



**CITY OF HUTTO, TEXAS
REGULAR CITY COUNCIL MEETING
THURSDAY, JULY 19, 2018 AT 7:00 PM
CITY HALL - CITY COUNCIL CHAMBERS
401 WEST FRONT STREET**

CITY COUNCIL

Doug Gaul, Mayor
Tom Hines, Place 2, Mayor Pro-tem
Scott Rose, Place 1
Nathan Killough, Place 3
Tim Jordan, Place 4
Patti Turner, Place 5
Terri Grimm, Place 6

AMENDED AGENDA

1. **CALL SESSION TO ORDER**

2. **ROLL CALL**

3. **INVOCATION**

4. **PLEDGE OF ALLEGIANCE**

5. **CITY COUNCIL COMMENTS**

5A. General Comments from City Council

6. **PUBLIC COMMENT**

Any citizen wishing to speak during public comment regarding an item on or off the agenda may do so after completing the required registration card. In accordance with the Texas Attorney General's Opinion, any public comment that is made on an item that is not on the published final agenda will only be heard by the City Council. No formal action, discussion, deliberation, or comment will be made by the City Council. Each person providing public comment will be limited to 3 minutes.

6A. Remarks from visitors. *(Three-minute time limit)*

7. **CITY MANAGER COMMENTS:**

7A. Presentation of Training Awards to the Hutto Police Department Explorers. (Chief Byron Frankland)

7B. Presentation of the City Financials for the Month of June and third quarter as well as the third quarter investment report as required by the fiscal and budgetary policy. (Anthony Emadi)

- 7C. Presentation of the Texas Economic Development Council Award for Economic Excellence to the City of Hutto. (Jessica Bullock)
- 7D. Report on Mayors Conference on Entrepreneurship. (Mayor Doug Gaul)
- 7E. Presentation announcing the company for Project Ollie. (Helen Ramirez)

8. **CONSENT AGENDA ITEMS:**

All items listed on the consent agenda are considered to be routine by the City Council and will be enacted by one motion. There will be no separate discussion of these items unless requested by a Council member in which event, the item will be removed from the consent agenda and considered as a regular agenda item.

- 8A. Consideration and possible action approving the minutes of the July 5, 2018 Regular City Council Meeting and July 12, 2018 Special Called Council Meeting. (Lisa Brown)
- 8B. Consideration and possible action on a resolution approving the proposed Mager Meadows Phase 2 Final Plat, 22.441 acres, more or less, of land, 95 residential lots, located Groves Avenue at Marimoor Drive. (Ashley Lumpkin)
- 8C. Consideration and possible action on a resolution approving the proposed Star Ranch Concept Plan (Revised), 112.125 acres, more or less, of land, located within Hutto's extraterritorial jurisdiction west of SH-130 and north of Gattis School Road. (Ashley Lumpkin)
- 8D. Consideration and possible action on an Economic Development Agreement authorizing the City Manager to execute a First Amended Chapter 380 Economic Development Agreement between the City of Hutto and Hutto Mezz Holdings, L.L.C. (Helen Ramirez)
- 8E. Consideration and possible action on a resolution approving the subdivision approval extension request for the Hutto Crossing Phase 4 Section 4 Final Plat, 3.219 acres, more or less, of land, public right-of-way, to become the west extension of Knowles Drive from Chris Kelley Boulevard. (Ashley Lumpkin)

REGULAR AGENDA ITEMS

9. **ORDINANCES:**

- 9A. Consideration of and possible action on the second and final reading of an ordinance approving the Traffic Impact Fee (TIF) Ordinance. (Matt Rector)
- 9B. Consideration and possible action on the first reading of an ordinance approving the Planned Unit Development (PUD) zoning ordinance amendment for the Hutto Crossings PUD, 465.00 acres, more or less, of land, located at the southwest corner of Chris Kelley Boulevard and US 79 West. (Ashley Lumpkin)

- 9C. Consideration of a public hearing and possible action on the first reading of an ordinance approving the zoning change for the property known as 212 FM 1660 South, 0.665 acres, more or less, of land, Lot 4 (N/PT), Block P of the City of Hutto, from OT-4R (Urban Residential) to SD-A (Special District) zoning district. (Ashley Lumpkin)
- 9D. Consideration of a public hearing and possible action on a Specific Use Permit request for 6081 FM 1660 North to allow a car wash in the B-2 (General Commercial) zoning district. (Ashley Lumpkin)
- 9E. Consideration and possible action on an ordinance for a cooperative program to serve the youth in the City of Hutto, Texas, and making available space within city facilities for the program. (Helen Ramirez)

10. **RESOLUTIONS:**

- 10A. Consideration and possible action on the proposed City of Hutto Five Year FY 2019 – 2023 Capital Improvements Plan (CIP) . (Matt Rector)
- 10B. Resolution authorizing the City Manager to execute an engagement letter with the audit firm Eide Bailly, LLP for fiscal year 2018 audit. (Anthony Emadi)
- 10C. Consideration and possible recommendation on the 2018 - 2028 Master Drainage Plan. (Matt Rector)
- 10D. Consideration and possible action on the 2018 - 2028 Mobility Master Plan.
- 10E. Consideration and possible action on the 2018 - 2028 Wastewater Master Plan.

11. **WORK SESSION:**

A work session is conducted for information or educational purposes. No action is taken by the Council on items listed.

- 11A. Work session with Burditt Consultants LLC regarding the Parks Master Plan.
- 11B. Work session regarding the Texas Main Street Program Boundary.

12. **EXECUTIVE SESSION:**

- 12A. Executive Session, as authorized by Texas Government Code Section 551.074, deliberations regarding contract negotiations pertaining to the City Manager.
- 12B. Executive Session, as authorized by Texas Government Code Section 551.074, deliberations regarding personnel matters, as it relates to City Council and Boards and Commissions.

- 12C. The City Council for the City of Hutto reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above as authorized by the Texas Government Code Sections 551.071 [Litigation/Consultation with Attorney], 551.072 [Deliberations regarding real property], 551.073 [Deliberations regarding gifts and donations], 551.074 [Deliberations regarding personnel matters] or 551.076 [Deliberations regarding deployment/implementation of security personnel or devices] and 551.087 [Deliberations regarding Economic Development negotiations].

13. **ACTION RELATIVE TO EXECUTIVE SESSION:**

- 13A. Consideration and possible action relating to contract negotiations regarding the City Manager.
- 13B. Consideration and possible action relating to City Council and Boards and Commissions.

14. **ADJOURNMENT**

CERTIFICATION

I certify that this notice of the July 19, 2018 Hutto City Council meeting was posted on the City Hall bulletin board of the City of Hutto on July 13 at _____ p.m.

Original Agenda Signed

Lisa L. Brown, City Secretary

The City of Hutto is committed to comply with the American with Disabilities Act. The Hutto City Council Chamber is wheelchair accessible. Request for reasonable special communications or accommodations must be made 48 hours prior to the meeting. Please contact the City Secretary at (512) 759-4033 or lisa.brown@huttotx.gov for assistance.

**CITY OF HUTTO
CITY COUNCIL AGENDA**

AGENDA ITEM NO.: 7B. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Anthony Emadi, CFO

ITEM:

Presentation of the City Financials for the Month of June and third quarter as well as the third quarter investment report as required by the fiscal and budgetary policy. (Anthony Emadi)

STRATEGIC GUIDE POLICY: Fiscal Responsibility

ITEM BACKGROUND:

Monthly Financials are presented to the City. Quarterly financials and investment reports are required by the fiscal and budgetary policy of the City.

BUDGETARY AND FINANCIAL SUMMARY:

N/A - Monthly Presentation

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not applicable.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Not applicable.

SUPPORTING MATERIAL:

1. [Balance Sheet](#)
2. [Fund Balance Report](#)
3. [Hutto 6-30-18 Quarterly](#)
4. [Revenue and Expenses](#)



City of Hutto, TX

Balance Sheet

Account Summary

As Of 06/30/2018

Balance

Fund: 10 - General Fund

Assets

Total Assets:	7,627,585.74	<u>7,627,585.74</u>
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Liability

Total Liability:	<u>603,232.52</u>
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Equity

Total Beginning Equity:	<u>4,742,648.25</u>
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Total Revenue	11,602,720.51
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Total Expense	<u>9,321,015.54</u>
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Revenues Over/Under Expenses	<u>2,281,704.97</u>
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Total Equity and Current Surplus (Deficit):	7,024,353.22
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Total Liabilities, Equity and Current Surplus (Deficit):	<u>7,627,585.74</u>
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Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 11 - General Debt Service Fund		
Assets		
	Total Assets:	1,121,299.20
		<u>1,121,299.20</u>
Liability		
	Total Liability:	16,327.50
Equity		
	Total Beginning Equity:	218,656.72
Total Revenue		1,622,031.80
Total Expense		735,716.82
Revenues Over/Under Expenses		886,314.98
	Total Equity and Current Surplus (Deficit):	1,104,971.70
	Total Liabilities, Equity and Current Surplus (Deficit):	<u>1,121,299.20</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 20 - Court Technology Fund		
Assets		
Total Assets:	3,545.81	<u>3,545.81</u>
Liability		
Total Liability:	-200.00	
Equity		
Total Beginning Equity:	9,599.97	
Total Revenue	4,940.91	
Total Expense	10,795.07	
Revenues Over/Under Expenses	-5,854.16	
Total Equity and Current Surplus (Deficit):	3,745.81	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>3,545.81</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 21 - Court Security Fund		
Assets		
Total Assets:	24,614.69	<u>24,614.69</u>
Liability		
Total Liability:	0.00	
Equity		
Total Beginning Equity:	27,790.72	
Total Revenue	2,370.70	
Total Expense	5,546.73	
Revenues Over/Under Expenses	-3,176.03	
Total Equity and Current Surplus (Deficit):	24,614.69	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>24,614.69</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 22 - Court Training Fund		
Assets		
Total Assets:	<u>2,418.37</u>	<u><u>2,418.37</u></u>
Liability		
Total Liability:	<u>0.00</u>	
Equity		
Total Beginning Equity:	<u>2,153.37</u>	
Total Revenue	265.00	
Total Expense	<u>0.00</u>	
Revenues Over/Under Expenses	265.00	
Total Equity and Current Surplus (Deficit):	2,418.37	
Total Liabilities, Equity and Current Surplus (Deficit):		<u><u>2,418.37</u></u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 24 - Hotel Tax Fund		
Assets		
Total Assets:	259,451.73	<u>259,451.73</u>
Liability		
Total Liability:	87,065.95	
Equity		
Total Beginning Equity:	217,859.44	
Total Revenue	130,191.34	
Total Expense	175,665.00	
Revenues Over/Under Expenses	-45,473.66	
Total Equity and Current Surplus (Deficit):	172,385.78	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>259,451.73</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 26 - ATS Red Light Camera Fund		
Assets		
Total Assets:	156,002.65	<u>156,002.65</u>
Liability		
Total Liability:	59,995.84	
Equity		
Total Beginning Equity:	95,946.77	
Total Revenue	5,498.09	
Total Expense	5,438.05	
Revenues Over/Under Expenses	60.04	
Total Equity and Current Surplus (Deficit):	96,006.81	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>156,002.65</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 27 - PEG Capital Fees		
Assets		
Total Assets:	56,394.12	<u>56,394.12</u>
Liability		
Total Liability:	0.00	
Equity		
Total Beginning Equity:	45,735.58	
Total Revenue	10,658.54	
Total Expense	0.00	
Revenues Over/Under Expenses	10,658.54	
Total Equity and Current Surplus (Deficit):	56,394.12	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>56,394.12</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 40 - Park Improvement Fund		
Assets		
Total Assets:	319,418.14	<u>319,418.14</u>
Liability		
Total Liability:	0.00	
Equity		
Total Beginning Equity:	315,791.61	
Total Revenue	3,626.53	
Total Expense	0.00	
Revenues Over/Under Expenses	<u>3,626.53</u>	
Total Equity and Current Surplus (Deficit):	319,418.14	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>319,418.14</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 50 - Utility Fund		
Assets		
Total Assets:	75,129,667.67	<u>75,129,667.67</u>
Liability		
Total Liability:	41,815,397.22	
Equity		
Total Beginning Equity:	23,444,369.56	
Total Revenue	78,662,871.66	
Total Expense	68,792,970.77	
Revenues Over/Under Expenses	9,869,900.89	
Total Equity and Current Surplus (Deficit):	33,314,270.45	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>75,129,667.67</u>

Balance Sheet

As Of 06/30/2018

		Balance	
Fund: 51 - Utility Debt Service Fund			
Assets			
	Total Assets:	-1,407,912.06	-1,407,912.06
Liability			
	Total Liability:	1,152.30	
Equity			
	Total Beginning Equity:	-1,430,831.02	
Total Revenue		1,977,296.41	
Total Expense		1,955,529.75	
Revenues Over/Under Expenses		21,766.66	
	Total Equity and Current Surplus (Deficit):	-1,409,064.36	
	Total Liabilities, Equity and Current Surplus (Deficit):		-1,407,912.06

Balance Sheet

As Of 06/30/2018

		Balance
Fund: 52 - Impact Fees Fund		
Assets		
	Total Assets:	830,029.00
		830,029.00
Liability		
	Total Liability:	949,265.00
Equity		
	Total Beginning Equity:	0.00
Total Revenue		1,080,764.00
Total Expense		1,200,000.00
Revenues Over/Under Expenses		-119,236.00
	Total Equity and Current Surplus (Deficit):	-119,236.00
	Total Liabilities, Equity and Current Surplus (Deficit):	830,029.00

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 60 - Capital Improvements Project		
Assets		
	Total Assets:	12,102,123.59
		<u>12,102,123.59</u>
Liability		
	Total Liability:	2,370,397.79
Equity		
	Total Beginning Equity:	2,640,225.61
Total Revenue		16,459,712.90
Total Expense		9,368,212.71
Revenues Over/Under Expenses		7,091,500.19
	Total Equity and Current Surplus (Deficit):	9,731,725.80
	Total Liabilities, Equity and Current Surplus (Deficit):	<u>12,102,123.59</u>

Balance Sheet

As Of 06/30/2018

	Balance	
Fund: 62 - Drainage & Streets Fund		
Assets		
Total Assets:	1,366,913.23	<u>1,366,913.23</u>
Liability		
Total Liability:	24,166.66	
Equity		
Total Beginning Equity:	0.00	
Total Revenue	3,113,639.45	
Total Expense	1,770,892.88	
Revenues Over/Under Expenses	<u>1,342,746.57</u>	
Total Equity and Current Surplus (Deficit):	1,342,746.57	
Total Liabilities, Equity and Current Surplus (Deficit):		<u>1,366,913.23</u>

Balance Sheet

As Of 06/30/2018

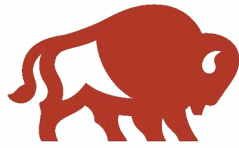
		Balance	
Fund: 70 - Solid Waste Fund			
Assets			
	Total Assets:	782,500.81	782,500.81
Liability			
	Total Liability:	270,238.81	
Equity			
	Total Beginning Equity:	319,835.44	
Total Revenue		1,034,378.61	
Total Expense		841,952.05	
Revenues Over/Under Expenses		192,426.56	
	Total Equity and Current Surplus (Deficit):	512,262.00	
	Total Liabilities, Equity and Current Surplus (Deficit):		782,500.81



Fund Balance Report

As Of 06/30/2018

Fund	Beginning Balance	Total Revenues	Total Expenses	Ending Balance
10 - General Fund	4,742,648.25	11,602,720.51	9,321,015.54	7,024,353.22
11 - General Debt Service Fund	218,656.72	1,622,031.80	735,716.82	1,104,971.70
20 - Court Technology Fund	9,599.97	4,940.91	10,795.07	3,745.81
21 - Court Security Fund	27,790.72	2,370.70	5,546.73	24,614.69
22 - Court Training Fund	2,153.37	265.00	0.00	2,418.37
24 - Hotel Tax Fund	217,859.44	130,191.34	175,665.00	172,385.78
26 - ATS Red Light Camera Fund	95,946.77	5,498.09	5,438.05	96,006.81
27 - PEG Capital Fees	45,735.58	10,658.54	0.00	56,394.12
40 - Park Improvement Fund	315,791.61	3,626.53	0.00	319,418.14
50 - Utility Fund	23,444,369.56	78,662,871.66	68,792,970.77	33,314,270.45
51 - Utility Debt Service Fund	-1,430,831.02	1,977,296.41	1,955,529.75	-1,409,064.36
52 - Impact Fees Fund	0.00	1,080,764.00	1,200,000.00	-119,236.00
60 - Capital Improvements Project	2,640,225.61	16,459,712.90	9,368,212.71	9,731,725.80
62 - Drainage & Streets Fund	0.00	3,113,639.45	1,770,892.88	1,342,746.57
70 - Solid Waste Fund	319,835.44	1,034,378.61	841,952.05	512,262.00
Report Total:	30,649,782.02	115,710,966.45	94,183,735.37	52,177,013.10



City of Hutto



For the Month Ended

June 30, 2018

Report Name

Certification Page
Executive Summary
Benchmark Comparison
Detail of Security Holdings
Change in Value
Earned Income
Investment Transactions
Amortization and Accretion
Projected Fixed Income Cash Flows

MARKET RECAP - JUNE 2018:

The key economic indicators released during June showed a strengthening economy with growing inflationary pressures. Nonfarm payrolls rose by +223k in May, well above the +190k median forecast, while prior month revisions added another +14k. Headline unemployment fell from 3.9% to 3.8%, the lowest since 1969, while the broader U6 "under-employment" rate fell from 7.8% to 7.6%, the lowest since December 2000. Average hourly earnings rose by a greater-than-expected +0.3% in May, pushing year-over-year wage inflation up from 2.56% to 2.71%. The ISM manufacturing index rebounded in May after slipping for two straight months. The 58.7 reading was within two points of the 14-year high set in February. Factory input prices continue to climb as the 79.5 reading on the ISM prices paid index was the highest since April 2011. The ISM non-manufacturing index rose by 1.8 points in May to 58.6, within 1.3 points of the 13-year high set in January. Retail sales unexpectedly jumped +0.8% in May, doubling the expected increase with the strongest monthly advance since November. Weak consumer spending held back first quarter economic growth, but the last three months have been quite solid. According to Bloomberg, retail sales are now tracking at a +5.9% year-over-year pace. Inflation firmed during May with the year-over-year consumer price index pushing up to +2.8% at the headline and +2.2% at the core. Producer prices also rose more than expected in May with the year-over-year headline PPI running at +3.1%, the highest since January 2012, and the core at +2.6%.

As expected, the Fed's policy setting Federal Open Market Committee raised the overnight fed funds target by 25 basis points to a new range of 1.75% - 2.00%. It was the seventh quarter-point increase since 2015. The statement tilted slightly hawkish compared to the previous statement, noting that "economic activity has been rising at a solid rate" versus just "moderate" previously; that the unemployment rate had "declined" versus "stayed low;" and household spending "has picked up" versus "moderated." The summary of economic projections, better known as the dot plot, also took a hawkish tilt with a lower unemployment rate, faster GDP growth for 2018, higher PCE for 2018, and a quicker pace of rate of hikes that now indicates a total of four 25 basis point hikes in 2018 versus three previously.

Financial markets don't seem to share the optimistic viewpoint painted by the data and seemingly validated by the Fed's action. Instead, markets are focusing on the burgeoning prospects of a trade war as the Trump administration and our global trading partners sink deeper into a spat of tit-for-tat tariffs. When President Trump implemented new 25% tariffs on \$50 billion worth of Chinese goods, China quickly retaliated with 25% tariffs on \$34 billion of U.S. goods. Trump responded by asking his staff to identify another \$200 billion of Chinese products that could have tariffs imposed. Commerce Secretary Wilbur Ross has said the ultimate objective is to remove barriers, "We're going to fix the problem of protectionism around the world and we're going to fix it by making it more painful for those countries to do bad practices than to do the right thing, which is to lower the trade barriers and lower their tariffs." Our trading partners, particularly Canada, Mexico, the EU and China are fighting back, initiating retaliatory tariffs on U.S. goods. State controlled media in China wrote, "If Trump continues to escalate trade tensions with China, we cannot rule out the possibility that China will strike back by adopting a hardline approach targeting Dow Jones Index giants." The major U.S. equity indexes have taken notice with the Dow down 2% for the year and nearly 9% below its high, and the S&P 500 about 5% below its high. Bond yields fell during the month, despite the Fed rate hike and hotter inflation data, with the yield curve flattening as the two-year Treasury note yield closed the month at 2.53% while the 10-year T-note yield slipped to 2.86%.

For the Month Ended
June 30, 2018

This report is prepared for the **City of Hutto** (the "Entity") in accordance with Chapter 2256 of the Texas Public Funds Investment Act ("PFIA"). Section 2256.023(a) of the PFIA states that: "Not less than quarterly, the investment officer shall prepare and submit to the governing body of the entity a written report of the investment transactions for all funds covered by this chapter for the preceding reporting period." This report is signed by the Entity's investment officers and includes the disclosures required in the PFIA. To the extent possible, market prices have been obtained from independent pricing sources.

The investment portfolio complied with the PFIA and the Entity's approved Investment Policy and Strategy throughout the period. All investment transactions made in the portfolio during this period were made on behalf of the Entity and were made in full compliance with the PFIA and the approved Investment Policy.

Officer Names and Titles:

Name: James Bryson

Title: Director of Finance

Account Summary

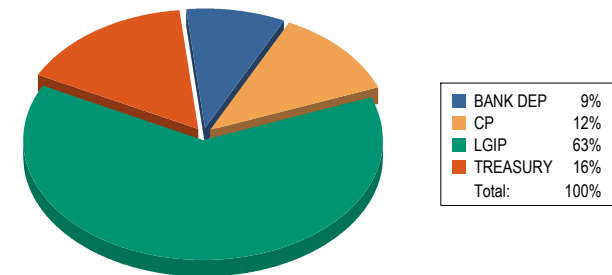
Allocation by Security Type

Beginning Values as of 05/31/18

Ending Values as of 06/30/18

Par Value	38,258,334.75	38,001,424.54
Market Value	38,216,879.75	37,973,518.04
Book Value	38,225,312.67	37,980,412.31
Unrealized Gain /(Loss)	(8,432.92)	(6,894.27)
Market Value %	99.98%	99.98%

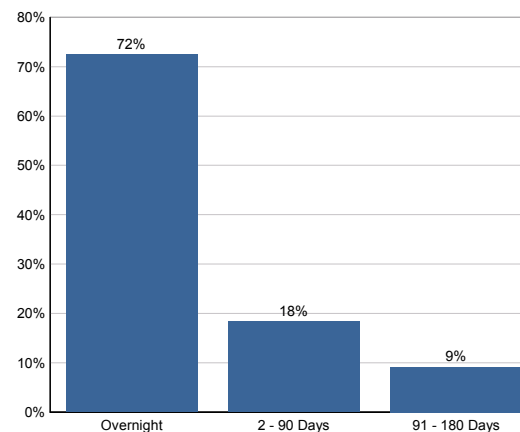
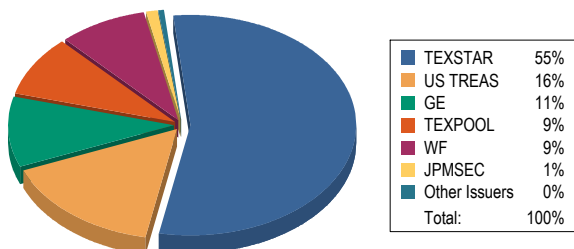
Weighted Avg. YTW	1.588%	1.700%
Weighted Avg. YTM	1.588%	1.700%



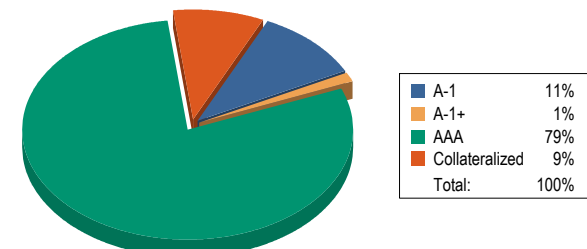
Allocation by Issuer

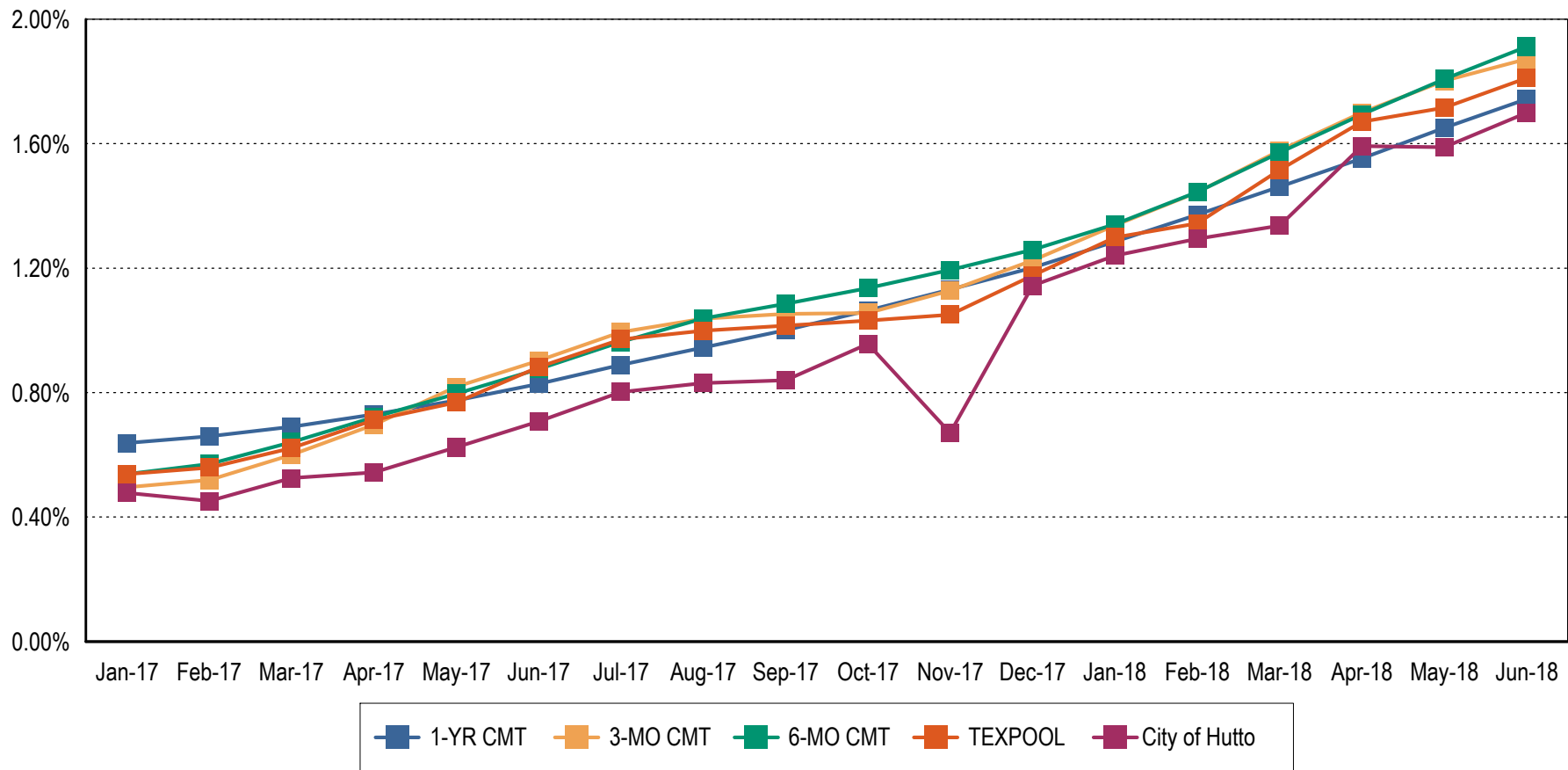
Maturity Distribution %

Credit Quality



Weighted Average Days to Maturity: 24





Note 1: CMT stands for Constant Maturity Treasury. This data is published in Federal Reserve Statistical Release H.15 and represents an average of all actively traded Treasury securities having that time remaining until maturity. This is a standard industry benchmark for Treasury securities. The CMT benchmarks are moving averages. The 3-month CMT is the daily average for the previous 3 months, the 6-month CMT is the daily average for the previous 6 months, and the 1-year and 2-year CMT's are the daily averages for the previous 12-months.

Note 2: Benchmark data for TexPool is the monthly average yield.

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
2007 Tax Note Bond Fund																	
TEXSTAR		LGIP	TexSTAR					171,323.63	100.000	171,323.63	171,323.63	100.000	171,323.63	1		1.830	1.830
Total for 2007 Tax Note Bond Fund								171,323.63	100.000	171,323.63	171,323.63	100.000	171,323.63	1		1.830	1.830
2010 Bond Fund																	
TEXSTAR		LGIP	TexSTAR					107.89	100.000	107.89	107.89	100.000	107.89	1		1.830	1.830
Total for 2010 Bond Fund								107.89	100.000	107.89	107.89	100.000	107.89	1		1.830	1.830
2010 GO Bond Fund																	
TEXSTAR		LGIP	TexSTAR					159,453.10	100.000	159,453.10	159,453.10	100.000	159,453.10	1		1.830	1.830
Total for 2010 GO Bond Fund								159,453.10	100.000	159,453.10	159,453.10	100.000	159,453.10	1		1.830	1.830
2011 CO Bond Fund																	
TEXSTAR		LGIP	TexSTAR					202,339.91	100.000	202,339.91	202,339.91	100.000	202,339.91	1		1.830	1.830
Total for 2011 CO Bond Fund								202,339.91	100.000	202,339.91	202,339.91	100.000	202,339.91	1		1.830	1.830
2012 GO Bond Fund																	
TEXSTAR		LGIP	TexSTAR					64,647.51	100.000	64,647.51	64,647.51	100.000	64,647.51	1		1.830	1.830
Total for 2012 GO Bond Fund								64,647.51	100.000	64,647.51	64,647.51	100.000	64,647.51	1		1.830	1.830
2013 CO Bond Fund																	
TEXSTAR		LGIP	TexSTAR					203.74	100.000	203.74	203.74	100.000	203.74	1		1.830	1.830
Total for 2013 CO Bond Fund								203.74	100.000	203.74	203.74	100.000	203.74	1		1.830	1.830

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
2016 GO Bond Fund																	
TEXSTAR		LGIP	TexSTAR					286,476.76	100.000	286,476.76	286,476.76	100.000	286,476.76	1		1.830	1.830
Total for 2016 GO Bond Fund								286,476.76	100.000	286,476.76	286,476.76	100.000	286,476.76	1		1.830	1.830
2017 CO Bonds																	
TEXSTAR		LGIP	TexSTAR					12,025,476.27	100.000	12,025,476.27	12,025,476.27	100.000	12,025,476.27	1		1.830	1.830
912828L40	12/04/17	TREAS NOTE	U.S. Treasury	1.000	09/15/18			3,000,000.00	99.527	2,985,820.31	2,996,236.35	99.808	2,994,240.00	77		1.612	1.612
912828A34	12/04/17	TREAS NOTE	U.S. Treasury	1.250	11/30/18			3,000,000.00	99.590	2,987,695.31	2,994,812.79	99.652	2,989,569.00	153		1.670	1.670
Total for 2017 CO Bonds								18,025,476.27	99.853	17,998,991.89	18,016,525.41	99.910	18,009,285.27	39		1.767	1.767
2017 LTN Bond Fund																	
TEXSTAR		LGIP	TexSTAR					1,359,325.13	100.000	1,359,325.13	1,359,325.13	100.000	1,359,325.13	1		1.830	1.830
Total for 2017 LTN Bond Fund								1,359,325.13	100.000	1,359,325.13	1,359,325.13	100.000	1,359,325.13	1		1.830	1.830
Debt Service																	
TEXSTAR		LGIP	TexSTAR					1,587,824.16	100.000	1,587,824.16	1,587,824.16	100.000	1,587,824.16	1		1.830	1.830
TEXSTAR2		LGIP	TexSTAR					4,602,133.82	100.000	4,602,133.82	4,602,133.82	100.000	4,602,133.82	1		1.830	1.830
Total for Debt Service								6,189,957.98	100.000	6,189,957.98	6,189,957.98	100.000	6,189,957.98	1		1.830	1.830
Operating Fund																	
FSB		BANK DEP	Bancorp South					186,051.26	100.000	186,051.26	186,051.26	100.000	186,051.26	1		1.320	1.320
TEXPOOL		LGIP	TexPool					3,306,131.89	100.000	3,306,131.89	3,306,131.89	100.000	3,306,131.89	1		1.811	1.811
TEXSTAR		LGIP	TexSTAR					307,988.67	100.000	307,988.67	307,988.67	100.000	307,988.67	1		1.830	1.830
WF-HUTTO		BANK DEP	Wells Fargo					3,241,940.80	100.000	3,241,940.80	3,241,940.80	100.000	3,241,940.80	1		0.000	0.000
36960MGT4	04/20/18	CP - DISC	GE Co		07/27/18			4,000,000.00	99.371	3,974,846.67	3,993,326.68	99.847	3,993,876.00	27		2.325	2.325
46640QMB4	03/16/18	CP - DISC	J.P.Morgan Sec		12/11/18			500,000.00	98.215	491,075.00	494,611.95	98.882	494,408.50	164		2.423	2.423
Total for Operating Fund								11,542,112.62	99.706	11,508,034.29	11,530,051.25	99.899	11,530,397.12	17		1.499	1.499

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
Total for City of Hutto									38,001,424.54	99.841	37,940,861.83	37,980,412.31	99.927	37,973,518.04	24	1.700	1.700

CUSIP	Security Type	Security Description	05/31/18 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	06/30/18 Book Value	05/31/18 Market Value	06/30/18 Market Value	Change in Mkt Value
2007 Tax Note Bond Fund											
TEXSTAR	LGIP	TexSTAR	171,066.31	257.32	0.00	0.00	0.00	171,323.63	171,066.31	171,323.63	257.32
Total for 2007 Tax Note Bond Fund			171,066.31	257.32	0.00	0.00	0.00	171,323.63	171,066.31	171,323.63	257.32
2010 Bond Fund											
TEXSTAR	LGIP	TexSTAR	169,753.74	0.00	(169,645.85)	0.00	0.00	107.89	169,753.74	107.89	(169,645.85)
Total for 2010 Bond Fund			169,753.74	0.00	(169,645.85)	0.00	0.00	107.89	169,753.74	107.89	(169,645.85)
2010 GO Bond Fund											
TEXSTAR	LGIP	TexSTAR	159,213.61	239.49	0.00	0.00	0.00	159,453.10	159,213.61	159,453.10	239.49
Total for 2010 GO Bond Fund			159,213.61	239.49	0.00	0.00	0.00	159,453.10	159,213.61	159,453.10	239.49
2011 CO Bond Fund											
TEXSTAR	LGIP	TexSTAR	202,036.01	303.90	0.00	0.00	0.00	202,339.91	202,036.01	202,339.91	303.90
Total for 2011 CO Bond Fund			202,036.01	303.90	0.00	0.00	0.00	202,339.91	202,036.01	202,339.91	303.90
2012 GO Bond Fund											
TEXSTAR	LGIP	TexSTAR	64,550.42	97.09	0.00	0.00	0.00	64,647.51	64,550.42	64,647.51	97.09
Total for 2012 GO Bond Fund			64,550.42	97.09	0.00	0.00	0.00	64,647.51	64,550.42	64,647.51	97.09
2013 CO Bond Fund											
BBVAHUTTO	BANK DEP	BBVA Compass MM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXSTAR	LGIP	TexSTAR	203.44	0.30	0.00	0.00	0.00	203.74	203.44	203.74	0.30
Total for 2013 CO Bond Fund			203.44	0.30	0.00	0.00	0.00	203.74	203.44	203.74	0.30

CUSIP	Security Type	Security Description	05/31/18 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	06/30/18 Book Value	05/31/18 Market Value	06/30/18 Market Value	Change in Mkt Value
2016 GO Bond Fund											
TEXSTAR	LGIP	TexSTAR	443,721.05	0.00	(157,244.29)	0.00	0.00	286,476.76	443,721.05	286,476.76	(157,244.29)
Total for 2016 GO Bond Fund			443,721.05	0.00	(157,244.29)	0.00	0.00	286,476.76	443,721.05	286,476.76	(157,244.29)
2017 CO Bonds											
TEXSTAR	LGIP	TexSTAR	9,584,484.53	2,440,991.74	0.00	0.00	0.00	12,025,476.27	9,584,484.53	12,025,476.27	2,440,991.74
912796PJ2	TREAS BILL	U.S. Treasury 0.000 06/07/18	2,999,191.26	0.00	(3,000,000.00)	808.74	0.00	0.00	2,999,229.00	0.00	(2,999,229.00)
912828L40	TREAS NOTE	U.S. Treasury 1.000 09/15/18	2,994,750.72	0.00	0.00	1,485.63	0.00	2,996,236.35	2,991,630.00	2,994,240.00	2,610.00
912828A34	TREAS NOTE	U.S. Treasury 1.250 11/30/18	2,993,788.98	0.00	0.00	1,023.81	0.00	2,994,812.79	2,987,343.00	2,989,569.00	2,226.00
Total for 2017 CO Bonds			18,572,215.49	2,440,991.74	(3,000,000.00)	3,318.18	0.00	18,016,525.41	18,562,686.53	18,009,285.27	(553,401.26)
2017 LTN Bond Fund											
TEXSTAR	LGIP	TexSTAR	1,387,162.61	0.00	(27,837.48)	0.00	0.00	1,359,325.13	1,387,162.61	1,359,325.13	(27,837.48)
Total for 2017 LTN Bond Fund			1,387,162.61	0.00	(27,837.48)	0.00	0.00	1,359,325.13	1,387,162.61	1,359,325.13	(27,837.48)
Debt Service											
TEXSTAR	LGIP	TexSTAR	914,603.75	673,220.41	0.00	0.00	0.00	1,587,824.16	914,603.75	1,587,824.16	673,220.41
TEXSTAR2	LGIP	TexSTAR	2,300,750.97	2,301,382.85	0.00	0.00	0.00	4,602,133.82	2,300,750.97	4,602,133.82	2,301,382.85
Total for Debt Service			3,215,354.72	2,974,603.26	0.00	0.00	0.00	6,189,957.98	3,215,354.72	6,189,957.98	2,974,603.26
Operating Fund											
FSB	BANK DEP	Bancorp South	185,836.44	214.82	0.00	0.00	0.00	186,051.26	185,836.44	186,051.26	214.82
TEXPOOL	LGIP	TexPool	3,727,105.52	0.00	(420,973.63)	0.00	0.00	3,306,131.89	3,727,105.52	3,306,131.89	(420,973.63)
TEXSTAR	LGIP	TexSTAR	1,364,593.94	0.00	(1,056,605.27)	0.00	0.00	307,988.67	1,364,593.94	307,988.67	(1,056,605.27)
WF-HUTTO	BANK DEP	Wells Fargo	4,083,252.41	0.00	(841,311.61)	0.00	0.00	3,241,940.80	4,083,252.41	3,241,940.80	(841,311.61)
36960MGT4	CP - DISC	GE Co 0.000 07/27/18	3,985,626.68	0.00	0.00	7,700.00	0.00	3,993,326.68	3,987,044.00	3,993,876.00	6,832.00
46640QMB4	CP - DISC	J.P.Morgan Sec 0.000 12/11/18	493,620.28	0.00	0.00	991.67	0.00	494,611.95	493,299.00	494,408.50	1,109.50
Total for Operating Fund			13,840,035.27	214.82	(2,318,890.51)	8,691.67	0.00	11,530,051.25	13,841,131.31	11,530,397.12	(2,310,734.19)

CUSIP	Security Type	Security Description	05/31/18 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	06/30/18 Book Value	05/31/18 Market Value	06/30/18 Market Value	Change in Mkt Value
Total for City of Hutto			38,225,312.67	5,416,707.92	(5,673,618.13)	12,009.85	0.00	37,980,412.31	38,216,879.75	37,973,518.04	(243,361.71)

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
2007 Tax Note Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	257.32	257.32	0.00	0.00	0.00	257.32
Total for 2007 Tax Note Bond Fund			0.00	257.32	257.32	0.00	0.00	0.00	257.32
2010 Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	107.15	107.15	0.00	0.00	0.00	107.15
Total for 2010 Bond Fund			0.00	107.15	107.15	0.00	0.00	0.00	107.15
2010 GO Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	239.49	239.49	0.00	0.00	0.00	239.49
Total for 2010 GO Bond Fund			0.00	239.49	239.49	0.00	0.00	0.00	239.49
2011 CO Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	303.90	303.90	0.00	0.00	0.00	303.90
Total for 2011 CO Bond Fund			0.00	303.90	303.90	0.00	0.00	0.00	303.90
2012 GO Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	97.09	97.09	0.00	0.00	0.00	97.09
Total for 2012 GO Bond Fund			0.00	97.09	97.09	0.00	0.00	0.00	97.09
2013 CO Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	0.30	0.30	0.00	0.00	0.00	0.30
Total for 2013 CO Bond Fund			0.00	0.30	0.30	0.00	0.00	0.00	0.30

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
2016 GO Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	529.71	529.71	0.00	0.00	0.00	529.71
Total for 2016 GO Bond Fund			0.00	529.71	529.71	0.00	0.00	0.00	529.71
2017 CO Bonds									
TEXSTAR	LGIP	TexSTAR	0.00	16,679.74	16,679.74	0.00	0.00	0.00	16,679.74
912796PJ2	TREAS BILL	U.S. Treasury 0.000 06/07/18	0.00	0.00	0.00	0.00	0.00	808.74	808.74
912828L40	TREAS NOTE	U.S. Treasury 1.000 09/15/18	6,358.70	2,445.65	0.00	0.00	8,804.35	1,485.63	3,931.28
912828A34	TREAS NOTE	U.S. Treasury 1.250 11/30/18	102.46	3,073.77	0.00	0.00	3,176.23	1,023.81	4,097.58
Total for 2017 CO Bonds			6,461.16	22,199.16	16,679.74	0.00	11,980.58	3,318.18	25,517.34
2017 LTN Bond Fund									
TEXSTAR	LGIP	TexSTAR	0.00	2,060.52	2,060.52	0.00	0.00	0.00	2,060.52
Total for 2017 LTN Bond Fund			0.00	2,060.52	2,060.52	0.00	0.00	0.00	2,060.52
Debt Service									
TEXSTAR	LGIP	TexSTAR	0.00	1,994.41	1,994.41	0.00	0.00	0.00	1,994.41
TEXSTAR2	LGIP	TexSTAR	0.00	5,576.85	5,576.85	0.00	0.00	0.00	5,576.85
Total for Debt Service			0.00	7,571.26	7,571.26	0.00	0.00	0.00	7,571.26
Operating Fund									
FSB	BANK DEP	Bancorp South	0.00	214.82	214.82	0.00	0.00	0.00	214.82
TEXPOOL	LGIP	TexPool	0.00	5,193.71	5,193.71	0.00	0.00	0.00	5,193.71
TEXSTAR	LGIP	TexSTAR	0.00	1,729.98	1,729.98	0.00	0.00	0.00	1,729.98
36960MGT4	CP - DISC	GE Co 0.000 07/27/18	0.00	0.00	0.00	0.00	0.00	7,700.00	7,700.00
46640QMB4	CP - DISC	J.P.Morgan Sec 0.000 12/11/18	0.00	0.00	0.00	0.00	0.00	991.67	991.67
Total for Operating Fund			0.00	7,138.51	7,138.51	0.00	0.00	8,691.67	15,830.18

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
Total for City of Hutto			6,461.16	40,504.41	34,984.99	0.00	11,980.58	12,009.85	52,514.26

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
2017 CO Bonds															
Maturities															
06/07/18	06/07/18	912796PJ2	TREAS BILL	U.S. Treasury		06/07/18		3,000,000.00	100.000	3,000,000.00	0.00	3,000,000.00		1.624	
Total for: Maturities								3,000,000.00		3,000,000.00	0.00	3,000,000.00		1.624	

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
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Total for All Portfolios

Transaction Type	Quantity	Total Amount	Realized G/L	YTM	YTW
Total Maturities	3,000,000.00	3,000,000.00		1.624	

CUSIP	Settle Date	Security Type	Security Description	Next Call Date	Purchase Qty	Orig Price	Original Cost	Amrt/Accr for Period	Total Amrt/Accr Since Purch	Remaining Disc / Prem	Book Value
2017 CO Bonds											
912796PJ2	03/05/18	TREAS BILL	U.S. Treasury 0.000 06/07/18		0.00	99.578	0.00	808.74	0.00	0.00	0.00
912828L40	12/04/17	TREAS NOTE	U.S. Treasury 1.000 09/15/18		3,000,000.00	99.527	2,985,820.31	1,485.63	10,416.04	3,763.65	2,996,236.35
912828A34	12/04/17	TREAS NOTE	U.S. Treasury 1.250 11/30/18		3,000,000.00	99.590	2,987,695.31	1,023.81	7,117.48	5,187.21	2,994,812.79
Total for 2017 CO Bonds					6,000,000.00		5,973,515.62	3,318.18	17,533.52	8,950.86	5,991,049.14
Operating Fund											
36960MGT4	04/20/18	CP - DISC	GE Co 0.000 07/27/18		4,000,000.00	99.371	3,974,846.67	7,700.00	18,480.01	6,673.32	3,993,326.68
46640QMB4	03/16/18	CP - DISC	J.P.Morgan Sec 0.000 12/11/18		500,000.00	98.215	491,075.00	991.67	3,536.95	5,388.05	494,611.95
Total for Operating Fund					4,500,000.00		4,465,921.67	8,691.67	22,016.96	12,061.37	4,487,938.63
Total for City of Hutto					10,500,000.00		10,439,437.29	12,009.85	39,550.48	21,012.23	10,478,987.77

CUSIP	Security Type	Security Description	Pay Date	Interest	Principal	Total Amount
2017 CO Bonds						
912828L40	TREAS NOTE	U.S. Treasury 1.000 09/15/18	09/15/18	15,000.00	3,000,000.00	3,015,000.00
912828A34	TREAS NOTE	U.S. Treasury 1.250 11/30/18	11/30/18	18,750.00	3,000,000.00	3,018,750.00
Total for 2017 CO Bonds				33,750.00	6,000,000.00	6,033,750.00
Operating Fund						
36960MGT4	CP - DISC	GE Co 0.000 07/27/18	07/27/18	0.00	4,000,000.00	4,000,000.00
46640QMB4	CP - DISC	J.P.Morgan Sec 0.000 12/11/18	12/11/18	0.00	500,000.00	500,000.00
Total for Operating Fund				0.00	4,500,000.00	4,500,000.00



City of Hutto, TX

Budget Report Group Summary

For Fiscal: 2017-2018 Period Ending: 06/30/2018

Account Typ...	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 10 - General Fund						
Revenue	13,081,430.75	13,163,946.75	582,952.43	11,602,720.51	-1,561,226.24	11.86 %
Expense	13,080,786.17	13,721,274.93	944,547.12	9,321,015.54	4,400,259.39	32.07 %
Fund: 10 - General Fund Surplus (Deficit):	644.58	-557,328.18	-361,594.69	2,281,704.97	2,839,033.15	509.40 %
Fund: 11 - General Debt Service Fund						
Revenue	1,651,792.64	1,651,792.64	1,994.76	1,622,031.80	-29,760.84	1.80 %
Expense	1,716,192.03	2,023,892.85	0.00	735,716.82	1,288,176.03	63.65 %
Fund: 11 - General Debt Service Fund Surplus (Deficit):	-64,399.39	-372,100.21	1,994.76	886,314.98	1,258,415.19	338.19 %
Fund: 20 - Court Technology Fund						
Revenue	7,000.00	7,000.00	427.38	4,940.91	-2,059.09	29.42 %
Expense	16,190.00	16,190.00	200.00	10,795.07	5,394.93	33.32 %
Fund: 20 - Court Technology Fund Surplus (Deficit):	-9,190.00	-9,190.00	227.38	-5,854.16	3,335.84	36.30 %
Fund: 21 - Court Security Fund						
Revenue	5,100.00	5,100.00	320.54	2,370.70	-2,729.30	53.52 %
Expense	31,250.00	31,250.00	1,707.01	5,546.73	25,703.27	82.25 %
Fund: 21 - Court Security Fund Surplus (Deficit):	-26,150.00	-26,150.00	-1,386.47	-3,176.03	22,973.97	87.85 %
Fund: 22 - Court Training Fund						
Revenue	500.00	500.00	17.50	265.00	-235.00	47.00 %
Expense	2,000.00	2,000.00	0.00	0.00	2,000.00	100.00 %
Fund: 22 - Court Training Fund Surplus (Deficit):	-1,500.00	-1,500.00	17.50	265.00	1,765.00	117.67 %
Fund: 24 - Hotel Tax Fund						
Revenue	250,000.00	250,000.00	11,270.75	130,191.34	-119,808.66	47.92 %
Expense	263,000.00	355,000.00	95,000.00	175,665.00	179,335.00	50.52 %
Fund: 24 - Hotel Tax Fund Surplus (Deficit):	-13,000.00	-105,000.00	-83,729.25	-45,473.66	59,526.34	56.69 %
Fund: 26 - ATS Red Light Camera Fund						
Revenue	0.00	0.00	0.00	5,498.09	5,498.09	0.00 %
Expense	5,000.00	5,000.00	135.86	5,438.05	-438.05	-8.76 %
Fund: 26 - ATS Red Light Camera Fund Surplus (Deficit):	-5,000.00	-5,000.00	-135.86	60.04	5,060.04	101.20 %
Fund: 27 - PEG Capital Fees						
Revenue	32,500.00	32,500.00	0.00	10,658.54	-21,841.46	67.20 %
Expense	26,200.00	26,200.00	0.00	0.00	26,200.00	100.00 %
Fund: 27 - PEG Capital Fees Surplus (Deficit):	6,300.00	6,300.00	0.00	10,658.54	4,358.54	-69.18 %
Fund: 40 - Park Improvement Fund						
Revenue	0.00	0.00	786.11	3,626.53	3,626.53	0.00 %
Fund: 40 - Park Improvement Fund Total:	0.00	0.00	786.11	3,626.53	3,626.53	0.00 %
Fund: 50 - Utility Fund						
Revenue	23,818,111.00	18,240,590.00	979,643.93	78,662,871.66	60,422,281.66	331.25 %
Expense	23,016,586.00	20,075,585.63	471,157.90	68,792,970.77	-48,717,385.14	-242.67 %
Fund: 50 - Utility Fund Surplus (Deficit):	801,525.00	-1,834,995.63	508,486.03	9,869,900.89	11,704,896.52	637.87 %
Fund: 51 - Utility Debt Service Fund						
Revenue	4,102,321.00	6,605,644.63	5,576.85	1,977,296.41	-4,628,348.22	70.07 %
Expense	4,117,406.00	6,634,677.00	0.00	1,955,529.75	4,679,147.25	70.53 %
Fund: 51 - Utility Debt Service Fund Surplus (Deficit):	-15,085.00	-29,032.37	5,576.85	21,766.66	50,799.03	174.97 %
Fund: 52 - Impact Fees Fund						
Revenue	1,200,000.00	1,200,000.00	352,572.75	1,080,764.00	-119,236.00	9.94 %
Expense	1,200,000.00	1,200,000.00	0.00	1,200,000.00	0.00	0.00 %
Fund: 52 - Impact Fees Fund Surplus (Deficit):	0.00	0.00	352,572.75	-119,236.00	-119,236.00	0.00 %

Budget Report
For Fiscal: 2017-2018 Period Ending: 06/30/2018

Account Typ...	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 60 - Capital Improvements Project						
Revenue	14,608,265.00	17,593,050.00	21,640.73	16,459,712.90	-1,133,337.10	6.44 %
Expense	15,071,264.00	22,055,714.40	991,360.44	9,368,212.71	12,687,501.69	57.52 %
Fund: 60 - Capital Improvements Project Surplus (Deficit):	-462,999.00	-4,462,664.40	-969,719.71	7,091,500.19	11,554,164.59	258.91 %
Fund: 62 - Drainage & Streets Fund						
Revenue	0.00	3,000,000.00	28,733.92	3,113,639.45	113,639.45	3.79 %
Expense	2,567,910.51	2,567,910.51	52,555.67	1,770,892.88	797,017.63	31.04 %
Fund: 62 - Drainage & Streets Fund Surplus (Deficit):	-2,567,910.51	432,089.49	-23,821.75	1,342,746.57	910,657.08	-210.76 %
Fund: 70 - Solid Waste Fund						
Revenue	1,305,000.00	1,305,000.00	116,320.33	1,034,378.61	-270,621.39	20.74 %
Expense	1,367,500.00	1,367,500.00	111,424.85	841,952.05	525,547.95	38.43 %
Fund: 70 - Solid Waste Fund Surplus (Deficit):	-62,500.00	-62,500.00	4,895.48	192,426.56	254,926.56	407.88 %
Report Surplus (Deficit):	-2,419,264.32	-7,027,071.30	-565,830.87	21,527,231.08	28,554,302.38	406.35 %

Fund Summary

Fund	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)
10 - General Fund	644.58	-557,328.18	-361,594.69	2,281,704.97	2,839,033.15
11 - General Debt Service Fund	-64,399.39	-372,100.21	1,994.76	886,314.98	1,258,415.19
20 - Court Technology Fund	-9,190.00	-9,190.00	227.38	-5,854.16	3,335.84
21 - Court Security Fund	-26,150.00	-26,150.00	-1,386.47	-3,176.03	22,973.97
22 - Court Training Fund	-1,500.00	-1,500.00	17.50	265.00	1,765.00
24 - Hotel Tax Fund	-13,000.00	-105,000.00	-83,729.25	-45,473.66	59,526.34
26 - ATS Red Light Camera Fund	-5,000.00	-5,000.00	-135.86	60.04	5,060.04
27 - PEG Capital Fees	6,300.00	6,300.00	0.00	10,658.54	4,358.54
40 - Park Improvement Fund	0.00	0.00	786.11	3,626.53	3,626.53
50 - Utility Fund	801,525.00	-1,834,995.63	508,486.03	9,869,900.89	11,704,896.52
51 - Utility Debt Service Fund	-15,085.00	-29,032.37	5,576.85	21,766.66	50,799.03
52 - Impact Fees Fund	0.00	0.00	352,572.75	-119,236.00	-119,236.00
60 - Capital Improvements Project	-462,999.00	-4,462,664.40	-969,719.71	7,091,500.19	11,554,164.59
62 - Drainage & Streets Fund	-2,567,910.51	432,089.49	-23,821.75	1,342,746.57	910,657.08
70 - Solid Waste Fund	-62,500.00	-62,500.00	4,895.48	192,426.56	254,926.56
Report Surplus (Deficit):	-2,419,264.32	-7,027,071.30	-565,830.87	21,527,231.08	28,554,302.38

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

7C.

AGENDA DATE: July 19, 2018

PRESENTED BY:

ITEM:

Presentation of the Texas Economic Development Council Award for Economic Excellence to the City of Hutto. (Jessica Bullock)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

The Economic Excellence Recognition program provides recognition to economic development organizations that meet a desired threshold of professionalism. Recipients qualify for recognition based on training taken by their governing board/council as well as the economic development director and professional staff. Certifications, professional memberships and activities, and organizational effectiveness of the economic development staff also contribute to the standards for qualification.

This program also recognizes strategic planning efforts that promote economic development. This includes the adoption of our Strategic Plan, amendment to the Future Land Use map, and Economic Development Policy. Through these tools we have created an "open for business" culture, exceeded our goals for the creation of commercial and industrial space, and attracting companies to move and stay in Hutto.

BUDGETARY AND FINANCIAL SUMMARY:

Not Applicable

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not Applicable

CITY ATTORNEY REVIEW:

Not Applicable

STAFF RECOMMENDATION:

Not Applicable

SUPPORTING MATERIAL:

There are no supporting documents.



**CITY COUNCIL
MEETING MINUTES
JULY 5, 2018**

The Hutto City Council met in a regular session on Thursday, July 5, 2018, in the Hutto City Council Chamber, 401 W. Front Street, Hutto, TX 78634.

CALL SESSION TO ORDER

Mayor Gaul called the session to order at 7:00 p.m.

ROLL CALL

Members of the City Council present were Mayor Doug Gaul, Mayor Pro-tem Tom Hines, Councilmember Scott Rose, Councilmember Nathan Killough, Councilmember Tim Jordan, Councilmember Patti Turner and Councilmember Terri Grimm.

Members of staff that were present were Odis Jones, City Manager; Bill Bingham, City Attorney; Helen Ramirez, Assistant City Manager; Byron Frankland, Chief of Police; Paul Hall, Asst. Chief of Police; Jessica Bullock, Director of Economic Development; Ashley Lumpkin, Executive Director of Business Development; Matt Rector, Executive Director of Public Works and Engineering; Eliska Padilla, Executive Director of Communications; Robert Sims, City Engineer; Anthony Host, Director of Construction, and Lisa Brown, City Secretary.

INVOCATION

The invocation was given by Mike Litton, The Fellowship - Hutto

PLEDGE OF ALLEGIANCE

Mayor Gaul led the Pledge of Allegiance and the Texas Pledge.

CITY COUNCIL COMMENTS

Councilmember Terri Grimm thanked the City employees for a wonderful 4th of July celebration, and she is very excited about the future of the new park.

Mayor Gaul remarked on the large turnout at the event and what a great job the staff did.

Councilmember Patti Turner also expressed her thanks for a great job.

City Manager Odis Jones took the opportunity to recognize Kristi Robich and Sharon Parker for all their hard work in planning and organizing the 4th of July event.

PUBLIC COMMENT

There were no public comments.

CONSENT AGENDA ITEMS

7A. Consideration and possible action approving the minutes of the June 21, 2018 City Council meeting.

Motion: Councilmember Killough made a motion to approve items the minutes from the June 21, 2018 Regular City Council meeting. Councilmember Grimm seconded the motion.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

REGULAR AGENDA ITEMS

ORDINANCES

8A. Consideration and action with respect to an Ordinance Authorizing the Issuance of City of Hutto, Texas Limited Tax Refunding Bonds, Series 2018; Authorizing the Levy of an Ad Valorem Tax in support of the Bonds; Approving an Official Statement, a Paying Agent/Registrar Agreement. A Purchase Agreement and An Escrow Agreement; Establishing Procedures for Selling and Delivery of the Bonds; And Authorizing Other Matters Related to the Bonds.

Dan Wegmiller explained to Council that by refinancing the bonds from the 2007 will allow the City to pay off some existing debt.

City Manager Odis Jones remarked that these bonds were purchased by the City some time ago. Making this adjustment and refinancing at a lower percentage rate will enable the City to make some money.

Motion: Councilmember Hines made a motion to approve the ordinance Authorizing the Issuance of City of Hutto, Texas Limited Tax Refunding Bonds, Series 2018; Authorizing the Levy of an Ad Valorem Tax in support of the Bonds; Approving an Official Statement, a Paying Agent/Registrar Agreement. A Purchase Agreement and

An Escrow Agreement; Establishing Procedures for Selling and Delivery of the Bonds; And Authorizing Other Matters Related to the Bonds. Councilmember Rose seconded the motion.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

8B. Consideration and possible action on the second reading of an ordinance altering the terms and appointments to boards, commissions and corporations to be realigned to match terms of City Council member places.

Motion: Councilmember Killough made a motion to approve the second reading of the ordinance. Councilmember Jordan seconded the motion.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

8C. Consideration and public hearing and possible action on the first reading of an ordinance approving the Traffic Impact Fee (TIF) Ordinance.

Carl Springer and Matthew Garrett reviewed the TIF for Council.

City Manager Jones remarked that the plan was augmented based off conversations at the Council retreat to limit the plan to work within the city limits. There are 65 projects in the fee program.

A public hearing was opened at 7:16 p.m. There being no comments the hearing was closed at 7:16 p.m.

Mayor Pro-tem Hines wanted to know if the fee gets tacked on to the price of the house, are we over-pricing ourselves out of the market.

City Manager Jones stated we are still well below what developers are paying in the market. Even if aligned with other markets we are still below. He believes home buyers will pay for a solid master planned community. Developers will be building 7,000 homes in Hutto and they know they will have to pay along the way. Designed in a way that existing residents will not have to pay.

Councilmember Grimm estimated if a buyer takes out a 30 year mortgage it averages out to about \$3.00 a month to the homeowner.

City Manager Jones – the TIF take the burden off the City who financed the debt through bonds.

Motion: Councilmember Killough made a motion to approve the first reading of the ordinance to approve the Traffic Impact Fee at a rate of \$1,961 per single family home. Councilmember Jordan seconded the motion.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

RESOLUTIONS

9A. Consideration and possible action on the proposed City of Hutto Five Year 2019-2023 Capital Improvement Plan (CIP).

The Capital Improvement Plan was presented to the Council by the City Engineer, Robert Sims.

Planning and Zoning Commissioner Steven Harris addressed the Council and advised them that the CIP had been presented to them at the July 3, 2018 P&Z meeting and was approved unanimously.

Councilmember Nate Killough wanted to know if there was anything left out of the plan that the Council needed to address.

Commissioner Harris stated that CR 137 was not high on the list but would need to be addressed, but our jurisdiction ends at the bridge. Drainage, but that will be in the budget and not part of the CIP.

Councilmember Jordan mentioned the issue of dumping street water in the Gainer Ditch in the Legends of Hutto subdivision.

Chief Frankland reviewed the renovation plans for the current City Hall building once the new City Hall is complete. The plan is to convert the council chambers into a class room with plans to become a certified TCOLE training center. Future plans also include building a Communication Center for dispatching 911 calls.

Councilmember Rose wanted to know if the ESD would fall under our jurisdiction – the Chief remarked that conversation has not yet been had, but will in the future.

Councilmember Rose remarked that it would make sense to include the ESD in our dispatch system and wants to be sure that happens.

Mr. Sims discussed the rehab of the ground storage tank at Shiloh. The new tank will be a welded tank that is supposed to have a service life of 50 years if properly maintained.

Mayor Pro-tem Hines stated he was not yet ready to vote on the CIP and wanted more time. Asked if it could be tabled to the next regular meeting.

Motion: Mayor Pro-tem Hines made a motion to table the vote on the CIP until the next regular meeting on July 19, 2018. Councilmember Rose seconded the amendment.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

CITY MANAGER COMMENTS

10A. Presentation of proposed goals supporting the city-wide objectives and strategic focus areas for the Fiscal Year 2018-2019.

Eliska Padilla reviewed the strategic goals for the Council and Staff, as discussed at the Council retreat, for the coming year 2018-2019.

10B. Update on construction at Innovation Business Park and Hutto Park on Brushy Creek.

Anthony Host, Director of Construction provided an update on Innovation Business Park- the project is 105 days behind schedule and is incurring liquid damages of \$1500.00 per day.

City Manager Jones remarked the delays are due to 1) the Army Corps of Engineers and FEMA; and 2) the contractor is having problems with staffing levels.

Mr. Host also remarked the event at Hutto Park the night before was a spectacular event due to the Parks Department, Public Works and the Event Staff. He stated the roads are done, water is done, they are ready to go with the ponds and will be installing some water features. Oncor has the poles in for electric. All should be ready and complete in time for KokeFest.

There was also discussion regarding proposed changes to the design of the amphitheater stage that the EDC is willing to fund.

Councilmember Rose wanted to know if we had a contract.

Councilmember Killough stated we already had a contract and wanted to know why the EDC is proposing a change.

City Manager Jones stated the contract allows for the City to enhance the structure.

Dan Thornton, Vice Chair of the EDC Board was present and stated the EDC is willing to contribute up to \$585,000.00 to build an 80' x 50' stage with 25' wings. This improved structure will allow the City to bring in acts that are a bigger draw and thereby creating more revenue.

Council recessed for Executive Session at 9:09 p.m. and reconvened at 11:29 p.m.

EXECUTIVE SESSION

- 11A. Executive Session, as authorized by Texas Government Code Section 551.074, deliberations regarding personnel matters, as it relates to City Council's Boards and Commissions
- 11B. Executive Session, as authorized by Texas Government Code, Section 551.071, consultation with attorney regarding public safety.
- 11C. Executive Session, as authorized by Texas Government Code, Section 551.071, consultation with attorney regarding negotiations with the Hutto Area Chamber of Commerce.
- 11D. Executive Session, as authorized by Texas Government Code, Section 551.071, consultation with attorney regarding waste transfer station.

ACTION RELATIVE TO EXECUTIVE SESSION

There was no action taken in the Executive Session.

The City Secretary was advised that Mayor Pro-tem recused himself from the discussion pertaining to Item 11B during the Executive Session.

12A. Consideration and possible action relating to City Council's Boards and Commissions.

Motion: Mayor Pro-tem Hines made a motion to appoint Councilmember Tim Jordan to the Economic Development Board. Councilmember Grimm seconded the motion.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

ADJOURNMENT

There being no further business to be heard, the meeting was adjourned at 11:30 p.m.

CITY OF HUTTO

Doug Gaul, Mayor

APPROVED:

Lisa L. Brown, City Secretary



**CITY COUNCIL
SPECIAL CALLED MEETING MINUTES
JULY 12, 2018**

The Hutto City Council met in a special called session on Thursday, July 12, 2018, in the Hutto City Council Chamber, 401 W. Front Street, Hutto, TX 78634.

CALL SESSION TO ORDER

Mayor Gaul called the session to order at 7:00 p.m.

ROLL CALL

Members of the City Council present were Mayor Doug Gaul, Mayor Pro-tem Tom Hines, Councilmember Scott Rose, Councilmember Nathan Killough, Councilmember Tim Jordan, Councilmember Patti Turner and Councilmember Terri Grimm.

Members of staff that were present were Helen Ramirez, Assistant City Manager; Byron Frankland, Chief of Police; Matt Rector, Executive Director of Public Works and Engineering; Eliska Padilla, Executive Director of Communications; Anthony Emadi, Chief Financial Officer; James Bryson, Director of Finance; Allison Hosgood, Executive Director of Organizational Development and Human Resources; and Lisa Brown, City Secretary.

INVOCATION

The invocation was given by Officer Josh Belliner.

PLEDGE OF ALLEGIANCE

Mayor Gaul led the Pledge of Allegiance and the Texas Pledge.

CITY COUNCIL COMMENTS

There were no comments from Council.

PUBLIC COMMENT

Reuben Bautista: 409 W. Front Street – He is the owner of Vortex Sport Center and wanted to introduce himself to the Council. He is new to Hutto and is excited about how the city is developing and hopes to become more involved in the community and government.

REGULAR AGENDA ITEMS

RESOLUTIONS

- 6A. Resolution authorizing the City Manager to amend the construction contract for the City of Hutto Amphitheater and approving the Hutto Economic Development Corporation Type B Board supplement to the contract. (Matt Rector)

Matt Rector presented the proposed revisions to the amphitheater stage. The changes include a 5' tall concrete stage that will be 80' x 50' with 25' wings on either side that will be covered by a steel structure with a metal roof. By improving the design the venue will be able to draw acts like or similar to ZZ Top and Brad Paisley. The cost of the new design is \$884,446.18. The City will contribute the \$300,000.00 previously approved for the originally proposed shade structure. The difference of \$584,446.18 will be covered from a grant from the EDC.

Motion: Mayor Pro-tem Hines made a motion to approve the resolution authorizing the City Manager to approve a change order for the redesigned structure and to accept the grant from the EDC not to exceed \$585,000. Councilmember Grimm seconded the amendment.

Vote: Mayor Doug Gaul
Mayor Pro-tem Tom Hines
Councilmember Scott Rose
Council Member Nate Killough
Councilmember Tim Jordan
Councilmember Patti Turner
Councilmember Terri Grimm

Action: The motion passed 7 ayes, and 0 nays.

CITY MANAGER COMMENTS

- 10A. Presentation of and discussion concerning the proposed Fiscal Year 2018-2019 Operating Budget.

Anthony Emadi provided a comprehensive overview of the proposed operating budget for Fiscal Year 2018-2019.

There was discussion among the Council and staff on when to meet with the outside agencies that are requesting funding from the City. It was agreed that the Council would schedule a special meeting before the August 2, 2018 regular Council meeting to meet with the agency representatives to review their applications.

ADJOURNMENT

There being no further business to be heard, the meeting was adjourned at 7:50 p.m.

CITY OF HUTTO

Doug Gaul, Mayor

APPROVED:

Lisa L. Brown, City Secretary

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

8B.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration and possible action on a resolution approving the proposed Mager Meadows Phase 2 Final Plat, 22.441 acres, more or less, of land, 95 residential lots, located Groves Avenue at Marimoor Drive. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

The Mager Meadows Phase 2 Final Plat is proposing a 22.441 acre subdivision consisting of 102 total lots, of which 95 are single-family residential lots. The proposed subdivision is located north on Mager Lane, west of Carol Drive. The main access to this phase will be from Mager Lane. Secondary access for this phase will be from Lincoln Street. Roadway rights-of-way are 55 feet in width.

The proposed subdivision is the second phase of an approved 3-phase preliminary plan. The phase line between phases 1 and 2 has moved as a result of construction requirements; as a result the greenlink between Groves Street and Craft Street is split between the two phases. The City Engineer required that the open space identified on the preliminary plan at Groves Lane and Mager Lane, part of which is identified as a drainage easement through filed records, be included as a whole in the drainage plans for the subdivision. The labels on these lots were changed on the final plat to reflect the City Engineer's comments, and to comply with the construction plans.

This phase complies with the overall approved preliminary plan.

Comments from all departments have been addressed.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Planning and Zoning Commission recommended approval to City Council on July 17, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends that the Council approve the resolution.

SUPPORTING MATERIAL:

1. [Resolution - Mager Meadows Phase 2 Final Plat](#)

RESOLUTION NO.

A RESOLUTION APPROVING THE PLAT KNOWN AS "MAGER MEADOWS PHASE 2 FINAL PLAT"; IN THE CITY OF HUTTO, WILLIAMSON COUNTY, TEXAS.

WHEREAS, the Texas Local Government Code Chapter 212 and the City of Hutto Subdivision Ordinance requires the Planning and Zoning Commission to take action to recommend to the City Council whether or not to approve or disapprove a subdivision plat within thirty (30) days of the date an application is accepted, and;

WHEREAS, the Texas Local Government Code Chapter 212 and the City of Hutto Subdivision Ordinance requires the City Council take action to approve or disapprove a subdivision plat within thirty (30) days of the date of presentation at Planning and Zoning Commission, and;

WHEREAS, the Development Services Department and the City Engineer have reviewed the above referenced plat for compliance with statute and engineering standards, and;

WHEREAS, if City Council fails to take action on this plat within the prescribed thirty (30) day period, the plat is granted statutory approval, Now therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

that the Hutto City Council hereby approves the resolution for the plat known as "Mager Meadows Phase 2 Final Plat", a copy of same being attached hereto as "Exhibit A" and incorporated herein for all purposes.

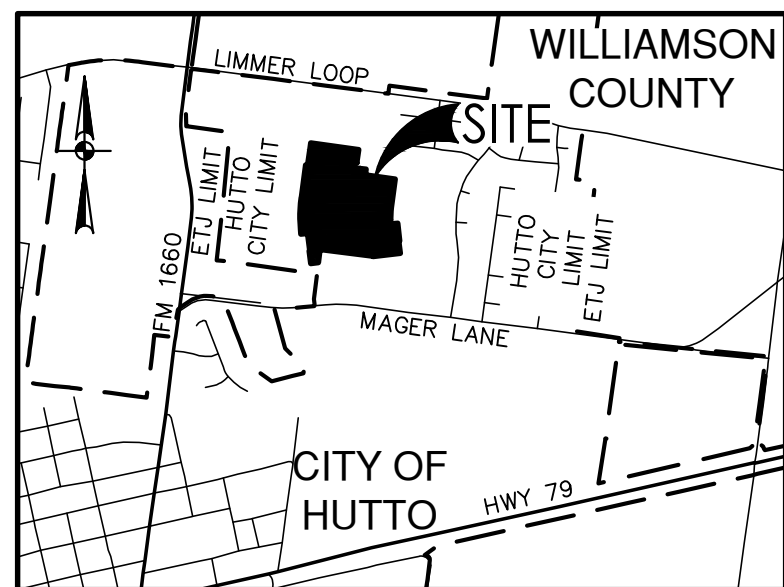
CONSIDERED and RESOLVED on this the **19th** day of the month **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary



LEGEND

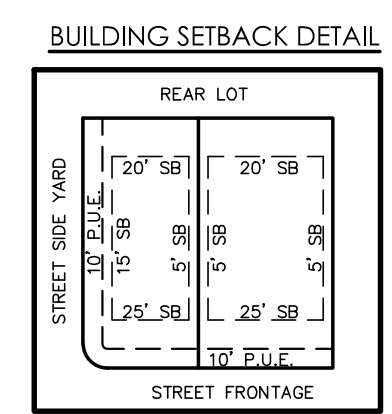
ETJ EXTRATERRITORIAL JURISDICTION
DOC. NO. DOCUMENT NUMBER
O.P.R. OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R. PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
D.R. DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
FD. I.R. FOUND IRON ROD
ESMT EASEMENT
VOL. VOLUME
PG. PAGE(S)
P.O.B. POINT OF BEGINNING
PUE PUBLIC UTILITY EASEMENT
FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
SET 1/2" IRON ROD (PD)
..... SIDEWALK

15' WASTEWATER ESMT (DOC. NO. 2017100109 O.P.R.)

BLOCK A	
LOT #	AREA (SQ. FT.)
2	OPEN SPACE LOT
3	7,099
4	6,462
5	6,471
6	6,480
7	6,488
8	6,703
9	6,628
10	6,500
11	6,500
12	6,500

BLOCK B	
LOT #	AREA (SQ. FT.)
38	6,561
39	OPEN SPACE LOT

BLOCK D	
LOT #	AREA (SQ. FT.)
7	GREENLINK LOT
18	7,674
19	6,495
20	6,890
21	6,739
22	6,739
23	6,739
24	6,739
25	6,688
26	7,085
27	7,085
28	7,085
29	7,085
30	7,080
31	7,767



**WILLIAM J. BROWN SURVEY
SECTION NO. 22
ABSTRACT NO. 105**

OWNER: MAGER MEADOWS, L.P.
REMANENT PORTION OF A
CALLED 72.025 ACRES
DOC. NO. 2004018146 (O.P.R.)

BLOCK E	
LOT #	AREA (SQ. FT.)
1	8,197
2	7,655
3	7,653
4	7,653
5	7,653
6	7,653
7	GREENLINK LOT
8	7,962
9	7,708
10	7,708
11	8,446
12	6,507
13	7,578
14	9,002
15	9,096
16	7,766
17	6,494
18	7,009
19	6,816
20	6,816
21	6,886
22	6,614
23	6,609
24	6,609
25	6,609
26	6,609
27	7,566
28	7,580

100' EASEMENT AS PER AN EMAIL RECEIVED FROM ONCOR DATED SEPTEMBER 3, 2014 FROM: JILL L. ALVAREZ, P.E. TRANSMISSION ROW MANAGER ONCOR ELECTRIC DELIVERY COMPANY LLC 115 WEST 7TH STREET, SUITE 0525 FORT WORTH, TX 76102-7033 OFC: 817.215.6061/CELL: 817.229.0445 EMAIL: JILL.ALVAREZ@ONCOR.COM

OWNER: HERBERT L. PREWITT AND CONNIE E. PREWITT 9.862 ACRES (VOL. 876, PGS. 655-656 D.R.)

OWNER: TRIM TECH OF AUSTIN, INC. 7.32 ACRES DOC. NO. 2007092382 (O.P.R.)

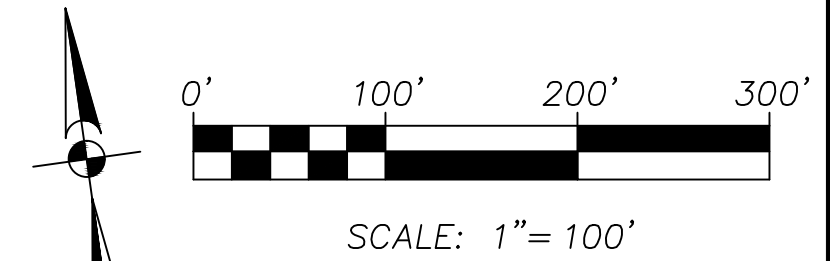
P.O.B.

OWNER: NORTH TOWN COMMONS, LLC REMAINING PORTION OF 28.449 ACRES DOC. NO. 2007062953 (O.P.R.)

CAROL MEADOWS SUBDIVISION SECTION ONE CABINET W. SLIDES 300-302 (P.R.)

FINAL PLAT OF MAGER MEADOWS, PHASE 2

A 22.441 ACRE, OR 977,526 SQUARE FEET TRACT OF LAND BEING ALL OF A CALLED 22.441 ACRE TRACT OF LAND CONVEYED TO 288 DEVELOPMENT, INC., IN SPECIAL WARRANTY DEED, RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SITUATED IN THE JOSIAS B. BEALLE SURVEY, ABSTRACT NO. 97, AND IN THE WILLIAM J. BROWN SURVEY, SECTION NO. 22, ABSTRACT NO. 105, IN WILLIAMSON COUNTY, TEXAS.



OWNER: 288 DEVELOPMENT INC. ADDRESS: 311 UNIVERSITY DRIVE, SUITE 101 FORT WORTH, TX 76107 (817) 332-9600 P

ACREAGE: 22.441 ACRES
LOTS ACREAGE: 17,828 ACRES
ROW ACREAGE: 4.613 ACRES

ENGINEER & SURVEYOR: PAPE-DAWSON ENGINEERS, INC. 10801 N MOPAC EXPY. BLDG. 3, SUITE 200 AUSTIN, TX 78759 (512) 454-8711 P (512) 459-8867 F

SURVEY: JOSIAS B. BEALLE SURVEY ABSTRACT NO. 97
WILLIAM J. BROWN SURVEY SECTION NO. 22, ABSTRACT NO. 150

NUMBER OF BLOCKS: 7
SINGLE FAMILY LOTS: 95
OPEN SPACE LOTS: 3
GREENLINK LOTS: 4
TOTAL LOTS: 102

LINEAR FEET OF NEW STREETS: 3,784'

PLAT PREPARATION DATE: APRIL 10, 2018
SUBMITTAL DATE: MAY 1, 2018

BENCHMARK DESCRIPTION AND ELEVATION
NAVD88 (GEOID03)
COMBINED SCALE FACTOR OF 0.99988

BENCHMARK NO. 100
SET CHISEL SQUARE MARK ON TOP OF CURB INLET NORTHWEST OF CAROL LN. AND HORIZON CV.
GRID NORTHING: 10176566.3'
GRID EASTING: 3177129.2'
ELEVATION: 674.16'

BENCHMARK NO. 1532
SET CHISEL SQUARE MARK ON TOP OF CONCRETE BASE OF HIGHLINE TOWER #96
GRID NORTHING: 10175727.2'
GRID EASTING: 3176239.0'
ELEVATION: 670.42'

BENCHMARK NO. 1529
SET CHISEL SQUARE MARK ON TOP OF CONCRETE BASE OF HIGHLINE TOWER #97
GRID NORTHING: 10175665.1'
GRID EASTING: 3175696.7'
ELEVATION: 663.07'

LINEAR FEET OF NEW STREETS:

CRAFT STREET: 668 LF
STELLAMAR DRIVE: 868 LF
MARIMOOR DRIVE: 944 LF
CRANBROOK LANE: 823 LF
QUARTON DRIVE: 481 LF

FOR REVIEW ONLY, NOT FOR FINAL RECORDATION



AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

Received 6/19/18



FINAL PLAT
OF
MAGER MEADOWS, PHASE 2

A 22.441 ACRE, OR 977,526 SQUARE FEET TRACT OF LAND BEING ALL OF A CALLED 22.441 ACRE TRACT OF LAND CONVEYED TO 288 DEVELOPMENT, INC., IN SPECIAL WARRANTY DEED, RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SITUATED IN THE JOSIAS B. BEALLE SURVEY, ABSTRACT NO. 97, AND IN THE WILLIAM J. BROWN SURVEY, SECTION NO. 22, ABSTRACT NO. 105, IN WILLIAMSON COUNTY, TEXAS, SAID 22.441 ACRE TRACT BEING MORE FULLY DESCRIBED AS FOLLOWS, WITH BEARINGS BASED ON THE NORTH AMERICAN DATUM 1983 (NA2011) EPOCH 201000, FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE CENTRAL ZONE:

BEGINNING at a ½" iron rod with yellow cap marked "Pape-Dawson" found for a northwest corner of Mager Meadows, Phase 1, a subdivision according to the plat recorded in Document No. 2018020539 of the Official Public Records of Williamson County, Texas, same being a point in the north boundary line of a called 7.32 acre tract recorded in Document No. 2007092382 of the Official Public Records of Williamson County, Texas for a northwest corner and **POINT OF BEGINNING** hereof;

THENCE departing the north boundary line of said 7.32 acre tract, with the west boundary line of said Mager Meadows, Phase 1, same being the east boundary line of said 22.441 acre tract the following eighteen (18) courses and distances,

- S 07°35'00" W**, a distance of **139.12 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a point of non-tangent curvature,
- along the arc of a curve to the left, having a **radius of 327.50 feet**, a **central angle of 00°22'28"**, a **chord bearing and distance of N 89°23'26" W, 2.14 feet**, an **arc length of 2.14 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a point of non-tangency,
- N 89°34'40" W**, a distance of **27.66 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 00°25'20" W**, a distance of **55.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 89°34'40" E**, a distance of **27.68 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a point of non-tangent curvature,
- along the arc of a curve to the right, having a **radius of 272.50 feet**, a **central angle of 07°13'43"**, a **chord bearing and distance of S 85°57'32" E, 34.36 feet**, an **arc length of 34.38 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a point of non-tangency,
- S 82°20'40" E**, a distance of **64.12 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 07°39'45" W**, a distance of **60.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 82°20'40" E**, a distance of **315.01 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 07°39'07" W**, a distance of **338.85feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 02°28'51" W**, a distance of **82.37 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 83°26'23" W**, a distance of **1.15 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 06°33'37" E**, a distance of **50.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 83°26'23" E**, a distance of **70.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 06°33'37" E**, a distance of **185.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 83°26'23" W**, a distance of **10.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 06°33'37" E**, a distance of **130.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found, and
- S 83°26'23" W**, a distance of **285.68 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a point in the east boundary line of said Lot 2 of Pinnelli-Mayberry Subdivision, according to the plat recorded in Document No. 2016009512 of the Official Public Records of Williamson County, Texas, same being a point in the west boundary line of the aforementioned Mager Meadows, Phase 1 and a southeast corner hereof;

THENCE N 07°09'40" E, departing the west boundary line of said Mager Meadows, Phase 1, with the east boundary line of said Lot 2 of Pinnelli-Mayberry Subdivision, same being a west boundary line of said 22.441 acre tract, a distance of **1.64 feet** to a ½" iron rod found for a south corner hereof;

THENCE N 82°50'20" W, departing the east boundary line of said Lot 2 of Pinnelli-Mayberry Subdivision, with the north boundary line of said Lot 2, and in part being the north boundary line of Lot 1 of Pinnelli-Mayberry Subdivision, a distance of **556.74 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a northwest corner of said Lot 1 of Pinnelli-Mayberry Subdivision, same being a south corner of said 22.441 acre tract;

THENCE S 07°11'05" W, departing the north boundary line of said Lot 1 of Pinnelli-Mayberry Subdivision, with the north boundary line of said Lot 1, same being a south boundary line of said 22.441 acre tract, a distance of **261.66 feet** to a ½" iron rod found in the west line of said Lot 1, same being a southeast corner of said 22.441 acre tract, also being the northeast corner of a called 9.862 acre tract conveyed to Herbert and Connie Prewitt recorded in Volume 876, Page 655 of the Deed Records of Williamson County, Texas for the southernmost southeast corner hereof;

THENCE N 82°16'00" W, with the north line of said 9.862 acre tract, same being the south line of said 22.441 acre tract, a distance of **488.14 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for the southeast corner of said 72.025 acre tract, same being the southwest corner hereof;

THENCE, with the east boundary line of the remnant portion of said 72.025 acre tract, same being the west boundary line of said 22.441 acre tract the following sixteen (16) courses and distance:

- N 83°26'23" E**, a distance of **421.34 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 06°33'37" W**, a distance of **130.40 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 81°33'15" E**, a distance of **6.81 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 08°26'45" W**, a distance of **55.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 06°33'37" W**, a distance of **129.40 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 83°26'23" W**, a distance of **70.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 06°09'07" W**, a distance of **50.00 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 04°06'25" W**, a distance of **57.19 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 01°50'07" W**, a distance of **54.42 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 00°22'49" E**, a distance of **54.42 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 02°35'45" E**, a distance of **54.42 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 04°48'41" E**, a distance of **54.42 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- N 06°57'53" E**, a distance of **53.48 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,

- N 07°39'43" E**, a distance of **347.45 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found,
- S 82°20'40" E**, a distance of **21.42 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found, and
- N 07°39'20" E**, a distance of **233.32 feet** to a ½" iron rod with yellow cap marked "Pape-Dawson" found for a northeast corner of the remnant portion of said 72.025 acre tract, same being a point in the south boundary line of said 7.32 acre tract, for a northwest corner hereof;

THENCE S 82°10'07" E, departing the east boundary line of the remnant portion of said 72.025 acre tract, with the south boundary line of said 7.32 acre tract, a distance of **505.18 feet** to the **POINT OF BEGINNING**, and containing 22.441 acres in Williamson County, Texas. Said tract being described in accordance with a survey made on the ground under Job No. 50796-02, prepared by Pape Dawson Engineers, Inc.

