City of Schertz
CIP Costs & Impact Fee Updates

Presented by: Lee Hamm, P.E.

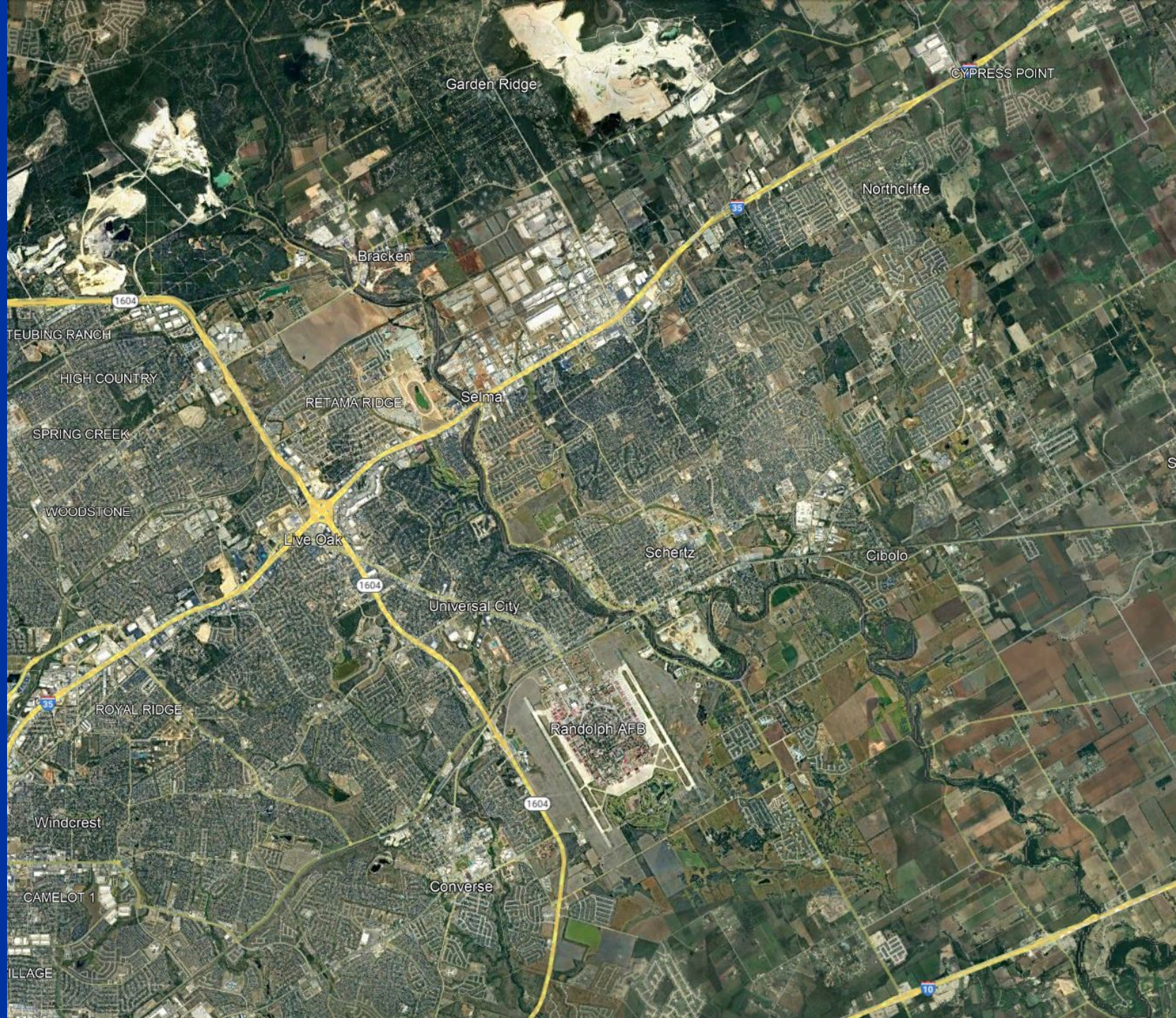
Agenda

- Land Use Assumption Overview
- Developing CIP Costs
- Living Unit Equivalents
- Credit Analysis
- Maximum Impact Fee
- Local Impact Fee Comparison
- Schedule
- Questions

