost
	Water System Master Plan	$ 32,000	$ -	$ 32,000
	Water Impact Fee	$ 20,000	$ -	$ 20,000
	Subtotal, Planning Expenses:	**$ 52,000**	**$ -**	**$ 52,000**
	Water Distribution System CIP Grand Total:	**$ 6,542,700**	**$ 3,925,911**	**$ 10,468,611**

Notes:

(1) Opinion of Project Cost includes:
  a) Engineer's Opinion of Construction Cost
  b) Professional Services Fees (Survey, Engineering, Testing, Legal)
  c) Cost of Easement or Land Acquisitions

(2) Debt Service based on 20-year simple interest bonds at 5%

(3) * - Developer Initiated Construction of 8-inch Waterline, City Participation in Oversize Cost

(4) * - City Initiated Construction

H.8 Utilized Capacity Costs

TABLE NO. 15
SUMMARY OF ELIGIBLE CAPITAL COST & UTILIZED CAPACITY COST

Water System	Total Capital Cost ($)	Total 20-Year Project Cost ($)	Utilized Capacity During Fee Period ($)
Existing Water Lines	$ 2,259,443	$ 3,580,694	$ 635,007
Existing Water Facilities	$ 3,494,971	$ 5,511,919	$ 1,503,201
Existing Water System Subtotal:	**$ 5,754,413**	**$ 9,092,613**	**$ 2,138,208**
Proposed Water Lines	$ 790,700	$ 1,268,956	$ 1,032,405
Proposed Water Facilities	$ 5,700,000	$ 9,147,655	$ 5,671,546
Master Plan & Impact Fee Expenses	$ 52,000	$ 52,000	$ 52,000
Proposed Water System Subtotal:	**$ 6,542,700**	**$ 10,468,611**	**$ 6,755,951**
TOTAL:	**$ 12,297,113**	**$ 19,561,224**	**$ 8,894,160**

I. CALCULATION OF MAXIMUM WATER IMPACT FEES

The maximum impact fees for the water distribution system is calculated by dividing the cost of the capital improvements or facility expansions necessitated and attributable to new development in the service area within the 10-year period by the number of living units anticipated to be added to the City within the 10-year period as shown on Table No. 16. The calculations are shown below.

TABLE NO. 16
MAXIMUM ALLOWABLE WATER IMPACT FEE

Maximum Water Impact Fee = $\frac{\text{Eligible Existing Utilized Cost} + \text{Eligible Proposed Utilized Cost}}{\text{Number of New Living Unit Equivalent over the Next 10 Years}}$