PLAT NOTES

- ALL LOTS IN THIS SUBDIVISION ARE RESTRICTED TO SINGLE FAMILY RESIDENTIAL USE, UNLESS OTHERWISE INDICATED.
- NO BUILDING, FENCING, LANDSCAPING OR STRUCTURES ARE ALLOWED WITHIN ANY DRAINAGE EASEMENT UNLESS EXPRESSLY PERMITTED BY THE CITY OF HUTTO.
- BUILDING SETBACK LINES SHALL CONFORM TO UNIFIED DEVELOPMENT CODE REQUIREMENTS. SEE DETAIL ON SHEET 1 OF THIS PLAT.
- ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS/HER ASSIGNS.
- A TEN (10) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ALONG AND ADJACENT TO ALL STREET SIDE PROPERTY LINES.
- A FIVE (5) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ON EACH SIDE OF ALL REAR LOT LINES.
- A FIVE (5) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ON EACH SIDE OF ALL INTERIOR SIDE LOT LINES.
- NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTION IS MADE TO PUBLIC WATER AND WASTEWATER UTILITIES.
- STREET LIGHTING SHALL BE PROVIDED BY THE DEVELOPER IN CONFORMANCE WITH UNIFIED DEVELOPMENT CODE REQUIREMENTS.
- SIDEWALKS AND STREET TREES SHALL BE CONSTRUCTED ON BOTH SIDES OF ALL STREETS WITHIN AND BOUNDING THIS SUBDIVISION. SIDEWALKS SHALL BE 5' IN WIDTH.
- WATER AND WASTEWATER SERVICE FOR THIS SUBDIVISION WILL BE AVAILABLE THROUGH THE CITY OF HUTTO AFTER THE APPROPRIATE WATER AND WASTEWATER SYSTEM IMPROVEMENTS ARE INSTALLED TO THIS SITE. THE CITY OF HUTTO ASSUMES NO OBLIGATIONS FOR INSTALLING ANY WATER AND WASTEWATER IMPROVEMENTS REQUIRED TO SERVE THIS SITE.
- UTILITY PROVIDERS FOR THIS DEVELOPMENT ARE:

WATER: CITY OF HUTTO

WASTEWATER: CITY OF HUTTO

ELECTRIC: ONCOR ELECTRIC DELIVERY COMPANY, LLC
- THERE IS NO PORTION WITHIN THE BOUNDARIES OF THIS SUBDIVISION PHASE THAT IS WITHIN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0520E DATED SEPTEMBER 26, 2008.
- IN ORDER TO PROMOTE DRAINAGE AWAY FROM A STRUCTURE, THE SLAB ELEVATION SHOULD BE BUILT AT LEAST ONE-FOOT ABOVE THE SURROUNDING GROUND, AND THE GROUND SHOULD BE GRADED AWAY FROM THE STRUCTURE AT A SLOPE OF 1/2" PER FOOT FOR A DISTANCE OF AT LEAST 10 FEET.
- THE MAXIMUM IMPERVIOUS COVERAGE ALLOWED ON EACH LOT IS 50%.
- DRAINAGE LOTS, OPEN SPACE LOTS AND GREENLINK LOTS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- GREENLINK LOTS SHALL BE DEVELOPED IN CONFORMANCE WITH THE UNIFIED DEVELOPMENT CODE.
- ALL CURB RETURN RADII ARE 25' UNLESS OTHERWISE NOTED.
- THIS PLAT IS SUBJECT TO THE APPROVED TRAFFIC IMPACT ANALYSIS APPROVED ON MARCH 28, 2017.
- ALL STREET TREES WITHIN AND BOUNDING THE SUBDIVISION WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- ALL STREETS WILL BE PAVED WITH STANDARD 30' FACE OF CURB TO FACE OF CURB PAVEMENT SECTION AS PER CITY OF HUTTO RESIDENTIAL LOCAL CROSS SECTION DETAIL S-07.
- ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CITY OF HUTTO UNIFIED DEVELOPMENT CODE, CONSTRUCTION STANDARDS AND GENERALLY ACCEPTED ENGINEERING PRACTICES.

BLOCK F		
LOT #	AREA (SQ. FT.)	
1	8,480	
2	6,554	
3	6,538	
4	6,538	
5	6,538	
6	6,538	
7	6,538	
8	GREENLINK LOT	
9	7,644	
10	8,288	
11	9,370	
12	6,510	
13	7,766	

BLOCK F		
LOT #	AREA (SQ. FT.)	
14	9,100	
15	9,100	
16	7,766	
17	6,492	
18	7,237	
19	6,961	
20	6,823	
21	6,644	
22	6,637	
23	6,637	
24	6,637	
25	6,637	
26	6,637	

BLOCK G		
LOT #	AREA (SQ. FT.)	
2	6,501	
3	6,501	
4	6,502	
5	6,502	
6	6,502	
7	6,503	
8A	GREENLINK LOT	
9	8,456	
10	7,577	
11	6,492	
12	7,766	
13	9,100	
14	9,100	

BLOCK K		
LOT #	AREA (SQ. FT.)	
1	OPEN SPACE LOT	
2	6,451	
3	6,500	
4	6,500	
5	6,500	
6	6,500	
7	6,500	

Received 6/19/18



LINE TABLE		
LINE #	BEARING	LENGTH
L1	N89°34'40"W	27.66'
L2	S00°25'20"W	55.00'
L3	S89°34'40"E	27.68'
L4	S82°20'40"E	64.12'
L5	S07°39'45"W	60.00'
L6	S02°28'51"W	82.37'
L7	S83°26'23"W	1.15'
L8	S06°33'37"E	50.00'
L9	N83°26'23"E	70.00'
L10	S83°26'23"W	10.00'
L11	S06°33'37"E	130.00'
L12	N07°09'40"E	1.64'
L13	N81°33'15"E	6.81'
L14	N08°26'45"W	55.00'
L15	N06°33'37"W	129.40'
L16	S83°26'23"W	70.00'
L17	N06°09'07"W	50.00'
L18	N04°06'25"W	57.19'
L19	N01°50'07"W	54.42'
L20	N00°22'49"E	54.42'
L21	N02°35'45"E	54.42'
L22	N04°48'41"E	54.42'
L23	N06°57'53"E	53.48'
L24	S82°20'40"E	21.42'
L25	N00°25'20"E	26.03'
L26	S85°00'40"W	138.62'
L27	S81°33'15"W	98.88'
L28	N81°33'15"E	47.94'
L29	N82°20'40"W	96.08'
L30	S82°20'40"E	15.15'
L31	S00°25'20"W	26.03'
L32	N83°26'23"E	97.88'
L33	S85°00'40"W	130.04'
L34	N07°11'05"E	0.39'
L35	S06°03'15"E	50.00'
L36	S03°21'37"E	59.44'
L37	S00°19'15"E	55.87'
L38	S02°37'27"W	55.87'
L39	S05°33'02"W	57.11'
L40	S82°20'15"E	260.01'
L41	S82°20'15"E	260.00'
L42	S82°20'15"E	260.00'
L43	S82°20'15"E	260.00'
L44	S07°39'45"W	44.86'
L45	S02°39'19"W	10.81'
L46	S02°39'19"W	58.64'
L47	S01°53'18"E	63.86'
L48	S05°50'43"E	50.00'
L49	S07°39'45"W	4.61'
L50	N89°34'40"W	55.00'
L51	S83°26'23"W	50.00'

CURVE TABLE					
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD	LENGTH
C1	327.50'	000°22'28"	N89°23'26"W	2.14'	2.14'
C2	272.50'	007°13'43"	S85°57'32"E	34.36'	34.38'
C3	12.50'	090°00'00"	N45°25'20"E	17.68'	19.63'
C4	427.50'	007°14'25"	N04°02'32"E	53.99'	54.02'
C5	902.50'	014°13'22"	N00°33'04"E	223.46'	224.03'
C6	12.50'	090°00'00"	N51°33'37"W	17.68'	19.63'
C7	12.50'	090°00'00"	S38°26'23"W	17.68'	19.63'
C8	642.50'	014°13'22"	S00°33'04"W	159.08'	159.49'
C9	587.50'	014°13'22"	S00°33'04"W	145.46'	145.84'
C10	12.50'	090°00'00"	S51°33'37"E	17.68'	19.63'
C11	327.50'	001°34'17"	N84°13'31"E	8.98'	8.98'
C12	272.50'	003°27'24"	S83°16'58"W	16.44'	16.44'
C13	12.50'	088°06'52"	N37°29'49"E	17.38'	19.22'
C14	1277.50'	014°13'22"	N00°33'04"E	316.30'	317.12'
C15	12.50'	090°00'25"	N37°20'28"W	17.68'	19.64'
C16	275.00'	007°14'00"	S85°57'40"E	34.69'	34.72'
C17	330.00'	007°14'00"	S85°57'40"E	41.63'	41.66'
C18	12.50'	090°00'00"	S44°34'40"E	17.68'	19.63'
C19	372.50'	007°14'25"	S04°02'32"W	47.04'	47.07'
C20	957.00'	014°13'22"	S00°33'04"W	236.95'	237.56'
C21	12.50'	090°00'10"	N38°26'23"E	17.68'	19.63'
C22	272.50'	001°34'16"	S84°13'31"W	7.47'	7.47'
C23	12.50'	088°25'43"	N50°46'29"W	17.43'	19.29'
C24	1222.50'	014°13'22"	N00°33'04"E	302.69'	303.46'
C25	12.50'	089°59'35"	N52°39'32"E	17.68'	19.63'
C26	427.50'	002°34'49"	N01°42'45"E	19.25'	19.25'
C27	427.50'	004°39'35"	N05°19'57"E	34.76'	34.77'
C28	902.50'	002°49'55"	N06°14'47"E	44.60'	44.61'
C29	902.50'	004°21'00"	N02°39'19"E	68.50'	68.52'
C30	902.50'	005°04'10"	N02°03'16"W	79.82'	79.85'
C31	902.50'	001°58'16"	N05°34'29"W	31.05'	31.05'
C32	642.50'	002°46'10"	S05°10'32"E	31.05'	31.06'
C33	642.50'	004°16'16"	S01°39'19"E	47.88'	47.90'
C34	642.50'	004°21'00"	S02°39'19"W	48.77'	48.78'
C35	642.50'	002°49'55"	S06°14'47"W	31.75'	31.76'
C36	587.50'	004°28'48"	S05°25'21"W	45.92'	45.94'
C37	587.50'	006°42'50"	S00°10'28"E	68.80'	68.84'
C38	587.50'	003°01'44"	S05°02'45"E	31.05'	31.06'
C39	272.50'	001°42'32"	S84°09'24"W	8.13'	8.13'
C40	272.50'	001°44'53"	S82°25'42"W	8.31'	8.31'
C41	1277.50'	001°25'13"	N05°51'00"W	31.67'	31.67'
C42	1277.50'	002°11'49"	N04°02'29"W	48.98'	48.98'
C43	1277.50'	002°12'56"	N01°50'07"W	49.40'	49.40'
C44	1277.50'	002°12'56"	N00°22'49"E	49.40'	49.40'
C45	1277.50'	002°12'56"	N02°35'45"E	49.40'	49.40'
C46	1277.50'	002°12'56"	N04°48'41"E	49.40'	49.40'
C47	1277.50'	001°44'35"	N06°47'27"E	38.86'	38.87'
C48	275.00'	002°39'49"	S83°40'34"E	12.78'	12.78'
C49	275.00'	004°34'11"	S87°17'34"E	21.93'	21.93'
C50	372.50'	003°18'17"	S02°04'29"W	21.48'	21.49'
C51	372.50'	003°56'08"	S05°41'41"W	25.58'	25.59'
C52	957.00'	000°37'51"	S07°20'49"W	10.54'	10.54'
C53	957.00'	002°56'05"	S05°33'51"W	49.01'	49.02'
C54	957.00'	002°56'43"	S02°37'27"W	49.19'	49.19'
C55	957.00'	002°56'43"	S00°19'15"E	49.19'	49.19'
C56	957.00'	002°54'42"	S03°14'57"E	48.63'	48.63'
C57	957.00'	001°51'19"	S05°37'58"E	30.98'	30.99'
C58	1222.50'	001°29'04"	N05°49'05"W	31.67'	31.67'
C59	1222.50'	003°17'36"	N03°25'45"W	70.26'	70.27'
C60	1222.50'	002°55'53"	N00°19'01"W	62.54'	62.55'
C61	1222.50'	002°55'53"	N02°36'53"E	62.54'	62.55'
C62	1222.50'	003°03'22"	N05°36'30"E	65.20'	65.21'
C63	1222.50'	000°31'34"	N07°23'58"E	11.22'	11.22'

22.4241 ACRE, OR 977.526 SQUARE FEET TRACT OF LAND BEING ALL OF A CALLED 22.441 ACRE TRACT OF LAND CONVEYED TO 288 DEVELOPMENT, INC., IN SPECIAL WARRANTY DEED, RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SITUATED IN THE JOSIAS B. BEALLE SURVEY, ABSTRACT NO. 97, AND IN THE WILLIAM J. BROWN SURVEY, SECTION NO. 22, ABSTRACT NO. 105, IN WILLIAMSON COUNTY, TEXAS.

THAT 288 DEVELOPMENT, INC., A TEXAS CORPORATION, AS OWNERS OF THE CERTAIN 22.441 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY SUBDIVIDE SAID 22.441 ACRE TRACT AS SHOWN HEREON, AND DOES HEREBY CONSENT TO ALL PLAT NOTE AND REQUIREMENTS SHOWN HEREON, AND DOES HEREBY DEDICATE TO THE CITY OF HUTTO THE STREETS, RIGHT-OF-WAY, EASEMENTS, AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF HUTTO MAY DEEM APPROPRIATE.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS ____ DAY OF _____, 2018.

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JOSEPH STRAUB, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

MY COMMISSION EXPIRES: _____

THAT PLAINSCAPITAL BANK, LIEN HOLDER OF THE CERTAIN 22.441 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY CONSENT TO THE SUBDIVISION OF SAID 22.441 TRACT AS SHOWN HEREON, AND DOES FURTHER HEREBY JOIN, APPROVE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DOES HEREBY DEDICATE TO THE CITY OF HUTTO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF HUTTO MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS MAGER MEADOWS, PHASE 2.

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED MATT NORRIS, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

MY COMMISSION EXPIRES: _____

THAT CONTINENTAL HOMES OF TEXAS, L.P., LIEN HOLDER OF THE CERTAIN 22.441 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY CONSENT TO THE SUBDIVISION OF SAID 22.441 TRACT AS SHOWN HEREON, AND DOES FURTHER HEREBY JOIN, APPROVE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DOES HEREBY DEDICATE TO THE CITY OF HUTTO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF HUTTO MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS MAGER MEADOWS, PHASE 2.

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED IAN CUDE, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

MY COMMISSION EXPIRES: _____

THAT MAGER MEADOWS, L.P., LIEN HOLDER OF THE CERTAIN 22.441 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NO. 2018007060 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY CONSENT TO THE SUBDIVISION OF SAID 22.441 TRACT AS SHOWN HEREON, AND DOES FURTHER HEREBY JOIN, APPROVE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DOES HEREBY DEDICATE TO THE CITY OF HUTTO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF HUTTO MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS MAGER MEADOWS, PHASE 2.

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JAMES B. HADDOCK, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

MY COMMISSION EXPIRES: _____

I, MICHAEL S. FISHER, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS (MAGER MEADOWS, PHASE 2) PLAT IS IN COMPLIANCE WITH THE CODES AND ORDINANCES OF THE CITY OF HUTTO, TEXAS.

MICHAEL S. FISHER
REGISTERED PROFESSIONAL ENGINEER NO. 87704
PAPE-DAWSON ENGINEERS, INC.
TBPE, FIRM REGISTRATION NO. 470
TBPLS, FIRM REGISTRATION NO. 10028801

I, VALERIE ZURCHER, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY AND THAT THE PROPERTY MARKERS AND MONUMENTS WERE PLACED UNDER MY SUPERVISION ON THE GROUND. THE FIELD WORK WAS COMPLETED ON APRIL 10, 2018.

VALERIE ZURCHER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 62222
PAPE-DAWSON ENGINEERS, INC.
TBPE, FIRM REGISTRATION NO. 470
TBPLS, FIRM REGISTRATION NO. 10028801

LISA L. BROWN, CITY SECRETARY _____ DATE _____

THAT I, NANCY E. RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATION OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20_____, A.D., AT _____ O'CLOCK _____ M. AND DULY RECORDED ON THE _____ DAY OF _____, 20_____, A.D., AT _____ O'CLOCK _____ M. IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY, IN DOCUMENT NO. _____.

BY: _____, DEPUTY



HUTTO CITY OF
WWW.HUTTOTX.GOV



**PAPE-DAWSON
ENGINEERS**

AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

8C.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration and possible action on a resolution approving the proposed Star Ranch Concept Plan (Revised), 112.125 acres, more or less, of land, located within Hutto's extraterritorial jurisdiction west of SH-130 and north of Gattis School Road. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

The Star Ranch development area is located outside of the City limits in the Extraterritorial Jurisdiction (ETJ). This area is subject to a Strategic Partnership Agreement and Limited Purpose Annexation (SPA/LPA) which includes a Concept Plan and sets vesting to the 2002 Subdivision Ordinance. Over the course of development, some land uses shown on the Concept Plan have been modified and reduced the area of non-residential development. These changes prompted the City to execute a Memorandum of Understanding (MOU) with Tack Development in February 2018, which was recently amended by City Council to remove the previously required commercial tract along Gattis School Road. The MOU, requires the applicant to make several of the updates presented with reflected on the proposed Revised Concept Plan. At this time, the applicant requests approval of the revised Concept Plan for the land the applicant still controls (highlighted on the attached map for clarification).

The Concept Plan was updated previously to reflect patio-style residential product on a portion of Parcel 21 and the entirety of Parcel 22. While the existing SPA/LPA is specific to state what levels of Concept Plan amendments are permitted and the approval process for amendments, the MOU now takes precedence to ensure the overall mix of land uses is similar to the original intent of the mix of land uses throughout the development.

The changes required in the MOU, and reflected on the attached Revised Concept Plan are as follow:

- Parcel 9 changed from Office/Retail to Multi-Family;
- Parcel 15, 30, and 31 are designated Retail;
- An approximate four (4) acre tract along directly adjacent to the driving range has been changed to Retail;
- The addition of the office complex under construction near Parcel 13; and,

- Any additional changes desired by the Developer

The MOU further states any changes to the Amended Concept Plan must be identified and approved by the city prior to the applicant's submission of a preliminary plat as well as next steps to preliminary and final plat the areas identified as future office and multi-family development. The MOU also states the SPA/LPA will be renegotiated and presented to City Council no later than January 2019.

Summary of Request

The Revised Star Ranch Concept Plan includes the area bound by SH 130 on the east, Gattis School Road to the South, Winterfield Drive on the West, and the property north of the future extension of Star Ranch Blvd. The areas seeking revision are indicated in the hatched area on the proposed Concept Plan. Along Muirfield Bend Drive Parcel 9 has been updated to reflect the townhome product currently under construction (formerly office/retail) and Parcel 43B provides an approximate 4.5 acre tract for Office/Retail, which results in the reduction of the driving range tract.

The other revisions are along Star Ranch Blvd., further north in the development. Parcel 15D designates another 14.28 acre tract for Retail (formerly multi-family). Parcel 15A is shown as 13.9 acres available for retirement/assisted living, Parcel 15B is shown as approximately 42.81 acres of multi-family and Parcel 15C shows 1.0 acres for Office/Retail; this area was previously designated as Estate Residential. Lastly, Parcel 18 is designated as a 12 acre school site. The approximate 3 acre amenity center site, which has always been shown north of the east-west portion of Star Ranch Blvd., may move along that strip of land between Parcel 15A-C with the final location determined with a future Preliminary Plat. The purpose for the flexibility in locating the amenity center is that the City is also requiring access to the approximate 36 acre park site along the northern edge of the development. In addition, Hutto ISD is being provided some flexibility in the final location of the school site along Star Ranch Blvd. While currently shown as Parcel 18, Hutto ISD has been discussing two other locations in the same vicinity with the developer. It is important to note that while providing flexibility in the ultimate amenity center and school site tracts, the commitment to have both land uses is shown on the revised Concept Plan.

The Revised Concept Plan proposes approximately 36 acres for parkland as agreed upon in the SPA/LPA. Sidewalks will be constructed on both sides of all streets within the subdivision and has recently been added along Parcel 9. Water and wastewater is provided by Williamson County Water, Sewer, Irrigation, and Drainage District (WCWSIDD) No. 3 and MUD No. 22. In addition, an updated traffic impact analysis is currently under review with the proposed land uses to reflect future traffic impacts of the development as proposed.

Public Comments

All property owners within 200-feet have been notified by mail of the revised Concept Plan. Staff has received over 200 contacts by mail, phone, and email in opposition of the request for more dense development. The main point of opposition relates to the additional commercial along Gattis School Road that was shown on a previous submittal (now removed and also amended out of the MOU). The residents are in support of moving the approximate 4.5 acres elsewhere within the Concept Plan, such as counting the change of Parcel 43B and Parcel 15 towards the minimum commercial acreage needed. Removing the requirement to allow additional commercial development along Gattis School,

maintains the existing view corridor into the golf course intact and alleviates concerns about increasing traffic volumes along Gattis School Road.

The second point of concern is the change from estate lots to multi-family. This change results in the removal of any low density, estate lots within the development. Most residents voiced frustration with changes to the Concept Plan that do not match what was presented when they purchased the property (2005 Master Plan attached). The residents also object to multi-family and concerns of increased crime, traffic, noise, as well as negative impacts on property values and quality of life. The change from Estate to a higher density caused the objection.

Staff facilitated two separate meetings regarding the Concept Plan. The first meeting was for Star Ranch residents only so that they could have an open dialogue with staff about their concerns. The second meeting was held to facilitate the discussion between the developer and the residents about the residents' concerns. In all, approximately 60 residents attended both meetings.

Staff Comments

The Concept Plan has been amended several times since 2005. The modifications complied with the 10% density increase limit provided in the SPA/LPA. Although a municipality often has limited control over development patterns in the ETJ, this master-planned development is different as it functions, partially, as a part of the City. Thus, with the combined SPA/LPA, subdivision platting authority, and the MOU, the City can exercise some additional land use control as it relates to the SPA/LPA areas and mix of commercial uses within that area. However, density and land use control is expressly prohibited in State Law (see attached excerpt 212.003). Understanding the limitations of state law, staff facilitated two separate meetings with the residents in order to understand their concerns as well as coordinate a meeting between the developer and the residents. Those concerns have been taken into account with the proposed amendment. Although the development pattern has changed from the original conceptual master plan, neither the City or Williamson County has land use controls to disallow the proposed changes.

The addition of the school site within the development is a positive addition to the development. Staff coordinated a meeting between the ISD and the developer to ensure both parties agreed to the location and acreage shown on the Concept Plan. There are still several steps in the development review process that must be completed, including Preliminary and Final Plat applications. The MOU also sets out additional development controls as the tracts currently in Tack Development ownership are required to meet the City Codes, including site plan review and approval as well as building permits and inspections.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Planning and Zoning Commission recommended approval to City Council on July 3, 2018 with the request the north amenity center is not reduced from the previous 3.01 acre size and it is located adjacent to Star Ranch Blvd. as shown on the 2005 Master Plan.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Because the Concept Plan is directly tied to the SPA/LPA agreement and the MOU, these revisions have only been reviewed by City staff. All future Preliminary Plat and Final Plat applications will be reviewed by both the city and county entities.

SUPPORTING MATERIAL:

1. [Resolution - Star Ranch Concept Plan \(Revised\)](#)
2. [2005 Star Ranch Master Plan](#)
3. [Texas Local Government Code 212.003](#)

RESOLUTION NO.

A RESOLUTION APPROVING THE CONCEPT PLAN KNOWN AS “STAR RANCH CONCEPT PLAN (REVISED)”; LOCATED WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF HUTTO, WILLIAMSON COUNTY, TEXAS.

WHEREAS, the Texas Local Government Code Chapter 212 and the City of Hutto Subdivision Ordinance requires the Planning and Zoning Commission to take action to recommend to the City Council whether or not to approve or disapprove a subdivision plat within thirty (30) days of the date an application is accepted, and;

WHEREAS, the Texas Local Government Code Chapter 212 and the City of Hutto Subdivision Ordinance requires the City Council take action to approve or disapprove a subdivision plat within thirty (30) days of the date of presentation at Planning and Zoning Commission, and;

WHEREAS, the Development Services Department and the City Engineer have reviewed the above referenced plat for compliance with statute and engineering standards, and;

WHEREAS, if City Council fails to take action on this plat within the prescribed thirty (30) day period, the plat is granted statutory approval, Now therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

that the Hutto City Council hereby approves the resolution for concept plan known as “Star Ranch Concept Plan (Revised)”, a copy of same being attached hereto as “Exhibit A” and incorporated herein for all purposes.

CONSIDERED and RESOLVED on this the **19th** day of the month **July, 2018**.

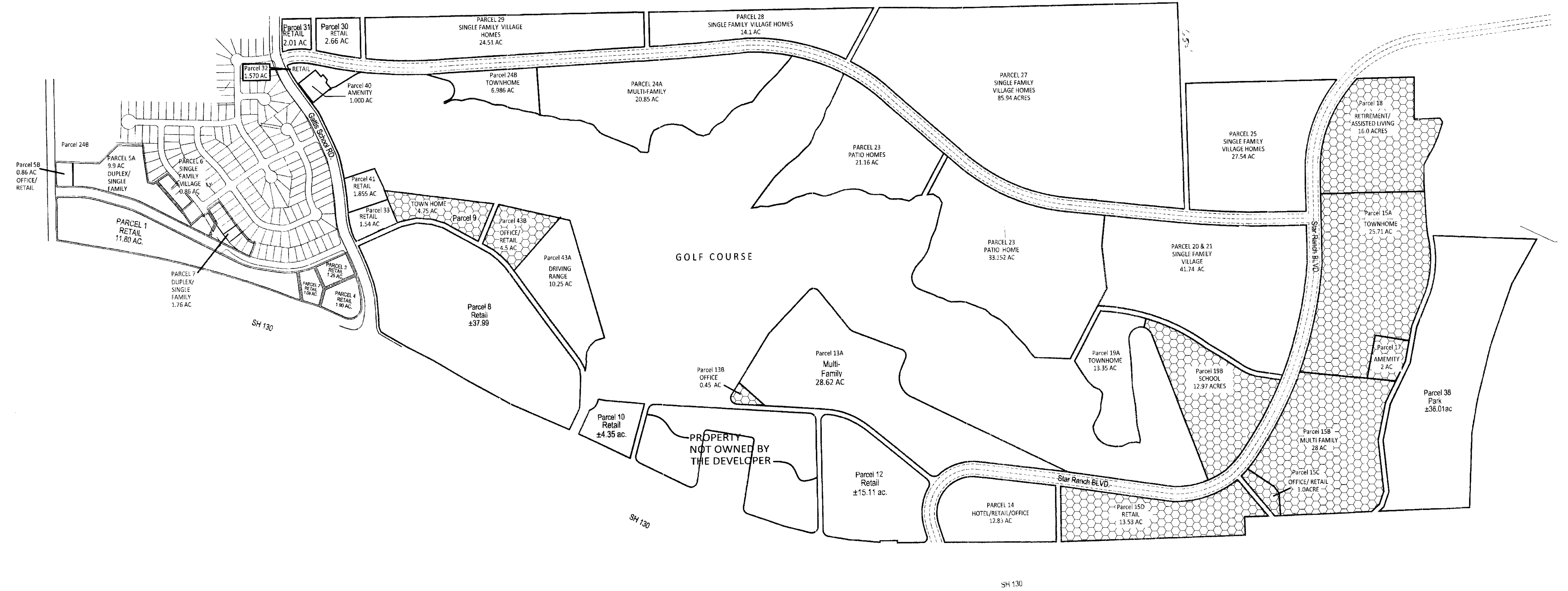
THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

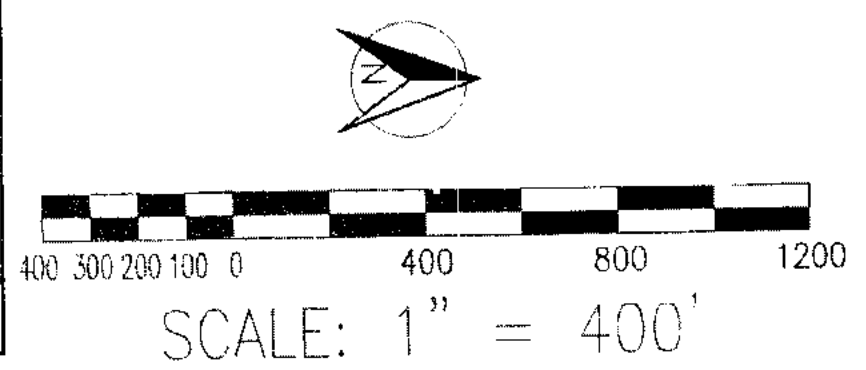
STAR RANCH
REVISED CONCEPT MASTER PLAN



STAR RANCH CONCEPTUAL MASTER PLAN FEBRUARY 2018

LAND USE	CURRENT ACRES	ORIG. ACRES	DIFFERENCE FROM ORIGINAL CONCEPT ACRES
OFFICE/ RETAIL	33.30	12.12	+21.18
HOTEL/RETAIL/OFFICE	12.83	12.83	0
RETAIL	76.61	163.04	-86.43
TOWNHOMES	42.98	58.76	-15.78
PATIO HOME	54.31	44.88	+9.43
SINGLE FAMILY VILLAGE	194.69	172.78	+21.91
SF - ESTATE	0	80.15	-80.15
MULTI-FAMILY	77.47	89.65	-12.18
AMENITY	3.00	4.7	-1.7
SCHOOL	12.97	10.10	+2.87
PARK	36.01	36.01	0
GOLF	179.02	183.56	-4.54
DRIVING RANGE	10.25	14.75	-4.5
ROW	2.86	2.86	0
DUPLEX/SINGLE FAMILY	11.66	0	+11.66
OFFICE	0.45	0	+0.45
ASSISTED LIVING	16.00	0	+16.00
TOTAL	765.42	886.19	-120.77

AREA REMOVED DUE TO DIFFERENT OWNERSHIP = 120.73



DEVELOPER INFORMATION
TACK DEVELOPMENT LTD & STAR GOLF PARTNERS, LTD
TIM TIMMERMAN
2490 FM 685
HUTTO, TX

Received 7/12/18



DATE: 07/12/2018
RANDALL JONES & ASSOCIATES ENGINEERING, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836-4793 FAX: (512) 836-4817 F-9784
RJ SURVEYING & ASSOCIATES, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836-4793 FAX: (512) 836-4817
F-10015400

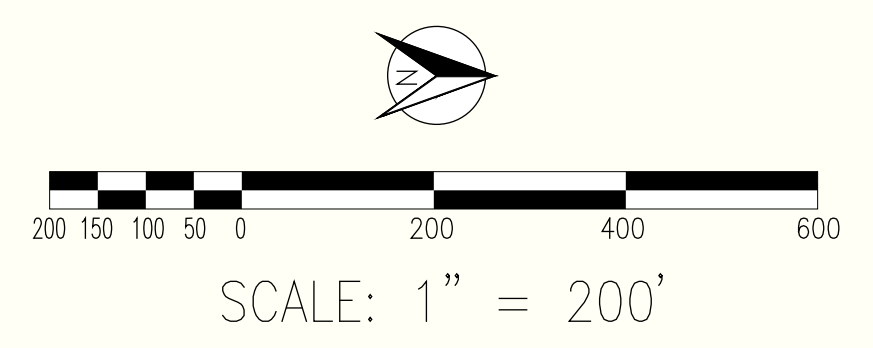


Star Ranch



MASTER PLAN

LAND STRATEGIES INC.
PAUL LINEHAN & ASSOCIATES
JUNE 2008



LOCAL GOVERNMENT CODE

TITLE 7. REGULATION OF LAND USE, STRUCTURES, BUSINESSES, AND RELATED
ACTIVITIES

SUBTITLE A. MUNICIPAL REGULATORY AUTHORITY

CHAPTER 212. MUNICIPAL REGULATION OF SUBDIVISIONS AND PROPERTY DEVELOPMENT

SUBCHAPTER A. REGULATION OF SUBDIVISIONS

Sec. 212.001. DEFINITIONS. In this subchapter:

(1) "Extraterritorial jurisdiction" means a municipality's extraterritorial jurisdiction as determined under Chapter 42, except that for a municipality that has a population of 5,000 or more and is located in a county bordering the Rio Grande River, "extraterritorial jurisdiction" means the area outside the municipal limits but within five miles of those limits.

(2) "Plat" includes a replat.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987. Amended by Acts 1989, 71st Leg., ch. 1, Sec. 46(b), eff. Aug. 28, 1989.

Sec. 212.002. RULES. After a public hearing on the matter, the governing body of a municipality may adopt rules governing plats and subdivisions of land within the municipality's jurisdiction to promote the health, safety, morals, or general welfare of the municipality and the safe, orderly, and healthful development of the municipality.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987.

Sec. 212.0025. CHAPTER-WIDE PROVISION RELATING TO REGULATION OF PLATS AND SUBDIVISIONS IN EXTRATERRITORIAL JURISDICTION. The authority of a municipality under this chapter relating to the regulation of plats or subdivisions in the municipality's extraterritorial jurisdiction is subject to any applicable limitation prescribed by an agreement under Section 242.001.

Added by Acts 2003, 78th Leg., ch. 523, Sec. 6, eff. June 20, 2003.

Sec. 212.003. EXTENSION OF RULES TO EXTRATERRITORIAL JURISDICTION.

(a) The governing body of a municipality by ordinance may extend to the extraterritorial jurisdiction of the municipality the application of municipal ordinances adopted under Section 212.002 and other municipal ordinances relating to access to public roads or the pumping, extraction, and use of groundwater by persons other than retail public utilities, as defined by Section 13.002, Water Code, for the purpose of preventing the use or contact with groundwater that presents an actual or potential threat to human health. However, unless otherwise authorized by state law, in its extraterritorial jurisdiction a municipality shall not regulate:

(1) the use of any building or property for business, industrial, residential, or other purposes;

(2) the bulk, height, or number of buildings constructed on a particular tract of land;

(3) the size of a building that can be constructed on a particular tract of land, including without limitation any restriction on the ratio of building floor space to the land square footage;

(4) the number of residential units that can be built per acre of land; or

(5) the size, type, or method of construction of a water or wastewater facility that can be constructed to serve a developed tract of land if:

(A) the facility meets the minimum standards established for water or wastewater facilities by state and federal regulatory entities; and

(B) the developed tract of land is:

(i) located in a county with a population of 2.8 million or more; and

(ii) served by:

(a) on-site septic systems constructed before September 1, 2001, that fail to provide adequate services; or

(b) on-site water wells constructed before September 1, 2001, that fail to provide an adequate supply of safe drinking water.

(b) A fine or criminal penalty prescribed by the ordinance does not apply to a violation in the extraterritorial jurisdiction.

(c) The municipality is entitled to appropriate injunctive relief in district court to enjoin a violation of municipal ordinances or codes applicable in the extraterritorial jurisdiction.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987. Amended by Acts 1989, 71st Leg., ch. 1, Sec. 46(b), eff. Aug. 28, 1989; Acts 1989, 71st

Leg., ch. 822, Sec. 6, eff. Sept. 1, 1989; Acts 2001, 77th Leg., ch. 68, Sec. 1, eff. Sept. 1, 2001; Acts 2003, 78th Leg., ch. 731, Sec. 3, eff. Sept. 1, 2003.

Sec. 212.004. PLAT REQUIRED. (a) The owner of a tract of land located within the limits or in the extraterritorial jurisdiction of a municipality who divides the tract in two or more parts to lay out a subdivision of the tract, including an addition to a municipality, to lay out suburban, building, or other lots, or to lay out streets, alleys, squares, parks, or other parts of the tract intended to be dedicated to public use or for the use of purchasers or owners of lots fronting on or adjacent to the streets, alleys, squares, parks, or other parts must have a plat of the subdivision prepared. A division of a tract under this subsection includes a division regardless of whether it is made by using a metes and bounds description in a deed of conveyance or in a contract for a deed, by using a contract of sale or other executory contract to convey, or by using any other method. A division of land under this subsection does not include a division of land into parts greater than five acres, where each part has access and no public improvement is being dedicated.

(b) To be recorded, the plat must:

(1) describe the subdivision by metes and bounds;

(2) locate the subdivision with respect to a corner of the survey or tract or an original corner of the original survey of which it is a part; and

(3) state the dimensions of the subdivision and of each street, alley, square, park, or other part of the tract intended to be dedicated to public use or for the use of purchasers or owners of lots fronting on or adjacent to the street, alley, square, park, or other part.

(c) The owner or proprietor of the tract or the owner's or proprietor's agent must acknowledge the plat in the manner required for the acknowledgment of deeds.

(d) The plat must be filed and recorded with the county clerk of the county in which the tract is located.

(e) The plat is subject to the filing and recording provisions of Section [12.002](#), Property Code.

Acts 1987, 70th Leg., ch. 149, Sec. 1, eff. Sept. 1, 1987. Amended by Acts 1989, 71st Leg., ch. 1, Sec. 46(b), eff. Aug. 28, 1989; Acts 1989, 71st Leg., ch. 624, Sec. 3.02, eff. Sept. 1, 1989; Acts 1993, 73rd Leg., ch. 1046, Sec. 1, eff. Aug. 30, 1993.

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

8D.

AGENDA DATE: July 19, 2018

PRESENTED BY:

ITEM:

Consideration and possible action on an Economic Development Agreement authorizing the City Manager to execute a First Amended Chapter 380 Economic Development Agreement between the City of Hutto and Hutto Mezz Holdings, L.L.C. (Helen Ramirez)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

The Developer, Hutto Mezz Holdings, L.L.C., a Texas Limited Liability Company, and City of Hutto entered into a Chapter 380 Economic Development Agreement on the 6th of March, 2014 (attached as supporting documentation) regarding reimbursements for certain improvements constructed by the Developer, including sewer line extensions.

The Developer and City are now proposing the execution of an First Amendment to this agreement which incorporates and modifies the reimbursement provisions of the Original Agreement (attached as First Amendment to 380 Economic Development Agreement).

BUDGETARY AND FINANCIAL SUMMARY:

The Developer and City are now proposing the execution of a First Amendment to the original agreement which incorporates and modifies the reimbursement provisions of the 2014 Original Agreement (attached as First Amendment to 380 Economic Development Agreement).

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not Applicable.

CITY ATTORNEY REVIEW:

City Attorney has reviewed and approved the first amendment to the Economic Development Agreement.

STAFF RECOMMENDATION:

Staff recommends approval of the First Amendment to the Economic Development Agreement with MEZZ Holdings.

SUPPORTING MATERIAL:

1. [First Amendment 380 Economic Development Agreement MEZZ 7 12 2018](#)
2. [Original 380 Economic Development Agreement with MEZZ 03 06 2014](#)

HUTTO MEZZ HOLDINGS L.L.C. and

CITY OF HUTTO, TEXAS

CHAPTER 380

FIRST AMENDED CHAPTER 380 ECONOMIC DEVELOPMENT AGREEMENT

This First Amended Chapter 380 Economic Development Agreement ("First Amended Agreement") is entered into this ____ day of July, 2018, by and between the City of Hutto, Texas, a Texas home rule municipal corporation ("City") and Hutto Mezz Holdings, L.L.C., a Texas Limited Liability Company, its successors and assigns ("Developer") (with each City and Developer a Party, and together, the "Parties").

WHEREAS, Developer and City have entered into a Chapter 380 Economic Development Agreement on the 3rd day of May 2012 which was amended on the 18th day of October, 2012 regarding reimbursements for certain improvements constructed by Developer, including sewer line extensions (together, the "Original Agreement"); and

WHEREAS, on the 6th day of March, 2014, Developer and City entered into a new Chapter 380 Agreement (the "Agreement"), which incorporated and modified the reimbursement provisions of the Original Agreement, along with revised reimbursement provisions; and

WHEREAS, The Parties desire to now to amend the Agreement,

NOW, THEREFORE, in consideration of the mutual benefits and promises and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the City and Developer agree as follows:

A. Section III of the Agreement shall be amended as follows:

III. Definitions.

"Sales Tax Revenues" is redefined to mean City sales taxes collected from the Property after the effective date of the Agreement.

"Available Sales Tax" is redefined to mean eighty percent (80%) of the Sales Tax Revenues collected by the City after the effective date of the Agreement until termination of the Agreement.

"Impact Fees" means the amount of water and wastewater impact fees paid to the City as result of the development on the Property.

"Available Impact Fees" is redefined to mean eighty percent (80%) of the Impact Fees collected by the City after the effective date of the Agreement, until the termination of the agreement.

“Available Property Tax” shall mean one hundred percent (100%) of the ad valorem property taxes, to include any rollback taxes, collected by the City deriving from the Property on and after the Effective Date until the termination of the Agreement.

“Termination of Agreement” shall mean when the obligations of the City and Developer, for the reimbursements and construction of Public Improvements, have been completed in accordance with the Agreement, as amended.

Except for the definitions redefined herein, definitions in the Agreement shall apply to this First Amended Agreement.

B. Section VII of the Agreement shall be amended as follows:

Section VII.A, B and C are deleted and replaced with the following:

VII. Rights and Obligations of the City.

A. Establishment of the Reimbursement Account and Payment Schedule.

1. Starting on the Effective Date, the City shall maintain an account (the “Reimbursement Account”) into which all Available Sales Tax, Available Property Tax, and Available Impact Fees as defined in Section III will be deposited and held for reimbursement to Developer pursuant to this Agreement

2. Payments and Payment Schedule. All approved reimbursements shall be paid to Developer from the Reimbursement Account as defined in VII.A.1, thereafter until all Phase Improvement Costs are paid in full. Interest at the rate of five percent (5%) per annum will accrue on the Phase 1b Improvement Costs (Costs only, not on interest) starting June 15, 2019, until reimbursement by City out of the Reimbursement Account. Payments will first be applied to any interest due, then to the Phase 1b Improvement Costs balance until the Phase 1b Improvement Costs are paid in full. No other interest shall be paid by City under this Agreement or First Amended Agreement.

B. Reimbursement of Phase Ia Improvements.

The “Phase Ia Improvement Cost Balance” means the unpaid balance of the Sewer Line Reimbursement as of the Effective Date, which is equal to \$727,404. As of May 9, 2018, the entire Phase Ia Improvement Cost Balance has been reimbursed to Developer and no additional amounts will be due on Phase Ia.

C. Reimbursement of Phase Ib Improvements.

The "Phase Ib Improvement Costs" means the documented costs of the Phase Ib Improvements, or \$5,000,000, whichever is less. The City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year after completion of the Phase Ib Improvements, with first payment due after completion of the Phase Ib Improvements in accordance with this Agreement and, continuing thereafter as such funds are available, until the Phase Ib Improvement Costs, plus any interest accrued per VII.A.2, are fully paid.

C. Section VIII of the Agreement shall be amended as follows:

Miscellaneous.

I. Notice for City Manager shall be amended as follows:

City: Odis Jones, City Manager
City of Hutto
401 West Front Street
Hutto, TX 78634

R. Continuation of Payments.

City shall continue to be obligated to make payments to the Developer of all sums coming due under this Agreement regardless of the expiration of the term of this Agreement and continuing until such amounts have been paid in full.

D. Source of Payments. Reimbursement under this Agreement, including this First Amended Agreement, shall be made only to the extent funds are collected from the Property by the City.

E. All other terms and conditions of the Agreement shall remain in full force and effect.

EXECUTED to be effective as of the ____ day of _____, 2018.

HUTTO MEZZ HOLDINGS, L.L.C

By: 

Printed Name: Aaron A. Giovara

Title: Authorized Signatory

CITY OF HUTTO, TEXAS

A home rule city and municipal corporation

By: _____

Printed Name: _____

Title: _____

RESOLUTION NO. R-14-03-06-16A

A RESOLUTION APPROVING AN ECONOMIC DEVELOPMENT AGREEMENT WITH HUTTO MEZZ HOLDINGS LLC FOR THE HUTTO CROSSINGS DEVELOPMENT IN CONSIDERATION FOR CERTAIN PUBLIC IMPROVEMENTS

WHEREAS, the City of Hutto (the CITY) entered into an economic development agreement with Hutto Mezz Holdings LLC (the DEVELOPER) in May 2012 for the extension of wastewater infrastructure; and

WHEREAS, the CITY desires to extend public roadways and infrastructure in order to improve traffic flow and increase economic development; and

WHEREAS, the City is authorized by Article III, Section 52-a of the Texas Constitution and Section 380.001 of the Texas Local Government Code, as amended, to establish economic development programs and to provide grants for economic development; and

WHEREAS, the CITY and DEVELOPER desire to set forth in this Agreement the terms and conditions of a performance-based economic development grant payments to be made to the DEVELOPER, its successors and assigns, for certain costs incurred in the development of the property.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS, that the Hutto City Council hereby approves the economic development agreement as attached as Exhibit A.

RESOLVED on this the **6th** day of the month of **March, 2014**.

CITY OF HUTTO, TEXAS



Debbie Holland, Mayor

ATTEST:



Christine Martinez, City Secretary

**HUTTO OPTION MEZZ HOLDINGS, L.L.C. AND
CITY OF HUTTO, TEXAS
CHAPTER 380
ECONOMIC DEVELOPMENT AGREEMENT**

This Economic Development Agreement ("Agreement") is entered into this 6th day of March, 2014, by and between the City of Hutto, Texas, a Texas home rule municipal corporation ("City") and Hutto Option Mezz Holdings, L.L.C., a Delaware limited liability company, its successors and assigns ("Developer").

RECITALS

WHEREAS, Developer is the owner of approximately 466.23 acres of land (the "Property") as shown on Exhibit "A", attached hereto and incorporated herein; and

WHEREAS, on the 3rd day of May 2012, Developer and the City entered into a Chapter 380 Economic Development Agreement, which was amended on October 18, 2012, (together, the "Original Agreement") regarding reimbursements for certain improvements constructed by Developer, including sewer line extensions; and

WHEREAS, Developer and the City desire to enter in to a new Chapter 380 Agreement which incorporates the reimbursement provisions of the Original Agreement in to this Agreement, along with this Agreement's new reimbursement provisions; and

WHEREAS, the purpose of this Agreement is to create an economic development program, pursuant to Chapter 380 of the Texas Local Government Code; and

WHEREAS, the City hereby establishes and authorizes the making of economic development grants to Developer in recognition of the positive economic benefits to the City through Developer's development of the Property as a mixed-use planned unit development ("The Crossings PUD") previously approved by the City on the 9th day of May, 2013; and

WHEREAS, the City has found and determined that the development of the Property will further the public interest and welfare, and that the benefits that will accrue to the City are

consistent with the City's economic development objectives to increase property and sale and use taxes, and the attraction of new jobs, and is necessary to promote and develop new business enterprises; and

WHEREAS, the City is authorized by Article III, Section 52-a of the Texas Constitution, and Section 380.001 of the Texas Local Government Code, as amended, to establish economic development programs and to provide grants for economic development; and

WHEREAS, the City and the Developer desire to set forth in this Agreement the terms and conditions of a performance-based economic development grant payments to be made to Developer, its successors and assigns, for certain costs incurred in the development of the Property.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein and for good and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree to the following:

I.

Authority

The City's execution of this Agreement, as authorized by Chapter 380 of the Texas Local Government Code, constitutes a valid and binding obligation of the City. The City acknowledges that Developer is acting in reliance upon the City's performance of its obligations under this Agreement in making its decision to commit substantial resources and money to construct the projects.

II.

Term

This Agreement shall become enforceable upon its Effective Date, which is the date this Agreement is executed by the City. This Agreement shall terminate twenty (20) years after the

Effective Date, unless otherwise extended as provided for in this Agreement or through force majeure.

III

Definitions

“Available Sales Tax” means seventy-five percent (75%) of the Sales Tax Revenues during the Phase I Reimbursement Period, and fifty percent (50%) of the Sales Tax Revenues during the Phase II Reimbursement Period.

“Available Property Tax” means seventy-five percent (75%) of the Property Tax Revenues during the Phase I Reimbursement Period, and fifty percent (50%) of the Property Tax Revenues during the Phase II Reimbursement Period.

“Available Impact Fees” means fifty percent (50%) of the applicable Impact Fees during the Phase I Reimbursement Period.

“Sales Tax Revenues” means the amount of retail sales tax (including sales tax on theater and entertainment venue ticket sales) collected by the City arising solely from the Project, and shall include any taxes, fees, or other revenues in the future which are intended to replace any of the sales or use tax revenues currently available to the City.

“Property Tax Revenues” means the amount of ad valorem property tax collected by the City deriving from the Property.

“Impact Fees” means the amount of all impact fees paid to the City as a result of development on the Property.

“Development Fees” means the amount of all development, permitting, and inspection fees paid to the City as a result of development on the Property.

IV.

Merger of Agreements

The City and the Developer previously entered into the Original Agreement. The Developer and the City now desire to reaffirm and modify the reimbursement provisions of the Original Agreement and merge them into this Agreement. Specifically, the City agreed to reimburse Developer a maximum amount of \$856,040 for the Developer's design and construction of a sewer line extension within the Property. The actual costs of that sewer extension were \$1,127,404, and the City has agreed to reimburse that entire amount. The City reimbursed \$400,000 of that amount to Developer in July 2013. The balance of reimbursement owed for work performed under the Original Agreement is \$727,404. This amount (the "Sewer Line Reimbursement") shall be included within this Agreement and shall be repaid pursuant to the provisions stated herein.

V.

The Public Improvements

The "Public Improvements", illustrated in Exhibit "B", and described in this section, are those projects undertaken in the development of the Property that will be eligible for reimbursement under this Agreement.

A. The "Developer Funded Wastewater Interceptor" is that portion of the Brushy Creek Interceptor, described in Exhibit "C" that was constructed by the Developer pursuant to the Original Agreement.

B. The "Carl Stern Extension" means the design, engineering and construction of the extension of Carl Stern Drive – along with all associated utility infrastructure, sidewalks, landscaping, and all other improvements within the public right-of-way - through the Property from the FM 685 right-of-way to the northbound frontage road of SH 130, at the approximate location shown in Exhibit "B", attached hereto and incorporated herein.

1. Segment One of the Carl Stern Extension, as shown on Exhibit “D”, is a two-lane and three-lane curbed and guttered connector road, constructed to City standards, from FM 685 to Segment Two.

2. Segment Two of the Carl Stern Extension, as shown on Exhibit “D”, is a two-lane curbed and guttered connector road, constructed to City standards, from the western end of Segment One to the eastern end of Segment Five.

3. Segment Three of the Carl Stern Extension, as shown on Exhibit “D”, is the widening and completion of Segment One, as a four-lane road with sidewalks and median, constructed to City standards, from FM 685 to the western end of Segment Three.

4. Segment Four of the Carl Stern Extension, as shown on Exhibit “D”, is the widening and completion of Segment Two, as a four-lane road with sidewalks and a median, constructed to City standards, from the western end of Segment Three to the eastern end of Segment Five.

5. Segment Five is a two-and three-laned curbed and guttered connector road, constructed to City standards, beginning at the western end of Segment Two and terminating at SH 130.

C. The “Knowles Drive Extension” means the design, engineering and construction of the extension of Knowles Drive – along with all associated utility infrastructure, sidewalks, landscaping, and all other improvements, constructed to City standards within the public right-of-way through the Property, from FM 685 to the northbound frontage road of SH 130, at the approximate location shown on Exhibit “B”, attached hereto.

D. The “Parks and Trails Improvements” means the design, engineering, and construction of publicly accessible trails and parkland improvements in and adjacent to the Carmel Creek

floodplain that are designed to provide public access to the Brushy Creek parkland, as generally depicted on Exhibit “B”.

VI.

Rights and Obligations of Developer

A. Construction of the Developer Funded Wastewater Interceptor.

Developer has completed construction of the Developer Funded Wastewater Interceptor (the “Phase Ia Improvements”). The project was accepted by the City of Hutto on July 18, 2013.

B. Construction of the Carl Stern Extension: Segments One, Two and Five.

1. Developer agrees to engineer, design and construct the utility infrastructure and roadway portions of Segment One, Segment Two and Segment Five of the Carl Stern Extension (the “Phase Ib Improvements”) within twenty-four (24) months after the Effective Date, subject to the force majeure provisions provided for herein. The City Council may grant extensions to this time period if the Council deems that an extension is in the best interests of the City. Developer may also choose to engineer, design, and construct some or all of the sidewalks, medians, and landscaping associated with Segment One, Segment Two and Segment Five within 24 months after the Effective Date, and include those as part of the Phase Ib Improvements. The final design shall be based on the ultimate build-out of Carl Stern Drive as a four-lane, separated roadway from FM 685 to Carmel Creek, then predominantly as a three lane roadway (with two short two lane sections) from Carmel Creek to the SH 130 frontage road, as shown on Exhibit “D”.

2. Developer agrees to construct the Phase Ib Improvements to City standards and in accordance with the standards described in The Crossings PUD.

3. Developer agrees to obtain the written approval of the City Public Works Department of the final design of the Phase Ib Improvements prior to contract award, which approval shall not be unreasonably withheld or delayed.

4. Developer agrees to fully comply with all provisions of the Texas Competitive Bidding Act, and to provide documentation of said compliance upon request by the City.

C. Construction of the Carl Stern Extension, Segments Three and Four.

1. Developer may award a contract for the construction of Segment Three and Segment Four (the “Phase IIa Improvements”) within ten (10) years from the Effective Date.

2. Developer agrees to construct the Phase IIa Improvements pursuant to City standards and in accordance with the standards described in The Crossings PUD.

3. Developer agrees to obtain written approval of the City for the final design of the Phase IIa Improvements prior to contract award, which approval shall not be unreasonably withheld or delayed.

D. Construction of Knowles Drive.

1. Developer may award a contract for the construction of Knowles Drive (the “Phase IIb Improvements”) within ten (10) years from the Effective Date.

2. Developer agrees to construct the Phase IIb Improvements pursuant to City standards and in accordance with the standards described in The Crossings PUD.

3. Developer agrees to obtain written approval of the City for the final design for the Phase IIb Improvements prior to contract award, which approval shall not be unreasonably withheld.

E. Construction of Parks and Trails.

1. Developer may award a contract for the construction of the Parks and Trails (the “Phase IIc Improvements”) within ten (10) years from the Effective Date.

2. Developer agrees to construct the Phase IIc Improvements pursuant to City standards and in accordance with the standards described in The Crossings PUD.

3. Developer agrees to obtain written approval of the City for the final design for the Phase IIc Improvements prior to contract award, which approval shall not be unreasonably withheld or delayed.

VII.

Rights and Obligations of the City

A. Establishment of the Reimbursement Account.

Starting on the Effective Date, the City shall maintain an account (the “Reimbursement Account”) into which all Available Sales Tax, Available Property Tax, and Available Impact Fees will be deposited and held for reimbursement to Developer pursuant to this Agreement.

B. Reimbursement of Phase Ia Improvements.

The “Phase Ia Improvement Cost Balance” means the unpaid balance of the Sewer Line Reimbursement as of the Effective Date, which is equal to \$727,404. The City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year for five (5) years following the Effective Date, or until the Phase Ia Improvement Cost Balance has been fully reimbursed. If the City has failed to reimburse the Developer the full Phase Ia Improvement Cost Balance within five (5) yrs after the Effective Date, then the City shall pay the balance of the Phase Ia Improvement Cost Balance not later than June 15, 2019 using other taxes or revenue sources available to the City. If the City fails to pay the balance owed, the above-described tax reimbursements shall continue each year thereafter until the balance is

fully paid at an interest rate of ten percent (10%) per year, which shall be deemed as a continuing obligation notwithstanding the expiration of the term of this Agreement.

C. Reimbursement of Phase Ib Improvements.

The “Phase Ib Improvement Costs” means the documented costs of the Phase Ib Improvements, or \$5,000,000, whichever is less. The City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year after completion of the Phase Ib Improvements, or until the Phase Ib Improvement Costs have been fully reimbursed. If the City has failed to reimburse the Developer the full Phase Ib Improvement Costs within five (5) yrs after the Effective Date, then the City shall pay the balance of the Phase Ib Improvement Costs not later than June 15, 2019 (the “Phase Ib Balance Due Date”) using other taxes or revenue sources available to the City. In the event that Developer does not complete the Phase Ib Improvements within 24 months of the Effective Date, then the Phase Ib Balance Due Date will be extended to 36 months after the Developer completes the Phase Ib Improvements. If the City fails to pay the balance owed, the above-described tax reimbursements shall continue each year thereafter until the balance is fully paid at an interest rate of ten percent (10%) per year, which shall be deemed as a continuing obligation notwithstanding the expiration of the term of this Agreement.

D. Reimbursement of Phase IIa Improvements.

Upon completion of the Phase IIa Improvements, the City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year until March 1, 2034, or until the Phase IIa Improvement Costs have been fully reimbursed, whichever comes first. The “Phase IIa Improvement Costs” means the documented costs of the Phase IIa Improvements, except that the sum of the Phase Ib

Improvement Costs and the Phase IIa Improvement Costs shall not exceed \$6,500,000.

E. Reimbursement of Phase IIb Improvements.

Upon completion of the Phase IIb Improvements, the City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year until March 1, 2034, or until the Phase IIb Improvement Costs have been fully reimbursed, whichever comes first. The “Phase IIb Improvement Costs” means the documented costs of the Phase IIb Improvements, or \$4,500,000, whichever is less.

F. Reimbursement of Phase IIc Improvements.

Upon completion of the Phase IIc Improvements, the City shall pay to Developer the funds available in the Reimbursement Account on or before March 1 of each year until March 1, 2034, or until the Phase IIc Improvement Costs have been fully reimbursed, whichever comes first. The “Phase IIc Improvement Costs” means the documented costs of the Phase IIc Improvements, or \$500,000, whichever is less.

G. Reduction of Development Fees.

As a further incentive for development of the Property, the City will reduce by 50% all Development Fees associated with the development on the Property for a period of five (5) years after the Effective Date.

H. Reimbursements.

All reimbursements are specifically contingent upon Developer presenting to the City evidence of all Project Costs. Project Costs include costs of engineering and design,

hard construction costs and other reasonable and necessary costs related to the construction of the Project, excluding right-of-way or easement costs or valuations.

VIII.

Miscellaneous

A. Mutual Assistance.

The City and Developer will do all things reasonably necessary or appropriate to carry out the terms and provisions of this Agreement, and to aid and assist each other in carrying out such terms and provisions in order to put each other in the same economic condition contemplated by this Agreement regardless of any changes in public policy, the law, or taxes or assessments attributable to the Property.

B. Representations and Warranties.

The City represents and warrants to Developer that the Program and this Agreement are within its authority, and that it is duly authorized and empowered to establish the Program and enter into this Agreement, unless otherwise ordered by a court of competent jurisdiction. Developer represents and warrants to the City that it has the requisite authority to enter into this Agreement.

C. Default.

If either the City or Developer should default in the performance of any obligations of this Agreement, the other party shall provide such defaulting party written notice of the default, and a minimum period of thirty (30) days to cure such default, prior to instituting an action for breach or pursuing any other remedy for default. If the City remains in default after notice and opportunity to cure, Developer shall have the right to pursue any remedy at law or in equity for the City's breach. If Developer remains in default after notice and opportunity to cure, the City's remedy shall be limited to a termination of any

future City tax reimbursements which have not been paid to Developer; provided however, City shall still be obligated to pay Developer any amounts (or interest) which have accrued for the benefit of Developer but have not yet been paid.

D. Attorney's Fees.

In the event any legal action or proceeding is commenced between the City and Developer to enforce provisions of this Agreement and recover damages for breach, the prevailing party in such legal action shall be entitled to recover its reasonable attorney's fees and expenses incurred by reason of such action, to the extent allowed by law.

E. Entire Agreement.

This Agreement contains the entire agreement between the parties. This Agreement may only be amended, altered or revoked by written instrument signed by the City and Developer, regardless of the future ownership of all or any portion of the Property.

F. Binding Effect.

This Agreement shall be binding on and inure to the benefit of the parties, their respective successors and assigns.

G. Assignment.

Developer may assign all or part of its rights and obligations to a third party upon thirty (30) days written notice to the City.

H. Amendment.

This Agreement may be amended by the mutual written agreement of the parties.

I. Notice.

Any notice and or statement required and permitted to be delivered shall be deemed delivered by actual delivery, facsimile with receipt of confirmation, or by depositing the

same in the United States mail, certified with return receipt requested, postage prepaid, addressed to the appropriate party at the following addresses:

Developer: Melanie Gangel
PCCP, LLC
555 California Street, Suite 3450
San Francisco, CA 94104

With a copy of legal notices to:
Hutto Option Mezz Holdings, LLC
10100 Santa Monica Blvd, Suite 1000
Los Angeles, CA 90067

City: Karen Daly, City Manager

City of Hutto
401 West Front Street
Hutto, TX 78634

Either party may designate a different address at any time upon written notice to the other party.

J. Interpretation.

Each of the parties has been represented by counsel of their choosing in the negotiation and preparation of this Agreement. Regardless of which party prepared the initial draft of this Agreement, this Agreement shall, in the event of any dispute, however, its meaning or application, be interpreted fairly and reasonably and neither more strongly for or against any party.

K. Applicable Law.

This Agreement is made, and shall be construed and interpreted, under the laws of the State of Texas and venue shall lie in Williamson County, Texas.

L. Severability.

In the event any provisions of this Agreement are illegal, invalid or unenforceable under present or future laws, and in that event, it is the intention of the parties that the

remainder of this Agreement shall not be affected. It is also the intention of the parties of this Agreement that in lieu of each clause and provision that is found to be illegal, invalid, or unenforceable, a provision be added to this Agreement which is legal, valid or enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

M. Paragraph Headings.

The paragraph headings contained in this Agreement are for convenience only and will in no way enlarge or limit the scope or meaning of the various and several paragraphs.

N. No Third Party Beneficiaries.

This Agreement is not intended to confer any rights, privileges or causes of action upon any third party.

O. Exhibits.

The following exhibits are attached and incorporated by reference for all purposes:

Exhibit "A"	-	Property Description
Exhibit "B"	-	Public Improvements
Exhibit "C"	-	Developer Funded Wastewater Interceptor
Exhibit "D"	-	Carl Stern Extension

P. No Joint Venture.

It is acknowledged and agreed by the parties that the terms hereof are not intended to and shall not be deemed to create any partnership or joint venture among the parties. The City, its past, present and future officers, elected officials, employees and agents of the City, do not assume any responsibilities or liabilities to any third party in connection with the development of the Project or the design, construction or operation of any portion of the Project.

Q. Force Majeure.

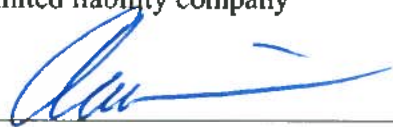
All time frames set forth in this Agreement shall be extended based upon "force majeure", acts of God, or any other activities beyond the reasonable control of the parties, including but not limited to labor strikes, material shortages, weather delays or delays in the issuance of governmental permits. The party claiming a delay shall notify the other party within ten (10) days of the event causing the delay.

R. Continuation of Payments.

City shall continue to be obligated to make payments to the Developer of any sums coming due under this Agreement in regards to Section VII.B and VII.C regardless of the expiration of the term until such amounts have been paid.

EXECUTED to be effective as of the 6th day of March, 2014.

HUTTO OPTION MEZZ HOLDINGS, L.L.C.
A Delaware limited liability company

By: 
Printed Name: Aaron A. Giovana
Title: Vice President

CITY OF HUTTO, TEXAS,
A home rule city and municipal corporation

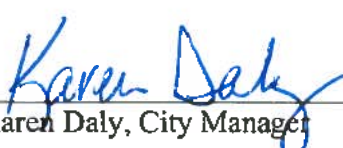
By: 
Karen Daly, City Manager

Exhibit "A"
Property Description



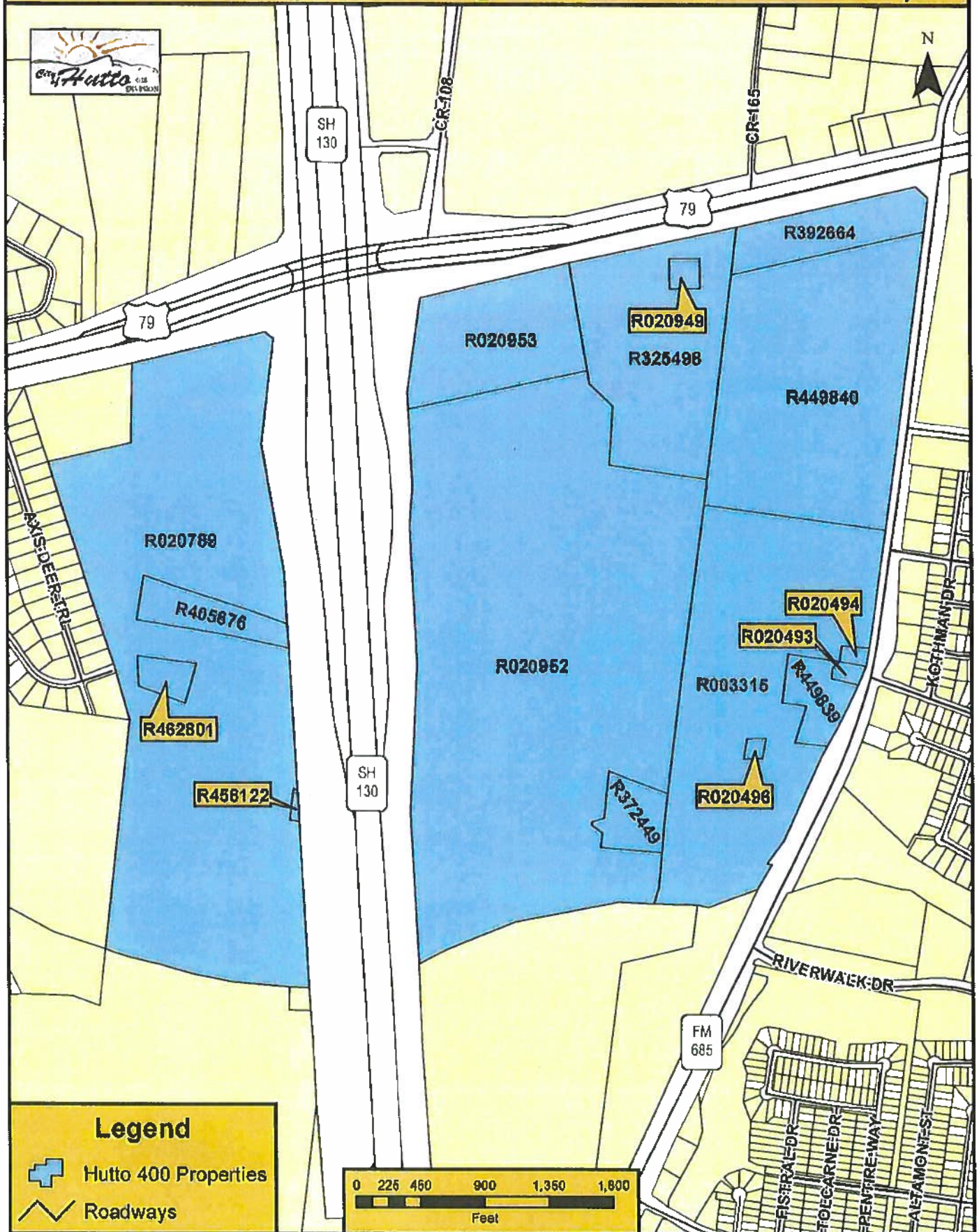
EXHIBIT A-THE PROPERTY

HUTTO CROSSINGS PUD

FEBRUARY 25, 2014



Hutto 400 (Crossings at Carmel Creek)



340.427 ACRES
THE CROSSINGS OF CARMEL CREEK
TRACTS 1, 3-9

FN. NO. 10-132(ACD)
JUNE 17, 2010
BPI NO. R0100650010003

DESCRIPTION

OF 340.427 ACRES OF LAND OUT OF THE MARTIN STROUSE SURVEY ABSTRACT NO. 587 AND THE NATHANIEL EDWARDS SURVEY ABSTRACT NO. 225, SITUATED IN THE CITY OF HUTTO, WILLIAMSON COUNTY, TEXAS, BEING COMPRISED OF THOSE CERTAIN EIGHT (8) TRACTS BEING: 150.96 ACRES; 19.95 ACRES; 33.12 ACRES; 55.302 ACRES; 10.00 ACRES; 64.428 ACRES; 6.00 ACRES AND 0.52 ACRES OF LAND CONVEYED TO HUTTO MEZZ HOLDINGS LLC BY DEED OF RECORD IN DOCUMENT NO. 2009018029, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 340.427 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING, at a 5/8-inch iron rod found at the intersection of the easterly right-of-way line of SH 130 (R.O.W. Varies) and the southerly line of Union Pacific Railroad (100' R.O.W.) running on the southerly side of US Highway 79 (R.O.W. Varies), at or near TXDOT S.H. 130 Station 704+85.15, 586.73' left and U.S. 79 Station 140+38.72, 309.68' left, for the northwesterly corner of said 19.95 acre tract and hereof;

THENCE, along said southerly line of Union Pacific Railroad, being the northerly lines of said 19.95 acre tract, said 33.12 acre tract, and said 10.00 acre tract, for the northerly line hereof, the following three (3) courses and distances:

- 1) N77°13'11"E, a distance of 1071.36 feet to a 1/2-inch iron rod found at the northeasterly corner of said 19.95 acre tract, being the northwesterly corner of said 33.12 acre tract, for an angle point;
- 2) N77°26'34"E, a distance of 1201.37 feet to a 1/2-inch iron pipe found at the northeasterly corner of said 33.12 acre tract, being the northwesterly corner of said 10.00 acre tract, for an angle point;
- 3) N77°16'59"E, a distance of 1291.22 feet to a concrete monument found at the northwesterly terminus of a right-of-way cutback line between said Union Pacific Railroad and the westerly right-of-way line of FM 685 (R.O.W. Varies), for the northeasterly corner of said 10.00 acre tract and hereof;

THENCE, S47°24'34"E, along said right-of-way cutback line, being a northeasterly line of said 10.00 acre tract, for a portion of the easterly line hereof, a distance of 114.71 feet to a broken concrete monument found at the southeasterly terminus of said right-of-way cutback line, being on said westerly right-of-way line of FM 685, for an angle point;

THENCE, along said westerly right-of-way line of FM 685, being the easterly lines of said 10.00 acre tract, said 55.302 acre tract, said 64.428 acre tract, said 0.52 acre tract, and said 6.00 acre tract, for the easterly line hereof, the following eight (8) courses and distances:

- 1) S07°30'56"W, a distance of 237.27 feet to a 1/2-inch iron rod found at the southeasterly corner of said 10.00 acre tract, being the northeasterly corner of said 55.302 acre tract, for an angle point;
- 2) S07°35'33"W, a distance of 2096.93 feet to a 1/2-inch iron rod with cap stamped "Watson 4550" found at the southeasterly corner of said 55.302 acre tract, being the northeasterly corner of said 64.428 acre tract, for an angle point;
- 3) S07°33'12"W, a distance of 577.87 feet to a 1/2-inch iron rod found at the beginning of a non-tangent curve to the right;
- 4) Along said curve, having a radius of 3769.83 feet, a central angle of 09°16'23", an arc length of 610.13 feet, and a chord which bears S17°38'49"W, a distance of 609.46 feet to a concrete monument found at the end of said curve;
- 5) S26°57'27"W, a distance of 462.70 feet to a 1/2-inch iron rod with cap set for an angle point;
- 6) S39°53'36"W, a distance of 189.86 feet to a concrete monument found, for an angle point;
- 7) S85°45'23"E, a distance of 46.21 feet to a 1/2-inch iron rod with unreadable cap found, for an angle point;
- 8) S26°27'56"W, a distance of 219.67 feet to a calculated point in the approximate centerline of Brushy Creek, being the southeasterly corner of said 64.428 acre tract, for the southeasterly corner hereof;

THENCE, leaving said westerly right-of-way line, along the southerly line of said 64.428 acre tract, with the approximate meanders of Brushy Creek, for a portion of the southerly line hereof, the following three (3) courses and distances:

- 1) S73°32'10"W, a distance of 420.30 feet to a calculated point, for an angle point;
- 2) N80°20'30"W, a distance of 105.82 feet to a calculated point, for an angle point;

- 3) N88°43'15"W, a distance of 313.26 feet to a calculated point at the southwesterly corner of said FM685, Ltd. remainder tract, for an angle point;

THENCE, N17°06'31"E, leaving the approximate centerline of Brushy Creek, along the westerly line of said 64.428 acre tract, for a portion of the southerly line hereof, a distance of 56.64 feet to a calculated point on the north bank of Brushy Creek, for the southeasterly corner of said 150.96 acre tract and an angle point hereof;

THENCE, along the southerly line of said 150.96 acre tract, with the approximate north bank of Brushy Creek, for a portion of the southerly line hereof, the following seven (7) courses and distances:

- 1) N83°46'42"W, a distance of 90.03 feet to a calculated point, for an angle point;
- 2) N89°55'58"W, a distance of 84.74 feet to a calculated point, for an angle point;
- 3) S78°31'35"W, a distance of 962.69 feet to a calculated point, for an angle point;
- 4) S69°58'09"W, a distance of 117.01 feet to a calculated point, for an angle point;
- 5) S71°39'17"W, a distance of 70.86 feet to a calculated point, for an angle point;
- 6) S66°48'27"W, a distance of 91.79 feet to a calculated point, for an angle point;
- 7) S64°42'50"W, a distance of 289.67 feet to a 1/2-inch iron rod with TxDOT aluminum cap found at the southwesterly corner of said 150.96 acre tract, being on said easterly right-of-way line of SH 130, for the southwesterly corner hereof;

THENCE, leaving the northerly bank of Brushy Creek, along said easterly right-of-way line of SH 130, for the westerly line of said 150.96 acre tract, said 19.95 acre tract, and hereof, the following seven (7) courses and distances:

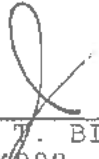
- 1) N02°37'45"W, a distance of 1032.38 feet to a 1/2-inch iron rod with cap stamped "RJ SURVEYING" found, for an angle point;
- 2) N02°41'19"E, a distance of 1030.22 feet to a 1/2-inch iron rod with TxDOT aluminum cap found, for an angle point;

- 3) N03°09'12"W, a distance of 974.83 feet to a 1/2-inch iron rod with cap stamped "RJ SURVEYING" found, for an angle point;
- 4) N04°27'19"E, a distance of 263.40 feet to a 1/2-inch iron rod with TxDOT aluminum cap found, for an angle point;
- 5) N03°08'20"W, a distance of 523.19 feet to a 1/2-inch iron rod with TxDOT aluminum cap found at the northwesterly corner of said 150.96 acre tract, being the southwesterly corner of said 19.95 acre tract, for an angle point;
- 6) N03°06'12"W, a distance of 121.70 feet to a 1/2-inch iron rod with cap found, for an angle point;
- 7) N07°32'19"E, a distance of 655.11 feet to the **POINT OF BEGINNING**, and containing 340.427 acres (14,828,996 square feet) of land, more or less, within these metes and bounds.

BEARING BASIS: TEXAS COORDINATE SYSTEM, NAD 83(93), CENTRAL ZONE, UTILIZING LCRA GPS CONTROL MONUMENTATION.

I, JOHN T. BILNOSKI, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION.

BURY & PARTNERS, INC.
ENGINEERING-SOLUTIONS
221 W. SIXTH STREET, SUITE 600
AUSTIN, TEXAS 78701


6/17/10
JOHN T. BILNOSKI, R.P.L.S.
NO. 4998
STATE OF TEXAS



125.977 ACRES
THE CROSSINGS OF CARMEL CREEK
TRACT 2

EN. NO. 10-133(ACD)
JUNE 17, 2010
BPI NO. R0100650010003

DESCRIPTION

OF 125.977 ACRES OF LAND OUT OF THE ROBERT MCNUTT SURVEY ABSTRACT NO. 422, SITUATED IN THE CITY OF HUTTO, WILLIAMSON COUNTY, TEXAS, BEING THAT CERTAIN 125.95 ACRE TRACT CONVEYED TO HUTTO MEZZ HOLDINGS LLC BY DEED OF RECORD IN DOCUMENT NO. 2009018929, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 125.977 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING, at a 1/2-inch iron rod with TxDOT aluminum cap found at the intersection of the westerly right-of-way line of SH 130 (R.O.W. Varies) and the southerly line of Union Pacific Railroad (100' R.O.W.) running on the southerly side of US Highway 79 (R.O.W. Varies), at or near TxDOT S.H. 130 Station 706+70.31, 518.16' right, for the northeasterly corner of said 125.95 acre tract and hereof;

THENCE, leaving said southerly line of Union Pacific Railroad, along the westerly right-of-way line of SH 130, for the easterly line of said 125.95 acre tract and hereof, the following six (6) courses and distances:

- 1) S50°15'22"E, a distance of 78.59 feet to a 1/2-inch iron rod with cap set, for an angle point;
- 2) S06°34'39"W, a distance of 736.94 feet to a 1/2-inch iron rod with unreadable cap found, for an angle point;
- 3) S10°12'43"E, a distance of 908.37 feet to a 1/2-inch iron rod with TxDOT aluminum cap found, for an angle point;
- 4) S03°30'52"E, a distance of 1476.40 feet to a 1/2-inch iron rod with TxDOT aluminum cap found, for an angle point;
- 5) S03°26'36"E, a distance of 211.77 feet to a 1/2-inch iron rod found, for an angle point;
- 6) S03°32'06"E, a distance of 1115.45 feet to a 1/2-inch iron rod with TxDOT aluminum cap found at the southeasterly corner of said 125.95 acre tract, being on the north bank of Brushy Creek, for the southeasterly corner hereof;

THENCE, leaving said westerly right-of-way line of SH 130, with the approximate north bank of Brushy Creek, for the southerly line of said 125.95 acre tract and hereof, the following four (4) courses and distances:

- 1) N89°07'10"W, a distance of 614.30 feet to a 1/2-inch iron rod found, for an angle point;
- 2) N81°08'34"W, a distance of 266.95 feet to a calculated point, for an angle point;
- 3) N77°09'50"W, a distance of 436.92 feet to a calculated point, for an angle point;
- 4) N72°08'24"W, a distance of 143.52 feet to a nail found at the southwesterly corner of said 125.95 acre tract, being the southeasterly corner of that certain 43.24 acre tract conveyed to Chaz Glace, by Deed of record in Document No. 9644889, of the Official Records of Williamson County, Texas, for the southwesterly corner hereof;

THENCE, N06°27'07"E, leaving the north bank of Brushy Creek, along the easterly line of said 43.24 acre tract, for a portion of the westerly line of said 125.95 acre tract and hereof, a distance of 1601.90 feet to a 1/2-inch iron rod found at the northeasterly corner of said 43.24 acre tract, being the southeasterly corner of Lot 1, Block "D", The Heights at Deerfield, a subdivision of record in Cabinet O, Slides 42-45, of the Plat Records of Williamson County, Texas, for an angle point;

THENCE, N17°35'28"W, along the easterly line of said Lot 1 and Block "A", of said The Heights at Deerfield, for a portion of the westerly line of said 125.95 acre tract and hereof, a distance of 1888.43 feet to a 1/2-inch iron rod with cap set at the southwesterly corner of that certain 8.45 acre tract conveyed to Hutto Option Mezz Holdings LLC, by Deed of record in Document No. 2008091478, of said Official Public Records, for an angle point;

THENCE, N77°25'19"E, leaving the easterly line of said Block "A", along the southerly line of said 8.45 acre tract, for a portion of the westerly line of said 125.95 acre tract and hereof, a distance of 597.55 feet to a 1/2-inch iron rod with cap set at the southeasterly corner of said 8.45 acre tract, for an angle point;

THENCE, N00°58'32"E, along the easterly line of said 8.45 acre tract, for a portion of the westerly line of said 125.95 acre tract and hereof, a distance of 552.31 feet to a 1/2-inch iron rod found at the northeasterly of said 8.45 acre tract, being on said southerly line of Union Pacific Railroad (100' R.O.W.) running on the southerly side of US Highway 79, for the northwesterly corner of said 125.95 acre tract and hereof;

EN 10-133(ACD)
JUNE 17, 2010
PAGE 3 OF 3

THENCE, N77°20'30"E, along said southerly line of Union Pacific Railroad, for the northerly line of said 125.95 acre tract and hereof, a distance of 952.81 feet to the POINT OF BEGINNING, and containing 125.977 acres (5,487,555 square feet) of land, more or less, within these metes and bounds.

BEARING BASIS: TEXAS COORDINATE SYSTEM, NAD 83(93), CENTRAL ZONE, UTILIZING LCRA GPS CONTROL MONUMENTATION.

I, JOHN T. BILNOSKI, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION.

BURY & PARTNERS, INC.
ENGINEERING-SOLUTIONS
221 W. SIXTH STREET, SUITE 600
AUSTIN, TEXAS 78701


6/17/10
JOHN T. BILNOSKI, R.P.L.S.
NO. 4998
STATE OF TEXAS

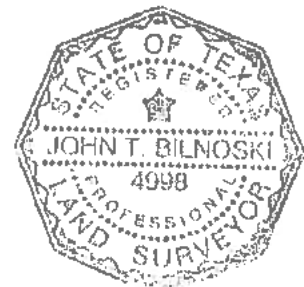


Exhibit “B”
Public Improvements



- CHAPTER 380 ITEMS**
- I. BRUSHY CREEK WASTEWATER EXTENSION
 - II. CARL STERN EXTENSION
 - III. KNOWLES DR. EXTENSION
 - IV. PARKS AND TRAILS

LEGEND:

	CITY PARKLAND 26.8 AC REQUIRED, 27.7 AC SHOWN		COMMUNITY TRAIL
	COMMUNITY OPEN SPACE		BRUSHY CREEK REGIONAL TRAIL
	TRAIL HEAD		PEDESTRIAN BRIDGE

*DEVELOPMENT AREA DESIGNATION REFER TO PWD DEVELOPMENT PLAN

EXHIBIT B-PUBLIC IMPROVEMENTS

HUTTO CROSSING

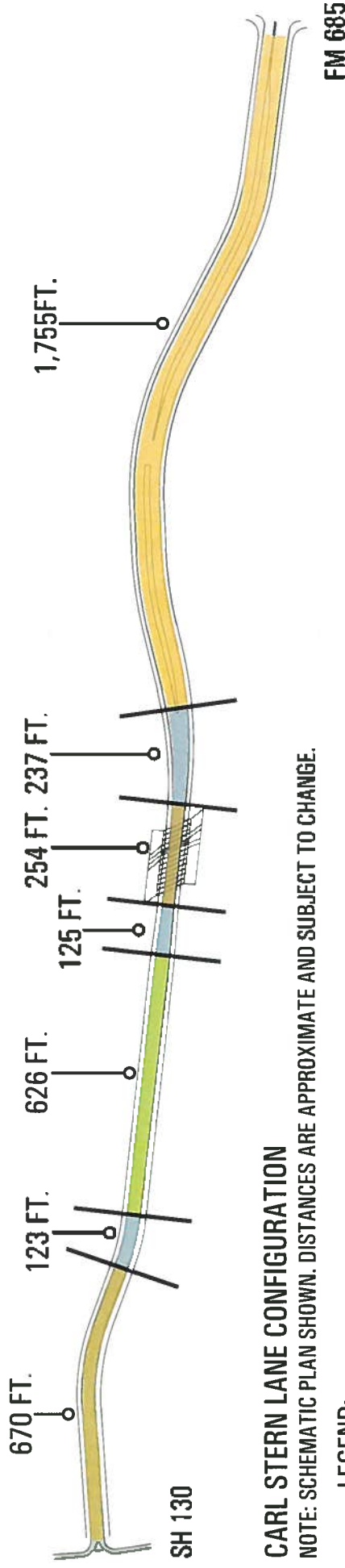
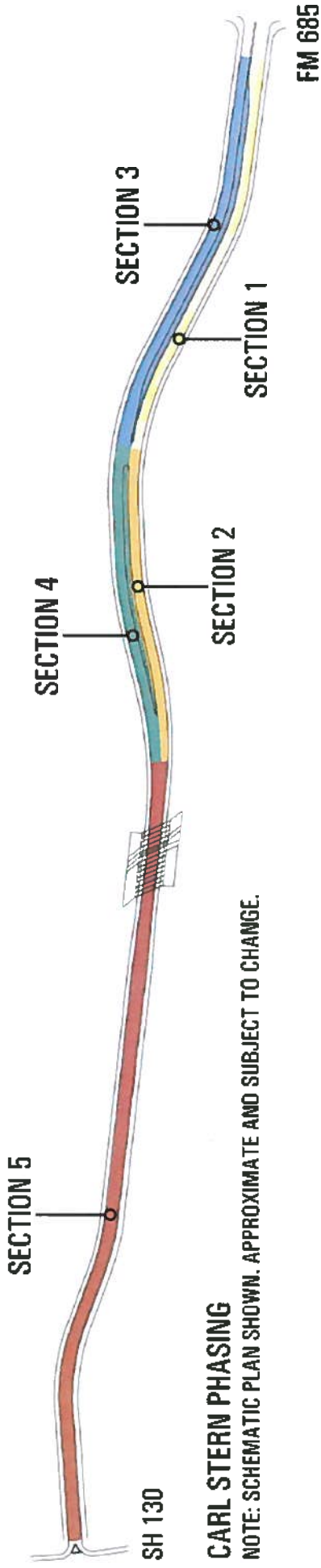
FEBRUARY 25, 2014



T.B.G.

Exhibit “C”
Developer Funded Wastewater Interceptor

Exhibit "D"
Carl Stern Extension



- LEGEND:**
- 2 LANE : 30' FC-FC
 - 3 LANE : 36' FC-FC
 - 4 LANE : 2 @ 22' FC-FC
 - TRANSITION

EXHIBIT D-CARL STERN EXTENSION

HUTTO CROSSING

FEBRUARY 25, 2014



DRAWING NOT TO SCALE

T B G

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

8E.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration and possible action on a resolution approving the subdivision approval extension request for the Hutto Crossing Phase 4 Section 4 Final Plat, 3.219 acres, more or less, of land, public right-of-way, to become the west extension of Knowles Drive from Chris Kelley Boulevard. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

To avoid expiration, the applicant requests a one year extension request for this final plat. Construction is expected to be completed within a year. The current expiration date is July 20, 2018.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not applicable.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends that the Council approve the resolution.