LAN

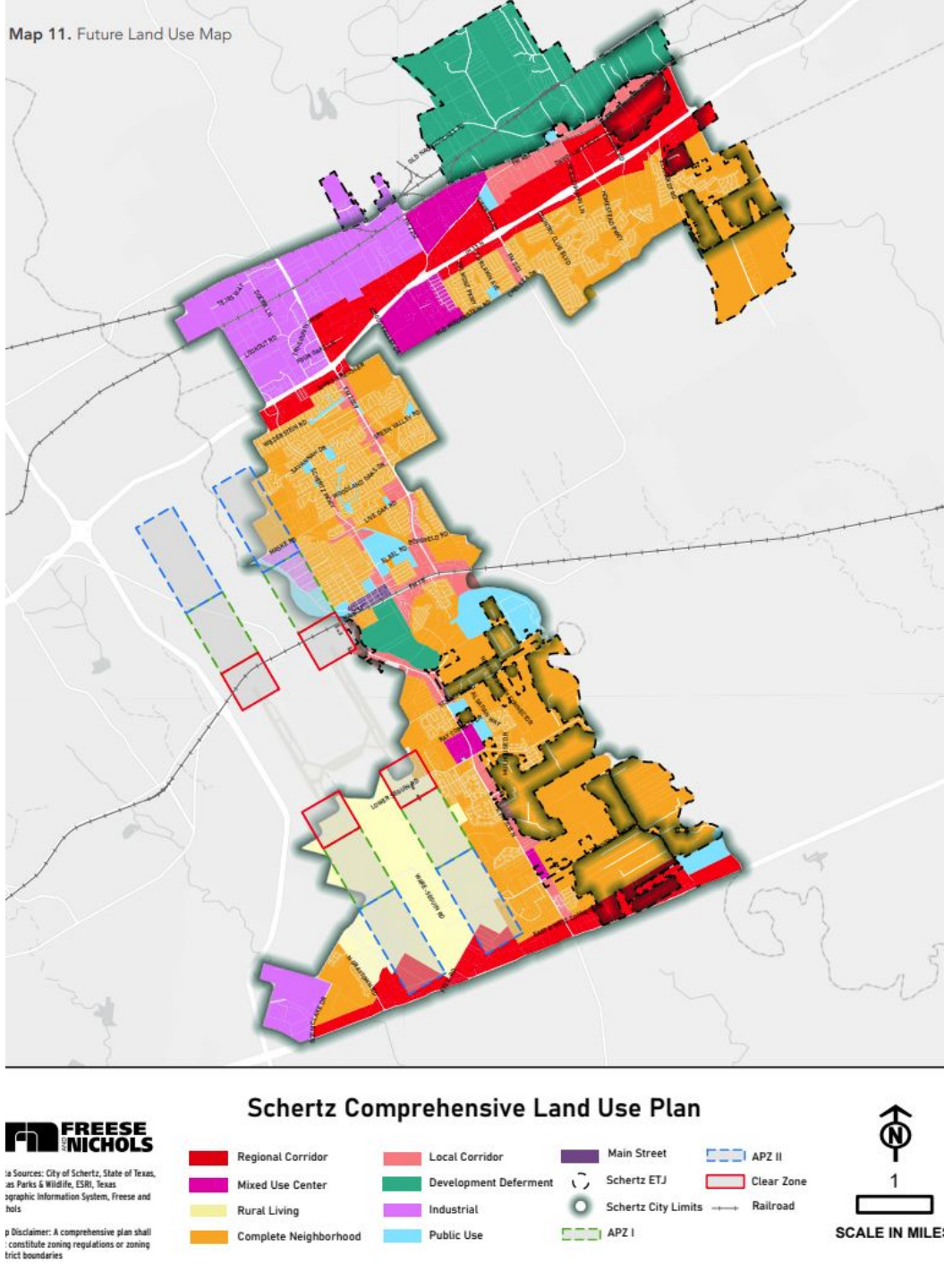
SCHERTZ
COMMUNITY • SERVICE • OPPORTUNITY

