Exhibit B - Ordinance No. 3494

Innovative approaches
Practical results
Outstanding service

Water & Wastewater Impact Fee Study

Prepared for:

City of North Richland Hills

Prepared by:

FREESE AND NICHOLS, INC.
4055 International Plaza, Suite 200
Fort Worth, Texas 76109
817-735-7300
Project number: NRH15536

Water & Wastewater Impact Fee Study

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City of North Richland Hills

FREESE AND NICHOLS, INC.
TEXAS REGISTERED
ENGINEERING FIRM
F-2144

5/24/17

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EXECUTIVE SUMMARY

1.0 BACKGROUND

Chapter 395 of the Texas Local Government Code requires an impact fee analysis before impact fees can be created and assessed. Chapter 395 defines an impact fee as "a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development." In September 2001, Senate Bill 243 amended Chapter 395 thus creating the current procedure for implementing impact fees.

2.0 LAND USE ASSUMPTIONS

To assist the City of North Richland Hills in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. Growth and development projections were formulated based on assumptions pertaining to the type, location, quantity and timing of various future land uses within the community. The 2016 population and commercial acreage are estimated to be 67,176 and 1,862 respectively. The projected 2026 population and commercial acreage are approximately 76,412 and 2,135, respectively.

3.0 CAPITAL IMPROVEMENTS PLAN

An impact fee capital improvements plan (CIP) was developed for the City to provide high quality water and wastewater service that promotes residential and commercial development. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through year 2026. The total impact fee eligible cost for the water system improvements is $13,474,237. The total impact fee eligible cost for the wastewater system improvements including financing costs is $7,578,307.

4.0 IMPACT FEE ANALYSIS

The impact fee analysis involves determining the utilization of existing and proposed projects required as defined by the capital improvement plan to serve new development over the next 10-years. The total projected costs include the projected 10-year capital costs and the consultant cost for preparing and updating the Impact Fee Study. The calculated fees are as follows:

- Maximum allowable water impact fee with 50% credit = $1,858
- Maximum allowable wastewater impact fee with 50% credit = $1,215
- Total combined allowable impact fee with 50% credit = $3,073

Comparison graphs showing impact fees for other benchmark cities are presented on **Figures 4-1** and **4-2**.

1.0 BACKGROUND

Chapter 395 of the Texas Local Government Code requires an impact fee analysis before impact fees can be created and assessed. Chapter 395 defines an impact fee as "a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development." In September 2001, Senate Bill 243 amended Chapter 395 thus creating the current procedure for implementing impact fees. Chapter 395 identifies the following items as impact fee eligible costs:

- Construction contract price
- Surveying and engineering fees
- Land acquisition costs
- Fees paid to the consultant preparing or updating the capital improvements plan (CIP)
- Projected interest charges and other financing costs for projects identified in the CIP

Chapter 395 also identifies items that impact fees cannot be used to pay for, such as:

- Construction, acquisition, or expansion of public facilities or assets other than those identified on the capital improvements plan
- Repair, operation, or maintenance of existing or new capital improvements
- Upgrading, updating, expanding, or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards
- Upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development
- Administrative and operating costs of the political subdivision
- Principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed above

The City of North Richland Hills authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water and wastewater systems. The purpose of this report is to address the methodology used in the development and calculation of water and wastewater impact fees

for the City. The methodology used herein satisfies the requirements of the Texas Local Government Code Chapter 395 for the establishment of water and wastewater impact fees.

2.0 LAND USE ASSUMPTIONS

To assist the City in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. Growth and development projections were formulated based on assumptions pertaining to the type, location, quantity and timing of various future land uses within the community. These land use assumptions, which include population projections, were the basis for the preparation of impact fee capital improvement plans for the water and wastewater systems.

2.1 Residential and Commercial Land Use

The historical population references the 2010 Census information as well as data collected from the North Central Texas Council of Governments (NCTCOG). The data indicated an increasing growth rate with an average of 0.96% over the last five years. Table 2-1 presents the historical populations for the City.