SUPPORTING MATERIAL:

1. [Resolution - Hutto Crossing Phase 4 Section 4 Final Plat-Extension Request](#)

RESOLUTION NO.

A RESOLUTION APPROVING THE SUBDIVISION APPROVAL EXTENSION FOR THE FINAL PLAT KNOWN AS "HUTTO CROSSING PHASE 4 SECTION 4 FINAL PLAT"; IN THE CITY OF HUTTO, WILLIAMSON COUNTY, TEXAS.

WHEREAS, the City of Hutto Unified Development Code Section 10.204.2 states that unless recorded, fiscal surety has been posted, and/or an extension has been granted, final plat approval expires one (1) year from the date of City Council approval, and;

WHEREAS, an applicant may request, in writing, an extension of final plat approval prior to the end of the one (1) year period, and the City Council may grant an extension not to exceed one (1) year, and;

WHEREAS, the City Council granted final plat approval of said plat on July 20, 2017, with Resolution No. R-17-07-20-8A, and;

WHEREAS, the Development Services Department has reviewed the subdivision approval extension request for compliance with City regulations, and;

WHEREAS, if the subdivision approval extension request is approved by City Council, the expiration date of said extension will be effective on the date of adoption and will expire twelve (12) months from that date, Now therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

that the Hutto City Council hereby approves the resolution for the subdivision extension request for the final plat known as "Hutto Crossing Phase 4 Section 4 Final Plat", a copy of same being attached hereto as "Exhibit A" and incorporated herein for all purposes.

CONSIDERED and RESOLVED on this the 19th day of the month **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

HUTTO CROSSING PHASE 4, SECTION 4 FINAL PLAT

OWNER'S CERTIFICATION

STATE OF TEXAS {
COUNTY OF WILLIAMSON { KNOW ALL MEN BY THESE PRESENTS

I, AARON GIOVARA, OWNER, HUTTO OPTION MEZZ HOLDINGS, LLC, SOLE OWNER OF THAT CERTAIN 6.00 ACRE TRACT (TRACT 8), A PORTION OF THAT 64.428 ACRE TRACT (TRACT 7) AND A PORTION OF THAT 150.96 ACRE TRACT (TRACT 1), DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2009018029 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE SAID 6.00 ACRE TRACT, THE SAID 64.408 ACRE TRACT AND THE SAID 150.96 ACRE TRACT OF LAND, AND DO HEREBY SUBDIVIDE 3.219 ACRE OF SAID TRACTS AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF HUTTO THE STREETS, ALLEYS, RIGHT-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF HUTTO MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS HUTTO CROSSING, PHASE 4, SECTION 4.

TO CERTIFY WHICH, WITNESS by my hand this 24 day of MARCH, 2017.

Aaron A. Giovara, Owner
Hutto Option Mezz Holdings LLC
10100 Santa Monica Blvd., Suite 1000
Los Angeles, CA 90067

State of California {
County of San Francisco {

On March 24, 2017 before me, Whitney Ann Allen, Notary Public, personally appeared Aaron A. Giovara who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.



I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Whitney Ann Allen

ENGINEER'S CERTIFICATION

STATE OF TEXAS {
COUNTY OF WILLIAMSON { KNOW ALL MEN BY THESE PRESENTS

A PORTION OF THIS TRACT IS WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 48491C0515E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.

I, KENNETH W. MARTIN, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS IN COMPLIANCE WITH THE CODES AND ORDINANCES OF THE CITY OF HUTTO, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TRAVIS COUNTY, TEXAS, THIS 27th DAY OF February, 2017.

Kenneth W. Martin
KENNETH W. MARTIN
Registered Professional Engineer No. 65971
State of Texas
1101 Capital of Texas Highway South
Building D, Suite 110
Austin, Texas 78746
(512) 327-9204



SURVEYOR'S CERTIFICATION

STATE OF TEXAS {
COUNTY OF WILLIAMSON { KNOW ALL MEN BY THESE PRESENTS

I, BLAINE J. MILLER, REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, BOUNDARY LINE CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT CORNER MONUMENTS SHOWN HEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE CODES AND ORDINANCES OF THE CITY OF HUTTO, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TRAVIS COUNTY, TEXAS, THIS 24th DAY OF FEBRUARY, 2017.

Blaine J. Miller
BLAINE J. MILLER
Registered Professional Land Surveyor No. 5121
State of Texas
Firm Registration No. 101267-0
925 Capital of Texas Highway South
Building B, Suite 115
Austin, Texas 78746
(512) 327-4006



CITY DEVELOPMENT SERVICES

This subdivision is located within the city limits of the City of Hutto, this the ____ day of _____, 2017.

Helen Ramirez, AICP, Director

DATE: _____

APPROVAL CITY OF HUTTO

This plat was approved for recording by the Hutto City Council on the ____ day of _____, 2017.

Doug Gall, Mayor,

DATE: _____

Seth Gipson, City Secretary

DATE: _____

STATE OF TEXAS {
COUNTY OF WILLIAMSON { KNOW ALL MEN BY THESE PRESENTS

I, Nancy E. Rister, Clerk of the County Court of said County, do hereby certify that the foregoing instrument in writing, with its certificate of authentication, was filed for record in my office on the ____ day of _____, 2017, A.D., at ____ o'clock, ____ M., and duly recorded this ____ day of _____, 2017, A.D., at ____ o'clock, ____ M., in the Official Public Records of said County in Document No. _____.

TO CERTIFY WHICH, WITNESS my hand and seal at the County Court of said County, at my office in Georgetown, Texas, the date last shown above written.

Nancy E. Rister, Clerk County Court
Williamson County, Texas

By: _____, Deputy

GENERAL NOTES:

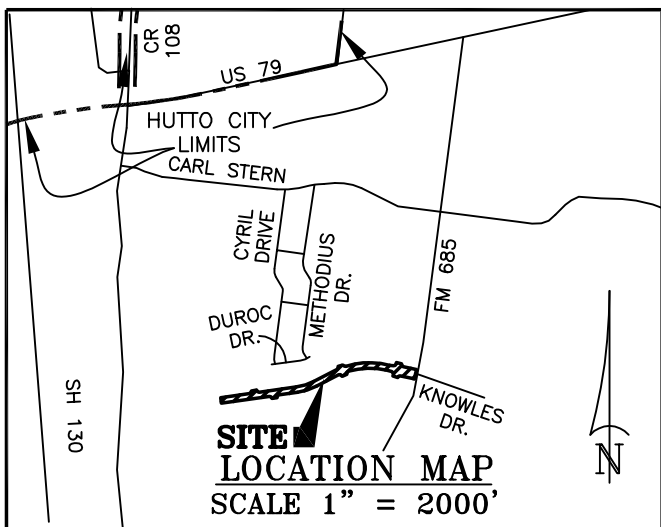
1. STREET LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC. 3.8 OF THE HUTTO CROSSINGS PUD AGREEMENT.
2. SIDEWALKS, FIVE (5') WIDE, SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS WITHIN AND BOUNDING THIS SUBDIVISION. SIDEWALKS SHALL BE MAINTAINED BY THE HOME OWNER'S ASSOCIATION.
3. WATER AND WASTEWATER SERVICE FOR THIS SUBDIVISION WILL BE AVAILABLE THROUGH THE CITY OF HUTTO AFTER THE APPROPRIATE WATER AND WASTEWATER SYSTEM IMPROVEMENTS ARE INSTALLED TO THIS SITE. THE CITY OF HUTTO ASSUMES NO OBLIGATION FOR INSTALLING ANY WATER AND WASTEWATER IMPROVEMENTS TO SERVE THIS SITE.
4. UTILITY PROVIDERS FOR THIS DEVELOPMENT ARE: WATER: CITY OF HUTTO; WASTEWATER: CITY OF HUTTO; ELECTRIC: ONCOR.
5. CITY OF HUTTO ASSUMES NO RESPONSIBILITY FOR INSTALLING ANY WATER AND WASTEWATER IMPROVEMENTS TO SERVE THIS SITE.
6. DEVELOPMENT OF THIS SUBDIVISION CONFORMS WITH THE CONCLUSIONS OF "DETERMINATION OF THE HYDROLOGIC IMPACT OF PROPOSED HUTTO CROSSING DEVELOPMENT USING UPPER BRUSHY CREEK WCD WATERSHED MODEL", DATED NOVEMBER 10, 2013 AND ADDENDUM DATED JANUARY 16, 2014.
7. STREET TREES ARE REQUIRED IN ACCORDANCE WITH SECTION 4.9.5 OF THE PUD AGREEMENT AND SHALL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION.
8. A PORTION OF THIS TRACT IS ENCRONCHED BY SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 1% ANNUAL CHANCE FLOODPLAIN AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY BOUNDARY MAP (FLOOD INSURANCE RATE MAP) COMMUNITY PANEL NUMBER 48491C0515E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.
9. THIS SUBDIVISION WILL BE ZONED PUD.
10. ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CITY OF HUTTO UNIFIED DEVELOPMENT CODE, CONSTRUCTION STANDARDS AND GENERALLY ACCEPTED ENGINEERING PRACTICES.

HUTTO CROSSING PHASE 4, SECTION 4 FINAL PLAT

CSCI		CAPITAL SURVEYING COMPANY INCORPORATED	
925 Capital of Texas Highway South Building B, Suite 115 Austin, Texas 78746 (512) 327-4006		FIRM REGISTRATION No. 101267-0	
DRAWN BY:	WAL	SCALE:	N/A
JOB NO.:	16530.10	DATE:	JUNE 1, 2016
DRAWING NO.:	16530P1	CRD #:	16530
			SHEET NO.: 1 OF 3

HUTTO CROSSING
PHASE 4, SECTION 4
FINAL PLAT

(51.979 ACRES)
TRACT 5
HUTTO OPTION MEZZ
HOLDINGS LLC
DEED AND BILL OF SALE
DOC. NO. 2009018029
O.P.R.W.C.



NATHANIEL EDWARDS
SURVEY No. 21
ABST. No. 225

(64.428 ACRES)
TRACT 7
HUTTO OPTION MEZZ
HOLDINGS LLC
DEED AND BILL OF SALE
DOC. NO. 2009018029
O.P.R.W.C.

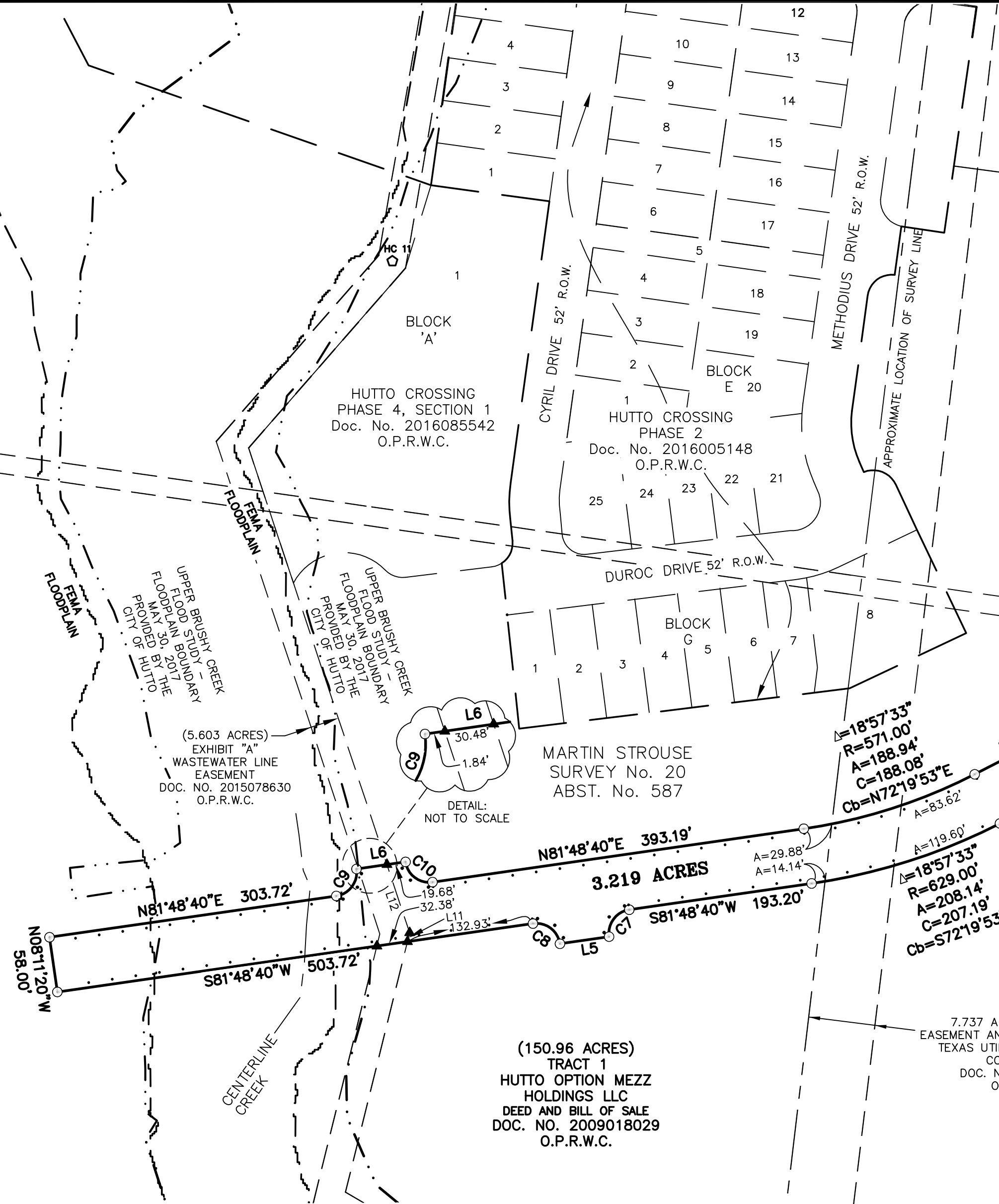
(0.52 ACRES)
TRACT 9
HUTTO OPTION MEZZ
HOLDINGS LLC
DEED AND BILL OF SALE
DOC. NO. 2009018029
O.P.R.W.C.

(6.00 ACRES)
TRACT 8
HUTTO OPTION MEZZ
HOLDINGS LLC
DEED AND BILL OF SALE
DOC. NO. 2009018029
O.P.R.W.C.

(150.96 ACRES)
TRACT 1
HUTTO OPTION MEZZ
HOLDINGS LLC
DEED AND BILL OF SALE
DOC. NO. 2009018029
O.P.R.W.C.

7.737 AC. (70' WIDE)
EASEMENT AND RIGHT-OF-WAY
TEXAS UTILITIES ELECTRIC
COMPANY
DOC. NO. 9649381
O.R.W.C.

TEMPORARY BENCHMARKS:
HC-11 [I] CUT IN CONCRETE ENCASUREMENT OF WASTEWATER MANHOLE, 86' SOUTHWEST OF SOUTHWEST CORNER OF LOT 1, BLOCK F, HUTTO CROSSING, PHASE 2 ELEV.=627.61' F.B. 1789 P. 54
HC-20 COTTON GIN SPINDLE SET IN POWER POLE, 70' NORTH OF THE SOUTHEAST CORNER OF HUTTO CROSSING, PHASE 4, SECTION 2. ELEV.=634.13' F.B. 1801 P. 30



CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	CHORD	CH. BEARING
C1	85°54'49"	25.00'	37.49'	34.07'	S59°51'16"W
C2	92°43'15"	25.00'	40.48'	36.19'	N30°00'06"W
C3	30°01'14"	771.00'	403.97'	399.37'	S88°37'40"W
C4	93°54'18"	25.00'	40.97'	36.54'	S26°38'54"W
C5	93°54'06"	25.00'	40.97'	36.55'	N67°15'19"W
C6	2°55'31"	771.00'	39.37'	39.36'	S64°18'53"W
C7	90°00'00"	25.00'	39.27'	35.36'	S36°48'40"W
C8	90°00'00"	25.00'	39.27'	35.36'	N53°11'20"W
C9	90°00'00"	25.00'	39.27'	35.35'	N36°48'40"E
C10	90°00'32"	25.00'	39.27'	35.36'	S53°11'20"E
C11	3°06'14"	829.00'	44.91'	44.90'	N64°24'14"E
C12	91°12'48"	25.00'	39.80'	35.73'	N20°20'57"E
C13	81°55'00"	25.00'	35.74'	32.78'	S66°12'57"E
C14	83°58'01"	25.00'	36.64'	33.45'	N54°53'43"E
C15	90°06'02"	25.00'	39.31'	35.39'	S32°08'19"E
C16	5°00'58"	2900.00'	253.89'	253.81'	N10°06'21"E
C17	2°45'29"	2900.00'	139.59'	139.58'	S15°58'07"W
(C18)	(09°45'00")	(2900.00')	(493.49')	(492.90')	(S12°28'21"W)

LINEAR FEET OF NEW STREET - 2095'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N72°21'51"W	51.93'
L2	N16°21'32"E	15.16'
L3	N76°21'44"W	52.93'
L4	S69°40'59"W	52.00'
L5	S81°48'40"W	52.00'
L6	N81°48'24"E	52.00'
L7	N73°48'14"E	52.66'
L8	S83°07'17"E	41.18'
L9	N12°54'42"E	14.94'
L10	S77°05'18"E	52.00'
L11	N13°54'08"E	9.51'
L12	N18°22'14"W	75.37'

LEGEND

0 50 100 150 200
1"=100'

O.P.R.W.C. OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY
O.R.W.C. OFFICIAL RECORDS WILLIAMSON COUNTY
() RECORD INFORMATION
R.O.W. RIGHT-OF-WAY
P.O.B. POINT OF BEGINNING
P.O.C. POINT OF COMMENCEMENT
○ IRON ROD SET WITH CAP MARKED "CAPITAL SURVEYING CO. INC."
⊗ IRON ROD FOUND WITH TXDOT CAP
▲ CALCULATED POINT
— BREAK IN SCALE
- - - - - SIDEWALK
--- UPPER BRUSHY CREEK FLOODPLAIN

NOTE:
THE COORDINATE VALUES SHOWN HEREON
ARE IN FEET AND BASED ON THE TEXAS
STATE PLANE COORDINATE SYSTEM, CENTRAL
ZONE, NAD83 HARN DATUM (GRID)

HUTTO CROSSING
PHASE 4, SECTION 4
FINAL PLAT

CSCI CAPITAL SURVEYING COMPANY INCORPORATED

925 Capital of Texas Highway South
Building B, Suite 115
Austin, Texas 78746
(512) 327-4006

FIRM REGISTRATION
No. 101267-0

DRAWN BY: WAL	SCALE: N/A	F.B.
JOB NO.: 16530.10	DATE: JUNE 1, 2016	SHEET NO.:
DRAWING NO.: 16530P1	CRD #: 16530	1 OF 3

HUTTO CROSSING
PHASE 4, SECTION 4
FINAL PLAT

DESCRIPTION

FIELDNOTE DESCRIPTION of a 3.219 acre tract out of the Nathaniel Edwards Survey No. 21, Abstract No. 225 and the Martin Strouse Survey, Abstract No. 587, Williamson County, Texas, being out of the remainder of that certain 150.96 acre tract, described as Tract 1, the remainder of that certain 64.428 acre tract, described as Tract 7 and the remainder of that certain 6.00 acre tract , described as Tract 8, all conveyed to Hutto Option Mezz Holdings LLC, by deed recorded in Document No. 2009018029 of the Official Public Records of Williamson County Texas; the said 3.219 acre tract is more particularly described by metes and bounds as follows:

Commencing at a 1/2" iron rod, with aluminum TxDOT cap, found on the common northerly line of the said 64.428 acre tract and southerly line of the remainder of that certain 51.979 acre tract, described as Tract 5 of said Document No. 2009018029, being on the westerly Right-of-Way (ROW) line of FM 685, same being the northeast corner of that certain 1.399 acre tract, described as Exhibit "C", and the southwest corner of that 3.315 acre tract, described as Exhibit "B", as both conveyed to the Texas Transportation Commission as recorded in Document No. 201304568 of the Official Public Records;

THENCE, with the westerly ROW line of FM 685 same being the westerly line of said 1.399 acre tract, across the said Tract 7, for the following two (2) courses:

- 1) S07°35'45", passing at 72.90 feet a 1/2" iron rod, with aluminum TxDOT cap, found online, for a total distance of 721.41 feet a 1/2" iron rod, with aluminum TxDOT cap, found for a point of curvature of a curve to the right;
- 2) With said curve to the right, having central angle of 05°00'58", a radius of 2900.00', a chord distance of 253.81 feet (chord bears S10°06'21"W), for an arc distance of 253.89 feet, to a a 1/2" iron rod, with plastic cap marked "Capital Surveying Company, Inc.", for a point on curve and THE POINT OF BEGINNING hereof;

THENCE, continuing with said curve to the right, having a central angle of 01°58'34", a radius of 2900.00 feet, a chord distance of 100.01 feet (chord bears S13°36'06"W), for an arc distance of 100.01 feet to a 1/2" iron rod, set for an angle point;

THENCE, leaving the westerly line of FM 685, across said Tract 8, Tract 7 and Tract 1, for the following thirty seven (37) courses:

- 1) N77°11'20"W, 148.39 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 2) With said curve to the left, having a central angle of 85°54'46", a radius of 25.00 feet, a chord distance of 34.07 feet (chord bears S59°51'15"W), for an arc distance of 37.49 feet to a 1/2" iron rod , set for an angle point;
- 3) N72°21'51"W, 51.93 feet to a 1/2" iron rod, set for an angle point;
- 4) N16°21'32"E, 15.12 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 5) With said curve to the left, having a central angle of 92°48'04", a radius of 25.00 feet, a chord distance of 36.21 feet (chord bears N29°57'40"W), for an arc distance of 40.49 feet to a 1/2" iron rod, set for a point of tangency;
- 6) N76°21'43"W, 52.93 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 7) With said curve to the left, having a central angle of 30°01'14", a radius of 771.00 feet, a chord distance of 399.37 feet (chord bears S88°37'40"), for an arc distance of 403.97 feet to a 1/2" iron rod, set for a point of compound curvature of a curve to the left;
- 8) With said curve to the left, having a central angle of 93°56'08", a radius of 25.00 feet, a chord distance of 36.55 feet (chord bears S26°38'59"W), for an arc distance of 40.99 feet to a 1/2" iron rod, set for an angle point;
- 9) S69°42'45"W, 52.00 feet to a 1/2" iron rod, set for a point of curvature of a non-tangent curve to the left;
- 10) With said non-tangent curve to the left, having a central angle of 93°54'17", a radius of 25.00 feet, a chord distance of 36.54 feet (chord bears N67°16'14"W), for an arc distance of 40.97 feet to a 1/2" iron rod, set for a point of compound curvature of a curve to the left;
- 11) With said curve to the left, having a central angle of 02°55'31", a radius of 771.00 feet, a chord distance of 39.36 feet (chord bears S64°18'53"W) for an arc distance of 39.37 feet to a 1/2" iron rod, set for a point of tangency;
- 12) S62°51'07"W, 224.67 feet to a 1/2" iron rod, set for a point of curvature of a curve to the right;
- 13) With said curve to the right, having a central angle of 18°57'33", a radius of 629.00 feet, a chord distance of 207.19 feet (chord bears S72°19'54"W), for an arc distance of 208.14 feet to a 1/2" iron rod, set for a point of tangency;
- 14) S81°49'40"W, 193.20 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 15) With said curve to the left, having a central angle of 90°00'00", a radius of 25.00 feet, a chord distance of 35.36 feet (chord bears S36°48'39"W), for an arc distance of 39.27 feet to a 1/2" iron rod, set for an angle point;
- 16) S81°48'40"W, 52.00 feet to a 1/2" iron rod, set for a point of curvature of a non-tangent curve to the left;
- 17) With said curve to the left, having a central angle of 90°00'00", a radius of 25.00 feet, a chord distance of 35.36 feet (chord bears N53°11'29"W), for an arc distance of 39.27 feet to a 1/2" iron rod, set for a point of tangency;
- 18) S81°48'40"W, 503.72 feet to a 1/2" iron rod, set for the southwest corner hereof;
- 19) N08°11'20"W, 58.00 feet to a 1/2" iron rod, set for the northwest corner hereof;
- 20) N81°48'40"E, 303.72 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 21) With said curve to the left, having a central angle of 89°59'28", a radius of 25.00 feet, a chord distance of 35.35 feet (chord bears N36°48'55"E), for an arc distance of 35.35 feet to a 1/2" iron rod, set for an angle point;
- 22) N81°48'24"E, 52.00 feet to a 1/2" iron rod, set for a point of curvature of a non-tangent curve to the left;
- 23) With said curve to the left, having a central angle of 90°01'04", a radius of 25.00 feet, a chord distance of 35.36 feet (chord bears S53°11'21"E), for an arc distance of 39.27 feet to a 1/2" iron rod, set for a point of tangency;
- 24) N81°48'40"E, 393.19 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 25) With said curve to the left, having a central angle of 18°57'33", a radius of 571.00 feet, a chord distance of 188.08 feet (chord bears N72°19'53"E), for an arc distance of 188.94 feet to a 1/2" iron rod, set for a point of tangency;
- 26) N62°51'07"E, 224.67 feet to a 1/2" iron rod, set for a point of curvature of a curve to the right;
- 27) With said curve to the right, having a central angle of 03°07'04", a radius of 829.00 feet, a chord distance of 45.11 feet (chord bears N64°23'49"E), for an arc distance of 45.11 feet to a 1/2" iron rod, set for a point of compound curvature of a curve to the left;
- 28) With said curve to the left, having a central angle of 91°12'48", a radius of 25.00 feet, a chord distance of 35.73 feet (chord bears N20°20'57"E), for an arc distance of 39.80 feet to a 1/2" iron rod, set for an angle point;
- 29) N73°48'14"E, 52.66 feet to a 1/2" iron rod, set for a point of curvature of a non-tangent curve to the left;
- 30) With said curve to the left, having a central angle of 81°55'00", a radius of 25.00 feet, a chord distance of 32.78 feet (chord bears S66°12'58"E), for an arc distance of 35.74 feet to a 1/2" iron rod, set for a point of reverse curvature of a curve to the right;
- 31) With said curve to the right, having a central angle of 32°00'16", a radius of 829.00 feet, a chord distance of 457.07 feet (chord bears N88°49'41"E), for an arc distance of 463.07 feet to a 1/2" iron rod, set for a point of tangency;
- 32) S83°07'17"E, 41.18 feet to a 1/2" iron rod, set for a point of curvature of a curve to the left;
- 33) With said curve to the left, having a central angle of 83°58'01", a radius of 25.00 feet, a chord distance of 33.45 feet (chord bears N54°53'42"E), for an arc distance of 36.64 feet to a 1/2" iron rod, set for a point of tangency;
- 34) N12°54'42"E, 14.38 feet to a 1/2" iron rod, set for an angle point;
- 35) S77°39'41"E, 52.00 feet to a 1/2" iron rod, set for a point of curvature of a non-tangent curve to the left;
- 36) With said curve to the left, having a central angle of 90°06'02", a radius of 25.00 feet, a chord distance of 35.39 feet (chord bears S32°08'18"E), for an arc distance of 39.31 feet to a 1/2" iron rod, set for a point of tangency;
- 37) S77°11'20"E, 144.54 feet to the POINT OF BEGINNING, CONTAINING within these metes and bounds 3.219 acres of land area.

All iron rods set are a 1/2" iron rod, with plastic cap marked "Capital Surveying Company, Inc.".

HUTTO CROSSING
PHASE 4, SECTION 4
FINAL PLAT

CSCI		CAPITAL SURVEYING COMPANY INCORPORATED	
925 Capital of Texas Highway South Building 5, Suite 115 Austin, Texas 78746 (512) 327-4006		FIRM REGISTRATION No. 101267-0	
DRAWN BY:	WAL	SCALE:	N/A
JOB NO.:	16530.10	DATE:	JUNE 1, 2016
DRAWING NO.:	16530P1	CRD #:	16530
		F.B.	
		SHEET NO.:	
		3 OF 3	



Murfee Engineering Company

July 12, 2018

Hutto City Council
409 W. Front Street #200
Hutto, Texas 78634

Subject: Hutto Crossing Phase 4 Section 4 Final Plat

To Whom It May Concern:

As agent for Hutto Option Mezz Holdings LLC, Murfee Engineering Company requests an extension to the July 20, 2018 expiration of the final plat. Construction is planned to be completed within a year.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ken Martin', is written over a light blue horizontal line.

Ken Martin, P.E.
Project Engineer

Cc: Mark Meyer, Sierra Consulting, LLC
George Murfee, P.E., Murfee Engineering Company
Ronee Gilbert, Murfee Engineering Company
File 11038.170

Received 7/12/18



CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

9A.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Matt Rector, Executive Director of
Engineering and Public Works

ITEM:

Consideration of and possible action on the second and final reading of an ordinance approving the Traffic Impact Fee (TIF) Ordinance.
(Matt Rector)

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

On May 8, 2018 the Planning and Zoning Commission recommended to City Council to accept the methodology of the Land Use Assumptions of the 10-Year Capital Improvement Plan under which the impact fee may be imposed. These recommendations were presented to City Council on May 17, 2018 and unanimously approved.

On June 5, 2018 the Planning and Zoning Commission was presented the recommended fee to be set of \$2,396 per vehicle mile and unanimously approved.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable at this time.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Planning and Zoning Commission recommends approval.

CITY ATTORNEY REVIEW:

Approved

STAFF RECOMMENDATION:

Staff recommends that the City Council approves this ordinance.

SUPPORTING MATERIAL:

1. [P&Z Memo to City Council](#)
2. [TIF Ordinance](#)
3. [TIF Study](#)



MEMORANDUM

To: City Council

From: Jessica Romigh, P&Z Chair
Davey Robinson, P&Z Vice-Chair
Kristen Harrington, P&Z
Steven R. Harris, P&Z
Michael Orman, P&Z
Tony Wertz, P&Z
Lori Ortiz, P&Z

Date: June 12, 2018

Re: Transportation Impact Fee

On Tuesday June 5, 2018, the Planning and Zoning Commission met during their regularly scheduled meeting. Staff worked with DKS Associates to prepare and present information regarding the Transportation Impact Fee that resulted from the land use methodology, transportation service area, projected growth, and 10-Year Capital Improvement Plans that were reviewed and recommended by the Planning and Zoning Commission and approved by City Council in May 2018.

In accordance with Chapter 395 of the Texas Local Government Code, Transportation Impact Fees are based on projections associated approved land use methodology, transportation service areas, projected growth, and 10-Year Capital Improvement plan.

The Planning and Zoning Commission reviewed and discussed the recommended Transportation Impact Fee as presented on June 5, 2018.

In accordance with Chapter 395 of the Texas Local Government Code, the Planning and Zoning Commission recommends approval of adopting an ordinance approving the Transportation Impact Fee of \$2,396 per vehicle mile.

A handwritten signature in blue ink, appearing to read 'Jessica L. Romigh'. The signature is fluid and cursive, with a large, stylized 'J' and 'R'.

Jessica Romigh
Planning and Zoning Commission Chair

ORDINANCE NO. O-_____

AN ORDINANCE OF THE CITY OF HUTTO, TEXAS, ADOPTING TRANSPORTATION IMPACT FEES PER VEHICLE MILE; ESTABLISHING PROCEDURES FOR THE ASSESSMENT, COLLECTION, COMPUTATION, EXPENDITURE, REFUND AND GENERAL ADMINISTRATION OF TRANSPORTATION IMPACT FEES; PROVIDING FOR THE ESTABLISHMENT OF ACCOUNTS FOR TRANSPORTATION IMPACT FEES; PROVIDING CONSTRUCTION, SEVERABILITY, AND CONFLICT CLAUSES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Chapter 395, Texas Local Government Code (“Statute”) provides the requirements and procedures for the adoption of Land Use Assumptions, Transportation Impact Fee Capital Improvements Plan, and Transportation Impact Fees; and

WHEREAS, the City retained DKS Associates to prepare a Transportation Impact Fee Study that contains Land Use Assumptions (LUA) reflecting a description of the Service Area and projections of 10-year growth in residential and non-residential land uses in the Service Area, a Transportation Impact Fee Capital Improvements Plan (CIP) to identify Capital Improvements or Roadway Facility expansions for which Transportation Impact Fees may be assessed, and a calculation of the Transportation Impact Fee. The Transportation Impact Fee Study is referenced as Exhibit A hereto and incorporated by reference herein; and

WHEREAS, after notice of public hearing was published as required by the Statute, the City Council held a public hearing on May 17, 2018 in which the City Council adopted the CIP and LUA by Ordinance No. O-18-05-17-11B, and;

WHEREAS, the Planning and Zoning Commission, in its role as the Capital Improvements Plan Advisory Committee of the City of Hutto, The CIP Advisory Committee, reviewed the LUA and the 10-year CIP on May 8th, 2018 and the Transportation Impact Fees per vehicle mile on June 5th, 2018 and filed its written comments on the proposed Transportation Impact Fees before the fifth (5th) business day before the date of the public hearing (July 5th, 2018) on the adoption of the Transportation Impact Fee; and

WHEREAS, as required by Section 395.054, Texas Local Government Code, the City Council conducted a public hearing in which any member of the public had the right to appear at the hearing and present evidence for or against the plan and proposed fee; and

WHEREAS, the City Council desires to adopt the Transportation Impact Fees and related administrative process as herein described and finds that it is in the best interest of the citizens of the City of Hutto; Now therefore

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HUTTO,
TEXAS:**

SECTION I. Short Title

This Ordinance shall be known and cited as the “Hutto Transportation Impact Fee Regulations”.

SECTION II. Findings Incorporated

The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein and are hereby found to be true and correct factual and legislative determinations of the City of Hutto, Texas.

SECTION III. Purpose

This Ordinance is intended to assure the provision of adequate roadway facilities to serve New Development in the City by requiring each development to pay a share of the costs of such Capital Improvements necessitated by and attributable to such New Development.

SECTION IV. Authority

This Ordinance is adopted pursuant to Texas Local Government Code Chapter 395 and the Hutto City Charter. Chapter 395 supplements this Ordinance to the extent that its provisions may be applicable hereto and, to such extent, its provisions are incorporated herein by reference. The provisions of this Ordinance shall not be construed to limit the power of the City to utilize other methods authorized under State law or pursuant to other City powers to accomplish the purposes set forth herein, either in substitution or in conjunction with this Ordinance. Guidelines may be developed by ordinance, resolution, or otherwise to implement and administer this Ordinance.

SECTION V. Applicability

The provisions of this Ordinance apply to all new development within the corporate boundaries of the City. The provisions of this article apply uniformly within each Service Area.

SECTION VI. Incorporation of Land Use Assumptions and Transportation Impact Fee Capital Improvements Plan

This Transportation Impact Fee Capital Improvements Plan and Land Use Assumptions identifying Capital Improvements or Facility Expansions pursuant to which Transportation Impact Fees may be assessed, as considered and adopted by the City Council Ordinance No. O-18-05-17-11B at the May 17, 2018 public hearing and with the Transportation Impact Fee Study as referenced in Exhibit A hereto is incorporated herein by reference for all purposes, including any future amendments thereto.

SECTION VII. Definitions

Definitions of terms defined in Local Government Code Section 395 are incorporated. Some definitions are repeated herein for convenience.

In this Ordinance:

- A. Assessment means the determination of the amount of the Maximum Assessable Transportation Impact Fee per Vehicle Mile which can be imposed on New Development pursuant to this Ordinance.

- B. Capital Improvement means a Transportation Facility with a life expectancy of three or more years, to be owned and operated by or on behalf of the City.
- C. City means the City of Hutto, Texas.
- D. Credit means a reduction in the amount of a Transportation Impact Fee(s), payments, or charges for approved construction or provision of the same type of Capital Improvement for which a fee has been assessed for a New Development. This is done by either a proven decrease in the number of Service Units attributable to such development or a decrease in the amount of Transportation Impact Fees otherwise due, that results from contributions of land, improvements or funds to construct system improvements in accordance with the City's subdivision and development regulations, policies or requirements, as determined and approved by the City.
- E. Final plat approval means authorization by City Council or designee that the final map of a proposed subdivision meets all City standards and conditions in accordance with the City's subdivision regulations and the City Council or designee executes the applicant's plat, and that the plat may be recorded in the office of the county clerk of Williamson or Travis County. The term applies both to original plats and replats.
- F. Impact Fee, or "Transportation Impact Fee", means a fee, charge, or Assessment for Transportation Facilities imposed on New Development by the City pursuant to this Ordinance in order to generate revenue to fund or recoup all or part of the costs of Capital Improvements or facility expansion necessitated by and attributable to such New Development. The term includes amortized charges, lump-sum charges, capital recovery fees, contributions in aid of construction and any other fee that functions as described by this Ordinance or the Statute. The term is inclusive of both the Maximum Assessable Transportation Impact Fee and the Transportation Impact Fee Collection Rate as herein described.
- G. Land Use Assumptions means the description of Service Area(s) and the projections of population and employment growth and associated changes in land uses, densities and intensities adopted by the City, as may be amended from time to time, upon which the Transportation Impact Fee Capital Improvements Plan is based.
- H. Land Use Equivalency Table means a table approved by the City Manager converting the demands for Capital Improvements generated by various land uses to numbers of Service Units, as may be amended from time to time. The land use equivalency table may be incorporated in a schedule of Impact Fee rates, attached as Exhibit C hereto and incorporated by reference herein.
- I. Maximum Assessable Transportation Impact Fee means the Impact fee that is established for the Service Area(s) computed by calculating the total projected costs of Capital Improvements necessitated by and attributable to New Development associated with the Transportation CIP, and then dividing that amount by the total number of Service Units anticipated with the Service Area(s) based upon the land use assumptions. The Maximum Assessable Transportation Impact Fee shall be established and reflected in Exhibit B, Schedule 1, attached hereto and incorporated herein. The City may adopt a Transportation Impact Fee

Collection Rate that is less than this amount, but in no instance shall the collected Transportation Impact Fee exceed the Maximum Assessed Transportation Impact Fee.

- J. New Development means a project involving the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure, or any use or extension of land, which has the effect of increasing the requirements for Capital Improvements or facility expansion, measured by the number of Service Units to be generated by such activity and which applies for any City permit or approval after the effective date of this ordinance.
- K. Recoupment means the imposition of an Impact Fee to reimburse the City for Capital Improvements which the City has previously oversized to serve New Development.
- L. Transportation Impact Fee Collection Rate means the current amount of Transportation Impact Fee adopted by Hutto City Council to be paid by the developer of any new development, as may from time to time be amended. The adopted Transportation Impact Fee Collection Rate shall be established and reflected in Exhibit B, Schedule 2, attached hereto and incorporated herein.
- M. Roadway means any arterial or collector streets or roads that have been designated in the City's adopted Mobility Plan, as may be amended from time to time. Roadway also includes and thoroughfare designated as a numbered highway on the official federal or Texas highway system; to the extent that the City incurs Capital Improvement costs for such facility.
- N. Roadway Facility means an improvement or appurtenance to a Roadway which includes, but is not limited to, rights-of-way, whether conveyed by plat, deed, condemnation, or easement; intersection improvements; traffic signals; turn lanes; drainage facilities associated with the Roadway Facility; street lighting or curbs, and water and wastewater improvements affected by the Roadway Facility. Roadway Facility also includes any improvement or appurtenance to an intersection with a Roadway officially enumerated in the federal or Texas highway system, and to any improvements or appurtenances to such federal or Texas highway, to the extent that the City has incurred capital costs for such facilities, including without limitation local matching funds and costs related to utility line relocation and the establishment of curbs, gutters, sidewalks, drainage appurtenances and rights-of-way. Roadway Facility excludes those improvements or appurtenances to any Roadway which is a Site-related Facility.
- O. Roadway Facility expansion means the expansion of the capacity of an existing roadway in the City, but does not include the repair, maintenance, modernization, or expansion of an existing roadway to better serve existing development.
- P. Transportation Impact Fee Capital Improvements Plan, or "Capital Improvements Plan" (CIP) means the adopted plan included in Exhibit A, as may be amended from time to time, which identifies the roadway facilities or Roadway Facility expansions and their costs for each roadway Service Area, which are necessitated by and which are attributable to New Development, for a period not to exceed 10 years, which are to be financed in whole or in part through the imposition of Transportation Impact Fees pursuant to this Ordinance.

- Q. Service Area means a Transportation Service Area within the City's corporate boundary, within which Impact Fees for Transportation Capital Improvements or Roadway Facility expansions may 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 Transportation Impact Fee Capital Improvements Plan applicable to the Service Area.
- R. Service Unit means a vehicle mile. A vehicle-mile shall be defined as one (1) vehicle traveling a distance of one (1) mile during the afternoon peak hour as defined in the Transportation Impact Fee Study.
- S. Site-related Facility means an improvement or facility which is for the primary use or benefit of one or more New Developments and/or which is for the primary purpose of safe and adequate provision of Roadway Facilities to serve the New Development, including access to the development, which is not included in the Transportation Capital Improvements Plan, and for which the developer(s) or property owner(s) is solely responsible under subdivision or other applicable development regulations. Site-related Facility may include a Roadway improvement which is located offsite, within or on the perimeter of the development site.
- T. System Facility means a roadway improvement or facility expansion which is designated in the Transportation Capital Improvements Plan and which is not a Site-related Facility. System Facility may include, as determined by the City Engineer, a roadway improvement which is located offsite, within or on the perimeter of the development site.

SECTION VIII. Transportation Service Areas

The City hereby established the Service Area, constituting land within the City's corporate boundary, as depicted in Exhibit A, referenced hereto and incorporated by reference herein. The boundaries of the Transportation Service Areas may be amended from time to time, or new Transportation Service Areas may be delineated, pursuant to the procedures of this Ordinance.

SECTION IX. Transportation Impact Fees Adopted

The City hereby adopts the Maximum Assessable Transportation Impact Fee attached and incorporated as Exhibit B, Schedule 1, and the Transportation Impact Collection Rate attached and incorporated as Exhibit B, Schedule 2. Each non-exempt New Development shall be assessed the Maximum Assessable Transportation Impact Fee and shall pay the Transportation Impact Fee Collection Rate, minus any applicable Credits, as described herein. Except as herein otherwise provided, the Assessment and collection of a Transportation Impact Fee shall be additional and supplemental to, and not in substitution of, any other tax, fee, charge or assessment which is lawfully imposed on and due against the property.

SECTION X. Roadway Impact Fee Required

No Final Plat or Replat for New Development shall be released for filing with Williamson or Travis County without Assessment of an Impact Fee pursuant to this Ordinance; or, if no plat is required, then no building permit shall be issued until such Assessment is made

and the Transportation Impact Fee Collection Rate is paid in accordance with the Assessment and collection procedures indicated herein.

SECTION XI. Assessment of Impact Fees

Assessment of the Impact Fee for any New Development shall be made as follows:

- A. For a New Development which has received final plat or replat approval before the effective date of this Ordinance, Assessment of Impact Fees shall occur on the effective date of this Ordinance, and shall be the amount of the Maximum Assessable Transportation Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1. However, the Transportation Impact Fee Collection Rate shall not be collected on any Service Unit which has received final plat approval before the effective date of this Ordinance and for which a valid building permit is issued within one year after the date of adoption of this Ordinance. In the event of the expiration of a final plat or replat, the resubmittal of said final plat or replat, after the effective date of this Ordinance, shall require the Assessment of Impact Fees..
- B. For land which is not required to be platted at the time of application for a building permit pursuant to the City's subdivision regulations prior to development, Assessment of Transportation Impact Fees shall occur at the time application is made for the building permit, and shall be the amount of the Maximum Assessable Transportation Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1 then in effect.
- C. For New Development which is submitted for approval pursuant to the City's subdivision regulations or which is proposed for replatting on or after the effective date of this Ordinance, Assessment of Impact Fees shall be at the time of final plat or replat approval, and shall be the amount of the Maximum Assessable Roadway Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1 then in effect.
- D. Following Assessment of the Impact Fee pursuant to this Section, the amount of the Impact Fee Assessment per Service Unit for that development cannot be increased, unless the developer of the property in the Service Area proposes to change the approved development by the submission of a new application or amendment for final approval, or other development application that results in approval of additional Service Units, in which case a new Assessment shall occur at the Exhibit B, Schedule 1 rate then in effect for such additional Service Unit.
- E. The City Engineer, or his or her designee, shall compute the Transportation Impact Fees for New Development by first determining whether the New Development is eligible for Credits calculated in accordance with this Ordinance, which would further reduce Impact Fees otherwise due in whole or in part. The total amount of Impact Fees for the New Development shall be attached to the development application as a condition of approval.
- F. Approval of an amending plat pursuant to Texas Local Government Code, Section 212.016 and the City's subdivision regulations is not subject to reassessment for an Impact Fee, unless as a result of the amendment the use changes and results in additional Service Units.

SECTION XII. Exemptions to Impact Fees

Pursuant to Texas Local Government Code Section 395.022, as amended, a public school district is not required to pay Transportation Impact Fees imposed under this Ordinance unless the board of trustees of the district consents to the payment of the fees by entering a contract with the City imposing the fees or they voluntarily elect to contribute to road improvements

SECTION XIII. Collection of Impact Fees

Transportation Impact Fees shall be collected in the following manner; however, the City has the ability to require construction greater than the Transportation Impact Fee Collection Rate for amounts up to the Maximum Assessable Transportation Impact Fee:

- A. The Transportation Impact Fee Collection Rate shall be paid at the time the City issues a building permit for a New Development. For New Development which does not require a building permit (such as a change in use), the Transportation Impact Fee Collection Rate shall be paid prior to the issuance of a Certificate of Occupancy.
- B. For properties requiring a plat, the Transportation Impact Fee Collection Rate to be paid and collected per Service Unit for New Development shall be the amount listed in Exhibit B, Schedule 2 in effect at the time of final plat or replat for approval for up to a one-year period following such final plat or replat approval. After the one-year period has expired, the Transportation Impact Fee collection Rate shall be paid according to the current amount listed in Exhibit B, Schedule 2 then in effect.
- C. For properties that do not require the filing of a plat, the Transportation Impact Fee Collection Rate shall be paid and collected per Service Unit for New Development in the amount listed in Exhibit B, Schedule 2 in effect at the time that the building permit application is filed.
- D. If the building permit for which an Impact Fee has been paid has expired, and a new application is thereafter filed, the Transportation Impact Fee Collection Rate shall be computed using Exhibit B, Schedule 2 in effect at the time of the new application, with Credits for previous payment of Impact Fees being applied against the new Impact Fees due.
- E. Whenever the property owner proposes to increase the number of Service Units for a development, the additional Impact Fees collected for such new Service Units shall be determined by using Exhibit B, Schedule 2 in effect at the time of the request and such additional fee shall be collected at the times prescribed by this section.
- F. The City may vary the rates of collection or amount of Transportation Impact Fees per Service Unit among or within Service Areas in order to reasonably further goals and policies affecting the adequacy of roadway facilities serving New Development, or other regulatory purposes affecting the type, quality, intensity, economic development potential or development timing of land uses within such Service Areas.

- G. The Maximum Assessable Roadway Impact Fee per Service Unit for Roadway Facilities, as may be amended from time to time, hereby is declared to be an approximate and appropriate measure of the impacts generated by a new unit of development on the City's Roadway System. To the extent that the Transportation Impact Fee Collection Rate charged against a New Development, as may be amended from time to time, is less than the Maximum Assessable Transportation Impact Fee per Service Unit assessed, such difference hereby is declared to be founded on policies unrelated to measurement of the impacts of the New Development on the City's roadway system. The Maximum Assessable Roadway Impact Fee may be used in evaluating any claim by a property owner that the dedication or construction of a Capital Improvement within a Service Area imposed as a condition of development approval pursuant to the City's subdivision or development regulations is disproportionate to the impacts created by the development on the City's Roadway System.

SECTION XIV. Credits against Impact Fees

The City may credit the contribution of land, improvements or funding for construction of any System Facility that is required or agreed to by the City, pursuant to rules established in this section or pursuant to administrative guidelines promulgated by the City with the following limitation:

- A. The Credit shall be associated with the plat or other detailed plan of development for the property that is to be served by the Roadway Facility.
- B. Master Planned Community projects, including subdivisions containing multiple phases, and whether approved before or after the effective date of these Impact Fee regulations, may apply for Credits against Transportation Impact Fees for the entire project based upon contributions of land, improvements or funds toward construction of system facilities. Credits shall be determined by comparing costs of Transportation Capital Improvements supplied by the project with the costs of Transportation Capital Improvements to be utilized by development within the project, utilizing a methodology approved by the City. The Credit determination shall be incorporated within an agreement for Credits, in accordance with this Ordinance. The Roadway requirements of an agreement for Credits shall not be less than what is required by the Hutto Unified Development Code (UDC).
- C. The City's current policies and regulation shall apply to determine a New Development's obligations to construct adjacent System Facilities. The obligation to construct, however, shall not exceed the Maximum Assessable Transportation Impact Fee assessed against the New Development under Exhibit B, Schedule 1. Construction required under such policies and regulations shall be a Credit against the amount of Impact Fees otherwise due. If the costs of constructing a System Facility in accordance with the current City policies and regulations are greater than the amount of the Transportation Impact Fee Collection Rate due, the amount of the Credit due shall be deemed to be 100% of the assessable Impact Fees and no Impact Fee shall be collected thereafter for the development, unless the number of Service Units is subsequently increased.
- D. All Credits against Transportation Impact Fees shall be based upon standards promulgated by the City, which may be adopted as administrative guidelines, including the following standards:

- a. No Credit shall be given for the dedication or construction of Site-related Facilities.
 - b. No Credit shall be given for a Roadway Facility which is not identified within the Transportation Impact Fee Capital Improvement Plan, unless the facility is on or qualifies for inclusion on the Mobility Plan and the City agrees that such improvement supplies capacity to New Developments other than the development paying the Transportation Impact Fee and provisions for Credits are incorporated in an agreement for Credits pursuant to this Ordinance.
 - c. In no event will the City grant a Credit when no Transportation Impact Fees can be collected pursuant to this Ordinance or for any amount exceeding the Transportation Impact Fee Collection Rate due for the development, unless expressly agreed to by the City in writing.
 - d. The City may participate in the costs of a System Facility to be dedicated to the City, including costs that exceed the amount of the Maximum Assessable Impact Fees for the development, in accordance with policies and rules established by the City. The amount of any Credit for construction of System Facility shall be reduced by the amount of any participation funds received from the City.
 - e. Were funds for Roadway Facilities have been escrowed under an agreement that was executed with the City prior to the effective date of this Ordinance, the following rules apply:
 - i. Funds expended under the agreement for Roadway Facilities shall first be credited against the amount of Transportation Impact Fees that would have been due under Exhibit B, Schedule 2 for those units of development for which building permits already have been issued;
 - ii. Any remaining funds shall be credited against Impact Fees due for the development under Exhibit B, Schedule 2 at the time building permits are issued.
- E. Credits for construction of Capital Improvements shall be deemed created when the Capital Improvements are completed and the City has accepted the facility, or in the case of Capital Improvements constructed and accepted prior to the Effective Date of this Ordinance shall expire ten (10) years from the date the Credit was created. Credits arising prior to such Effective Date shall expire ten (10) years from such effective date. Upon application by the property owner, the City may agree to extend the expiration date for the Credit on mutually agreeable terms.
- F. Unless an agreement for Credits, as described herein, is executed providing for a different manner of applying Credits against Transportation Impact Fees due, a Credit associated with a plat or replat shall be applied at the time of application for the first building permit and, at each building permit application thereafter, to reduce Impact Fees due until the Credit is exhausted.

- G. An owner of a New Development who has constructed or financed a Transportation Capital Improvement or Roadway Facility expansion designated in the Transportation Impact Fee Capital Improvements Plans, or other Transportation Capital Improvement that supplies excess capacity, as required or authorized by the City, shall enter into an agreement with the City to provide for Credits against Transportation Impact Fees due for the development in accordance with this paragraph. The agreement shall identify the basis for and the method for computing and the amount of the Credit due and any reduction in Credits attributable to consumption of road capacity by developed lots or tracts served by the Transportation Capital Improvements. For multi-phased projects, the City may require that total Credits be proportionally allocated among the phases. If authorized by the City, the agreement also may provide for allocation of Credits among New Developments within the project, and provisions for the timing and collection of Impact Fees.

SECTION XV. Use of Proceeds of Impact Fee Accounts

The Transportation Impact Fees collected for each Service Area pursuant to these regulations may be used to finance or to recoup the costs of all or a portion of any roadway improvements or facility expansions identified in the Transportation Impact Fee Capital Improvements Plan for the Service Area, including but not limited to the construction contract price, surveying and engineering fees, and land acquisition costs (including land purchases, court awards and costs, attorney's fees, and expert witness fees). Transportation Impact Fees may also be used to pay the principal sum and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of the City to finance such roadway improvement or facility expansions. Transportation Impact Fees may also be used to pay fees actually contracted to be paid to an independent qualified engineer or financial consultant for preparation of or updating the Transportation Impact Fee Capital Improvements Plan. The Capital Improvements Advisory Committee shall recommend a Transportation Impact Fee Funding Plan identifying the projects to be funded with Transportation Impact Fees. City Council shall have final approval of the funding plan. Impact Fees collected may not be used to pay for the expenses prohibited by Statute.

SECTION XVI. Establishment of Accounts

The City's Finance Department shall establish an account to which interest is allocated for each Service Area for which a Transportation Impact Fee is imposed pursuant to this Ordinance. Each Impact Fee collected within the Service Area shall be deposited in such account with the following regulations:

- A. Interest earned on the account into which the Impact Fees are deposited shall be considered funds of the account and shall be used solely for the purposes authorized in this Ordinance and the Statute.
- B. The City's Finance Department shall establish adequate financial and accounting controls to ensure that Transportation Impact Fees disbursed from the account are utilized solely for the purposes authorized in this Ordinance and the Statute. 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 Ordinance; provided, however, that any Transportation Impact Fee paid shall be expended

within a reasonable period of time, but not to exceed ten (10) years from the date the fee is deposited into the account.

- C. The City's Finance Department shall maintain and keep financial records for Transportation Impact Fees, which shall show the source and disbursement of all fees collected in or expended from each Service Area. The records of the account into which Impact Fees are deposited shall be open for public inspection and copying during ordinary business hours. The City may establish a fee for copying services.

SECTION XVII. Impact Fee as Additional and Supplemental Regulation

Transportation Impact Fees established by these regulations are additional and supplemental to, and not in substitution of, any other requirements imposed by the City on the development of land or the issuance of building permits or certificates of occupancy. Such Impact Fees are intended to be consistent with and to further the policies of the Capital Improvements Plan, the zoning ordinances, subdivision regulations and other City policies, ordinances and resolutions by which the City seeks to ensure the provision of adequate public facilities in conjunction with the development of land. This Ordinance shall not affect, in any manner, the permissible use of property, density of development, design, and improvement standards and requirements, or any other aspect of the development of land or provision of public improvements subject to the zoning and subdivision regulations or other regulations and policies of the City, which shall be operative and remain in full force and effect without limitation with respect to all such development.

SECTION XVIII. Updates to Plans and Revision of Fees

The City shall update its Land Use Assumptions and Capital Improvements Plan and make any revision of fees as indicated below:

- A. The City shall update its Land Use Assumptions and Transportation Impact Fee Capital Improvements Plans and shall recalculate the Transportation Impact Fees based thereon in accordance with the procedures set forth in Texas Local Government Code, Ch. 395, or in any successor statute.
- B. Exhibit B, Schedule 2 may be amended without revising the Land Use Assumptions and Transportation Capital Improvements Plans at any time prior to the update provided for in this Section, provided that the Transportation Impact Fee Collection Rate to be collected under Exhibit B, Schedule 2 do not exceed the Maximum Assessable Transportation Impact Fees assessed under Exhibit B, Schedule 1.
- C. If, at the time an update is required as indicated herein and the City Council determines that no change to the Land Use Assumptions, Transportation Impact Fee Capital Improvements Plan or Transportation Impact Fees are needed, it may dispense with such update by following the procedures in Texas Local Government Code, Section 395.0575 or its successor statute.
- D. The City may amend any other provisions of this Ordinance in accordance with procedures for ordinance amendments contained in the City's Charter or State law.

SECTION XIX. Refunds

- A. Upon application, and Transportation Impact Fee or portion thereof collected pursuant to this Ordinance, which has not been expended within the Service Area within ten (10) years from the date of payment, shall be refunded to the record owner of the property for which the Impact Fee was paid or, if the Impact Fee was paid by another entity, to such entity. The application for refund pursuant to this section shall be submitted within sixty (60) days after the expiration of the ten-year period for expenditure of the Impact Fee. An Impact Fee shall be considered expended on a first-in, first out basis.
- B. An Impact Fee collected pursuant to this Ordinance shall also be considered expended if the total expenditures for Capital Improvements or Roadway Facility expansions authorized within the Service Area within ten (10) years following the date of payment exceeds the total fees collected within the Service Area for such improvements or expansions during such period.
- C. If a refund is due pursuant to Subsections A or B, the City shall divide the difference between the amount of expenditures and the amount of the Impact Fees collected by the total number of Service Units assumed within the Service Area for the period to determine the refund due per Service Unit. The refund to the record owner 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 upon that amount.

SECTION XX. Rebates

If the building permit for a New Development for which a Transportation Impact Fee has been paid has expired, and a modified or new application has not been filed within six (6) months of such expiration, the City shall, upon written application, rebate the amount of the Impact Fee to the record owner of the property for which the Impact Fee was paid. If no application for rebate pursuant to this subsection has been filed within this period, no rebate shall become due.

SECTION XXI. Appeals

The property owner or applicant for New Development may appeal the applicability or amount of the Transportation Impact Fee or the availability or amount of Credits or Refunds to the City Council using the following procedure:

- A. The burden of proof shall be on the applicant to demonstrate that relief should be granted by the City.
- B. The applicant must file a written notice of appeal with the City Manager or his/her designee within thirty (30) days following the decision being appealed. Along with the notice of appeal, an applicant may request an alternative Service Unit computation for land uses not contained with the latest edition of the ITE Trip Generation Manual by submitting a trip generation study demonstrating the appropriateness of the trip generation rates for the proposed development. An applicant may also include an alternative Service Unit Calculation.

- C. The City Manager or his/her designee (“Manager”) may (1) resolve the appeal, if the applicant agrees with the Manager’s decision, or (2) if the applicant does not agree, refer the matter to the Capital Improvements Advisory Committee to make a decision, along with the City Manager’s recommendation and any trip generation study provided, if any.
- D. If City Council review is requested by the applicant after receiving the City Manager’s and/or Capital Improvements Advisory Committee decision, the City secretary shall schedule a public hearing at which the applicant may present testimony and evidence before the city Council. The City Council shall act on the appeal within 60 days of receipt of the notice of appeal by the City, unless otherwise agreed by the Applicant.
- E. If the notice of appeal is accompanied by a payment or other security satisfactory to the City Attorney in an amount equal to the original determination of the Transportation Impact Fee due, the City shall process and may issue a building permit if other requirements are met while the appeal is pending.
- F. If the City Council allows for a different amount of the Transportation Impact Fee due for a New Development under this section to be paid, it may cause to be appropriated from other City funds the amount of the reduction in the Impact Fee to the account for the Service Area in which the property is located.

SECTION XXII. Severability

If any provision of this Ordinance or the application of any provision to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

SECTION XXIII. Conflicts

This Ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances for the City of Hutto, Texas, as amended, except where provisions of this Ordinance are in direct conflict with the provisions of such ordinances or such Code, in which event the conflicting provisions of such ordinances and Code are hereby repealed.

SECTION XXIV. Effective Date

This Ordinance shall take effect on July 5, 2018 or immediately from and after its passage and publication in accordance with the provisions of the Texas Local Government Code, whichever is later, and it is accordingly so ordained.

READ and **APPROVED** on first reading on this the ____ day of _____, **2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

By motion duly made, seconded and passed with an affirmative vote of all the Councilmembers present, the requirement for reading this ordinance on two separate days was dispensed with.

READ, PASSED and **ADOPTED** on first reading of ordinance this ____ day of _____, **2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

Attest:

Lisa L. Brown, City Secretary

EXHIBIT A
(TRANSPORTATION IMPACT FEE STUDY)

The Transportation Impact Fee Study is on file in the Engineering Department and the City Secretary's Offices. Due to size, it is not attached to the Ordinance but is referenced and incorporated herein as if attached.

EXHIBIT B

SCHEDULE 1

MAXIMUM ASSESSABLE ROADWAY IMPACT FEE PER SERVICE UNIT

Maximum Assessable Impact Fee	Service Unit
\$2,396.00	Vehicle Mile

SCHEDULE 2

TRANSPORTATION IMPACT FEE COLLECTION RATE PER SERVICE UNIT

Transportation Impact Fee	Service Unit
\$1,960.78	Vehicle Mile



Hutto

Roadway Impact Fee Study

June 2018



Hutto Roadway Impact Fee Study

Prepared for the City of Hutto

Prepared by:

DKS Associates

7500 Rialto Boulevard, Building 1, Suite 250

Austin, TX 78735

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Section I. Introduction

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption on Impact Fees. An Advisory Committee is required to review the Land Use Assumptions and CIP used in calculating the maximum fee, and to provide its finding for consideration by the City Council. The City Council must then conduct a public hearing on the Land Use Assumptions and CIP before considering an Impact Fee ordinance. Accordingly, The City of Hutto has developed its Land Use Assumptions and Capital Improvements Plan (CIP) necessary to implement roadway impact fees. This report includes details of the Roadway Impact Fee calculation methodology in accordance with Chapter 395 and the development of the Roadway Impact Fee Capital Improvement Plan, and summarizes the applicable Land Use Assumptions and Service Units per Development Unit.

Methodology

Impact fees are a mechanism for funding the public infrastructure necessitated by new development. They are meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs. In the case of roadway impact fees, the infrastructure need is the increased capacity on arterial and collector roadways that serve the overall transportation system. Statutory requirements mandate that impact fees be based on a specific list of improvements identified in the program and only the cost necessitated by new growth over a ten-year period may be considered.

The impact fee capital improvements plan is based on forecasted growth in the City limits of Hutto over a ten-year planning period. This growth was estimated based on population and employment assumptions prepared by the City (refer to the land use assumptions in Table 1). These land use assumptions serve as a key component from which impact fees are calculated.

Service Units

Service units establish a relationship between supply provided by roadway projects and demand placed on the street system by a development. The service unit for the computation of Hutto's Roadway Impact Fees is a vehicle-mile of travel during the evening peak-hour. The roadway impact fee is determined based on the impact of each service unit on the arterial and collector roadways in the service area over the ten-year period. This impact is based on the number and length of new trips generated by a development and various trip characteristics of each land-use. The service unit reflects both capacity provided by the roadway system and the demand placed on the system during the evening peak hour.

Service Area

Impact fee legislation requires that service areas be defined for impact fees to ensure that facility improvements are in proximity to the area that is generating the need. Chapter 395 requires that roadway service areas be limited to a six-mile maximum and be located within the current City limits. Therefore, areas within the extraterritorial jurisdiction (ETJ) are excluded from this study. The result is that new development can only be assessed an impact fee based on the cost of necessary capital improvements within that service area.

Since the current City limits of Hutto falls within the six-mile maximum, one service area was developed. Figure 1, shown later in this document, includes the service area for Hutto, in addition to the current corporate boundaries. Future annexations may necessitate the City to split into two service areas, one north of US 79 and one south of US 79, to conform to the six-mile legislative mandate. It should be noted that in cases where the service area boundary follows the City limits, only those portions of the facility within the City limits are included in the service area.

Land Use Assumptions

Table 1 summarizes the residential and employment 10-year growth projections for the City. These values were provided by City of Hutto staff and are largely based on an identification of undeveloped parcels, the City's Future Land Use Plan and historical building permit data. Residential data was provided in terms of the number of dwelling units. Employment data was broken down into three groups including basic, service and retail employment and was provided in terms of square footage of building area. Basic employment includes the industrial and warehousing uses, service employment generally includes uses such as government or professional offices, and retail employment includes uses such as shopping centers and other retail stores.

Table 1: Residential and Employment 10-Year Projections

Land Use	10-Year Growth
Residential	3,766 dwelling units
Basic Employment	1,800,000 sq. ft.
Service Employment	770,000 sq. ft.
Retail Employment	1,200,000 sq. ft.

Section 2. Service Units of Existing Roadways

An inventory of major roadways that are designated as arterial and/or collector facilities on the City of Hutto Functional Classification Plan was conducted to determine the capacity provided by the existing roadway system, the demand currently placed on the system and the deficiencies. Any deficiencies found to occur will be carried over in the impact fee calculations (netting out capacity made available by the CIP). Data for the inventory was obtained from the Functional Classification Plan, field reconnaissance, and peak hour traffic volume count data. A summary of the data can be found in Appendix A.

The roadways were divided into segments based on changes in lane configuration, major intersections, or City limits. For the assessment of individual segments, lane capacities were assigned to each segment based on roadway functional class and type of existing cross-section. Table 2 shows the roadway capacities assumed for existing facilities. The capacity values are based upon generally accepted roadway capacity criteria.

Table 2: Hourly Capacity per lane-mile of Existing Roadways

Description	Hourly Vehicle-Mile Capacity per Lane-Mile
Five-lane undivided (TWLTL)	700
Four-lane undivided	525
Three-lane undivided (TWLTL)	525
Two-lane Undivided	475
Rural Cross-Section	150

Existing Traffic Volumes

Existing directional p.m. peak hour volumes were obtained from traffic counts collected in October 2017. Counts were collected along major roadways and at intersections throughout the City. For segments not counted, existing volumes were used or estimates were developed based on data from adjoining roadway counts.

Existing Vehicle-Miles of Supply

The total capacity provided by existing roadways in the City was identified. For each roadway segment, the existing service units (i.e., vehicle-miles) of capacity supplied were calculated using the following:

- Vehicle-Miles of Capacity = Link capacity per peak hour per lane x Number of Lanes x Length of segment (miles)

Existing roadways in the City provide an estimated 36,850 vehicle-miles of capacity.

Existing Vehicle-Miles of Demand

The utilization of existing roadways in terms of service units (i.e., vehicle-miles) was calculated for each roadway segment. The vehicle miles of existing demand were calculated by the following equation:

- Vehicle-Miles of Demand = PM peak hour volume x Length of segment (miles)

Existing roadways in the City have an estimated 20,042 vehicle-miles of demand.

Existing Vehicle-Miles of Deficiencies

For each roadway segment, the existing service units (i.e., vehicle-miles) of excess capacity and/or deficiencies were calculated. Each direction was evaluated to determine if vehicle demands exceed the available capacity. If demand exceeds capacity in one or both directions, the deficiency is deducted from the supply associated with the impact fee capital improvement plan. An estimated 179 vehicle-miles of deficiencies were identified on the existing roadway system. These deficiencies will be carried over to the impact fee calculation.

Section 3. Service Units for New Development

The service unit used to develop Hutto's Roadway Impact Fees is a vehicle-mile of travel during the evening peak-hour. The roadway impact fee is determined based on the impact of each service unit on the arterial and collector roadways in the service area over the ten-year period. This impact is based on the number and length of new trips generated by a development and various trip characteristics of each land-use. The following sections summarize the process used to develop the service units for each new development in the City.

Trip Generation

Trip generation is the method used to estimate the number of vehicles that are added to the roadway network from a proposed project. Trip generation information for the PM peak hour was based on data in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition. The Trip Generation Manual provides the number of trips that are produced or attracted to each land use per dwelling unit, square foot of building, or other corresponding unit.

For the retail category of land uses, the trip generation rate is adjusted to account for pass-by trips. Pass-by trips represent those that are made by drivers attracted to a new development, but already on the roadway network for another trip purpose. For example, a stop at a convenience store on the way home from work is a pass-by trip for the convenience store. Since the travel demand for pass-by trips are accounted for in the primary trip calculations, it is necessary to discount the retail trip generation rates to avoid double counting trips. The assumed pass-by rates and resulting trip generation rates are shown in Table 3.

Trip Length

To convert vehicle trips to vehicle-miles, the trip generation rates for each land use must be multiplied by the average trip length (in miles). Trip length data was based on information generated from the 2020 CAMPO Travel Demand Model and travel survey information. The trip length values are based on land use and limited to the service area size of six miles. In cases where the average trip length of a land use exceeds the service area boundary, the maximum trip length was capped at six miles. The trip lengths represent the average distance that a vehicle will travel between an origin and destination of which either the origin or destination contains the land-use category.

Since each vehicle-trip has an origin and a destination, a development should only pay for one-half of the cost necessary to complete each trip. To prevent the double charging, trip lengths were divided by two to reflect half of the vehicle trip associated with development. The adjusted average trip lengths and maximum trip lengths are shown in Table 3.

Vehicle-Miles of Demand per Development Unit

The Roadway Impact Fee is determined by multiplying the impact fee rate by the number of

service units projected for the proposed development. The result of combining the trip generation and trip length information is an equivalency table which establishes the service unit rate for various land uses, as shown in Table 3. The service unit rates are based on a development unit for each land use. For example, a dwelling unit is the basis for residential land uses, while 1,000 gross square feet of floor area is the basis for office and industrial land uses. The individual land uses are grouped into categories, such as residential, office, retail, services and industrial. However, even with these specific land use types, information is not available for every conceivable land use. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy.

Table 3: Vehicle Miles per Development Unit

ITE Land Use	ITE Code	Development Units	Average Trip Rate	Pass-by Rate	Average Trip Rate after Deductions	Trip Length (mi)	O-D Adjustment	Adjusted Trip Length (mi.)	Maximum Trip Length (mi.)	Vehicle- mile per Development Unit
Port and Terminal										
Truck Terminal	30	Acres	6.55	0%	6.55	12.51	50%	6.25	6.00	39.30
Industrial										
General Light Industrial	110	1,000 sq. ft.	0.97	0%	0.97	12.51	50%	6.25	6.00	5.82
General Heavy Industrial	120	1,000 sq. ft.	0.68	0%	0.68	12.51	50%	6.25	6.00	4.08
Industrial Park	130	1,000 sq. ft.	0.85	0%	0.85	12.51	50%	6.25	6.00	5.10
Manufacturing	140	1,000 sq. ft.	0.73	0%	0.73	12.51	50%	6.25	6.00	4.38
Warehousing	150	1,000 sq. ft.	0.32	0%	0.32	12.51	50%	6.25	6.00	1.92
Mini-Warehouse	151	1,000 sq. ft.	0.26	0%	0.26	12.51	50%	6.25	6.00	1.56
Utilities	170	1,000 sq. ft.	0.76	0%	0.76	12.51	50%	6.25	6.00	4.56
Residential										
Single-Family Detached Housing	210	Dwelling Unit	1.00	0%	1.00	10.21	50%	5.10	5.10	5.10
Apartment/ Multi-family/ Condominium	220	Dwelling Unit	0.62	0%	0.62	10.21	50%	5.10	5.10	3.16
Residential Townhome	230	Dwelling Unit	0.52	0%	0.52	10.21	50%	5.10	5.10	2.65
Mobile Home Park / Manufactured Housing	240	Dwelling Unit	0.59	0%	0.59	10.21	50%	5.10	5.10	3.01
Senior Adult Housing-Detached	251	Dwelling Unit	0.27	0%	0.27	10.21	50%	5.10	5.10	1.38
Senior Adult Housing-Attached	252	Dwelling Unit	0.25	0%	0.25	10.21	50%	5.10	5.10	1.28
Assisted Living	254	Beds	0.22	0%	0.22	10.21	50%	5.10	5.10	1.12
Lodging										

ITE Land Use	ITE Code	Development Units	Average Trip Rate	Pass-by Rate	Average Trip Rate after Deductions	Trip Length (mi)	O-D Adjustment	Adjusted Trip Length (mi.)	Maximum Trip Length (mi.)	Vehicle- mile per Development Unit
Hotel	310	Room	0.60	0%	0.60	9.92	50%	4.96	4.96	2.98
Motel / Other Lodging Facilities	320	Room	0.47	0%	0.47	9.92	50%	4.96	4.96	2.33
Recreational										
Golf Course	430	Acre	0.30	0%	0.30	15.20	50%	7.60	6.00	1.80
Miniature Golf Course	431	Hole	0.33	0%	0.33	15.20	50%	7.60	6.00	1.98
Golf Driving Range	432	Tee	1.25	0%	1.25	15.20	50%	7.60	6.00	7.50
Multipurpose Recreational Facility	435	1,000 sq. ft.	3.58	0%	3.58	15.20	50%	7.60	6.00	21.48
Bowling Alley	437	Lanes	1.51	0%	1.51	15.20	50%	7.60	6.00	9.06
Multiplex Movie Theater	445	Screens	13.64	0%	13.64	15.20	50%	7.60	6.00	81.84
Ice Skating Rink	465	1,000 sq. ft.	2.36	0%	2.36	15.20	50%	7.60	6.00	14.16
Racquet / Tennis Club	491	Court	3.35	0%	3.35	15.20	50%	7.60	6.00	20.10
Health / Fitness Club	492	1,000 sq. ft.	3.53	0%	3.53	15.20	50%	7.60	6.00	21.18
Athletic Club	493	1,000 sq. ft.	5.96	0%	5.96	15.20	50%	7.60	6.00	35.76
Recreational Community Center	495	1,000 sq. ft.	2.74	0%	2.74	15.20	50%	7.60	6.00	16.44
Institutional										
Junior / Community College	540	Students	0.12	0%	0.12	9.39	50%	4.70	4.70	0.56
Church	560	1,000 sq. ft.	0.55	0%	0.55	9.39	50%	4.70	4.70	2.58
Day Care Center	565	1,000 sq. ft.	12.34	0%	12.34	9.39	50%	4.70	4.70	57.94
Medical										
Hospital	610	1,000 sq. ft.	0.93	0%	0.93	10.40	50%	5.20	5.20	4.84

ITE Land Use	ITE Code	Development Units	Average Trip Rate	Pass-by Rate	Average Trip Rate after Deductions	Trip Length (mi)	O-D Adjustment	Adjusted Trip Length (mi.)	Maximum Trip Length (mi.)	Vehicle- mile per Development Unit
Nursing Home	620	Beds	0.22	0%	0.22	10.40	50%	5.20	5.20	1.14
Clinic	630	1,000 sq. ft.	5.18	0%	5.18	10.40	50%	5.20	5.20	26.94
Animal Hospital/Veterinary Clinic	640	1,000 sq. ft.	4.72	0%	4.72	10.40	50%	5.20	5.20	24.54
Office										
General Office Building	710	1,000 sq. ft.	1.49	0%	1.49	14.29	50%	7.15	6.00	8.94
Corporate Headquarters Building	714	1,000 sq. ft.	1.41	0%	1.41	14.29	50%	7.15	6.00	8.46
Single Tenant Office Building	715	1,000 sq. ft.	1.74	0%	1.74	14.29	50%	7.15	6.00	10.44
Medical-Dental Office Building	720	1,000 sq. ft.	3.57	0%	3.57	14.29	50%	7.15	6.00	21.42
Office Park	750	1,000 sq. ft.	1.48	0%	1.48	14.29	50%	7.15	6.00	8.88
Retail										
Building Materials and Lumber Store	812	1,000 sq. ft.	4.49	25%	3.37	6.12	50%	3.06	3.06	10.30
Free-Standing Discount Superstore	813	1,000 sq. ft.	4.35	28%	3.13	6.12	50%	3.06	3.06	9.58
Free-Standing Discount Store	815	1,000 sq. ft.	4.98	28%	3.59	6.12	50%	3.06	3.06	10.97
Hardware/Paint Store	816	1,000 sq. ft.	4.84	26%	3.58	6.12	50%	3.06	3.06	10.96
Nursery (Garden Center)	817	1,000 sq. ft.	6.94	28%	5.00	6.12	50%	3.06	3.06	15.29
Shopping Center	820	1,000 sq. ft.	3.71	34%	2.45	6.12	50%	3.06	3.06	7.49
Specialty Retail Center	826	1,000 sq. ft.	2.71	20%	2.17	6.12	50%	3.06	3.06	6.63
New and Used Car Sales	841	1,000 sq. ft.	2.62	20%	2.10	6.12	50%	3.06	3.06	6.41

ITE Land Use	ITE Code	Development Units	Average Trip Rate	Pass-by Rate	Average Trip Rate after Deductions	Trip Length (mi)	O-D Adjustment	Adjusted Trip Length (mi.)	Maximum Trip Length (mi.)	Vehicle- mile per Development Unit
Automobile Parts Sales	843	1,000 sq. ft.	5.98	43%	3.41	6.12	50%	3.06	3.06	10.43
Tire Store	848	1,000 sq. ft.	3.54	28%	2.55	6.12	50%	3.06	3.06	7.80
Supermarket	850	1,000 sq. ft.	9.48	36%	6.07	6.12	50%	3.06	3.06	18.56
Convenience Market with Gasoline Pumps	853	Fueling Positions	19.07	63%	7.06	6.12	50%	3.06	3.06	21.59
Discount Club	857	1,000 sq. ft.	4.18	20%	3.34	6.12	50%	3.06	3.06	10.23
Home Improvement Superstore	862	1,000 sq. ft.	2.33	48%	1.21	6.12	50%	3.06	3.06	3.71
Electronic Superstore	863	1,000 sq. ft.	4.50	40%	2.70	6.12	50%	3.06	3.06	8.26
Toy/Children's Superstore	864	1,000 sq. ft.	4.99	28%	3.59	6.12	50%	3.06	3.06	10.99
Department Store	875	1,000 sq. ft.	1.87	28%	1.35	6.12	50%	3.06	3.06	4.12
Apparel Store	876	1,000 sq. ft.	3.83	28%	2.76	6.12	50%	3.06	3.06	8.44
Arts and Crafts Store	879	1,000 sq. ft.	6.21	28%	4.47	6.12	50%	3.06	3.06	13.68
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 sq. ft.	8.40	53%	3.95	6.12	50%	3.06	3.06	12.08
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 sq. ft.	9.91	49%	5.05	6.12	50%	3.06	3.06	15.46
Furniture Store	890	1,000 sq. ft.	0.45	53%	0.21	6.12	50%	3.06	3.06	0.65
Services										
Walk-In Bank	911	1,000 sq. ft.	12.13	40%	7.28	7.28	50%	3.64	3.64	26.47
Drive-In Bank	912	Drive-in Lanes	33.24	47%	17.62	7.28	50%	3.64	3.64	64.08
Hair Salon	918	1,000 sq. ft.	1.93	34%	1.27	7.28	50%	3.64	3.64	4.63
Drinking Place	925	1,000 sq. ft.	11.34	50%	5.67	7.28	50%	3.64	3.64	20.62

ITE Land Use	ITE Code	Development Units	Average Trip Rate	Pass-by Rate	Average Trip Rate after Deductions	Trip Length (mi)	O-D Adjustment	Adjusted Trip Length (mi.)	Maximum Trip Length (mi.)	Vehicle- mile per Development Unit
Quality Restaurant	931	1,000 sq. ft.	7.49	44%	4.19	7.28	50%	3.64	3.64	15.26
High Turnover (Sit-Down) Restaurant	932	1,000 sq. ft.	9.85	43%	5.61	7.28	50%	3.64	3.64	20.42
Fast Food Restaurant without Drive-Thru Window	933	1,000 sq. ft.	26.15	50%	13.08	7.28	50%	3.64	3.64	47.56
Fast Food Restaurant with Drive-Thru Window	934	1,000 sq. ft.	32.65	50%	16.33	7.28	50%	3.64	3.64	59.38
Coffee/Donut Shop without Drive-Thru Window	936	1,000 sq. ft.	40.75	70%	12.23	7.28	50%	3.64	3.64	44.47
Coffee/Donut Shop with Drive-Thru Window	937	1,000 sq. ft.	42.80	70%	12.84	7.28	50%	3.64	3.64	46.71
Quick Lubrication Vehicle Shop	941	Servicing Positions	5.19	55%	2.34	7.28	50%	3.64	3.64	8.50
Automobile Care Center	942	1,000 sq. ft.	3.11	40%	1.87	7.28	50%	3.64	3.64	6.79
Gasoline/ Service Station	944	Vehicle Fueling Position	13.87	42%	8.04	7.28	50%	3.64	3.64	29.26
Gasoline/ Service Station w/ Conv Market	945	Vehicle Fueling Position	13.51	56%	5.94	7.28	50%	3.64	3.64	21.62
Gasoline/ Service Station w/ Conv Market and Car Wash	946	Vehicle Fueling Position	13.86	56%	6.10	7.28	50%	3.64	3.64	22.18
Self-Service Car Wash	947	Stall	5.54	40%	3.32	7.28	50%	3.64	3.64	12.09

Projected 10-year Vehicle-Miles of Demand

Projected service units (i.e., vehicle-miles) of demand were calculated based on the net growth expected to occur over the 10-year planning period, and on the associated service unit generation for each of the population and employment data components (basic, service and retail). Basic employment generally encompasses the industrial land uses; retail employment includes retail uses; and service employment generally encompasses office uses. Separate calculations were performed for each data component and combined to determine a total for the Citywide service area. Vehicle-miles of demand for population growth were based on dwelling units (residential). Vehicle-miles of demand for employment were based on the square footage of building space for industrial, office and retail uses.

The City is expected to have an estimated 45,566 vehicle-miles of demand over the 10-year planning period. A summary of the data can be found in Appendix B.

Section 4. Roadway Impact Fee Capital Improvement Plan

The City has identified transportation projects needed to accommodate the projected growth within the City, as shown in Table 4 and Figure 1. All arterial and collector facilities identified on the City's Functional Classification Plan not constructed to the ultimate build-out were included in the impact fee CIP to provide flexibility for development due to the rapid rate of development.

The impact fee CIP can only include roadways which are included on the City's Functional Classification Plan as arterial or collector facilities. Impact fee legislation also allows for the recoupment of costs for previously constructed facilities and projects currently under construction; however, no projects were included for recoupment.

In general, the costs associated with the design, right-of-way acquisition, and construction and financing of all items necessary to implement the roadway projects identified in the capital improvements plan are eligible. These estimates are based on the ultimate roadway section identified by functional classification. For CIP projects along State highway or County facilities in the current City limits, no State or County match was assumed, the projects were assumed to be 100 percent funded by the City.