Land Use Assumptions Overview



Land Use Assumptions

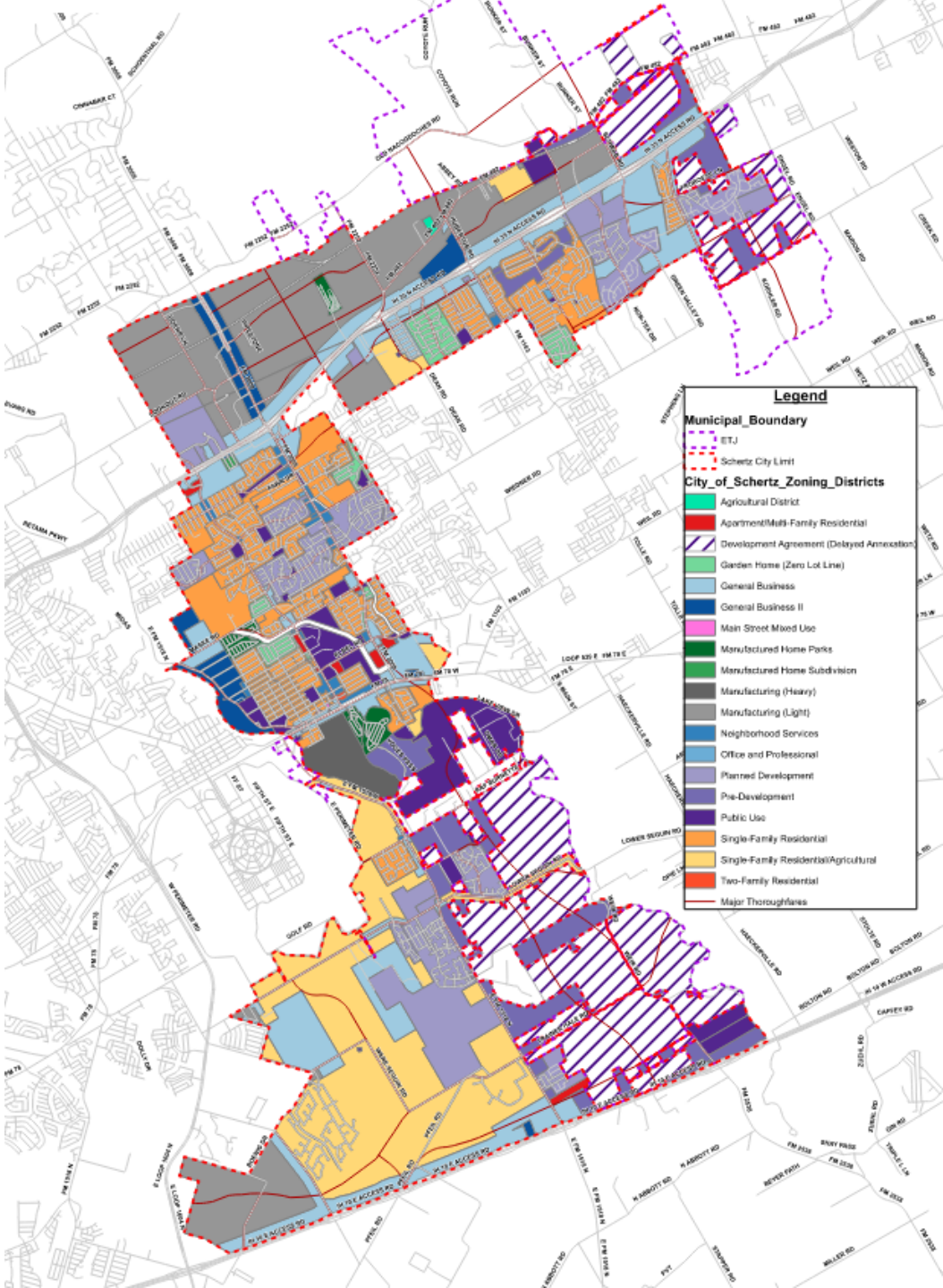
- Basis was the 1) 2018 Land Use Plan Map, 2) existing land uses, and 3) proposed developments.
- Modified based on information received from the City on April 8th, 2022.
- It is assumed that these developments will remain in place for the 30-year planning period.
- New growth will expand away from the City center.
- Development pressure along the IH-35 corridor and from New Braunfels will result in development at higher densities throughout the north.