Table 2-1 Historical Population

Year	City Population	Average Annual Population Growth Rate
2010	63,343	--
2011	63,490	0.23%
2012	63,780	0.46%
2013	64,240	0.72%
2014	65,690	2.26%
2015	66,433	1.13%
	Average	**0.96%**

FNI worked with City staff and utilized the NCTCOG projections by Traffic Survey Zones (TSZs) to develop and distribute the projected populations and commercial growth. The population growth through 2026 was determined by evaluating historical trends and working with City planning staff to identify areas of potential growth for the 2026 planning period. The 2016 base year population and commercial acreage are approximately 67,176 and 1,862, respectively. The 2026 projected population and commercial acreage are approximately 76,412 and 2,135, respectively. TSZs and input from the City's planning staff were used to provide an accurate

depiction of how the population and commercial acreage is distributed throughout the City. **Figure 2-1** presents the 2016 and 2026 served populations and commercial acreage by TSZ.

FIGURE 2-1
CITY OF NORTH RICHLAND HILLS
POPULATION BY TSZ

LEGEND

- Traffic Survey Zone
- Transit Oriented Development
- Highway
- Road
- Railroad
- Stream
- Lake/Pond
- Parcel
- City Limit
- Other City Limit

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TSZ
2016 Population (67,176) (Non-Residential Acres (1,862))
2026 Population (76,412) (Non-Residential Acres (2,135))

TSZ	2016 Population (Non-Residential Acres)	2026 Population (Non-Residential Acres)
9166	676 (3)	728 (12)
9196	3 (43)	3 (34)
30169	1,524 (4)	1,524 (5)
30170	1,211 (20)	1,556 (35)
9191	0 (0)	63 (0)
9195	1,356 (29)	1,795 (68)
9192	967 (0)	1,177 (0)
9194	1,521 (13)	1,627 (13)
9231	906 (11)	993 (19)
9226	2,835 (1)	2,870 (11)
9227	2,208 (5)	2,427 (7)
9229	558 (11)	741 (19)
9232	847 (8)	994 (15)
9270	2,032 (19)	2,214 (16)
9228	2,460 (20)	3,442 (19)
9230	1,860 (28)	2,735 (28)
9272	2,387 (48)	2,596 (47)
9271	1,815 (6)	2,123 (17)
9275	1,232 (9)	1,291 (11)
9273	740 (0)	946 (1)
40985	201 (15)	525 (11)
9329	305 (25)	480 (23)
9323	2,151 (17)	2,151 (17)
9324	2,812 (17)	3,337 (14)
9274	429 (174)	847 (198)
30122	1,691 (72)	1,691 (84)
9326	3,237 (85)	3,258 (79)
9322	3,740 (86)	4,194 (120)
9330	867 (58)	1,823 (50)
30123	2,260 (18)	2,260 (18)
30127	1,103 (44)	1,167 (68)
9369	1,779 (16)	1,779 (19)
40989	0 (83)	0 (86)
9364 Iron Horse TOD	902 (146)	2,251 (142)
9366	938 (81)	966 (84)
9370	530 (34)	530 (41)
9367	1,579 (73)	1,579 (80)
9368	3,251 (86)	3,251 (94)
30124	1,463 (54)	1,463 (75)
9372	100 (18)	100 (19)
9365	2,384 (81)	2,384 (86)
30125	2,017 (8)	2,017 (12)
9428	926 (61)	926 (66)
10894	95 (99)	264 (118)
9426	836 (22)	836 (25)
9425	751 (2)	751 (2)
9494	407 (50)	453 (70)
9491	1,618 (57)	1,618 (56)
9489	1,666 (2)	1,666 (3)

Keller
Colleyville
Fort Worth
Watauga
Haltom City
Hurst
Richland Hills
Smithfield TOD
Iron Horse TOD

0 1,300 2,600
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3.0 CAPITAL IMPROVEMENTS PLAN

An impact fee capital improvements plan (CIP) was developed for the City to provide high quality water and wastewater service that promotes residential and commercial development. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through year 2026.

3.1 Water and Wastewater Load Projections

The population data was used to develop future water demands and wastewater flows based on a projected average day per capita use and peaking factors. **Table 3-1** presents the projected water demands, and **Table 3-2** presents the projected wastewater flows for the City.