$= \frac{\$2,138,208 + \$6,755,951}{1,129} \quad \frac{\$8,894,160}{1,129}$

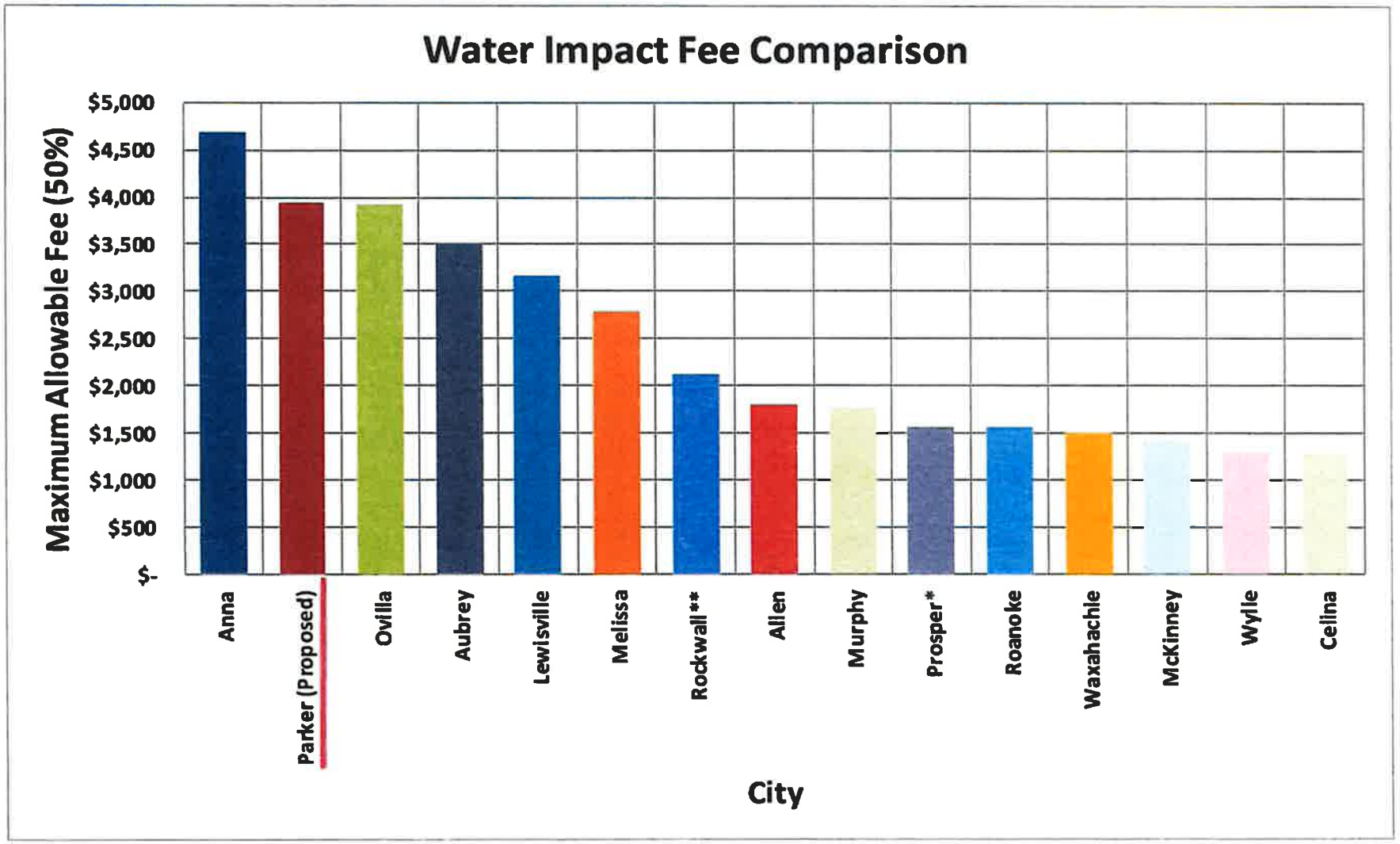
Maximum Impact Fee = $7,877.91

Allowable Maximum Water Impact Fee: (Max Impact Fee x 50%)* = $3,938.95

** Maximum allowable impact fee is 50% of the maximum calculated impact fee per Chapter 395 LGC*

Figure No. 2 is a comparison graph of maximum water impact fees calculated for cities in North Central Texas compared to the City of Parker.

Based on the Maximum Impact Fee Calculation for Water, Table No. 17 calculates the maximum impact fee for the various sizes of water meters.



*Impact fee based on 5/8" meter.
**Impact fee based on 1" meter.

FIGURE NO. 2

TABLE NO. 17
ALLOWABLE MAXIMUM FEE PER LIVING UNIT EQUIVALENT AND PER METER SIZE AND TYPE

50% Max . Water Impact fee /LUE **$ 3,938.95**

Typical Land Use	Meter Type	Meter Size	LUE	Maximum Water Impact Fee
Single Family Residential	Simple	1"	1	$ 3,938.95
Single Family Residential	Simple	2"	4	$ 15,755.82