Table 4: Roadway Impact Fee Capital Improvement Plan

Service Area*	Project #	Roadway	Limits	Length (mi)	Num. of Lanes	Functional Classification	City Share	% in Service Area	Total Project Cost in Service Area
A	A1	CR 109	CR 108 to CR 118 extension	1.42	3	Major Collector	0%	100%	\$0
A / X	A2	CR 118	CR 109 extension to W. of FM 1660	0.07	5	Minor Arterial	100%	50%	\$587,500
A / X	A3	CR 118	FM 1660 to CR 132 extension	0.50	5	Minor Arterial	100%	50%	\$3,075,000
A	A4	CR 132	FM 1660 to CR 109 extension	0.90	2	Minor Collector	0%	100%	\$0
A / X	A5	CR 132	FM 1660 to Carol Drive extension	0.53	2	Minor Collector	100%	50%	\$425,000
A / X	A6	CR 132	CR 118 extension to N. of Bosque Drive	0.54	2	Minor Collector	100%	50%	\$1,062,500
A / X	A7	CR 132	Carol Drive extension to S. of Bosque Drive	0.20	2	Minor Collector	100%	50%	\$200,000
A / X	A8	CR 132	W. of CR 133 to E. of CR 133	0.41	2	Minor Collector	100%	50%	\$412,500
A	A9	CR 132 Realignment	CR 132 to CR 133	0.42	5	Minor Arterial	100%	100%	\$4,925,000
A / X	A10	CR 132	CR 132 Realignment to S. of CR 132 extension	0.17	5	Minor Arterial	100%	50%	\$900,000
A	A11	CR 132	Carol Drive extension to CR 132 Realignment	0.68	3	Major Collector	100%	100%	\$3,675,000
A	A12	Carol Drive	Limmer Loop to CR 132	0.79	2	Minor Collector	100%	100%	\$3,075,000
A	A13	Carol Drive	Magner Lane to US 79	0.44	2	Minor Collector	100%	100%	\$1,700,000
A / X	A14	FM 1660	City limits to 982 ft. S. of City limits	0.19	3	Major Collector	100%	50%	\$362,500
A	A15	FM 1660	982 ft. S. of City limits to N. of Blanco Drive	0.29	3	Major Collector	100%	100%	\$750,000
A / X	A16	FM 1660	N. of Blanco Drive to CR 132	0.21	3	Major Collector	100%	50%	\$400,000
A	A17	FM 1660	CR 132 to Carrington Street	0.08	3	Major Collector	100%	100%	\$475,000
A / X	A18	FM 1660	Sylvan Street to N. of Limmer Loop	0.17	3	Major Collector	100%	50%	\$225,000
A	A19	FM 1660	N. of Limmer Loop to Limmer Loop	0.09	3	Major Collector	100%	100%	\$325,000
A / X	A20	FM 1660	Limmer Loop to S. of Limmer Loop	0.12	3	Major Collector	100%	50%	\$200,000

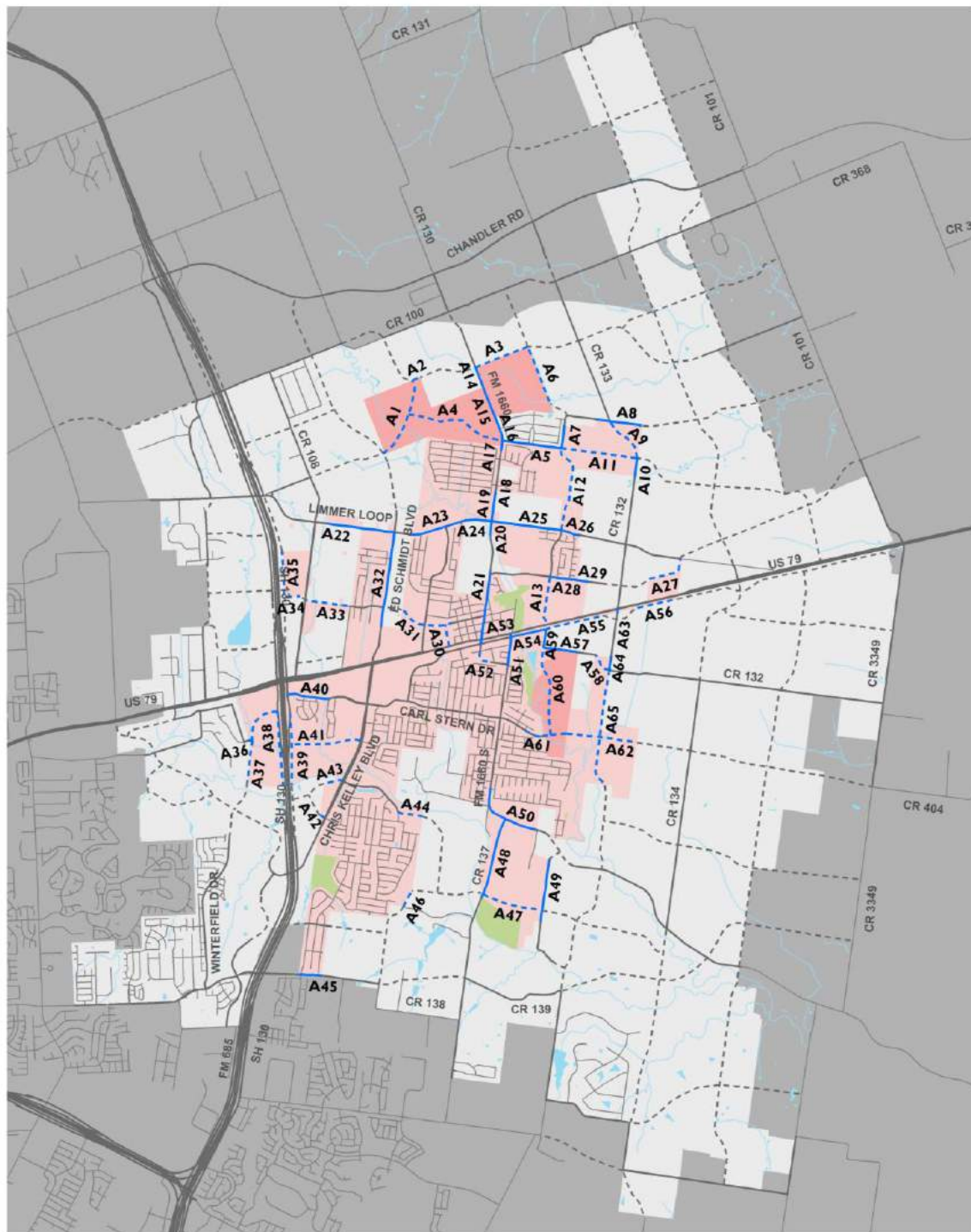
Service Area*	Project #	Roadway	Limits	Length (mi)	Num. of Lanes	Functional Classification	City Share	% in Service Area	Total Project Cost in Service Area
A	A21	FM 1660	Magner Lane to Front Street	0.65	3	Major Collector	100%	100%	\$3,500,000
A / X	A22	Limmer Loop	E. of Innovation Boulevard to Ed Schmidt Boulevard	0.61	5	Minor Arterial	100%	50%	\$2,362,500
A	A23	Limmer Loop	E. of Ed Schmidt Boulevard to Adriana Lane	0.49	5	Minor Arterial	100%	100%	\$3,575,000
A / X	A24	Limmer Loop	Adriana Lane to FM 1660	0.23	5	Minor Arterial	100%	50%	\$787,500
A / X	A25	Limmer Loop	FM 1660 to Carol Drive	0.60	5	Minor Arterial	100%	50%	\$2,162,500
A	A26	Limmer Loop	Carol Drive to City limits	0.19	5	Minor Arterial	100%	100%	\$1,325,000
A / X	A27	Magner Lane	E. of CR 132 to Limmer Loop	0.38	3	Major Collector	100%	50%	\$1,025,000
A	A28	Magner Lane	Carol Drive to E. of Kates Way	0.25	3	Major Collector	100%	100%	\$750,000
A / X	A29	Magner Lane	E. of Kates Way to City limits	0.09	3	Major Collector	100%	50%	\$137,500
A	A30	Silo Street	US 79 to Live Oak Street	0.20	3	Major Collector	100%	100%	\$1,075,000
A	A31	Live Oak Street	Short Street to E. of Ed Schmidt Boulevard	0.50	3	Major Collector	100%	100%	\$2,675,000
A / X	A32	Ed Schmidt Boulevard	S. of Emory Farms Avenue to Limmer Loop	0.84	5	Minor Arterial	100%	50%	\$2,587,500
A / X	A33	Emory Farms Avenue	Alliance Boulevard to Innovation Boulevard	0.41	3	Major Collector	100%	50%	\$1,100,000
A / X	A34	Emory Farms Avenue	W. of Innovation Boulevard to SH 130 NB Service Road	0.16	3	Major Collector	100%	50%	\$437,500
A / X	A35	SH 130 NB Service Road	Emory Farms Avenue extension and N. City limits	0.39	2	Major Arterial	100%	50%	\$787,500
A	A36	Spotted Fawn Drive	W. City limits to the Winterfield Drive extension	0.04	2	Minor Collector	100%	100%	\$150,000
A / X	A37	Winterfield Drive	Kirkhill Street to SH 130 SB Service Road	0.77	3	Major Collector	100%	50%	\$2,575,000

Service Area*	Project #	Roadway	Limits	Length (mi)	Num. of Lanes	Functional Classification	City Share	% in Service Area	Total Project Cost in Service Area
A	A38	SH 130 SB Service Road	S. City limits to S. of Carl Stern Drive	0.66	2	Major Arterial	100%	100%	\$2,625,000
A	A39	SH 130 NB Service Road	S. City limits to S. of Carl Stern Drive	0.63	2	Major Arterial	100%	100%	\$2,500,000
A	A40	Carl Stern Drive	Cyril Drive to SH 130 NB Service Road	0.37	5	Minor Arterial	100%	100%	\$4,750,000
A	A41	Knowles Drive	Chris Kelley Boulevard to SH 130 Service Road	0.62	2	Minor Collector	100%	100%	\$2,400,000
A	A42	Great Western Drive	Chris Kelley Boulevard to W. City limits	0.05	2	Minor Collector	100%	100%	\$225,000
A	A43	Riverwalk Drive	Chris Kelley Boulevard to W. City limits	0.18	3	Major Collector	100%	100%	\$1,375,000
A	A44	Riverwalk Drive	E. of Creston Cove to E. City limits	0.22	3	Major Collector	100%	100%	\$1,500,000
A / X	A45	CR 138	W. of Little Lake Road to E. of Dana Drive	0.20	5	Minor Arterial	100%	50%	\$650,000
A / X	A46	CR 138	CR 197 to E. of Navidad River Drive	0.16	3	Major Collector	100%	50%	\$550,000
A	A47	E-W Roadway	W. of CR 137 to CR 163	0.56	3	Major Collector	100%	100%	\$4,175,000
A	A48	CR 137	FM 1660 to S. of new E-W Roadway	0.72	3	Major Collector	100%	100%	\$3,500,000
A / X	A49	CR 163	S. of FM 1660 to S. of E-W Roadway	0.56	2	Minor Collector	100%	50%	\$687,500
A	A50	FM 1660	King Lane to Swindoll Lane	0.64	3	Major Collector	100%	100%	\$2,650,000
A	A51	FM 1660	Evans Street to US 79	0.28	3	Major Collector	100%	100%	\$800,000
A	A52	Jim Cage Lane	Austin Avenue to Evans Street	0.17	2	Minor Collector	100%	100%	\$675,000
A	A53	US 79	FM 1660 South Intersection	0.09	1	Major Arterial	100%	100%	\$350,000
A	A54	Front Street	FM 1660 to Front Street extension	0.31	2	Major Collector	100%	100%	\$1,150,000
A / X	A55	Front Street	CR 199 to W. of CR 132	0.53	3	Major Collector	100%	50%	\$1,700,000
A / X	A56	Front Street	E. of CR 132 to W. of CR 134 extension	0.36	3	Major Collector	100%	50%	\$1,150,000

Service Area*	Project #	Roadway	Limits	Length (mi)	Num. of Lanes	Functional Classification	City Share	% in Service Area	Total Project Cost in Service Area
A / X	A57	CR 199	CR 199 extension to W. of CR 199 realignment	0.31	3	Major Collector	100%	50%	\$500,000
A	A58	CR 199 realignment	CR 199 to CR 132	0.20	3	Major Collector	100%	100%	\$1,100,000
A / X	A59	CR 199	Front Street to CR 199 extension	0.14	3	Major Collector	100%	50%	\$225,000
A	A60	CR 199	CR 199 to Carl Stern Drive extension	0.81	2	Minor Collector	100%	100%	\$3,125,000
A	A61	Carl Stern Drive	Riverbed Pass to CR 199 extension	0.24	3	Minor Arterial	100%	100%	\$1,800,000
A	A62	Carl Stern Drive	CR 199 extension to E. City limits	0.77	5	Minor Arterial	100%	100%	\$8,600,000
A	A63	CR 132	US 79 to N. of Front Street extension	0.03	5	Minor Arterial	100%	100%	\$1,050,000
A / X	A64	CR 132	CR 199 to CR 132	0.11	5	Minor Arterial	100%	50%	\$650,000
A	A65	CR 132	CR 199 Realignment to S. City limits	1.06	5	Minor Arterial	100%	100%	\$12,100,000
Future Impact Fee Update Cost (2 five-year updates)							100%	100%	\$100,000
Total Project Cost									\$112,350,000
Total Implementation Cost									\$112,450,000

*A / X indicates a roadway that is half in / half out of City Limits

Figure 1. Roadway Impact Fee Capital Improvement Plan



Legend

- TIF Eligible Roadway Improvement

-  City Limits
-  Assumed Annexations into City Limits
-  Extraterritorial Jurisdiction
-  Parks

Service Units of Supply Available for New Development

Each project identified in the CIP will add a certain amount of capacity to the City's roadway network based on its length and classification. The projects in the CIP were divided into segments based on changes in lane configuration, major intersections, or City limits. For the assessment of individual segments, lane capacities were assigned to each segment based on roadway functional class and proposed cross-section. Table 5 shows the roadway capacities assumed for proposed roadways in the CIP. The capacity values are based upon generally accepted roadway capacity criteria.

The projected service units (i.e., vehicle-miles) of new capacity supplied by the projects in the CIP were calculated similar to the vehicle-miles of existing capacity supplied, summarized earlier in this document. The equation used was:

- Vehicle-Miles of Capacity = Link capacity per peak hour per lane x Number of Lanes x Length of segment (miles)

The CIP will provide an estimated 34,858 vehicle-miles of capacity. A summary of the data can be found in Appendix C.

Table 5: Hourly Capacity per lane-mile for Proposed Roadways

Description	Hourly Vehicle-Mile Capacity per Lane-Mile
Major Arterial	700
Minor Arterial	650
Major Collector	525
Minor Collector	475

Vehicle-Miles of Existing Demand on CIP Roadways

A number of roadways identified in the CIP have traffic currently utilizing a portion of their existing capacity. The total amount of capacity along these roadways currently being used by existing traffic is removed from the total supply of the CIP to account for the net capacity available for new growth. This was calculated by the following equation:

- Vehicle-Miles of Existing Demand on CIP Roadways = PM peak hour volume x Length of segment (miles)

Existing traffic will utilize 3,683 vehicle-miles of capacity on CIP roadways.

Vehicle-Miles of Existing Deficiencies

Existing deficiencies on the City's roadway network are not recoverable through impact fees. Any roadway within the City that does not provide enough capacity to serve existing traffic (even those not identified on the Roadway Impact Fee CIP) must have the deficiency removed from the capacity supplied by the CIP. This was calculated by the following equation:

- $\text{Vehicle-Miles of Existing Deficiencies} = \text{Vehicle-Miles of Existing Supply} - \text{Vehicle-Miles of Existing Demand}$

Overall, the City has 179 vehicle-miles of existing deficiencies.

Net Capacity Added by the CIP

The net capacity added by the CIP is determined by subtracting the existing demand and existing deficiencies from the total capacity supplied by the CIP. Overall, the CIP provides 30,996 net vehicle-miles of capacity to serve future growth, as shown in Table 6.

Table 6: Net Capacity Added by the CIP

Line	Impact Fee Calculation Input	Service Area A	Action
1	Capacity Supplied by CIP (vehicle-miles)	34,858	
2	Existing Demand (vehicle-miles)	3,683	
3	Existing Deficiencies (vehicle-miles)	179	
4	Net Capacity Added by CIP (vehicle-miles)	30,996	Line 1 - Line 2 - Line 3

Section 5. Roadway Impact Fee Calculation

This section discusses the calculation of the maximum cost per service unit and the calculation of roadway impact fees. The roadway impact fee will vary based on the land use, and size of the development. The maximum assessable impact fee is the sum of the eligible Roadway Impact Fee CIP costs divided by the growth in travel attributable to new development projected to occur within the 10-year period. Table 5 illustrates the calculation of the maximum assessable impact fee.

CIP Cost Attributable to New Development

The total cost of the CIP projects within the Citywide service area (see Table 4: Roadway Impact Fee Capital Improvement Plan), including study update costs, are estimated at \$112,450,000. If traffic exists on proposed CIP project roadways or there are any deficiencies present on the current network, the total cost of the CIP projects is adjusted to reflect the net capacity being made available by the CIP.

Cost to meet Existing Utilization

By comparing the net capacity added by the CIP to the total vehicle-miles of capacity added by the CIP, the total CIP project costs that serve existing traffic can be identified. This will allow for the exclusion of the CIP project costs attributable to existing usage and deficiencies. This was calculated by the following equation:

- $\text{Cost to meet Existing Utilization} = \text{Net Capacity Added by the CIP} / \text{Total Vehicle-Miles of Capacity added by the CIP}$

Overall, about 11%, or \$12,456,267 of CIP costs are attributable to existing traffic.

Portion of CIP Cost Attributable to New Development

In order to ensure that the vehicle-miles added by the Roadway Impact Fee CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the amount of vehicle-miles added by the Roadway Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Roadway Impact Fee CIP cost is reduced accordingly. This is determined by the following equation:

- $\text{Portion of CIP Attributable to New Development} = \text{Projected 10-year Vehicle-Miles of Demand} / \text{Net Capacity Added by the CIP}$

This calculation is required by Chapter 395 to ensure capacity added is attributable to new growth, and is limited to 100%. As shown in Table 7, 100% of the CIP is attributable to new development over 10-years, or \$99,993,733.

Table 7: CIP Cost Attributable to New Development

Line	Impact Fee Calculation Input	Service Area A	Action
1	Capacity Supplied by CIP (vehicle-miles)	34,858	From Table 6
4	Net Capacity Added by CIP (vehicle-miles)	30,996	From Table 6
5	Total Cost of CIP in Service Area	\$112,450,000	
6	Cost of Net Capacity Supplied	\$99,993,733	(Line 4 / Line 1) * Line 5
7	Cost to meet Existing Utilization	\$12,456,267	Line 5 - Line 6
8	Projected 10-year Demand (vehicle-miles)	45,566	
9	Portion of CIP Attributable to New Development	147%	Line 8 / Line 4
10	Net Portion of CIP Attributable to New Development	100%	If Line 8 > Line 4, Reduce Line 9 to 100%, Otherwise no change
11	CIP Cost Attributable to New Development	\$99,993,733	Line 6 * Line 10

Finance Costs Attributable to New Development

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model, which fully recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of ad valorem taxes.

The assumptions employed in the maximum assessable impact fee determination provide a reasonable basis for forecasting, however, it must be emphasized that these assumptions may not necessarily reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Impact Fee Advisory Committee and allows for the option to update or revise impact fees to reflect the actual implementation of the impact fee program.

Once the cost of capacity added that is attributable to growth (Table 7 - line 11) is determined, it must then be decided how the cost will be financed: cash and/or debt. It was determined that the projects included in Hutto's Roadway Impact Fee CIP had no prior funding. Based on discussions with City staff, it is assumed that the City will debt finance 50% of the future project costs and cash finance 50%. For debt financing, the cost of financing is based on the City staff's estimates of future debt costs for bonds issued with 20-year terms, as shown in Appendix E. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

Currently, the exact timing and annual level of capital expenditures over the 10-year forecast is indeterminate; therefore, it is assumed that capital expenditures will occur in equal amounts over the

10-year program period. It is also assumed that for debt financed capital projects, the City will expend debt proceeds over a 2-year timeframe. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. Because of the 10-year forecast limitation, and in order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of year 9 and all of year 10 bond proceeds are assumed to be spent fully in year 10.

Overall, \$30,828,240 in CIP finance costs are attributable to new development.

Interest Earnings

Because debt is issued over 20-year terms and impact fees developed herein are to be charged over a 10-year period, sufficient fund balance must be generated to meet the future debt service obligations. Because of the generation of the fund balance, excess monies will be available for interest earnings. Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund roadway transportation improvements, interest earnings are credited against the costs recoverable through impact fees. It should be noted that Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination; however, in an effort to acknowledge the time value of the impact fee payers' monies, interest earnings have been credited. Interest is assumed to be earned at an annual rate of 1.7075% based on the TexPool rate as of 4/30/2018.

As with the timing and level of the capital expenditures over the 10-year forecast, the timing and annual level of service unit growth over the 10-year program period is indeterminate at the present time. As such, it is assumed that service unit growth will be consistent over the 10-year forecast.

Overall, \$11,754,499 in interest earnings must be credited when determining the maximum assessable impact fee.

Net CIP Costs Attributable to New Development

The net CIP costs attributable to new development is the total CIP project costs (including financial costs) that may be recovered through impact fees. This is determined by the following equation:

- $\text{Net Portion of CIP Attributable to New Development} = \text{Total Cost of the CIP Projects} - \text{Cost to meet Existing Utilization} \times \text{Portion of CIP Cost Attributable to New Development} + \text{Finance Costs} - \text{Interest Earnings}$

As shown in Table 8, a net of \$119,067,474 in CIP costs are attributable to new development.

Maximum Cost per Service Unit without Credits

The maximum cost per service unit (i.e., vehicle-mile) before credits is determined by the following equation:

- Maximum Cost per Service Unit without Credits = Net CIP Cost Attributable to New Development / Projected 10-year Vehicle-Miles of Demand

As shown in Table 8, the maximum impact fee per vehicle-mile is \$2,613 without the ad valorem tax credit.

Table 8: Calculation of Maximum Cost per Service Unit without Credits

Line	Impact Fee Calculation Input	Service Area A	Action
8	Projected 10-year Demand (vehicle-miles)	45,566	From Table 7
11	CIP Cost Attributable to New Development	\$99,993,733	From Table 7
12	Financed CIP Costs Attributable to New Development	\$30,828,240	
13	Interest Earnings	\$11,754,499	
14	Net CIP Cost Attributable to New Development	\$119,067,474	Line 11 + Line 12 - Line 13
15	Maximum Cost per Service Unit without Credits	\$2,613	Line 14 / Line 8

Ad Valorem Tax Credit

NewGen Strategies and Solutions, LLC performed a credit analysis to identify the impact fee credit for ad valorem tax revenue. Chapter 395 requires a plan for awarding either a credit for the portion of ad valorem tax and/or utility service revenues generated by new service units during the program period that are used for payment of improvements that are included in the Roadway Impact Fee. As an alternative, a credit equal to 50% of the total cost of implementing the Roadway Impact Fee may be used. The City has elected to pursue the determination of a credit for the portion of ad valorem tax revenues generated by new service units during the program period that are used for payment of improvements that are included in the Roadway Impact Fee. It should be noted that the credit is not a determination to recognize the total ad valorem tax revenue generated by new service units, but is only a credit for the portion of ad valorem tax revenue that is used for payment of improvements that are included in the Roadway Impact Fee. Theoretically, the credit determination could be zero (\$0) if the City does not utilize any of the new service unit ad valorem tax revenue to fund improvements that are included in the Roadway Impact Fee.

However, to be conservative and recognize potential cash flow issues that can occur with the funding of major capital improvement projects, it is assumed that the cash funded projects (50% of the improvement costs included in the Roadway Impact Fee) could potentially be funded by ad valorem tax revenue. Since payments made through ad valorem tax revenue will consist of not only the revenue generated by new service units in the defined service area, but also existing property owners throughout the City, the portion attributable to the new service units in the defined service area must be isolated, as illustrated in the credit calculation in Appendix E.

Overall, \$9,882,137 in ad valorem tax revenue must be credited against CIP costs.

Recoverable CIP Costs

The recoverable CIP costs include the total CIP costs after excluding the ad valorem tax revenue. It is determined by the following equation:

- Recoverable CIP Costs= Net CIP Cost Attributable to New Development - Ad Valorem Tax Credit

The recoverable CIP costs are \$109,185,337.

Maximum Cost per Service Unit with Credits

The maximum cost per service unit (i.e., vehicle-miles) with credits is determined by the following equation:

- Maximum Cost per Service Unit with Credits= Recoverable CIP Costs / Projected 10-year Vehicle-Miles of Demand

As shown in Table 9, the maximum assessable impact fee per vehicle-mile is \$2,396.

Table 9: Calculation of Maximum Cost per Service Unit

Line	Impact Fee Calculation Input	Service Area A	Action
8	Projected 10-year Demand (vehicle-miles)	45,566	From Table 8
14	Net CIP Cost Attributable to New Development	\$119,067,474	From Table 8
16	CIP Credit for Ad Valorem Taxes	\$9,882,137	
17	Recoverable CIP Costs	\$109,185,337	Line 14 - Line 16
18	Maximum Cost per Service Unit with Credits	\$2,396	Line 17 / Line 8

Calculation of Impact Fees

The calculation of roadway impact fees for new development involves a two-step process.

- **Step 1:** Calculate of the total number of service units (i.e., vehicle-miles) that will be generated by the new development using Table 3: Vehicle Miles per Development Unit.

New Development Vehicle Miles = Number of Development Units x Vehicle-Miles per Development Unit

- **Step 2:** Calculate the impact fee due by the new development based on the fee per service unit.

Impact Fee Due = New Development Vehicle Miles x Impact Fee per Vehicle-mile

Example Impact Fee Calculations

The following fees would be assessed to new developments in Hutto if the cost per service unit were \$2,396 (adopted at the maximum assessable impact fee). It is ultimately up to the City whether they choose to adopt the maximum assessable impact fee or adopt a fee that is lower than the maximum fee (e.g., 50% of the assessable impact fee).

- Single-Family dwelling unit:
 - 1 (dwelling unit) x 5.10 vehicle-miles = 5.10 vehicle-miles
 - 5.10 vehicle-miles x \$2,396 per vehicle-mile = \$12,219.60 (maximum fee)
- Office with 10,000 square-feet:
 - 10 (1,000 sq. ft.) x 8.94 vehicle-miles = 89.40 vehicle-miles
 - 89.40 vehicle-miles x \$2,396 per vehicle-mile = \$214,202.40 (maximum fee)
- Retail Center with 15,000 square-feet:
 - 15 (1,000 sq. ft.) x 6.63 vehicle-miles = 99.45 vehicle-miles
 - 99.45 vehicle-miles x \$2,396 per vehicle-mile = \$238,282.20 (maximum fee)
- Industrial Park with 50,000 square-feet:
 - 50 (1,000 sq. ft.) x 5.10 vehicle-miles = 255.00 vehicle-miles
 - 255.00 vehicle-miles x \$2,396 per vehicle-mile = \$610,980.00 (maximum fee)

Appendix

Appendix A: Existing Roadway Inventory

Appendix B: Projected 10-Year Growth- Vehicle-Miles of Demand

Appendix C: Roadway Impact Fee CIP Service Units of Supply

Appendix D: Conceptual Level Roadway Project Cost Estimates

Appendix E: Debt Service and Credit Analysis

Appendix A:

Existing Roadway Inventory

Roadway	Limits	Length (mi)	Number of Lanes		Functional Classification	Peak Hour Volume		% In Service Area	Capacity per lane-mile		Vehicle-Mile of Supply		Vehicle-Mile of Demand		Excess Capacity per vehicle-mile		Existing Deficiencies per vehicle-mile	
			NB/ EB	SB/ WB		NB/ EB	SB/ WB		NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB	NB/ EB	SB/ WB
CR 132	FM 1660 to S. of Bosque Drive	0.72	1.0	1.0	Rural	15	5	50%	150	150	54	54	5	2	49	52		
CR 132	City limits to City limits	0.69	1.0	1.0	Rural	19	9	50%	150	150	52	52	7	3	45	49		
FM 1660	City limits to 982 ft. S. of City limits	0.19	1.0	1.0	2-lane	519	331	50%	475	475	44	44	48	31	0	13	4	
FM 1660	982 ft. S. of City limits to N. of Blanco Drive	0.29	1.0	1.0	2-lane	519	331	100%	475	475	136	136	149	95	0	41	13	
FM 1660	N. of Blanco Drive to CR 132	0.21	1.0	1.0	2-lane	519	331	50%	475	475	50	50	55	35	0	15	5	
FM 1660	CR 132 to Carrington Street	0.08	1.0	1.0	2-lane	519	331	100%	475	475	39	39	42	27	0	12	4	
FM 1660	Carrington Street to Sylvan Street	0.39	1.5	1.5	3-lane	653	417	50%	525	525	152	152	126	80	26	71		
FM 1660	Sylvan Street to N. of Limmer Loop	0.17	1.0	1.0	2-lane	653	417	100%	475	475	79	79	109	70	0	10	30	
FM 1660	N. of Limmer Loop to Limmer Loop	0.09	1.0	1.0	2-lane	653	417	100%	475	475	42	42	58	37	0	5	16	
FM 1660	Limmer Loop to S. of Limmer Loop	0.12	1.0	1.0	2-lane	275	276	50%	475	475	28	28	16	16	12	12		
FM 1660	N. of Magner Lane to Cottonwood Drive	0.09	1.0	1.0	2-lane	275	276	50%	475	475	20	20	12	12	9	9		
FM 1660	Cottonwood Drive to US 79	0.53	1.0	1.0	2-lane	248	302	100%	475	475	250	250	131	159	120	91		
Limmer Loop	E. of Innovation Boulevard to Ed Schmidt Boulevard	0.61	1.0	1.0	2-lane	536	261	50%	475	475	144	144	163	79	0	65	19	
Limmer Loop	E. of Ed Schmidt Boulevard to Adriana Lane	0.49	1.5	1.5	3-lane	689	388	100%	525	525	390	390	341	192	49	198		
Limmer Loop	Adriana Lane to FM 1660	0.23	1.5	1.5	3-lane	611	352	50%	525	525	92	92	71	41	21	51		
Limmer Loop	FM 1660 to Carol Drive	0.60	1.5	1.5	3-lane	207	183	50%	525	525	236	236	62	55	174	181		
Limmer Loop	Carol Drive to City limits	0.19	1.5	1.5	3-lane	207	183	100%	525	525	152	152	40	35	112	117		
Carol Drive	Limmer Loop to Magner Lane	0.44	1.0	1.0	2-lane	10	5	100%	475	475	207	207	4	2	203	205		
Magner Lane	FM 1660 to W. of Cottonwood Creek	0.09	1.0	1.0	2-lane	35	15	50%	475	475	22	22	2	1	20	21		
Magner Lane	E. of Cottonwood Creek to 400 E. of Cottonwood Creek	0.07	1.5	1.5	3-lane	35	15	100%	525	525	59	59	3	1	56	58		
Magner Lane	Carol Drive to 400 E. of Cottonwood Creek	0.28	1.5	1.5	3-lane	35	15	50%	525	525	111	111	5	2	106	109		
Magner Lane	Carol Drive to E. of Kates Way	0.25	1.0	1.0	2-lane	35	15	100%	475	475	118	118	9	4	110	115		
Magner Lane	E. of Kates Way to City limits	0.09	1.0	1.0	2-lane	35	15	50%	475	475	20	20	2	1	19	20		
Live Oak Street	FM 1660 to Short Street	0.30	1.0	1.0	2-lane	5	10	100%	475	475	142	142	1	3	140	139		
Exchange Boulevard	US 79 to Limmer Loop	1.19	1.0	1.0	2-lane	120	80	100%	475	475	564	564	142	95	421	469		
Emory Farms Avenue	Ed Schmidt Boulevard to Alliance Boulevard	0.30	1.0	1.0	2-lane	15	30	100%	475	475	141	141	4	9	136	132		
Ed Schmidt Boulevard	US 79 to S. of Emory Farms Avenue	0.34	2.5	2.5	5-lane	657	563	100%	700	700	597	597	224	192	373	405		
Ed Schmidt Boulevard	S. of Emory Farms Avenue to Limmer Loop	0.84	1.5	1.5	3-lane	422	395	50%	525	525	330	330	177	166	153	165		
Innovation Boulevard	City limits to Emory Farms Avenue	0.31	1.5	1.5	3-lane	246	160	50%	525	525	122	122	38	25	84	97		
Innovation Boulevard	N. of Emory Farms Avenue to S. of Limmer Loop	0.41	1.5	1.5	3-lane	246	160	50%	525	525	161	161	50	33	111	129		
US 79	City limits to Alliance Boulevard	0.98	2.5	2.5	5-lane	1870	1273	50%	700	700	854	854	913	622	0	233	59	
US 79	Alliance Boulevard to City limits	3.03	2.5	2.5	5-lane	1446	1153	100%	700	700	5,310	5,310	4,387	3,498	922	1,811		
Chris Kelley Boulevard	US 79 to City limits	1.52	2.5	2.5	5-lane	992	924	100%	700	700	2,665	2,665	1,511	1,407	1,154	1,258		
Carl Stern Boulevard	SH 130 NB Service Road to Cyril Drive	0.37	1.5	1.5	3-lane	157	56	100%	525	525	292	292	58	21	234	271		
Carl Stern Boulevard	Cyril Drive to Chris Kelley Boulevard	0.35	2.5	2.5	5-lane	157	56	100%	700	700	620	620	56	20	565	601		
Carl Stern Boulevard	Chris Kelley Boulevard to FM 1660	1.22	1.5	1.5	3-lane	429	277	100%	525	525	964	964	525	339	439	625		
Carl Stern Boulevard	FM 1660 to Riverbed Pass	0.25	1.0	1.0	2-lane	105	78	100%	475	475	118	118	26	19	92	98		
Jim Cage Lane	US 79 to Austin Avenue	0.10	1.0	1.0	2-lane	162	256	100%	475	475	49	49	17	26	32	22		
Evans Street	FM 1660 to Brushy Street	0.12	1.0	1.0	2-lane	8	7	100%	475	475	57	57	1	1	56	56		
Front Street	Carl Stern Boulevard to Janis Mae Drive	0.15	1.5	1.5	3-lane	195	158	100%	525	525	119	119	29	24	89	95		
Front Street	Janis Mae Drive to FM 1660	1.06	1.0	1.0	2-lane	177	224	100%	475	475	504	504	188	237	316	266		
Front Street	FM 1660 to City limits	0.31	1.0	1.0	Rural	25	16	100%	150	150	46	46	8	5	39	41		
Riverwalk Drive	Chris Kelley Boulevard to N. of Holbrooke Street	0.59	1.0	1.0	2-lane	110	65	100%	475	475	281	281	65	38	216	242		
Kaatz	Little Lake Road to Dana Drive	0.20	1.0	1.0	2-lane	5	5	100%	475	475	94	94	1	1	93	93		
CR 138	W. of Little Lake Road to E. of Dana Drive	0.20	1.5	1.5	3-lane	396	222	50%	525	525	79	79	40	22	39	57		
FM 1660 S	US 79 to Evans Street	0.48	1.0	1.0	2-lane	379	539	100%	475	475	226	226	180	257	46	0		30
FM 1660 S	Evans Street to King Lane	1.11	1.5	1.5	3-lane	459	565	100%	525	525	875	875	510	628	365	247		
FM 1660 S	King Lane to Swindoll Lane	0.64	1.0	1.0	2-lane	212	200	100%	475	475	302	302	135	127	167	175		
CR 199	Front Street to City limits	0.14	1.0	1.0	Rural	25	16	50%	150	150	10	10	2	1	9	9		
CR 199	City limits to CR 132	0.15	1.0	1.0	Rural	25	16	50%	150	150	11	11	2	1	9	10		
CR 132	CR 199 to City limits	0.11	1.0	1.0	Rural	11	6	50%	150	150	8	8	1	0	8	8		
CR 137	FM 1660 to City limits	0.72	1.0	1.0	2-lane	442	243	100%	475	475	342	342	318	175	24	167		
CR 163	S. of FM 1660 to City limits	0.56	1.0	1.0	Rural	1	1	50%	150	150	42	42	0	0	42	42		
											18425	18425	11069	8973	7504	9483	148	30

Appendix B:

Projected 10-Year Growth- Vehicle-Miles of Demand

Residential				
Service Area	Added Dwelling Units	Development Unit	Vehicle- mile per Development Unit	Total Vehicle-miles
A	3,766	Dwelling Unit	5.10	19,217

Basic Employment				
Service Area	Added Basic square feet	Development Unit	Vehicle- mile per Development Unit	Total Vehicle-miles
A	1,800,000	1,000 sq. ft.	5.82	10,476

Service Employment				
Service Area	Added Service square feet	Development Unit	Vehicle- mile per Development Unit	Total Vehicle-miles
A	770,000	1,000 sq. ft.	8.94	6,884

Retail Employment				
Service Area	Added Retail square feet	Development Unit	Vehicle- mile per Development Unit	Total Vehicle-miles
A	1,200,000	1,000 sq. ft.	7.49	8,989

Summary					
Service Area	Residenial Growth Vehicle- miles	Basic Growth Vehicle- miles	Service Growth Vehicle- miles	Retail Growth Vehicle- miles	Total Growth Vehicle- miles
A	19,217	10,476	6,884	8,989	45,566

Appendix C:

Roadway Impact Fee CIP Service Units of Supply

Project #	Roadway	Limits	Length (mi)	Number of Lanes	Functional Classification	Peak Hour Volume	% In Service Area	Hourly Capacity per lane-mile	Vehicle-Mile of Supply	Vehicle-Mile of Demand	Excess Capacity per vehicle-mile	Total Project Cost	Total Project Cost in Service Area
A1	CR 109	CR 108 to CR 118 extension	0.00	3	Major Collector	0	100%	525	0	0	0	\$9,550,000	\$0
A2	CR 118	CR 109 extension to W. of FM 1660	0.07	5	Minor Arterial	0	50%	650	114	0	114	\$1,175,000	\$587,500
A3	CR 118	FM 1660 to CR 132 extension	0.50	5	Minor Arterial	0	50%	650	815	0	815	\$6,150,000	\$3,075,000
A4	CR 132	FM 1660 to CR 109 extension	0.00	2	Minor Collector	0	100%	475	0	0	0	\$3,500,000	\$0
A5	CR 132	FM 1660 to Carol Drive extension	0.53	2	Minor Collector	20	50%	475	250	5	245	\$850,000	\$425,000
A6	CR 132	CR 118 extension to N. of Bosque Drive	0.54	2	Minor Collector	0	50%	475	258	0	258	\$2,125,000	\$1,062,500
A7	CR 132	Carol Drive extension to S. of Bosque Drive	0.20	2	Minor Collector	10	50%	475	93	1	92	\$400,000	\$200,000
A8	CR 132	W. of CR 133 to E. of CR 133	0.41	2	Minor Collector	28	50%	475	194	6	188	\$825,000	\$412,500
A9	CR 132 Realignment	CR 132 to CR 133	0.42	5	Minor Arterial	0	100%	650	1,379	0	1,379	\$4,925,000	\$4,925,000
A10	CR 132	CR 132 Realignment to S. of CR 132 extension	0.17	5	Minor Arterial	28	50%	650	277	2	274	\$1,800,000	\$900,000
A11	CR 132	Carol Drive extension to CR 132 Realignment	0.68	3	Major Collector	0	100%	525	1,078	0	1,078	\$3,675,000	\$3,675,000
A12	Carol Drive	Limmer Loop to CR 132	0.79	2	Minor Collector	0	100%	475	752	0	752	\$3,075,000	\$3,075,000
A13	Carol Drive	Magner Lane to US 79	0.44	2	Minor Collector	0	100%	475	416	0	416	\$1,700,000	\$1,700,000
	FM 1660	City limits to 982 ft. S. of City limits	0.19	3	Major Collector	850	50%	525	146	79	67	\$725,000	\$362,500
	FM 1660	982 ft. S. of City limits to N. of Blanco Drive	0.29	3	Major Collector	850	100%	525	452	244	208	\$750,000	\$750,000
	FM 1660	N. of Blanco Drive to CR 132	0.21	3	Major Collector	850	50%	525	167	90	77	\$800,000	\$400,000
A17	FM 1660	CR 132 to Carrington Street	0.08	3	Major Collector	850	100%	525	128	69	59	\$475,000	\$475,000
	FM 1660	Sylvan Street to N. of Limmer Loop	0.17	3	Major Collector	1,070	50%	525	131	89	42	\$450,000	\$225,000
	FM 1660	N. of Limmer Loop to Limmer Loop	0.09	3	Major Collector	1,070	100%	525	141	96	45	\$325,000	\$325,000
	FM 1660	Limmer Loop to S. of Limmer Loop	0.12	3	Major Collector	551	50%	525	92	32	60	\$400,000	\$200,000
A21	FM 1660	Magner Lane to Front Street	0.65	3	Major Collector	550	100%	525	1,024	358	666	\$3,500,000	\$3,500,000
A22	Limmer Loop	E. of Innovation Boulevard to Ed Schmidt Boulevard	0.61	5	Minor Arterial	797	50%	650	987	242	745	\$4,725,000	\$2,362,500
	Limmer Loop	E. of Ed Schmidt Boulevard to Adriana Lane	0.49	5	Minor Arterial	1,077	100%	650	1,608	533	1,075	\$3,575,000	\$3,575,000
	Limmer Loop	Adriana Lane to FM 1660	0.23	5	Minor Arterial	963	50%	650	379	112	267	\$1,575,000	\$787,500
	Limmer Loop	FM 1660 to Carol Drive	0.60	5	Minor Arterial	390	50%	650	973	117	856	\$4,325,000	\$2,162,500
A26	Limmer Loop	Carol Drive to City limits	0.19	5	Minor Arterial	390	100%	650	628	75	553	\$1,325,000	\$1,325,000
A27	Magner Lane	E. of CR 132 to Limmer Loop	0.38	3	Major Collector	0	50%	525	298	0	298	\$2,050,000	\$1,025,000
A28	Magner Lane	Carol Drive to E. of Kates Way	0.25	3	Major Collector	50	100%	525	393	12	380	\$750,000	\$750,000
	Magner Lane	E. of Kates Way to City limits	0.09	3	Major Collector	50	50%	525	68	2	65	\$275,000	\$137,500
A30	Silo Street	US 79 to Live Oak Street	0.20	3	Major Collector	0	100%	525	312	0	312	\$1,075,000	\$1,075,000
A31	Live Oak Street	Short Street to E. of Ed Schmidt Boulevard	0.50	3	Major Collector	0	100%	525	780	0	780	\$2,675,000	\$2,675,000
A32	Ed Schmidt Boulevard	S. of Emory Farms Avenue to Limmer Loop	0.84	5	Minor Arterial	817	50%	650	1,363	343	1,021	\$5,175,000	\$2,587,500
A33	Emory Farms Avenue	Alliance Boulevard to Innovation Boulevard	0.41	3	Major Collector	0	50%	525	320	0	320	\$2,200,000	\$1,100,000
A34	Emory Farms Avenue	W. of Innovation Boulevard to SH 130 NB Service Road	0.16	3	Major Collector	0	50%	525	125	0	125	\$875,000	\$437,500
A35	SH 130 NB Service Road	Emory Farms Avenue extension and N. City limits	0.39	2	Major Arterial	0	50%	700	276	0	276	\$1,575,000	\$787,500
A36	Spotted Fawn Drive	W. City limits to the Winterfield Drive extension	0.04	2	Minor Collector	0	100%	475	33	0	33	\$150,000	\$150,000
A37	Winterfield Drive	Kirkhill Street to SH 130 SB Service Road	0.77	3	Major Collector	0	50%	525	604	0	604	\$5,150,000	\$2,575,000
A38	SH 130 SB Service Road	S. City limits to S. of Carl Stern Drive	0.66	2	Major Arterial	0	100%	700	924	0	924	\$2,625,000	\$2,625,000
A39	SH 130 NB Service Road	S. City limits to S. of Carl Stern Drive	0.63	2	Major Arterial	0	100%	700	886	0	886	\$2,500,000	\$2,500,000
A40	Carl Stern Drive	Cyril Drive to SH 130 NB Service Road	0.37	5	Minor Arterial	213	100%	650	1,206	79	1,127	\$4,750,000	\$4,750,000
A41	Knowles Drive	Chris Kelley Boulevard to SH 130 Service Road	0.62	2	Minor Collector	0	100%	475	585	0	585	\$2,400,000	\$2,400,000
A42	Great Western Drive	Chris Kelley Boulevard to W. City limits	0.05	2	Minor Collector	0	100%	475	51	0	51	\$225,000	\$225,000
A43	Riverwalk Drive	Chris Kelley Boulevard to W. City limits	0.18	3	Major Collector	0	100%	525	279	0	279	\$1,375,000	\$1,375,000
A44	Riverwalk Drive	E. of Creston Cove to E. City limits	0.22	3	Major Collector	0	100%	525	349	0	349	\$1,500,000	\$1,500,000
A45	CR 138	W. of Little Lake Road to E. of Dana Drive	0.20	5	Minor Arterial	618	50%	650	325	62	263	\$1,300,000	\$650,000
A46	CR 138	CR 197 to E. of Navidad River Drive	0.16	3	Major Collector	0	50%	525	128	0	128	\$1,100,000	\$550,000
A47	E-W Roadway	W. of CR 137 to CR 163	0.56	3	Major Collector	0	100%	525	886	0	886	\$4,175,000	\$4,175,000
A48	CR 137	FM 1660 to S. of new E-W Roadway	0.72	3	Major Collector	685	100%	525	1,132	492	640	\$3,500,000	\$3,500,000
A49	CR 163	S. of FM 1660 to S. of E-W Roadway	0.56	2	Minor Collector	2	50%	475	265	1	264	\$1,375,000	\$687,500
A50	FM 1660	King Lane to Swindoll Lane	0.64	3	Major Collector	412	100%	525	1,003	262	741	\$2,650,000	\$2,650,000
A51	FM 1660	Evans Street to US 79	0.28	3	Major Collector	918	100%	525	438	255	183	\$800,000	\$800,000
A52	Jim Cage Lane	Austin Avenue to Evans Street	0.17	2	Minor Collector	0	100%	475	164	0	164	\$675,000	\$675,000
A53	US 79	FM 1660 South Intersection	0.09	1	Major Arterial	0	100%	0	0	0	0	\$350,000	\$350,000
A54	Front Street	FM 1660 to Front Street extension	0.31	2	Major Collector	41	100%	525	325	13	312	\$1,150,000	\$1,150,000
A55	Front Street	CR 199 to W. of CR 132	0.53	3	Major Collector	0	50%	525	418	0	418	\$3,400,000	\$1,700,000
A56	Front Street	E. of CR 132 to W. of CR 134 extension	0.36	3	Major Collector	0	50%	525	283	0	283	\$2,300,000	\$1,150,000
A57	CR 199	CR 199 extension to W. of CR 199 realignment	0.31	3	Major Collector	41	50%	525	244	6	238	\$1,000,000	\$500,000
A58	CR 199 realignment	CR 199 to CR 132	0.20	3	Major Collector	0	100%	525	319	0	319	\$1,100,000	\$1,100,000
A59	CR 199	Front Street to CR 199 extension	0.14	3	Major Collector	41	50%	525	109	3	106	\$450,000	\$225,000
A60	CR 199	CR 199 to Carl Stern Drive extension	0.81	2	Minor Collector	0	100%	475	765	0	765	\$3,125,000	\$3,125,000
A61	Carl Stern Drive	Riverbed Pass to CR 199 extension	0.24	3	Minor Arterial	0	100%	650	476	0	476	\$1,800,000	\$1,800,000
A62	Carl Stern Drive	CR 199 extension to E. City limits	0.77	5	Minor Arterial	0	100%	650	2,511	0	2,511	\$8,600,000	\$8,600,000
A63	CR 132	US 79 to N. of Front Street extension	0.03	5	Minor Arterial	17	100%	650	94	0	93	\$1,050,000	\$1,050,000
A64	CR 132	CR 199 to CR 132	0.11	5	Minor Arterial	17	50%	650	179	1	178	\$1,300,000	\$650,000
A65	CR 132	CR 199 Realignment to S. City limits	1.06	5	Minor Arterial	0	100%	650	3,459	0	3,459	\$12,100,000	\$12,100,000
									34,858	3,683	31,175	\$153,325,000	\$112,350,000

Appendix D:

Conceptual Level Roadway Project Cost Estimates

Project #	Roadway	Limits	Number of Lanes	Functional Classification	Estimated Construction Cost	Estimated Right-of-Way Cost	Estimated Design Cost	Total Estimated Cost
A1	CR 109	CR 108 to CR 118 extension	3	Major Collector	\$7,841,000	\$454,000	\$1,234,000	\$9,550,000
A2	CR 118	CR 109 extension to W. of FM 1660	5	Minor Arterial	\$965,000	\$34,000	\$152,000	\$1,175,000
A3	CR 118	FM 1660 to CR 132 extension	5	Minor Arterial	\$5,083,000	\$245,000	\$800,000	\$6,150,000
A4	CR 132	FM 1660 to CR 109 extension	2	Minor Collector	\$2,857,000	\$177,000	\$450,000	\$3,500,000
A5	CR 132	FM 1660 to Carol Drive extension	2	Minor Collector	\$724,000	\$0	\$114,000	\$850,000
A6	CR 132	CR 118 extension to N. of Bosque Drive	2	Minor Collector	\$1,729,000	\$107,000	\$272,000	\$2,125,000
A7	CR 132	Carol Drive extension to S. of Bosque Drive	2	Minor Collector	\$341,000	\$0	\$54,000	\$400,000
A8	CR 132	W. of CR 133 to E. of CR 133	2	Minor Collector	\$708,000	\$0	\$111,000	\$825,000
A9	CR 132 Realignment	CR 132 to CR 133	5	Minor Arterial	\$4,058,000	\$207,000	\$639,000	\$4,925,000
A10	CR 132	CR 132 Realignment to S. of CR 132 extension	5	Minor Arterial	\$1,530,000	\$24,000	\$241,000	\$1,800,000
A11	CR 132	Carol Drive extension to CR 132 Realignment	3	Major Collector	\$3,015,000	\$179,000	\$474,000	\$3,675,000
A12	Carol Drive	Limmer Loop to CR 132	2	Minor Collector	\$2,520,000	\$156,000	\$397,000	\$3,075,000
A13	Carol Drive	Magner Lane to US 79	2	Minor Collector	\$1,393,000	\$86,000	\$219,000	\$1,700,000
A14	FM 1660	City limits to 982 ft. S. of City limits	3	Major Collector	\$625,000	\$0	\$98,000	\$725,000
A15	FM 1660	982 ft. S. of City limits to N. of Blanco Drive	3	Major Collector	\$642,000	\$0	\$101,000	\$750,000
A16	FM 1660	N. of Blanco Drive to CR 132	3	Major Collector	\$684,000	\$0	\$108,000	\$800,000
A17	FM 1660	CR 132 to Carrington Street	3	Major Collector	\$391,000	\$0	\$62,000	\$475,000
A18	FM 1660	Sylvan Street to N. of Limmer Loop	3	Major Collector	\$373,000	\$0	\$59,000	\$450,000
A19	FM 1660	N. of Limmer Loop to Limmer Loop	3	Major Collector	\$270,000	\$0	\$42,000	\$325,000
A20	FM 1660	Limmer Loop to S. of Limmer Loop	3	Major Collector	\$332,000	\$0	\$52,000	\$400,000
A21	FM 1660	Magner Lane to Front Street	3	Major Collector	\$2,991,000	\$19,000	\$471,000	\$3,500,000
A22	Limmer Loop	E. of Innovation Boulevard to Ed Schmidt Boulevard	5	Minor Arterial	\$4,062,000	\$0	\$639,000	\$4,725,000
A23	Limmer Loop	E. of Ed Schmidt Boulevard to Adriana Lane	5	Minor Arterial	\$3,063,000	\$26,000	\$482,000	\$3,575,000
A24	Limmer Loop	Adriana Lane to FM 1660	5	Minor Arterial	\$1,350,000	\$12,000	\$212,000	\$1,575,000
A25	Limmer Loop	FM 1660 to Carol Drive	5	Minor Arterial	\$3,705,000	\$31,000	\$583,000	\$4,325,000
A26	Limmer Loop	Carol Drive to City limits	5	Minor Arterial	\$1,130,000	\$10,000	\$178,000	\$1,325,000
A27	Magner Lane	E. of CR 132 to Limmer Loop	3	Major Collector	\$1,665,000	\$99,000	\$262,000	\$2,050,000
A28	Magner Lane	Carol Drive to E. of Kates Way	3	Major Collector	\$647,000	\$0	\$102,000	\$750,000
A29	Magner Lane	E. of Kates Way to City limits	3	Major Collector	\$223,000	\$0	\$35,000	\$275,000
A30	Silo Street	US 79 to Live Oak Street	3	Major Collector	\$874,000	\$52,000	\$137,000	\$1,075,000
A31	Live Oak Street	Short Street to E. of Ed Schmidt Boulevard	3	Major Collector	\$2,181,000	\$129,000	\$343,000	\$2,675,000
A32	Ed Schmidt Boulevard	S. of Emory Farms Avenue to Limmer Loop	5	Minor Arterial	\$4,409,000	\$68,000	\$694,000	\$5,175,000
A33	Emory Farms Avenue	Alliance Boulevard to Innovation Boulevard	3	Major Collector	\$1,791,000	\$106,000	\$282,000	\$2,200,000
A34	Emory Farms Avenue	W. of Innovation Boulevard to SH 130 NB Service Road	3	Major Collector	\$701,000	\$42,000	\$110,000	\$875,000
A35	SH 130 NB Service Road	Emory Farms Avenue extension and N. City limits	2	Major Arterial	\$1,343,000	\$0	\$211,000	\$1,575,000
A36	Spotted Fawn Drive	W. City limits to the Winterfield Drive extension	2	Minor Collector	\$112,000	\$7,000	\$18,000	\$150,000
A37	Winterfield Drive	Kirkhill Street to SH 130 SB Service Road	3	Major Collector	\$4,234,000	\$245,000	\$666,000	\$5,150,000
A38	SH 130 SB Service Road	S. City limits to S. of Carl Stern Drive	2	Major Arterial	\$2,248,000	\$0	\$354,000	\$2,625,000
A39	SH 130 NB Service Road	S. City limits to S. of Carl Stern Drive	2	Major Arterial	\$2,155,000	\$0	\$339,000	\$2,500,000
A40	Carl Stern Drive	Cyril Drive to SH 130 NB Service Road	5	Minor Arterial	\$4,024,000	\$73,000	\$633,000	\$4,750,000
A41	Knowles Drive	Chris Kelley Boulevard to SH 130 Service Road	2	Minor Collector	\$1,961,000	\$122,000	\$309,000	\$2,400,000
A42	Great Western Drive	Chris Kelley Boulevard to W. City limits	2	Minor Collector	\$169,000	\$11,000	\$27,000	\$225,000
A43	Riverwalk Drive	Chris Kelley Boulevard to W. City limits	3	Major Collector	\$1,131,000	\$46,000	\$178,000	\$1,375,000

A44	Riverwalk Drive	E. of Creston Cove to E. City limits	3	Major Collector	\$1,224,000	\$71,000	\$193,000	\$1,500,000
A45	CR 138	W. of Little Lake Road to E. of Dana Drive	5	Minor Arterial	\$1,097,000	\$10,000	\$173,000	\$1,300,000
A46	CR 138	CR 197 to E. of Navidad River Drive	3	Major Collector	\$897,000	\$52,000	\$141,000	\$1,100,000
A47	E-W Roadway	W. of CR 137 to CR 163	3	Major Collector	\$3,452,000	\$180,000	\$543,000	\$4,175,000
A48	CR 137	FM 1660 to S. of new E-W Roadway	3	Major Collector	\$3,016,000	\$0	\$475,000	\$3,500,000
A49	CR 163	S. of FM 1660 to S. of E-W Roadway	2	Minor Collector	\$1,169,000	\$0	\$184,000	\$1,375,000
A50	FM 1660	King Lane to Swindoll Lane	3	Major Collector	\$2,271,000	\$0	\$357,000	\$2,650,000
A51	FM 1660	Evans Street to US 79	3	Major Collector	\$691,000	\$0	\$109,000	\$800,000
A52	Jim Cage Lane	Austin Avenue to Evans Street	2	Minor Collector	\$550,000	\$34,000	\$87,000	\$675,000
A53	US 79	FM 1660 South Intersection	1	Major Arterial	\$289,000	\$0	\$45,000	\$350,000
A54	Front Street	FM 1660 to Front Street extension	2	Major Collector	\$994,000	\$0	\$156,000	\$1,150,000
A55	Front Street	CR 199 to W. of CR 132	3	Major Collector	\$2,926,000	\$0	\$460,000	\$3,400,000
A56	Front Street	E. of CR 132 to W. of CR 134 extension	3	Major Collector	\$1,980,000	\$0	\$312,000	\$2,300,000
A57	CR 199	CR 199 extension to W. of CR 199 realignment	3	Major Collector	\$861,000	\$0	\$136,000	\$1,000,000
A58	CR 199 realignment	CR 199 to CR 132	3	Major Collector	\$893,000	\$53,000	\$141,000	\$1,100,000
A59	CR 199	Front Street to CR 199 extension	3	Major Collector	\$384,000	\$0	\$60,000	\$450,000
A60	CR 199	CR 199 to Carl Stern Drive extension	2	Minor Collector	\$2,563,000	\$159,000	\$403,000	\$3,125,000
A61	Carl Stern Drive	Riverbed Pass to CR 199 extension	3	Minor Arterial	\$1,481,000	\$85,000	\$233,000	\$1,800,000
A62	Carl Stern Drive	CR 199 extension to E. City limits	5	Minor Arterial	\$7,102,000	\$377,000	\$1,118,000	\$8,600,000
A63	CR 132	US 79 to N. of Front Street extension	5	Minor Arterial	\$899,000	\$5,000	\$141,000	\$1,050,000
A64	CR 132	CR 199 to CR 132	5	Minor Arterial	\$1,115,000	\$0	\$175,000	\$1,300,000
A65	CR 132	CR 199 Realignment to S. City limits	5	Minor Arterial	\$10,003,000	\$519,000	\$1,574,000	\$12,100,000

Appendix E:

Debt Service and Credit Analysis

City of Hutto - 2018 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Calculation Assumptions

Summary

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	1.71%
Annual Service Unit Growth ⁽²⁾	4,557
Existing Fund Balance ⁽³⁾	-
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded New Project Cost ⁽⁵⁾	50,046,867
New Project Cost Funded Through New Debt ⁽⁶⁾	49,946,867
Total Recoverable Project Cost ⁽⁷⁾	\$ 99,993,733

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 4,994,687	4.65%	20
2	4,994,687	5.00%	20
3	4,994,687	5.00%	20
4	4,994,687	5.00%	20
5	4,994,687	5.00%	20
6	4,994,687	5.25%	20
7	4,994,687	5.25%	20
8	4,994,687	5.25%	20
9	4,994,687	5.25%	20
10	4,994,687	5.25%	20
Total	\$ 49,946,867		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 7,499,530
2	9,999,373
3	9,999,373
4	9,999,373
5	9,999,373
6	9,999,373
7	9,999,373
8	9,999,373
9	9,999,373
10	12,499,217
Total	\$ 99,993,733

- (1) TexPool rate as of 4/30/2018
- (2) Derived from the 10-year Growth Projections in DKS Report
- (3) New Impact Fee, Balance Not Applicable for Hutto
- (4) Not Applicable for Listed Impact Fee CIP
- (5) Assumes 50% of new project costs funded through sources other than debt
- (6) Assumes 50% of new project costs funded through new debt issues
- (7) DKS Pre-Credit Impact Fee Calculations
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest cost provided by City Staff - May 2018
- (10) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Hutto - 2018 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation Assumptions
 Detailed Expense Schedules

I. New Debt Service Detail

<u>Year</u>	<u>Series 1</u>	<u>Series 2</u>	<u>Series 3</u>	<u>Series 4</u>	<u>Series 5</u>	<u>Series 6</u>	<u>Series 7</u>	<u>Series 8</u>	<u>Series 9</u>	<u>Series 10</u>	<u>Total Annual New Debt Service</u>
1	\$ 388,979	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 388,979
2	388,979	400,787	-	-	-	-	-	-	-	-	789,766
3	388,979	400,787	400,787	-	-	-	-	-	-	-	1,190,552
4	388,979	400,787	400,787	400,787	-	-	-	-	-	-	1,591,339
5	388,979	400,787	400,787	400,787	400,787	-	-	-	-	-	1,992,125
6	388,979	400,787	400,787	400,787	400,787	409,326	-	-	-	-	2,401,451
7	388,979	400,787	400,787	400,787	400,787	409,326	409,326	-	-	-	2,810,777
8	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	-	-	3,220,103
9	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	-	3,629,429
10	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
11	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
12	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
13	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
14	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
15	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
16	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
17	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
18	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
19	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
20	388,979	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	4,038,755
21	-	400,787	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	3,649,776
22	-	-	400,787	400,787	400,787	409,326	409,326	409,326	409,326	409,326	3,248,990
23	-	-	-	400,787	400,787	409,326	409,326	409,326	409,326	409,326	2,848,203
24	-	-	-	-	400,787	409,326	409,326	409,326	409,326	409,326	2,447,416
25	-	-	-	-	-	409,326	409,326	409,326	409,326	409,326	2,046,630
26	-	-	-	-	-	-	409,326	409,326	409,326	409,326	1,637,304
27	-	-	-	-	-	-	-	409,326	409,326	409,326	1,227,978
28	-	-	-	-	-	-	-	-	409,326	409,326	818,652
29	-	-	-	-	-	-	-	-	-	409,326	409,326
	\$ 7,779,583	\$ 8,015,732	\$ 8,015,732	\$ 8,015,732	\$ 8,015,732	\$ 8,186,519	\$ 8,186,519	\$ 8,186,519	\$ 8,186,519	\$ 8,186,519	\$ 80,775,107

City of Hutto - 2018 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions

II. Summary of Annual Expenses

Year	New Annual Debt Service⁽¹⁾	Annual Capital Expenditures⁽²⁾	Annual Bond Proceeds⁽²⁾	Existing Annual Debt Service⁽³⁾	Annual Credit⁽⁴⁾	Total Expense
1	\$ 388,979	\$ 7,499,530	\$ (4,994,687)	\$ -	\$ (42,805)	\$ 2,851,017
2	789,766	9,999,373	(4,994,687)	-	(156,588)	5,637,864
3	1,190,552	9,999,373	(4,994,687)	-	(322,144)	5,873,095
4	1,591,339	9,999,373	(4,994,687)	-	(526,622)	6,069,404
5	1,992,125	9,999,373	(4,994,687)	-	(761,100)	6,235,712
6	2,401,451	9,999,373	(4,994,687)	-	(1,022,826)	6,383,312
7	2,810,777	9,999,373	(4,994,687)	-	(1,304,119)	6,511,345
8	3,220,103	9,999,373	(4,994,687)	-	(1,601,329)	6,623,461
9	3,629,429	9,999,373	(4,994,687)	-	(1,911,662)	6,722,454
10	4,038,755	12,499,217	(4,994,687)	-	(2,232,941)	9,310,344
11	4,038,755	-	-	-	-	4,038,755
12	4,038,755	-	-	-	-	4,038,755
13	4,038,755	-	-	-	-	4,038,755
14	4,038,755	-	-	-	-	4,038,755
15	4,038,755	-	-	-	-	4,038,755
16	4,038,755	-	-	-	-	4,038,755
17	4,038,755	-	-	-	-	4,038,755
18	4,038,755	-	-	-	-	4,038,755
19	4,038,755	-	-	-	-	4,038,755
20	4,038,755	-	-	-	-	4,038,755
21	3,649,776	-	-	-	-	3,649,776
22	3,248,990	-	-	-	-	3,248,990
23	2,848,203	-	-	-	-	2,848,203
24	2,447,416	-	-	-	-	2,447,416
25	2,046,630	-	-	-	-	2,046,630
26	1,637,304	-	-	-	-	1,637,304
27	1,227,978	-	-	-	-	1,227,978
28	818,652	-	-	-	-	818,652
29	409,326	-	-	-	-	409,326
	\$ 80,775,107	\$ 99,993,733	\$ (49,946,867)	\$ -	\$ (9,882,137)	\$ 120,939,837

City of Hutto - 2018 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions

III. Summary of Principal Paid to Date for Existing Debt⁽³⁾

The projects related to this Impact Fee CIP have not been previously funded with debt.

IV. Summary of Debt Financing

Existing Debt Funded Project Costs ⁽⁵⁾	-
-Less Principal PTD	-
Outstanding Debt Principal	-
New Project Costs Debt Principal ⁽⁵⁾	49,946,867
Principal Component	\$ 49,946,867

(1) This Appendix - Page 2

(2) This Appendix - Page 1

(3) Not Applicable for Impact Fee CIP

(4) This Appendix - Page 9

(5) This Appendix - Page 1

City of Hutto - 2018 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Calculation Assumptions

Revenue Test

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 2,396	4,557	\$ 10,918,534	\$ 2,851,017	\$ 8,067,517	68,876	8,136,393
2	2,396	4,557	10,918,534	5,637,864	5,280,670	184,013	13,601,075
3	2,396	4,557	10,918,534	5,873,095	5,045,438	275,314	18,921,828
4	2,396	4,557	10,918,534	6,069,404	4,849,130	364,490	24,135,447
5	2,396	4,557	10,918,534	6,235,712	4,682,821	452,092	29,270,361
6	2,396	4,557	10,918,534	6,383,312	4,535,222	538,511	34,344,093
7	2,396	4,557	10,918,534	6,511,345	4,407,189	624,052	39,375,334
8	2,396	4,557	10,918,534	6,623,461	4,295,073	709,003	44,379,410
9	2,396	4,557	10,918,534	6,722,454	4,196,080	793,602	49,369,092
10	2,396	4,557	10,918,534	9,310,344	1,608,190	856,707	51,833,989
11	-	-	-	4,038,755	(4,038,755)	850,584	48,645,818
12	-	-	-	4,038,755	(4,038,755)	796,146	45,403,209
13	-	-	-	4,038,755	(4,038,755)	740,779	42,105,233
14	-	-	-	4,038,755	(4,038,755)	684,466	38,750,944
15	-	-	-	4,038,755	(4,038,755)	627,191	35,339,380
16	-	-	-	4,038,755	(4,038,755)	568,939	31,869,563
17	-	-	-	4,038,755	(4,038,755)	509,692	28,340,500
18	-	-	-	4,038,755	(4,038,755)	449,433	24,751,178
19	-	-	-	4,038,755	(4,038,755)	388,145	21,100,568
20	-	-	-	4,038,755	(4,038,755)	325,811	17,387,624
21	-	-	-	3,649,776	(3,649,776)	265,734	14,003,581
22	-	-	-	3,248,990	(3,248,990)	211,373	10,965,965
23	-	-	-	2,848,203	(2,848,203)	162,927	8,280,689
24	-	-	-	2,447,416	(2,447,416)	120,498	5,953,770
25	-	-	-	2,046,630	(2,046,630)	84,188	3,991,328
26	-	-	-	1,637,304	(1,637,304)	54,173	2,408,198
27	-	-	-	1,227,978	(1,227,978)	30,636	1,210,856
28	-	-	-	818,652	(818,652)	13,686	405,890
29	-	-	-	409,326	(409,326)	3,436	-
			109,185,337	120,939,837		11,754,499	

City of Hutto - 2018 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Max Fee Calculation

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Future Value Escalation</u>		<u>Annual Service Units</u>		<u>Annual Expense</u>	
		<u>Interest Rate Factor</u>	<u>Recovery Fee Factor</u>	<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.6202	1.0000	4,557	7,383	\$ 2,851,017	\$ 4,619,291
2	28	1.5930	1.0000	4,557	7,259	5,637,864	8,981,256
3	27	1.5663	1.0000	4,557	7,137	5,873,095	9,198,914
4	26	1.5400	1.0000	4,557	7,017	6,069,404	9,346,792
5	25	1.5141	1.0000	4,557	6,899	6,235,712	9,441,688
6	24	1.4887	1.0000	4,557	6,783	6,383,312	9,502,911
7	23	1.4637	1.0000	4,557	6,670	6,511,345	9,530,777
8	22	1.4391	1.0000	4,557	6,558	6,623,461	9,532,122
9	21	1.4150	1.0000	4,557	6,448	6,722,454	9,512,167
10	20	1.3912	1.0000	4,557	6,339	9,310,344	12,952,821
11	19	1.3679	1.0000	-	-	4,038,755	5,524,503
12	18	1.3449	1.0000	-	-	4,038,755	5,431,756
13	17	1.3223	1.0000	-	-	4,038,755	5,340,566
14	16	1.3001	1.0000	-	-	4,038,755	5,250,907
15	15	1.2783	1.0000	-	-	4,038,755	5,162,753
16	14	1.2568	1.0000	-	-	4,038,755	5,076,078
17	13	1.2357	1.0000	-	-	4,038,755	4,990,860
18	12	1.2150	1.0000	-	-	4,038,755	4,907,071
19	11	1.1946	1.0000	-	-	4,038,755	4,824,690
20	10	1.1745	1.0000	-	-	4,038,755	4,743,691
21	9	1.1548	1.0000	-	-	3,649,776	4,214,850
22	8	1.1354	1.0000	-	-	3,248,990	3,689,022
23	7	1.1164	1.0000	-	-	2,848,203	3,179,661
24	6	1.0976	1.0000	-	-	2,447,416	2,686,364
25	5	1.0792	1.0000	-	-	2,046,630	2,208,733
26	4	1.0611	1.0000	-	-	1,637,304	1,737,322
27	3	1.0433	1.0000	-	-	1,227,978	1,281,116
28	2	1.0258	1.0000	-	-	818,652	839,739
29	1	1.0085	1.0000	-	-	409,326	412,821
						68,492	120,939,837
							164,121,241

Total Escalated Expense for Entire Period	\$ 164,121,241
Less Future Value of Initial Fund Balance	-
Net Escalated Expense for Entire Period	\$ 164,121,241
Total Escalated Service Units	68,492
Impact Fee for Citywide Service Area	\$ 2,396

City of Hutto - 2018 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Calculation Assumptions

Impact Fee Project and Funding Listing

<u>Impact Fee Project Name⁽¹⁾</u>	<u>Impact Fee No.⁽¹⁾</u>	<u>Total</u>		<u>Impact Fee Cost⁽²⁾</u>	<u>Debt Funded⁽³⁾</u>		<u>Non-Debt Funded⁽³⁾</u>	<u>Impact Fee</u>	
		<u>Project Cost</u>	<u>⁽¹⁾</u>		<u>Existing</u>	<u>Proposed</u>		<u>Cost</u>	<u>⁽³⁾</u>
CR 109 - CR 108 to CR 118 extension	A1	\$	9,550,000	\$	-	\$	-	\$	-
CR 118 - CR 109 extension to W. of FM 1660	A2		1,175,000		522,364	-	261,182	261,182	522,364
CR 118 - FM 1660 to CR 132 extension	A3		6,150,000		2,734,074	-	1,367,037	1,367,037	2,734,074
CR 132 - FM 1660 to CR 109 extension	A4		3,500,000		-	-	-	-	-
CR 132 - FM 1660 to Carol Drive extension	A5		850,000		377,880	-	188,940	188,940	377,880
CR 132 - CR 118 extension to N. of Bosque Drive	A6		2,125,000		944,700	-	472,350	472,350	944,700
CR 132 - Carol Drive extension to S. of Bosque Drive	A7		400,000		177,826	-	88,913	88,913	177,826
CR 132 - W. of CR 133 to E. of CR 133	A8		825,000		366,766	-	183,383	183,383	366,766
CR 132 Realignment - CR 132 to CR 133	A9		4,925,000		4,378,964	-	2,189,482	2,189,482	4,378,964
CR 132 - CR 132 Realignment to S. of CR 132 extension	A10		1,800,000		800,217	-	400,108	400,108	800,217
CR 132 - Carol Drive extension to CR 132 Realignment	A11		3,675,000		3,267,552	-	1,633,776	1,633,776	3,267,552
Carol Drive - Limmer Loop to CR 132	A12		3,075,000		2,734,074	-	1,367,037	1,367,037	2,734,074
Carol Drive - Magner Lane to US 79	A13		1,700,000		1,511,521	-	755,760	755,760	1,511,521
FM 1660 - City limits to 982 ft. S. of City limits	A14		725,000		322,310	-	161,155	161,155	322,310
FM 1660 - 982 ft. S. of City limits to N. of Blanco Drive	A15		750,000		666,847	-	333,424	333,424	666,847
FM 1660 - N. of Blanco Drive to CR 132	A16		800,000		355,652	-	177,826	177,826	355,652
FM 1660 - CR 132 to Carrington Street	A17		475,000		422,337	-	211,168	211,168	422,337
FM 1660 - Sylvan Street to N. of Limmer Loop	A18		450,000		200,054	-	100,027	100,027	200,054
FM 1660 - N. of Limmer Loop to Limmer Loop	A19		325,000		288,967	-	144,484	144,484	288,967
FM 1660 - Limmer Loop to S. of Limmer Loop	A20		400,000		177,826	-	88,913	88,913	177,826
FM 1660 - Magner Lane to Front Street	A21		3,500,000		3,111,954	-	1,555,977	1,555,977	3,111,954
Limmer Loop - E. of Innovation Boulevard to Ed Schmidt Boulevard	A22		4,725,000		2,100,569	-	1,050,285	1,050,285	2,100,569
Limmer Loop - E. of Ed Schmidt Boulevard to Adriana Lane	A23		3,575,000		3,178,639	-	1,589,320	1,589,320	3,178,639
Limmer Loop - Adriana Lane to FM 1660	A24		1,575,000		700,190	-	350,095	350,095	700,190
Limmer Loop - FM 1660 to Carol Drive	A25		4,325,000		1,922,743	-	961,372	961,372	1,922,743
Limmer Loop - Carol Drive to City limits	A26		1,325,000		1,178,097	-	589,048	589,048	1,178,097
Magner Lane - E. of CR 132 to Limmer Loop	A27		2,050,000		911,358	-	455,679	455,679	911,358
Magner Lane - Carol Drive to E. of Kates Way	A28		750,000		666,847	-	333,424	333,424	666,847
Magner Lane - E. of Kates Way to City limits	A29		275,000		122,255	-	61,128	61,128	122,255
Silo Street - US 79 to Live Oak Street	A30		1,075,000		955,815	-	477,907	477,907	955,815
Live Oak Street - Short Street to E. of Ed Schmidt Boulevard	A31		2,675,000		2,378,422	-	1,189,211	1,189,211	2,378,422
Ed Schmidt Boulevard - S. of Emory Farms Avenue to Limmer Loop	A32		5,175,000		2,300,623	-	1,150,312	1,150,312	2,300,623
Emory Farms - Alliance Boulevard to Innovation Boulevard	A33		2,200,000		978,043	-	489,021	489,021	978,043
Emory Farms - W. of Innovation Blvd to SH 130 NB Service Road	A34		875,000		388,994	-	194,497	194,497	388,994
SH 130 NB Service Road - Emory Farms extension and N. City limits	A35		1,575,000		700,190	-	350,095	350,095	700,190
Spotted Fawn Drive - W. City limits to the Winterfield Drive extension	A36		150,000		133,369	-	66,685	66,685	133,369
Winterfield Drive - Kirkhill Street to SH 130 SB Service Road	A37		5,150,000		2,289,509	-	1,144,755	1,144,755	2,289,509

City of Hutto - 2018 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Calculation Assumptions

Impact Fee Project and Funding Listing

<u>Impact Fee Project Name⁽¹⁾</u>	<u>Impact Fee</u>	<u>Total</u>	<u>Impact Fee</u>	<u>Debt Funded⁽³⁾</u>		<u>Non-Debt</u>	<u>Impact Fee</u>
	<u>No.⁽¹⁾</u>	<u>Project Cost⁽¹⁾</u>	<u>Cost⁽²⁾</u>	<u>Existing</u>	<u>Proposed</u>	<u>Funded⁽³⁾</u>	<u>Cost</u>
SH 130 SB Service Road - S. City limits to S. of Carl Stern Drive	A38	2,625,000	2,333,966	-	1,166,983	1,166,983	2,333,966
SH 130 NB Service Road - S. City limits to S. of Carl Stern Drive	A39	2,500,000	2,222,824	-	1,111,412	1,111,412	2,222,824
Carl Stern Drive - Cyril Drive to SH 130 NB Service Road	A40	4,750,000	4,223,367	-	2,111,683	2,111,683	4,223,367
Knowles Drive - Chris Kelley Boulevard to SH 130 Service Road	A41	2,400,000	2,133,912	-	1,066,956	1,066,956	2,133,912
Great Western Drive - Chris Kelley Boulevard to W. City limits	A42	225,000	200,054	-	100,027	100,027	200,054
Riverwalk Drive - Chris Kelley Boulevard to W. City limits	A43	1,375,000	1,222,553	-	611,277	611,277	1,222,553
Riverwalk Drive - E. of Creston Cove to E. City limits	A44	1,500,000	1,333,695	-	666,847	666,847	1,333,695
CR 138 - W. of Little Lake Road to E. of Dana Drive	A45	1,300,000	577,934	-	288,967	288,967	577,934
CR 138 - CR 197 to E. of Navidad River Drive	A46	1,100,000	489,021	-	244,511	244,511	489,021
E-W Roadway - W. of CR 137 to CR 163	A47	4,175,000	3,712,117	-	1,856,058	1,856,058	3,712,117
CR 137 - FM 1660 to S. of new E-W Roadway	A48	3,500,000	3,111,954	-	1,555,977	1,555,977	3,111,954
CR 163 - S. of FM 1660 to S. of E-W Roadway	A49	1,375,000	611,277	-	305,638	305,638	611,277
FM 1660 - King Lane to Swindoll Lane	A50	2,650,000	2,356,194	-	1,178,097	1,178,097	2,356,194
FM 1660 - Evans Street to US 79	A51	800,000	711,304	-	355,652	355,652	711,304
Jim Cage Lane - Austin Avenue to Evans Street	A52	675,000	600,163	-	300,081	300,081	600,163
US 79 - FM 1660 South Intersection	A53	350,000	311,195	-	155,598	155,598	311,195
Front Street - FM 1660 to Front Street extension	A54	1,150,000	1,022,499	-	511,250	511,250	1,022,499
Front Street - CR 199 to W. of CR 132	A55	3,400,000	1,511,521	-	755,760	755,760	1,511,521
Front Street - E. of CR 132 to W. of CR 134 extension	A56	2,300,000	1,022,499	-	511,250	511,250	1,022,499
CR 199 - CR 199 extension to W. of CR 199 realignment	A57	1,000,000	444,565	-	222,282	222,282	444,565
CR 199 realignment - CR 199 to CR 132	A58	1,100,000	978,043	-	489,021	489,021	978,043
CR 199 - Front Street to CR 199 extension	A59	450,000	200,054	-	100,027	100,027	200,054
CR 199 - CR 199 to Carl Stern Drive extension	A60	3,125,000	2,778,531	-	1,389,265	1,389,265	2,778,531
Carl Stern Drive - Riverbed Pass to CR 199 extension	A61	1,800,000	1,600,434	-	800,217	800,217	1,600,434
Carl Stern Drive - CR 199 extension to E. City limits	A62	8,600,000	7,646,516	-	3,823,258	3,823,258	7,646,516
CR 132 - US 79 to N. of Front Street extension	A63	1,050,000	933,586	-	466,793	466,793	933,586
CR 132 - CR 199 to CR 132	A64	1,300,000	577,934	-	288,967	288,967	577,934
CR 132 - CR 199 Realignment to S. City limits	A65	12,100,000	10,758,471	-	5,379,235	5,379,235	10,758,471
Future Impact Fee Update Cost (2 five-year updates)		100,000	100,000	-	-	100,000	100,000
Total		\$ 153,425,000	\$ 99,993,733	\$ -	\$ 49,946,867	\$ 50,046,867	\$ 99,993,733

(1) 2018 Transportation Impact Fee Study

(2) DKS Calculation Excluding Existing Demand and Deficiencies - A1 and A4 are Assumed to be Developer Funded.

(3) Based on Contributions by Project and Estimated Future Debt Financing

City of Hutto - 2018 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation Assumptions
 Credit Calculation

2018 Vehicle Miles Citywide	36,850
Ten Year Growth in Vehicle Miles ⁽¹⁾	45,566
	<u>10 years</u>
Annual Growth in Vehicle Miles	4,557

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	\$ 388,979	\$ 789,766	\$ 1,190,552	\$ 1,591,339	\$ 1,992,125	\$ 2,401,451	\$ 2,810,777	\$ 3,220,103	\$ 3,629,429	\$ 4,038,755	\$ 22,053,279
2018 Vehicle Miles plus Growth	41,407	45,963	50,520	55,076	59,633	64,190	68,746	73,303	77,859	82,416	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	\$ 9.39	\$ 17.18	\$ 23.57	\$ 28.89	\$ 33.41	\$ 37.41	\$ 40.89	\$ 43.93	\$ 46.62	\$ 49.00	
Annual Growth in Credit Calculation Vehicle Miles (Cumulative)	4,557	9,113	13,670	18,226	22,783	27,340	31,896	36,453	41,009	45,566	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	\$ 42,805	\$ 156,588	\$ 322,144	\$ 526,622	\$ 761,100	\$ 1,022,826	\$ 1,304,119	\$ 1,601,329	\$ 1,911,662	\$ 2,232,941	\$ 9,882,137
Credit Amount	\$ 9,882,137										

(1) 10-year Growth Projections in DKS Report

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

9B.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration and possible action on the first reading of an ordinance approving the Planned Unit Development (PUD) zoning ordinance amendment for the Hutto Crossings PUD, 465.00 acres, more or less, of land, located at the southwest corner of Chris Kelley Boulevard and US 79 West. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

Hutto Crossing is an approximately 466.23 acre site located south of US 79, between Chris Kelley Boulevard and State Highway 130 Toll. The site contains single family residences, apartments, retail, office, and mixed use areas, with parkland and trails.

Owner: Hutto Option Mezz Holdings, LLC

Applicant: Sean Compton, TBG Partners

Current Zoning: Hutto Crossing Planned Unit Development

Proposed Zoning: Planned Unit Development

Surrounding Zoning and Land Use:

North: B-2, ETJ (Church, Commercial, Vacant)

East: B-2, SF-1 (School, Commercial, Single-Family)

South: SF-1, ETJ (Industrial, Vacant)

West: ETJ (residential)

Summary of Request:

These proposed amendments do not change the permitted uses within the district. The existing Hutto Crossing Development PUD includes the flexibility to address market trends and changing

demographics, but does not include some signage types, access to parking along the UP rail line, new fence and wall opportunities, and clarification on the trail system.

The purpose of the proposed amendments are as follows:

- a. Create new signage types, including wayfinding, and remove unused sign types from the PUD;
- b. Address site design standards that either conflict with the City's UDC, or add definitions for items that are not included in the UDC;
- c. Create parking standards for parking areas and access along the UP rail line;
- d. Add residential design standards to the PUD, clarifying previous language and intentions;
- e. Add non-residential building design standards to address façade treatments and materials;
- f. Provide additional landscaping standards;
- g. Provide some flexibility in fence and wall requirements;
- h. Add specific lighting to the prohibited lighting type list;
- i. Clarify the Parkland Dedication and trail system installation and maintenance.

The attached spreadsheet details the changes listed above.

Staff Review:

The Planned Unit Development (PUD) process and zoning designation allows creativity, innovation and flexibility in land use, density, site planning and design for a parcel that would result in a project more appropriate and desirable than what would result from strict application of the UDC. Development standards are required for a parcel that would be developed as a PUD. Staff has reviewed the proposed PUD amendments against the required criteria.

1. *The PUD is consistent with the spirit of the community, neighborhood and other applicable land use and development plans, compatible with the character of adjacent development or recommended land uses, it would not adversely affect property near the site, and it achieves the benefits of improved design.*

The proposed PUD amendments are consistent with the desired flexibility guidelines of the existing Hutto Crossing district, yet provide additional guidelines and regulations to continue the patterns and growth within the District. The proposed amendments give the commercial areas of the development more flexibility in design, and the new wayfinding signage will enhance the overall sense of community within the district.

2. *The PUD will not adversely affect land with significant historical, cultural, recreational or aesthetic value.*

The uses within the existing PUD will not change. The entire Hutto Crossing Development does not adversely affect the land or City of Hutto.

3. *The PUD will give benefits through providing open space, parks, conservation of environmental features, aesthetic features and harmonious design, and/or energy efficient site design.*

The existing Hutto Crossing PUD contains open spaces and a trail system. These areas are part of the aesthetics of the developing community, and will not be changed. All parkland dedications were calculated with the original PUD adoption and platting processes.

4. *The benefits of preserving land for open space, parks or other public amenities outweigh the potential impact from more intense or dense development of the site.*

These PUD amendments provide clear and concise standards for an intense, dense development, with active open space and design guidelines to provide a cohesive, pedestrian-oriented commercial district. The new wayfinding signage will enhance the cohesiveness of the community, and the updated design standards ensure a quality commercial development.

5. *The PUD controls external effects on nearby land uses such as movement and congestion of traffic; lighting; trash accumulation and litter; noise, air and water pollution; and other factors affecting public health, welfare, safety and convenience.*

The proposed development amendments include guidelines for increased street connectivity and overall site guidelines that are designed to minimize hazards while promoting a sense of community. The new standards will not negatively affect the health, safety, and general welfare of the community.

6. *The PUD will be served by adequate facilities including streets, fire protection, water and sanitation.*

The proposed amendments do not affect the existing plats for the development. The development will continue to meet Code standards.

7. *The PUD does not have a significantly greater burden on the city's existing infrastructure, public improvements and services than development at a density permitted under the current zoning or suggested under community, neighborhood and other applicable land use and development plans, or that arrangements are made to mitigate impacts.*

The proposed amendments do not affect the existing infrastructure plans for the development. The development will continue to meet Code standards.

8. *PUD architectural design, landscaping, hardscaping and signage parameters must give evidence of compatibility with adjacent development, internal consistency of design, and conformance to city design standards.*

The proposed amendments do not allow for non-compatible development within the community. New construction must conform to the design guidelines already approved with the existing PUD Development Plan.

All property owners within 200 feet of the boundary of the development have been notified by mail of the proposed zoning change.

Notice was published in the Taylor Daily Press. Notice has also been posted on the City of Hutto website.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Planning and Zoning Commission recommended approval to City Council on March 6, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff finds that the proposed PUD amendments for the Hutto Crossing Planned Unit Development meet the intent of all provisions for PUD Review Criteria as listed in Section 10.203.10.3 of the UDC. Therefore, staff recommends that the City Council approve the first reading of the ordinance. The Council may dispense with the second reading of the ordinance.

SUPPORTING MATERIAL:

1. [Ordinance - Hutto Crossing Planned Unit Development \(PUD\) Ordinance Amendment](#)
2. [Hutto Crossing PUD Amendment - PUD Plan \(Red-Lined Version\)](#)
3. [Hutto Crossing PUD Amendment - Comparison Chart \(Supporting Information\)](#)

ORDINANCE NO.

AN ORDINANCE OF THE CITY OF HUTTO, TEXAS AMENDING THE HUTTO CROSSING PLANNED UNIT DEVELOPMENT (PUD) ZONING ORDINANCE ADOPTED IN ORDINANCE NO. O-13-05-09-11A1, BY REPLACING THE DEVELOPMENT PLAN WITH THE REVISED PLAN ATTACHED AS EXHIBIT "B" AND ATTACHED HERETO, FOR 465.0 ACRES, MORE OR LESS, OF LAND, IN HUTTO, WILLIAMSON COUNTY, TEXAS AND MORE PARTICULARLY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO; PROVIDING FOR A PUBLICATION CLAUSE, SEVERABILITY CLAUSE, REPEALING CLAUSE, OPEN MEETING CLAUSE, PENALTY CLAUSE AND EFFECTIVE DATE.

WHEREAS, a request has been made to the City Council of the City of Hutto, Texas to amend the Narrows Planned Unit Development (PUD) by replacing the Development Plan with the revised plan attached as **Exhibit "B"** being attached hereto and incorporated herein, and;

WHEREAS, the Planning and Zoning Commission recommended approval of the proposed amendment on the 6th day of March, 2018, and;

WHEREAS, on the 5th day of April, 2018, after proper notification, the City Council held a public hearing on the requested amendment, and;

WHEREAS, on the 19th day of April, 2018, after proper notification, the City Council held a public hearing on the requested amendment, and;

WHEREAS, the City Council determines that the zoning ordinance amendment provided for herein promotes the health, safety, morals and protects and preserves the general welfare of the community, and;

WHEREAS, each and every requirement set forth in Chapter 211, Sub-Chapter A., Texas Local Government Code, and Article 14.02.002, Code of Ordinances (2007 Edition), City of Hutto, Texas concerning public notices, hearings, and other procedural matters has been fully complied with, Now therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

SECTION I.