Land Use Assumptions Continued

- Regions that do not currently lie within the City water or wastewater CCNs currently identified by the Texas PUC will remain so.

- The existing water and wastewater CCNs will remain in place for the 30-year planning period.

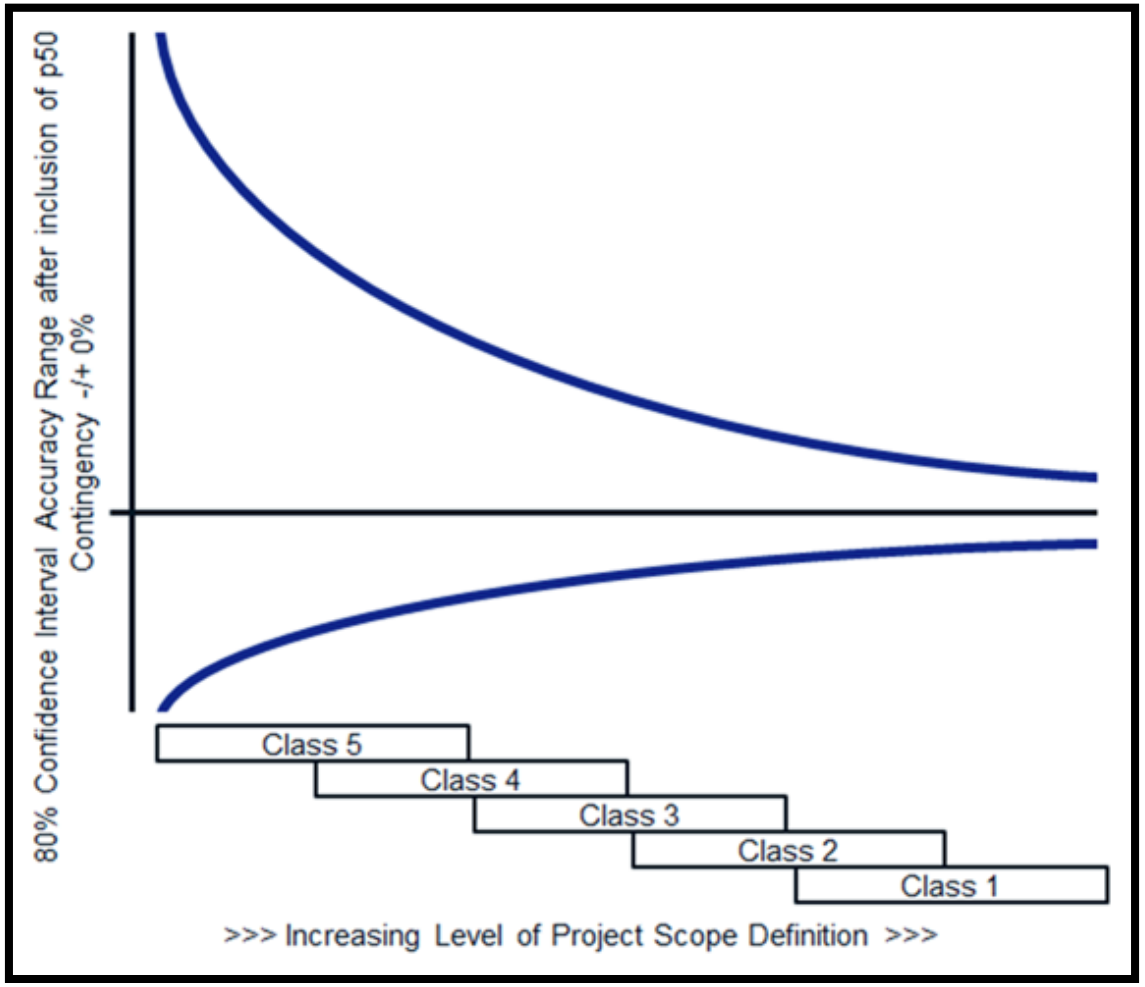


Developing CIP Costs

- Cost Data
- Inflation Rate Calculation
- Eligible Project Costs

Cost Data

- For this analysis Class 4 estimating was identified as the appropriate, industry standard, estimation class.
- A 30% contingency factor was applied across all cost estimates, which reflects the range of accuracy of a Class 4 estimate.
- Sources of Cost Data
  - TxDOT Online Bid Reports (past year)
  - RS Means Database
  - Cost Estimates from Past & Current City Projects
  - Cost Estimates from Past & Current LAN Projects