APPENDIX
WATER IMPACT FEE UTILIZED CAPACITY TABLES

TABLE NO. 18
CITY OF PARKER, TEXAS
2016 WATER SYSTEM IMPACT FEE STUDY
EXISTING WATER LINES

Pipe Number	Length (Ft.)	Diameter (Inches)	Date of Const.	Avg. Unit Cost ($/Ft.)	Construction Cost ($)	20 Year Debt Service Utilizing Simple Interest	Total 20 Year Project Cost ($)	(%) Utilized Capacity			($) Utilized Capacity		
								2016	2026	During Fee Period	2016	2026	During Fee Period
1 - Parker Road 12 & 18-Inch Water Line (East Side P.S. to F.M. 2551)													
P-1078	358	12	0	$61.79	$22,119	$13,379	$35,498	100%	100%	0%	$35,498	$35,498	$0
P-1084	2,615	12	0	$61.79	$161,569	$97,726	$259,295	100%	100%	0%	$259,295	$259,295	$0
P-1271	7,903	18	0	$61.79	$488,292	$295,344	$783,636	100%	100%	0%	$783,636	$783,636	$0
P-1289	2,072	18	0	$61.79	$128,020	$77,433	$205,453	100%	100%	0%	$205,453	$205,453	$0
Subtotal:	**12,948**				**$800,000**	**$483,881**	**$1,283,881**				**$1,283,882**	**$1,283,882**	**$0**
2 - F.M. 2551 8-Inch Water Line													
P-1035	3,315	8	0	$77.08	$255,515	$154,549	$410,063	57%	100%	43%	$233,736	$410,063	$176,327
Subtotal:	**3,315**				**$255,515**	**$154,549**	**$410,063**				**$233,736**	**$410,063**	**$176,327**
3 - Parker Road 12-Inch Water Line (F.M. 2551 to Springhill Estates Drive)													
P-1068	1,989	12	0	$30.00	$59,670	$36,092	$95,762	100%	100%	0%	$95,762	$95,762	$0
P-1069	585	12	0	$30.00	$17,550	$10,615	$28,165	100%	100%	0%	$28,165	$28,165	$0
P-1070	1,008	12	0	$30.00	$30,240	$18,291	$48,531	100%	100%	0%	$48,531	$48,531	$0
P-1071	560	12	0	$30.00	$16,800	$10,162	$26,962	100%	100%	0%	$26,962	$26,962	$0
P-1072	645	12	0	$30.00	$19,350	$11,704	$31,054	100%	100%	0%	$31,054	$31,054	$0
P-1073	1,009	12	0	$30.00	$30,270	$18,309	$48,579	100%	100%	0%	$48,579	$48,579	$0
P-1074	944	12	0	$30.00	$28,320	$17,129	$45,449	96%	98%	2%	$43,631	$44,540	$909
P-1075	812	12	0	$30.00	$24,360	$14,734	$39,094	100%	100%	0%	$39,094	$39,094	$0
P-1076	953	12	0	$30.00	$28,590	$17,293	$45,883	100%	100%	0%	$45,883	$45,883	$0
P-1077	596	12	0	$30.00	$17,880	$10,815	$28,695	100%	100%	0%	$28,695	$28,695	$0
P-1178	1,927	12	0	$30.00	$57,810	$34,966	$92,776	95%	100%	5%	$88,138	$92,776	$4,639
Subtotal:	**11,028**				**$330,840**	**$200,109**	**$530,949**				**$524,494**	**$530,041**	**$5,548**
4 - Chaparral Elevated Storage Tank 16-Inch Water Line													
P-1260	2,956	16	0	$33.83	$100,000	$60,485	$160,485	6%	71%	65%	$9,629	$113,944	$104,315
Subtotal:	**2,956**				**$100,000**	**$60,485**	**$160,485**				**$9,629**	**$113,944**	**$104,315**
5 - Muddy Creek 12-Inch Water Line													
P-1169	2,780	12	0	$30.00	$83,400	$50,445	$133,845	100%	100%	0%	$133,845	$133,845	$0
P-1170	3,035	12	0	$30.00	$91,050	$55,072	$146,122	34%	100%	66%	$49,681	$146,122	$96,440
P-1171	1,890	12	0	$30.00	$56,700	$34,295	$90,995	37%	100%	63%	$33,668	$90,995	$57,327
P-1176	325	12	0	$30.00	$9,750	$5,897	$15,647	67%	88%	21%	$10,484	$13,770	$3,286
P-1280	1,570	12	0	$30.00	$47,100	$28,489	$75,589	0%	91%	91%	$0	$68,786	$68,786
P-1317	3,350	12	0	$30.00	$100,500	$60,788	$161,288	64%	90%	26%	$103,224	$145,159	$41,935
P-1319	320	12	0	$30.00	$9,600	$5,807	$15,407	60%	100%	40%	$9,244	$15,407	$6,163
P-1321	990	12	0	$30.00	$29,700	$17,964	$47,664	61%	75%	14%	$29,075	$35,748	$6,673
Subtotal:	**14,260**				**$427,800**	**$258,756**	**$686,556**				**$369,221**	**$649,832**	**$280,610**