Table 3-1 Projected Water Demands

Year	Served Population	Average Day Demand (MGD)	Maximum Day Demand (MGD)	Peak Hour Demand (MGD)
2016	67,176	11.14	22.48	39.34
2026	76,412	12.69	25.61	44.82

Table 3-2 Projected Wastewater Flows

Year	Served Population	Average Annual Daily Flow (MGD)	Peak Wet Weather Flow (MGD)
2016	67,176	5.59	19.57
2026	76,412	6.36	25.44

3.2 Water and Wastewater System Improvements

Proposed water distribution and wastewater collection system projects were developed utilizing the City's updated water and wastewater models and the capital improvements plan presented in the *2009 Water & Wastewater Master Plan*. A summary of the costs for each of the projects required for the 10-year period used in the impact fee analysis for both the water and wastewater systems are shown in **Tables 3-3** and **3-4,** respectively. The 2016 percent utilization is the portion of a project's capacity required to serve existing development. It is not included in the impact fee eligible analysis and cost calculation. The 2026 percent utilization is the portion of the project's capacity that will be required to serve the projected growth in the City's service area in 2026. The 2016-2026 percent utilization is the portion of the project's capacity required to serve development from 2016 to 2026. The portion of a project's total cost that is used to serve development projected to occur from 2016 through 2026 is calculated as the total actual cost multiplied by the 2016-2026 percent utilization. Only this portion of the cost is used in the impact fee analysis. The proposed 10-year water system impact fee eligible projects are shown on **Figure 3-1**. Proposed wastewater system impact fee eligible projects are shown on **Figure 3-2**.

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Table 3-3
Cost Allocation for Water Impact Fee Calculation

Proj. No.	Description of Project	Percent Utilization			Capital Cost	Costs Based on 2016 Dollars		
		2016*	2026	10-Year 2016-2026		Current Development	10-Year 2016-2026	Beyond 2026
EXISTING								
A	8-inch WL south along Davis Blvd. east and south to Northfield Drive	45%	90%	45%	$123,360	$55,512	$55,512	$12,336
B	12-inch WL from Bridge St. to Emerald Hills Way	10%	70%	60%	$295,664	$29,566	$177,398	$88,699
C	16-inch WL from Mid-Cities Blvd. South along Tecnol Blvd. East along industrial Park Blvd, South along Holiday Ln. to Janetta Dr.	20%	90%	70%	$846,642	$169,328	$592,649	$84,664
D	12-inch/16-inch WL along Holiday Ln. from Mid-Cities Blvd to existing 12-inch WL north of Bogart Dr. 12-inch WL along College Circle from Holiday Ln. to Ross Rd.	70%	95%	25%	$347,587	$243,311	$86,897	$17,379
E	W/WW Impact Fee Study (Water Portion)	0%	100%	100%	$55,000	$0	$55,000	$0
PROPOSED								
1	Three Pressure Reducing Valves on water lines along Holiday Ln., Meadow Lakes Dr. and Grapevine Hwy. in the south.	0%	90%	90%	$786,300	$0	$707,670	$78,630
2	12-Inch WL along Emerald Hills Way to replace existing 10-inch WL from Harwood to Newman Dr.	50%	90%	40%	$838,700	$419,350	$335,480	$83,870
3	12-inch WL to replace existing 6-inch and 8-inch WL from Davis Blvd., east on Clark St., north on Colorado Blvd., east on Harwood Rd. to Grapevine Hwy.	35%	90%	55%	$1,606,100	$562,135	$883,355	$160,610
4	12-Inch WL to replace existing 6-inch WL along Janetta Dr. from Holiday Ln. to Roberta Dr.	35%	90%	55%	$1,362,900	$477,015	$749,595	$136,290
5	12-inch WL to replace existing 6-inch and 8-inch WL along Loop 820, Holiday Ln., and Riviera Rd. from the proposed PRV near Thaxton Pkwy. to Ken Michael Ct.	30%	80%	50%	$1,922,000	$576,600	$961,000	$384,400
6	20-Inch WL to replace existing 12-inch WL along Mid Cities Blvd. from Rufe Snow Dr. to Smithfield Rd.	40%	60%	20%	$3,709,500	$1,483,800	$741,900	$1,483,800
7	16-inch WL to replace existing 6-inch and 8-inch WL along Smithfield Rd. north of Mid Cities Blvd.	25%	75%	50%	$3,116,100	$779,025	$1,558,050	$779,025
8	24-Inch WL to replace existing 12-inch WL along Watauga Rd. from Rufe Snow Dr. to existing 16-inch WL east of Watauga P.S. and GST	20%	70%	50%	$5,968,800	$1,193,760	$2,984,400	$1,790,640
9	Expand Pumping Capacity and Ground Storage at Watauga P.S.	65%	90%	25%	$7,628,600	$4,958,590	$1,907,150	$762,860
10	Offsite Water Supply Improvements from Fort Worth	55%	85%	30%	$4,073,500	$2,240,425	$1,222,050	$611,025
11	10-inch/12-inch WL near the Mid-Cities Blvd. and Amundson Dr. intersection and 12-inch line from Mid-Cities Blvd. and Cardinal Ln. intersection to Bridge St.	60%	90%	30%	$968,400	$581,040	$290,520	$96,840
12	12-inch WL along Eagle Crest Dr. from Rufe Snow Dr. to existing 10-inch WL Northwest of Industrial Park Blvd.	50%	70%	20%	$678,800	$339,400	$135,760	$203,640
13	8-inch WL along Country Place Dr. south of Northfield Dr.	70%	100%	30%	$99,500	$69,650	$29,850	$0
	Total Water Capital Improvements Cost				**$34,427,453**	**$14,178,508**	**$13,474,237**	**$6,774,709**