Inflation Rate Calculation

- To accurately capture construction costs for the 2030 & 2050 planning period, a yearly average inflation rate was calculated.
- Three sources were averaged and standardized:
  - RS Means Historical Inflation Indexes
  - Mortenson Historical Inflation Indexes
  - Turner Historical Inflation Indexes
- **Median Yearly Inflation Rate = 3.91%**

Time Frame	Total Inflation Rate	Yearly Inflation Rate
RS Means Historical Inflation Indexes		
2020 to 2024	128%	6.31%
2010 to 2024	169%	3.81%
2000 to 2024	251%	3.91%
1990 to 2024	309%	3.38%
1980 to 2024	454%	3.50%
Mortenson Historical Inflation Indexes		
2020 to 2023	132%	9.65%
2010 to 2023	188%	5.93%
Turner Historical Inflation Indexes		
2020 to 2023	117%	5.27%
2010 to 2023	172%	4.25%
2000 to 2023	231%	3.70%
1996 to 2024	272%	3.77%
	Average:	**4.86%**
	Median:	**3.91%**

Eligible Project Costs

- Determined by TLGC Section 395
- Eligibility - Projects occurring in the first 10 years of the planning period.
- Utilization Percentage is also applied.
  - Important note – Unique Cases where 2030 CIP projects reach 100% in 2030 and then reduce in 2050.

$$\%\ Utilization = \frac{2030\ Peak\ Flow - 2020\ Peak\ Flow}{2050\ Peak\ Flow}$$

$$\%\ Utilization\ (special\ case) = \frac{2030\ Peak\ Flow - 2020\ Peak\ Flow}{2030\ Peak\ Flow}$$

Example of Project Cost Sheet

SCHERTZ

Capital Improvement Plan Estimate of Probable Cost

Project Name: Bubbling Springs 6" WL Replacement
Project Number: NT-W1**
Project Category: Water
CIP Type: System Improvement

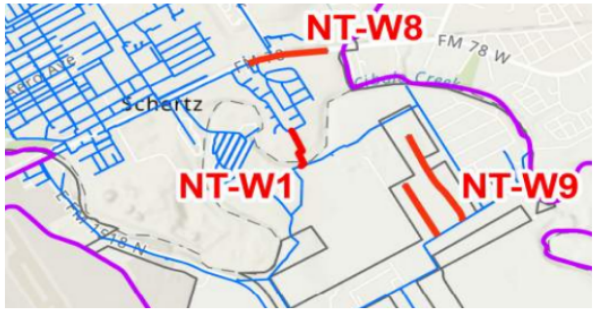
Date: August 2024
Phase: Near Term

Project Description:
Replace leaking 6" from River Rd to just south of Cibolo Creek along Bubbling Springs with 12", approximately 1,320 LF.

Justification:
City identified CIP.

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL
1	12" Water Line	LF	1,320	$ 135	$ 179,000
2	Gate Valve	EA	3	$ 7,000	$ 21,000
3	Fire Hydrant	EA	3	$ 8,500	$ 26,000
4	Service & System Connections	EA	27	$ 2,100	$56,700
4	Surface Replacement	LF	660	$ 196	$ 130,000
5	Traffic Control	LS	1	$ 8,000	$ 8,000
6	SWPPP	LS	1	$ 25,000	$ 25,000
				SUBTOTAL	**$ 446,000**
				MOBILIZATION (5%)	$23,000
				CONTINGENCY (30%)	$134,000
				TOTAL CONSTRUCTION	**$610,000**
				PS&E & CONSTRUCTION MANAGEMENT (25%)	$153,000
				ESTIMATE TOTAL PROJECT COST	**$763,000**

Project Location:



Near Term Water CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Near Term CIP				
System Improvement Projects				
NT-W1**	Bubbling Springs 6" WL Replacement	$763,000	27%	$206,715
NT-W2	Corbett Pump Station & 3.0 MG GST	$8,600,000	0%	$0
NT-W3	Ware Seguin Pump Station Operational Improvement	$175,000	0%	$0
NT-W4	12" WL from Ware Seguin to Lower Seguin	$1,538,000	0%	$0
NT-W5	Fred Couples to Schwab	$455,556	0%	$0
NT-W6	Schwab to Eckhardt	$1,600,000	0%	$0
NT-W7**	Graytown to Pfeil	$1,550,000	69%	$1,077,040
NT-W8**	FM 78 Water Line Replacement	$875,000	22%	$194,778
NT-W9**	Moonlight Meadow Dr & Lost Meadow Dr WL Replacement	$3,000,000	0%	$0
NT-W10**	Robinhood Way WL Replacement	$4,650,000	0%	$0
	NEAR TERM TOTAL:	**$23,206,556**	**-**	**$1,478,532**

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

2030 Water CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Proposed 2030 CIP				
Growth Projects				
2030-W1	12" WL from Tri-County Extension to Cibolo Valley Drive	$4,788,000	100%	$4,788,000
2030-W2	Raf Burnette Rd 12" WL Improvements	$1,438,000	89%	$1,272,934
2030-W3	8" WL from Ray Corbett Dr to Lower Seguin Rd	$3,688,000	97%	$3,569,245
2030-W4**	Trainer Hale Rd 2" WL Replacement & 8" WL Improvement	$9,850,000	93%	$9,192,317
2030-W5**	Boenig Dr S 6" WL Replacement & 8" WL Improvement	$6,388,000	69%	$4,411,757
2030-W6	Live Oak to IH-35 24" Transmission Main	$32,075,000	100%	$32,075,000
2030-W7	Ware Seguin Pump Station Expansion Phase 1	$5,213,000	33%	$1,737,667
2030-W8	IH-10 8" WL Improvements	$6,063,000	100%	$6,063,000
	2030 Growth Subtotal:	**$69,503,000**	**-**	**$63,109,920**
System Improvement Projects				
2030-W9	PRV Installation for Proposed Southwest Pressure Plane	$413,000.0	0%	$0
2030-W10**	River Rd 6" WL Replacement	$2,325,000	58%	$1,354,926
	2030 System Improvement Projects Subtotal:	**$2,738,000**	**-**	**$1,354,926**
	2030 TOTAL:	**$72,241,000**	**-**	**$64,464,846**

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

2050 Water CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Proposed 2050 CIP				
Growth Projects				
2050-W1	Corbett Pump Station Expansion	$1,663,000	2050 CIP Projects are not included in this impact fee total.	
2050-W2	FM 2252 8" WL Improvements	$8,800,000		
2050-W3	Ware Seguin Pump Station Expansion Phase 2	$2,725,000		
2050-W4	Beck St 6" WL Replacement	$5,288,000		
2050-W5	Raf Burnette Rd 8" WL Improvements	$4,438,000		
2050-W6	IH-35 Pump Station & 3.0 MG GST	$42,188,000		
2050-W7	IH-10 & FM 1518 8" WL Improvements	$3,075,000		
	2050 Growth Subtotal:	**$68,177,000**		
System Improvement Projects				
2050-W8	Lower Seguin Rd 8" WL Replacement	$4,775,000		
	2050 System Improvement Projects Subtotal:	**$4,775,000**		
	2050 TOTAL:	**$72,952,000**		

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

Near Term Wastewater CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Near Term CIP				
Growth Projects				
NT-S1	Town Creek Phase IV 24" - Section 1	$6,875,000	21%	$1,440,972
NT-S2	Town Creek Phase IV 12" - Section 2	$2,925,000	0%	$0
NT-S3	Town Creek Phase V 24"	$10,425,000	23%	$2,378,763
NT-S4**	Upsize Lookout Line	$3,838,000	20%	$771,788
NT-S5**	Upsize Tri County Line	$2,084,800	25%	$526,887
NT-S6	Cibolo West Main	$16,213,000	83%	$13,523,463
NT-S7	Woman Hollering Creek Lift Station, Gravity Lines, and Force Main	$3,400,000	74%	$2,517,091
Near Term Growth Subtotal:		**$45,760,800**	-	**$21,158,965**
System Improvement Projects				
NT SI-1	Decommission Tri County Lift Station	$88,000	0%	$0
NT SI-2	Decommission Corbett Lift Station	$1,500,000	0%	$0
NT SI-3	Decommission Sedona Lift Station & Woman Hollering Creek WWTP	$175,000	0%	$0
Near Term System Improvement Projects Subtotal:		**$1,763,000**	-	**$0**
NEAR TERM TOTAL:		**$47,523,800**	-	**$21,158,965**