TABLE NO. 18
CITY OF PARKER, TEXAS
2016 WATER SYSTEM IMPACT FEE STUDY
EXISTING WATER LINES

Pipe Number	Length (Ft.)	Diameter (Inches)	Date of Const.	Avg. Unit Cost ($/Ft.)	Construction Cost ($)	20 Year Debt Service Utilizing Simple Interest	Total 20 Year Project Cost ($)	(%) Utilized Capacity			($) Utilized Capacity		
								2016	2026	During Fee Period	2016	2026	During Fee Period
6 - 2009 12-Inch Water Line Phase-2													
P-1181	2,419	12	2009	$50.43	$121,996	$73,789	$195,785	54%	70%	16%	$105,724	$137,050	$31,326
P-1254	2,940	12		$50.43	$148,271	$89,682	$237,953	71%	75%	4%	$168,947	$178,465	$9,518
Subtotal:	**5,359**				**$270,267**	**$163,471**	**$433,738**				**$274,671**	**$315,515**	**$40,844**
7 - Church Road Waterline													
P-1080	3,124	12	2002	$15.72	$49,113	$0	$49,113	58%	100%	42%	$28,485	$49,113	$20,627
P-1220	1,648	12		$15.72	$25,908	$0	$25,908	71%	97%	26%	$18,395	$25,131	$6,736
Subtotal:	**4,772**				**$75,021**	**$0**	**$75,021**				**$46,880**	**$74,244**	**$27,363**
Total:	**54,638**				**$2,259,443**	**$1,321,251**	**$3,580,694**				**$2,742,513**	**$3,377,521**	**$635,007**

TABLE NO. 19
CITY OF PARKER, TEXAS
2016 WATER DISTRIBUTION IMPACT FEE STUDY
EXISTING WATER SUPPLY, PUMPING AND STORAGE FACILITIES

Pump Station Improvements	Year Const.	Capacity	Units	Pump Station Cost ($)					Capacity Utilized (%)			Capacity Utilized ($)		
				Construction Cost ($)	Engineering, Testing and Property Acquisition	Debt Service Interest Rate %	20 Year Debt Service Utilizing Simple Interest	Total 20 Yr. Project Cost ($)	2016	2026	In The CRF Period	2016	2026	In The CRF Period
Existing Pump Stations, Ground Storage, and Elevated Storage Facilities														
Facilities & Water Line Purchase From Pecan Orchard	1988	-----	-----	$196,000	$0	Special	$21,560	$217,560	100%	100%	0%	$217,560	$217,560	$0
East Side Pump Station Improvements	2003	3.60	MGD	$396,700	$79,340	5%	$287,934	$763,974	93%	100%	7%	$710,495	$763,974	$53,478
City Hall Elevated Storage Tank	2011	1.0	MG	$2,352,442	$470,488	5%	$1,707,455	$4,530,385	55%	87%	32%	$2,491,712	$3,941,435	$1,449,723
Existing Facilities Total:				**$2,945,142**	**$549,828**		**$2,016,948**	**$5,511,919**				**$3,419,767**	**$4,922,969**	**$1,503,201**