* Utilization in 2016 on proposed projects indicates a portion of the project that will be used to address deficiencies within the existing system and therefore not eligible for impact fee cost recovery for future growth.

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Table 3-4
Cost Allocation for Water Impact Fee Calculation

Proj. No.	Description of Project	Percent Utilization			Capital Cost	Costs Based on 2016 Dollars		
		2016*	2026	10-Year 2016-2026		Current Development	10-Year 2016-2026	Beyond 2026
EXISTING								
A	Aegon Lift Station Expansion from 0.9 MGD to 1.6 MGD Capacity, New 15-inch WW Lines to replace 8-inch/10-inch/12-inch Upstream and Downstream of Lift Station.	60%	80%	20%	$966,060	$579,636	$193,212	$193,212
B	W/WW Impact Fee Study (Wastewater Portion)	0%	100%	100%	$55,000	$0	$55,000	$0
PROPOSED								
1	15-inch Interceptor replacement of existing 6-inch, 8-inch, and 10-inch WW Lines along Cardinal Ln. and Mid Cities Blvd. Also a 27-inch Incerceptor going North from Grapevine Hwy. along Emerald Hills Way to Walker's Creek Park.	35%	90%	55%	$4,831,200	$1,690,920	$2,657,160	$483,120
2	8-inch Interceptor replacement of existing 6-inch WW Line south of Highway 820.	15%	30%	15%	$981,200	$147,180	$147,180	$686,840
3	27-inch and 24-inch Interceptor replacement of existing 21-inch WW Line along Highway 820.	55%	90%	35%	$3,406,900	$1,873,795	$1,192,415	$340,690
4	12-inch and 10-inch Interceptor replacement of existing 8-inch and 10-inch WW Lines along Maplewood Ave. and Susan Lee Ln.	60%	90%	30%	$1,235,200	$741,120	$370,560	$123,520
5	30-inch Interceptor replacement of existing 21-inch and 24-inch WW Lines along Industry Park Blvd. North of Holiday Ln.	35%	75%	40%	$1,569,800	$549,430	$627,920	$392,450
6	21-inch Interceptor replacement of existing 18-inch line along Little Ranch Rd. South of Mid-Cities Blvd.;18-inch and 15-inch Interceptor replacement of existing 12 and 15-inch lines along Little Ranch Rd. from Hightower Dr. to Mid-Cities Blvd.; New 15-inch line along Hightower Dr. to replace existing 12-inch Lines.	40%	80%	40%	$2,216,300	$886,520	$886,520	$443,260
7	15-inch and 12-inch Interceptor replacement of existing 8-inch and 10-inch WW Lines along Whitfield Ct., northeast along Whitfield Dr., east along Maple Dr., north to Mid-Cities Blvd.	60%	90%	30%	$3,684,000	$2,210,400	$1,105,200	$368,400
8	24-inch Interceptor replacement of existing 12-inch WW line along Richland Plaza Dr. from Onyx Dr south to Broadway Ave.	40%	70%	30%	$1,143,800	$457,520	$343,140	$343,140
	Total Wastewater Capital Improvements Cost				**$20,089,460**	**$9,136,521**	**$7,578,307**	**$3,374,632**

* Utilization in 2016 on Proposed Projects indicates a portion of the project that will be used to address deficiencies within the existing system and therefore not eligible for impact fee cost recovery for future growth.