That the City Council has considered and made findings on the following matters regarding the proposed amendment:

- 1) The PUD is consistent with the spirit of the community, neighborhood and other applicable land use and development plans, compatible with the character of adjacent development or recommended land uses, it would not adversely affect property near the site, and it achieves the benefits of improved design; and
- 2) The PUD will not adversely affect land with significant historical, cultural, recreational or aesthetic value; and
- 3) The PUD will give benefits through providing open space, parks, conservation of environmental features, aesthetic features and harmonious design, and/or energy efficient site design; and
- 4) The benefits of preserving land for open space, parks or other public amenities outweigh the potential impact from more intense or dense development on the site; and

- 5) The PUD controls external effects on nearby land uses such as movement and congestion of traffic; lighting; trash accumulation and litter; noise, air and water pollution; and other factors affecting public health, welfare, safety and convenience; and
- 6) The PUD will be served by adequate facilities including streets, fire protection, water and sanitation; and
- 7) The PUD does not have a significantly greater burden on the city's existing infrastructure, public improvements and services than development at a density permitted under the current zoning or suggested under community, neighborhood and other applicable land use and development plans, or arrangements are made to mitigate impacts; and
- 8) PUD architectural design, landscaping, hardscaping and signage parameters must give evidence of compatibility with adjacent development, internal consistency of design, and conformance to city design standards.

That the Hutto Crossing Planned Unit Development (PUD) is hereby amended for the property described in the **Exhibit "A"**, attached hereto and incorporated herein, and the Development Plan attached hereto as **Exhibit "B"** and incorporated herein.

SECTION II. Publication Clause

The City Secretary of the City of Hutto is hereby authorized and directed to publish the caption of this ordinance in the manner and for the length of time prescribed by law.

SECTION III. Severability Clause

The provisions of this ordinance are severable, and if any sentence, section, or other parts of this ordinance should be found to be invalid, such invalidity shall not affect the remaining provisions, and the remaining provisions shall continue in full force and effect.

SECTION IV. Repealing Clause

All ordinances and resolutions and parts thereof in conflict herewith are hereby expressly repealed insofar as they conflict.

SECTION V. Open Meeting Clause

The City Council hereby finds and declares that written notice of the date, hour, place, and subject of the meeting at which this ordinance was adopted was posted and that such meeting was open to the public as required by law at all times during which this ordinance and the subject hereof were discussed, considered, and formerly acted upon, all as required by the Open Meetings Act, Chapter 551, Texas Government Code, as amended.

SECTION VI. Effective Date

This ordinance shall take effect and be in force from and after its passage.

READ and **APPROVED** on first reading on this the **19th** day of **July, 2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

By motion duly made, seconded and passed with an affirmative vote of all the Councilmembers present, the requirement for reading this ordinance on two separate days was dispensed with.

READ, PASSED and **ADOPTED** on first reading of ordinance this **19th** day of **July, 2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

Attest:

Lisa L. Brown, City Secretary

EXHIBIT A
LEGAL DESCRIPTION

Tract 1: Surface Estate only in and to APPROXIMATELY 150.96 ACRES of land being out of and a portion of the MARTIN STROUSE SURVEY, ABSTRACT NO. 587, in Williamson County, Texas, and being the same tract called Tract 1 and particularly described by metes and bounds in the deed recorded in Document No. 2005083815, Official Public Records of Williamson County, Texas, and Exhibit "A-1" attached hereto.

Tract 2: Surface Estate only in and to APPROXIMATELY 125.95 ACRES of land being out of and a portion of the ROBERT McNUTT SURVEY, ABSTRACT NO. 422, in Williamson County, Texas, and being the same tract called Tract 2 and more particularly described by metes and bounds in the deed recorded in Document No. 2005083815, Official Public Records of Williamson County, Texas, and Exhibit "A-2" attached hereto.

Tract 3: Surface Estate only in and to APPROXIMATELY 19.95 ACRES of land being out of and a portion of the MARTIN STROUSE SURVEY, ABSTRACT NO. 587, in Williamson County, Texas, and being the same tract called Tract 3 and more particularly described by metes and bounds in the deed recorded in Document No. 2005083815, Official Public Records of Williamson County, Texas, and Exhibit "A-3" attached hereto.

Tract 4: APPROXIMATELY 33.12 ACRES of land being out of and a portion of the MARTIN STROUSE SURVEY, ABSTRACT NO. 587, in Williamson County, Texas, and being the same tract called 33.14 acres in Deed recorded in Volume 1120, Page 651, Official Records of Williamson County, Texas, and said 33.12 acre tract being more particularly described by metes and bounds in Exhibit "A-4" attached hereto.

Tract 5: APPROXIMATELY 55.302 ACRES of land being out of and a portion of the NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, in Williamson County, Texas, and being the same tract of land more particularly described by metes and bounds in the Deed recorded in Document No. 2004094951, Official Public Records of Williamson County, Texas, and Exhibit "A-5" attached hereto.

Tract 6: APPROXIMATELY 10.00 ACRES of land being out of and a portion of the NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, in Williamson County, Texas, and being the same tract conveyed in Deed recorded in Document No. 199931543 and Document No. 2006024663, Official Public Records of Williamson County, Texas, and said 10.00 acre tract being more particularly described by metes and bounds in Exhibit "A-6" attached hereto.

Tract 7: APPROXIMATELY 64.428 ACRES of land being out of and a portion of the NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, in Williamson County, Texas and being that same tract conveyed in Deed recorded in Document No. 2006024665, Official Public Records of Williamson County, Texas, and said 64.428 acre tract being more particularly described by metes and bounds in Exhibit "A-7" attached hereto.

Tract 8: APPROXIMATELY 6.00 ACRES of land being out of and a portion of the NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, in Williamson County, Texas and being all of that 5.34 acre tract described in Final Judgment recorded in Document No. 2003119703, Official Public Records of Williamson County, Texas and all of that 0.65 acre tract conveyed in Deed recorded in Volume 2655, Page 128, Official Records of Williamson County, Texas, and said 6.00 acre tract being more particularly described by metes and bounds in Exhibit "A-8" attached hereto.

Tract 9: APPROXIMATELY 0.52 ACRES of land being out of and a portion of the NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, in Williamson County, Texas and being that same tract conveyed in Volume 2027, Page 857, Official Records of Williamson County, Texas and said 0.52 acre tract being more particularly described by metes and bounds in Exhibit "A-9" attached hereto.

150.96 acres

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE MARTIN STROUSE SURVEY, ABSTRACT No. 587 AND BEING A PART OF THAT 355.85 ACRE TRACT OF LAND CONVEYED TO BOBBY JOE SHEPHERD AND WIFE, LINDA K. SHEPHERD BY DEED RECORDED IN VOLUME 1399, PAGE 172 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE at a 1/2" iron rod found in the South Line of the Missouri Pacific Railroad, the same being the Northwest Corner of that 33.14 Acre Tract of land conveyed to Alpha 79 Investments Associates by deed recorded in Volume 1120, Page 851 of the Official Records of Williamson County, Texas and the Northeast Corner of the said 355.85 Acre Tract;

THENCE S.09°24'32"E., along the East Line of the said 355.85 Acre Tract and the West Line of the said 33.14 Acre Tract, a distance of 735.72 feet to a 1/2" iron rod found and the Point of Beginning;

THENCE along the East Line of the said 355.85 Acre Tract the following nine courses:

1. S.09°30'10"E. a distance of 110.60 feet to a 1/2" iron rod found;
2. S.45°31'52"E. a distance of 224.93 feet to a 1/2" iron rod found;
3. S.03°41'00"W. a distance of 407.01 feet to a 1/2" iron rod found;
4. S.82°05'31"E. a distance of 684.80 feet to a 1/2" iron rod found;
5. S.07°25'05"W. a distance of 1372.18 feet to a 1/2" iron rod found;
6. S.08°51'58"W. a distance of 1032.59 feet to a 1/2" iron rod found;
7. S.05°06'48"W. a distance of 445.54 feet to a 1/2" iron rod found;
8. S.18°35'39"W. a distance of 89.56 feet;
9. S.17°07'30"W. a distance of 15.68 feet to the North Bank of Brushy Creek and the South Line of the said 355.85 Acre Tract;

THENCE along the South Line of the said 355.85 Acre Tract and the North Bank of Brushy Creek the following seven courses:

1. N.83°46'38"W. a distance of 89.97 feet;
2. N.89°55'54"W. a distance of 84.73 feet;
3. S.78°31'38"W. a distance of 962.61 feet;
4. S.69°58'13"W. a distance of 117.00 feet;
5. S.71°39'21"W. a distance of 70.65 feet;
6. S.66°46'31"W. a distance of 91.78 feet;
7. S.64°42'54"W. a distance of 289.55 feet to the Southeast Corner of that 28.449 Acre Tract of land conveyed to the State of Texas by deed recorded in Document No. 2004029675 of the Official Public Records of Williamson County, Texas;

THENCE along the East Line of the said 28.449 Acre Tract and crossing the said 355.85 Acre Tract the following five courses:

RECORDERS MEMORANDUM
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clearly legible for satisfactory recodation.

EXHIBIT A-1

150.96 acres

1. N.02°37'45"W. a distance of 1032.39 feet to a 1/2" iron rod found;
2. N.02°41'25"E. a distance of 1030.00 feet to a 1/2" iron rod found;
3. N.03°09'22"W. a distance of 974.79 feet to a 1/2" iron rod found;
4. N.04°28'17"E. a distance of 263.34 feet to a 1/2" iron rod found;
5. N.03°08'24"W. a distance of 523.15 feet to a 1/2" iron rod found in the South Line of that 20.00 Acre Tract of land conveyed to James W. Hargrove and wife, Joyce V. Hargrove, by deed recorded in Document No. 9729037 of the Official Records of Williamson County, Texas;

THENCE N.77°13'49"E., crossing the said 355.85 Acre Tract and along the South Line of the said 20.00 Acre Tract, a distance of 1275.92 feet to the said Point of Beginning.

Containing 150.96 acres, more or less.

John K. Weigand 1-8-2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas



RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753

RECORDERS MEMORANDUM

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EXHIBIT A-1

125.95 Acres

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE ROBERT McNUTT SURVEY, ABSTRACT No. 422, BEING ALL OF TRACT II, CONTAINING 6.10 ACRES, AS DESCRIBED IN THE SPECIAL WARRANTY DEED RECORDED IN DOCUMENT No. 2004085125 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 6.10 ACRES BEING A PART OF THAT 40.00 ACRE TRACT OF LAND CONVEYED TO BOBBY JOE SHEPHERD AND LOUWANE SHEPHERD BY DEED RECORDED IN DOCUMENT No. 2000044999 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND A PORTION OF THAT 0.550 ACRE TRACT OF LAND AND A PORTION OF THAT 4.450 ACRE TRACT OF LAND CONVEYED TO BOBBY JOE SHEPHERD BY DEED RECORDED IN DOCUMENT No. 2000045211 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; AND A PORTION OF THAT 155.00 ACRE TRACT OF LAND CONVEYED TO BOBBY J. SHEPHERD BY DEED RECORDED IN DOCUMENT No. 2000045213 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; AND ALL OF TRACT III, CONTAINING 1.93 ACRES, CONVEYED TO HUTTO MT. ZION CHURCH, INC., BY DEED RECORDED IN DOCUMENT No. 2004085125 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; AND ALL OF THAT "PARTNERSHIP PROPERTY", CONTAINING 117.51 ACRES CONVEYED TO THE SHEPHERD FAMILY LIMITED PARTNERSHIP BY SPECIAL WARRANTY DEED RECORDED IN DOCUMENT No. 2004085125 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; AND A PART OF THAT 1.00 ACRE TRACT OF LAND CONVEYED TO SHIRD GENE CANTWELL, JR., AND LINDA DIANNE CANTWELL BY DEED RECORDED IN VOLUME 1760, PAGE 393 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE at a 1/2" iron rod found in the South Line of the Missouri Pacific Railroad, for the Northeast Corner of the plat of The Heights at Deerfield, according to the plat thereof recorded in Cabinet O, Slides 42, 43, 44 and 45 of the Plat Records of Williamson County, Texas, the same being the Northwest Corner of Tract I, containing 8.45 Acres, conveyed to Shepherd Mini Storage, Inc. by the said deed recorded in Document No. 2004085125;

THENCE N.77°25'02"E., along the North Line of the said 8.45 Acre Tract and the South Line of the Missouri Pacific Railroad, a distance of 773.99 feet to a 1/2" iron rod found for the Northeast Corner of the 8.45 Acre Tract and the Point of Beginning;

EXHIBIT A-2

Page 1 of 3 SALAND1250-1299\1251\1251 SHEP-DESC.tif

125.95 Acres

THENCE N.77°20'41"E., along the South Line of Missouri Pacific Railroad and the North Line of the said 117.51 Acre Partnership Tract, a distance of 952.69 feet to ½" iron rod found for the Northwest Corner of that 65.009 Acre Tract of land conveyed to Lone Star Infrastructure, JV, by deed recorded in Document No. 2003094491 of the Official Public Records of Williamson County, Texas;

THENCE along the West Line of the 65.009 Acre Tract and the East Line of the 117.51 Acre Tract the following four courses:

1. S.50°16'36"E. a distance of 78.57 feet to a ½" iron rod set;
2. S.06°34'47"W. a distance of 736.81 feet to a ½" iron rod set;
3. S.10°12'22"E. a distance of 907.95 feet to a ½" iron rod set;
4. S.03°31'10"E. a distance of 1476.66 feet to a ½" iron rod found with a TXDOT cap in the North Line of the said 1.00 Acre Tract conveyed to Cantwell, and for the Northwest Corner of that 0.771 Acre Tract of land conveyed to James Noble Johnson, Trustee, by deed recorded in Document No. 2004003072 of the Official Public Records of Williamson County, Texas;

THENCE S.03°30'46"E., crossing the said 1.00 Acre Tract and along the West Line of the said 0.771 Acre Tract, a distance of 211.59 feet to a ½" iron rod with TXDOT cap found for the Southwest Corner of the said 0.771 Acre Tract and a corner in the West Line of the said 65.009 Acre Tract;

THENCE S.03°31'25"E., along the West Line of the said 65.009 Acre Tract and the East Line of the said 117.51 Acre Tract, a distance of 1115.42 feet to a ½" iron rod found with TXDOT cap for the Southwest Corner of the 65.009 Acre Tract and the Southeast Corner of the 117.51 Acre Tract;

THENCE along the South Line of the said 117.51 Acre Tract the following four courses:

1. N.89°07'29"W. a distance of 614.27 feet to a point;
2. N.81°08'16"W. a distance of 266.96 feet to an iron post;
3. N.77°09'32"W. a distance of 436.94 feet to an iron post;
4. N.72°08'06"W. a distance of 143.53 feet to a nail found for the Southwest Corner of the said 117.51 Acre Tract and the Southeast Corner of that 43.24 Acre Tract of land conveyed to Chaz Glace by deed recorded in Document No. 9644889 of the Official Records of Williamson County, Texas, said 43.24 Acre Tract being the same tract conveyed to Leroy Brady Behrens, et al by deed recorded in Volume 1120, Page 20 of

EXHIBIT A-2

125.95 Acres

the Deed Records of Williamson County, Texas;

THENCE N.06°27'33"E., along the West Line of the 117.51 Acre Tract and the East Line of the said 43.24 Acre Tract, a distance of 1601.64 feet to a 1/2" iron rod found for the Northeast Corner of the said 43.24 Acre Tract and for the Southeast Corner of the said plat of Heights of Deerfield;

THENCE N.17°35'30"W., along the East Line of said plat of Heights of Deerfield and the West Line of the 117.51 Acre Tract, a distance of 1888.60 feet to a 1/2" iron rod found for the Southwest Corner of the said 8.45 Acre Tract conveyed to Shepherd Mini Storage, Inc.;

THENCE N.77°26'56"E., along the South Line of the said 8.45 Acre Tract, a distance of 597.56 feet to a 1/2" iron rod found for the Southeast Corner of the 8.45 Acre Tract;

THENCE N.00°58'09"E., along the East Line of the 8.45 Acre Tract, a distance of 552.23 feet to the said Point of Beginning.

Containing 125.95 acres, more or less.

John K. Weigand 1-8-2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas



RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753

EXHIBIT A-2

Page 3 of 3 S:\LAND\1250-1299\1251\1251 SHEP-DESC.dxf

19.95 Acres

DESCRIPTION:

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE MARTIN STROUSE SURVEY, ABSTRACT No. 587, AND BEING A PART OF THAT 20.00 ACRE TRACT OF LAND CONVEYED TO JAMES W. HARGROVE, AND WIFE, JOYCE V. HARGROVE, BY DEED RECORDED IN DOCUMENT NO. 9729037 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN at a $\frac{1}{2}$ " iron rod found in the South Line of the Missouri Pacific Railroad for the Northwest Corner of that 33.14 acre tract of land conveyed to Alpha 79 Investment Associates, by deed recorded in Volume 1120, Page 851 of the Official Records of Williamson County, Texas, the same being the Northeast Corner of the said 20.00 Acre Tract;

THENCE S.09°24'32"E., along the East Line of the 20.00 Acre Tract and the West Line of the 33.14 Acre Tract, a distance of 735.72 feet to a $\frac{1}{2}$ " iron rod found for the Southeast Corner of the 20.00 Acre Tract;

THENCE S.77°13'49"W., along the South Line of the 20.00 Acre Tract, a distance of 1275.92 feet to a $\frac{1}{2}$ " iron rod found with a TXDOT (Texas Department of Transportation) cap, the same being the Southeast Corner of that 0.033 acre tract of land conveyed to the State of Texas by deed recorded in Document No. 2004079381 of the Official Public Records of Williamson County, Texas;

THENCE N.03°09'30"W., crossing the said 20.00 Acre Tract and along the East Line of the said 0.033 Acre Tract, a distance of 121.58 feet to a $\frac{1}{2}$ " iron rod set in the West Line of the said 20.00 Acre Tract for the North Corner of the said 0.033 Acre Tract;

THENCE N.07°32'45"E., along the West Line of the said 20.00 Acre Tract, the same being the West Line of the Martin Strouse Survey and also the East Line of the right of way for State Highway 130, as described in the deed to Lone Star Infrastructure, JV, by deed recorded in Document No. 2003094491 of the Official Public Records of Williamson County, Texas, a distance of 655.21 feet to a $\frac{1}{2}$ " iron rod found in the South Line of the Missouri Pacific Railroad for the Northwest Corner of the said 20.00 Acre Tract;

THENCE N.77°13'25"E., along the South Line of the Missouri Pacific Railroad and the North Line of the 20.00 Acre Tract, a distance of 1071127 feet to the said Point of Beginning.

Containing 19.95 acres, more or less.

John K. Weigand 1-9-2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas

RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753



RECORDERS MEMORANDUM
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EXHIBIT A-3

33.12 Acres

DESCRIPTION:

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE MARTIN STROUSE SURVEY, ABSTRACT No. 587, AND BEING ALL OF THAT 33.14 ACRE TRACT OF LAND CONVEYED TO ALPIA 79 INVESTMENT ASSOCIATES BY DEED RECORDED IN VOLUME 1120, PAGE 651 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN at a 1" Iron pipe found in the South Line of the Missouri Pacific Railroad, the same being the Northwest Corner of that 10.00 acre tract of land conveyed to Adeline J. Geistman by deed recorded in Document No. 199931543 of the Official Public Records of Williamson County, Texas and also being the Northeast Corner of the said 33.14 Acre Tract;

THENCE S.07°20'37"W., along the East Line of the said 33.14 Acre Tract, the West Line of the said 10.00 Acre Tract and on or near the East Line of the Martin Strouse Survey, a distance of 337.18 feet to a 1" Iron pipe found for the Southwest Corner of the said 10.00 Acre Tract and the Northwest Corner of that 55.302 acre tract of land conveyed to Hutto Market, L.P., by deed recorded in Document No. 2004094951 of the Official Public Records of Williamson County, Texas;

THENCE S.07°09'28"W., along the East Line of the said 33.14 Acre Tract, the West Line of the said 55.302 Acre Tract and on or near the East Line of the Martin Strouse Survey, a distance of 1430.80 feet to a 1/2" Iron rod found for the Southeast Corner of the said 33.14 Acre Tract and the Easterly Northeast Corner of that 355.85 acre tract of land conveyed to Bobby Joe Shepherd and wife, Linda K. Shepherd, by deed recorded in Volume 1399, Page 172 of the Official Public Records of Williamson County, Texas;

THENCE along the Common Line of the 33.14 Acre Tract and the 355.85 Acre Tract the following four courses:

1. N.82°05'31"W. a distance of 684.80 feet to a 1/2" Iron rod set;
2. N.03°41'00"E. a distance of 407.01 feet to a 1/2" Iron rod found;
3. N.45°31'52"W. a distance of 224.93 feet to a 1/2" Iron rod found;
4. N.09°30'10"W. a distance of 110.00 feet to a 1/2" Iron rod found for the Southeast Corner of that 20.00 acre tract of land conveyed to James W. Hargrove and wife, Joyce V. Hargrove, by deed recorded in Document No. 9729037 of the Official Public Records of Williamson County, Texas;

THENCE N.09°24'32"W., along the West Line of the 33.14 Acre Tract, the same being the East Line of the said 20.00 Acre Tract, a distance of 735.72 feet to a 1/2" Iron rod found in the South Line of the Missouri Pacific Railroad for the Northwest Corner of the 33.14 Acre Tract and the Northeast Corner of the 20.00 Acre Tract;

THENCE N.77°26'15"E., along the South Line of the Missouri Pacific Railroad and the North Line of the 33.14 Acre Tract, a distance of 1201.34 feet to the said Point of Beginning

Containing 33.12 acres, more or less.

John H. Weigard 1.8.2007
J. Kenneth Weigard
Registered Professional Land Surveyor No. 5741
State of Texas

RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753



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clearly legible for satisfactory recordation.

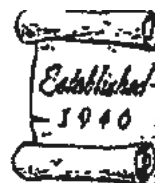
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EXHIBIT A-4



WATSON SURVEYING

9501 CAPITAL OF TEXAS HWY.
SUITE 303 AUSTIN, TX 78759
346-8566 FAX 346-8568



FIELD NOTES FOR 55.302 ACRES OUT OF THE NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, WILLIAMSON COUNTY, TEXAS, AS RECORDED IN DOCUMENT NO. 2004094951, WILLIAMSON COUNTY OFFICIAL PUBLIC RECORDS, BEING PART OF A 175.58 ACRE TRACT RECORDED IN DOCUMENT 9758800, WILLIAMSON COUNTY OFFICIAL RECORDS, SAID 55.302 ACRES BEING DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a $\frac{1}{2}$ " steel pin found at the southeast corner of a 10.00 acre tract conveyed to Adeline J. Beistman in Document Number 199931543, Williamson County Official Records, being a point in the west line of F.M. Highway 685, for the northeast corner hereof;

THENCE $91^{\circ}00'00''$ W 2097.03 feet along said west line, also the east line of said 175.58 acre parent tract, to a $\frac{1}{2}$ " steel pin set, for the southeast corner hereof;

THENCE $N80^{\circ}00'19''$ W 1292.31 feet crossing said 175.58 acres, with the north line of a 84.428 acre tract recorded in Document No. 2006024663, to a $\frac{1}{2}$ " steel pin set in the fenced west line of said 175.58 acres and the east line of a 355.85 acre tract recorded in Volume 1398, Page 172, Williamson County Official Records, for the southwest corner hereof;

THENCE $N09^{\circ}52'58''$ E 183.62 feet generally following a fence with said line, to a $\frac{1}{2}$ " steel pin found at the northeast corner of said 355.85 acre tract, also the southeast corner of a 32.14 acre tract recorded in Volume 1120, Page 651, Williamson County Official Records, for an angle point hereof;

THENCE $N08^{\circ}38'27''$ E 1431.36 feet generally following a fence along the east line of said 32.14 acres, also the west line of said 175.58 acres, to a $\frac{1}{2}$ " steel pin found at the southwest corner of said 10.00 acres, for the northwest corner hereof;

THENCE $N76^{\circ}41'25''$ E 1389.28 feet with the south line of said 10.00 acres to the POINT OF BEGINNING, containing 55.302 acres of land.

Bearing basis is the east line of said 175.58 acre parent tract

Surveyed 8 January 2007 by:

Stuart Watson
Stuart Watson, RPLS 4550



RECORDERS MEMORANDUM
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EXHIBIT A-5

10.00 Acres

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE NATHANIEL EDWARDS SURVEY, ABSTRACT No. 225 AND BEING ALL OF THAT 10.00 ACRE TRACT OF LAND CONVEYED TO ADELINE J. GEISTMAN BY DEED RECORDED IN DOCUMENT No. 199931543 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN at a 1" iron pipe found in the South Line of the Missouri Pacific Railroad, the same being the Northeast Corner of that 33.14 Acre Tract of land conveyed to Alpha 79 Investment Associates by deed recorded in Volume 1120, Page 851, of the Official Records of Williamson County, Texas, and the Northwest Corner of the said 10.00 Acre Tract

THENCE N.77°17'04"E., along the South Line of the Missouri Pacific Railroad and the North Line of the 10.00 Acre Tract, a distance of 1290.97 feet to a Concrete Monument found for the Northerly Northeast Corner of the 10.00 Acre Tract;

THENCE S.47°26'10"E., along the Northeasterly Line of the said 10.00 Acre Tract, a distance of 114.72 feet to a Concrete Monument found in the West Line of F. M. Highway 585 for the Southerly Northeast Corner of the 10.00 Acre Tract;

THENCE S.07°31'34"W., along the East Line of the 10.00 Acre Tract and the West Line of F. M. Highway 585, a distance of 237.25 feet to a 1/2" iron rod found for the Southeast Corner of the 10.00 Acre Tract;

THENCE S.77°17'29"W., along the South Line of the said 10.00 Acre Tract, a distance of 1389.88 feet to a 1/2" iron rod found for the Southwest Corner of the 10.00-Acre Tract;

THENCE N.07°20'37"E., along the West Line of the said 10.00 Acre Tract, a distance of 337.18 feet to the said Point of Beginning.

Containing 10.00 Acres, more or less.

John H. Weigand 1.8.2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas

RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753

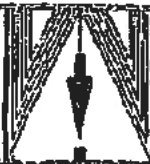


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EXHIBIT A-6



712 71
WATSON SURVEYING
9501 CAPITAL OF TEXAS HWY.
SUITE 303 AUSTIN, TX 78759
346-8568 FAX 346-8568



FIELD NOTES FOR 64.428 ACRES OUT OF THE NATHANIEL EDWARDS SURVEY, ABSTRACT NO. 225, WILLIAMSON COUNTY, TEXAS, AS RECORDED IN DOCUMENT NO. 2008024669, WILLIAMSON COUNTY OFFICIAL PUBLIC RECORDS, BEING PART OF A 175.58 ACRE TRACT RECORDED IN DOCUMENT 9758800, WILLIAMSON COUNTY OFFICIAL RECORDS, SAID 64.428 ACRES BEING DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a $\frac{1}{2}$ " steel pin found at the southeast corner of a 55.302 acre tract conveyed to Steven L. Adams by deed recorded in Document No. 2003119704, Williamson County Deed Records, being a point in the west right-of-way (ROW) line of F.M. Highway 685, for the northeast corner hereof;

THENCE along said west ROW line, as conveyed to State of Texas by deed in Volume 288, Page 541, Williamson County Official Records (WCOR), the following 2 courses:

- 1) S09°56'56"W 577.92 feet to a $\frac{1}{2}$ " steel pin with orange cap set at the start of a curve to the right,
- 2) along said curve with chord of S11°46'47"W 240.87 feet and radius of 3769.83 feet to a $\frac{1}{2}$ " pinched pipe found at the end of a chain link fence, for corner hereof;

THENCE along the north and west lines of a 0.52 acre tract conveyed to Moss Stromberg as recorded in Vol. 2027, Pg. 857, WCOR, these 2 courses:

- 1) N81°47'12"W 200.40 feet to a $\frac{1}{2}$ " steel pin with orange cap set near a chain link fence corner at the northwest corner of said 0.52 acres, for inside corner hereof,
- 2) S09°44'02"W 109.35 feet to a $\frac{1}{2}$ " steel pin found at the southwest corner of said 0.52 acres and the northeast corner of a 5.34 acre tract conveyed to Carol Stromberg (deed not yet recorded);

THENCE along the north, west and south lines of said 5.34 acres for the following 5 courses:

- 1) N80°00'19"W 365.32 feet to a $\frac{1}{2}$ " steel pin with orange cap found in a fence on the east side of an old lane, for inside corner hereof,
- 2) S09°26'01"W 337.92 feet generally following said fence on the east side of an old lane to a $\frac{1}{2}$ " steel pin with orange cap found, for inside corner,
- 3) S80°00'19"E 173.70 feet to a $\frac{1}{2}$ " steel pin with orange cap found for corner hereof,
- 4) S09°59'41"W 271.29 feet to a $\frac{1}{2}$ " steel pin with orange found for inside corner hereof,
- 5) S80°00'19"E 268.94 feet to a $\frac{1}{2}$ " steel pin with orange cap found near a fence at the west ROW line of F.M. Highway 685, at the southeast corner of said 5.34 acres and a easterly corner hereof;

THENCE along the west ROW of F.M. Highway 685 the following 5 courses:

- 1) Along a curve to the right with chord of S26°58'05"W 274.39 feet and

EXHIBIT A-7

radius of 3769.83 feet, to the base of a leaning concrete monument for end of curve,

- 2) S29°04'45"W 461.63 feet generally following a fence to the top center of a concrete monument, for angle point,
- 3) S42°00'54"W 169.42 feet generally following a fence to the top center of a concrete monument, for inside corner hereof,
- 4) S83°25'15"E 45.87 feet departing fence to a 1/2" steel pin with orange cap set at an inside corner of said ROW line, for corner hereof,
- 5) S28°50'17"W 219.51 feet to a point (underwater) in the center of Brushy Creek, for the southeast corner hereof;

THENCE along the center of Brushy Creek and the north line of a 23.75 acre tract conveyed to Dingo Partners, Ltd. as recorded in Doc. 9742126, Williamson County Deed Records the following 2 courses:

- 1) S75°54'31"W 420.00 feet to a submerged point near the east side of an unused concrete bridge, for angle point hereof,
- 2) N77°58'09"W 105.74 feet to the submerged northwest corner of said 23.75 acres, also the northeast corner of a 188.92 acre tract conveyed to Key Ranch Limited Partnership, et al, as recorded in Doc. 2000038583, Williamson County Deed Records, for angle point hereof;

THENCE N86°20'54"W 313.03 feet continuing along the center of Brushy Creek and the north line of said 188.92 acre tract, to a submerged point for the southwest corner hereof;

THENCE along the east line of a 355.85 acre tract conveyed to Linda Shepherd by deed recorded in Volume 1399, Page 172, Williamson County Deed Records, the following 6 courses:

- 1) N19°28'52"E 58.60 feet to a calculated point for angle point hereof,
- 2) N20°55'55"E 89.68 feet to a 1/2" steel pin found at a fence corner,
- 3) N07°27'59"E 445.17 feet to a 1/2" steel pin found near fence,
- 4) N09°15'03"E 1032.98 feet to a 1/2" steel pin found near fence,
- 5) N08°49'31"E 1188.48 feet to a 1/2" steel pin found near fence at the southwest corner of above-said 55.302 acres, for northwest corner hereof;

THENCE S80°00'19"E 1282.31 feet along the south line of said 55.302 acres to the POINT OF BEGINNING, containing 64.428 acres of land.

Bearing basis is the south line of said 55.302 acre tract, also the north line of this 64.428 acre tract.

Surveyed 8 January 2007 by:


Stuart Watson, RPLS 4550



EXHIBIT A-1

3.00 Acres

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE N. EDWARDS SURVEY, ABSTRACT No. 225, BEING ALL OF THAT 0.65 ACRE TRACT OF LAND CONVEYED TO CAROL STROMBERG BY DEED RECORDED IN VOLUME 2655, PAGE 128 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS AND ALL OF THAT 5.34 ACRE TRACT OF LAND CONVEYED TO CAROLE STROMBERG BY DEED RECORDED IN DOCUMENT NO. 2003119703 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Commence at a pinched pipe found in the West Right of way Line of F. M. 685 at the Northeast Corner of that 0.52 acre tract of land conveyed to Ross E. Stromberg by deed recorded in Volume 2027, Page 857 of the Official Records of Williamson County, Texas, said point being on the arc of a curve to the right having a radius of 3769.83 feet, a central angle of $01^{\circ}54'05''$, and a chord bearing $S.12^{\circ}11'31''W.$, 125.10 feet;

THENCE southerly, along the arc of said curve, the same being the East Line of the said 0.52 Acre Tract and the West Right of way Line of F. M. 685, a distance of 125.10 feet to a nail set at the Southeast Corner of the 0.52 Acre Tract, the Northeast Corner of the said 0.65 Acre Tract, and the Point of Beginning at a point of compound curvature of a curve to the right;

THENCE continue southerly, along the arc of said curve to the right, at a distance of 138.9 feet pass a $1/2''$ iron rod found at the Southeast Corner of the said 0.65 Acre Tract and the Northeast Corner of the said 5.34 Acre Tract, in all a total distance of 264.08 feet, said curve having a radius of 3769.83 feet, a central angle of $09^{\circ}18'25''$, and a chord bearing $S.17^{\circ}46'48''W.$, 609.50 feet to a $1/2''$ iron rod found;

THENCE departing the said West Right of way Line of F. M. 685 and along the South, West and North Line of the said 5.34 Acre Tract the following five courses:

1. $N.82^{\circ}22'21''W.$ a distance of 270.20 feet to a $1/2''$ iron rod with Watson Surveying cap found;
2. $N.07^{\circ}34'50''E.$ a distance of 271.10 feet to a $1/2''$ iron rod with Watson Surveying cap found;
3. $N.82^{\circ}21'58''W.$ a distance of 173.58 feet to a $1/2''$ iron rod with Watson Surveying cap found;
4. $N.07^{\circ}01'48''E.$ a distance of 337.82 feet to a $1/2''$ iron rod with Watson Surveying cap found;
5. $S.82^{\circ}24'41''E.$ a distance of 365.44 feet to a $1/2''$ iron rod found at the Northwest Corner of the said 0.65 Acre Tract;

THENCE $S.79^{\circ}35'18''E.$, along the North Line of the said 0.65 Acre Tract, a distance of 189.74 feet to the said Point of Beginning.

Containing 3.00 acres, more or less.

John K. Weigand 1-B-2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas



RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753

RECORDERS MEMORANDUM

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13-011 A-8

0.52 Acre

A PARCEL OF LAND IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE N. EDWARDS SURVEY, ABSTRACT No. 225, AND BEING ALL OF THAT 0.52 ACRE TRACT OF LAND CONVEYED TO RUSS E. STROMBERG BY DEED RECORDED IN VOLUME 2027, PAGE 857 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN at a pinched pipe found in the West Right of way Line of F. M. 685 at the Northeast Corner of the said 0.52 Acre Tract, said point being S.09°24'39"W., 240.84 feet from the North End of a curve having a radius of 3769.83 feet, the North End of said curve being S.07°34'49"W., 3065.89 from the center of the Missouri Pacific Railroad Track where it crosses the West Right of way Line of F. M. 685;

THENCE southerly, along the arc of said curve to the right, the same being the West Right of Way Line of F. M. 685 and the East Line of the said 0.52 Acre Tract, a distance of 125.10 feet, said curve having a radius of 3769.83 feet, a central angle of 01°54'05", and a chord bearing S.12°11'31"W., 125.10 feet to a nail set at the Southeast Corner of the said 0.52 Acre Tract;

THENCE N.79°35'18"W., along the South Line of the said 0.52 Acre Tract and the North Line of that 0.65 Acre Tract conveyed to Carol Stromberg by deed recorded in Volume 2655, Page 128 of the Official Records of Williamson County, Texas, a distance of 189.74 feet to a 1/2" Iron rod found at the Southwest Corner of the said 0.52 Acre Tract;

THENCE N.07°15'08"E., along the West Line of the said 0.52 Acre Tract, a distance of 109.28 feet to a 1/2" Iron rod with Watson Surveying cap found at the Northwest Corner of the said 0.52 Acre Tract;

THENCE S.84°08'53"E., along the North Line of the said 0.52 Acre Tract, a distance of 200.28 feet to the said Point of Beginning.

Containing 0.52 acre, more or less.

John K. Weigand 1-B. 2007
J. Kenneth Weigand
Registered Professional Land Surveyor No. 5741
State of Texas

RJ Surveying, Inc.
1212 East Braker Lane
Austin, Texas 78753



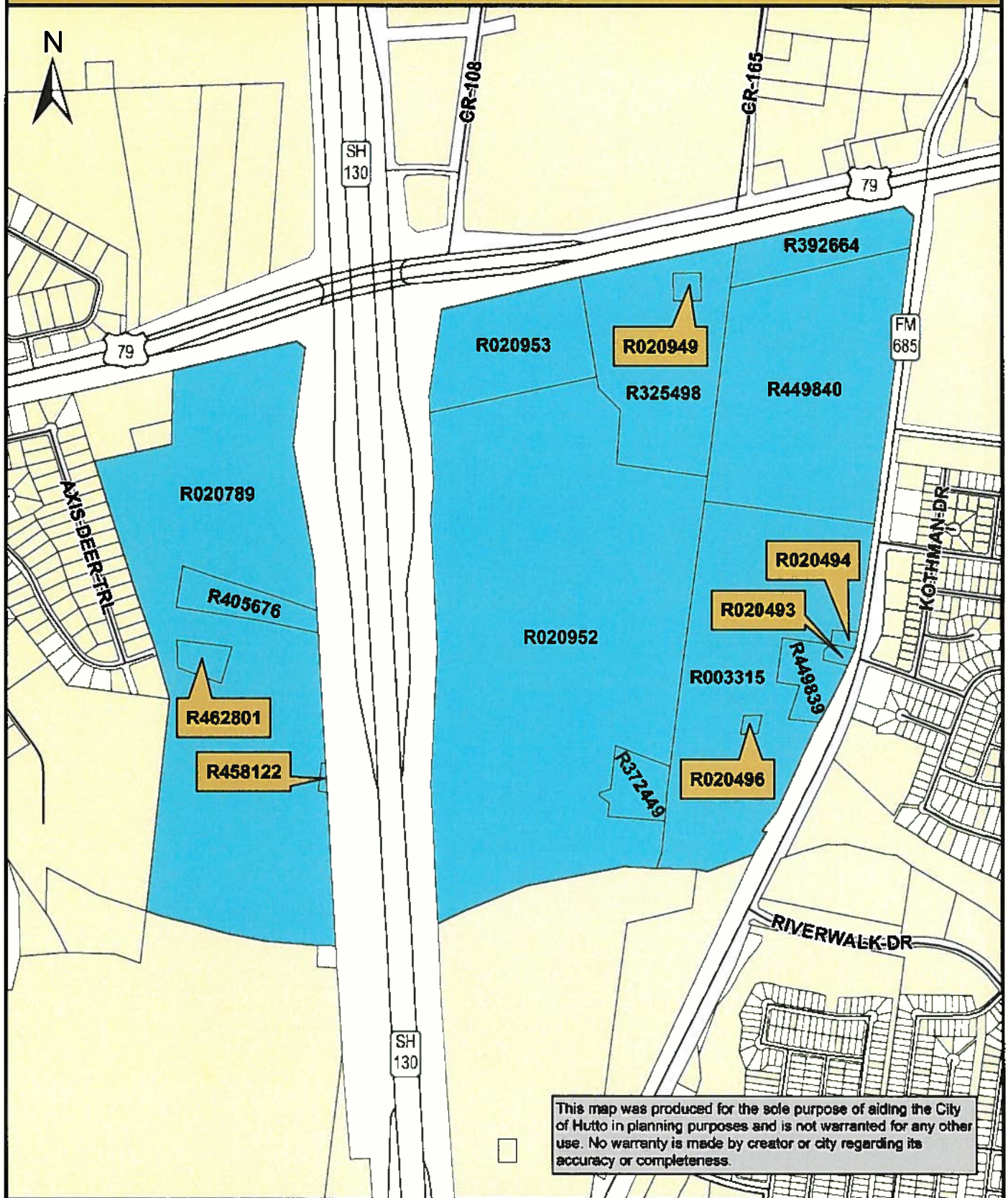
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Hutto Crossings PUD



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Hutto Crossing Planned Unit Development

April 16, 2013

Applicant's PUD Amendment: January 25, 2018

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1. GENERAL PROVISION

1.1. Title

This ordinance is known as “Hutto 465 Ac Tract Planned Unit Development Ordinance”, and may be cited as “Hutto 465 Ac Tract PUD” , “this PUD” or “the District”.

1.2. Purpose and Intent

Hutto 465 Ac Tract PUD Ordinance is intended to encourage innovative planning and flexibility in land use, density, site planning and design for development of the 465-acre property. This PUD accommodates development with a mixed of uses, and allows a degree of flexibility in the application of standards and rules based the Unified Development Code of the City of Hutto.

Designation of a single use zoning district and application of standard development provisions would be too rigid for practical application on the unique and bifurcated property, challenged with difficult access constraints, including the abutting Union Pacific Railroad ROW, Brushy Creek and SH130.

This ordinance is enacted to promote the following:

- Promote good planning practice, design, architecture and urban design; and orderly land use
- Preserve open space and prevent overcrowding.
- Provide the physical infrastructure needed to serve city residents and visitors
- Secure safety from fire and other dangers, and provide for adequate sun, light and air.
- Merge rules governing land use and development into one accessible and comprehensible document for the property.

1.3. PUD Criteria

The PUD plan and development standards set forth in this Ordinance are consistent with the following criteria:

- The PUD would not adversely affect property near the site, and it achieves the benefits of an improved design
- The PUD will not adversely affect land with significant historical, cultural, recreational or aesthetic value
- The PUD will give benefits through providing City parkland, open space, harmonious design, and energy efficient site design
- The PUD will be served by adequate facilities including streets, fire protection, water and sanitation
- Architectural design, landscaping, hardscaping and signage parameters set forth in this PUD give evidence of compatibility with adjacent development and internal consistency of design.

1.4. Compatibility with Gateway Overlay

Hutto 465 Ac Tract PUD Ordinance acknowledges the design principles and intent of the Gateway Overlay District as stated in the Gateway Overlay intent statement. The PUD recognizes that the Gateway Overlay District goals set forth below are to be reflected in the PUD standards:

- Coordinate with ongoing planning efforts for the Hutto Gateway and to further goals, policies and objectives outlined in the Comprehensive plan.

- Ensure the integrity of the ongoing planning process so public discourse can take place involving affected property owners and city residents while still ensuring individual development proposals are consistent with Comprehensive plan goals, policies and objectives.
- Ensure new development incorporates the following:
 - Pedestrian-friendly environment with wide sidewalks, tree-lined streets, active shopfronts, short blocks and variety of uses
 - Variety of public gathering places such as squares and civic greens
 - Naturally calmed streets, shaded by rows of trees that allow for on-street parking
 - Streets and sidewalks that form a connected network, providing a variety of pedestrian and vehicular routes to any single destination in and out of the development
 - Variety of compatible uses, allowing people the opportunity to live, work and play near one another, including, specifically, residential uses above ground floor commercial uses, as appropriate
 - Opportunities for housing choice and variety, including attached and detached homes available for both rental and ownership
 - Buildings placed close to the local or internal collector streets, oriented to the sidewalk and street front, providing easy access for pedestrian activity
 - Building facades that create visual interest through horizontal and vertical articulation with windows, multiple entrances facing streets and sidewalks, and no blank walls
 - Parking located to the rear or side of buildings (to the extent practical)
 - Central Texas native landscaping and trees in parking areas and along bordering walkways
 - Protection and enhancement of the natural features of the site, using them as the framework in creation of any site plans
 - Internal principal (“main”) street as part of the organization of development on the site
 - Development that does not turn its back on arterial streets (to the extent practical), but instead focuses on taming the street edge with element such as slip roads, landscaping and pedestrian-oriented features

1.4.1. General applicability and interpretation

Hutto 465 Ac Tract Planned Unit Development Ordinance applies to all regulations and other matters regarding land use and development of land within the PUD boundary, including zoning, subdivision, platting and urban design.

This ordinance is referenced to the “**Unified Development Code of the City of Hutto, Texas**” (amended 03-09-2012) in effect on the date of adoption of this ordinance, which may also be cited as the “UDC”. In those cases where in conflict, this PUD shall take precedence over the UDC.

1.5. Severability

If a regulation, article, section, phrase, clause, term, word, or part of this PUD is considered invalid, it will not affect the applicability and enforceability of the remaining portions.

1.6. Amendments to Ordinance

Technical, site planning or engineering considerations that meet the intent of this PUD may call for minor deviations from the approved PUD. The Development Services Department may approve minor deviations if they promote flexibility in design and are consistent with the intent of the original PUD approval.

- An administrative approval is a ruling that would permit a practice that is not consistent with a specific provision of this Ordinance but is justified by the provisions of the Section 1.2 Intent and Purpose and Section 1.3 PUD Criteria above. The Development Services Department shall have the authority to approve or disapprove administratively a request for an administrative approval pursuant to regulations established by the Development Services Department and approved by the City Council. Where no specific criteria for granting of the modification are specified, an administrative approval may be granted only for a dimensional deviation of less than 10% of the specified standard.
- The request for an amendment to the PUD Ordinance shall not subject the entire application to public hearing, but only that portion necessary to rule on the specific issue requiring the relief.

1.7. Definitions

Definitions set forth in **Section 10.202 of the UDC**, including general abbreviations, terms, definitions and conditions for use indicated throughout this ordinance shall apply to this PUD.

Sign height: distance from the bottom of the sign face to the top of the sign.

Sign, PUD identification: sign identifying the name and/or logo of the Hutto PUD district without advertising individual developments within the PUD. A PUD identification sign is characterized by expressing a coherent character or features of the District and is distinct from a development sign internal to the PUD that identifies a neighborhood, apartment, residential subdivision or other development within the PUD.

Sign, wayfinding: sign which provides orientation, information, directions or wayfinding within or about the District. Wayfinding signs may be free standing (pole), kiosk, monument wall or other permitted sign type for the District.

Sign face area: area of the smallest rectangle enclosing the extreme limits of the sign lettering. The sign area calculated shall be measured on a single side. Sign face area does not include a supporting structure, monument, monument base, pole cover, or landscape feature unless used to convey a message.

Clear vision area: unobstructed view area at corner lots and curb cuts. The clear vision area is a triangle formed between points on flow lines following property lines 30 ft. from the point of intersection at a corner lot, and 20 ft. along a property line and a driveway edge of pavement at a curb cut.

Fence height: distance from the top of the fence or wall to the finish grade of the lot directly under it. Berms, walls or similar features constructed for increasing the height of a fence or wall are considered part of the fence or wall.

1.8. Development Review Process

The development review process for property within the boundary of this PUD shall comply with the **Section 10.203 the UDC**, except that applications under this PUD shall be eligible to utilize the following by right:

- Applications shall be processed with priority over those under the existing conventional zoning code or the UDC, including those with earlier filing dates.

1.9. Vested Development Rights

The effective date and expiration of vested development rights for property within the boundary of this PUD shall comply with **Section 10.204 the UDC**.

1.10. Reviewing and Administration Parties

The reviewing and administrative parties, their responsibilities and processes established in **Section 10.208 of the UDC** shall apply for development of this PUD.

Development Services staff as identified in this PUD shall include City of Hutto Planning, Engineering, Parks and Recreation and other City departments as appropriate.

1.11. Interpretation

Interpretation of this PUD shall follow the procedures established in **Section 10.209 of the UDC**.

Photos are not considered official, adopted parts of the PUD.

Photos and drawings used in this PUD are examples intended to explain certain design concepts. Some features shown in photos and drawings may not conform to other sections of this PUD. If there is a conflict of meaning or implication between the text of this PUD and any heading, drawing, table, figure or illustration, the text will control.

Images depicting a business are not considered an official endorsement.

2. DEVELOPMENT PLAN

2.1. Permitted Uses in the PUD

Permitted uses within the boundaries of the PUD are as follows:

2.1.1. Residential Uses

2.1.1.1. Single household detached, village, and zero lot line

The single household use is a setting for single household residential development of a medium density detached, village or zero lot line character, with support facilities and services that are compatible with single household residences. Density may range from four to eight dwelling units per acre, depending on the context of the development.

2.1.1.2. Two to four household

The two to four household use is a setting for two household, three household and four household residential structures of a medium density, suburban and village character, along with support facilities and services that are compatible with residential areas. Density may range from eight to 14 dwelling units per acre, depending on the context of the development.

2.1.1.3. Single Household attached (Townhouse and condominium)

The single household attached use is a setting for townhouse and condominium attached residential structures of a medium density character, along with support facilities and services that are compatible with a range of residential areas. Density may range from six to 20 dwelling units per acre, depending on the context of the development.

2.1.1.4. Multiple unit household

The multiple unit household use is a setting for development of multi-unit residential structures and developments, such as apartment and condominium complexes, garden and courtyard multifamily residential buildings, and residential loft buildings. Density may range from 14 to 25 dwelling units per acre, depending on the context of the development.

2.1.2. Commercial and retail use

2.1.2.1. Commercial and retail use

The commercial and retail use is a setting for low to mid intensity retail uses, offices and personal services intended to serve residents of a neighborhood and surrounding community. Additionally, commercial and retail use is a setting for development of a wide range of retail uses, offices and personal and business services. Commercial and retail use should be clustered at locations accessible to the community. Site and building design standards are intended to encourage high quality development, promote internal and external pedestrian connectivity, and prevent potential harm to adjacent residential uses.

2.1.3. Industrial Uses

2.1.3.1. Light industry

Light industry use is composed of land and structures used primarily to provide space for commercial enterprises involved in research and development, light manufacturing, packaging, warehousing, distribution, and skilled mechanical trades. Light industry uses should be grouped together in large, contiguous areas, close to transportation facilities, well separated or buffered from low density residential areas.

2.1.4. Recreational Uses

2.1.4.1. Recreation use

The recreation use accommodates recreation and resort uses that take advantage of the land, encourages large outdoor recreation uses that could not easily be provided in the already urbanized portions of the area, and permits commercial and service uses connected with recreational activities. Recreation use should be generally separated or buffered from low density residential areas.

2.2. Use Descriptions and Standards

Refer to **Sections 10.306 – 10.311 of the UDC** for definitions of uses and standards for residential uses, commercial and retail uses, industrial uses, institutional and civic uses, temporary uses and accessory uses permitted in the PUD.

2.2.1. General performance standards

The general performance standards for property within the boundary of this PUD shall comply with **Section 10.312 of the UDC**.

2.2.2. PUD uses

Permitted uses set forth in this section 2.2.2 in the PUD must conform to **Exhibit A, PUD Development Plan**.

2.2.2.1. Permitted Use table abbreviations

	Context
X	Permitted use permitted by right, subject to conditions and performance standards for the use. All permitted uses are subject to conditions set forth in Section 10.202 of the UDC .
-	Not a permitted use

Permitted Uses

2.2.2.2 Residential Uses

Residential Uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Assisted living facility	X	X	X	X
Boarding and rooming house	-	-	-	-
Dwelling: live-work	X	X	X	X
Dwelling: accessory unit	X	X	X	X
Dwelling: manufactured	-	-	-	-
Dwelling: multiple unit	X	X	X	X
Dwelling: single household attached	X	X	X	X
Dwelling: single household detached	-	X	X	X
Dwelling: single household village	-	X	X	X
Dwelling: single household zero lot line	-	X	X	X
Dwelling: two to four household	-	X	X	X
Group home	-	-	-	-
Halfway House	-	-	-	-
Independent living facility	X	X	X	X
Manufactured home park	-	-	-	-
Nursing home	X	X	X	X

2.2.2.3 Commercial and Retail Uses

Commercial and retail uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Adult oriented use	-	-	-	-
Bakery: retail	X	X	X	X
Bank	X	X	X	X
Campground, recreational vehicle park	-	-	-	-
Car wash	-	-	-	-
Club/lodge facility	X	X	X	X
Convenience store	X	X	X	X
Convenience store: with gasoline sales	X	X	X	X
Day care: child (1-6 children)	X	X	X	X
Day care: child (greater than 6 children)	X	X	X	X
Day care: adult (1-4 persons)	X	X	X	X
Day care: adult (greater than 4 persons)	X	X	X	X
Day care: pet	X	X	X	X
Day labor agency	-	-	-	-
Entertainment facility, theater	X	-	X	X
Farm product sales	X	X	X	X
Food catering	X	X	X	X
Funeral home	X	-	X	X
Gas station	X	-	X	X
Grocery store	X	X	X	X
Indoor recreation facility	X	-	X	X
Instructional facility	X	X	X	X
Kennel	-	-	-	-
Large item sales and rental: class 1	X	-	X	X
Large item sales and rental: class 2	X	-	X	X
Lodging establishment	X	X	X	X
Lodging establishment: bed and breakfast	X	X	X	X
Manufactured home sales	-	-	-	-

Commercial and retail uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Nightclub	X	-	X	X
Office: medical	X	X	X	X
Office: professional	X	X	X	X
Outdoor recreation facility	X	X	X	X
Personal and business service shop	X	X	X	X
Print shop	X	X	X	X
Restaurant, bar	X	X	X	X
Retail store (no more than 10,000 sq. ft.)	X	X	X	X
Retail store (greater than 10,000 sq. ft.)	X	-	X	X
Special services	-	-	-	-
Travel plaza, truck stop	-	-	-	-
Vehicle auction	-	-	-	-
Veterinary clinic	X	X	X	X

2.2.2.4 Industrial Uses

Industrial uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
General industrial use	-	-	-	-
Heavy industrial use	-	-	-	-
Junkyard	-	-	-	-
Light industrial use	-	-	X	X
Research laboratory	-	-	X	X
Self-storage facility	-	-	-	-
Trade use	X	-	X	X
Vehicle minor repair facility	X	-	X	X
Vehicle major repair facility	-	-	-	-
Vehicle storage facility	-	-	-	-
Warehouse and distribution facility	-	-	X	X

2.2.2.5 Institutional Uses

Institutional and civic uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Amenity center	X	X	X	X
Aquatic facility	X	X	X	X
Athletic facility	X	X	X	X
Cemetery	-	-	-	-
Community facility	X	X	X	X
Golf course	-	-	-	-
Hospital	X	-	X	X
Park	X	X	X	X
Park and ride lot (as principal use)	X	-	X	X
Place of worship or assembly	X	X	X	X
Public utility substation	X	X	X	X
School: no more than 5 students	X	X	X	X
School: at least 6 students	X	X	X	X
Transit station	X	-	X	-

2.2.2.6 Temporary Uses

Temporary uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Construction equipment storage lot	-	-	X	X
Construction field office	X	X	X	X
Garage sale	X	X	X	X
Model home / lot sales	X	X	X	X

Temporary uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Portable storage container	X	X	X	X
Temporary building	-	-	X	X

2.2.2.7. Accessory uses

Accessory uses and structures are intended to allow property owners the full use of their property while maintaining the character of the surrounding area. Accessory uses and structures must be built and used only for purposes that are secondary and normal to the principal use of the property and must be placed on the same lot with the principal use.

Accessory uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Antenna, radio hobbyist $\leq$ max ht in district	X	X	X	X
Antenna, radio hobbyist $\geq$ max ht in district	-	-	-	-
Antenna, non-residential: $\leq$ 15 ft. above roofline	X	X	X	X
Antenna, non-residential use: other	X	X	X	X
Wireless facility: attached	X	X	X	X
Wireless facility: concealed	X	X	X	X
Wireless facility: freestanding	-	-	-	-
Donation drop-off box	X	X	X	X
Drive through facility	X	X	X	X
Home occupation	X	X	X	X
Residential accessory structure	X	X	X	X
Satellite dish	X	X	X	X
Swimming pool	X	X	X	X
Vending machine (outdoor)	X	X	X	X
Free-standing cisterns	X	X	X	X
Wind energy system	X	X	X	X

2.2.3. Applicability and enforcement

2.2.3.1. New and undefined uses

As commerce and technology evolve, new types of land uses will develop and forms of land use not anticipated may seek locations in the city. To provide for contingencies, Development Services staff will consider the appropriateness of an undefined use in this PUD and may administratively approve such uses. Approval criteria include:

- Impacts of the use, including externalities and use of public services and infrastructure
- The use is similar in nature and impact to a use listed and defined as a permitted use in the PUD
- The use is not similar in nature and impact to a use defined and listed as a prohibited use in the PUD, or prohibited in the PUD but permitted in a different district
- The use conforms to the intent of this PUD
- The interpretation does not lower the protection given to the public by this PUD
- The use does not have the potential to create a dynamic that would harm the vitality or future development potential of surrounding commercial, industrial and residential areas
- Performance standards and conditions for uses similar in nature and impact are also considered

If Development Services staff finds the proposed land use is not appropriate for the district, the applicant may appeal the decision to the City Council within 60 days of determination.

2.3. Use Specific Design Standards

2.3.1. Large item sales and rental (Class 1, 2, and 3)

2.3.1.1. Architecture

Separate structures (service building, car wash, used car sales building, etc.) on a site must share architectural detail and design elements similar or compatible to the host building to provide a cohesive project site.

Vehicle service areas and bays must be screened or sited so they are not visible from the street.

Garage doors cannot face the street.

Garage doors must be integrated into the overall design theme of the site with color, texture, and windows.

2.3.1.2. Parking, circulation, and stacking

Vehicle display parking and inventory areas are not exempt from site planning standards.

Large expanses of concrete or asphalt must be avoided. Unrelieved pavement in vehicle display areas and other areas often visited by customers must be limited by using landscaping, contrasting colors and banding or pathways of alternate paver material.

Vehicle/pedestrian conflict points must be clearly defined with textured and colored pavement or pavers.

Service areas must provide adequate stacking space that does not impede vehicle circulation through the site or result in vehicles stacking into the street.

2.3.1.3. Landscaping

Vehicle display parking and inventory areas are not exempt from landscaping standards.

Inventory cannot be stored, parked or displayed in landscape areas.

2.3.2. Vertical mixed use

2.3.2.1. Definition

A single building containing more than one type of land use; or a single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified complementary, cohesive whole. Vertical mixed use buildings are building where two or more different uses occupy the same building usually on different floors, for instance, retail on the ground floor and office and/or residential uses on the second and/or third floors.

2.3.2.2. Applicability

Vertical mixed use buildings and development containing residential uses permitted in table 2.2.2.2 and commercial and retail uses permitted in table 2.2.2.3 are permitted in designated areas conforming to **Exhibit A, PUD Development Plan.**

Exhibit A- PUD Development Plan



3. Site Design Standards

3.1. General Standards

3.1.1. Utilities

3.1.1.1. Utility lines

All new utility service lines must be placed underground. Transmission lines are exempted.

3.1.1.2. Utility boxes

- Utility boxes must be as small as practical.
- Utility boxes greater than 2 ft. tall cannot be placed in the clear vision area, or interfere with use of streets, alleys, sidewalks, and bicycle paths.
Utility boxes in the front yard on a block must be painted a uniform earth tone color.

3.1.2. Lot dimensions and area

Required lot dimensions and area are as follows:

	Single Family				Two-to-Four Unit	Single Family Attached	Multifamily	Vertical Mixed Use; Institutional	Commercial and Retail	Industrial
	Detached	Detached alley load, cul-de-sac or detached garage	Zero Lot Line	Village						
Lot area (min)	5,175 sq. ft.	5,500 sq. ft.	4,950 sq. ft.	4,500 sq. ft.	4,500 sq. ft.	1,500 sq. ft. per unit	20,000 sq. ft.	10,000sq. ft.	10,000sq. ft.	43,560 sq. ft. (1 ac)
Lot width at front setback line (min)	45 ft.	45 ft.	45 ft.	45 ft.	45 ft.	20 ft.	100 ft.	75 ft.	75 ft.	100 ft.

- Flag lots must have at least 30 ft. frontage along a public right-of-way.

3.1.3. Building envelope

3.1.3.1. General

If there is a conflict among the setback and landscape/buffer yard standards in this PUD when applied to a certain site, the setbacks set forth in this section will apply.

3.1.3.2. Primary and accessory structures

Default bulk standards for primary and accessory structures are as follows:

	Single Family			Two-to-Four Unit	Single Family Attached	Multifamily	Vertical Mixed Use; Institutional	Commercial and Retail	Industrial
	Detached	Zero Lot Line	Village						
Front yard (min)	15 ft.	15 ft.	15 ft.	15 ft.	15 FT	15 ft.	5 ft.	10 ft.	25 ft.
Front yard on loop lane (min)	15 ft.	10 ft.	10 ft.	n/a	n/a	n/a	n/a	n/a	n/a
Front yard: garage door (min)	20 ft.; 20 ft. side load yard	20 ft.; 20 ft. side load yard	20 ft.; 20 ft. side load yard	20 ft.	20 ft.; 20 ft. side load yard	25 ft.	20 ft.	25 ft.	25 ft.
Side yard (min)	5 ft.	0 ft. one side, 12 ft. other	5 ft.	5 ft.; 0 ft. for common walls	5 ft.; 0 ft. for common walls	15 ft.	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses
Rear yard (min)	15 ft.	10 ft.	15 ft. (house and garage)	15 ft.	15 ft.	25 ft.	25 ft.; 50 ft. from existing residential uses or building height	25 ft.; 50 ft. from existing residential uses or building height	25 ft.; 50 ft. from existing residential uses
Side and rear yard for accessory building (min)	5 ft.	5 ft.	5 ft.	5 ft.; 0 ft. for common walls	5 ft.	15 ft.	Same as main building	Same as main building	Same as main building
Spacing between buildings (min)	10 ft.	10 ft.	10 ft.	10 ft.; 0 ft. for common walls	10 ft.; 0 ft. for common walls	20 ft.	0 ft. for common walls or 20 ft.	0 ft. for common walls or 50% height of taller building, at least 20 ft.	0 ft. for common walls or 50% height of taller building, at least 20 ft.
Building height (max)	35 ft. / 2.5 stories	35 ft. / 2.5 stories	35 ft. / 2.5 stories	35 ft. / 3 stories	3 stories	3 stories	3 stories; 5 stories along US 79, FM 685 and SH 130	3 stories; 5 stories along US 79, FM 685 and SH 130	3 stories
Building height, accessory (max)	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.

Accessory structures are prohibited between the front building line of the primary building and the public right-of-way.

The cumulative gross floor area of all accessory structures on the site may be no more than 25% of the yard where they are located.

Accessory structures must be placed at least 10 ft. or a distance equivalent to their height from primary structures on a site, whatever is lesser.

Building permitting and setback standards do not apply to accessory structures no more than 20 sq. ft. in area

Required buffer yards may result in larger required setbacks.

3.1.4. Riparian setbacks

Minimum structural setbacks from riparian areas (edge of 100-year floodplain or delineated wetlands), wherein structures are defined as substantial impervious cover improvements, are:

- Watercourses draining an area at least 0.5 square mile and having a defined bed and bank, designated 100-year flood plains, and Category 3 wetlands: 0 ft.
- Watercourses draining an area of 0.5-20 square miles, and Category 2 wetlands: 5 ft.
- Watercourses draining an area of greater than 20 square miles, and Category 1 wetlands: 10 ft.

3.1.5. Setback encroachment and exceptions

These uses and structures may encroach into a yard or required setback as follows:

Type of structure or use	Residential uses	Non-residential uses
Air conditioning equipment	Any part of the side and rear yard	n/a
Arbors and trellises	Any yard, at least 5 ft. from neighboring PL	
Awnings	no more than 3 ft. into front, side or rear setback; may hang over easements	no more than 6 ft. into front, side or rear setback; may hang over easements; may hang over public ROW with approval of City Council
Backflow prevention devices	Any part of the side and rear yard	Any yard on the site
Bay windows, chimneys, entry vestibules less than 8 ft. wide and less than 33% of the wall length, overhanging eaves	no more than 3 ft. into any setback	
Newspaper vending boxes, pay telephones	n/a	Any yard on the site; property must be occupied by a principal building
Open deck and covered patio in which the finish grade is greater than 5 ft. above grade	at least 5 ft. into rear setback, if area underneath is left unscreened/unenclosed	n/a
Open deck and covered patios in which the finish grade is no more than 5 ft. above grade	No more than 10 ft. into rear setback	n/a
Ramps and other access devices required by the ADA.	Any yard on the site	
Retaining walls	Any yard on the site	
Satellite dishes at least 1m in diameter	Side and rear yard, at least 10 ft. from PL	

Encroachments across property lines, into the public right-of-way, or into utility, drainage, access, conservation or riparian easements are prohibited.

3.1.6. Buffer yard

3.1.6.1. Buffer yards between lots

Buffer yards planted and/or screened in conformance to landscape and fencing standards in this PUD, are required between adjacent lots as follows. A buffer yard shall be measured from property line of the adjacent development use. Sidewalks and internal walkways are a permitted use within a buffer yard.

Proposed development	Adjacent development				
	Residential 1-4 Units	Residential 4+ Units	Vertical Mixed Use, Institutional	Commercial and Retail	Industrial
Residential: 1-4 Units	n/a	5 ft.	5 ft.	25 ft.	50 ft.
Residential: 4+ Units	5 ft.	n/a	n/a	n/a	50 ft.
Vertical Mixed Use, Institutional	10 ft.	10 ft.	n/a	n/a	25 ft.
Commercial and Retail	25 ft	10 ft.	n/a	n/a	25 ft.
Industrial	50 ft. + 6 ft. min tall masonry wall or 6 ft. min tall earthen berm (both wall/berm and footage required)	50 ft. + 6 ft. min tall masonry wall or 6 min ft. tall earthen berm (both wall/berm and footage required)	25 ft.	25 ft.	n/a
A 6ft ht. min. tall masonry (brick, stone, decorative CMU, similar materials) wall or 6 ft. ht. min. tall earth berm may substitute for buffer yard up to 100 ft. in depth.					
Buffer yards must be landscaped per Section 3.5.					

3.1.6.2. Landscape buffer yards between parking lots and streets

Landscape buffer yards, planted per landscaping standards in Section 3.5, are required between a parking lot and a street as follows:

- SH 130 and FM 685: 10 ft. from right-of-way.
- Other streets: 5 ft. from right-of-way.

3.1.6.3. Landscape buffer yards elsewhere

- Landscape buffer yards, planted per landscaping standards in Section 3.5, are required between a development perimeter wall along a street between wall and sidewalk or right-of-way edge: 5 ft. from sidewalk or right-of-way.

3.1.7. Residential adjacency

3.1.7.1. Loading area screening

Off-street loading areas must be screened from view, to the greatest extent practical, using one or more of the following: Wing walls, landscape screens, changes in building orientation, and/or other architectural elements to buffer loading docks located less than 150 ft. from a residential use, lodging establishment, nursing home or assisted living facility.

3.1.7.2. Vehicle intensive use screening

One or more of the following: wing walls, landscape screens, changes in building orientation, and/or other architectural elements must be used to the greatest extent practical to buffer drive-through aisles and mechanical commercial uses when they are located less than 150 ft. from a residential use, lodging establishment, nursing home or assisted living facility.

3.1.7.3. Vehicle service bays

Vehicle service bays and loading area garage doors located less than 150 ft. from a residential use must face away from residential uses, unless separated by a building or permanent architectural feature. Walls 6 ft. ht. min. (or vegetative screening) separating service bays from a residential use must be masonry (stone, brick, decorative CMU, similar materials) with no openings.

3.1.7.4. Dumpster enclosures

Dumpster enclosures in nonresidential areas of the PUD must be located at least 50 ft. from a residential use.

3.2. Site Design

3.2.1. Siting and Orientation

3.2.1.1. One to Four Household, Attached Single Family Dwellings and Developments

3.2.1.1.1. Applicability

These standards apply to all development with residential uses other than multiple unit dwellings.

3.2.1.1.2. Building orientation

One and two household dwellings must be oriented where the front façade is parallel to and facing the street as much as possible, and not another dwelling on an adjacent lot. On corner lots, houses may face the corner of either fronting street.

3.2.1.2. Multiple Unit Household Development and Structures

3.2.1.2.1. Applicability

These standards apply to all residential development with multiple unit dwelling uses.

3.2.1.2.2. Building orientation

Buildings must be oriented towards the perimeter streets, or an internal drive or road network, rather than orientation only to internal parking lots.

3.2.1.2.3. Common open space

3.2.1.2.3.1. Common open space required

The minimum amount of common open space (as a percentage of net land area) for a multiple household development is 10%.

3.2.1.2.3.2. Common open space siting

Common open space must be amassed into meaningful, quality open spaces. Clustering of buildings is encouraged to minimize small, narrow, unassigned strips in front of and between buildings. Designated common open space may be in a natural, undisturbed state, landscaped for more formal courtyards or plazas, or developed for active or passive recreation.

Common open space land must be compact and contiguous to the maximum extent practicable, unless the land is used as a continuation of an existing greenway, trail, or other linear park, or unless specific topographic features require a different configuration.

Common open space must be reasonably accessible to all residents of the development.

3.2.1.2.3.3. Areas not considered as common open space

The following do not count towards required common open space:

- Private lots, yards, balconies and patios dedicated for use by a specific unit.
- Public right-of-way or private streets and drives.
- Parking areas and driveways for dwellings.
- Land covered by structures except ancillary structures associated with use of open space such as gazebos and picnic shelters.
- Designated outdoor storage areas.
- Land areas between buildings less than 30 ft., and land area between a building and parking lots or driveways less than 30 ft.
- Required rear and side yard setbacks. Detention/retention facilities, including drainage swales, unless for use as accessible and useable year-round community amenities for residents of the development (e.g., picnic areas, passive recreation areas, playgrounds, ponds for fishing and/or boating, walking trails, etc.).
- Wetlands that are saturated for greater than 50% of the year.

3.2.1.3. Non-Residential Sites of Structures

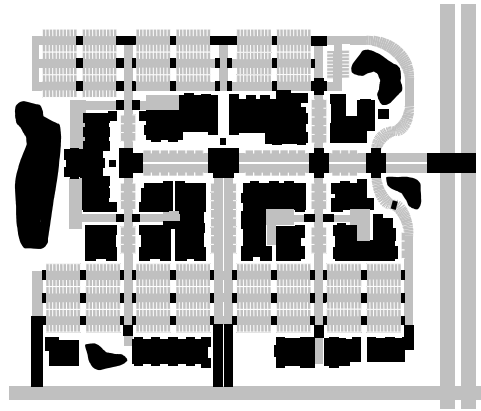
3.2.1.3.1. Applicability

These standards apply to all development with commercial and retail uses.

3.2.1.3.2. Orientation to streets

The primary façade and pedestrian entrance of a building must be oriented towards the public right-of-way when not facing an internal street or drive.

In shopping, commercial centers and developments with multiple buildings, buildings must be oriented towards either the perimeter streets or an internal drive or road network that orients buildings towards an internal street, rather than orientation only to internal parking lots.



Retail Village

3.2.1.3.3. Orientation to walkways

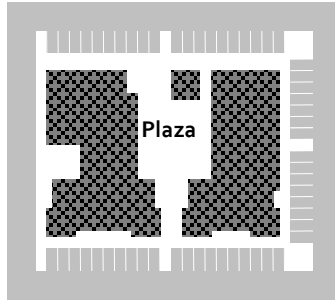
One building entrance must open directly onto a connecting walkway with pedestrian frontage. Sides of a principal building facing a public street must have one or more customer entrances.

3.2.1.3.4. Plazas

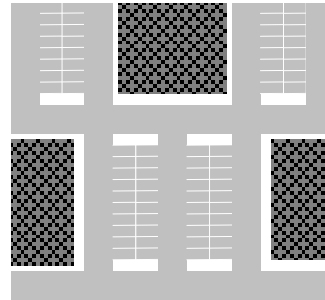
Commercial buildings 25,000 SF and larger must be placed in a way that creates plazas and/or pedestrian gathering areas that are large enough to encourage active pedestrian use and buffer pedestrians from street traffic .

3.2.1.3.5. Clustering

Clustering of buildings in larger master planned and multiple building developments is required, to the greatest extent practical.



Do this: cluster buildings to create plazas and pedestrian gathering areas



Don't do this : separate buildings with parking lots

3.2.1.3.6. Building perimeter wall spacing from driving surfaces

Building walls must be placed at least 5 ft. from drive aisles and parking areas. This buffer area may be breached for loading areas, drive-through windows, garage access and similar uses.

3.2.1.3.7. Solar orientation

When building orientation to the east and west is unavoidable, landscaping, canopies, arcades, roof overhangs, or similar features must be used to shade facades and building walls that face into the summer afternoon sun to the greatest extent practical.

3.2.2. Sidewalks

3.2.2.1. Sidewalks required

Sidewalks in conformance to Section 4.8 and Section 4.9 must be provided along both sides of public or private street frontages to promote an active pedestrian environment and reduce potential conflicts.

3.2.2.2. Sidewalks required for use change

Sidewalks in conformance to Section 4.8 and Section 4.9 must be constructed along the public right-of-way adjacent to any lot that changes use. A Certificate of Occupancy for new construction will not be issued until the sidewalk is constructed and accepted by the city.

3.2.3. Internal Pedestrian Circulation

3.2.3.1. Applicability

The following standards apply to all development with residential uses with multiple unit dwellings, and commercial, retail and industrial uses.

3.2.3.2. Internal walkways

Internal walkways must be provided along all façades featuring a customer entrance and along all façades abutting public parking areas. Internal walkways must be placed at least 4 ft. or more from the façade or wall along at least 30% of its length, to provide opportunities for beds for foundation landscaping, outdoor seating and patios, and building articulation (except for storefronts with a zero setback). Sidewalks are not required within service areas, loading docks and other non-customer areas.

3.2.3.3. Pedestrian connectivity

Connecting walkways, at least 5 ft. wide for a commercial development and at least 5 ft. for MF development, must link perimeter public sidewalks to primary building entries, including through parking areas, and to buildings on adjacent parcels, to the greatest extent practical. Circulation patterns must be as obvious and simple as possible. All likely pedestrian routes must be considered to minimize shortcuts to the extent practical through parking and landscape areas.

3.2.3.4. Conflict points

Internal pedestrian walkways must be distinguished from driving surfaces by textured and colored pavement or similar contrasting technique, to emphasize conflict points and enhance pedestrian safety.



Well-defined conflict point

3.2.3.5. Aggregation of plazas

Pedestrian areas and plazas shall be aggregated in high activity areas to the greatest extent practical, and not distributed in low impact areas such as building peripheries, areas behind blank walls.

3.2.3.6. Orientation of plazas

Pedestrian areas and plazas shall be oriented to views of activities, architectural landmarks or useable open space wherever possible.

3.2.4. Public transit facilities

Commercial and residential developments that could generate high volumes of transit use must accommodate the potential for public transit facilities. If the development is in an existing transit service area, it must provide for an appropriately scaled transit facility; otherwise, the development must make accommodations for a potential future public transit facility.

Transit routes, access points and shelter locations should be addressed along city adopted transit streets in and on the perimeter of nonresidential projects. Bus stop areas and bus shelters within a city adopted transit service area must be placed close to significant clusters of buildings.

There must be an uninterrupted durable pedestrian path connecting transit stops and/or shelters with the nearest sidewalk or pedestrian path.

3.2.5. Service Areas

3.2.5.1. Applicability

These standards apply to all development with multiple unit residential dwellings, commercial, retail and industrial uses.

3.2.5.2. Orientation

Service entrances, loading docks, waste disposal areas and similar uses must be oriented toward service roads and drives to the greatest extent practical and away from the public right-of-way and residential areas, unless adequately screened.

Service areas may not be located where they will be readily visible from primary facades of adjacent buildings without appropriate screening to screen service area views from the primary facades of adjacent or where they will harm important or identified view corridors.

3.2.5.3. Screening

Service entrances, loading docks, waste disposal areas and similar uses must be screened from public streets, pedestrian gathering areas and primary building entrances with fencing, walls and/or landscaping, with design elements compatible with the architectural theme of the host building.



Effective use of wing wall used to screen loading dock

3.2.5.4. Coordination of service area locations

Service area location must be coordinated with adjacent developments wherever possible to promote use of shared service drives.

3.2.5.5. Access routes

Service circulation in a development must be designed to provide safe movement for anticipated vehicles.

Fire lanes and routes for service, emergency and utility access must be clearly marked.

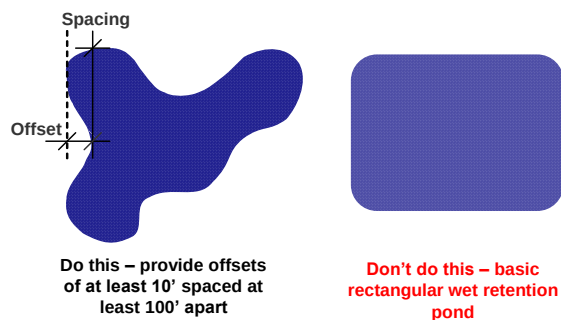
3.2.5.6. Gas tank bed pipes

Tank vent pipes must be screened, placed in an inconspicuous location and painted a dark color, or integrated into or adjacent to the building.

3.2.6. Water Bodies and Retention Areas

3.2.6.1. Shape

Permanent wet retention ponds visible from a street or other public area must be designed to appear natural by having edge alignment offsets to the greatest extent practical.



3.2.6.2. Project incorporation

Natural and manmade water bodies at least 20,000 sq. ft. that are located next to a public right-of-way must be integrated into the overall design of a development in one of the following ways:

- Provide a walkway at least 5 ft. wide, with native tall trees on average 30 ft. centers and a bench and/or picnic table next to the water body every 150 ft.
- Provide a plaza or pedestrian gathering area at least 200 sq. ft. with a bench and/or picnic table close to the water body.

3.2.6.3. Slope

Retention basins must be designed with at least 5:1 side slopes to 2 ft. below the normal water line.

Fenced retention basins will be approved administratively by City Engineer staff, only in extreme situations, and may be placed to the side and/or rear of the parcel as far from a public street as possible.

3.2.6.4. Fencing

Metal decorative fences may be used to fence manmade water bodies and retention basins.

3.2.7. Land Disturbance

New development should respect and maintain the natural topography on a site through sensitive site organization and minimizing land disturbance. Layout of new development should follow and respect the natural topography of the site to the maximum extent possible. Over lot grading to create a large level lot or site shall be limited to disturbed sites and in all cases minimized to the extent practical.

Extensive grading or unusual site improvements (e.g. large retaining walls) to force a preconceived design onto a particular piece of property is strongly discouraged. Berms, channels, swales, and similar man-made changes to the landscape must be designed and graded to be an integral part of the natural landscape and to provide a smooth transition in changes of slope.

3.3. Parking and Access

3.3.1. General standards

3.3.1.1. Applicability

Parking, access and design standards apply to all uses, unless otherwise stated. Vehicle display and storage areas at vehicle dealers, vehicle repair businesses and vehicle storage facilities, and areas intended for the storage or movement of vehicles on industrial sites are not exempt.

3.3.1.2. Large vehicles and equipment

Outdoor storage or overnight parking of semi-trucks, semi-trailers, and other vehicles having a gross vehicle weight rating of at least 17,000 pounds is prohibited in residential and commercial use areas, except within commercial service or storage yards and loading areas. Exceptions are pickup trucks, personal recreational vehicles not being used for habitation, and vehicles associated with a business on a commercial site. Construction equipment may only be stored on lots in residential and commercial use areas while construction is permitted.

3.3.2. Access

3.3.2.1. Shared access

- Shared and master planned access, rearage roads and/or access easements across parcels are permitted and encouraged and will be required where considered necessary by Development Services staff and/or city engineer, with administrative approval, to minimize potential congestion, decrease accident potential and reduce the number of curb cuts and conflict points along a street.
- Commercial and individual development must be designed to provide for shared access with adjacent commercial and industrial parcels to the greatest extent practical. Provisions must be made for connection of pedestrian and vehicle circulation systems with adjacent parcels.
- Property owners cannot block access to parking lot connections on adjacent parcels.
- Vehicular access easements from one lot to adjacent lots and for private driveways within a lot may be provided on the subdivision plat or by separate recorded instrument. Such access easements may be specifically defined or blanket access easements.

3.3.2.2. Curb cuts

- Curb cuts and ramps must be placed at convenient and safe locations. Curb cuts must be limited to the fewest necessary to provide adequate circulation and workable access to a parking area.
- Commercial and industrial driveway connections to public streets shall be designed to align with opposing driveways or be offset a minimum of 80 feet, measured from face of curb or edge of pavement to face of curb or edge of pavement on undivided streets.
- Curb cuts must be spaced at intervals of at least 250 ft., or at least 500 ft. along major arterials, unless this would prevent access to a separate property (not an outparcel) and a rearage road is not possible.
- When a parcel fronts on two different streets, or a street and a rearage road, the curb cut must be from the street with the lower functional classification unless otherwise administratively approved by Development Services staff.
- Curb cuts and ramps must avoid crossing or funneling traffic through loading areas, drive-through aisles and outdoor trash storage and collection areas.

3.3.2.3. Driveway throats

- Driveway throats to parking areas serving <50,000 sq. ft. of commercial, industrial or civic GFA accessing non-arterial streets must be at least 20 ft. long.

- Driveway throats to parking areas serving at least 50,000 sq. ft. of commercial, industrial or civic GFA, and those accessing arterial streets, must be at least 30 ft. long.
- Driveway throat length is measured from the right-of-way line.

3.3.2.4. Entry orientation

Entrance drives should align with focal points in a development such as landmark towers or landscape features, whenever practical.

3.3.2.5. Emergency access

Site design elements must reasonably accommodate access standards of emergency vehicles and services.

3.3.2.6. Service functions

Service functions must be integrated into the circulation pattern in a way that minimizes interaction with customer vehicles and pedestrians.

3.3.2.7. Connectivity for multi-family residential development

Multifamily residential development must not be planned as “pods”, isolated from surrounding development, but instead must be integrated into the larger grid of public streets and internal access driveways. Residential development with multiple unit dwellings must have pedestrian and vehicular connections to adjacent residential and commercial development.

3.3.3. Circulation

3.3.3.1. Circulation routes

- Circulation and parking areas in a development must be designed to be safe, efficient and attractive, considering use by all modes of available transportation.
- Parking lots must provide well-defined circulation routes for vehicles, bicycles and pedestrians that minimize conflicts to the greatest extent practical.
- Circulation routes must focus on main entries and exits, and provide for secondary access points to the greatest extent practical.
- Redundant circulation cannot reduce land available for landscaping or walkways.
- Vehicle circulation paths must be designed and sited to calm traffic where practical without the required need for vertical deflection devices such as speed bumps and humps. Horizontal deflection and psychological traffic calming (traffic circles, corner neckdowns, chicanes, tapers, landscape medians, small turn radii, decorative paving) is encouraged.

3.3.3.2. Safety and conflict points

Circulation areas must be designed so vehicles can proceed safely without posing a danger to pedestrians or other vehicles, and without interfering with parking areas. Standard traffic control devices and signs must be used to direct traffic where necessary.

To the maximum extent practicable, pedestrians and vehicles must be separated through walkways or sidewalks. Where complete separation of pedestrians and vehicles is not possible, landscaping, bollards, decorative paving, lighting and other permanent methods must be used to delineate pedestrian areas and other conflict points.

3.3.4. Parking Aisles

3.3.4.1. Aisle and curb cut dimensions

Access drive lanes and aisles must have the following widths (excluding added width from curb return areas) at the gutter line:

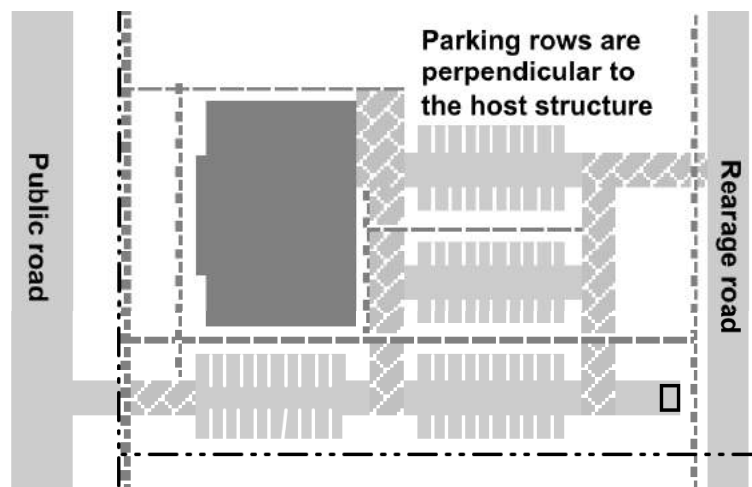
- Residential driveway: 8 ft. - 24 ft.
- Residential parking lot: 10 ft. - 14 ft. one way, 20 ft. - 24 ft. two-way
- Nonresidential parking lot to 99 spaces: 10 ft. - 14 ft. one way, 20 ft. - 24 ft. two-way
- Nonresidential parking lot 100 spaces or more: 10 ft. - 24 ft. one way, 24 ft. - 36 ft. two-way
- Service access driveways: drive width sized for adequate vehicular access and turning movement

Parking area aisles must have these minimum widths:

- Angle 0° / parallel to aisle: at least 12 ft. one way, at least 20 ft. two-way.
- Angle 30°: at least 11 ft. one way, at least 20 ft. two-way.
- Angle 45°: at least 13 ft. one way, at least 21 ft. two-way.
- Angle 60°: at least 18 ft. one way, at least 23 ft. two-way.
- Angle 90°: at least 24 ft.

3.3.4.2. Aisle orientation

In large parking lots, parking aisles must be oriented perpendicular to buildings where practical in order to minimize the need for pedestrians to walk parallel to moving cars and across landscaped areas.