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

2030 Wastewater CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Proposed 2030 CIP				
Growth Projects				
2030-S1	Hope Lane 8" Gravity Line	$2,025,000	67%	$1,359,153
2030-S2	Old Wiederstein Road 8"	$1,338,000	5%	$68,849
2030-S3	Union Pacific Railroad 8" - Section 1	$2,563,000	10%	$249,210
2030-S4	Union Pacific Railroad 8" - Section 2	$400,000	12%	$47,722
2030-S5	Wiederstein Road 8"	$1,663,000	83%	$1,372,188
2030-S6	Schaefer Road 8" - Section 1	$4,913,000	33%	$1,613,509
2030-S7	Schaefer Road 8" - Section 2	$1,938,000	100%	$1,938,000
2030-S8	Aranda 8"	$475,000	100%	$475,000
2030-S9	Weir Road 10"	$2,525,000	100%	$2,522,465
2030-S10	Trainer Hale Road 10"	$1,038,000	100%	$1,034,756
2030-S11	Ware Seguin Road 8"	$3,113,000	97%	$3,012,264
2030-S12	FM 1518 8"	$400,000	40%	$160,000
2030-S13	I-10 8" - Section 1	$2,713,000	99%	$2,677,145
2030-S14	Boenig Drive 8"	$2,963,000	29%	$849,531
2030-S15	N Greytown Road 8"	$1,275,000	52%	$661,379
	2030 Growth Subtotal:	**$29,342,000**	-	**$18,041,171**
System Improvement Projects				
2030 SI-1**	Friesenhahn West Line WW Upsize	$8,175,000	22%	$1,833,143
2030 SI-2**	Fairlawn WW Upsize	$1,375,000	9%	$121,579
2030 SI-3**	Cibolo Crossing WW Line Upsize	$1,288,000	4%	$46,406
2030 SI-4**	Woodland Oak Drive Replacements	$338,000	4%	$13,741
2030 SI-5**	Old Wiederstein WW Upsize	$5,050,000	61%	$3,099,614
2030 SI-6**	Northcliffe Lift Station Upgrade	$7,838,000	5%	$392,686
2030 SI-7	Decommission Belmont Park Lift Station	$463,000	0%	$0
	2030 System Improvement Projects Subtotal:	**$24,527,000**	-	**$5,507,169**
	2030 TOTAL:	**$53,869,000**	-	**$23,548,341**

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

2050 Wastewater CIP Projects - EOPC

Project Number	Project Name	Total Project Cost	2020-2030 Growth Utilization	Impact Fee Eligible Portion
Proposed 2050 CIP				
Growth Projects				
2050-S1	I-35 N 8"	$9,088,000	2050 CIP projects are not included in the impact fee total.	
2050-S2	Friesenhahn Lane 8"	$6,500,000		
2050-S3	Schaefer Road 8" - Section 3	$5,713,000		
2050-S4	Corbett JH 8"	$2,888,000		
2050-S5	Lower Seguin Road 8"	$1,338,000		
2050-S6	I-10 8" - Section 2	$3,338,000		
	2050 Growth Subtotal:	**$28,865,000**		
System Improvement Projects				
2050 SI-1	Cypress Point Lift Station Upgrade	$1,463,000		
2050 SI-2	Decommission Schertz Parkway Lift Station	$238,000		
2050 SI-3	Decommission Park Lift Station	$3,663,000		
2050 SI-4	Decommission Cover's Cove Lift Station	$238,000		
	2050 System Improvement Projects Subtotal:	**$5,602,000**		
	2050 TOTAL:	**$34,467,000**		

Note: Projects denoted by ** indicate that they have both growth & system improvement components.

Living Unit Equivalents

Living unit or service unit equivalents (LUEs) are:

"*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 and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years*".

Schertz's Growth in LUEs

- Typical practice - one water LUE is equal to a typical residential water meter.
- The wastewater LUE is assumed to be 70% of a single residential water meter's usage to account for irrigation, evaporation, and other water losses associated with the wastewater system.
- Water LUE = 0.17 gpm
- Wastewater LUE = 0.119 gpm.