FIGURE 3-1
CITY OF NORTH RICHLAND HILLS
WATER SYSTEM IMPACT FEE ELIGIBLE CAPITAL IMPROVEMENTS PLAN

LEGEND

- Proposed IF Eligible Pressure Reducing Valve
- Proposed IF Eligible Water Line
- Existing IF Eligible Water Line
- Water Meter
- Divider Valve
- Pump Station
- Ground Storage Tank
- Elevated Storage Tank
- 8" and Smaller Water Line
- 10" and Larger Water Line
- Highway
- Road
- Railroad
- Pressure Plane Boundary
- Stream
- Lake/Pond
- Parcel
- Pressure Plane
- City Limit
- Other City Limit

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E Water Impact Fee Study

Shady Grove Rd EST

Bursey Rd EST

Starnes Rd EST

Amundson Dr EST

9 Expand Watauga PS Add 5 MG GST

10 Water Supply Improvements from Fort Worth

8

7

11

6

College Hills PS and GST

D

C

1 Proposed Pressure Reducing Valve

12

B

A

13

Proposed Pressure Reducing Valve

2

3

Johnson PS and GST

4

5

Conn PS and GST

Watauga

Haltom City

Richland Hills

Hurst

Colleyville

Little Bear Creek

Big Fossil Creek

Walker Branch

Mesquite Branch

0 1,300 2,600

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FIGURE 3-2
CITY OF
NORTH RICHLAND HILLS
WASTEWATER SYSTEM
IMPACT FEE ELIGIBLE
CAPITAL IMPROVEMENTS PLAN

B Wastewater Impact Fee Study

LEGEND

- Proposed IF Eligible Sewer Line
- Existing IF Eligible Lift Station (LS)
- Existing IF Eligible Sewer Line
- Meter Station (M)
- 8" and Smaller Wastewater Line
- 10" and Larger Wastewater Line
- Road
- Railroad
- Stream
- Lake/Pond
- Parcel
- City Limit
- Other City Limit

MAJOR BASINS

- Big Bear
- Big Fossil Creek
- Calloway
- Little Bear
- Mackey Creek
- Walker

Aegon
0.9 MGD Lift Station
Expansion to 1.6 MGD

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Keller
Colleyville
Fort Worth
Watauga
Haltom City
Richland Hills
Hurst

0 1,300 2,600
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4.0 IMPACT FEE ANALYSIS

The impact fee analysis involves determining the total projected costs to serve new development and the projected number of service units attributed to new development over the next 10-years. The total projected costs include the projected 10-year capital costs and the consultant cost for preparing and updating the Impact Fee Study.

4.1 Service Units

The maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period. A water service unit is defined as service equivalent to a water connection for a single-family residence. The City does not directly meter wastewater flows and bills for wastewater services are based on the customer's water consumption. Therefore, a wastewater service unit is defined as the wastewater service provided to a customer with a water connection for a single-family residence. However, the wastewater service units are reduced by a factor of 86% in order to account for irrigation water meters included in the water meter inventory.

The service associated with public, commercial and industrial connections is converted to service units based upon the capacity of the meter used to provide service. The number of service units required to represent each meter size is based on the maximum rated capacity of the meters as shown from AWWA Standards C700, C701, C702 and C703. The service unit equivalent for each meter size used by the City is listed in **Table 4-1**.

Table 4-1 Service Unit Equivalency Table

Meter Size	Base Volume	Water Service Unit Equivalents	Wastewater Service Unit Equivalents
3/4”	267	1.00	0.86
1”	446	1.67	1.44
1 ½”	889	3.33	2.86
2”	1,423	5.33	4.58
3”	2,670	10.00	8.60
4”	2,849	10.67	9.18
6”	8,899	33.33	28.66
8”	16,020	60.00	51.60

Table 4-2 and **Table 4-3** show the water and wastewater service units, respectively, for 2016 and the projected service units for 2026. Typically, in North Richland Hills, single-family residences are served with 3/4-inch water meters. Larger meters represent public, commercial, and industrial water use. The City provided current meter data that included the meter size and type of each active water meter. The growth in water meters was projected using population and commercial acreage growth projections and land use assumptions. The growth in service units was determined by subtracting the existing service units from the projected 2026 service units and results in a growth of 3,627 water service units and 3,120 wastewater service units over the 10-year period.