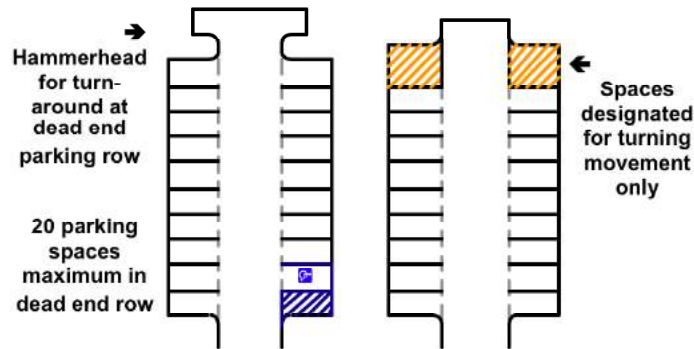
3.3.4.3. Mixture of angles and one-way and two-way aisles

Mixture of one-way and two-way parking aisles, or different degrees of angled parking in a parking area is prohibited, except when individual parking areas are separated by a landscape buffer at least 5 ft. wide.

3.3.4.4. Dead end aisles

Dead end aisles must be avoided wherever possible. Where a dead end aisle is unavoidable, adequate space for unimpeded turn-around must be provided.

Dead end aisles may contain no more than 20 parking spaces.



3.3.4.5. Head-in/head-out and parallel parking from the public right-of-way

Parking areas larger than 12 spaces fronting on residential local street or lower must be designed so vehicles can leave without backing or fronting out onto a public street, or having to reenter a public street to access another aisle on the same lot. Driveways for single household dwelling units are exempted.

3.3.5. Stacking/Queuing Areas

3.3.5.1. Drive-through aisles

Minimum length of off-street stacking lanes for drive-through aisles must be provided as follows:

Bank teller window, ATM: at least 50 ft. measured from teller, window or ATM.

Restaurant drive-through: at least 50 ft. measured from order box, at least 30ft. between order box and first payment or pick-up window.

Other uses with drive-through windows (pharmacy, dry cleaners, etc.): at least 50 ft. measured from window.

Drive-through aisles must be physically separated from parking and circulation areas, and:

- Cannot interfere with the on-site parking and circulation for other vehicles on the site.
- Cannot interfere with on-site parking.
- Cannot result in traffic queuing into a drive aisle, adjacent property or street.

Drive-through aisles must be 10 ft. - 12 ft. wide.

Drive-through aisles and pickup windows cannot be on a street-facing side of the building.

Reduction of minimum length of queuing length may be approved by Development Services staff if it can be demonstrated that it is necessary and feasible.

3.3.5.2. Gas pumps

There must be at least 20 ft. space for one vehicle stacked behind the vehicle at the far end of a row of gas pumps, and room for other vehicles to bypass stacked vehicles at fueling areas.

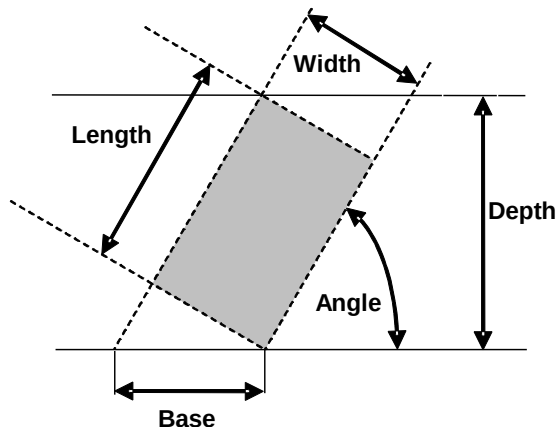
3.3.6. Parking and Loading Space Bulk Standards

3.3.6.1. Parking space dimensions

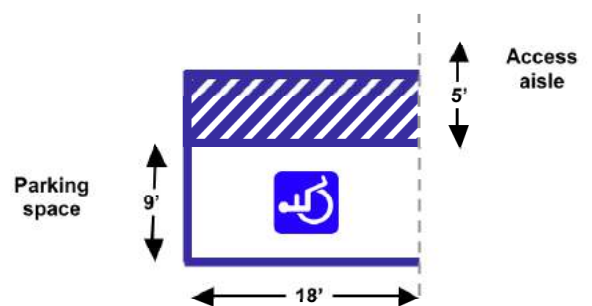
Parking spaces must have the following dimensions:

- Standard parking space (perpendicular or angled to the aisle): 9 ft. x 18 ft.
- Standard parking space (parallel to the aisle): 8 ft. x 23 ft.
- Handicapped parking space: 9 ft. x 18 ft., plus a clear 5 ft. x 18 ft. loading area to the side. Two handicapped spaces may share one loading area.
- Motorcycle space: 4.5 ft. x 9 ft.
- Off-street loading space: 12 ft. x 25 ft.
- Bicycle space: a stationary object where a user can secure both wheels and the frame of the bicycle with a 6 ft. cable and lock. The stationary object may be a freestanding bicycle rack, a wall-mounted bracket; an enclosed bicycle locker; a three point bicycle rack; or a fenced, covered, locked or guarded bicycle storage area.

Parking space measurements



Handicapped parking space



3.3.6.2. Parking space location

3.3.6.2.1. Lots and Parcels Fronting along FM 685, Carl Stern Boulevard and SH 130

Parking for non-residential buildings on non-corner lots must have at least 50% of the parking spaces placed behind the front building line.

Parking for non-residential buildings on corner lots must have at least 30% of the parking spaces placed behind the front building line.

Parking for non-residential buildings larger than 50,000 sf. is exempt from this parking space location requirement.

3.3.6.2.2. Lots and Parcels Fronting along internal streets

Parking for non-residential buildings on non-corner lots must have at least 70% of the parking spaces placed behind the front building line.

Parking for non-residential buildings on corner lots must have at least 50% of the parking spaces placed behind the front building line.

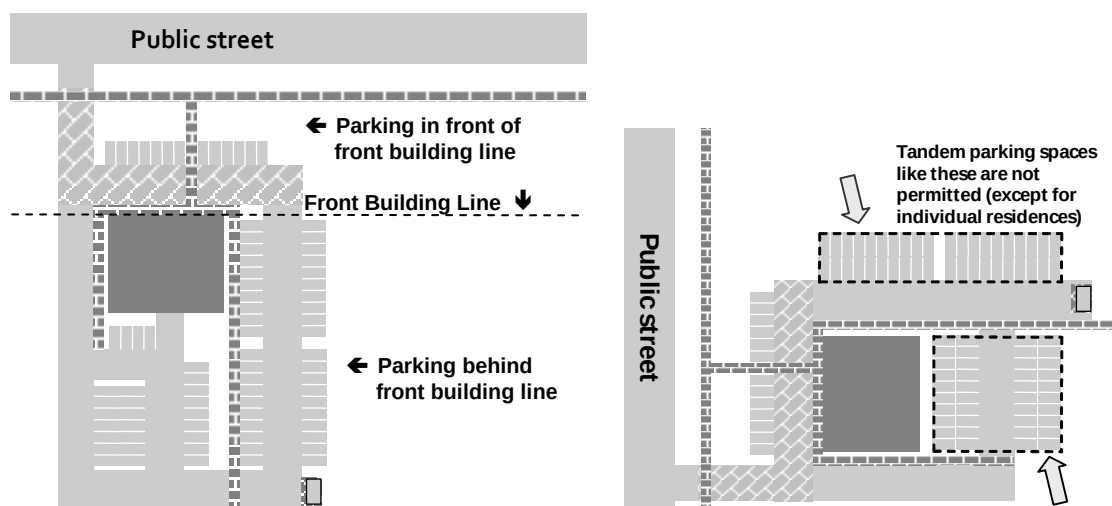
Parking for retail, commercial and industrial uses in buildings larger than 50,000 sf. is exempt from this parking space location requirement.

3.3.6.2.3 Lots and Parcels Fronting along UP Railroad Right-Of-Way

Parking for non-residential uses may be located without limitation, provided that landscape screening is provided along the UP Railroad right-of-way that comply with requirements set forth with Section 3.5.3.4 Parking lot and vehicular use screening.

3.3.6.3. Tandem parking

Tandem parking spaces, where the only access to a parking space is from another parking space, are permitted only for individual residential units.



Parking for non-residential buildings

3.3.7. Parking and Loading Space Number Standards

3.3.7.1. Required parking spaces

Uses should offer only the minimum amount of parking that is necessary to meet anticipated normal demand. The number of required off-street parking and truck loading spaces for a use is as follows.

Residential use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Dwelling unit: single household	2 per dwelling	n/a	n/a
Dwelling unit: single household + accessory unit, at least 2 units	1.5 per dwelling	n/a	n/a

Commercial use classification	Required spaces (minimum)		Required loading spaces (minimum)
Multi-tenant retail buildings (shopping centers); indoor recreation facility	1 per 400 sq. ft. GFA	n/a	1 per tenant; may be waived by Development Services staff
Restaurant, bar/tavern, adult oriented use (live entertainment), nightclub, club/lodge	1 per 150 sq. ft. GFA	n/a	1
Retail uses, including: art studio, performing; art studio, visual; bank; bakery, retail; convenience store; funeral home; gas station; grocery store; instructional facility; large item sales and rental; personal and business service shop; print shop; retail store; vehicle minor repair.	1 per 400 sq. ft. GFA	n/a	1 per tenant; may be waived by Development Services staff
Office uses, including medical office, professional office, veterinary clinic	1 per 400 sq. ft. GFA	n/a	1 per building
Child day care facility, pet day care and boarding, elderly day care facility	1 per employee + 3 (n/a for child day care in a home)	n/a	n/a
Lodging establishment (all) (restaurants, bars, nightclubs and other accessory uses computed separately)	1.2 per guest room + 1 per 100 sq. ft. GFA meeting/banquet room	n/a	1 + 1 per 5000 sq. ft. GFA meeting room area
Entertainment facility: theater	1 per 4 seats	n/a	1
Farm product sales, flea market, kennel, plant nursery, greenhouse	No requirements	n/a	n/a

Industrial use classification	Required spaces (minimum)		Required loading spaces (minimum)
Light industrial use, trade use, vehicle major repair	1 per 1000 sq. ft. GFA	n/a	1 per 2500 sq. ft. GFA or 2 per user/tenant, whatever is more
Research laboratory	1 per 400 sq. ft. GFA	n/a	1 per building
Warehouse and distribution facility	1 per 2000 sq. ft. GFA	n/a	1 per 5000 sq. ft. GFA
Vehicle storage facility	1 per 400 sq. ft. GFA office space + 1 per stored vehicle	n/a	n/a

Institutional use classification	Required spaces (minimum)		Required loading spaces (minimum)
Community facility, amenity center	1 per 500 sq. ft. GFA	n/a	n/a
Hospital (excluding general medical office space)	0.5 per bed + 1 per 500 sq. ft. GFA inpatient treatment area + 1 per 400 sq. ft. GFA outpatient treatment area	n/a	1 per 20,000 sq. ft. GFA
Place of worship or assembly	1 per 5 seats in primary sanctuary or assembly area	n/a	Required for accessory uses (school, etc.)
School: elementary, middle and high	1 per 10 seats in auditorium/cafatorium	n/a	1 per cafeteria + 1 per gymnasium + 1 per assembly hall + 1 bus per 2 classrooms

Temporary use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Christmas tree lot, carnival, construction equipment field storage lot, vehicle sales-off site	No set minimum; parking plan requires approval by CD staff	No set maximum n/a	No set minimum; parking plan requires approval by CD staff
Construction field office	3 per facility	n/a	n/a
Garage sale, lot sales office, model home	No requirements	No requirements	No requirements

Accessory use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Agricultural activity, antenna-radio hobbyist, antenna-non-residential use, boat house, CMRS facility (attached), dock, home occupation, satellite dish, swimming pool	No requirements	No requirements	No requirements
CMRS facility (freestanding), public utility substation	No requirements	No requirements	1 per site
Drive-through facility	Refer to queuing area standards	n/a	n/a

3.3.7.2. Variance to minimum parking requirements and parking space location

Reducing minimum parking requirements may be approved by the Board of Adjustment if it can be demonstrated that the parking space location or required minimum number of spaces are not necessary to meet the normal day-to-day needs of a proposed use.

3.3.7.3. Handicap designated parking spaces

Handicapped designated parking spaces must be placed on the shortest possible accessible route of travel to an accessible building entrance. The number of handicapped designated parking spaces required for nonresidential uses is:

Total spaces	<25	36-50	51-75	76-100	101-150	151-200	201-300	301-400	401-500	501-1000	greater than 1000
Handicapped spaces	1	2	3	4	5	6	7	8	9	2%	20 + 1 per additional 100 total spaces

3.3.7.4. Motorcycle parking spaces

One or more motorcycle parking spaces must be provided for every 100 standard vehicle parking spaces provided for non-residential uses, when the parking lot has greater than 50 spaces.

3.3.7.5. Bicycle parking

One or more bicycle parking spaces must be provided for every 20 vehicle parking spaces required as a minimum for non-residential uses. Bicycle parking design must follow standards recommended by the Association of Professional and Bicycle Professionals.

3.3.7.6. Shared parking facilities

Agreements which share parking between uses with non-conflicting parking demands (eg. a church and a bank) are encouraged as a means to reduce the amount of land area devoted to parking if the applicant can demonstrate that shared parking is feasible. Where different uses create staggered parking demand periods, shared parking calculations among adjacent parcels is permitted to justify reducing the amount of required parking.

3.3.7.7. On-street parking

Designated on-street parking spaces no more than 200 ft. from the main entrance of a building with a commercial use may be counted towards the required amount of parking spaces for commercial and retail use. These spaces do not count towards the permitted parking space location requirements. Designated on-street parking spaces no more than 100 ft. from the entrance of a building may be counted towards the required amount of parking spaces for residential use with multi-unit dwellings. On-street parking being counted towards the required amount of parking spaces for any use or business, other than a residential amenity center, recreation use, common open space use, or parkland must not encroach into single family detached residential areas.

3.3.7.8. Building or use enlargement

When a building or use is enlarged 25% or more, additional parking and loading spaces, in compliance with Section 3.3.7, minimum required parking, must be provided based on the building area associated with the enlargement.

3.3.7.9. Space computation and fractions

Fractional results will be rounded up when computing the number of required parking and loading spaces.

3.3.8. Landscaping Areas

3.3.8.1. Applicability

These standards do not apply to single household dwellings, two to four household dwellings, single family attached dwellings, or parks and common open space.

Specific plant material standards are detailed in the landscaping standards in this chapter. Parking setback and buffer yard standards are detailed in the bulk standards section in this PUD.

3.3.8.2. Parking lot interior landscaping

Landscape areas must consist of at least 10% of the interior area of a parking lot. Landscaped islands may be clustered or evenly distributed.

3.3.8.3. Parking lot entrances

Landscape islands at least 10 ft. wide must be used to define primary parking lot entrances.

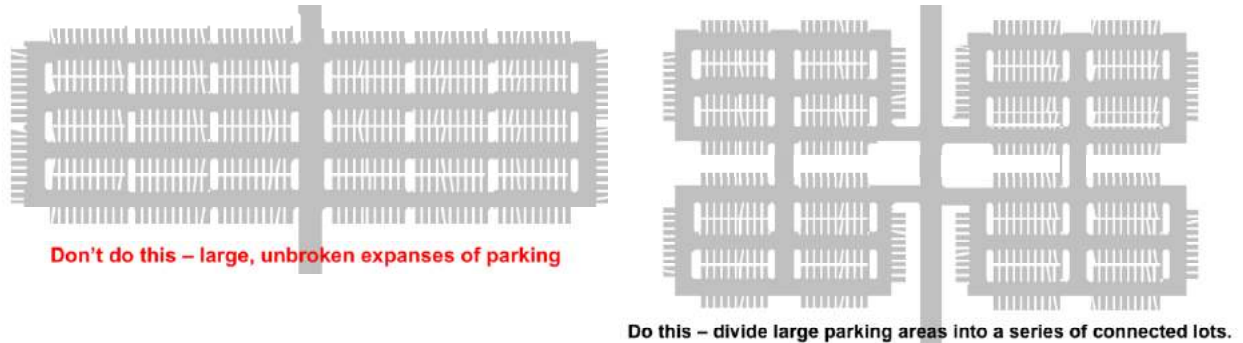
3.3.8.4. Parking rows

Landscape islands of at least 180 sq. ft. must be placed at both ends of a parking row.

Parking rows cannot extend for greater than 10 spaces without an interrupting landscape island of at least 180 sq. ft.

3.3.8.5. Division of large parking lots

Large parking lots must be visually and functionally segmented into smaller lots with no more than 150 parking spaces, by landscape islands at least 10 ft. wide, to the greatest extent practical.



3.3.8.6. Connecting walkways

The landscape area following a connecting walkway within a commercial center must be at least 5 ft. wide.

3.3.8.7. Parking overflow to landscape areas

Parking cannot overflow onto areas outside of the designated parking area that does not meet the minimum pavement standards for the use. Parking and vehicle display on pedestrian and landscaped areas is prohibited.

3.3.8.8. Street corners

A corner landscape area must be provided if parking or a drive aisle is between a building and the street corner. Parking spaces and drive aisles must be at least 30 ft. from the intersection point of property lines at the corner.

3.3.9. Development Standards

3.3.9.1. Surface standards and paving materials

3.3.9.1.1. Permanent surfacing

- Parking and loading areas must have a permanent surface of asphalt, concrete, brick, paver blocks or a solid surface of similar or better durability and performance characteristics.
- Porous pavement and concrete may be used for individual parking spaces and lightly used drive aisles. Porous pavement and concrete is discouraged for busy drive aisles, service drives and truck/freight loading areas. Porous pavement cannot be used for handicapped parking spaces.

3.3.9.1.2. Permanent surfacing exception: single and two-household dwellings

- Porous pavement may be used as a parking surface for single and two household dwellings.

- Driveways may have a “Hollywood driveway” design, where the driving surface is broken up into paved tracks at least 2.5 ft. wide for the wheels, separated by a planted strip.
- Driveway width shall be no wider than a 2-door garage at property line; driveways for 3rd garage door must flare out.
- Parking on an unpaved surface is prohibited.



Separated Hollywood driveway strips

3.3.9.1.3. Permanent surfacing exception: temporary uses

Permanent parking surfaces are not required for temporary uses. A parking plan must be approved for temporary uses, subject to Development Services staff review.

3.3.9.2. Grading and drainage

Parking and loading areas must be graded and drained to dispose of all surface water, in conformance to the approved drainage plan for the site.

3.3.9.3. Markings

Parking spaces, aisles, entryways, loading spaces and queue spaces surfaced in permanent materials must be marked to show their location.

Handicapped parking spaces must be marked with the international symbol of accessibility on the space and on a sign at the head of the parking space.

Motorcycle parking spaces must be marked with a sign at the head of the space, from 3 ft. and 5 ft. above the parking surface.

Parking space markings for one, two and three household dwellings are not required.

3.3.10. Shopping cart return areas

Shopping cart return areas must be defined by curbs and landscaping.

3.4. Architectural design

3.4.1. Single Household and Two- to Four-Household Residence Design

3.4.1.1. Mandatory homeowner association

A mandatory homeowner association shall be created and maintained for all single household and two-to-four-household residential development.

3.4.1.2. Required elements

Single household and two to four household dwellings must include at least one of the following elements:

- Side, detached, rear or alley-loaded garage
- Masonry (brick, stone) wainscot at least 4 ft. on front and side exterior walls, if the side walls are not those materials
- One story scaled entries recessed or covered with a porch, canopy, or other shading device
- Functional front porch at least 72 sq. ft.
- One of the following green building certifications:
National Association of Home Builders National Green Building Program: ANSI ICC 700-2008 National Green Building Standard, Bronze, Silver, or Gold.

U.S. Green Building Council Leadership in Energy and Environmental Design (LEED): Certified, Silver, Gold or Platinum.

3.4.1.3. Exterior Wall Standards:

- Exterior surface area (all stories) of primary buildings shall consist of un-painted clay brick, ledge stone, fieldstone, cast stone, granite, tile, painted or tinted stucco, glass façade, glass block (or alternative glazing e.g. Kalwall) and factory tinted (not painted) split faced concrete masonry unit, cementitious-fiber planking (not panels) or similar material approved by the Development Services staff.
- Solid wood planking, decorative cementitious-fiber panels and other materials approved by the Development Services staff may be used for accent features.
- A minimum of fifteen percent (15%) of the front primary building façade for buildings shall consist of window or door openings.
- All building fronts shall have at least four different design features to break the wall plane. The following are examples of the types of design features that meet this requirement: horizontal off-sets, recesses or projections, porches, breezeways, porte-cocheres, courtyards, awnings, canopies, alcoves, recessed entries, ornamental cornices, display or other ornamental windows, vertical "elevation" off-sets, peaked roof forms, arches, outdoor patios, architectural details such as tile work or moldings integrated into the façade, integrated planters or wing walls, accent materials, varied roof heights, premium roofing materials such as tile or standing seam metal, or similar design features approved by the Development Services staff. Windows shall have a maximum exterior reflectivity of twenty percent (20%).

- Design elements and detailing, including the presence of windows and window treatments, trim detailing, and exterior wall materials, must be continued around the structure. The percentage of design elements and detailing are not required to be consistent on all facades.



Façade with elevation design features, first floor articulation and detached rear garage



Example of façade with elevation design features, individual garage doors (projecting), and articulation of first story



Example of façade treatment through first and second floor articulation, elevation design features, color selection of garage doors (projecting)



Example of elevation design features



Example of elevation design features, first floor articulation, and individual garage doors (flush)



Avoid - flat and boxy 2-story facade with low-pitched roof and lacking elevation design features



Avoid – façade with flat pitch roof, lack of pedestrian-scaled entry and elevation design features

3.4.1.4. Facades - corner

Houses on corner lots shall be articulated on both street facades; continue siding material palette on both street-facing facades and incorporate architectural elements such as side porches, bay windows, gable roofs and similar design elements and detailing on side street facing façade. The percentage of design elements and detailing are not required to be consistent on both facades.



Corner lot/street facing facades - example of elevation detailing continued on both façades



Corner lot/ street facing facades – continuation of elevation design features



Avoid: Side street facing façade that lacks elevation design features



Avoid: Side street-facing facade that lacks elevation design features

3.4.1.5. Garages

3.4.1.5.1. Front-loaded garages

A front-loaded garage may occupy no more than 70% of the house frontage.

3.4.1.5.2. Garage doors - articulation

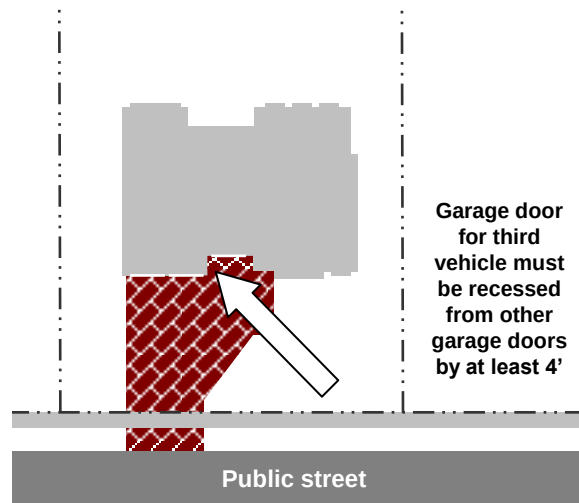
- Garage doors articulation shall include detailing and/or relief in the surface using wood or wood-like finished materials, windows are a preferred element
- Paint colors and/or stain for garage doors shall be compatible with the color palette of the building elevation on which the garage door is located
- Individual garage doors are preferred on street facing facades; garage doors are limited to 2-car garage size.
- The use of 3 garage doors on a street facing facade is discouraged; At least one of the 3 garage doors must be side facing or recessed a minimum of 4 ft. from the other garage doors.



Detailing of the wooden garage door provides required garage door articulation on street facing facades



Three-car garage with detailed, individual garage doors; note required recess of two doors on right



Driveway flares out are required from the property line to accommodate the 3 garages

3.4.1.5.3. Orientation: corner lots and open space lots

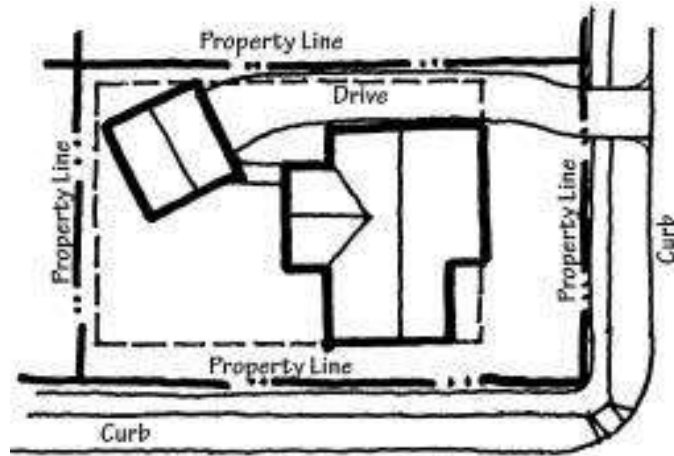
Garages for one and two household dwellings accessed from the fronting street must be located on the interior lot line side of the lot, opposite from the corner or open space lot.



Corner lot: locate garage/driveway away from the corner

3.4.1.5.4. Types of garages

3.4.1.5.4.1. Garage – detached rear



A detached rear garage is a permitted garage type.



Example of detached rear garage



Example of detached rear garage



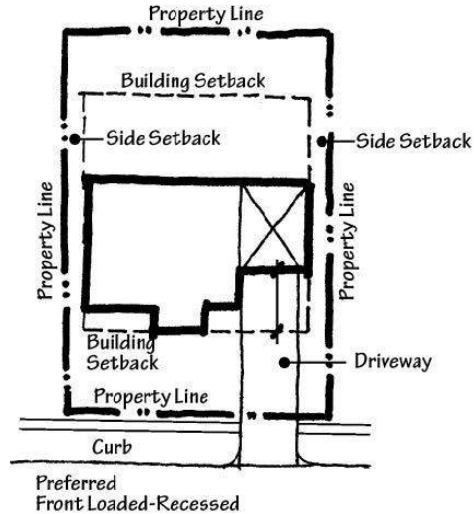
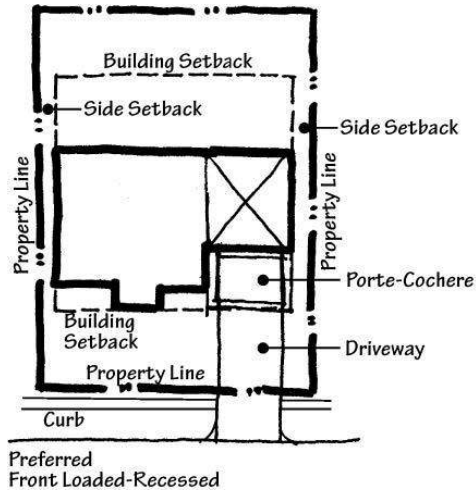
Example of detached rear garage



Example of detached rear garage

3.4.1.5.4.2. Garage - recessed

A garage door recessed from the face of the front façade is a permitted garage type. An overhead eave is a preferred detail element above the garage



Street facing garage with a large eave and individual garage doors



Recessed, tandem garage with individual garage door and detailing above



Recessed front garage creates a shadow line and emphasis on the rest of the facade

3.4.1.5.4.3. Garage - flush with façade

Garage doors flush with the street facing façade require detailing on the façade to de-emphasize the visual impact of the garage, including the following:

Trim or banding around the garage door

Garage door relief detailing and windows are a preferred element

Coordinated color selection to de-emphasize the garage door

Individual garage doors are preferred



Avoid - flush garage with completely flat 2- car garage door, no detailing or relief, highlight paint color on door inadvertently attracts attention, lack of trim around door, lack of first floor façade articulation above garage

3.4.1.5.4.4. Garage – projecting

Garages projecting in front of the street facing façade may protrude in front of the façade provided that detailing is provided on all exposed garage facades to de-emphasize the visual impact of the garage.

Windows and individual garage doors are preferred element.

The following are required on projecting garage:

- Integrated trim or banding around the garage door that matches the residential building
- Detailing and articulation of the door facade
- Color selection that does not emphasize the garage door
- An architectural top to the garage, such as a gabled roof



Projecting garage- example of integration of matched house/garage siding, trim detailing above, garage door detailing, accent colors, articulation of first floor level above garage, and use of gable above



Projecting garage – example showing windows on door, detailing and trim and good color selection



Projecting garage – example integration of masonry siding matching façade, good detailing, trim and color selection (note: garage door lacks adequate detail)



Projecting garage- example of integration of siding on garage trim, accent lights, accent colors, articulation of first story level, detailing on garage door, gable and centered window above

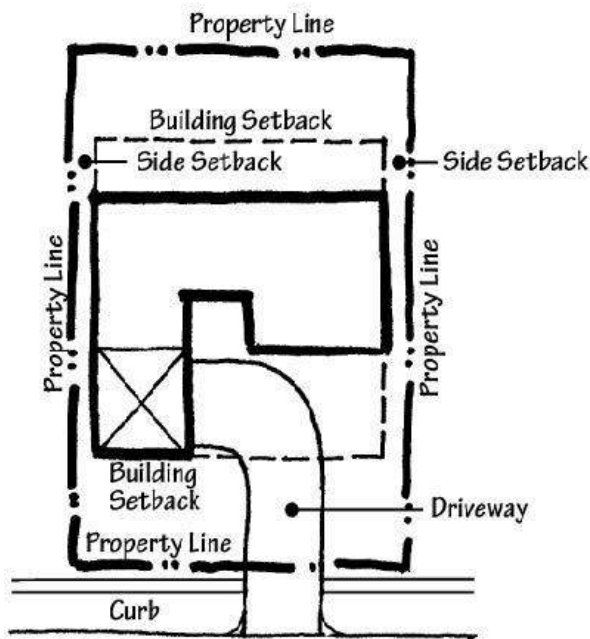


Avoid - projecting garage with completely flat 2-car garage door, no detail, paint color not complimentary to house façade. Light color masonry poor selection choice as it highlights the garage

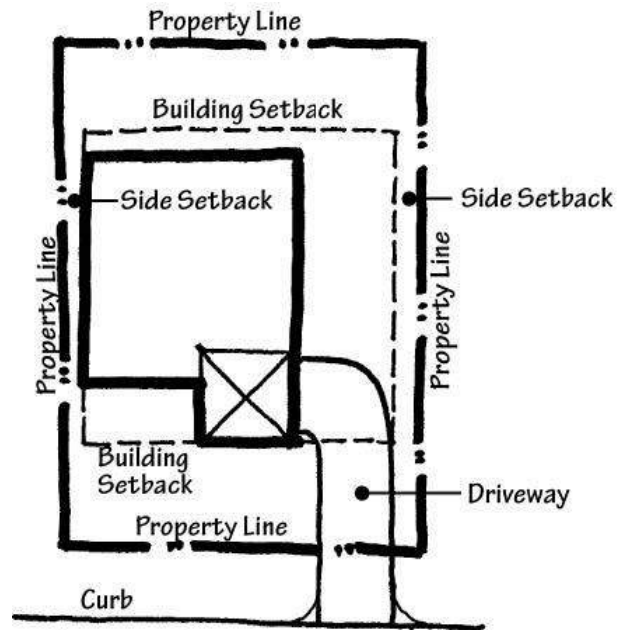
3.4.1.5.5. Garage - side-loaded

Garages that are side-loaded (in relation to the street) are a preferred and permitted garage type provided the following requirements are incorporated:

- Garage door articulation requirements are incorporated
- Placement of driveway pavement meets setback restrictions
- Driveway pavement is limited to the minimum necessary for safe vehicular movement



Inside Swing Side Loaded



Outside Swing Side Loaded



Side-loaded garage with individual doors and windows

3.4.1.5.6. Garage – Rear alley loaded

Alley loaded garages is a permitted garage type. Alley loaded garages may be attached or detached from the home.

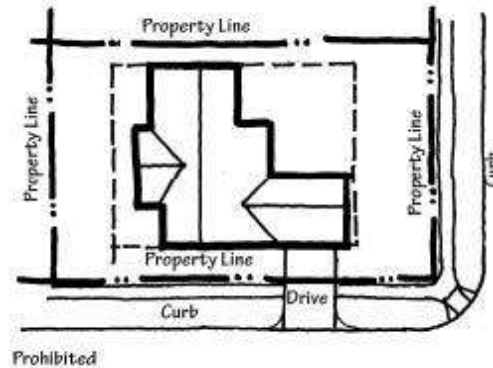
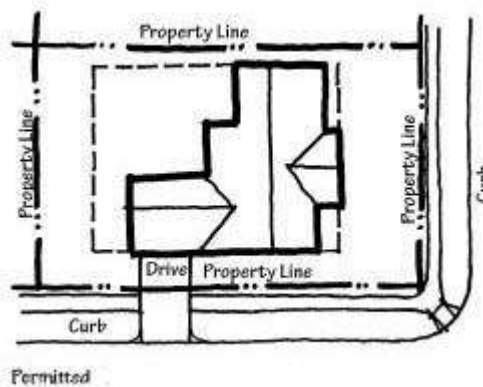


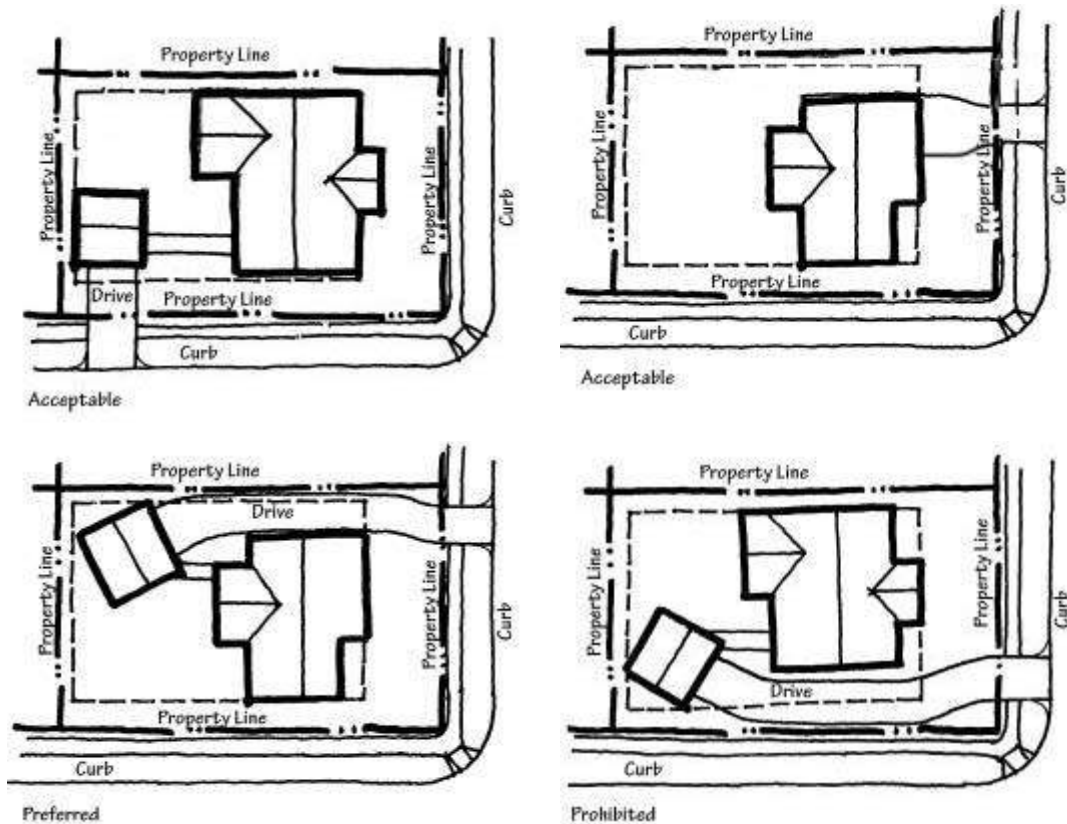
Garages access from rear alley

3.4.1.5.7. Corner lot garage placement

Minimize the visual prominence of garage and driveway placement on corner lots by incorporating the following:

- Avoid garage placement/driveway access from a side street that is:
 - Centered on an approaching street. It is visually prominent
 - Placed close to the street corner
- Avoid garage placement/driveway access from the fronting street that is:
 - Placed close to the street corner



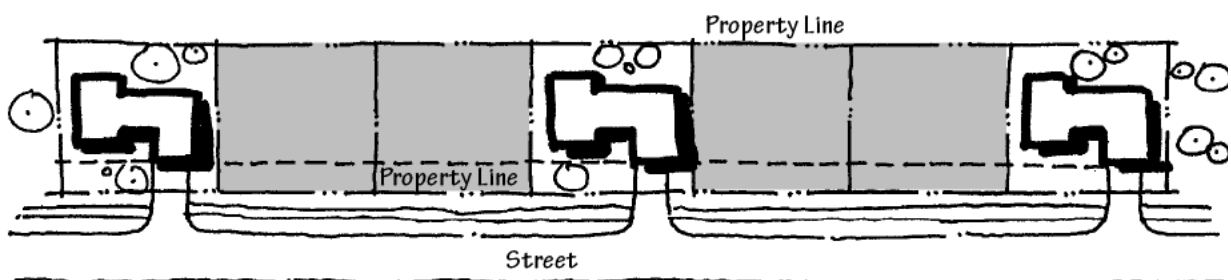


3.4.1.6. Plan spacing and repetition

No two elevations of the same style and plan type are permitted side-by-side within a given block face. Developments with single household and two household dwellings must adhere to the following minimum standards:

3.4.1.6.1. Same plan, different elevation, same side of the street

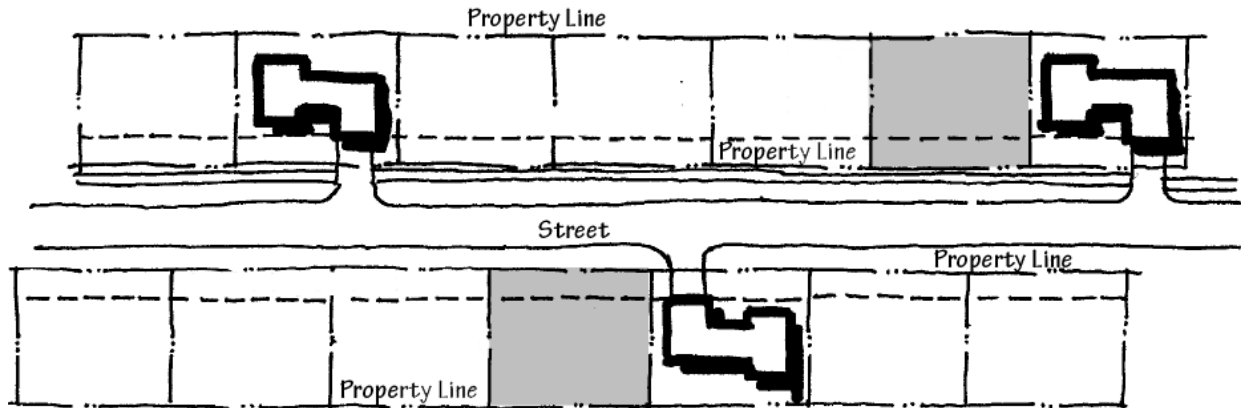
When building different elevations of the same plan on the same side of the street, two lots must be skipped and the home (same plan, different elevation) shall be placed on the third lot.



Same Plan, Different Elevation, Same Side of the Street

3.4.1.6.2. Same plan, different elevation, opposite side of the street

When the same plan, different elevation is on the opposite side of the street, the lot fronting the property, and the one beside it shall be skipped, for a total of two skipped lots, and the home (same plan, different elevation) shall be placed on the third lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.

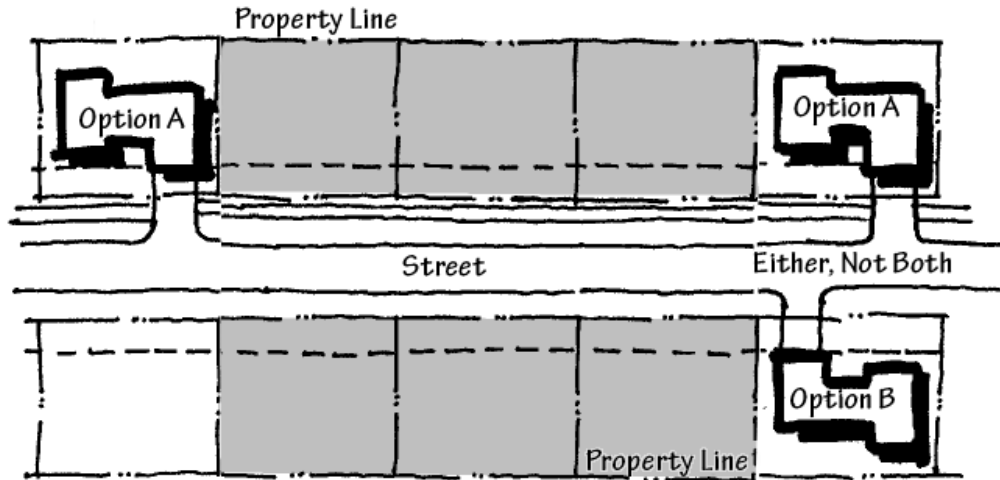


Same Plan, Different Elevation, Opposite Side of Street

3.4.1.6.3. Same plan, same elevation, same or opposite side of the street

When the same plan, same elevation is on the same side of the street, three lots shall be skipped and the home (same plan, same elevation) shall be placed on the fourth lot.

When the same plan, same elevation is on the opposite side of the street, the lot fronting the property shall be counted as the first lot, then count an additional two lots and place the home (same plan, same elevation) on the fourth lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.



Same Plan, Same Elevation, Same or Opposite Side of Street



Same elevation on non-adjacent lots (2 lots must be skipped)



Diversity in elevations (even within the same architectural style), no duplicate elevations adjacent

3.4.1.7. Roofs

On buildings with pitched roofs, the minimum roof pitch is 6:12. Pitched roofs shall be clad in 25-year minimum composition shingles or low reflectivity galvanized metal roofing materials.

3.4.1.8. Mechanical equipment screening

Rooftop mechanical equipment is prohibited unless placed where they are not visible from the public ROW.

Ground mounted mechanical equipment (air conditioning units, utility boxes, etc.) must be hidden or screened with architecturally integral wing walls or landscape screening material that will grow to the same height as the equipment being screened, or placed where they are not readily visible from a public street, to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.

3.4.2. Single Household Attached and Multiple Unit Household Residence Design

3.4.2.1. Architectural style

Distinct groups of buildings on a site must share common, identifiable, complementary design elements and/or detailing in a multiple household residential development. This includes non-residential structures in the development such as amenity centers, laundry and maintenance buildings, garages, carports, and dumpster enclosures.

3.4.2.2. Form and mass

A single, large, dominant building mass should be avoided.

Multiple household residential building designs should incorporate visually heavier and more massive elements, details or colors at the building base, and visually lighter elements, details or colors above the base.

Changes in mass or form should be related to entrances, the integral structure and/or the interior space organization, and not just for cosmetic effect.

3.4.2.3. Exterior walls

3.4.2.3.1. Pattern

Facades must be articulated with bays, insets, balconies, porches, stoops or other similar design elements related to entrances and windows.

3.4.2.3.2. Four-sided design

All walls viewed must include materials and design characteristics consistent with those on the front. Lesser quality materials for side or rear walls are prohibited.

3.4.2.3.3. Long walls and facades

- The maximum length of a multiple household residential building is 200 ft.
- Wall and roof planes must have offsets or setbacks with a differential in horizontal plane of at least 2 ft. every no more than 50 ft.
- Up to six townhouse units may be attached in a single row.

3.4.2.3.4. Building entries

- Common balconies on perimeter walls providing access to two or more units are prohibited.
- Building entries next to a public street, private drive or parking area must be articulated to provide an expression of human activity or use in relation to building size through the use of doors, windows, entranceways, and other design features such as corners, setbacks, and offsets can be used to create articulation.

3.4.2.3.5. Garage doors

Front loading garage doors on multiple household residential building must include the following elements:

- Front-loaded garage doors may comprise no more than 50% of the total length of the front façade of a multiple residential building's front façade. Every two single-bay garage doors or every double garage door must be offset by at least 4 ft. from the plane of an adjacent garage door,
- Garage doors must integrate into the overall building design with color, texture or other similar design elements.

3.4.2.3.6. Windows and transparency

- All walls and elevations on all floors of multiple household buildings must include windows, except when necessary to assure privacy for adjacent property owners.
- Exterior windows should be located to promote occupant surveillance of entryways and common areas.

3.4.2.3.7. Building roofs

- On buildings with pitched roofs, the minimum roof pitch is 6:12.
- Roof forms must be designed to correspond and denote building elements and functions such as entrances and arcades
- On buildings where flat roofs are the predominant roof type, parapet walls must vary in height and/or shape at least once every no more than 50 ft. along a wall façade. Exceptions to the parapet standards may be administratively approved by Development Services staff if it can be demonstrated that the building design character meets the intent of this Section.
- On buildings where sloping roofs are the predominant roof type, each building must have a variety of roof forms

3.4.2.4. Materials and color

3.4.2.4.1. Building materials

- Building exterior materials must be high quality and durable. Masonry, stone and/or brick must be used as exterior materials for at least 40% of exterior facades, excluding doors, windows and trim. Wood, fiber-cement siding, corrugated metal, and stucco are suitable examples of appropriate secondary exterior materials.
- Deviations up to 10% to building material standards may be administratively approved by Development Services staff if it can be demonstrated that the building material meets the design intent of this Section.
- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated and pre-engineered buildings are prohibited.

3.4.2.4.2. Roof materials

- Roof materials must be high quality and durable. Acceptable roof materials include concrete tile, architectural asphalt shingles, metal shingles and split seam metal.
- Flat roofs may utilize any roofing material but must include a parapet.

3.4.2.4.3. Material or color changes

- Material or color changes must only occur at a change of plane or reveal line.
- Exceptions to location of material or color change standards may be administratively approved by Development Services staff if it can be demonstrated that the location meets the design intent of this Section.
- Piecemeal embellishment and frequent material changes are prohibited.

3.4.2.4.4. Mechanical equipment screening

Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at least as high as the equipment to be screened. Makeshift equipment screens, such as wooden or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping.

Mechanical equipment must be located where their acoustics will not be disruptive to abutting residential dwelling units.

Solar panels and rain collection devices are exempt from mechanical equipment screening standards.

3.4.3. Commercial, Office, Public, Institutional and Mixed-Use Building Design

3.4.3.1. Architectural style

Attached or distinct group of buildings on a site must share common identifiable, complementary design elements and/or detailing. This includes accessory structures such as freestanding canopies, accessory and maintenance buildings, and dumpster enclosures.

A building must have a single definitive, consistent style; mixing of various architectural styles on the same building is discouraged.

3.4.3.2. Form and mass

A single, large, dominant building mass must be avoided in new building additions involving changes to the mass of existing buildings. Changes in mass should be related to entrances, tenant spaces, the integral structure and/or the interior space organization and activities.

3.4.3.3. Exterior walls

3.4.3.3.1. Base and top

Façades and walls must have a recognizable base, with design examples achieving this criteria including (but not limited to):

- thicker walls, ledges or sills;
- integrally textured materials such as stone or other masonry;
- integrally colored and patterned materials such as smooth-finished stone;
- lighter or darker colored materials, mullions or panels; or
- planters;
- wainscoting or plinth course

Façades and walls must have a recognizable top, with design examples achieving this criteria including (but not limited to):

- cornice treatments, other than colored stripes or bands alone, with integrally textured materials such as stone or other masonry or differently colored materials;
- sloping roof with overhangs extending a minimum of 18 inches;
- stepped parapets.



Example of sloping roofed building with recognizable base and top.



Example of flat roofed building with recognizable base and top.

3.4.3.3.2. Four-sided design

All walls must include use materials and general design characteristics consistent those on the front.



Example of four sided design

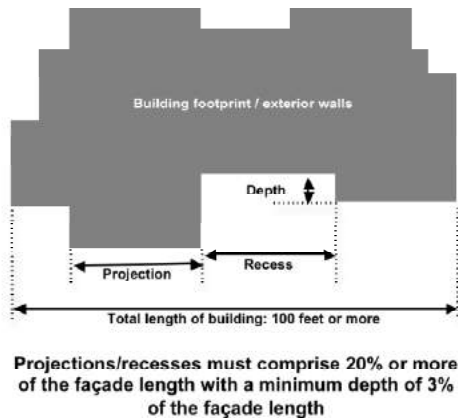


Example of four-sided design



3.4.3.3.3. Long walls and façade; projections and recesses

- Walls at least 100 ft. long must include wall plane projections or recesses having at least 3% depth of the façade length, and extending at least 20% of the façade length.
- Deviations up to 10% to wall plane projections or recesses may be administratively approved by Development Services staff if it can be demonstrated that the building wall design meets the design intent of this Section.



Large retail store with projections and recesses

3.4.3.3.4. Exterior walls

- Exterior walls cannot have a blank, uninterrupted length. greater than 50 ft. without including one or more of these the following design features: change in plane, change in texture or masonry pattern, windows, or other equivalent element(s) that subdivide the wall into human scale proportions. Side or rear walls may include false windows and door openings defined by frames, sills and lintels, or similarly proportioned modulations, only when actual doors and windows are not possible because of the building use. Deviations up to 10% to side or rear wall articulation may be administratively approved by Development Services staff if it can be demonstrated that the building wall design meets the design intent of this Section.

3.4.3.3.5. Primary building entrances

Primary building entrances must be clearly defined and shall be recessed or framed by a sheltering element such as an awning, arcade or portico to provide shelter from the sun and inclement weather.



Well-defined building entrance

3.4.3.3.6. Retail building entrances

Anchor stores (defined as a retail building containing greater than 25,000 sf), and freestanding, single-use buildings, must have a clearly defined, highly visible customer entrance with four or more of the following elements (but not limited to):

- Arcades
- Arches
- Canopies or porticos
- Details such as tile work and moldings integrated into the building structure and design
- Display windows
- Integral planters or wing walls that include landscaped areas and/or places for sitting
- Outdoor patios
- Overhangs
- Peaked roof forms
- Raised corniced parapets over the door
- Recesses and/or projections
- Clinging vines
- Bas-relief artwork or mosaics
- Trellis

At least 25% of the additional stores in a shopping center must have two or more of the elements listed above.



Projections, arches, raised cornice parapet, integrated tile work and molding



Outdoor patio, display windows



Peaked roof form, canopy, display windows, projections



Peaked roof form, projections, arcade, display window, arches

3.4.3.3.7. Awnings

Awnings may only be used in detached increments above individual windows, doors and entries.



Separate awnings above individual windows

3.4.3.3.8. Transparency in commercial buildings

At ground level floors, buildings must have a high level of transparency: façades and walls that face a public street, plaza, or primary customer parking areas (excluding the building rear and side facades and service areas) must be transparent between 2 ft. and 7 ft. above the grade or walkway along at least 50% of its length along the front facade, except where the internal arrangement of a building makes it impractical to provide transparency along a portion of a wall. In these conditions, a combination of sculptural, mosaic, or bas-relief artwork and transparent window areas or displays may substitute for 25% of required transparent areas, except when fronting on plaza areas.



Good door and window coverage on prominent elevations

3.4.3.3.9. Garage doors

- Garage bay doors fronting on a public street: design elements shall include the following: doors must be segmented, with windows covering at least 25% of the garage surface. Roll-up garage doors are prohibited. Garage doors must be recessed at least 2 ft. behind the building façade. Garage bay doors must be integrated into the overall design of the host building with color, texture, windows and similar or compatible design elements. Bay doors may not be visible from a residential use.
- Vehicle service areas and bays must be screened or sited so visibility from a public street is as low as possible: landscape screening shall comply with requirements set forth with Section 3.5.3.4 Parking lot and vehicular use screening.
- Roll-up garage doors are permitted in vehicle service areas and bays.



Garage doors integrated into building architecture

3.4.3.4. Building roofs

3.4.3.4.1. Roof form design

Roof forms must correspond to and denote building elements and functions such as entrances, arcades and porches. Roof forms should relate to adjacent buildings to the greatest extent practical.

3.4.3.4.2. Required features

Sloping roofs must have one of the following features:

- Overhanging eaves, extending at least 1.5 ft. past the supporting wall or facade.

- Sloping roofs that do not have an overhanging eave, or with an eave less than 1.5ft past the supporting wall or facade must have an average slope of at least 1 ft. of vertical rise for every 3 ft. of horizontal run and no more than 1 ft. of vertical rise for every 1 ft. of horizontal run.

3.4.3.4.3. Roof lines

The continuous plane of a roof line must be no more than 100 ft. unless it can be demonstrated it meets the intent of this Section. Exceptions may be administratively approved by Development Services staff.



Example of varied roof line plane

3.4.3.4.4. Drive through facilities

Drive through facilities must be architecturally integrated into the host structure.

Drive through facilities must be located to minimize or avoid conflict with internal pedestrian routes. Pedestrian paths must be distinguished from vehicular driving surfaces by textured and colored pavement or other contrasting design element to emphasize conflict points and enhance pedestrian safety.



Drive-through architecturally integrated into host structure

3.4.3.5. Canopies

3.4.3.5.1. Architectural integration

Canopies must include design elements found on the main building, such as color, exterior materials and/or roof pitch.

3.4.3.5.2. Canopy support poles

Canopy support poles must include design elements consistent with the overall architectural theme of the primary building, or pole covers at least 18 in. in diameter or width, with a similar surface material and architectural treatments as the dominant material on the host building.

3.4.3.5.3. Canopy fascia

Canopy fascia must be the same color as the dominant color of the host building. Striping and banding on canopies is prohibited.



Canopy design integrated into site

3.4.3.6. Materials and color

3.4.3.6.1. Building materials

- Predominant building exterior materials must be high quality and durable. Masonry (stone, brick, decorative CMU and similar materials) must be used as exterior materials for at least 40% of exterior facades, excluding doors, windows and trim. Wood, fiber-cement siding and textured concrete/EIFS are examples of appropriate secondary exterior materials.
- Corrugated metal is an acceptable material. Corrugated metal and ACM panels are examples of acceptable accent materials, and may have a cumulative surface area of no more than 30% of the area of all exterior walls on a building.
- Building-integrated photovoltaics (BIPV) may substitute for any amount of predominant and secondary exterior materials.
- Smooth-faced concrete block, painted masonry, and tilt-up and precast concrete panels are prohibited.
- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated metal buildings and panels are prohibited.

3.4.3.6.2. Roof materials

- Roof materials must be high quality and durable. Acceptable roof materials include concrete tile, architectural asphalt shingles, metal shingles, split seam metal, photovoltaic roof tiles and shingles, and solar panels.
- Planted green roofs are permitted and strongly encouraged.
- Flat roofs may utilize any roofing material but must have a continuous parapet.

3.4.3.6.3. Building colors

- Building colors must be low reflecting, muted and neutral or earth toned. Roof colors should be muted and compatible with the dominant building color.
- High intensity colors, metallic colors, black, fluorescent colors, single color schemes and groups of stripes are prohibited as the predominant building color or color scheme.
- High intensity colors, and black or grey, may be used on building trim and accents.

3.4.3.6.4. Material or color changes

- Material or color changes must occur only at a change of plane or reveal line, unless when administratively approved by Development Services staff.



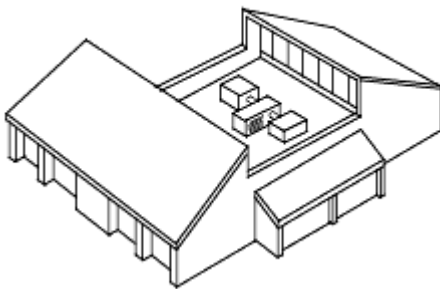
Change in materials at a change in plane.

3.4.3.7. Mechanical equipment screening

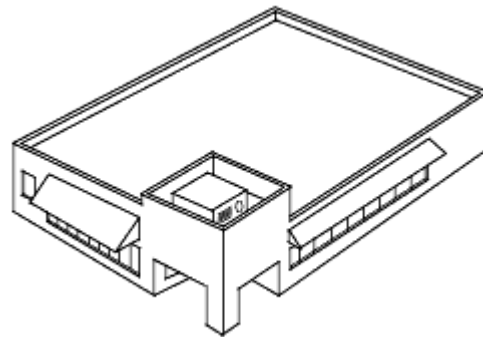
Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at a height least as high as the equipment to be screened. Makeshift equipment screens, such as wood or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.



Example of appropriate screening for rooftop mechanical equipment



Example of appropriate screening for rooftop mechanical equipment

3.4.3.8. Utility equipment screening

Electrical meters, switch boxes, panels, conduit, and related utility equipment must be placed in the most inconspicuous location practical.

Utility equipment must be painted or coated to match the color of the mounting surface, to the greatest extent practical.

Utility equipment located in an area that may be frequently seen by the general public must be screened to the extent practical with landscape screening or a wing wall architecturally integrated into the host building structure.



Utility equipment at back of building painted to match wall



Utility equipment in more visible location screened by wing wall

3.4.3.8.1. Cobranded uses

Cobranded uses such as restaurants and convenience stores must be well integrated into the host structure. Using disharmonious architectural elements, such as a non-compatible façade materials or disharmonious roof pitch from the host building structure is prohibited, unless it can be demonstrated that it meets the intent of this Section.



Cobranded uses with harmonious architectural elements

3.4.4. Industrial building design

3.4.4.1. Intent

This section shall not apply to industrial structures over 200,000 sq. ft. in area.

3.4.4.2. Character and image

In industrial developments located on a single site, each building must include compatible building design characteristics shared by all buildings in the development, such as façade materials and colors, so the development forms a cohesive place.

Distinct groups of buildings on a site must share a common, identifiable, complementary design or style. This includes accessory structures such as freestanding canopies, accessory and maintenance buildings, and dumpster enclosures.

3.4.4.3. Form and mass

A single, large, dominant building mass should be avoided in new buildings and, as much as possible, in projects involving changes to the mass of existing buildings. Changes in mass must be related to entrances, the integral structure and/or the organization of interior spaces and activities and not merely for cosmetic effect.

3.4.4.4. Exterior walls and facades

3.4.4.4.1. Pattern

Façades and walls must include a repeating pattern with an expression of architectural or structural bays through a change in plane, such as an offset, reveal, pilaster, projecting ribs, fenestration patterns, or piers; and any of the following elements:

- color change
- texture change
- material module change

Design elements must repeat at intervals of no more than 60 ft. Deviations up to 10% to the interval repetition may be administratively approved by Development Services staff.

3.4.4.4.2. Four-sided design

All façades and walls must include materials and design characteristics consistent with those on the front façade. Inferior or lesser quality materials for side or rear walls are prohibited.

3.4.4.4.3. Garage doors

Bay doors must be screened using wing walls, carefully placed berms on the site, or other effective screening and site planning techniques, or otherwise sited so visibility from the public streets is minimized. Bay doors must be integrated into the overall design of the host building with color, texture, windows and similar or compatible design elements. Segmented garage bay doors with windows are preferred to roll-up garage doors.

3.4.4.4.4. Primary building entrances

Primary building entrances must be clearly defined and recessed or framed by a sheltering element such as an awning, arcade or portico to provide shelter from the sun and inclement weather.

3.4.4.5. Building roofs

3.4.4.5.1. Planted green roofs

Planted green roofs, solar panels and rain collection tanks are strongly encouraged

3.4.4.6. Materials and color

3.4.4.6.1. Building colors

- Building colors must be low reflecting, muted and neutral or earth toned. Roof colors must be muted and compatible with the dominant building color.
- High intensity colors, metallic colors, fluorescent colors, single color schemes and groups of stripes are prohibited as the predominant building color or color scheme.
- Brighter colors, and black or grey, may be used on building trim and accents.
- An exception to the color standards may be administratively approved by Development Services staff if it can be demonstrated that the color selection meets the design intent of this Section.

3.4.4.6.2. Building materials

Durable, high quality building materials must be used. Brick, stone, split-face CMU, EIFS, detailed tilt-up concrete panels, and building-integrated photovoltaics (BIPV) are examples of appropriate building materials.

- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated and pre-engineered metal buildings and panels are prohibited.

3.4.4.6.3. Material or color changes

- Material or color changes must occur only at a change of plane or reveal line.
- An exception to the location of material or color change standards may be administratively approved by Development Services staff if it can be demonstrated that the location meets the design intent of this Section.
- Piecemeal embellishment and frequent material changes are prohibited.



Industrial building design: appropriate



Industrial building design: appropriate



Industrial building design: appropriate



Industrial building design: appropriate

3.4.4.7. Mechanical equipment screening

Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at a height at least as high as the equipment to be screened. Makeshift equipment screens, such as wooden or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.

3.4.4.8. Utility equipment screening

Electrical meters, switch boxes, panels, conduit, and related utility equipment must be placed in the most inconspicuous location practical.

Utility equipment must be painted or coated to match the color of the mounting surface to the greatest extent practical.

Utility equipment located in an area that may be frequently seen by the general public must be screened to the extent practical with landscape screening or with a wing wall architecturally integrated into the host building structure.

3.5. Landscaping

3.5.1. General standards

3.5.1.1. Visibility

Shrubs growing over 3 ft. tall at maturity must be placed at least 10 ft. from curb cuts. This is to maintain clear driver sight distance at driveway-street intersections.

3.5.1.2. Utilities

Tree trunks must be placed at least 10 ft. from streetlights and 5 ft. from wet utilities. Tree trunks must be placed at least 4 ft. from gas lines.

3.5.1.3. Clear zone at intersections

Trees in tree lawns must be at least 15 ft. from the curb return corner at street intersections.

3.5.2. Required landscaping: single and two-household dwellings

3.5.2.1. Tree number

Lots with single household and two household dwellings must have at least the following number of trees:

- Street tree - one native tall tree shall be installed per 25 ft. - 30 ft. of linear street frontage within the tree lawn area provided trees are set back from utilities. Required street trees may be installed in the front yard only if inadequate tree lawn area is available to meet the street tree frontage requirements. It is the responsibility of the installer to insure there are no conflict with utilities and complies with clear vision area

requirements. Intersection clear zones and curb cut visibility areas are not included in the street frontage calculations.

- One native tall tree or two native short trees for every 3,000 sq. ft. of lot area.

Existing native tall and short trees conforming to Section 3.18.3.3 may be used to meet minimum tree planting requirements.

3.5.2.2. Shrub number

Lots with single household and two household dwellings must have one or more native shrubs for every 1,000 sq. ft. of lot area. All of the required shrubs must be placed in the front half of the lot. Lots at least 50,000 sq. ft. do not need more than 100 shrubs.

3.5.2.3. Tree and shrub size

Native tall trees must have a trunk of at least 2 in. caliper and 10-12 ft. ht. Native short trees must have a caliper of at least 1.5 in. and 8-10' ht. Planted shrubs must have at least 1-gallon container or be at least 2 ft. tall, and grow to a height of at least 2 ft.

3.5.2.4. Groundcover

Groundcover must be planted on areas of developed parcels that are not part of an impervious surface, covered with porous paving, occupied by shrubbery or gardens, or under a tree drip line.

3.5.3. Required landscaping: non-residential and 3+ household residential development

3.5.3.1. Landscaping areas

Parcels with a non-residential use or 3+ household residential structures must be landscaped as follows. Additional plants may be required per buffer yard standards in Section 3.1.6, and mechanical equipment screening requirements.

Planting requirements set forth in this Section shall comply with standards set forth in Section 3.5.1. Minor deviations to the standards set forth in this Section may be administratively approved by Development Services staff if it meets the intent of this Section.

3.5.3.2. Minimum percentage

A minimum percentage of the total area being developed shall be landscaped in accordance with the following percentages:

- Commercial uses: 15%
- Commercial pad sites: 5%
- Multifamily dwellings: 20%
- Office and professional uses: 15%
- Institutional and civic uses: 15%
- Industrial or manufacturing uses: 10%

3.5.3.3. Tree and shrub requirement

For every 500 square feet of landscaping required, or portion thereof, at least two (2) large trees and four (4) shrubs are required. Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

3.5.3.4. Parking lot and vehicular use screening

The perimeter of all vehicular use areas including parking areas, drive aisles, and loading areas shall be screened as follows:

- Vehicular use areas shall be screened from all abutting rights-of-way, including the UP Railroad, by a continuous landscaped area not less than 10 ft. deep.
- Vehicular use areas shall be screened from all abutting residential property by a continuous landscaped area not less than 8 ft. deep.
- Landscape screening shall contain one (1) large tree per thirty (30) linear feet, or portion thereof, and a continuous hedge not less than 3 ft. in height.
- In addition to the required vehicular use screening, all outdoor parking shall have landscaping islands within the parking area equal to not less than 7% of the gross parking lot area.
- Landscape islands shall be required on both ends of all parking aisles, if such spaces are not adjacent to another landscaped area or entry throat.
- Not more than ten (10) consecutive parking spaces shall be provided without a landscaped island.
- Landscape islands shall be a minimum of 9 ft. wide and 18 ft. deep, and shall contain at least one (1) large tree and four (4) shrubs.
- Driveways and entry throats shall contain at least one (1) large tree and five (5) shrubs on each side.
- Required parking lot landscaping may be counted toward the minimum landscaped area required in Section 3.5.3.2.

3.5.3.5. Tree and shrub standards applicable to this Section

The following standards apply to trees and shrubs:

- Planting areas for each tree provided shall have a minimum undisturbed pervious area of at least 100 square feet and shall be planted or covered with grass, mulch, or other appropriate ground cover.
- Each development shall provide at least three (3) different species. No more than 50% of all trees, per development, shall be of the same species.
- Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

3.5.3.6. Tree and shrub size

Native tall trees must have a caliper of at least 2 in. and 10-12 ft. ht. Native short trees must have a caliper of at least 1.5 in. and 8-10' ht. Planted shrubs must have minimum 1-gallon container or be at least 18 in. tall.

3.5.3.7. Tree and shrub placement

Trees and shrubs may be clustered in groups, to present a natural environment and ease maintenance. All trees must be placed on the parcel being developed, unless otherwise permitted. If Development Services staff finds that it is impractical to plant trees and/or shrubs on parcels being developed, those trees and/or shrubs may be planted elsewhere in the PUD. Minor deviations may be administratively approved by Development Services staff in cases where necessary due to site constraints.

3.5.3.8. Groundcover

Groundcover must be planted on areas on a developed parcel that are not part of an impervious surface, covered with porous paving, occupied by shrubbery or gardens, or under a tree drip line.

3.5.4. Materials, maintenance, and replacement

3.5.4.1. Plant materials

Plant choice must be based on the Central Texas ecological setting and site microclimate conditions.

3.5.4.2. Native tall trees

Native and adapted tall trees that can be planted or used to meet landscaping requirements include the following.

Anaqua	(Ehretia anacua)
Bald Cypress	(Taxodium distichum var. distichum)
Bigtooth Maple	(Acer grandidentatum)
Black Walnut	(Juglans nigra)
Blackjack Oak	(Quercus marilandica)
Bur Oak	(Quercus macrocarpa)
Cedar Elm	(Ulmus crassifolia)
Chinquapin Oak	(Quercus muhlenbergii)
Durand Oak	(Quercus sinuate)
Escarpment Live Oak	(Quercus fusiformis)
Lacebark Elm	(Ulmus parvifolia)
Monterey Oak	(Quercus polymorpha)
Montezuma Cypress	(Taxodium mucronatum)
Pecan	(Carya illinoensis)
Red Maple	(Acer rubrum)
Red Oak	(Quercus lobatae)
Sawtooth Oak	(Quercus acutissima)
Shumard Oak	(Quercus shumardii)
Southern Live Oak	(Quercus virginiana)
Texas Ash (female only)	(Fraxinus texensis)
Texas Red Oak	(Quercus texana)
Western Soapberry	(Sapindus drummondii)
Winged Elm (female only)	(Ulmus alata)
Yellow Buckeye	(Aesculus pavia var. flavescens)

Established deciduous and semi-deciduous (not coniferous or palm) canopy trees at least 30 ft. tall with a trunk of at least 4 in. caliper of other species, that are not on the nuisance tree list.

3.5.4.3. Native short trees

Native and adapted short trees that can be planted or used to meet landscaping requirements include the following.

American Smoke Tree	(Cotinus obovatus)
Anacacho Orchid Tree	(Bauhinia lunarioides)
Big Tooth Maple	(Acer grandidentatum)
Blackhaw Viburnum	(Viburnum prunifolium)
Carolina Buckthorn	(Frangula caroliniana)
Cherry Laurel	(Prunus caroliniana)
Chitalpa	(Chitalpa)
Crape Myrtle	(Lagerstroemia indica)
Desert Willow	(Chilopsis linearis)
Downy Serviceberry	(Amelanchier arborea)
Eve's Necklace	(Styphnolobium affine)
Evergreen Sumac	(Rhus virens)
Goldenball Lead Tree	(Leucaena retusa)
Kidneywood	(Eysenhardtia texana)
Lacey Oak	(Quercus laceyi)
Mexican Buckeye	(Ungnadia speciosa)
Mexican Plum	(Prunus Mexicana)
Mexican Poinciana	(Caesalpinia mexicana)
Mexican Redbud	(Cercis canadensis var. Mexicana)
Mountain Laurel	(Cala secundiflora)
Possumhaw Holly	(Aquifoliaceae Ilex decidua)
Red Buckeye	(Aesculus pavia)
Rough Leaf Dogwood	(Cornaceae Cornus drummondii)
Rusty Blackhaw Viburnum	(Viburnum rufidulum)
Saucer Magnolia	(Magnolia x soulangiana)
Smokeberry	(Cotinus coggygria)
Soapberry	(Sapindus drummondii)
Spicebush	(Lauraceae Lindera benzoin)
Texas Mountain Laurel	(Sophora secundiflora)
Texas Persimmon	(Diospyros texana)
Texas Pistachio	(Pistacia texana)
Texas Redbud	(Cercis canadensis var. texensis)
Western Soapberry	(Sapindus drummondii)
Yaupon Holly	(Ilex vomitoria)

Established deciduous and semi-deciduous trees 10 ft. to 30 ft. tall with a trunk of at least 3 in. caliper of other species, that are not on the nuisance tree list.

3.5.4.4. Native shrubs

Recommended native and adapted shrubs that can be planted or used to meet landscaping requirements include the following.

Abelia	(Abelia)
Agarita	Mahonia trifoliolata)
Agave	(Agavaceae)
American Beautyberry	(Callicarpa Americana)
Bamboo Muhly	(Muhlenbergia dumosa)
Barbados Cherry	(Malpighia glabra)
Beautybush	(Kolkwitzia amabilis)
Big Muhly	(Muhlenbergia lindheimeri)
Black Dalea	(Dalea frutescens)
Burford Holly	(Ilex cornuta 'Burfordii')
Bush Germander	(Teucrium fruticans)
Butterfly Bush	(Buddleja davidii, Buddleja marrubiifolia)
Caellia	(Camellia)
Cenizo/Texas Sage	(Eucophyllum frutescens)
Coralberry	(Symphoricarpos orbiculatus)
Cotoneaster	(Cotoneaste)
Deer Muhly	(Muhlenbergia rigens)
Dwarf Chinese Holly	(Ilex cornuta Rotunda)
Elaeagnus	(Elaeagnus pungens)
Flame Acanthus	(Anisacanthus quadrifidus)
Flowering Senna	(Senna corymbosa)
Forsythia	(Forsythia x intermedia)
Fragrant Mimosa	(Mimosa borealis)
Fragrant Sumac	(Rhus aromatica)
Germander	(Teucrium fruticans)
Gulf Muhly	(Muhlenbergia capillaris)
Inland Sea Oats	(Chasmanthium latifolium)
Japanese Barberry	(Berberis thunbergii)
Mexican Feather Grass	(Nassella tenuissima)
Mock Orange	(Philadelphus coronarius)
Mountain Sage	(Salvia regal)
Nandina	(Nandina domestica compacta)
Primrose Jasmine	(Jasminum mesnyi)
Rose of Sharon	(Hibiscus syriacus)
Sage	(Salvia)
Sideoats Grama	(Bouteloua curtipendula)
Skull Cap	(Leguminosae Scutellaris)
Sweet Mockorange	(Philadelphus coronarius)
Texas Dwarf Palmetto	(Sabal minor)
Texas Lantana	(Lantana horrida)
Texas Sage	(Leucophyllum frutescens)
Texas Sotol	(Dasylirion texanum)
Turk's Cap	(Malvaviscus arboreus)
Upright Rosemary	(Rosmarinus officinalis)
Viburnum (all)	(Viburnum)
Witch Hazel	(Hamamelidaceae Hamamelis
virginiana)	
Wooly Butterfly Bush	(Buddleia marrubiifolia)
Yellow Bells	(Tecoma stans)
Yucca	(Yucca)

3.5.4.5. Nuisance plants

Nuisance plants include the following. Nuisance plants may not be planted or used to meet the City's landscaping requirements, and are not protected by tree preservation, replacement, protection and removal standards.

Trees:

American Sweetgum	(Liquidambar styraciflua)
Arizona Ash	(Fraxinus velutin)
Bois d'arc	(Maclura pomifera)
Boxelder Maple	(Acer negundo)
Bradford Pear	(Pyrus calleryana bradfordii)
Brazilian Pepper	(Schinus terebinthifolius)
Chinaberry	(Melia azedarach)
Chinese Parasol Tree	(Firmiana simplex)
Chinese Tallow	(Sapium sebiferum)
Elephant Ear	(Alocasia spp., Colocasia spp.)
Eucalyptus (all)	(Eucalyptus)
Euonymus (all)	(Euonymus)
Hackberry	(Celtis occidentalis)
Honey Locust	(Gleditsia triacanthos)
Honeysuckle (all)	(Lonicera)
Japanese Zelkova	(Zelkova serrata)
Juniper (males)	(Juniperus)
Leland Cypress	(Cupressocyparis leylandii)
Lombardy Poplar	(Populus nigra)
Mesquite	(Prosopis glandulosa)
Mimosa, Silk Tree	(Albizzia julibrissin)
Monkey Puzzle	(Araucaria araucana)
Mulberry (all)	(Morus)
Olive	(Olea, Elenganus)
Paulownia	(Paulownia tomentosa)
Red-Tipped Photinia	(Photinia x fraseri)
Silver Maple	(Acer saccharinum)
Tree of Heaven	(Ailanthus altissima)
Vitex	(Vitex agnus-castus)

Shrubs:

Chinese Photinia	(Photinia spp.)
Common Privet	(Ligustrum sinense, L. vulgare)
Japanese Ligustrum	(Ligustrum lucidum)
Nandina (berrying varieties)	(Nandina domestica)
Photinia (all)	(Photinia)
Pyracantha, Firethorn	(Pyracantha spp.)
Russian Olive	(Elaeagnus angustifolia)
Wax Leaf Ligustrum	(Ligustrum japonicum)

Vines:

Cat's Claw Vine	(Macfadyena unguis-cati)
English Ivy	(Hedera helix)
Japanese Honeysuckle	(Lonicera japonica)
Kudzu	(Pueraria lobata)

Poison Ivy	(Toxicodendron radicans)
Vinca	(Vinca major, V. Minor)

Other:

Eurasian Watermilfoil	(Myriophyllum spicatum)
Giant Cane	(Arundo donax)
Hydrillia	(Hydrilla verticillata)
Johnson Grass	(Sorghum halepense)
Running Bamboo	(Phyllostachys aurea)
Water Hyacinth	(Eichhornia crassipes)

All plants listed in Texas Administrative Code Section 19.300 (Noxious and Invasive Plant List), and listed as Invasive and Noxious Weeds by the USDA Natural Resources Conservation Service, are also considered nuisance plants. Other plants may be prohibited at the discretion of Development Services staff on a case-by-case basis.

3.5.4.6. Low water use plants

Low water use trees, shrubs and groundcovers shall be used to the greatest extent practical.

3.5.4.7. Planting beds

Shrub and ground cover planting beds must be separated from turf grass with edging, and must have open surface areas covered with mulch or gravel.

3.5.4.8. Topsoil

Topsoil removed during construction activity must be conserved for later use on areas requiring re-vegetation and landscaping, to the maximum extent practicable.

3.5.4.9. Plant quality

Landscape plants must be free of defects, and of normal health, height, leaf density and spread appropriate to the species, as defined by American Association of Nurserymen standards.

3.5.4.10. Installation

Landscaping must be installed using sound horticultural practices, in a way that encourages quick establishment and healthy growth. Landscaping in each phase must either be installed or the installation must be secured with a letter of credit, escrow or performance bond for 150% of landscaping value before a certificate of occupancy for any building in a phase is issued.

3.5.4.11. Maintenance

Trees and vegetation, irrigation systems, fences, walls and other landscape elements are considered elements of the project in the same way as parking, building materials and other site details. The applicant, landowner or successors must be jointly and severally

responsible for regular maintenance of all landscaping elements in good condition. Landscaping must be maintained free from disease, pests, weeds and litter.

3.5.4.12. Replacement

Required landscape elements that are removed or dead must be promptly replaced.

3.5.5. Irrigation

3.5.5.1. Automatic irrigation required

All plants on newly developed parcels, except those developed for single household and two household dwellings, must be irrigated with underground or drip irrigation, with these exceptions:

- Plants that do not require irrigation for establishment.
- Mature xeriscape areas, with established plants that do not require irrigation for survival.
- Trees established for two years or more.
- Parkland or land designated for parkland in this PUD

3.5.5.2. Irrigation plan required

An irrigation plan must be included in the landscape plan for site plan review, if applicable.

3.5.6. Tree preservation and removal

3.5.6.1. Tree preservation, removal and replacement: undeveloped and redeveloped sites

3.5.6.1.1. Nuisance trees

Nuisance trees, as defined in Section 3.6.4.5, may be removed from a developed or undeveloped lot anytime. Replacement of nuisance trees is not required.

3.5.6.1.2. Diseased, dangerous and dead trees

Diseased, dangerous and dead trees of all species may be removed from an undeveloped lot anytime. Replacement of removed diseased, dangerous and dead trees is not required.

3.5.6.1.3. Healthy, protected trees (native, tall, and small trees)

Protected trees (trees with a DBH of at least 18 in. which are not nuisance trees) that are healthy and located on a vacant parcel or redevelopment site may only be removed when the parcel is developed or redeveloped. A tree

inventory and survey, showing the location, size, species and condition of existing protected trees on a lot, must be submitted and approved with a preliminary subdivision, site plan or building permit for a development, whichever comes first.

Site features must be designed to minimize disturbance to protected trees. Tree wells or cut areas may be used to preserve the original grade around an existing tree to the extent practical.

At least 50% of the total number of healthy protected trees must remain on the site or be relocated on a site within the PUD. Gross DBH loss of protected trees to be removed must be replaced at a 1:1 ratio. Replacement trees must be planted either on the development site or elsewhere in the PUD, in areas approved by Development Services staff. Replacement trees must have a DBH of at least 2 in.

A protected tree may be designated for removal if it meets one of the following criteria.

- It is in an existing or proposed easement or stormwater management system and cannot practically be saved.
- It is located where it will create a potential safety or health hazard, or a nuisance to existing or proposed structures or vehicle or pedestrian routes.
- It is located where it interferes with the installation, delivery, or maintenance of existing utility services to the site.

3.5.6.2. Tree preservation, removal, and replacement: developed lots

3.5.6.2.1. Nuisance trees

Nuisance trees may be removed from a developed lot anytime. Replacement of nuisance trees is not required.

3.5.6.2.2. Diseased, dangerous, and dead trees

Diseased, dangerous and dead trees of all non-nuisance species may be removed from a developed lot anytime.

3.5.6.2.3. Healthy, protected trees (native, tall, and small trees)

Healthy native tall and small trees with a DBH of 2.5 in. or more that cannot be considered diseased, dangerous or dead may be removed from a lot if the gross DBH loss is replaced at a 1:1 ratio (1 in. replaced for every 1 in. lost of

caliper inches DBH). At least 50% of the total number of replacement caliper inches must be planted on the lot, to the extent practical, or may be planted elsewhere within the PUD as approved by Development Services staff. Required mitigation trees planted elsewhere in the PUD shall be noted on the site plan, as well as the other site plan, and may not be counted towards future mitigation tree requirements on the other site plan.

3.5.6.3. Tree removal and replacement: signs

Healthy trees of all species and sizes, except species defined as nuisance trees, may not be removed with the intent of increasing the visibility of an existing sign, unless with administrative approval of Development Services staff.

3.5.6.4. Tree replacement conditions

3.5.6.4.1. Replacement plant types

Replacement trees may be any combination of native tall and short trees that keeps or brings the site in conformance with minimum required landscaping standards.

3.5.6.4.2. Replacement trees

Replacement trees must be placed on site, or in areas approved by Development Services staff within the PUD.

3.5.6.4.3. Landscape requirements

Existing and replacement trees may be used to meet landscape requirements. After tree removal and replacement, the number and placement of trees on a parcel must continue to conform to landscaping requirements.

3.5.6.4.4. Maintenance

Replacement trees must be maintained in good condition for one year after planting. In that year, the property owner must guarantee survival.

3.5.6.4.5. Unauthorized removal

The gross DBH loss of trees that are removed in violation of this section by the property owner, developer or any party acting on their behalf must be replaced at a 2:1 ratio (2 in. replaced for every 1 in. lost of caliper inches) with native tall trees. For illegal vegetation clearance to increase the visibility of signs per Section 3.5.6.3, replacement native tall trees must be planted in the cleared area, with 1 in. DBH for every 10 sq. ft. cleared.

3.5.6.5. Tree protection during construction

3.5.6.5.1. Tree protection zone

During construction, perimeter fencing must be erected around protected trees, at least at one-half of the drip line to the greatest extent practical , to

establish a tree protection zone, unless otherwise approved by Development Services staff. Large parcels with protected trees that are separated from construction or land clearing areas, street rights-of-way and utility easements may be "ribboned off," by placing post stakes at least 50 ft. apart and tying ribbon or rope from stake to stake along the perimeter. Storage or movement of equipment, material, debris or fill in the tree protection zone is prohibited.

3.5.6.5.2. Storage near trees

During construction, equipment cleaning or storage or disposal or waste material such as paints, oils, solvents, asphalt, concrete, motor oil or other material harmful to trees cannot be placed in the drip line of protected trees or group of trees.

3.5.6.5.3. Attachment to trees

Damaging attachments, wires, signs or permits cannot be fastened to protected trees.

3.5.6.5.4. Trenching

Trenches or footings must be outside the inner one-half of the dripline, to the greatest extent practical. Under the drip line of protected trees, no cut or fill may exceed 4 in. unless a qualified arborist or forester evaluates and approves the disturbance. When trenching for utilities, tunneling under roots greater than 8 in. diameter is required to prevent root damage. The developer is responsible for coordination with utility companies when trenching near protected trees, to the extent practical.

3.5.6.5.5. Root preservation

During grading, roots at least 1 in. in must be cut off cleanly with a handsaw about 12 in. behind the line of excavation. Exposed roots must be protected with moist backfill soil.

3.5.6.5.6. Grades

Raising the grade more than 6 in. around tree trunks is prohibited. This can cause trunk rotting, and serious damage or death to the tree. Finished grades must slope away from trunks to avoid water concentrated at tree bases.

3.5.7. Required site furniture

A parcel with a non-single family residential and a non-industrial use must have the following furniture installed, provided the condition(s) described in this Section exist on the site. Furniture must be functional. All amenities located on a site shall be owned, operated and maintained by the private property owner.

- Internal walkways: (choose 1 of the following) 1 bench, 1 trash can, 1 bike rack, or 1 masonry planter per 150 ft. linear walkway.
- Plazas: 1 bench per 50 sq. ft. and 1 trash can per 100 sq. ft. plaza area.
- Colonnades, loggias: 1 bench and 1 trash can per 50 ft.
- Bus stops: 2 benches and 1 trash can per stop (applicable to city adopted transit streets only).

3.6. Common Open Space

3.6.1. Required common open space

The PUD shall provide for a collection of privately owned, common open space lots set within a street system with access to the Brushy Creek park land. Common open space will be designed to (i) serve the recreational needs of the residents (ii) provide places and opportunities for interaction within the community and (iii) provide opportunities for interaction with the natural environment.

A minimum of 5 acres of land located within the Carmel Creek 100-year floodplain shall be established and maintained as common open space. An additional 15 acres of common open space shall be established within the PUD at locations within or adjacent to residential areas.

All private open space and structures thereon shall be conveyed to and permanently owned and maintained by a Property Owner's Association (POA) or other responsible entity approved by the Director. The POA may adopt rules and regulations regarding access, permitted uses, security (policing) and maintenance responsibilities for the open spaces.

Each lot designated as common open space shall include at least six thousand (6,000) square feet. The area of the common open space lot shall be measured and calculated to the property line of the affected lot.

Parking for common open space uses within the PUD may be provided with adjacent on-street parking. Off-street parking may also be provided within a common open space lot, at the option of the Developer. On-street parking will be credited toward the required parking spaces of the affected lot.

Except for undisturbed and reestablished native landscape areas, common open space shall be maintained by one of the following watering methods: an underground irrigation system; a drip irrigation system; or a hose attachment within two hundred (200) feet of all landscaping. Watering may be suspended in times of drought.

Common open space may include detention ponds that are primarily earthen, planted with plants, and functionally serve as an aesthetic and/or recreational amenity for residents. Such elements may include trails on the pond lot, water aeration fountains, shade trees and other plantings and seating. Such detention or wet ponds do not require screening.

3.6.2. Access

Common open space must be reasonably accessible to all residents of the PUD. Convenient pedestrian and vehicular access to open space must be provided. Green links and trails must be provided to common open space not readily accessible to a public street.

3.6.3. Common open space design

Common open space must be configured as a meaningful and functional space. Common open space land must be compact and contiguous to the maximum extent practicable, unless the land is used as a greenway or other linear park. Small, narrow, or unassigned strips behind or between buildings is unacceptable. Designated common open space may be in a natural, undisturbed state, landscaped for more formal, open play areas, or developed for active and/or passive recreation.

Common open space lots shall include park improvements, such as trails, lighting, seating, landscape planting, irrigation and accessory buildings and shade structures that are appropriate for the intended use and site conditions of that site. Access for police, fire or ambulance emergency providers shall be provided to private and common open spaces.