Growth in Water LUEs			
Scenario	Total Flow (gpm)	Living Unit Equivalent (gpm)	# of LUEs
Existing Residential	2,225	0.17	13,089
Existing Other	2,485		14,620
2030 Residential	3,372		19,838
2030 Other	2,545		14,971
		Growth In Residential:	***6,749***
		Growth In Other:	***351***

Growth in Wastewater LUEs			
Scenario	Total Flow (gpm)	Living Unit Equivalent (gpm)	# of LUEs
Existing Business	113	0.119	951
Existing Other	3,483		29,269
2030 Business	123		1,034
2030 Other	4,332		36,403
		Growth in Business:	***82***
		Growth In Other:	***7,134***

Credit Analysis

- TLGC requires that the maximum allowable impact fee may not exceed: the Eligible Impact Fee minus the mandated credit, divided by the growth in LUEs.
- This credit can be determined in one of two ways:
  1. A credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan.
  2. In the alternative, a credit equal to 50 percent of the total projected cost of implementing the Capital Improvements Plan.
- The first method was selected and performed by the City's financial consultant, Willdan Financial Services. Below are their results.

WATER Revenue Credit -- $3,365,530

WASTEWATER Revenue Credit -- $4,611,802

SCHERTZ
COMMUNITY • SERVICE • OPPORTUNITY

Maximum Allowable Impact Fees

Water Impact Fee	
Impact Fee Eligible Costs	$65,943,379
Credit (Calculated: 5.1%)	($3,365,530)
Total Impact Fee Eligible Costs	$62,577,849
Growth in LUEs	7,100
Maximum Allowable Water Impact Fee	**$8,814**

Wastewater Impact Fee	
Impact Fee Eligible Costs	$44,707,306
Credit (Calculated: 10.3%)	($4,611,802)
Total Impact Fee Eligible Costs	$40,095,504
Growth in LUEs	7,217
Maximum Allowable Wastewater Impact Fee	**$5,556**

Maximum Allowable Impact Fee by Meter Size

Meter Size	Meter Type	Maximum Flow Rate for Continuous Duty (gpm)	Proposed LUE	Maximum Allowable Water Impact Fee	Maximum Allowable Wastewater Impact Fee
5/8"	MULTI-JET	15	1.0	$ 8,814	$ 5,556
3/4"	MULTI-JET	20	1.3	$ 11,810	$ 7,445
1"	MULTI-JET	30	2.0	$ 17,627	$ 11,112
2"	ULTRASONIC	250	16.7	$ 146,924	$ 92,615
3"	ULTRASONIC	500	33.3	$ 293,848	$ 85,231
4"	ULTRASONIC	1,000	66.7	$ 587,607	$ 370,406
6"	ULTRASONIC	1,600	106.7	$ 940,154	$ 592,639
8"	ULTRASONIC	2,800	186.7	$ 1,645,248	$ 1,037,104
10"	ULTRASONIC	5,500	366.7	$ 3,231,708	$ 2,037,150
12"	ULTRASONIC	5,500	366.7	$ 3,231,708	$ 2,037,150

LAN

Local Impact Fee Comparison

City/Utility	Total	Water	Wastewater	Population Served (At the Time of Individual Analysis)
Pflugerville (2023)	$29,849	$14,713	$15,136	65,191
NBU (2022)	$25,692	$19,448	$6,244	90,403
Seguin (2023)	$16,558	$7,308	$9,250	29,470
Schertz (Proposed 2024)	**$14,369**	**$8,814**	**$5,556**	**45,719**
SAWS (2024)	$9,350	$5,987	$3,363	2,000,000
Austin (2023)	$7,700	$4,800	$2,900	961,000
Boerne (2023)	$7,629	$2,509	$5,120	18,232
San Marcos (2018)	$6,485	$3,801	$2,684	68,217
Schertz (Current from 2011)	**$4,603**	**$2,934**	**$1,669**	**34,754**
Cibolo (2021)	$2,712	$1,839	$873	34,000

SCHERTZ
COMMUNITY • SERVICE • OPPORTUNITY

Questions?