TABLE NO. 20
CITY OF PARKER, TEXAS
2016 WATER SYSTEM IMPACT FEE STUDY
PROPOSED WATER LINES

** * Average Unit costs are based in 2016 dollars unless otherwise indicated and includes 20% for engineering and easen*

	Pipe Number	Length (Ft.)	Diameter (Inches)	Avg. Unit Cost ($/Ft.)	Construction Cost ($)	20 Year Debt Service @ 5% Simple Interest	Total 20 Year Project Cost ($)	(%) Utilized Capacity			($) Utilized Capacity		
								2016	2026	During Fee Period	2016	2026	During Fee Period
1 - Dillehay Drive 18-Inch Water Line													
This project begins at the proposed Central Pump Station and bears north and south. The northern segment terminates near Kara Lane approximantly 1,500 feet south of Chapparral while the southern segment continues to just south of Lindsey Lane approximantly 2,000 feet north of Parker Road													
2	P-1252	2,490	18"	$140.00	$348,600	$210,851	$559,451	0.0%	100.0%	100.0%	$0	$559,451	$559,451
2	P-1253	1,635	18"	$140.00	$228,900	$138,451	$367,351	0.0%	71.0%	71.0%	$0	$260,819	$260,819
Subtotal:		**4,125**			**$577,500**	**$349,302**	**$926,802**				**$0**	**$820,270**	**$820,270**
2 - Chaparral Elevated Storage Tank 16-Inch Water Line													
This water line begins at the proposed Chaparral Elevated Storage Tank and continues northerly connecting to the existing 16-inch water line at the intersection of Malone Drive and Nestledown Road													
2	P-11191	385	16"	$120.00	$46,200	$27,944	$74,144	0.0%	62.0%	62.0%	$0	$45,969	$45,969
Subtotal:		**385**			**$46,200**	**$27,944**	**$74,144**				**$0**	**$45,969**	**$45,969**
3 - Bois-D-Arc Lane 8-Inch Water Line													
The water line begins at a point for connection to the existing 18-inch Parker Road Water Line and continues southerly connecting to the existing 8-inch water line south of Bois-D-Arc Lane													
2	P-1157	1,670	8"	$100.00	$167,000	$101,010	$268,010	0.0%	62.0%	62.0%	$0	$166,166	$166,166
Subtotal:		**1,670**			**$167,000**	**$101,010**	**$268,010**				**$0**	**$166,166**	**$166,166**
CIP Total:		**6,180**			**$790,700**	**$478,256**	**$1,268,956**				**$0**	**$1,032,405**	**$1,032,405**

1 - City Participate in Cost Oversize

2 - City Initiated & Funded

TABLE NO. 21
CITY OF PARKER, TEXAS
2016 WATER DISTRIBUTION IMPACT FEE STUDY
PROPOSED WATER FACILITIES

	Facility Improvements	Year Const.	Projected Capacity	Units	Water Facilities Cost ($)					Capacity Utilized (MGD)			Capacity Utilized (%)			Capacity Utilized ($)		
					Capital Cost ($)	Engineering, Testing and Property Acquisition 20% ($)	Opinion of Project Total Cost ($)	20 Year Debt Service Utilizing 5% Simple Interest ($)	Total 20 Yr. Project Cost ($)	2016	2026	In The CRF Period	2016	2026	In The CRF Period	2016	2026	In The CRF Period
Proposed Pump Stations, Ground Storage, and Elevated Stora																		
8	Central Pump Station - 1 75 MGD P S		1 75	MGD	$2,625,000	$525,000	$3,150,000	$1,905,283	$5,055,283	0 0	0 6	0 6	0 0%	62 0%	62 0%	$0	$3,134,275	$3,134,275
9	Central Pump Station - 0 75 MG G S R		0 75	MG	$825,000	$165,000	$990,000	$598,803	$1,588,803	0 0	0 6	0 6	0 0%	62 0%	62 0%	$0	$985,058	$985,058
10	NTMWD Delivery Point No 2		5 0	MGD	$1,100,000	$220,000	$1,320,000	$798,404	$2,118,404	0 0	0 6	0 6	0 0%	62 0%	62 0%	$0	$1,313,411	$1,313,411
11	Bois-D-Arc Lane 8-Inch Pressure Reducing Valve		-----	-----	$200,000	$40,000	$240,000	$145,164	$385,164	0 0	0 6	0 6	0 0%	62 0%	62 0%	$0	$238,802	$238,802
	Proposed Facility Total:				**$4,750,000**	**$950,000**	**$5,700,000**	**$3,447,655**	**$9,147,655**								**$5,671,546**	**$5,671,546**

2016 - 2026
WATER IMPACT FEE STUDY

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