3.6.4. Areas not considered as common open space

The following do not meet the requirement for common open space:

- Private lots or yards not available for common use
- Public right-of-way or private streets and drives.
- Land covered by structures except ancillary structures associated with use of open space such as gazebos, picnic shelters or meeting rooms
- Detention/retention facilities, including drainage swales, unless designed for use as accessible and useable year-round community amenities by the residents of the development (e.g., picnic areas, passive recreation areas, playgrounds, ponds for fishing and/or boating, walking trails, etc.).

Good Open Space Examples	Open Space Examples to Avoid
 Functional common open space, including shade trees, jogging trail, sports court, and irrigated grass turf fronting on a public street	 Avoid - expansive, unmaintained area with scattered play structures, lack of shade, trees and walking paths and perimeter fence separating residents from open space
 Wide concrete trail graded for bike and pedestrian use within linear open	 Avoid - left over strip of land between street ROW and perimeter fence,

space area accessible from street, undisturbed wooded and natural area and perimeter stone wall	lack of tree cover and perimeter fence separating residents from open space
	
Concrete trail, native tall trees, natural wooded area, play area, seating, planted trees, and neighborhood pool and pool house	Avoid - expansive area with limited improvements, lack of shade trees, poorly located bike parking

3.7. Fences and Walls

3.7.1. General standards

3.7.1.1. Placement

3.7.1.1.1. Public right-of-way

Fences and walls cannot be placed in the public right-of-way.

3.7.1.1.2. Tree preservation

Fences must be placed where they will not threaten significant vegetation.

3.7.1.2. Materials

3.7.1.2.1. Finished side out

Fences with an unfinished or rough side and a finished or smooth side must be placed so the finished or smooth side faces out.

3.7.1.2.2. Prohibited materials

Materials not originally intended for use in constructing a fence are prohibited as fencing and screening materials. Examples of prohibited materials include plywood, particleboard, corrugated metal sheets (not incorporated into a frame), railroad ties, tires, door panels, and other makeshift materials.

3.7.1.2.3. Barbed wire and electric fences

Electrically charged, barbed wire and razor wire fences are prohibited. Exceptions are fences used to enclose livestock on farms, serve a public or quasi-public institution for public safety or security purposes, and temporarily securing construction vehicles and materials on a construction site.

3.7.1.2.4. Columns

Columns, pilasters, piers, finials and posts may be no more than 6 in. taller than the fence it joins.

3.7.1.3. Maintenance

3.7.1.3.1. General maintenance

Fences and adjacent landscaping must be maintained by their owners in good structural condition and repair. This includes general maintenance, painting and staining, and the replacement of broken, warped or missing portions with materials of equal or better quality that are consistent in design. Fences, walls and hedges must be vertically aligned and maintained upright; and in good structural or living condition. Angled or non-vertical fence support posts are prohibited.

3.7.1.3.2. Development perimeter walls

Individual property owners cannot alter development perimeter walls that are owned or controlled by a property owner's association without prior permission of the property owner's association.

3.7.1.4. Landscaping

Landscaping at a fence or wall may be required per landscape requirements in Section 3.5.

3.7.2. Permitted fences, walls, and hedges

The following fence, wall and hedge types are *permitted* and optional. Minor deviations to the fence standards set forth in this Section may be administratively approved by Development Services staff.

Permitted fence Area / purpose	Height	Fence transparency	Acceptable types/materials
Agricultural use	no more than 5 ft.	at least 50% along at least 50% of height, excluding columns; at least 75% along entire height in clear vision area	Wire (smooth, high-tensile, woven, mesh, hog wire, cable rail) Chain link Pipe Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, similar materials) Shrubbery hedge
Residential front yard	no more than 3 ft. (36 in.)	At least 75% along entire height in clear vision area	Wood frame wire Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, similar materials) Shrubbery hedge

Permitted fence Area / purpose	Height	Fence transparency	Acceptable types/materials
Residential side and rear yard	no more than 6.0 ft. (72") except that 8.0 ft. permitted on rear and side fences: 1) to stair step in height to finish grade at the base of the fence or slope changes and 2) where adjacent to a commercial or other non-single family use.	at least 25%, excluding columns, when next to trail or park; otherwise, may be solid	Wood frame wire Chain link (plastic coated; no slats. Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Privacy (wood, plastic) Masonry (stone, brick, similar materials) Shrubby hedge
Tennis / basketball court	no more than 15 ft.	at least 50%	Ornamental (metal, plastic) Chain link (plastic coated only)
Cannot substitute for other fence types when forming a boundary fence.			
Perimeter security fencing (Industrial and recreational uses only)	no more than 8 ft.	at least 75%, excluding columns in front yard; may be solid behind the building line	Ornamental (metal) Masonry (stone, brick, split face CMU, similar materials)
Outdoor storage area fencing requirements apply to equipment storage yards and similar areas visible from a street.			
Temporary perimeter security fencing (construction sites only)	no more than 8 ft.	Any	Wire (smooth, high-tensile, woven, mesh, hog wire, cable rail) Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Privacy (wood, plastic) Chain link
The fence must be removed when construction ends.			
Park, open space	no more than 4 ft. 5 ft. for dog park	at least 25%, excluding columns	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, decorative CMU, similar materials) Shrubby hedge Chain link (plastic coated, for dog parks and athletic fields only)
Outdoor storage area fencing requirements apply to equipment storage yards and similar areas visible from a street.			
Parking area: non-residential and 3+ household residential development	no more than 3.5 ft. (42 in.)	at least 75% along entire height in clear vision area	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Bollard and chain Masonry (stone, brick, decorative CMU, similar materials) Shrubby hedge
Retention and detention pond or basin	no more than 6 ft.	at least 50%, excluding columns	Ornamental (metal)
Development perimeter walls along SH 130, FM 685 and UP Rail Road	6 ft. to 12 ft.	may be solid	Masonry (stone, brick, split face CMU, similar materials) or Shrubby hedge

3.7.3. Required fences, walls, and hedges

The following fence, wall and hedge types are required. Minor deviations to the fence standards set forth in this section may be administratively approved by Development Services staff.

Required fence Area / purpose	Height	Fence transparency	Acceptable types/materials
Swimming pool	4 ft. - 6 ft.	at least 50%	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Chain link (but not at a public pool)
	Openings or gaps in the fence must be no more than 4 in. If the perimeter fencing on the lot meets these standards, an added fence surrounding the swimming pool is not required. Construction of fence must comply with ICC Building Code requirements, as adopted.		
Outdoor storage area	6 ft. - 8 ft.; may be taller if it screens tall objects	no more than 25%; must be solid when next to or visible from residential use	Privacy (plastic) Masonry (stone, brick, decorative CMU, similar materials)
	Should include the same, similar or compatible materials, finishes and detailing as the host structure. Masonry (stone, brick, decorative CMU, similar materials) is required when the storage area is visible from a residential use.		
Vehicle inventory area next to residential districts	6 ft. - 8 ft.	Must be solid	Masonry (stone, brick, decorative CMU, similar materials)
	Should include the same materials, finishes and detailing as the host structure.		
Residential development RV storage area	8 ft. - 10 ft.	Must be solid; gate may have transparency	Masonry (stone, brick, decorative CMU, similar materials)
	Must include the same materials, finishes and architectural detailing as the development perimeter wall; otherwise, must conform to development perimeter wall design standards.		
Dumpster and utility area	7 ft. - 8 ft.	Must be solid	Masonry (stone, brick, decorative CMU, similar materials)
	Must include the same, similar or compatible materials, finishes and detailing as the host structure. Gates must be visually and structurally solid; must be metal. Dumpsters and compactors cannot be unscreened, unless they are used for a construction or demolition project on the site.		
Loading area wing wall	Up to the building parapet; height determined in site plan review	Must be solid	Masonry (stone, brick, decorative CMU, similar or compatible materials)
	Must include the same, similar or compatible materials, finishes and detailing as the host structure.		
Utility substation or facility	6 ft. - 12 ft., or sufficient to conceal the substation or height required by the utility provider.	Must be solid	Masonry (stone, brick, decorative CMU, similar or compatible materials)

Required fence Area / purpose	Height	Fence transparency	Acceptable types/materials
Development perimeter wall	6 ft. min. 8 ft. max. 4ft. max.(or 6 ft. ht. max with 10% fence transparency) when adjacent to open space	Any	Ornamental (metal) Masonry (stone, brick, decorative CMU, similar or compatible materials) Ornamental metal or combination metal and wood must be used in areas adjacent to common open space to promote views. Precast concrete walls (h-post and single panel) may only be used to replace existing stockade fence-based perimeter walls.
	Required for residential subdivisions with more than one double frontage or corner lot, where the adjacent street at the rear or side of the lots is a minor arterial or major arterial street. Walls must include masonry columns at least 18 in. x 18 in. at no more than 50 ft. intervals, and turning and end points of the wall.		

Fencing may also be required under buffer yard requirements in Section 2.3.5.

3.7.4. Gated communities

Gated communities are prohibited.

3.8. Outdoor Lighting

3.8.1. General Standards

3.8.1.1. Display levels and light pollution

Lighting must be designed to minimize light pollution and spillage on adjacent properties.

Illumination at the property line must be no more than 5 lux for non-cut-off lights, and no more than 15 lux for cut-off lights. Streetlights are exempted.

Illumination spillover onto adjacent residential zoned properties must be no more than 5 lux. Streetlights are excepted

Streetlights in public right-of-way shall be solar-powered wherever possible.

3.8.1.2. Shielding

Outdoor lighting must be shielded, except at athletic fields. Shielding is achieved when light rays are not emitted above the horizontal plane of a fixture. The cone of illumination must be at least 30° downward from the horizontal plane.

3.8.1.3. Illumination of background and foreground spaces

Background spaces such as parking lots must be illuminated as unobtrusively as possible to meet the functional needs of circulation, security and safety.

Foreground spaces, such as building entrances and plaza seating areas, must use proximate lighting that defines the space without glare to the extent practical.

3.8.1.4. Confusion with warning devices

Lighting devices that may be confused with warning, emergency or traffic signals are prohibited.

3.8.2. Permitted on-site light sources

The following light sources are permitted:

- Incandescent. Fluorescent. Warm white and natural lamps must be used to reduce detrimental effects.
- Metal halide. Light must be filtered with a glass, acrylic or translucent enclosure of the light source.
- High-pressure sodium. Must be color corrected.
- Light-emitting diode. Warm white and natural lamps must be used to reduce detrimental effects.
- Glass tubes filled with neon, argon, or krypton. Limited decorative lighting only.

Types of light sources must be compatible throughout a commercial center lot, to the extent practical.

Street light source shall be consistent throughout each development within the PUD, to the extent practical and as permitted by the utility provider.

3.8.3. Prohibited lighting

The following light sources are prohibited:

- Laser source light.
- Strobe light.
- Flashing, blinking, or variably intense light, intentional or resulting from a defect.
- Search lights

Exceptions are:

- Traditional holiday lighting not used to draw attention to a sign.
- Flashing or blinking lights required by law.
- Beacon or searchlight, including temporary display. Beacons are permitted on structures where the Federal Aviation Administration requires them.

3.8.4. Light poles

3.8.4.1. Height

Maximum light pole heights are as follows: Streetlight light pole height shall be coordinated with the utility provider.

Parking areas: 20 ft.

Pedestrian areas and drive aisles: 16 ft.

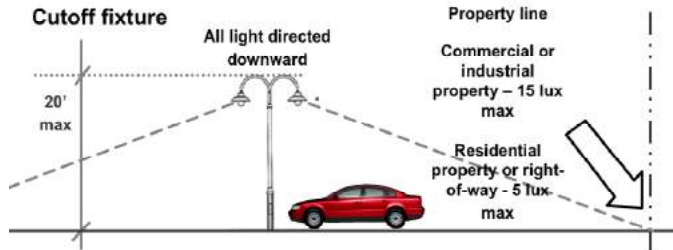
Sports fields: 50 ft.

Temporary lighting at construction sites: 50 ft.

Alley: 12 ft.

Street-local and collector: 16 ft.

Street-arterial: 24 ft.



3.8.4.2. Design

Light poles should have a base, middle and top.

Light pole design must be consistent or compatible with the style and character of the building design on the site.

Cobra head light poles are prohibited on pedestrian-oriented commercial streets, unless required by the utility provider. Decorative cobra head street light poles may be used on arterial streets, and streets in vehicle-oriented commercial and industrial areas. Where used, cobra head street light poles must incorporate a supplemental non-cobra style light mounted at a 12 ft. - 14 ft. height to illuminate the sidewalk, to the extent practical and as permitted by the utility provider.

Bare metal poles are prohibited.

Elevated form bases greater than 4 in. above grade are prohibited.

Light poles must be placed in landscape areas wherever practical. Light poles must not obstruct sidewalks or bicycle paths.

3.8.5. Attached light features

3.8.5.1. Sconces

Sconces or gooseneck lighting fixtures may be used to illuminate areas near building walls. Sconces must direct light downward against the building wall and immediately adjacent areas.

Light fixture design must be compatible with the style and character of the host structure.



An example of contemporary gooseneck lighting.

3.8.5.2. Wall packs

Wall packs may only be used at the rear of industrial buildings to light security areas. They cannot be used to draw attention to the building or provide general building or site lighting.

Wall packs must be fully shielded to direct the light downward.

Source output per wall pack must be no more than 1500 lumens.

3.8.5.3. Awnings

Awnings and canopy fascia cannot be internally illuminated.

3.8.6. Gas station canopies

3.8.6.1. Design

Lighting fixtures, including lenses, must be completely recessed into to the canopy ceiling if it is flat or no lower than 1 ft. above the lowest point of the canopy roof or fascia if it is sloped.

Source output per fixture must be no more than 3750 lumens.

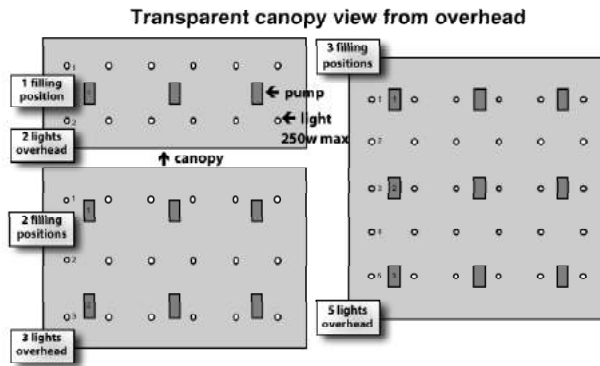
Canopy fascia cannot be illuminated, except logo signs permitted by sign requirements in Section 3.9.

3.8.6.2. Number

Canopies one pump deep may have up to two lighting fixtures per filling space.

Canopies two pumps deep may have up to three lighting fixtures per two filling spaces.

Canopies three pumps deep may have up to five lighting fixtures per three filling spaces.



3.8.7. Flood lights

Floodlights may be used only to light sports fields, outdoor recreation areas and construction sites.

Floodlights must be fully shielded or provided with sharp cut-off ability, to minimize uplight, spill-light and glare.

3.8.8. Accent lighting

Bottom-mounted lights used to illuminate landscaping and water features, or provide visual accents, are permitted.

Pole mounted accent lighting greater than 1 ft. tall is prohibited.

Roof-mounted and rooftop accent lighting is prohibited.

Banding of building plane changes (cornices, building corners, column edges, etc.) with neon or other illumination is prohibited.

3.8.9. Signs

Signs may be illuminated internally.

Ground mounted lights may illuminate a monument sign. Lighting should not spill over the edge of the sign wall face and must be shielded from oncoming traffic.

Exposed bulbs that outline a sign are prohibited.

Blinking, chasing, or other changes in illumination intensity, color, or direction, intentional or not, are prohibited. This includes electronic message centers.

Open faced neon channel letters are prohibited.

3.8.10. Alternative conformance

Development Services staff may administratively approve an alternative lighting plan. Alternative lighting plans must clearly identify and discuss modifications, proposed alternatives, and how the alternative plan will meet the intent of this section better than a plan conforming to this section.

Development Services staff will consider whether the proposed alternative lighting design protects natural areas from light intrusion, enhances neighborhood continuity and connectivity, and shows innovative and creative design.

3.9. Signs

3.9.1. Permitted signs

3.9.1.1. Undeveloped parcels

The following signs are permitted on lots with agricultural uses, and vacant or undeveloped parcels:

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Temporary: real estate	Freestanding (pole) or attached (wall)	1 per 1,000 ft. of street frontage	64 sq. ft. per sign	Freestanding: 10 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached (wall)	50 ft. min. separation	32 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary: property for sale or rent	Freestanding (pole) or attached (wall)	1 per 1,000 ft. of street frontage	64 sq. ft. per sign	Freestanding: 10 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Temporary displays	As permitted in Section 3.9				

3.9.1.2. Residential uses

The following signs are permitted on lots with residential uses:

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent: PUD identification	Freestanding (pole, monument or integrated into entry feature)	2 per entrance into the PUD and 1 along each PUD property frontage	128 sq. ft. per sign	12 ft.; 40 ft. ht if integrated into entry feature, sculpture, monument wall, fountain, etc.)	n/a
Permanent: development	Freestanding (pole, monument or attached (wall))	1 per each entrance into the development	32 sq. ft.	6 ft.	n/a
Permanent: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft.	6 ft.	n/a
Temporary: property with construction	Freestanding (pole) or attached (wall)	1 per street frontage	4 sq. ft. per sign	Freestanding: 6 ft. Attached – below roofline	Freestanding: 5 ft. from property lines
Temporary: property for sale or rent	Freestanding (pole) or attached (wall)	1 per street frontage	4 sq. ft. per sign	Freestanding: 6 ft. attached: below roofline	Freestanding: 5 ft. from property lines
Temporary: property with model home	Freestanding (pole)	1 per house	16 sq. ft. per sign	4 ft.	5 ft. from property lines
Temporary: new residential development	Freestanding (pole) or attached (wall)	1 per each entrance into the development	32 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
	Freestanding (pole)	1 per 50 linear feet of frontage; up to 6 for the development	12 sq. ft. per sign	4 ft.	5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft. per sign	6 ft.	n/a
Temporary displays	Only for multiple unit household dwelling developments, subject to Section 3.9				

3.9.1.3. Institutional and civic uses

The following signs are permitted on lots with institutional and civic uses.

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent	Freestanding (pole, monument)	1	32 sq. ft.	6 ft.	5 ft. from property lines
	Attached (awning, canopy, projecting, wall, window)	2 per wall	Building total = 0.5 sq. ft. per façade frontage ft.	Below roofline	n/a
Temporary: property with construction	Attached (wall) or freestanding (pole)	1 per street frontage	12 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary: property for sale or rent	Attached (wall) or freestanding (pole)	1 per street frontage	12 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary displays	Subject to Section 3.9				

3.9.1.4. Commercial, retail and industrial uses.

The following signs are permitted on lots with commercial, retail and industrial uses:

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent: PUD identification	Freestanding (monument, pole or integrated into project entry feature)	2 per entrance into the PUD and 1 along each PUD property frontage	128 sq. ft. per sign	12 ft.; 40 ft. if integrated into entry feature (wall, architectural or sculptural feature, fountain, etc.)	n/a
Permanent	Freestanding (monument): single use/building sites and outparcels	1, or 2 (1 per street frontage) if on corner lot	64 sq. ft. per sign	8 ft.	n/a 100 ft. from other freestanding signs on the site.
	Freestanding (monument): multi-tenant building/commercial or industrial center <100,000 sq. ft. GFA	1 per street frontage and 1 per 500 ft. of property frontage	96 sq. ft. per sign	12 ft.	n/a 100 ft. from other freestanding signs on the site.
	Freestanding (monument): multi-tenant building/retail commercial or industrial center ≥100,000 sq. ft. GFA	1 per street frontage and 1 per 1000 ft. of linear frontage	128 sq. ft. per sign	18 ft.	n/a 100 ft. from other freestanding signs on the site.
	Attached (awning, canopy, projecting, wall and window): single use/building sites	Any, up to maximum permitted area for the wall	Front/façade: 1.0 sq. ft. per linear wall frontage ft. Side and rear walls: 0.50 sq. ft. per linear wall frontage ft. 32 sq. ft. minimum signage allocation	Below roofline	n/a
	Attached (awning, canopy, projecting, wall and window): multi-tenant building/shopping center sites	Any, up to maximum permitted area for the tenant frontage of the wall where the signage will be placed	Same permitted area as single use/building sites, allocated by tenant frontage for an individual façade or wall. May be further restricted by master sign plan	Below roofline	n/a
	Attached (gas station canopy; in addition to freestanding signs)	1 on each side	no more than 32 sq. ft. per sign, (including logo)	n/a	n/a

Type		Number	Maximum sign face area	Maximum height	Minimum setback
	Attached (sculptural)	1 per building or tenant space	no more than 64 sq. ft. (height at tallest point x width at widest point)	at least 50% of sculpture height below roofline or parapet wall	n/a
Permanent: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft.	6 ft.	n/a
Temporary: property with construction	Freestanding	2 per vehicle entrance	32 sq. ft. per sign	6 ft.	5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole) or attached (wall)	50 ft. min. separation	48 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary: property for sale or rent	Attached (wall) or freestanding (pole)	1 per street frontage	1 sq. ft. per 1,000 sq. ft per sign, 32 sq. ft. per sign minimum allocation, not to exceed 128 sq. ft. per sign.	Freestanding: 8 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary displays	Subject to provisions of Section 3.9				

3.9.1.5. Open space and recreational uses.

The following signs are permitted on common open space lots and lots with recreational uses.

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent	Attached (wall) or freestanding (monument, pole), within open space lot and recreational uses	1 per street frontage	32 sq. ft.	Freestanding: 6 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Permanent: District-oriented	Freestanding (pole) or attached (wall)	Unlimited; 50 ft. min. separation	32 sq. ft.	6ft.	n/a
Temporary: Wayfinding	Freestanding (pole) or attached (wall)	50 ft. min. separation	32 sq. ft.	6ft.	n/a
Temporary: property with construction	Freestanding (pole) or attached (wall)	1 per street frontage	32 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Temporary displays	Allowed only for open space or recreational uses Subject to Section 3.9				

3.9.2. Exempted signs, not requiring a sign permit

These signs are permitted in all development areas, unless noted. A sign permit is not required for exempt signs provided the sign complies with the standards set forth in this Section 3.9:

Wayfinding signs

A-frame signs, up to 12 SF in area

Address numbers and family name identification on residences.

City-owned/operated signs. On and Off-site directional kiosk signs authorized by the City of Hutto.

Directional sign: one freestanding sign per curb cut in commercial, retail and industrial uses. Signs may be no more than 6 ft. tall and no more than 18 sq. ft. in area.

For sale, for rent and for lease signs on vehicles, boats, trailers and other personal property.

Garage sale signs: up to three signs, each no more than 4 sq. ft., may be displayed only while the garage sale is in progress. Garage sale signs must be placed outside of the right-of-way and public property. Garage sale signs may be placed within City of Hutto right-of-way (not County or State right-of-way) if written permission from an adjacent property owner is attached to said sign. Said garage sale sign must be removed before 5:00 PM on the last day

of the sale. This amendment supersedes Chapter 8, Article 8.05 of the City of Hutto Code of Ordinances.

Hippopotamus statues no more than 3 ft. tall painted with the name, logo and/or trademark colors of the business or sponsor displaying them.



Native hippopotamus statue

Historical markers, plaques, grave markers, cornerstones and commemorative tablets.

Works of fine art that in no way identify or advertise a product or business.

National, state, local and decorative non-commercial flags, each no more than 50 sq. ft. in area, flown for their intended purpose under generally accepted flag protocol, on a flagpole or building mounted staff no taller than the maximum permitted building height in the underlying zoning district, and not acting as a form of advertising.

Open house signs: up to three signs may be used, displayed outside the public right-of-way and public property. Open house signs may be placed within City of Hutto right-of-way (not County or State right-of-way) if written permission from an adjacent property owner is attached to said sign. Said open house sign shall be displayed only while the open house is in progress or for 16 hours in a one-week period, whichever is shorter. The sign must be removed immediately after the open house. Signs may be no more than 4 sq. ft. in area, and no more than 4 ft. tall.

Public Information Signs, provided such signs are removed no more than 3 days after event.

Public utility warning and underground utility identification signs.

Religious symbols (cross, Star of David, star and crescent, etc.). Signs where the shape of a religious symbol is an integral part of the sign design are not exempted.

Signs manufactured as a standard, integral part of a mass-produced product accessory to a commercial, public or semi-public use, including telephone booths, mail and newspaper boxes, vending machines, automated teller machines, gas pumps and vacuums.

Signs, notices, placards, certificates and official papers authorized or required by statute, government agency or court.

Signs for rest rooms, accepted credit cards, business organization membership (Chamber of Commerce, Better Business Bureau, etc.), meetings of civic groups, and business hours, displayed at a business.

Signs identifying zones in parking lots, no more than 6 sq. ft. in area.

Signs on concessions and rides at special events such as fairs and festivals.

Signs painted on vehicles and trailers that are operating and registered, used in everyday business activities, parked in areas appropriate for their use as vehicles normally used during business hours, and not being used only for attracting business.

Temporary decorations and displays that are clearly associated with a national, local, or religious holiday or celebration, provided there are no fire, traffic, or pedestrian hazards.

3.9.3. Prohibited signs

The following signs are prohibited in all areas of the PUD, unless noted.

Off-premise signs, except for directional kiosk signs.

Signs with changing light, color or motion effects, intentional or resulting from a defect. This prohibition includes, but is not limited to:

- Blinking, flashing, chasing, strobe and alternating color lights, integrated into a sign or not.
- Electronic message centers.
- Signs incorporating “eye catchers” and similar shiny devices designed to reflect light and create a glimmering or flashing effect.
- Signs with animated or rotating parts.
- Signs emitting flame, smoke, steam or other visual matter.

This prohibition does not apply to:

- Electronic changeable copy/message board/variable message signs whose message portion is enclosed with glass, plastic, or other durable material and who provide an auto-dimming feature based on natural ambient light conditions. Auto-dimming feature must not allow any changeable copy/message board to exceed a brightness of 7,000 NITs in daylight or 500 NITs for night use. Such signs also cannot be animated; messages must remain static for at least sixty seconds, and display no more than four colors any one time in a static pattern.
- Signs with flashing or chasing lights on concessions and rides at special events such as fairs and festivals.
- Holiday decorations and light strings displayed during November, December and January. Light strings cannot outline or highlight a sign.
- Rotating barber poles at a legitimate barber or beauty shop.
- Rudimentary time and temperature displays that are not potentially distracting to drivers.

- Warning signs and markers placed by, or authorized by and on behalf of government agencies.

Temporary signs placed in or over the public right-of-way or public property require a sign permit. Permanent signs are not permitted in the right-of-way. The city may remove signs installed without a sign permit that are located in the public right-of-way or on public property. Temporary signs placed in or over the public right-of-way or public property are permitted with an approved R.O.W. permit and City license agreement.

This prohibition does not apply to:

- Signs placed by government authorities.
- Banners placed on a light pole, utility pole, or over a street, as part of a special event of general civic interest.
- Kiosk signs.
- Wayfinding signs.
- Temporary garage sale and open house signs in compliance with Section 3.22.4 and this PUD.
- Signs placed on vehicles and trailers that are parked and used primarily as a sign.
- Signs and posters placed on trees, fences, light poles and utility poles, except parking lot zone signs on light poles.
- Banners, pennants, balloons, streamers, and other temporary signs, except on a temporary basis as permitted in Section 3.22.4.

Attached signs placed on a roof or above a parapet wall of a building. This prohibition does not apply to sculptural signs.

Attached domed, bullnose and bubble-style awning signs.

Freestanding signs placed where they might obscure a clear view of traffic on intersecting streets, and traffic warning and control signals and signs.

Signs that closely resemble or imitate official signs and traffic control devices.

Signs blocking doors, windows, vents, stairs and ramps.

Signs built and displayed without a sign permit, if a sign permit is required.

Signs built from materials usually used for temporary signs (cloth, thin plastic, corrugated plastic, etc.) displayed as permanent signs, except for no more than 30 days or less in place of a damaged, removed or permitted but unbuilt sign

Portable signs, including signs originally built as portable signs permanently mounted on a building or the ground.

Snipe, spam, and bandit signs.

Large objects such as motor vehicles, boats, aircraft, engine blocks, home appliances, heavy equipment, industrial machinery, and similar objects used as or included in signs.

Signs not expressly permitted in this section or elsewhere in this PUD.

3.9.4. Temporary signs and displays

3.9.4.1. Temporary displays

Temporary displays may include these items:

- Banners, no more than 32 sq. ft.
- Banners placed over the street to identify special events of general civic interest. The banners cannot be used for commercial advertising. Sponsor identification may be displayed on no more than 25% of the banner face area.
- Pennants, streamers, and small (no more than 12 in. diameter) balloons.
- Balloons and other inflatable objects no more than 12 ft. in height. Balloons and inflatable objects cannot be placed on top of a building. Inflatable objects cannot have flailing or animated elements.
- New development marketing flags.
- A business may have up to six temporary displays in a calendar year, with a time of no more than 30 days for each display.

3.9.4.2. Construction sign display time

Temporary signs on property under construction must be removed in 7 days after construction is complete.

3.9.4.3. Real estate sign display time

Temporary signs on property for sale or rent must be removed in 7 days after the lease or sale of the identified property.

3.9.4.4. Temporary development sign display time

Temporary signs within the PUD may be displayed as long as the sign is maintained in good repair and has a valid sign permit for up to 2 years, at which time a new permit application must be submitted.

Temporary development signs at rental communities may be displayed as long as the sign is maintained in good repair and has a valid sign permit for up to 2 years, at which time a new permit application must be submitted.

3.9.5. Substitution of non-commercial message

Noncommercial copy may be substituted for commercial copy on any permitted sign. If noncommercial copy is substituted, the resulting sign will continue to be treated as the original commercial sign under this code and will not be treated as an outdoor advertising display. Content of noncommercial copy on a sign otherwise permitted by this code may be changed without complying with provisions required for sign copy or design approval.

3.9.6. Sign design

3.9.6.1. Color

Colors for permanent on-site sign frames and supports must match, compliment or be compatible with the primary finish and colors of buildings on the site.

3.9.6.2. Illumination

Illumination must be shielded so there is no glare in the public right-of-way and adjacent properties, and directed so it does not point towards the sky.

Illumination must be steady and even over the entire sign face, to the greatest extent practical. The full number of lighting elements must be kept in working condition.

3.9.6.3. Materials

Internally lit channel letters and halo lit letters are preferred for attached signs. Domed, bullnose and bubble-style awning signs, and internally illuminated box signs, are prohibited as attached signs.

The sign base of permanent freestanding signs must match, compliment or be compatible with the dominant surface material of the main building on the site.

3.9.6.4. Attached sign placement

Attached signs cannot overlap features such as cornices, eaves, window and door frames, columns and other decorative elements, except with administrative approval of Development Services staff.

Signs must be placed at least 3 ft. from the vertical edge of a wall and other attached signs.

3.9.6.5. Attached sign height

Attached signs must be placed entirely below the lowest point of a building's parapet wall, except signs on water towers and smokestacks.

The lowest point of a projecting or awning sign must be at least 8 ft. above the sidewalk.

3.9.6.6. Window sign area

Window signs may cover no more than 25% of a window area.

Window signs are not considered in measuring the overall sign face area on a wall.

3.9.6.7. Free-standing sign placement

Freestanding signs cannot be placed where they obscure important architectural features such as entrances, display windows or decorative elements when seen from the public right-of-way.

Freestanding signs cannot be placed in or project over the public right-of-way, or create a visual obstruction in a vertical space between 3 ft. and 10 ft. above the curb in the clear vision area of a public street.

3.9.6.8. On-site free-standing sign landscaping

Landscaping must form a cluster or massing at the base of freestanding signs, in an area at least 25% of the sign height around the footprint, except with administrative approval of Development Services staff.

3.9.6.9. A-frame signs

A-frame signs must be secured in place, to the extent practical.

3.9.6.10. Sign master plans

A Sign Master Plan is not required for the PUD, provided signs comply with provisions of this Section 3.9. If a lot contains multiple businesses and uses, the applicant may submit a Sign Master Plan. The plan shall be submitted with a site development plan permit for a parcel or site. Sign type, color, scheme, size and illumination of the signs being submitted for approval must be coordinated and compatible with the architectural character on the site.

3.9.7. Sign permits

3.9.7.1. Sign permit required

Sign permits are required for the following sign types:

- New permanent signs, excluding window signs.
- New development signs.
- New real estate, construction and temporary development signs at least 12 sq. ft.
- Temporary displays.
- Expansion to the face area or height, or change in the dimensions of an existing sign
- Change in the location of an existing sign.
- Change in the logo, name or message displayed on an existing sign, except altering the copy on changeable copy faces.

3.9.7.2. Sign permit and specific use permit approval required

Specific use permit review and approval, and a sign permit, is required for a sculptural sign.

3.9.7.3. Sign permit not required

Sign permits are not required for the following sign types:

- Wayfinding signs
- Exempted signs
- Window signs

3.9.7.4. Revocation

Sign permits will be revoked if there is any violation of this code or misrepresentation of any information in the permit application.

3.9.7.5. Pending violations

Sign permits will not be issued for businesses or locations where existing signs violate this PUD, except to replace an illegal sign with a legal sign.

3.9.7.6. Expiration

Sign permits expire six months after permit issuance, if the signs are not built.

3.9.8. Sign maintenance

3.9.8.1. Building code conformance

Signs must be built and maintained in conformance to structural, electrical and safety standards of the most current International Building Code, as adopted by the City.

3.9.8.2. Condition

Signs must be kept clean and in good repair, visually and structurally. Braces, bolts, clips, fastenings and supporting frames must be securely affixed to the support structure or wall. Signs must be kept free of rust, rot, insect infestations, bird nests and other deterioration.

3.9.8.3. Blank signs

Sign faces that are unreadable, not maintained, or removed, leaving only the shell or support structure, must be replaced in 30 days or the sign must be removed. This is not an exception to the prohibition of nonconforming sign replacement.

3.9.8.4. Unsafe signs

Signs that are unsecured, unsafe or in danger of falling; or damaged, destroyed, taken down or removed for any purpose other than copy change, must be removed or repaired to conform to this PUD.

3.9.8.5. Removal

When sign removal is required, the entire sign, supporting structure and any exposed foundation must be removed.

Signs painted directly on an exposed masonry wall must be removed by a process that strips the entire sign from the wall, not by painting over the sign. Signs declared historic by the Historic Preservation Commission are exempt.

3.9.9. Non-conforming and abandoned signs

3.9.9.1. Non-conforming signs

Provisions for nonconforming and abandoned signs are in **Section 10.206 of the UDC**.

3.9.9.2. Abandoned signs

Signs are considered abandoned if they:

Advertise or identify an object, person, institution, business, product, service, event or location that no longer exists or is no longer relevant; or

Abandoned signs must be removed by the sign owner, property owner or the city at the owner's expense. Abandoned signs cannot be reused. Signs declared historic by the Historic Preservation Commission are exempt.

3.9.10 On-premise signs

All permanent and temporary signs located within the PUD shall be considered on-premise signs.

4. SUBDIVISION STANDARDS

4.1. Lot Division and Adjustment Processes

4.1.1. Amended plat

4.1.1.1. Applicability

The amended plat process may be used for the following in the PUD:

- Adjust or relocate the boundary or lot lines between one or more adjacent lots on an approved plat, where the number of lots will not increase.
- Join two or more adjacent lots on an approved plat, where the entire plat will not be vacated.
- Correct an error or omission on an approved plat.
- Show monuments set after death, disability, or retirement from practice of the engineer or surveyor charged with responsibilities for setting monuments.
- Show the proper location or character of monuments that have been changed in location, character, or shown incorrectly on an approved plat.

4.1.1.2. Criteria and process

The amended plat process and review criteria are described in **Section 10.203.2 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.2. Major subdivision

4.1.2.1. Applicability

A major subdivision permits the division of a parcel into two or more lots and/or tracts. The major subdivision process may be used to subdivide legal lots, if the subdivision is not eligible for the short form subdivision process.

4.1.2.2. Criteria and process

The major subdivision process and review criteria are described in **Section 10.203.7 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.3. Short form subdivision (short form final plat, minor subdivision)

4.1.3.1. Applicability

A short form subdivision provides for the timely review of proposed land division that does not discernibly impact surrounding properties, environmental resources, city character or public facilities. The short form subdivision process may be used for the following land divisions:

- Division of existing legal uses with separate utilities, except nonconforming billboards. This process cannot be used to divide accessory uses from principal uses or create an opportunity for more principal uses.
- Division of an unplatted lot into four lots or less, with no new streets, with the condition that further subdivision must be approved through the major subdivision process.
- Divisions of land for public utilities, open space, schools or other public uses.

4.1.3.2. Criteria and process

The short form subdivision process and review criteria are described in **Section 10.203.14 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.4. Plat vacation

4.1.4.1. Applicability

Plat vacation provides for the vacation of an entire subdivision plat if development will not occur consistent with the approved plat.

4.1.4.2. Criteria and process

The plat vacation process and review criteria are described in **Section 10.203.11 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.5. Right-of-way vacation

4.1.5.1. Applicability

Right-of-way vacation permits the vacation of rights-of-way and easements that are no longer needed. Subject to review criteria, City Council may grant a right-of-way or easement vacation for any right-of-way or easement of record where the city has jurisdiction. Right-of-way vacation results in a new lot configuration, and also requires an amended plat.

4.1.5.2. Criteria and process

The right-of-way vacation process and review criteria are described in **Section 10.203.13**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.2. Plat Types

4.2.1. Preliminary plat

4.2.1.1. Purpose

A preliminary plat provides detailed graphic information and associated text showing property boundaries, easements, land use, streets, utilities, drainage, and other information required to evaluate proposed subdivisions of land. The preliminary plat includes the location of required by this article and other applicable city ordinances, codes and policies. Preliminary plats cannot be recorded or used as a plat of record.

4.2.1.2. Criteria and process

Information required for preliminary plat submittal is described in the **City of Hutto Development Administrative Guide Manual**.

4.2.2. Final plat

4.2.2.1. Purpose

A final plat provides detailed graphic information and associated text showing property boundaries, easements, streets, utilities, drainage, and other information required for the maintenance of public records of the subdivision of land. Final plats are recorded and used as a plat of record, subject to the regulations in this chapter.

4.2.2.2. Criteria and process

Information required for concept plan submittal is described in the **City of Hutto Development Administrative Guide Manual**.

4.3. General Provisions

4.3.1. Required improvements

4.3.1.1. Required features

The developer or applicant must make all of the following improvements:

- Dedicate right-of-way necessary to achieve the width required by applicable transportation-related plans for streets adjoining the property.
- Reserve, but not dedicate, right-of-way for controlled access highways.
- Pave and install curbs and gutters along streets adjoining the property.
- Install sidewalks and pedestrian pathways.
- Install street signs.
- Install street lighting.
- Install development perimeter walls, if walls are required.
- For residential development, provide open space and recreational facilities.
- Install all utilities underground, excluding transmission lines.
- Provide landscaping, drainage, fire protection required for the project.

4.3.1.2. Developer responsibilities

All improvements which the developer is required to make shall be made at the developer's expense without reimbursement by the City, except as provided otherwise in this PUD or related development agreement. The City may contract with a developer to construct public improvements relating to the development in accordance with **Chapter 212, Subchapter C of the Texas Local Government Code**, as amended.

4.3.2. Timing and inspection of improvements

Unless otherwise stated, a subdivider developer cannot begin construction activities in the PUD, including clearing and/or rough grading, before first obtaining all city approvals required by this chapter.

4.3.3. Phasing plan requirements

Projects to be developed in multiple phases must meet all the following requirements unless otherwise approved by the Development Services staff.

If requested in the original application, a major subdivision may be considered for approval for phased development.

Phasing plans must be included in the first submittal and are reviewed by Development Services staff and/or other city staff and evaluated as part of the overall development plan.

Each phase of a development needs to be “stand alone” for utilities, fire protection, streets and stormwater management. Phase lines must follow reasonable and logical boundaries, such as terminating at intersections or following topographical breaks.

Phases must be constructed in the approved manner to ensure orderly and planned development.

Phases must be planned to ensure the efficient construction of adjacent future phases (phases immediately next to the subject phase, sharing a common boundary line), and to ensure that phased development is contiguous.

Lot numbers shall not be duplicated in different phases of the same subdivision.

Each proposed phase must, at a minimum, include the transportation, utility, and other public/private infrastructure shown on the proposed phasing plans, so each phase is independent of later phases.

Right-of-way and/or easements for public infrastructure servicing the respective phase must be recorded with the first plat.

Water and sewer extension permit applications for each individual phase of the project are required after plan approval.

4.3.4. Construction plans submission

4.3.4.1. Submittal

Subdivision improvement construction plans shall be submitted for review and approval by the City Engineer for all development for which public improvements are required.

4.3.4.2. Developer must retain engineer

The developer must retain the services of an engineer registered in the state of Texas, whose seal shall be placed on the subdivision improvement construction plans in accordance with the Texas Engineering Practice Act. The engineer shall be responsible for the services described in City Standards. The services performed by the engineer shall be as designated in the latest edition of the “Manual of Professional Practice – General Engineering Services,” published by the Texas Society of Professional Engineers, and shall include both design and inspection as defined in this code.

4.3.4.3. Submittal content

Except as provided in this code, after preliminary plat approval, subdivision improvement construction plans may be submitted to the City Engineer for approval. The subdivision improvement construction plans submittal shall include all of the information specified in the Development Administrative Guide.

4.3.4.4. State review

All subdivision improvement construction plans must comply with the Texas Accessibility Standards administered by the Texas Department of Licensing and Regulation (TDLR) and the Americans with Disabilities Act of 1990, as amended. The developer shall submit applicable portions of the subdivision improvement construction plans to TDLR for review. Upon the completion of construction, the developer shall request inspection of all pedestrian facilities by the TDLR and pay all necessary fees. The City will not accept the public improvements until the developer provides evidence that the plans have been reviewed and approved by TDLR and that payment of the required inspection fees has been made.

4.3.4.5. Expiration of approval subdivision improvement construction plan

The subdivision improvement construction plans will expire 2 years from the date of approval by the City Engineer if construction has not commenced. Even after construction has commenced, the approved subdivision improvement construction plans will expire 3 years from the date of approval. If approved subdivision improvement construction plans expire, the plans shall be resubmitted for review and approval to ensure compliance with the current design and construction standards.

4.3.4.6. Pre-construction conference

After the approval of the subdivision improvement construction plans, a pre-construction conference shall be required to commence construction of the public improvements. Said conference shall be held with the City Engineer and include the following persons: developer, developer's contractor, developer's engineer, and other parties as determined by the City Engineer.

4.3.5. Construction of public improvements

4.3.5.1. Requirement

All public improvements required by these regulations shall be installed and constructed by the developer, or his successors in title, within 3 years from the approval of the subdivision improvement construction plans. All improvements shall conform to the provisions of this PUD and approved plans.

4.3.5.2. Failure to complete improvements

Where public improvements are not completely installed and constructed within 3 years, the City may do the following:

- Where an additional fiscal surety was required, obtain the funds to complete the public improvements using a third party selected by the City; and/or
- Exercise any other rights available under the law.

4.3.5.3. Sidewalk construction

- Sidewalks for single-family and two-family lots

Except as provided in this PUD, a developer shall install sidewalks on the rear of double frontage lots, on the side of a corner lot, and where shown on the subdivision improvement construction plans.

- Sidewalks for single family attached, multifamily, and non-residential lots

A developer shall install sidewalks for single family attached, multifamily, and non-residential lots that abut a public street and where shown on the subdivision improvement construction plans. A subdivision shall not be accepted until the sidewalk has been constructed in accordance with the regulations of this PUD and has been inspected and approved by the City Engineer.

- Deferment of sidewalk construction

Sidewalks shall be installed in accordance with this section except under the following circumstances, as determined by the City Engineer:

- Where the existing cross-section of street makes immediate construction of a sidewalk impractical;
- Where a non-residential subdivision abutting an existing street is isolated from any other sidewalk by a distance of twice the frontage of the subdivision; or
- Where construction or reconstruction of the road where a sidewalk is to be placed is imminent and the sidewalk would be destroyed if constructed.

The City may require a cash payment by the developer in lieu of construction of the sidewalk if the Planning and Zoning Commission determines that the sidewalk should not be built within the 3-year period of the construction plans. The cash payment shall equal the cost of constructing and installing the sidewalk at the time of acceptance of the public improvements. The developer shall pay the cash payment prior to the acceptance of the public improvements by the City.

- State review

All sidewalks must comply with the Texas Accessibility Standards administered by the Texas Department of Licensing and Regulation (TDLR) and/or with the Americans with Disabilities Act of 1990, as amended, whichever is more restrictive. The developer shall submit its sidewalk plans to TDLR for review and, upon completion of its construction, for inspection. The City will not accept public improvements until the developer provides evidence that the sidewalk plans have been reviewed and approved by TDLR. The developer is responsible for all fees associated with the State plan review and inspection, and must submit to the City evidence of payment of all required inspection fees.

4.3.5.4. Benchmarks

- *Designation*

A permanent benchmark shall be designated with each addition or subdivision. Benchmarks shall be located on public property in a location acceptable to the City Engineer. Benchmarks are considered public improvements and shall consist of a brass disk, approved by the City Engineer, set in a concrete structure of such mass and dimensions and constructed on an unyielding foundation that, in the opinion of the City Engineer, will ensure the integrity of the benchmark.

- *Installation*

Prior to the acceptance of the public improvements, benchmarks shall be installed by the developer. The elevation, horizontal datum, and description of each benchmark installed shall be certified by a surveyor and submitted to the City Engineer. In the event that public improvements are not required, benchmarks shall still be installed by the developer and the certification and description provided to the City Engineer prior to plat recordation.

- *Modification*

The City Engineer may modify the benchmark requirement if he/she determines one of the following:

- The requirement would create needless redundancy of benchmarking because of an established public benchmark exists in the immediate vicinity, is readily accessible, and will not be removed or made inaccessible by construction associated with the addition or subdivision;
- The requirement creates undue hardship on the developer;
- There is no feasible opportunity to install a brass disk in a suitable structure. In this case, the City Engineer may approve a permanent benchmark established in conformance with generally accepted surveying and engineering practices; or lack of development within the subdivision or addition

4.3.6. Restrictions on certificate of occupancy

City staff cannot issue certificates of occupancy for development until staff certifies the developer or subdivider has installed all improvements in conformance to the requirements of this section and the approved final plat and construction drawings. All improvements must be functional and under the warranty period for maintenance.

4.3.7. Construction traffic and alternative routes

Construction traffic from the development of new subdivisions and/or site plans shall be required to use a reasonable alternative route until 75% of the total certificates of occupancy are issued in the new development boundary as identified with the associated subdivision/site plan. If no reasonable alternative route exists, existing public streets may be used.

4.3.8. Street signs

Street name signs conforming to city design standards must be placed at street intersections. The subdivider or developer must install the signs before city acceptance of required improvements. Street signs are included in improvements where fiscal surety may be submitted instead of completed improvements. The subdivider or developer is required to replace or repair street signs that are damaged during construction.

4.3.9. Street lights

The property owner or developer must install street lighting along proposed public and/or private streets, streets, and along existing streets adjoining the property. Development Services and Public works staffs approve street light location and design. Illumination must conform to lighting regulations in Section 3.22. The subdivider or developer is required to replace or repair lights that are damaged during construction.

4.4. Assurances for Improvement Completion

4.4.1. Improvements or surety instrument before final plat recording

On approval of a final plat by City Council, but before recording, the applicant must:

Construct all improvements as required by this chapter, and provide a surety instrument guaranteeing their maintenance as required in this code; or

Provide a surety instrument in accordance with this PUD guaranteeing construction of all improvements required by this article and in this PUD and other applicable regulations.

4.4.2. Completion of improvements

Before the final plat is recorded, the developer must:

Complete all improvements required by this article according to the approved construction plans and subject to the City Engineer's approval and the City's acceptance, except as otherwise provided.

Construct all sidewalks in common areas and at street corners as shown on the approved final plat and according to the City's regulations or the City's standard details and specifications. Sidewalks must be constructed and approved for each lot before a certificate of occupancy is issued.

4.4.3. Fiscal security

A developer must post fiscal security with the City prior to a request for recordation of the final plat if the public improvements have not been accepted by the City and provided that the subdivision improvement construction plans have been approved by the City Engineer.

4.4.3.1. Amount

The amount of fiscal security posted by the developer shall equal the estimated cost plus ten percent to complete the public improvements that have not been accepted. The developer's engineer must provide the City Engineer with a sealed opinion of the probable cost for his approval.

4.4.3.2. Types

- A developer may post as fiscal security:
- A performance bond; or
- A letter of credit, approved by the City Attorney.

4.4.3.3. Return of fiscal security

The City shall return the fiscal security to the developer when the City accepts the public improvements.

4.4.3.4. Expenditures of fiscal security

The City may draw on the fiscal security and pay the cost of completing the public improvements if it determines that the developer has breached the obligations secured by the fiscal security or the 3-year time period for the installation of the required public improvements has expired. The City shall refund the balance of the fiscal security, if any, to the developer. The developer shall be liable for the cost that exceeds the amount of fiscal security, if any.

4.4.4. Inspection and acceptance

4.4.4.1. Entry and inspection

The City Engineer and other City employees shall have the right to enter upon the construction site for the purpose of conducting inspections. The City Engineer shall conduct inspections of the public improvements during construction to ensure general conformity with plans and specifications as accepted. If the City Engineer finds, upon inspection, that any of the public improvements have not been constructed in accordance with City ordinances, then the developer shall be responsible for making the necessary changes to insure compliance.

Upon completion of the public improvements, the developer shall arrange with the City Engineer for a final inspection to determine that the public improvements have been installed in conformity with the approved subdivision improvement construction plans. The developer shall pay all necessary inspection fees prior to the acceptance of the public improvements by the City.

4.4.4.2. Acceptance of improvements

Request acceptance of improvements

Upon completion of the construction of the public improvements, the developer shall request that the City accept the improvements for maintenance. Concurrent with the request for acceptance of the public improvements for maintenance, the developer shall submit all information required for acceptance of improvements specified in the Development Administrative Guide.

4.4.5. Maintenance of improvements

The developer shall be responsible for the maintenance and repair of all public improvements for 2 years after acceptance of said public improvements by the City. Prior to acceptance of improvements by the City pursuant to Section 4.4.4.2, a 2-year maintenance guarantee, in favor of the City, shall be provided by the developer by means of a warranty bond, subject to approval of the City.

4.5. Construction Standards

4.5.1. General

Construction for streets and drainage must conform to the City of Hutto Standard Details and the City of Georgetown Construction Specifications and Standards.

Construction standards and specifications for electrical and gas utilities must be in conformance to the standards of the approved utility provider.

4.6. Lot Configuration

4.6.1. Lots

4.6.1.1. General standards

Size, shape, and location of lots must be established considering topographic conditions, contemplated uses, and the character of the surrounding area.

Lot sizes and building setback lines must conform to the minimum lot area, minimum lot width, and minimum yard standards required in the PUD.

Lots that front on more than one street other than corner lots, resulting in the need for a large development perimeter wall facility, should be minimal or avoided.

Side lot lines must be substantially at right angles or radial to street alignments.

4.6.1.2. Lot width

Lot width at the street right-of-way line at the end of a cul-de-sac or the outside of a sharp curve must be at least 20 ft., to accommodate driveways, drainage facilities and utilities.

4.6.1.3. Lot shape

Lots should be as rectangular as practicable. Sharp angles between lot lines should be avoided.

4.6.1.4. Lot numbering

Lots must be numbered consecutively in each block. Lot numbering may be cumulative throughout the subdivision if the numbering continues from block to block in a uniform manner approved on a preliminary plat.

Blocks must be numbered consecutively in the overall plat and/or sections of an overall plat as recorded.

4.6.2. Easements

Easements must be dedicated for dry and wet utilities, drainage ways, and access paths where necessary, and may be required across parts of lots (including side lines) if in the opinion of the city, they are needed.

Utility easements should be located where they will not prevent tree planting in tree lawns.

4.7. Parkland Dedication

4.7.1. Dedication procedure

4.7.1.1. Parkland Dedication

Parkland dedication requirements set forth in this Ordinance shall satisfy all parkland requirements of the City with respect to the PUD. A minimum of 26.9 acres of land within the Brushy Creek 100-year floodplain within the PUD, as generally depicted **Exhibit A, PUD Concept Plan**, shall be dedicated to the City as parkland.

With the consent of the City, parkland may be conveyed to a third party for later conveyance to the City of Hutto, provided no additional costs are incurred by the developer.

Except as provided herein, no parkland dedication, cash payment in lieu of parkland dedication or improvements in lieu of parkland dedication shall be required for the PUD. The area to be dedicated must be shown on the preliminary plat and final plat; and must be included in the dedication statement. Dedicated parkland must meet the requirements and guidelines of this section.

4.7.1.2. Parkland trail improvement

The developer shall be responsible improving the parkland with a 10 ft. wide concrete shared use trail that is consistent with the City of Hutto Parks, Recreation, Open Space and Trails Master Plan. The 10 ft. trail shall be located in the Brushy Creek 100-year floodplain and extend from the FM 685 ROW to the SH 130 ROW. The alignment of the trail shall be approved by the Parks and Recreation Director prior to construction. The trail improvements must be shown on a detailed exhibit accompanying the final plat of the parkland.

At the City's option, the trail may be constructed by the developer and conveyed to the City upon acceptance, or cash may be paid to the City in lieu of the trail construction. The cash amount will be based on a construction estimate of the trail. If constructed by the developer, the trail construction must be constructed and accepted at a date mutually agreed upon by both the developer and Parks and Recreation Director. Maintenance of the trail shall be the responsibility of the City of Hutto upon City acceptance.

4.7.1.3. Dedication required before plat recording

Land requirements must be met before the plat is recorded.

4.7.1.4. Dedication by warranty deed

Parkland must be dedicated to the city by general warranty deed, and acceptable evidence of clear title and payment of all taxes must be provided to the city.

4.7.1.5. Improvements by park site

The subdivider or developer is responsible for installation of public improvements next to the park site including, but not limited to, curb and gutters, streets, sidewalks, and storm drainage facilities made necessary by the development.

4.7.2. Nature of parkland

4.7.2.1. Access

Convenient pedestrian and vehicular access to park land must be provided. In areas of parkland not fronting a public street, access by frequent green links or public paths must be provided.

4.8. Pedestrian and Bicycle Facilities

4.8.1. Sidewalks

4.8.1.1. Location

Sidewalks must be installed on both sides of all public streets, except limited access highways and loop lanes.

Sidewalks must be placed inside the public right-of-way as close to the outer edge of the right-of-way as possible, to provide a tree lawn at least 5 ft. deep to the extent practical, except that sidewalks may be placed in an access easement on private property. Development Services staff may administratively approve exceptions to the tree lawn requirement and sidewalk location where conditions warrant, such as provision for accessible routes.

Sidewalks may meander to avoid trees, utility poles and boxes, and other obstacles; for aesthetics and to meet universal accessibility requirements.

4.8.1.2. Timing of sidewalk construction

The builder or developer of a site must build a sidewalk when the adjacent site is developed. When streets are built, the subdivider or developer must also build sidewalks along streets adjacent to amenity centers, open space, easement rights-of-way, and land dedicated for parks and other purposes.

Sidewalks located along collector and arterial streets must be built at when the thoroughfare is constructed.

All required sidewalks must be built before a certificate of occupancy is issued.

4.8.1.3. Connectivity

Sidewalks must connect to existing adjacent sidewalks, or be designed and placed to allow connection to future adjacent sidewalks. Required sidewalks serving non-residential lots must connect to parking in the lot and to primary building entrances. Required connections may include street crosswalks but may not span distances of at least 50 ft. without an improvement to protect pedestrians from vehicles.

Sidewalks must be installed to provide all residential areas with direct access to all neighborhood facilities, including schools, parks and playgrounds, places of worship and assembly, shopping centers, amenity centers, and public transit stops, wherever possible.

4.8.1.4. Pedestrian crossing

Pedestrian crossings must be made safer for pedestrians whenever possible by shortening crosswalk distance with curb extensions, reducing sidewalk curb radii, and eliminating free right-turn lanes, where practical. Signals allowing longer crossing times in shopping districts, mid-block crossings in high-pedestrians use areas, corner neckdowns, textured pavement, and medians must be provided as appropriate.

Adequate signs and street markings must be provided for all crosswalks

4.8.1.5. Easements

Easements for sidewalk connections to adjacent required sidewalks not yet built are required. Easements for all accessways are required.

Easements must be established to provide public access for sidewalks, pedestrian paths/ trails / greenbelts, or bicycle trails identified in applicable city plans.

4.8.2. Bicycle paths and lanes

4.8.2.1. Location

Bicycle lanes must be incorporated in the design of arterial streets located within residential areas of the PUD, and wide outside lanes must be incorporated in the design of major collector streets. On local streets and residential collectors low traffic speeds and volumes allow bicyclists and motorists to safely share the street and bike lanes, therefore, are not required.

4.8.2.2. Construction standards

Design and construction of all bicycle facilities must meet or exceed standards in the "Guide for Development of Bicycle Facilities" published by the American Association of State Highway and Transportation Officials (AASHTO). Signing and pavement markings for such facilities must conform to the Manual on Uniform Traffic Control Devices (MUTCD).

4.8.3. Multi-use paths

While not encouraged to substitute for a good system of on-street facilities, multi-use paths may be used to enhance pedestrian and bicycle travel where the existing circulation system does not serve these patrons well or provide corridors free of obstacles. Paths must connect to the street and sidewalk system safely and conveniently, and must meet the following requirements and those in city design standards.

Path connections must be well signed with destination and directional signing.

Paths must be located in corridors that serve origin and destination points such as residential areas, schools, shopping centers, and parks.

Paths must be built in locations that are visible and easily accessible, for the personal safety of users.

Whenever possible, paths must be designed so motor vehicle crossings are removed or significantly minimized. Where crossings exist, they must be carefully designed to ensure the safety of the users. Where multi-use paths are proposed to run parallel with streets, they must be offset at least 6 ft. from the back of the curb.

Paths must be constructed of durable, low-maintenance materials, with sufficient width and clearance to allow users to walk or bike at reasonable speeds. Paths must be at least 8 ft. wide.

Where multiple uses are intended (e.g., shared pedestrian and bicycle traffic) the path should be 8 ft. wide whenever possible.

4.9. Street Classifications

4.9.1. Alley

An alley (residential or commercial) is a public street designed to provide access to the rear or side of a lot including garage access, solid waste access, fire access and utility easements.

- Alleys are required for all residential lots fronting on a Residential Lane
- Alleys are required in Non-Residential areas where it is necessary to provide for adequate access for service vehicles, off-street loading or unloading, access for emergency vehicles or similar reasons consistent with the intent of this PUD.
- Alleys may not access arterial streets.
- All alleys shall have at least two direct access points to public streets and are subject to block length criteria included in this PUD.

Alleys shall be dedicated to the public.

4.9.2. Green lane

A green lane has no road surface, but rather takes the form of a park or pedestrian plaza fronted by single household dwellings, two to four household dwellings, and/or townhouses or rowhouses.

- Green lanes cannot access arterial streets
- Facades and front porches (if any) of dwellings on lots fronting green lane must face the lane, not the alley

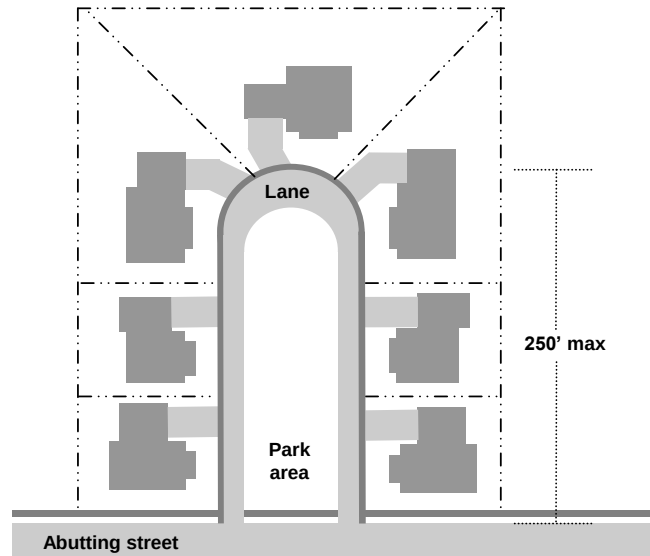
A homeowner association shall maintain the groundcover and vegetation of the green lane.

4.9.3. Loop lane

A loop lane is an alternate street design that offers a turnaround in place of a cul-de-sac. A loop lane provides open space instead of the expanse of asphalt paving found in a standard cul-de-sac.

- Loop lanes may not access arterial streets.
- The lane must be dedicated to the city.
- A homeowner association shall maintain the green space.

Utilities and water detention may be located in the green space.



4.9.4. Residential lane

A residential lane serves up to 80 dwelling units is expected to carry less than 800 vehicles per day.

- On-street parking, where provided, shall be provided in additional bays.
- Continuous sidewalks and street trees at regular intervals are required on both sides of the residential lane

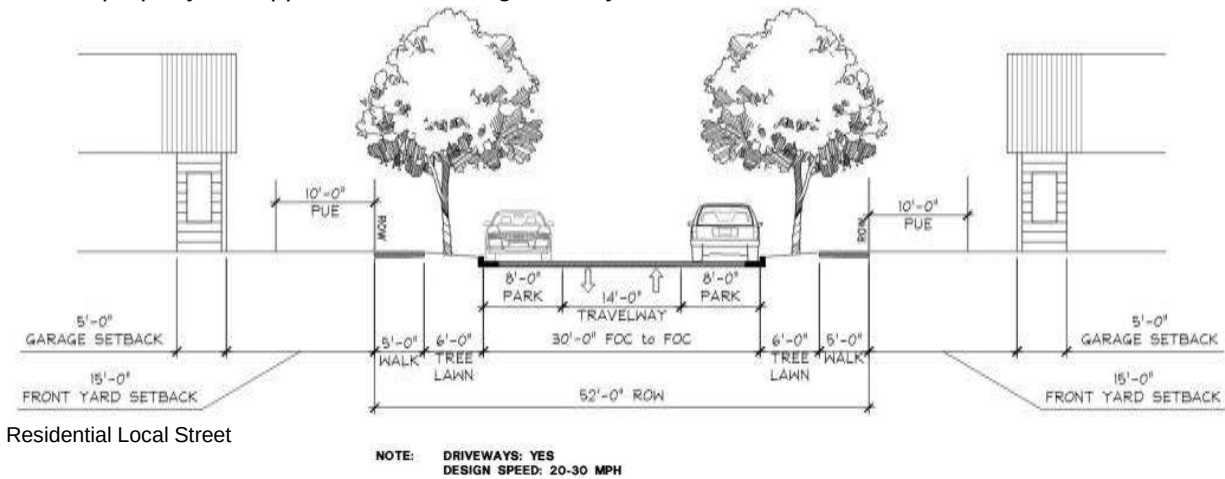


Street Trees in the tree lawns

4.9.5. Residential local street

A Residential Street generally serves up to 80 dwelling units and is expected to carry less than 800 vehicles per day.

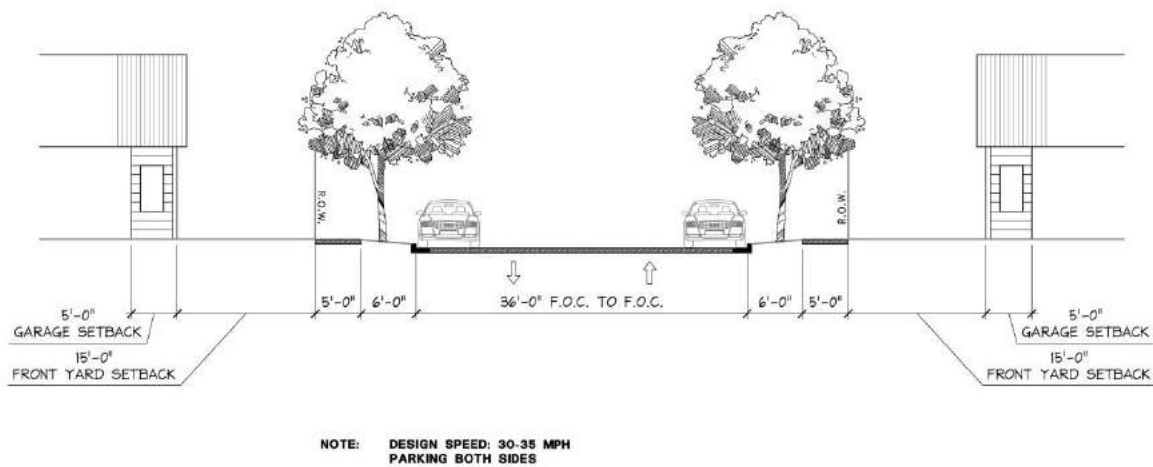
- Continuous sidewalks and street trees at regular intervals are required on both sides of a residential street
- Driveway access to residential units is permitted.
- Alleys are permitted in conjunction with Residential Streets, but are not required.
- On local streets, no driveway is permitted closer to a corner than 50 feet, except that if a lot is less than 50 ft. in width, then the driveway must be placed as close as possible to the property line opposite the street right of way line.



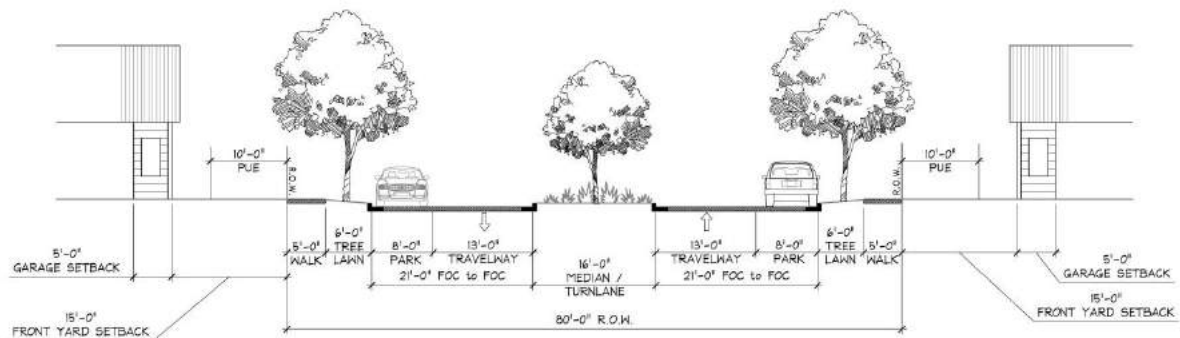
4.9.6. Residential collector

A Residential Collector and Divided Residential Collector is a street type that has an actual or anticipated traffic flow of 800 average daily trips (ADT) or greater.

- Continuous sidewalks and street trees at regular intervals are required on both sides of a residential collector.
- A Residential Collector may provide access to any type of residential unit.
- A Residential Collector shall provide two-through lanes for traffic
- A Residential Collector shall provide parking on both sides of the roadway.
- Driveway access to single-family or two-family dwelling units is permitted when spaced no less than 50 feet apart measured from center to center.
- On collector streets, no driveway is permitted closer to a corner than 100 feet.
- Planted medians are permitted on a Divided Residential Collector.



Residential Collector



Divided Residential Collector

4.9.7. Major collector street

A Major Collector is a street that has an actual or anticipated traffic flow of 2500 ADT or greater.

- A Major Collector is generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on the size and density of development.
- A Major Collector shall provide access to all types of commercial and industrial uses.
- A Major Collector shall provide for two through lanes with parking on each side or four through lanes.
- No driveway access to single-family or two-family dwelling units is permitted.
- Medians may be allowed with approval of City Staff.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a major collector street.

4.9.8. Minor arterial street

A Minor Arterial is a street whose main purpose is to serve as a major route through and between different areas of the City.

- A Minor Arterial is generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on the size and density of development.
- Minor Arterials have two through lanes in each direction separated by a median.
- No parking is permitted.
- No driveway access to single-family or two-family dwelling units is permitted.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a minor arterial street.

4.9.9. Major arterial street

A Major Arterial is a street, including Interstate Highway Service Roads, whose main purpose is to serve as a major route into, out of or across the City.

- These streets are generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on size and density of development.
- Major Arterials have at least three lanes in each direction separated by a median.
- Interstate Highway Service Road standards are established by the Texas Department of Transportation and do not include a bicycle lane within the street Section.
- No parking is permitted.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a major arterial street.

4.9.10. Private interior drive

Development within the PUD, including multifamily and single family uses, may be organized to include private interior drives which serve residents. Private interior drives, if any, shall be maintained by the Property Owners Association (POA) and shall comply with all City fire and emergency regulations. All private interior drives shall be a minimum pavement width of twenty (20) feet.

4.9.11. Street classification standards

Standard	Alley	Green Lane	Loop Lane	Residential Lane	Residential Local	Residential Collector	Divided Residential Collector	Major Collector	Minor Arterial	Major Arterial
ADT (Avg Daily Traffic)	---	--	<150	< 800	< 800	> 800	>800	> 2500	> 12,500	> 24000
Min. ROW (Right of Way)	20	50	90	49	52	58	80	66	110	135
FOC – FOC (Face of curb to Face of curb)	--	--	20	24	30	36	2 @21	44	82	106
Length	--	< 250	< 250	#	#	#	#	#	#	#
Lanes	1	n/a	1	2	2	2	2	2-4	4	6
Lane Width	20	36-40	11-12	10-12	8-14 (includes parking)	10	10	10-12	12	12
Median Width	---	---	---	---	---	---**	16'	---**	24	24
Design Speed	---	---	15	20-25	20-25	25-30	25-30	30-35	35-45	35-45
Driveways	Yes	Alley	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Parking	No	#	Yes	Yes*	Both Sides	Both Sides	One Side, Each Way	Both Sides***	No	No
Tree Lawn	No	No	No	5', both	6', both	6', both	6', both	6', both	6', both	6', both
Sidewalks	No	4', both	4', both	4', both	5', both	5', both	5', both	5', both	5', both	5', both
Commercial Driveway Spacing for City / County Controlled Roadways and State System Highways										
Posted Speed (MPH)					Driveway Spacing (Feet)					
< 30					200					
35					250					
40					305					
45					360					
50					425					

Unless otherwise specified, all width dimensions are in feet and speeds are in mph.

Refer to standards defined elsewhere in this chapter

* On-street parking, where provided, shall be provided in additional bays

** Median allowed with approval of City Staff

*** 2 Lane Roadways Only

4.10. Street Design

4.10.1. Right-of-way width measurement

Right-of-way width is measured from front lot line to front lot line of opposite lots.

4.10.2. Geometry

4.10.2.1. Horizontal alignment

Maximum deflection in alignment permitted without the use of a curve shall be ten degrees.

4.10.2.2. Arterial street curves

Curves in arterial streets shall be designed in accordance with design speed standards found in AASHTO manual, with exceptions to this standard granted only by the Final Approval Authority.

4.10.2.3. Collector street curves

Curves in collector streets shall be designed in accordance with design speed standards found in AASHTO manual, with exceptions to this standard granted only by the Final Approval Authority.

4.10.2.4. Local street curves

Curves in local streets shall be designed in accordance with design speed standards found in AASHTO manual. The requirement for local streets exempts 90-degree or 'elbow' curves provided a radius of 50 ft is provided.

4.10.2.5. Reverse curves

Reverse curves shall be separated with a minimum tangent of 100 feet.

4.10.2.6. Vertical curves

Vertical curves shall be designed in accordance with AASHTO standards.

4.10.2.7. Cul de sacs and temporary turnarounds

- Cul-de-sac bulbs or turnarounds must have a paved radius of at least 50 ft. for single household and two-household use, and at least 60 ft. for other uses. A landscape island located in the center of the bulb is permitted.
- No more than 200 projected average daily trips (using ITE standards) shall be allowed for any cul-de-sac longer than 200 feet.
- Temporary turnarounds meeting the requirements outlined in the most recently adopted IFC shall be provided at the end of streets more than 100 feet long that will be extended in the future. The following note should be placed on the plat: "Crosshatched area is temporary easement for turn-around until street is extended (give direction) in a recorded plat." No temporary dead-end street in excess of 400 feet may be created unless no other practical alternative is available. A sign must be posted at the turnaround stating the street may be extended in the future.

4.10.2.8. Reserve strips

Reserve strips or "spite strips" at the end of streets are prohibited.

4.10.3. Intersections

4.10.3.1. Intersection angle

Streets must generally intersect at a 90° angle, except that variations of greater than 10° on collector and local streets and greater than 5° on major and minor arterials must be approved by the city engineer.

4.10.3.2. Radius at corners

Local and collector street corners must have a 10 ft. - 15 ft. radii; acute corners must have a 20 ft. - 25 ft. radii.

Arterial street corners must have a 20 ft. - 25 ft. radii.

Buildings, signs or parking is prohibited in the area between the corner curves and the chord connecting the ends of the curves except as approved by planning staff or the city engineer.

Street intersections with one or more residential collector level and higher classified streets must include 25 ft. right of way flares/cutbacks. The flare/cutback is measured along tangents from the point of intersection of the two right of way lines.

4.10.3.3. Center line tie with existing streets

New streets intersecting with or extending to meet existing streets must be tied to the existing street on centerline with dimensions and bearings to show relationship.

4.10.3.4. Partial or half streets

Partial or half streets are strongly discouraged. Partial or half streets may be provided only where the city finds a street should be located on a property line, where the proposed road has a center median.

4.10.4. Traffic calming

4.10.4.1. Horizontal deflection improvements

Traffic calming improvements that use horizontal deflection, including traffic circles, corner neckdowns, chicanes, tapers, landscape medians, are permitted. Horizontal deflection improvements may encroach into the required paved area for a street type described in this Ordinance, if reasonable access is not obstructed. The city engineer and Development Services staff must approve the design and implementation of horizontal deflection improvements.

4.10.4.2. Vertical deflection improvements

Traffic calming improvements that use vertical deflection, including speed bumps, speed humps, speed cushions, and speed tables, are strongly discouraged. The city engineer and Development Services staff must approve the design and use of vertical deflection improvements.

Speed tables, if used, should be integrated into pedestrian crossings at intersections and green links.

Speed humps and speed cushions, while strongly discouraged, are preferable to speed bumps.

4.11. Street Grid, Circulation, and Connectivity

4.11.1. General alignment

The precise alignment of thoroughfares included in the Plan may be varied to allow adjustments that increase the compatibility of the right-of-way with natural or manmade features such as steep slopes, waterways, wildlife habitats, neighborhoods, historic structures or existing roadways.

4.11.2. Street arrangement and internal connectivity

4.11.2.1. Conformity to plan

Width and location of streets must conform to the underlying concept plan and the transportation element of community, neighborhood and other applicable land use and development plans.

4.11.2.2. Topography

The street system must have a logical relationship to the natural topography of the ground.

4.11.2.3. Street Connectivity

The street network in a residential development must be strongly promoted, unless Development Services staff finds it impractical due to creek and drainageways, existing right-of-way, and/or natural features. If this requirement is waived, 5 ft. wide pedestrian trails in at least 15 ft. green links must link cul-de-sacs and provide through-block access where Development Services staff finds pedestrian connectivity is needed.

4.11.2.4. Collector street connectivity

All collector-designated streets shall connect on both ends to an existing or planned collector or higher-level street.



4.11.2.5. Blocks

4.11.2.5.1. Maximum block length

Residential local street block lengths shall be no more than 600 ft., excepting along SH 130, the Union Pacific railroad right-of-way, 100 year floodplain and streets crossing a transmission line easement. Block lengths shall be measured along the block face from intersecting curb to intersecting curb.

4.11.2.5.2. Block depth

Blocks should have sufficient width to allow two tiers of lots of appropriate depth. Alleys giving access to the rear of lots on a block is strongly encouraged.

4.11.2.5.3. Single-tier blocks and double-frontage lots

- Residential blocks with one tier of double frontage lots are strongly discouraged. Alternative block configurations not relying on single tier blocks or long stretches of double frontage lots to separate residential development from through traffic and arterials, or placement of higher density multiple household residential development along arterial streets, is encouraged.
- For residential double frontage lots, there must be an easement at least 10 ft. deep abutting a traffic arterial or other disadvantageous use, dedicated to the appropriate governmental entity, with no right of cross access. There must also be at least a 10 ft. deep tract or easement on the other side of the property line abutting a traffic arterial or other disadvantageous use, for a development perimeter wall and landscaping buffer.

4.11.2.6. Mid-block green lengths

Except for perimeter block frontages along SH130, UP railroad and FM 685, green links at least 12 ft. wide including a sidewalk that is at least 5 ft. wide must be placed near the center and entirely across blocks that are greater than 800 ft. long, to give convenient pedestrian circulation through the development. Green links must be landscaped in conformance to landscaping standards for connecting walkways in this PUD, and maintained by the underlying homeowner association.

4.11.2.7. Circulation

- Each subdivision shall provide for the continuation of all arterial streets and highways as shown on the City's Comprehensive Plan. Arterial streets should be located on the perimeter of the residential neighborhood.
- Collector and local streets should be designed to provide access to each parcel of land within the residential neighborhood and within industrial areas. They should be planned so that future urban expansion will not require the conversion of minor streets to arterial routes.
- Collector streets should be designed to provide a direct route from other minor streets to the major street and expressway system and to provide access to public facilities within the neighborhood; however, collector streets should not be aligned in a manner that will encourage their use by through traffic.

- Collector-designated streets must connect on both ends to an existing or planned collector or higher-level street.

Permitted alternatives to cul-de-sacs include loop lanes and T-streets, and any similar alternative approved by the City Engineer.

4.11.2.8. Required subdivision access points

- To the extent practical, subdivisions with <100 residential units must provide vehicular access to two or more existing or planned public streets
- To the extent practical, subdivisions with 100 to 199 residential units must provide vehicular access to three or more existing or planned public streets.
- To the extent practical, one or more additional access points must be provided for each 100 lots exceeding 199 lots.
- Development Services staff may reduce the required number of access points due to topography, natural features, or the configuration of adjacent developments, or other constraints including SH130, Brushy Creek floodplain, and Union Pacific railroad.
- Access points must be shown on the plat and construction plans for the development. Construction of the street may be postponed to a later phase of development. The Planning and Zoning Commission may require the construction of any access point when the final plat is approved.

4.11.2.9. Relation to adjoining street systems

To provide connectivity to other neighborhoods existing streets in adjacent or adjoining areas shall be continued in the new development, in alignment therewith. Whenever connections to anticipated or proposed surrounding streets are required by this Section, the right-of-way shall be extended and the street developed to the property line of the subdivided property (or to the edge of the remaining undeveloped portion of a single tract) at the point where the connection to the anticipated or proposed street is expected. The permit-issuing authority may also require temporary turnarounds to be constructed at the end of such streets pending their extension when such turnarounds appear necessary to facilitate the flow of traffic or accommodate emergency or service vehicles. Notwithstanding the other provisions of this subsection, no temporary dead-end street in excess of 400 feet may be created unless no other practical alternative is available.

- *Street jogs*
Offsets in street alignment are permitted, provided the distance between center lines is not less than 125 feet.
- *Large lot subdivision*
If the lots in the proposed subdivision are large enough to suggest re-subdivision in the future, or if part of the parent tract is not platted, consideration must be given to possible future street openings and access to future lots which could result from such re-subdivision.
- *Through traffic*
Local streets shall be designed so as to meet the local street connectivity requirements of Section 4.12.2.3.

- *Half streets*
No half streets shall be platted or constructed except for arterial streets.
- *Dead-end streets*
Dead-end streets shall be prohibited except short stubs to permit extension. Temporary turnarounds shall be required where the street stub exceeds one lot or 100 feet in length, whichever is greater. The developer shall provide a sign at the stub declaring that the particular street will connect with future development.
- *Topography*
The street system shall bear a logical relationship to the natural topography of the ground.
- *Private streets*
 - Private streets are prohibited.
 - All streets shall be constructed to City standards for public streets. Common access easements may be required.
- *Unpaved street rights-of-way*
The portion of the street right-of-way between a private lot line and the curb or pavement edge shall be designed and constructed to meet the requirements of the City's Construction Standards and Specifications for Roads, Streets, Structures and Utilities.
- Access to public streets from private property
 - No person shall cut a curb or gutter Section nor pave a street right-of-way without first obtaining a permit from the City, and complying with City Codes. Where no curb and gutter street construction is permitted, no person shall construct or pave the borrow ditch street Section without first obtaining a permit from the City and complying with City Code.

No temporary utility service will be provided to the building lot or site until a curb cut, street right-of-way permit has been issued and no permanent utility service will be provided until the work authorized by permit is satisfactorily completed and approved by the City.

4.11.2.10. Intersections

- *Sight triangle*
According to the following requirements, a sight triangle shall be established at all intersections.
 - On local streets the sight triangle shall be based on the back of the curb, on all other streets it shall be based on the right-of-way.
 - The sides of the sight triangle shall extend for 25 feet along the right-of-way/curb from the projected intersection of said right-of-way/curb. Where the right of-way/curb curves as the intersection is approached, the tangents at

the points of beginning for the corner curve shall be projected to determine the origination of the sides of the sight triangle.

- No construction, planting or grading shall be permitted to interfere with the sight triangle between the heights of three and seven feet as measured from the crowns of the adjacent streets.

- Angle of intersection

Except where existing conditions will not permit, all streets, major and minor, shall intersect at a 90 degree angle. Variations of more than ten degrees on minor streets and more than five degrees on major streets must first be approved by the City Engineer.

- Radius at corners

- All local and collector street corners shall have 15 foot radii and shall meet required fire apparatus access, except acute corners which shall have a radius of 25 feet. Arterial streets shall have a minimum corner radius of 25 feet. No buildings, sign or parking shall be allowed in the area between the corner curves and the chord connecting the ends of the curves.
- All street intersections containing one or more residential collector level and above streets shall include 25 foot right of way flares/cutbacks. The 25 foot flare/cutback will be measured along the tangents from the point of intersection of the 2 right of way lines.

- Center line tie with existing streets

Each new street intersecting with or extending to meet an existing street shall be tied to the existing street on center line with dimensions and bearings to show relationship.

4.12. Driveways and Easements

4.12.1. Easements

4.12.1.1. Utility easements

All easements must be dedicated to the City and their locations shall be clearly denoted on plat documents.

- Uniform and continuous easements shall be provided along lot lines for utility service. The City may approve a location other than along a lot line.
- Easements for water, sewer, and storm sewer lines shall be at least 20 feet in total width if between lots. 10-foot public utility easements should be included along all street rights-of-way.

Other utility easements (for other than water, sewer, and storm sewer lines) shall be a minimum of five feet in width when abutting the street lot lines and at least three feet in width when abutting interior lot lines.

4.12.1.2. Emergency access easements

Emergency access easements shall be defined by the local fire code as amended.
Emergency access easements shall not be divided by lot lines.

4.12.2. Driveway spacing from intersections

4.12.2.1. No driveway is permitted closer to a corner than the driveway separation standard provided in Section 4.7.12.

4.12.2.2. Driveway spacing shall be measured from the edge of the street to the center of the driveway.

4.12.2.3. Any request to deviate from these standards may be submitted to the City Engineer.

4.12.3. Design requirements and standards

4.12.3.1. Additional access

The City Engineer may require more than one access point onto a collector or arterial street for a single parcel during Site Plan review provided that the number and location of access points onto local streets and the additional access points onto collector and arterial streets must be approved by the highway authority having jurisdiction over the roadway from which access is being taken.

4.12.3.2. Width of access

The width of access driveways shall be determined by the highway authority having jurisdiction over the roadway from which access is being taken. However, in no case shall an individual driveway width be greater than 35 feet. Where a highway authority has not established driveway width requirements and standards, the standards and requirements of the Texas Department of Transportation shall apply.

4.12.3.3. Closure or relocation of existing access points

The City Engineer, in conjunction with the highway authority having jurisdiction over the roadway from which access is being taken, shall have the authority to require the closure or relocation of existing access points where multiple access points to the site are available.

4.12.3.4. Curb cuts at intersections

A curb cut for a corner parcel at the intersection of any streets shall be located the maximum practical distance from the center of the intersecting streets, without intrusion into any required buffer. The number and location of the curb cut must be approved by the highway authority having jurisdiction over the street from which access is being taken. Where a highway authority has not established curb cut requirements and standards, the standards and requirements used by the Texas Department of Transportation shall apply.

4.13. Road Adequacy Standards

4.13.1. Street naming

Proposed street names must appear on a preliminary plat. Street names become official with the city after the following takes place:

- The plat is recorded; and Williamson County 911 Addressing accepts the street name.

4.13.2. Traffic impact analysis, when required

The TIA shall conform to the requirements set forth in **Section 10.515.4 of the Hutto UDC**. A Traffic Impact Analysis shall be required with any application for a subdivision or plat approval, Site Plan approval, or other procedure for which the proposed development generates traffic in excess of 2,000 average daily trips, based upon the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. In the event that specific land uses for the development are not specified at the time of subdivision or plat application, the daily trip generation rate for the most intensive land use from the ITE Manual for the land use classification of the application shall be used to compute the estimated average daily trips.

4.13.3. Stormwater and drainage standards

Except as set forth in this Section 4.14.3, the stormwater and drainage standards established in **Section 10.701 of the UDC** shall apply to development of this PUD.

4.13.3.1. Stormwater drainage system

- Drainage channels and detention ponds that are to be maintained by the public shall be contained within drainage lots. Adequate room for access shall be provided for drainage channels and detention ponds. Ramps no steeper than 5 feet horizontal to 1 foot vertical shall be provided at appropriate locations to allow access to drainage channels and detention ponds. The minimum bottom width for any channel with vegetative side slopes shall be 8 feet, except that drainage channels associated with streets have no minimum width. If required, a 5-inch thick reinforced concrete trickle channel shall be provided in all newly constructed channels and from detention pond inlets to outlets. The area adjacent to trickle channels shall slope at a minimum of 2 percent.
- Open drainage sections:
Minor collectors (draining less than 20 acres) shall be constructed using best practices for stormwater drainage to the greatest extent practical. Surface conveyance may be utilized if it can be established to the satisfaction of the City Engineer that it is physically feasible and preferred to storm sewers. Open ditches may be used, provided that such ditches are lined with permanent materials accepted by the City Engineer.