Table 4-2 Projected Water Service Units for 2016-2026

Meter Size	2016 Existing Water Meters	2016 Existing Water Service Units	2026 Projected Water Meters	2026 Projected Water Service Units	Projected Growth in Water Service Units
¾”	19,087	19,087	21,712	21,712	2,625
1”	1,301	2,173	1,480	2,472	299
1-1/2"	75	250	85	283	33
2"	771	4,109	877	4,674	565
3"	36	360	41	410	50
4"	17	181	19	203	22
6"	4	133	5	167	34
8"	2	120	2	120	0
Total	**21,293**	**26,413**	**24,221**	**30,040**	**3,627**

Table 4-3 Projected Wastewater Service Units for 2016-2026

Meter Size	2016 Existing Water Meters	2016 Existing Wastewater Service Units	2026 Projected Water Meters	2026 Projected Wastewater Service Units	Projected Growth in Wastewater Service Units
¾”	19,087	16,415	21,712	18,672	2,258
1”	1,301	1,869	1,480	2,126	257
1-1/2"	75	215	85	243	28
2"	771	3,534	877	4,020	486
3"	36	310	41	353	43
4"	17	156	19	174	19
6"	4	114	5	143	29
8"	2	103	2	103	0
Total	**21,293**	**22,715**	**24,221**	**25,835**	**3,120**

4.2 Maximum Impact Fee Calculation

Chapter 395 of the Texas Local Government Code states that the maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period less a credit to account for water and wastewater revenues used to finance capital improvement plans.

The total projected costs include the projected capital improvement costs to serve 10-year development and the consultant cost for preparing and updating the capital improvements plan.

Maximum Water Impact Fee:

Capital Improvement Costs	$ 13,474,237
Total Eligible Costs	$ 13,474,237
Total Water Impact Fee Credit (50%)	$ 6,737,119

The total eligible cost associated with the existing and proposed water system improvements to meet projected growth over the next ten years is $13,474,237. The increase in the number of service units due to growth over the next ten years is projected as 3,627 service units.

$$\text{Maximum Water Impact Fee with 50\% Credit} = \frac{\text{Total Eligible Costs – Credit}}{\text{10-year growth in Service Units}}$$

$$= \frac{\$\ 13{,}474{,}237 - \$6{,}737{,}119}{3{,}627\ \text{SUE}}$$

$$= \$\ 1{,}858\ /\ \text{SUE}$$

Maximum Wastewater Impact Fee:

Capital Improvement Costs	$ 7,578,307
Total Eligible Costs	$ 7,578,307
Total Wastewater Impact Fee Credit (50%)	$ 3,789,154

The total eligible cost associated with the existing and proposed water system improvements to meet projected growth over the next ten years is $7,578,307. The increase in the number of service units due to growth over the next ten years is projected as 3,120 service units.

$$\text{Maximum Wastewater Impact Fee with 50\% Credit} = \frac{\text{Total Eligible Costs – Credit}}{\text{10-year growth in Service Units}}$$

$$= \frac{\$\ 7{,}578{,}307 - \$\ 3{,}789{,}154}{3{,}120\ \text{SUE}}$$

$$= \$\ 1{,}215\ /\ \text{SUE}$$

The total maximum allowable water and wastewater impact fee is $3,073.

In addition to the maximum allowable impact fees calculated above, as a wholesale customer, the City of North Richland Hills must also include Fort Worth's impact fees. The inclusion of Fort Worth's current water and wastewater impact fees, of $1,457 and $865, is required as part of the water and wastewater wholesale agreement between the City and Fort Worth. Approximately 60% of the City's water is supplied by Fort Worth, and are therefore responsible for 60% of Fort Worth's water impact fee, or $874. The City's maximum allowable water and wastewater impact fees with Fort Worth's impact fees is summarized in **Table 4-4**. Comparison graphs showing impact fees in other benchmark cities throughout the Metroplex are included as **Figures 4-1** and **4-2**.

Table 4-4 Maximum Allowable Impact Fees with Fort Worth Impact Fees

	Water	Wastewater	Combined
50% of Allowable Impact Fee	$1,858	$1,215	$3,073
Fort Worth Impact Fee*	$874**	$865	$1,739
Total Impact Fee	**$2,732**	**$2,080**	**$4,812**

* Effective April 1st, 2017. Fees are for a ¾" meter.
** 60% of Fort Worth's water impact fee for a ¾" meter.

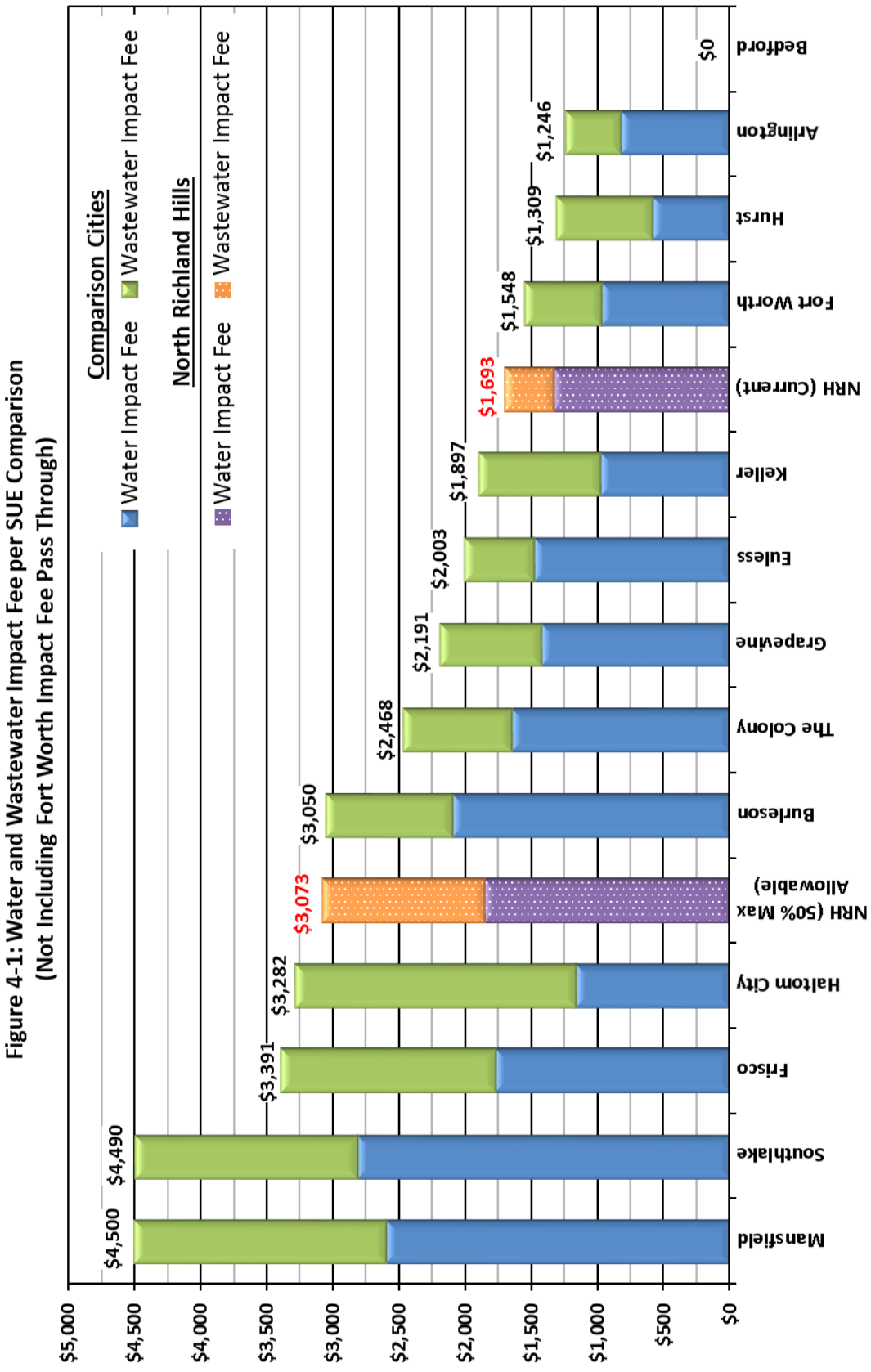
Figure 4-1: Water and Wastewater Impact Fee per SUE Comparison
(Not Including Fort Worth Impact Fee Pass Through)
Comparison Cities
Water Impact Fee
Wastewater Impact Fee
North Richland Hills
Water Impact Fee
Wastewater Impact Fee
$5,000
$4,500
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$4,500
$4,490
$3,391
$3,282
$3,073
$3,050
$2,468
$2,191
$2,003
$1,897
$1,693
$1,548
$1,309
$1,246
$0
Mansfield
Southlake
Frisco
Haltom City
NRH (50% Max Allowable)
Burleson
The Colony
Grapevine
Euless
Keller
NRH (Current)
Fort Worth
Hurst
Arlington
Bedford

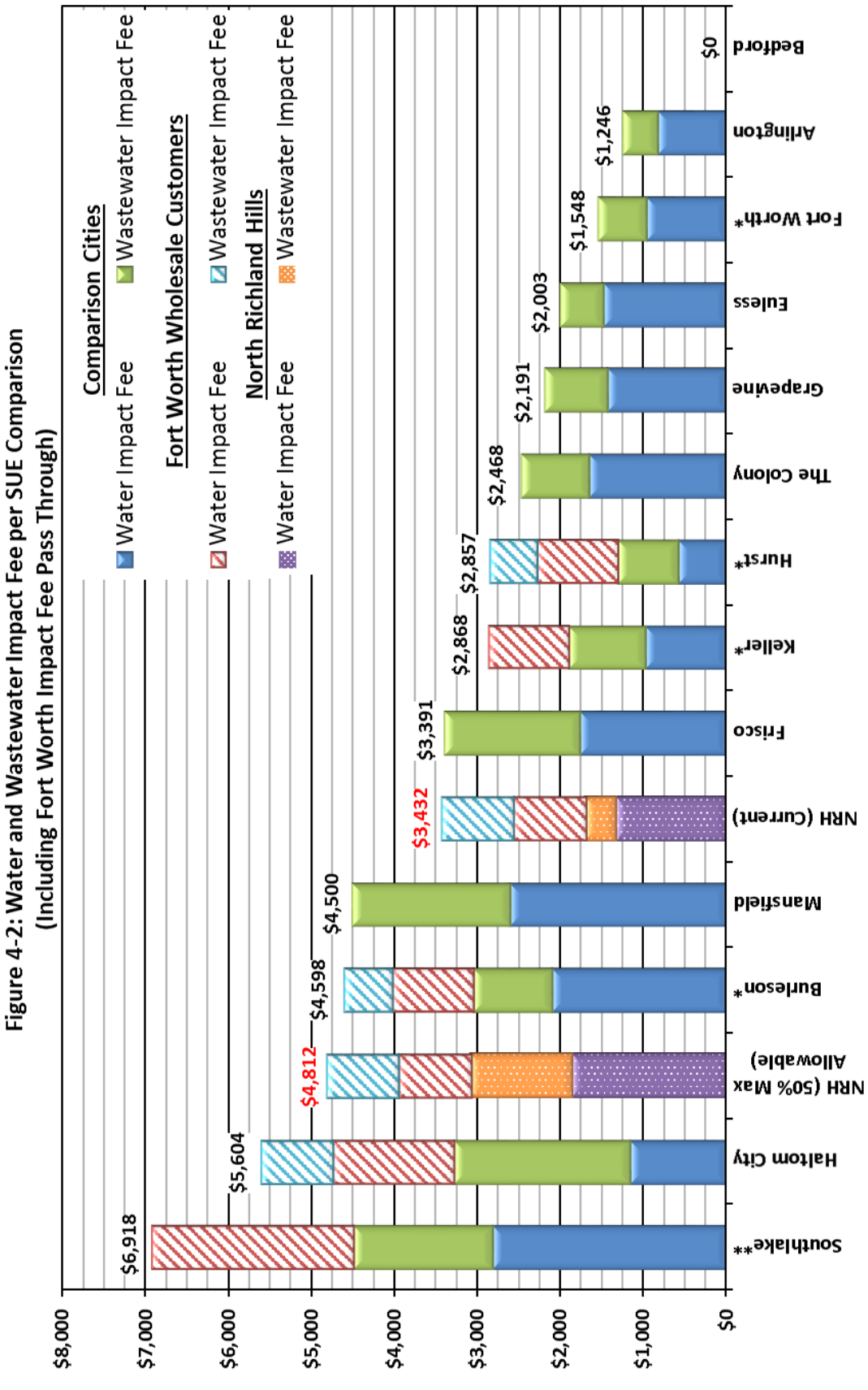

Figure 4-2: Water and Wastewater Impact Fee per SUE Comparison
(Including Fort Worth Impact Fee Pass Through)

*Fort Worth impact fee adjusted to City's base meter size of 5/8"
**Fort Worth impact fee adjusted to City's base meter size of 1"