4.13.4. Grading

Grading of lots with existing slopes of 1 percent or greater will not be required, provided it is demonstrated to the satisfaction of the City Engineer that there are no existing or proposed features that will prevent the lots from adequately draining.

4.13.5. Water and wastewater standards

The water and wastewater standards established in **Section 10.801 of the UDC** shall apply to development of this PUD.

Hutto Crossing Planned Unit Development

April 16, 2013

Applicant's PUD Amendment: January 25, 2018

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1. GENERAL PROVISION

1.1. Title

This ordinance is known as “Hutto 465 Ac Tract Planned Unit Development Ordinance”, and may be cited as “Hutto 465 Ac Tract PUD” ~~or “this PUD”~~ or “the District”.

1.2. Purpose and Intent

Hutto 465 Ac Tract PUD Ordinance is intended to encourage innovative planning and flexibility in land use, density, site planning and design for development of the 465-acre property. This PUD accommodates development with a mixed of uses, and allows a degree of flexibility in the application of standards and rules based the Unified Development Code of the City of Hutto.

Designation of a single use zoning district and application of standard development provisions would be too rigid for practical application on the unique and bifurcated property, challenged with difficult access constraints, including the abutting Union Pacific Railroad ROW, Brushy Creek and SH130.

This ordinance is enacted to promote the following:

- Promote good planning practice, design, architecture and urban design; and orderly land use
- Preserve open space and prevent overcrowding.
- Provide the physical infrastructure needed to serve city residents and visitors
- Secure safety from fire and other dangers, and provide for adequate sun, light and air.
- Merge rules governing land use and development into one accessible and comprehensible document for the property.

1.3. PUD Criteria

The PUD plan and development standards set forth in this Ordinance are consistent with the following criteria:

- The PUD would not adversely affect property near the site, and it achieves the benefits of an improved design
- The PUD will not adversely affect land with significant historical, cultural, recreational or aesthetic value
- The PUD will give benefits through providing City parkland, open space, harmonious design, and energy efficient site design
- The PUD will be served by adequate facilities including streets, fire protection, water and sanitation
- Architectural design, landscaping, hardscaping and signage parameters set forth in this PUD give evidence of compatibility with adjacent development and internal consistency of design.

1.4. Compatibility with Gateway Overlay

Hutto 465 Ac Tract PUD Ordinance acknowledges the design principles and intent of the Gateway Overlay District as stated in the Gateway Overlay intent statement. The PUD recognizes that the Gateway Overlay District goals set forth below are to be reflected in the PUD standards:

- Coordinate with ongoing planning efforts for the Hutto Gateway and to further goals, policies and objectives outlined in the Comprehensive plan.

- Ensure the integrity of the ongoing planning process so public discourse can take place involving affected property owners and city residents while still ensuring individual development proposals are consistent with Comprehensive plan goals, policies and objectives.
- Ensure new development incorporates the following:
 - Pedestrian-friendly environment with wide sidewalks, tree-lined streets, active shopfronts, short blocks and variety of uses
 - Variety of public gathering places such as squares and civic greens
 - Naturally calmed streets, shaded by rows of trees that allow for on-street parking
 - Streets and sidewalks that form a connected network, providing a variety of pedestrian and vehicular routes to any single destination in and out of the development
 - Variety of compatible uses, allowing people the opportunity to live, work and play near one another, including, specifically, residential uses above ground floor commercial uses, as appropriate
 - Opportunities for housing choice and variety, including attached and detached homes available for both rental and ownership
 - Buildings placed close to the local or internal collector streets, oriented to the sidewalk and street front, providing easy access for pedestrian activity
 - Building facades that create visual interest through horizontal and vertical articulation with windows, multiple entrances facing streets and sidewalks, and no blank walls
 - Parking located to the rear or side of buildings (to the extent practical)
 - Central Texas native landscaping and trees in parking areas and along bordering walkways
 - Protection and enhancement of the natural features of the site, using them as the framework in creation of any site plans
 - Internal principal (“main”) street as part of the organization of development on the site
 - Development that does not turn its back on arterial streets (to the extent practical), but instead focuses on taming the street edge with element such as slip roads, landscaping and pedestrian-oriented features

1.4.1. General applicability and interpretation

Hutto 465 Ac Tract Planned Unit Development Ordinance applies to all regulations and other matters regarding land use and development of land within the PUD boundary, including zoning, subdivision, platting and urban design.

This ordinance is referenced to the “**Unified Development Code of the City of Hutto, Texas**” (amended 03-09-2012) in effect on the date of adoption of this ordinance, which may also be cited as the “UDC”. In those cases where in conflict, this PUD shall take precedence over the UDC.

1.5. Severability

If a regulation, article, section, phrase, clause, term, word, or part of this PUD is considered invalid, it will not affect the applicability and enforceability of the remaining portions.

1.6. Amendments to Ordinance

Technical, site planning or engineering considerations that meet the intent of this PUD may call for minor deviations from the approved PUD. The Development Services Department may approve

minor deviations if they promote flexibility in design and are consistent with the intent of the original PUD approval.

- An administrative approval is a ruling that would permit a practice that is not consistent with a specific provision of this Ordinance but is justified by the provisions of the Section 1.2 Intent and Purpose and Section 1.3 PUD Criteria above. The Development Services Department shall have the authority to approve or disapprove administratively a request for an administrative approval pursuant to regulations established by the Development Services Department and approved by the City Council. Where no specific criteria for granting of the modification are specified, an administrative approval may be granted only for a dimensional deviation of less than 10% of the specified standard.
- The request for an amendment to the PUD Ordinance shall not subject the entire application to public hearing, but only that portion necessary to rule on the specific issue requiring the relief.

1.7. Definitions

Definitions set forth in **Section 10.202 of the UDC**, including general abbreviations, terms, definitions and conditions for use indicated throughout this ordinance shall apply to this PUD.

Sign height: distance from the bottom of the sign face to the top of the sign.

Sign, PUD identification: sign identifying the name and/or logo of the Hutto PUD district without advertising individual developments within the PUD. A PUD identification sign is characterized by expressing a coherent character or features of the District and is distinct from a development sign internal to the PUD that identifies a neighborhood, apartment, residential subdivision or other development within the PUD.

Sign, wayfinding: sign which provides orientation, information, directions or wayfinding within or about the District. Wayfinding signs may be free standing (pole), kiosk, monument wall or other permitted sign type for the District.

Sign face area: area of the smallest rectangle enclosing the extreme limits of the sign lettering. The sign area calculated shall be measured on a single side. Sign face area does not include a supporting structure, monument, monument base, pole cover, or landscape feature unless used to convey a message.

Clear vision area: unobstructed view area at corner lots and curb cuts. The clear vision area is a triangle formed between points on flow lines following property lines 30 ft. from the point of intersection at a corner lot, and 20 ft. along a property line and a driveway edge of pavement at a curb cut.

Fence height: distance from the top of the fence or wall to the finish grade of the lot directly under it. Berms, walls or similar features constructed for increasing the height of a fence or wall are considered part of the fence or wall.

1.8. Development Review Process

The development review process for property within the boundary of this PUD shall comply with the **Section 10.203 the UDC**, except that applications under this PUD shall be eligible to utilize the following by right:

- Applications shall be processed with priority over those under the existing conventional zoning code or the UDC, including those with earlier filing dates.

1.9. Vested Development Rights

The effective date and expiration of vested development rights for property within the boundary of this PUD shall comply with **Section 10.204 the UDC**.

1.10. Reviewing and Administration Parties

The reviewing and administrative parties, their responsibilities and processes established in **Section 10.208 of the UDC** shall apply for development of this PUD.

Development Services staff as identified in this PUD shall include City of Hutto Planning, Engineering, Parks and Recreation and other City departments as appropriate.

1.11. Interpretation

Interpretation of this PUD shall follow the procedures established in **Section 10.209 of the UDC**.

Photos are not considered official, adopted parts of the PUD.

Photos and drawings used in this PUD are examples intended to explain certain design concepts. Some features shown in photos and drawings may not conform to other sections of this PUD. If there is a conflict of meaning or implication between the text of this PUD and any heading, drawing, table, figure or illustration, the text will control.

Images depicting a business are not considered an official endorsement.

2. DEVELOPMENT PLAN

2.1. Permitted Uses in the PUD

Permitted uses within the boundaries of the PUD are as follows:

2.1.1. Residential Uses

2.1.1.1. Single household detached, village, and zero lot line

The single household use is a setting for single household residential development of a medium density detached, village or zero lot line character, with support facilities and services that are compatible with single household residences. Density may range from four to eight dwelling units per acre, depending on the context of the development.

2.1.1.2. Two to four household

The two to four household use is a setting for two household, three household and four household residential structures of a medium density, suburban and village character, along with support facilities and services that are compatible with residential areas. Density may range from eight to 14 dwelling units per acre, depending on the context of the development.

2.1.1.3. Single Household attached (Townhouse and condominium)

The single household attached use is a setting for townhouse and condominium attached residential structures of a medium density character, along with support facilities and services that are compatible with a range of residential areas. Density may range from six to 20 dwelling units per acre, depending on the context of the development.

2.1.1.4. Multiple unit household

The multiple unit household use is a setting for development of multi-unit residential structures and developments, such as apartment and condominium complexes, garden and courtyard multifamily residential buildings, and residential loft buildings. Density may range from 14 to 25 dwelling units per acre, depending on the context of the development.

2.1.2. Commercial and retail use

2.1.2.1. Commercial and retail use

The commercial and retail use is a setting for low to mid intensity retail uses, offices and personal services intended to serve residents of a neighborhood and surrounding community. Additionally, commercial and retail use is a setting for development of a wide range of retail uses, offices and personal and business services. Commercial and retail use should be clustered at locations accessible to the community. Site and building design standards are intended to encourage high quality development, promote internal and external pedestrian connectivity, and prevent potential harm to adjacent residential uses.

2.1.3. Industrial Uses

2.1.3.1. Light industry

Light industry use is composed of land and structures used primarily to provide space for commercial enterprises involved in research and development, light manufacturing, packaging, warehousing, distribution, and skilled mechanical trades. Light industry uses should be grouped together in large, contiguous areas, close to transportation facilities, well separated or buffered from low density residential areas.

2.1.4. Recreational Uses

2.1.4.1. Recreation use

The recreation use accommodates recreation and resort uses that take advantage of the land, encourages large outdoor recreation uses that could not easily be provided in the already urbanized portions of the area, and permits commercial and service uses connected with recreational activities. Recreation use should be generally separated or buffered from low density residential areas.

2.2. Use Descriptions and Standards

Refer to **Sections 10.306 – 10.311 of the UDC** for definitions of uses and standards for residential uses, commercial and retail uses, industrial uses, institutional and civic uses, temporary uses and accessory uses permitted in the PUD.

2.2.1. General performance standards

The general performance standards for property within the boundary of this PUD shall comply with **Section 10.312 of the UDC**.

2.2.2. PUD uses

Permitted uses set forth in this section 2.2.2 in the PUD must conform to **Exhibit A, PUD Development Plan**.

2.2.2.1. Permitted Use table abbreviations

	Context
X	Permitted use permitted by right, subject to conditions and performance standards for the use. All permitted uses are subject to conditions set forth in Section 10.202 of the UDC .
-	Not a permitted use

Permitted Uses

2.2.2.2 Residential Uses

Residential Uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Assisted living facility	X	X	X	X
Boarding and rooming house	-	-	-	-
Dwelling: live-work	X	X	X	X
Dwelling: accessory unit	X	X	X	X
Dwelling: manufactured	-	-	-	-
Dwelling: multiple unit	X	X	X	X
Dwelling: single household attached	X	X	X	X
Dwelling: single household detached	-	X	X	X
Dwelling: single household village	-	X	X	X
Dwelling: single household zero lot line	-	X	X	X
Dwelling: two to four household	-	X	X	X
Group home	-	-	-	-
Halfway House	-	-	-	-
Independent living facility	X	X	X	X
Manufactured home park	-	-	-	-
Nursing home	X	X	X	X

2.2.2.3 Commercial and Retail Uses

Commercial and retail uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Adult oriented use	-	-	-	-
Bakery: retail	X	X	X	X
Bank	X	X	X	X
Campground, recreational vehicle park	-	-	-	-
Car wash	-	-	-	-
Club/lodge facility	X	X	X	X
Convenience store	X	X	X	X
Convenience store: with gasoline sales	X	X	X	X
Day care: child (1-6 children)	X	X	X	X
Day care: child (greater than 6 children)	X	X	X	X
Day care: adult (1-4 persons)	X	X	X	X
Day care: adult (greater than 4 persons)	X	X	X	X
Day care: pet	X	X	X	X
Day labor agency	-	-	-	-
Entertainment facility, theater	X	-	X	X
Farm product sales	X	X	X	X
Food catering	X	X	X	X
Funeral home	X	-	X	X
Gas station	X	-	X	X
Grocery store	X	X	X	X
Indoor recreation facility	X	-	X	X
Instructional facility	X	X	X	X
Kennel	-	-	-	-
Large item sales and rental: class 1	X	-	X	X
Large item sales and rental: class 2	X	-	X	X
Lodging establishment	X	X	X	X

Commercial and retail uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Lodging establishment: bed and breakfast	X	X	X	X
Manufactured home sales	-	-	-	-
Nightclub	X	-	X	X
Office: medical	X	X	X	X
Office: professional	X	X	X	X
Outdoor recreation facility	X	X	X	X
Personal and business service shop	X	X	X	X
Print shop	X	X	X	X
Restaurant, bar	X	X	X	X
Retail store (no more than 10,000 sq. ft.)	X	X	X	X
Retail store (greater than 10,000 sq. ft.)	X	-	X	X
Special services	-	-	-	-
Travel plaza, truck stop	-	-	-	-
Vehicle auction	-	-	-	-
Veterinary clinic	X	X	X	X

2.2.2.4 Industrial Uses

Industrial uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
General industrial use	-	-	-	-
Heavy industrial use	-	-	-	-
Junkyard	-	-	-	-
Light industrial use	-	-	X	X
Research laboratory	-	-	X	X
Self-storage facility	-	-	-	-
Trade use	X	-	X	X
Vehicle minor repair facility	X	-	X	X
Vehicle major repair facility	-	-	-	-
Vehicle storage facility	-	-	-	-
Warehouse and distribution facility	-	-	X	X

2.2.2.5 Institutional Uses

Institutional and civic uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Amenity center	X	X	X	X
Aquatic facility	X	X	X	X
Athletic facility	X	X	X	X
Cemetery	-	-	-	-
Community facility	X	X	X	X
Golf course	-	-	-	-
Hospital	X	-	X	X
Park	X	X	X	X
Park and ride lot (as principal use)	X	-	X	X
Place of worship or assembly	X	X	X	X
Public utility substation	X	X	X	X
School: no more than 5 students	X	X	X	X
School: at least 6 students	X	X	X	X
Transit station	X	-	X	-

2.2.2.6 Temporary Uses

Temporary uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Construction equipment storage lot	-	-	X	X
Construction field office	X	X	X	X

Temporary uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Garage sale	X	X	X	X
Model home / lot sales	X	X	X	X
Portable storage container	X	X	X	X
Temporary building	-	-	X	X

2.2.2.7. Accessory uses

Accessory uses and structures are intended to allow property owners the full use of their property while maintaining the character of the surrounding area. Accessory uses and structures must be built and used only for purposes that are secondary and normal to the principal use of the property and must be placed on the same lot with the principal use.

Accessory uses	DevAreaA	DevAreaB	DevAreaC	DevAreaD
Antenna, radio hobbyist $\leq$ max ht in district	X	X	X	X
Antenna, radio hobbyist $\geq$ max ht in district	-	-	-	-
Antenna, non-residential: $\leq$ 15 ft. above roofline	X	X	X	X
Antenna, non-residential use: other	X	X	X	X
Wireless facility: attached	X	X	X	X
Wireless facility: concealed	X	X	X	X
Wireless facility: freestanding	-	-	-	-
Donation drop-off box	X	X	X	X
Drive through facility	X	X	X	X
Home occupation	X	X	X	X
Residential accessory structure	X	X	X	X
Satellite dish	X	X	X	X
Swimming pool	X	X	X	X
Vending machine (outdoor)	X	X	X	X
Free-standing cisterns	X	X	X	X
Wind energy system	X	X	X	X

2.2.3. Applicability and enforcement

2.2.3.1. New and undefined uses

As commerce and technology evolve, new types of land uses will develop and forms of land use not anticipated may seek locations in the city. To provide for contingencies, Development Services staff will consider the appropriateness of an undefined use in this PUD and may administratively approve such uses. Approval criteria include:

- Impacts of the use, including externalities and use of public services and infrastructure
- The use is similar in nature and impact to a use listed and defined as a permitted use in the PUD
- The use is not similar in nature and impact to a use defined and listed as a prohibited use in the PUD, or prohibited in the PUD but permitted in a different district
- The use conforms to the intent of this PUD
- The interpretation does not lower the protection given to the public by this PUD

- The use does not have the potential to create a dynamic that would harm the vitality or future development potential of surrounding commercial, industrial and residential areas
- Performance standards and conditions for uses similar in nature and impact are also considered

If Development Services staff finds the proposed land use is not appropriate for the district, the applicant may appeal the decision to the City Council within 60 days of determination.

2.3. Use Specific Design Standards

2.3.1. Large item sales and rental (Class 1, 2, and 3)

2.3.1.1. Architecture

Separate structures (service building, car wash, used car sales building, etc.) on a the site must share architectural detail and design elements similar or compatible to the host building to provide a cohesive project site.

Vehicle service areas and bays must be screened or sited so they are not visible from the street.

Garage doors cannot face the street.

Garage doors must be integrated into the overall design theme of the site with color, texture, and windows.

2.3.1.2. Parking, circulation, and stacking

Vehicle display parking and inventory areas are not exempt from site planning standards.

Large expanses of concrete or asphalt must be avoided. Unrelieved pavement in vehicle display areas and other areas often visited by customers must be limited by using landscaping, contrasting colors and banding or pathways of alternate paver material.

Vehicle/pedestrian conflict points must be clearly defined with textured and colored pavement or ~~brick~~ pavers.

Service areas must provide adequate stacking space that does not impede vehicle circulation through the site or result in vehicles stacking into the street.

2.3.1.3. Landscaping

Vehicle display parking and inventory areas are not exempt from landscaping standards.

Inventory cannot be stored, parked or displayed in landscape areas.

2.3.2. Vertical mixed use

2.3.2.1. Definition

A single building containing more than one type of land use; or a single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified complementary, cohesive whole. Vertical mixed use buildings are building where two or more different uses occupy the same building usually on different floors, for instance, retail on the ground floor and office and/or residential uses on the second and/or third floors.

2.3.2.2. Applicability

Vertical mixed use buildings and development containing residential uses permitted in table 2.2.2.2 and commercial and retail uses permitted in table 2.2.2.3 are permitted in designated areas conforming to **Exhibit A, PUD Development Plan.**

Exhibit A- PUD Development Plan



3. Site Design Standards

3.1. General Standards

3.1.1. Utilities

3.1.1.1. Utility lines

All new utility service lines must be placed underground. Transmission lines are exempted.

3.1.1.2. Utility boxes

- Utility boxes must be as small as practical.
- Utility boxes greater than 2 ft. tall cannot be placed in the clear vision area, or interfere with use of streets, alleys, sidewalks, and bicycle paths.
- Utility boxes in the front yard on a block must be painted a uniform earth tone color.

3.1.2. Lot dimensions and area

Required lot dimensions and area are as follows:

	Single Family				Two-to-Four Unit	Single Family Attached	Multifamily	Vertical Mixed Use; Institutional	Commercial and Retail	Industrial
	Detached	Detached alley load, cul-de-sac or detached garage	Zero Lot Line	Village						
Lot area (min)	5,175 sq. ft.	5,500 sq. ft.	4,950 sq. ft.	4,500 sq. ft.	4,500 sq. ft.	1,500 sq. ft. per unit	20,000 sq. ft.	10,000sq. ft.	10,000sq. ft.	43,560 sq. ft. (1 ac)
Lot width at building linefront setback line (min)	45 ft.	45 ft.	45 ft.	45 ft.	45 ft.	20 ft.	100 ft.	75 ft.	75 ft.	100 ft.

- Flag lots must have at least 30 ft. frontage along a public right-of-way.

3.1.3. Building envelope

3.1.3.1. General

If there is a conflict among the setback and landscape/buffer yard standards in this PUD when applied to a certain site, the setbacks set forth in this section will apply.

3.1.3.2. Primary and accessory structures

Default bulk standards for primary and accessory structures are as follows:

	Single Family			Two-to-Four Unit	Single Family Attached	Multifamily	Vertical Mixed Use; Institutional	Commercial and Retail	Industrial
	Detached	Zero Lot Line	Village						
Front yard (min)	15 ft.	15 ft.	15 ft.	15 ft.	15 FT	15 ft.	5 ft.	10 ft.	25 ft.
Front yard on loop lane (min)	15 ft.	10 ft.	10 ft.	n/a	n/a	n/a	n/a	n/a	n/a
Front yard: garage door (min)	20 ft.; 20 ft. side load <u>yard</u>	20 ft.; 20 ft. side load <u>yard</u>	20 ft.; 20 ft. side load <u>yard</u>	20 ft.	20 ft.; 20 ft. <u>side load yard</u>	25 ft.	20 ft.	25 ft.	25 ft.
Side yard (min)	5 ft.	0 ft. one side, 12 ft. other	5 ft.	5 ft.; 0 ft. for common walls	5 ft.; 0 ft. for common walls	15 ft.	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses	0 ft. for common walls or 10 ft.; 50 ft. from existing residential uses
Rear yard (min)	15 ft.	10 ft.	15 ft. (house and garage)	15 ft.	15 ft.	25 ft.	25 ft.; 50 ft. from existing residential uses or building height	25 ft.; 50 ft. from existing residential uses or building height	25 ft.; 50 ft. from existing residential uses
Side and rear yard for accessory building (min)	5 ft.	5 ft.	5 ft.	5 ft.; 0 ft. for common walls	5 ft.	15 ft.	Same as main building	Same as main building	Same as main building
Spacing between buildings (min)	10 ft.	10 ft.	10 ft.	10 ft.; 0 ft. for common walls	10 ft.; 0 ft. for common walls	20 ft.	0 ft. for common walls or 20 ft.	0 ft. for common walls or 50% height of taller building, at least 20 ft.	0 ft. for common walls or 50% height of taller building, at least 20 ft.
Building height (max)	35 ft. / 2.5 stories	35 ft. / 2.5 stories	35 ft. / 2.5 stories	35 ft. / 3 stories	3 stories	3 stories	3 stories; 5 stories along US 79 <u>and</u> FM 685 <u>and</u> SH 130	3 stories; 5 stories along US 79 <u>and</u> FM 685 <u>and</u> SH 130	3 stories
Building height, accessory (max)	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.	15 ft.

Accessory structures are prohibited between the front building line of the primary building and the public right-of-way.

The cumulative gross floor area of all accessory structures on the site may be no more than 25% of the yard where they are located.

Accessory structures must be placed at least 10 ft. or a distance equivalent to their height from primary structures on a site, whatever is lesser.

Building permitting and setback standards do not apply to accessory structures no more than 20 sq. ft. in area

Required buffer yards may result in larger required setbacks.

3.1.4. Riparian setbacks

Minimum structural setbacks from riparian areas (edge of 100-year floodplain or delineated wetlands), wherein structures are defined as substantial impervious cover improvements, are:

- Watercourses draining an area at least 0.5 square mile and having a defined bed and bank, designated 100 -year flood plains, and Category 3 wetlands: 0 ft.
- Watercourses draining an area of 0.5-20 square miles, and Category 2 wetlands: 5 ft.
- Watercourses draining an area of greater than 20 square miles, and Category 1 wetlands: 10 ft.

3.1.5. Setback encroachment and exceptions

These uses and structures may encroach into a yard or required setback as follows:

Type of structure or use	Residential uses	Non-residential uses
Air conditioning equipment	Any part of the side and rear yard	n/a
Arbors and trellises	Any yard, at least 5 ft. from neighboring PL	
Awnings	no more than 3 ft. into front, side or rear setback; may hang over easements	no more than 6 ft. into front, side or rear setback; may hang over easements; may hang over public ROW with approval of City Council
Backflow prevention devices	Any part of the side and rear yard	Any yard on the site
Bay windows, chimneys, entry vestibules less than 8 ft. wide and less than 33% of the wall length, overhanging eaves	no more than 3 ft. into any setback	
Newspaper vending boxes, pay telephones	n/a	Any yard on the site; property must be occupied by a principal building
Open deck and covered patio in which the finish grade is greater than 5 ft. above grade	at least 5 ft. into rear setback, if area underneath is left unscreened/unenclosed	n/a
Open deck and covered patios in which the finish grade is no more than 5 ft. above grade	No more than 10 ft. into rear setback	n/a
Ramps and other access devices required by the ADA.	Any yard on the site	
Retaining walls	Any yard on the site	
Satellite dishes at least 1m in diameter	Side and rear yard, at least 10 ft. from PL	

Encroachments across property lines, into the public right-of-way, or into utility, drainage, access, conservation or riparian easements are prohibited.

3.1.6. Buffer yard

3.1.6.1. Buffer yards between lots

Buffer yards planted and/or screened in conformance to landscape and fencing standards in this PUD, are required between adjacent lots as follows. A buffer yard shall be measured from property line of the adjacent development use. Sidewalks and internal walkways are a permitted use within a buffer yard.

Proposed development	Adjacent development				
	Residential 1-4 Units	Residential 4+ Units	Vertical Mixed Use, Institutional	Commercial and Retail	Industrial
Residential: 1-4 Units	n/a	5 ft.	5 ft.	25 ft.	50 ft.
Residential: 4+ Units	5 ft.	n/a	n/a	n/a	50 ft.
Vertical Mixed Use, Institutional	10 ft.	10 ft.	n/a	n/a	25 ft.
Commercial and Retail	25 ft	10 ft.	n/a	n/a	25 ft.
Industrial	50 ft. + 6+ ft. <u>min</u> tall masonry wall or 6+ ft. <u>min</u> tall earthen berm (<u>both</u> wall/berm and footage required)	50 ft. + 6+ ft. <u>min</u> tall masonry wall or 6+ <u>min</u> ft. tall earthen berm (<u>both</u> wall/berm and footage required)	25 ft.	25 ft.	n/a
A 6ft <u>ht. min.</u> tall masonry (brick, stone, decorative CMU, similar materials) wall or 6 ft. <u>ht. min.</u> tall earth berm may substitute for buffer yard up to 100 ft. in depth.					
Buffer yards <u>s depth</u> must be landscaped per Section 3.5.					

3.1.6.2. Landscape buffer yards between parking lots and streets

Landscape buffer yards, planted per landscaping standards in Section 2-183.5, are required between a parking lot and a street as follows:

- SH 130 and FM 685: 10 ft. from right-of-way.
- Other streets: 5 ft. from right-of-way.

3.1.6.3. Landscape buffer yards elsewhere

Landscape buffer yards, planted per landscaping standards in Section 2-183.5, are required as follows: between a

- Dd development perimeter walls s along a street between wall and sidewalk or right-of-way edge: 5 ft. from sidewalk or right-of-way.

3.1.7. Residential adjacency

3.1.7.1. Loading area screening

Off-street loading areas must be fully-screened from view, to the greatest extent practical of residential uses, using one or more of the following-: Wing walls, landscape screens, changes in building orientation, and/or other architectural elements must be used to

buffer loading docks located ~~no more less~~ than 150 ft. from a residential use, lodging establishment, nursing home or assisted living facility.

3.1.7.2. Vehicle intensive use screening

One or more of the following: ~~W~~ing walls, landscape screens, changes in building orientation, and/or other architectural elements must be used to the greatest extent practical to buffer drive-through aisles and mechanical commercial uses when they are located ~~no more less~~ than 150 ft. from a residential use, lodging establishment, nursing home or assisted living facility.

3.1.7.3. Vehicle service bays

Vehicle service bays and loading area garage doors located less than 150 ft. from a residential use must face away from residential uses, unless separated by a building or permanent architectural feature ~~at least the height of the service bays~~. Walls -6 ft. ht. min. (or vegetative screening) separating service bays from a residential use must be masonry (stone, brick, decorative CMU, similar materials) with no openings.

3.1.7.4. Dumpster enclosures

Dumpster enclosures in nonresidential areas of the PUD must be located at least 50 ft. from a residential use.

3.2. Site Design

3.2.1. Siting and Orientation

3.2.1.1. One to Four Household, Attached Single Family Dwellings and Developments

3.2.1.1.1. Applicability

These standards apply to all development with residential uses other than multiple unit dwellings.

3.2.1.1.2. Building orientation

One and two household dwellings must be oriented where the front façade is parallel to and facing the street as much as possible, and not another dwelling on an adjacent lot. On corner lots, houses may face the corner of either fronting street.

3.2.1.2. Multiple Unit Household Development and Structures

3.2.1.2.1. Applicability

These standards apply to all residential development with multiple unit dwelling uses.

3.2.1.2.2. Building orientation

Buildings must be oriented towards the perimeter streets, or an internal drive or road network, rather than orientation only to internal parking lots.

3.2.1.2.3. Common open space

3.2.1.2.3.1. Common open space required

The minimum amount of common open space (as a percentage of net land area) for a multiple household development is 10%.

3.2.1.2.3.2. Common open space siting

Common open space must be amassed into meaningful, quality open spaces. Clustering of buildings is encouraged to minimize small, narrow, unassigned strips in front of and between buildings. Designated common open space may be in a natural, undisturbed state, landscaped for more formal courtyards or plazas, or developed for active or passive recreation.

Common open space land must be compact and contiguous to the maximum extent practicable, unless the land is used as a continuation of an existing greenway, trail, or other linear park, or unless specific topographic features require a different configuration.

Common open space must be reasonably accessible to all residents of the development.

3.2.1.2.3.3. Areas not considered as common open space

The following do not count towards required common open space:

- Private lots, yards, balconies and patios dedicated for use by a specific unit.
- Public right-of-way or private streets and drives.
- Parking areas and driveways for dwellings.
- Land covered by structures except ancillary structures associated with use of open space such as gazebos and picnic shelters.
- Designated outdoor storage areas.
- Land areas between buildings less than 30 ft., and land area between a building and parking lots or driveways, ~~of~~ less than 30 ft.
- ~~Required~~ rear and side yard ~~-perimeter~~ setbacks.
- Detention/retention facilities, including drainage swales, unless for use as accessible and useable year-round community amenities for residents of the development (e.g.,

picnic areas, passive recreation areas, playgrounds, ponds for fishing and/or boating, walking trails, etc.).

- Wetlands that are saturated for greater than 50% of the year.

3.2.1.3. Non-Residential Sites of Structures

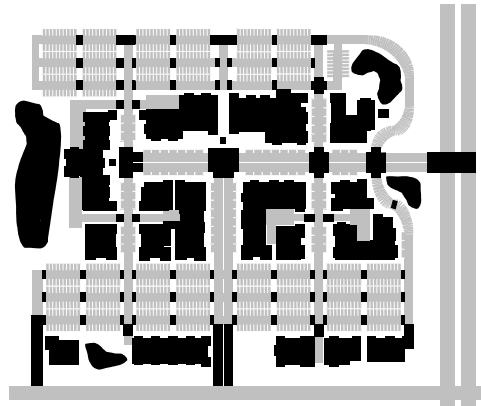
3.2.1.3.1. Applicability

These standards apply to all development with commercial and retail uses.

3.2.1.3.2. Orientation to streets

The primary façade and pedestrian entrance of a building must be oriented towards the public right-of-way when not facing an internal street or drive.

In shopping, commercial centers and developments with multiple buildings, buildings must be oriented towards either the perimeter streets or an internal drive or road network that orients buildings towards an internal street, rather than orientation only to internal parking lots.



Retail Village

3.2.1.3.3. Orientation to walkways

One ~~main~~ building entrance must open directly onto a connecting walkway with pedestrian frontage. Sides of a principal building facing a public street must have one or more customer entrances. ~~When a principal building faces more than two public streets, this requirement will apply only to two sides.~~

3.2.1.3.4. Plazas

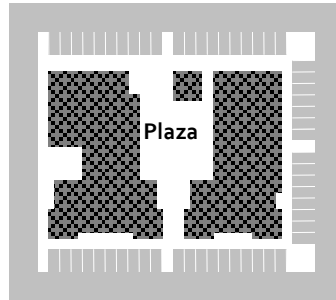
Commercial buildings 25,000 SF and larger must be placed in a way that creates plazas and/or pedestrian gathering areas that are large enough to encourage active pedestrian use and buffer pedestrians from street traffic ~~and circulation areas.~~

~~3.2.1.3.5. Views~~

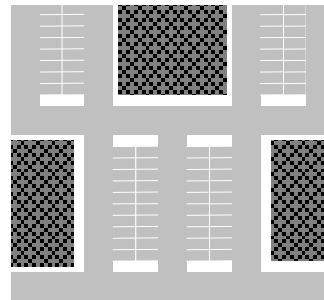
~~Commercial buildings must be oriented to promote views through and into each commercial development.~~

~~3.2.1.3.6.~~ ~~3.2.1.3.5.~~ -Clustering

Clustering of buildings in larger master planned and multiple building developments is required, to the greatest extent practical.



Do this: cluster buildings to create plazas and pedestrian gathering areas



Don't do this : separate buildings with parking lots

~~3.2.1.3.7.~~ ~~3.2.1.3.6.~~ Building perimeter wall spacing from driving surfaces

Building walls must be placed at least 5 ft. from drive aisles and parking areas ~~around the entire building perimeter~~. This buffer area may be breached for loading areas, drive-through windows, ~~and~~ garage access and similar uses.

~~3.2.1.3.8.~~ ~~3.2.1.3.7.~~ Solar orientation

When building orientation to the east and west is unavoidable, landscaping, canopies, arcades, roof overhangs, or similar features must be used to shade facades and building walls that face into the summer afternoon sun to the greatest extent practical.

3.2.2. Sidewalks

3.2.2.1. Sidewalks required

Sidewalks in conformance to Section 4.8 and Section 4.9 must be provided along both sides of public or private street frontages to promote an active pedestrian environment and reduce potential conflicts.

3.2.2.2. Sidewalks required for use change

Sidewalks in conformance to Section 4.8 and Section 4.9 must be constructed along the public right-of-way adjacent to any lot that changes use. A Certificate of Occupancy for

new construction will not be issued until the sidewalk is constructed and accepted by the city.

3.2.3. Internal Pedestrian Circulation

3.2.3.1. Applicability

The following standards apply to all development with residential uses with multiple unit dwellings, and commercial, retail and industrial uses.

3.2.3.2. Internal walkways

Internal walkways ~~extending the full length of a building~~ must be provided along all façades featuring a customer entrance and along all façades abutting public parking areas. Internal walkways must be placed at least ~~6-4~~ ft. or more from the façade or wall along at least 30% of its length, to provide opportunities for beds for foundation landscaping, outdoor seating and patios, and building articulation (except for storefronts ~~where with a~~ zero setback, ~~i.e. no planting beds~~). Sidewalks are not required ~~within~~ service areas, loading docks and other non-customer areas.

3.2.3.3. Pedestrian connectivity

Connecting walkways, at least ~~6-5~~ ft. wide for a commercial development and at least 5 ft. for MF development, must link perimeter public sidewalks ~~with to primary~~ building entries, including through parking areas, ~~all points in the development~~, and to buildings on adjacent parcels, to the greatest extent practical. Circulation patterns must be as obvious and simple as possible. All likely pedestrian routes must be considered to minimize shortcuts to the extent practical through parking and landscape areas.

3.2.3.4. Conflict points

Internal pedestrian walkways must be distinguished from driving surfaces by textured and colored pavement or similar contrasting technique, to emphasize conflict points and enhance pedestrian safety.



Well-defined conflict point

3.2.3.5. Aggregation of plazas

Pedestrian areas and plazas shall be aggregated in high activity areas to the greatest extent practical, and not distributed in low impact areas such as building peripheries, areas behind blank walls, ~~or where they are barely visible.~~

3.2.3.6. Orientation of plazas

Pedestrian areas and plazas shall be oriented to views of activities, architectural landmarks or useable open space wherever possible.

3.2.4. Public transit facilities

Commercial and residential developments that could generate high volumes of transit use must accommodate the potential for public transit facilities. If the development is in an existing transit service area, it must provide for an appropriately scaled transit facility; otherwise, the development must make accommodations for a potential future public transit facility.

Transit routes, access points and shelter locations should be addressed along city adopted transit streets in and on the perimeter of nonresidential projects. Bus stop areas and bus shelters within a city adopted transit service area must be placed close to significant clusters of buildings.

There must be an uninterrupted durable pedestrian path connecting transit stops and/or shelters with the nearest sidewalk or pedestrian path.

3.2.5. Service Areas

3.2.5.1. Applicability

These standards apply to all development with multiple unit residential dwellings, commercial, retail and industrial uses.

3.2.5.2. Orientation

Service entrances, loading docks, waste disposal areas and similar uses must be oriented toward service roads and drives to the greatest extent practical and away from the public right-of-way and residential areas, unless adequately screened.

Service areas ~~cannot may not~~ be ~~placed-located~~ where they will be readily visible from primary facades of adjacent buildings without appropriate screening to screen service area views from the primary facades of adjacent or where they will harm important or identified view corridors.

3.2.5.3. Screening

Service entrances, loading docks, waste disposal areas and similar uses must be screened from public streets, pedestrian gathering areas and primary building entrances with fencing, walls and/or landscaping, with design elements compatible with the architectural theme of the host building.



Effective use of wing wall used to screen loading dock

3.2.5.4. Coordination of service area locations

Service area location must be coordinated with adjacent developments wherever possible to promote use of shared service drives.

3.2.5.5. Access routes

Service circulation in a development must be designed to provide safe movement for anticipated vehicles.

Fire lanes and routes for service, emergency and utility access must be clearly marked.

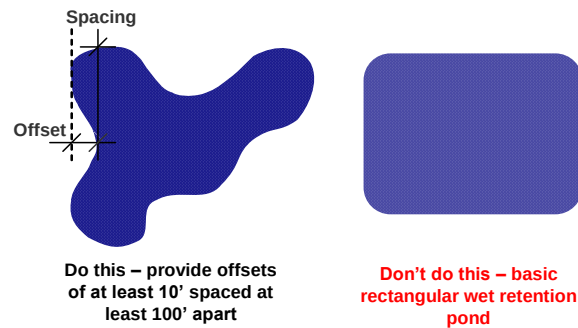
3.2.5.6. Gas tank bed pipes

Tank vent pipes must be screened, placed in an inconspicuous location and painted a dark color, or integrated into or adjacent to the building ~~architecture~~.

3.2.6. Water Bodies and Retention Areas

3.2.6.1. Shape

Permanent wet retention ponds visible from a street or other public area must be designed to appear natural by having edge alignment offsets to the greatest extent practical.



3.2.6.2. Project incorporation

Natural and manmade water bodies at least 20,000 sq. ft. that are ~~placed~~ located next to a public right-of-way must be integrated into the overall design of a development in one of the following ways:

- Provide a walkway at least 5 ft. wide, with native tall trees on average 30 ft. centers and a bench and/or picnic table next to the water body every 150 ft.
- Provide a plaza or ~~courtyard~~ pedestrian gathering area at least 200 sq. ft. with a bench and/or picnic table ~~next to~~ close to the water body.

3.2.6.3. Slope

Retention basins must be designed with at least 5:1 side slopes to 2 ft. below the normal water line.

Fenced retention basins will ~~only~~ be approved administratively by City Engineer staff, only in extreme situations, and ~~will~~ may be placed to the side and/or rear of the parcel as far from ~~the a public right-of-way~~ street as possible.

3.2.6.4. Fencing

Metal decorative fences may be used to fence manmade water bodies and retention basins.

3.2.7. Land Disturbance

New development should respect and maintain the natural topography on a site through sensitive site organization and minimizing land disturbance. Layout of new development should follow and respect the natural topography of the site to the maximum extent possible. Over lot grading to create a large level lot or site shall be limited to disturbed sites and in all cases minimized to the extent practical.

Extensive grading or unusual site improvements (e.g. large retaining walls) to force a preconceived design onto a particular piece of property is strongly discouraged. Berms, channels, swales, and similar man-made changes to the landscape must be designed and graded to be an integral part of the natural landscape and to provide a smooth transition in changes of slope.

3.3. Parking and Access

3.3.1. General standards

3.3.1.1. Applicability

Parking, access and design standards apply to all uses, unless otherwise stated. Vehicle display and storage areas at vehicle dealers, vehicle repair businesses and vehicle storage facilities, and areas intended for the storage or movement of vehicles on industrial sites are not exempt.

3.3.1.2. Large vehicles and equipment

Outdoor storage or overnight parking of semi-trucks, semi-trailers, and other vehicles having a gross vehicle weight rating of at least 17,000 pounds is prohibited in residential and commercial use areas, except within commercial service or storage yards and loading areas. Exceptions are pickup trucks, personal recreational vehicles not being used for habitation, and vehicles associated with a business on a commercial site. Construction equipment may only be stored on lots in residential and commercial use areas while construction is permitted.

3.3.2. Access

3.3.2.1. Shared access

- Shared and master planned access, rearage roads and/or access easements across parcels are permitted and encouraged and will be required where considered necessary by Development Services staff and/or city engineer, with administrative approval, to minimize potential congestion, decrease accident potential and reduce the number of curb cuts and conflict points along a street.
- Commercial and individual development must be designed to provide for shared access with adjacent commercial and industrial parcels to the greatest extent practical. Provisions must be made for connection of pedestrian and vehicle circulation systems with adjacent parcels.
- Property owners cannot block access to parking lot connections on adjacent parcels.
- Vehicular access easements from one lot to adjacent lots and for private driveways within a lot may be provided on the subdivision plat or by separate recorded instrument. Such access easements may be specifically defined or blanket access easements.

3.3.2.2. Curb cuts

- Curb cuts and ramps must be placed at convenient and safe locations. Curb cuts must be limited to the fewest necessary to provide adequate circulation and workable access to a parking area.
- Commercial and industrial ~~Driveways~~ connections to public streets shall be designed to align with opposing driveways or be offset a minimum of 80 feet, measured from face of curb or edge of pavement to face of curb or edge of pavement on undivided streets.
- Curb cuts must be spaced at intervals of at least 250 ft., or at least 500 ft. along major arterials, unless this would prevent access to a separate property (not an outparcel) and a rearage road is not possible.
- When a parcel fronts on two different streets, or a street and a rearage road, the curb cut must be from the street with the lower functional classification unless otherwise administratively approved by Development Services staff.
- Curb cuts and ramps must avoid crossing or funneling traffic through loading areas, drive-through aisles and outdoor trash storage and collection areas.

3.3.2.3. Driveway throats

- Driveway throats to parking areas serving <50,000 sq. ft. of commercial, industrial or civic GFA accessing non-arterial streets must be at least 20 ft. long.
- Driveway throats to parking areas serving at least 50,000 sq. ft. of commercial, industrial or civic GFA, and those accessing arterial streets, must be at least 30 ft. long.
- Driveway throat length is measured from the right-of-way line.

3.3.2.4. Entry orientation

Entrance drives should align with focal points in a development such as landmark towers or landscape features, whenever practical.

3.3.2.5. Emergency access

Site design elements must reasonably accommodate access standards of emergency vehicles and services.

3.3.2.6. Service functions

Service functions must be integrated into the circulation pattern in a way that minimizes interaction with customer vehicles and pedestrians.

3.3.2.7. Connectivity for multi-family residential development

Multifamily residential development must not be planned as “pods”, isolated from surrounding development, but instead must be integrated into the larger grid of public streets and internal access driveways. Residential development with multiple unit dwellings must have pedestrian and vehicular connections to adjacent residential and commercial development.

3.3.3. Circulation

3.3.3.1. Circulation routes

- Circulation and parking areas in a development must be designed to be safe, efficient and attractive, considering use by all modes of available transportation.

- Parking lots must provide well-defined circulation routes for vehicles, bicycles and pedestrians that minimize conflicts to the greatest extent practical.
- Circulation routes must focus on main entries and exits, and ~~designate~~ provide for secondary access points to the greatest extent practical.
- Redundant circulation cannot reduce land available for landscaping or walkways.
- Vehicle circulation paths must be designed and sited to calm traffic where practical without the required need for vertical deflection devices such as speed bumps and humps. Horizontal deflection and psychological traffic calming (traffic circles, corner neckdowns, chicanes, tapers, landscape medians, small turn radii, decorative paving) is encouraged.

3.3.3.2. Safety and conflict points

Circulation areas must be designed so vehicles can proceed safely without posing a danger to pedestrians or other vehicles, and without interfering with parking areas. Standard traffic control devices and signs must be used to direct traffic where necessary.

To the maximum extent practicable, pedestrians and vehicles must be separated through walkways or sidewalks. Where complete separation of pedestrians and vehicles is not possible, landscaping, bollards, decorative paving, lighting and other permanent methods must be used to delineate pedestrian areas and other conflict points.

3.3.4. Parking Aisles

3.3.4.1. Aisle and curb cut dimensions

Access drive lanes and aisles must have the following widths (excluding added width from curb return areas) at the gutter line:

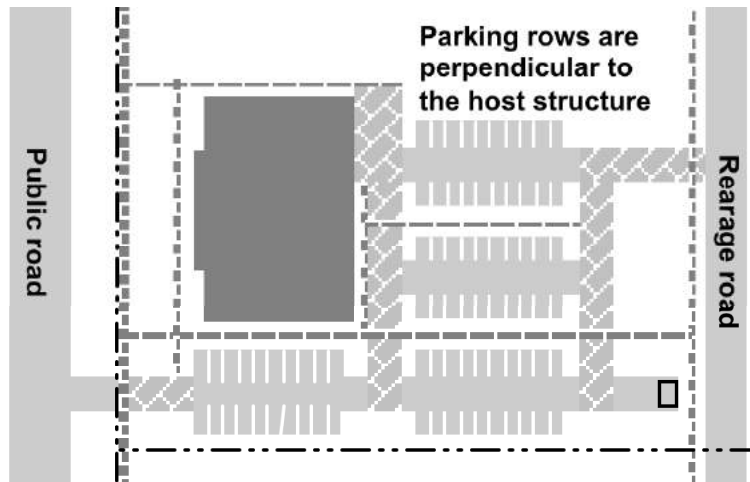
- Residential driveway: 8 ft. - 24 ft.
- Residential parking lot: 10 ft. - 14 ft. one way, 20 ft. - 24 ft. two-way
- Nonresidential parking lot to 99 spaces: 10 ft. - 14 ft. one way, 20 ft. - 24 ft. two-way
- Nonresidential parking lot 100 spaces or more: 10 ft. - 24 ft. one way, 24 ft. - 36 ft. two-way
- Service access driveways: drive width sized for adequate vehicular access and turning movement

Parking area aisles must have these minimum widths:

- Angle 0° / parallel to aisle: at least 12 ft. one way, at least 20 ft. two-way.
- Angle 30°: at least 11 ft. one way, at least 20 ft. two-way.
- Angle 45°: at least 13 ft. one way, at least 21 ft. two-way.
- Angle 60°: at least 18 ft. one way, at least 23 ft. two-way.
- Angle 90°: at least 24 ft.

3.3.4.2. Aisle orientation

In large parking lots, parking aisles must be oriented perpendicular to buildings where practical in order to minimize the need for pedestrians to walk parallel to moving cars and across landscaped areas.



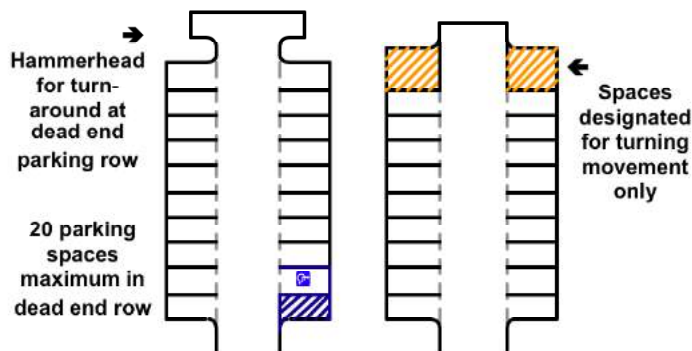
3.3.4.3. Mixture of angles and one-way and two-way aisles

Mixture of one-way and two-way parking aisles, or different degrees of angled parking in a parking area is prohibited, except when individual parking areas are separated by a landscape buffer at least 5 ft. wide, ~~with limited access.~~

3.3.4.4. Dead end aisles

Dead end aisles must be avoided wherever possible. Where a dead end aisle is unavoidable, adequate space for unimpeded turn-around must be provided.

Dead end aisles may contain no more than 20 parking spaces.



3.3.4.5. Head-in/head-out and parallel parking from the public right-of-way

Parking areas larger than 12 spaces fronting on residential local street or lower must be designed so vehicles can leave without backing or fronting out onto a public street, or having to reenter a public street to access another aisle on the same lot. Driveways for single household dwelling units are exempted.

3.3.5. Stacking/Queuing Areas

3.3.5.1. Drive-through aisles

Minimum length of Off-street stacking lanes for drive-through aisles must be provided as follows:

Bank teller window, ATM: at least ~~60~~50 ft. measured from teller, window or ATM.

Restaurant drive-through: at least ~~40~~50 ft. measured from order box, at least ~~60-30~~ ft. between order box and first payment or pick-up window.

Other uses with drive-through windows (pharmacy, dry cleaners, etc.): at least ~~60-50~~ ft. measured from window.

Drive-through aisles must be physically separated from parking and circulation areas, and:

- Cannot interfere with the on-site parking and circulation for other vehicles on the site.
- Cannot interfere with on-site parking.
- Cannot result in traffic queuing into a drive aisle, adjacent property or street.

Drive-through aisles must be 10 ft. - 12 ft. wide.

Drive-through aisles, ~~elements~~ and pickup windows cannot be on a street-facing side of the building.

Reduction of minimum length of queuing length may be approved by Development Services staff if it can be demonstrated that it is necessary and feasible.

3.3.5.2. Gas pumps

There must be at least 20 ft. space for one vehicle stacked behind the vehicle at the far end of a row of gas pumps, and room for other vehicles to bypass stacked vehicles at fueling areas.

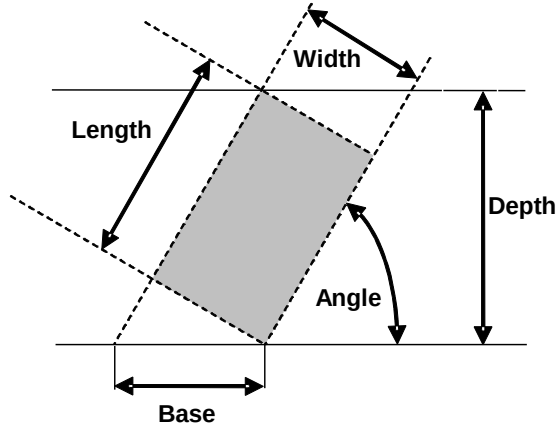
3.3.6. Parking and Loading Space Bulk Standards

3.3.6.1. Parking space dimensions

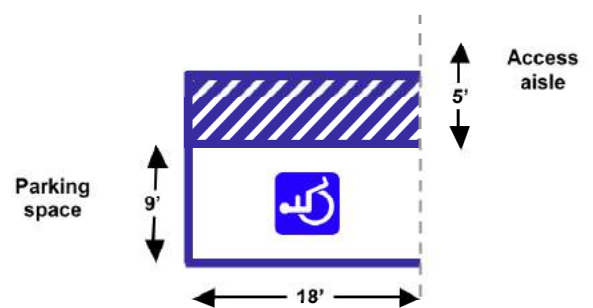
Parking spaces must have the following dimensions:

- Standard parking space (perpendicular or angled to the aisle): 9 ft. x 18 ft.
- Standard parking space (parallel to the aisle): 8 ft. x 23 ft.
- Handicapped parking space: 9 ft. x 18 ft., plus a clear 5 ft. x 18 ft. loading area to the side. Two handicapped spaces may share one loading area.
- Motorcycle space: 4.5 ft. x 9 ft.
- Off-street loading space: 12 ft. x 25 ft.
- Bicycle space: a stationary object where a user can secure both wheels and the frame of the bicycle with a 6 ft. cable and lock. The stationary object may be a freestanding bicycle rack, a wall-mounted bracket; an enclosed bicycle locker; a three point bicycle rack; or a fenced, covered, locked or guarded bicycle storage area.

Parking space measurements



Handicapped parking space



3.3.6.2. Parking space location

3.3.6.2.1. Lots and Parcels Fronting ~~Frontage~~ along FM 685, Carl Stern Boulevard UP Railroad and SH 130

Parking for non-residential buildings on non-corner lots must have at least 50% of the parking spaces placed behind the front building line.

Parking for non-residential buildings on corner lots must have at least 30% of the parking spaces placed behind the front building line.

Parking for non-residential buildings larger than 50,000 sf. is exempt from this parking space location requirement.

3.3.6.2.2. Lots and Parcels Fronting ~~Frontage~~ along internal streets

Parking for non-residential buildings on non-corner lots must have at least 70% of the parking spaces placed behind the front building line.

Parking for non-residential buildings on corner lots must have at least 50% of the parking spaces placed behind the front building line.

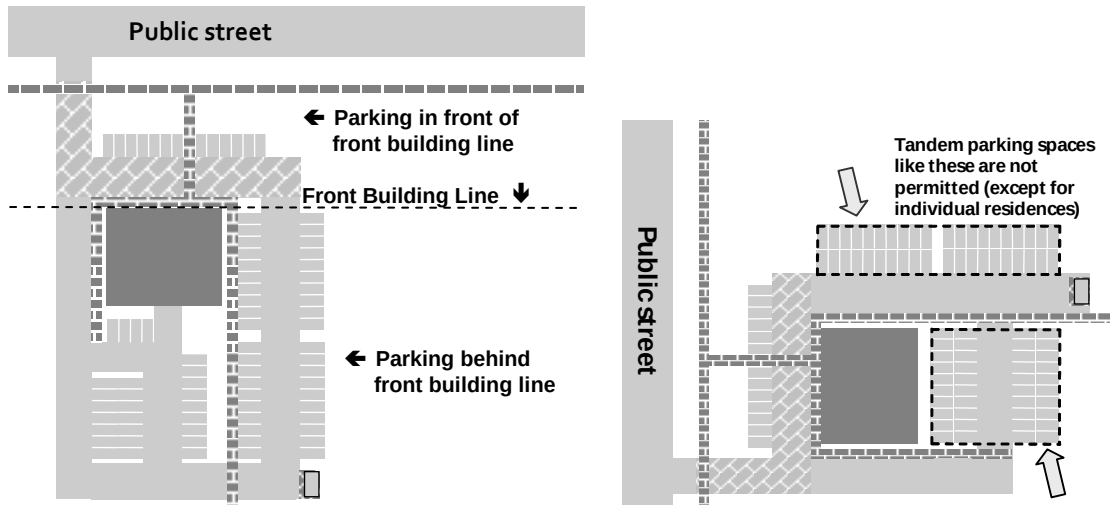
Parking for retail, commercial and industrial uses in buildings larger than 50,000 sf. is exempt from this parking space location requirement.

3.3.6.2.3 Lots and Parcels Fronting along UP Railroad Right-Of-Way

Parking for non-residential uses may be located without limitation, provided that landscape screening is provided along the UP Railroad right-of-way that comply with requirements set forth with Section 3.5.3.4 Parking lot and vehicular use screening.

3.3.6.3. Tandem parking

Tandem parking spaces, where the only access to a parking space is from another parking space, are permitted only for individual residential units.



Parking for non-residential buildings

3.3.7. Parking and Loading Space Number Standards

3.3.7.1. Required parking spaces

Uses should offer only the minimum amount of parking that is necessary to meet anticipated normal demand. The number of required off-street parking and truck loading spaces for a use is as follows.

Residential use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Dwelling unit: single household	2 per dwelling	n/a	n/a
Dwelling unit: single household + accessory unit, at least 2 units	1.5 per dwelling	n/a	n/a

Commercial use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Multi-tenant retail buildings (shopping centers); indoor recreation facility	1 per 400 sq. ft. GFA	1 per 200 sq. ft. GFA <u>n/a</u>	1 per tenant; may be waived by Development Services staff
Restaurant, bar/tavern, adult oriented use (live entertainment), nightclub, club/lodge	1 per 150 sq. ft. GFA	1 per 75 sq. ft. GFA <u>n/a</u>	1
Retail uses, including: art studio, performing; art studio, visual; bank; bakery, retail; convenience store; funeral home; gas station; grocery store; instructional facility; large item sales and rental; personal and business service shop; print shop; retail store; vehicle minor repair.	1 per 400 sq. ft. GFA	1 per 200 sq. ft. GFA <u>n/a</u>	1 per tenant; may be waived by Development Services staff
Office uses, including medical office, professional office, veterinary clinic	1 per 400 sq. ft. GFA	1 per 200 sq. ft. GFA <u>n/a</u>	1 per building
Child day care facility, pet day care and boarding, elderly day care facility	1 per employee + 3 (n/a for child day care in a home)	1 per employee + 6 (n/a for child day care in a home) <u>n/a</u>	n/a
Lodging establishment (all) (restaurants, bars, nightclubs and other accessory uses computed separately)	1.2 per guest room + 1 per 100 sq. ft. GFA meeting/banquet room	1.5 per guest room + 1 per 50 sq. ft. GFA meeting/banquet room <u>n/a</u>	1 + 1 per 5000 sq. ft. GFA meeting room area
Entertainment facility: theater	1 per 4 seats	1 per 2 seats <u>n/a</u>	1
Farm product sales, flea market, kennel, plant nursery, greenhouse	No requirements	n/a	n/a

Industrial use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Light industrial use, trade use, vehicle major repair	1 per 1000 sq. ft. GFA	1 per 333.3 sq. ft. GFA <u>n/a</u>	1 per 2500 sq. ft. GFA or 2 per user/tenant, whatever is more
Research laboratory	1 per 400 sq. ft. GFA	1 per 200 sq. ft. GFA <u>n/a</u>	1 per building
Warehouse and distribution facility	1 per 2000 sq. ft. GFA	1 per 1000 sq. ft. GFA <u>n/a</u>	1 per 5000 sq. ft. GFA
Vehicle storage facility	1 per 400 sq. ft. GFA office space + 1 per stored vehicle	1 per 200 sq. ft. GFA office space + 1 per stored vehicle <u>n/a</u>	n/a

Institutional use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Community facility, amenity center	1 per 500 sq. ft. GFA	1 per 100 sq. ft. GFA n/a	n/a
Hospital (excluding general medical office space)	0.5 per bed + 1 per 500 sq. ft. GFA inpatient treatment area + 1 per 400 sq. ft. GFA outpatient treatment area	0.75 per bed + 1 per 250 sq. ft. GFA inpatient treatment area + 1 per 200 sq. ft. GFA outpatient treatment area n/a	1 per 20,000 sq. ft. GFA
Place of worship or assembly	1 per 5 seats in primary sanctuary or assembly area	1 per 3 seats in primary sanctuary or assembly area n/a	Required for accessory uses (school, etc.)
School: elementary, middle and high	1 per 10 seats in auditorium/cafatorium	1 per 3 seats in auditorium/cafatorium n/a	1 per cafeteria + 1 per gymnasium + 1 per assembly hall + 1 bus per 2 classrooms

Temporary use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Christmas tree lot, carnival, construction equipment field storage lot, vehicle sales-off site	No set minimum; parking plan requires approval by CD staff	No set maximum; parking plan requires approval by CD staff n/a	No set minimum; parking plan requires approval by CD staff
Construction field office	3 per facility	6 per facility n/a	n/a
Garage sale, lot sales office, model home	No requirements	No requirements	No requirements

Accessory use classification	Required spaces (minimum)	Maximum spaces	Required loading spaces (minimum)
Agricultural activity, antenna-radio hobbyist, antenna-non-residential use, boat house, CMRS facility (attached), dock, home occupation, satellite dish, swimming pool	No requirements	No requirements	No requirements
CMRS facility (freestanding), public utility substation	No requirements	No requirements	1 per site
Drive-through facility	Refer to queuing area standards	n/a	n/a

3.3.7.2. Variance to ~~maximum-minimum~~ parking requirements and parking space location

~~Exceeding maximum~~Reducing minimum parking requirements may be approved by the Board of Adjustment if it can be demonstrated that the parking space location or required permitted maximum-minimum number of spaces will are not necessary to meet the normal day-to-day needs of a proposed use.

~~Exceeding parking space location requirements may be approved by the Development Services staff if it can be demonstrated that the permitted parking space location will not meet the normal day-to-day needs of a proposed use.~~

3.3.7.3. Handicap designated parking spaces

Handicapped designated parking spaces must be placed on the shortest possible accessible route of travel to an accessible building entrance. The number of handicapped designated parking spaces required for nonresidential uses is:

Total spaces	<25	36-50	51-75	76-100	101-150	151-200	201-300	301-400	401-500	501-1000	greater than 1000
Handicapped spaces	1	2	3	4	5	6	7	8	9	2%	20 + 1 per additional 100 total spaces

3.3.7.4. Motorcycle parking spaces

One or more motorcycle parking spaces must be provided for every 100 standard vehicle parking spaces provided for non-residential uses, when the parking lot has greater than 50 spaces.

3.3.7.5. Bicycle parking

One or more bicycle parking spaces must be provided for every 20 vehicle parking spaces required as a minimum for non-residential uses. Bicycle parking design must follow standards recommended by the Association of Professional and Bicycle Professionals.

3.3.7.6. Shared parking facilities

Agreements which share parking between uses with non-conflicting parking demands (eg. a church and a bank) are encouraged as a means to reduce the amount of land area devoted to parking if the applicant can demonstrate that shared parking is feasible. Where different uses create staggered parking demand periods, shared parking calculations among adjacent parcels is permitted to justify reducing the amount of required parking.

3.3.7.7. On-street parking

Designated on-street parking spaces no more than 200 ft. from the main entrance of a building with a commercial use may be counted towards the required amount of parking spaces for commercial and retail use. These spaces do not count towards the permitted parking space location requirements. Designated on-street parking spaces no more than 100 ft. from the entrance of a building may be counted towards the required amount of parking spaces for residential use with multi-unit dwellings. On-street parking being counted towards the required amount of parking spaces for any use or business, other than a residential amenity center, recreation use, common open space use, or parkland must not encroach into single family detached residential areas.

3.3.7.8. Building or use enlargement

When a building or use is enlarged 25% or more, additional parking and loading spaces, in compliance with Section 3.3.7, minimum required parking, must be provided based on the building area associated with the enlargement.

3.3.7.9. Space computation and fractions

Fractional results will be rounded up when computing the number of required parking and loading spaces.

3.3.8. Landscaping Areas

3.3.8.1. Applicability

These standards do not apply to single household dwellings, two to four household dwellings, single family attached dwellings, or parks and ~~green-common open~~ spaces ~~over 5 acres in area.~~

Specific plant material standards are detailed in the landscaping standards in this chapter. Parking setback and ~~buffer yard~~ buffer yard standards are detailed in the bulk standards section in this ~~chapter~~ PUD.

3.3.8.2. Parking lot interior landscaping

Landscape areas must consist of at least 10% of the interior ~~space-area~~ of a parking lot. Landscaped islands may be clustered or evenly distributed.

3.3.8.3. Parking lot entrances

Landscape islands at least 10 ft. wide must be used to define primary parking lot entrances.

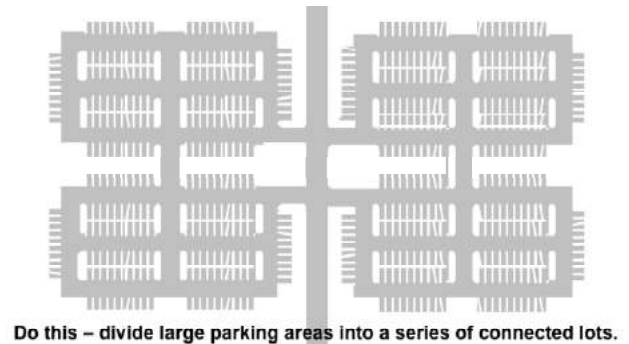
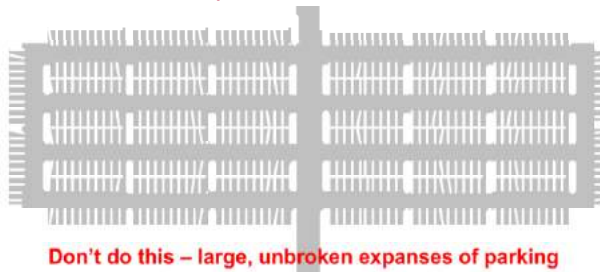
3.3.8.4. Parking rows

Landscape islands of at least 180 sq. ft. must be placed at both ends of a parking row.

Parking rows cannot extend for greater than 10 spaces without an interrupting landscape island of at least 180 sq. ft.

3.3.8.5. Division of large parking lots

Large parking lots must be visually and functionally segmented into smaller lots with no more than 150 parking spaces, by landscape islands at least 10 ft. wide, to the greatest extent practical.



3.3.8.6. Connecting walkways

The landscape area following a connecting walkway within a commercial center must be at least 5 ft. wide.

3.3.8.7. Parking overflow to landscape areas

Parking cannot overflow onto areas outside of the designated parking area that does not meet the minimum pavement standards for the use. Parking and vehicle display on pedestrian and landscaped areas is prohibited.

3.3.8.8. Street corners

A corner landscape area must be provided if parking or a drive aisle is between a building and the street corner. Parking spaces and drive aisles must be at least 30 ft. from the intersection point of property lines at the corner.

3.3.9. Development Standards

3.3.9.1. Surface standards and paving materials

3.3.9.1.1. Permanent surfacing

- Parking and loading areas must have a permanent surface of asphalt, concrete, brick, paver blocks or a solid surface of similar or better durability and performance characteristics.
- Porous pavement and concrete may be used for individual parking spaces and lightly used drive aisles. Porous pavement and concrete is discouraged for busy drive aisles, service drives and truck/freight loading areas. Porous pavement cannot be used for handicapped parking spaces.

3.3.9.1.2. Permanent surfacing exception: single and two-household dwellings

- Porous pavement may be used as a parking surface for single and two household dwellings.
- Driveways may have a "Hollywood driveway" design, where the driving surface is broken up into paved tracks at least 2.5 ft. wide for the wheels, separated by a planted strip.
- Driveway width shall be no wider than a 2-door garage at property line; driveways for 3rd garage door must flare out.
- Parking on an unpaved surface is prohibited.



Separated Hollywood driveway strips

3.3.9.1.3. Permanent surfacing exception: temporary uses

Permanent parking surfaces are not required for temporary uses. A parking plan must be approved for temporary uses, subject to Development Services staff review.

3.3.9.2. Grading and drainage

Parking and loading areas must be graded and drained to dispose of all surface water, in conformance to the approved drainage plan for the site.

3.3.9.3. Markings

Parking spaces, aisles, entryways, loading spaces and queue spaces surfaced in permanent materials must be marked to show their location.

Handicapped parking spaces must be marked with the international symbol of accessibility on the space and on a sign at the head of the parking space.

Motorcycle parking spaces must be marked with a sign at the head of the space, from 3 ft. and 5 ft. above the parking surface.

Parking space markings for one, two and three household dwellings are not required.

3.3.10. Shopping cart return areas

Shopping cart return areas must be defined by curbs and landscaping.

3.4. Architectural design

3.4.1. Single Household and Two- to Four-Household Residence Design

3.4.1.1. Mandatory homeowner association

A mandatory homeowner association shall be created and maintained for all single household and two-to-four-household residential development.

3.4.1.2. Required elements

Single household and two to four household dwellings must include at least one of the following elements:

- Side, detached, rear or alley-loaded garage
- Masonry (brick, stone) wainscot at least 4 ft. on ~~all front and side~~ exterior walls, if the side ~~and rear~~ walls are not those materials
- One story scaled entries recessed or covered with a porch, canopy, or other shading device
- Functional front porch at least 72 sq. ft.
- One of the following green building certifications:
National Association of Home Builders National Green Building Program: ANSI ICC 700-2008 National Green Building Standard, Bronze, Silver, or Gold.

U.S. Green Building Council Leadership in Energy and Environmental Design (LEED): Certified, Silver, Gold or Platinum.

3.4.1.3. Exterior Wall Standards:

- Exterior surface area (all stories) of primary buildings shall consist of un-painted clay brick, ledge stone, fieldstone, cast stone, granite, tile, painted or tinted stucco, glass façade, glass block (or alternative glazing e.g. Kalwall) and factory tinted (not painted) split faced concrete masonry unit, cementitious-fiber planking (not panels) or similar material approved by the Development Services staff.
- Solid wood planking, decorative cementitious-fiber panels and other materials approved by the Development Services staff may be used for accent features.
- A minimum of fifteen percent (15%) of the front primary building façade for buildings shall consist of window or door openings.
- ~~All building fronts shall have at least four different design features to break the wall plane. The following are examples of the types of design features that shall be utilized~~meet this requirement: horizontal off-sets, recesses or projections, porches, breezeways, porte-cocheres, courtyards, awnings, canopies, alcoves, recessed entries, ornamental cornices, display or other ornamental windows, vertical "elevation" off-sets, peaked roof forms, arches, outdoor patios, architectural details such as tile work or moldings integrated into the façade, integrated planters or wing walls, accent materials, varied roof heights, premium roofing materials such as tile or standing seam metal, or similar design features approved by the Development Services staff.-
- Windows shall have a maximum exterior reflectivity of twenty percent (20%).
- Design elements and detailing, including the presence of windows and window treatments, trim detailing, and exterior wall materials, must be continued around the structure. The percentage of design elements and detailing are not required to be consistent on all facades.



Façade with elevation design features, first floor articulation and detached rear garage



Example of façade with elevation design features, individual garage doors (projecting), and articulation of first story



Example of façade treatment through first and second floor articulation, elevation design features, color selection of garage doors (projecting)



Example of elevation design features



Example of elevation design features, first floor articulation, and individual garage doors (flush)



Avoid - flat and boxy 2-story facade with low-pitched roof and lacking elevation design features



Avoid – façade with flat pitch roof, lack of pedestrian-scaled entry and elevation design features

3.4.1.4. Facades - corner

Houses on corner lots shall be articulated on both street facades; continue siding material palette on both street-facing facades and incorporate architectural elements such as side porches, bay windows, gable roofs and similar design elements and detailing treatment on side street facing façade. The percentage of design elements and detailing are not required to be consistent on both facades.



Corner lot/street facing facades - example of elevation detailing continued on both façades



Corner lot/ street facing facades – continuation of elevation design features



Avoid: Side street facing façade that lacks elevation design features



Avoid: Side street-facing facade that lacks elevation design features

3.4.1.5. Garages

3.4.1.5.1. Front-loaded garages

A front-loaded garage may occupy no more than 70% of the house frontage.

3.4.1.5.2. Garage doors - articulation

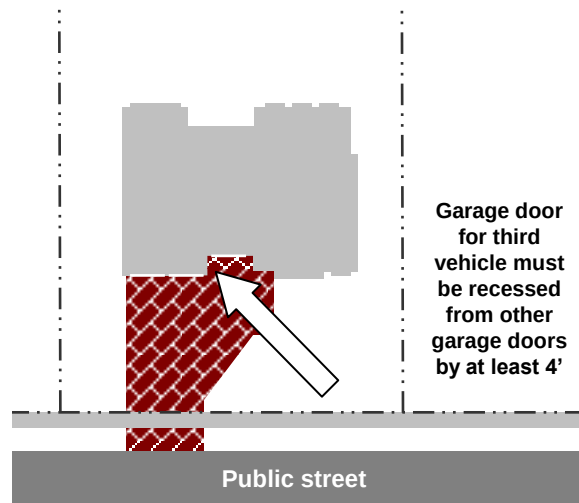
- Garage doors articulation shall include detailing and/or relief in the surface using wood or wood-like finished materials, windows are a preferred element
- Paint colors and/or stain for garage doors shall be compatible with the color palette of the building elevation on which the garage door is located
- Individual garage doors are preferred on street facing facades; garage doors are limited to 2-car garage size.
- The use of 3 garage doors ~~for 3 cars~~ on a street facing facade is discouraged; At least one of the 3 garage doors must be side facing or recessed a minimum of 4 ft. from the other garage doors.



Detailing of the wooden garage door provides required garage door articulation on street facing facades



Three-car garage with detailed, individual garage doors; note required recess of two doors on right



Driveway flares out are required from the property line to accommodate the 3 garages

3.4.1.5.3. Orientation: corner lots and open space lots

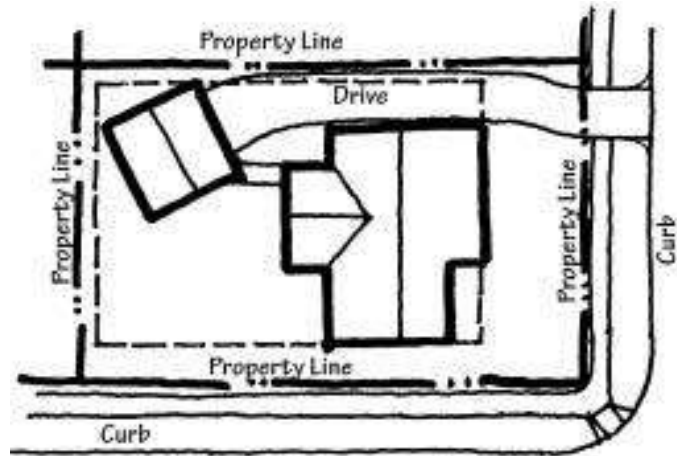
Garages for one and two household dwellings accessed from the fronting street must be located on the interior lot line side of the lot, opposite from the corner or open space lot.



Corner lot: locate garage/driveway away from the corner

3.4.1.5.4. Types of garages

3.4.1.5.4.1. Garage – detached rear



A detached rear garage is a permitted garage type.



Example of detached rear garage



Example of detached rear garage



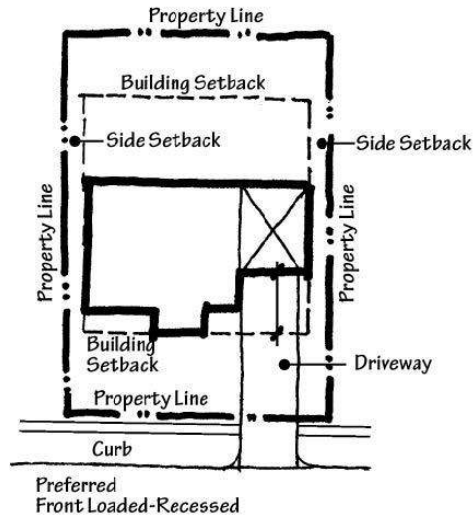
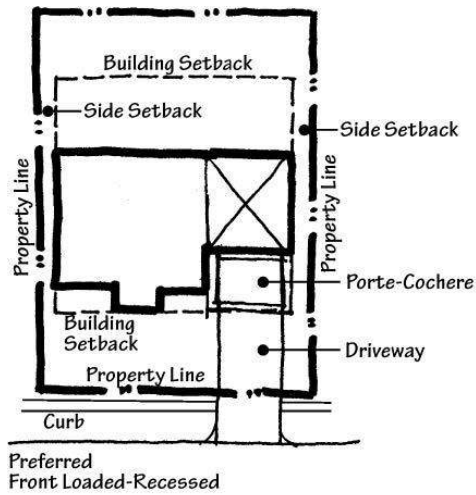
Example of detached rear garage



Example of detached rear garage

3.4.1.5.4.2. Garage - recessed

A garage door recessed from the face of the front façade is a permitted garage type. An overhead eave is a preferred detail element above the garage



Street facing garage with a large eave and individual garage doors



Recessed, tandem garage with individual garage door and detailing above



Recessed front garage creates a shadow line and emphasis on the rest of the facade

3.4.1.5.4.3. Garage - flush with façade

Garage doors flush with the street facing façade require detailing on the façade to de-emphasize the visual impact of the garage, including the following:

Trim or banding around the garage door

~~Pronounced~~ Garage door relief detailing, ~~and~~ windows are a preferred element

~~Careful~~ Coordinated color selection to de-emphasize the garage door

Individual garage doors are preferred



Avoid - flush garage with completely flat 2- car garage door, no detailing or relief, highlight paint color on door inadvertently attracts attention, lack of trim around door, lack of first floor façade articulation above garage

3.4.1.5.4.4. Garage – projecting

Garages projecting in front of the street facing façade may protrude in front of the façade provided that detailing is provided on all exposed garage facades to de-emphasize the visual impact of the garage. Windows and individual garage doors are preferred element.

The following are required on projecting garage:

- Integrated trim or banding around the garage door that matches the residential building
- Detailing and articulation of the door facade
- Color selection that does not emphasize the garage door
- An architectural top to the garage, such as a gabled roof



Projecting garage- example of integration of matched house/garage siding, trim detailing above, garage door detailing, accent colors, articulation of first floor level above garage, and use of gable above



Projecting garage – example showing windows on door, detailing and trim and good color selection



Projecting garage – example integration of masonry siding matching façade, good detailing, trim and color selection (note: garage door lacks adequate detail)



Projecting garage- example of integration of siding on garage trim, accent lights, accent colors, articulation of first story level, detailing on garage door, gable and centered window above

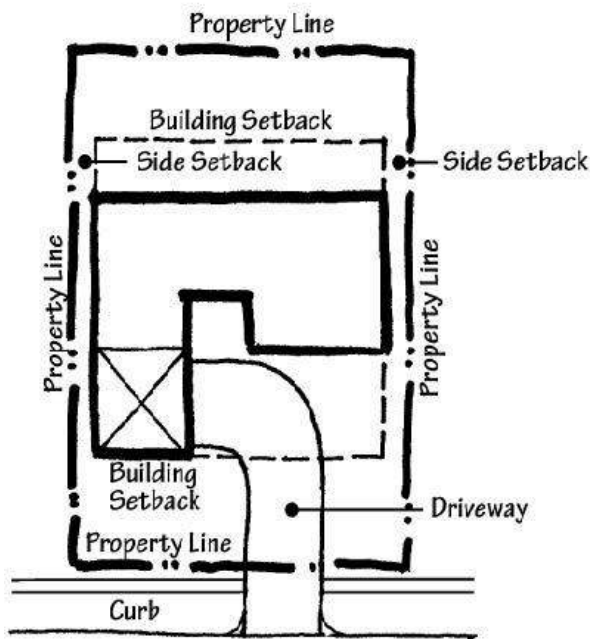


Avoid - projecting garage with completely flat 2-car garage door, no detail, paint color not complimentary to house façade. Light color masonry poor selection choice as it highlights the garage

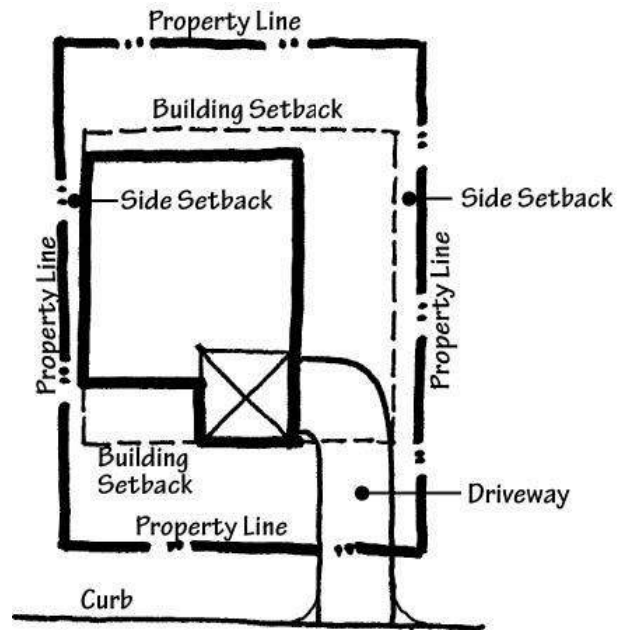
3.4.1.5.5. Garage - side-loaded

Garages that are side-loaded (in relation to the street) are a preferred and permitted garage type provided the following requirements are incorporated:

- Garage door articulation requirements are incorporated
- Placement of driveway pavement meets setback restrictions
- Driveway pavement is limited to the minimum necessary for safe vehicular movement



Inside Swing Side Loaded



Outside Swing Side Loaded



Side-loaded garage with individual doors and windows

3.4.1.5.6. Garage – Rear alley loaded

Alley loaded garages is a permitted garage type. Alley loaded garages may be attached or detached from the home.

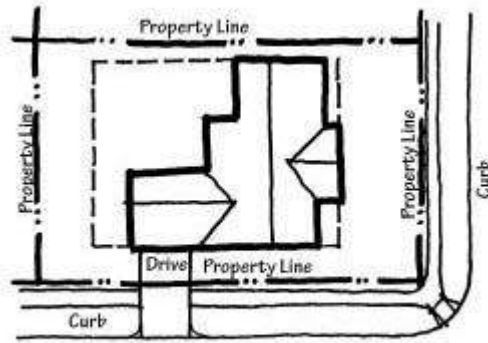


Garages access from rear alley

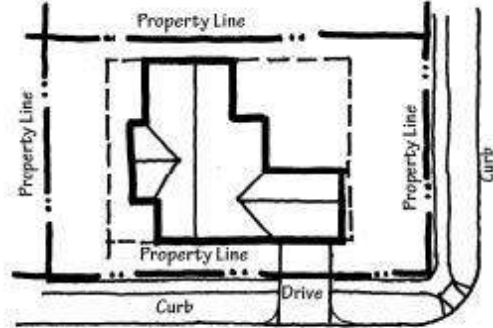
3.4.1.5.7. Corner lot garage placement

Minimize the visual prominence of garage and driveway placement on corner lots by incorporating the following:

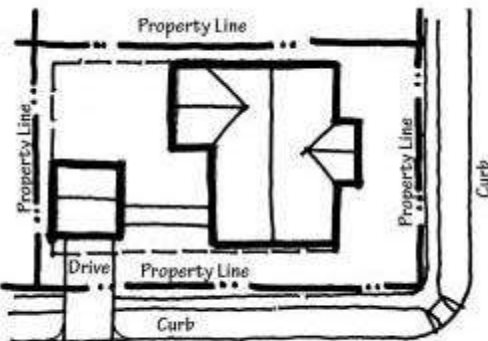
- Avoid garage placement/driveway access from a side street that is:
 - Centered on an approaching street. It is visually prominent
 - Placed close to the street corner
- Avoid garage placement/driveway access from the fronting street that is:
 - Placed close to the street corner



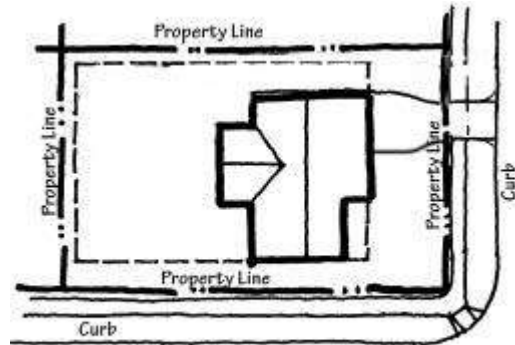
Permitted



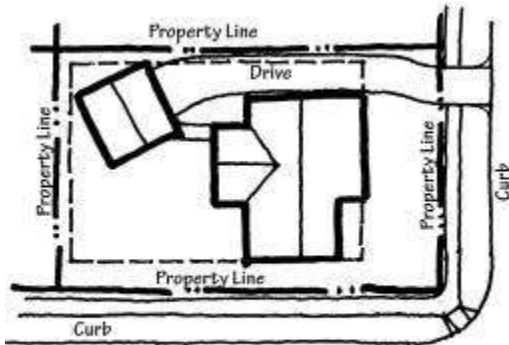
Prohibited



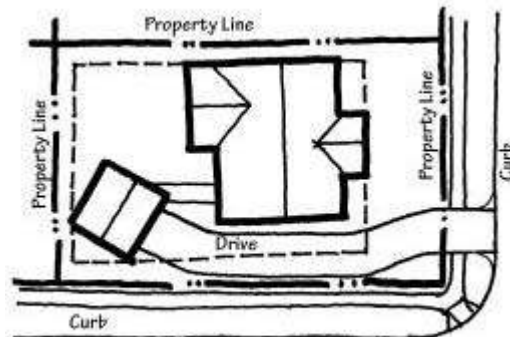
Acceptable



Acceptable



Preferred



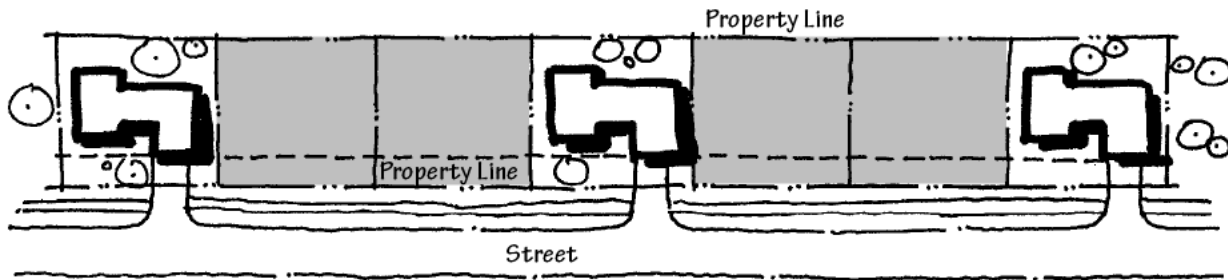
Prohibited

3.4.1.6. Plan spacing and repetition

No two elevations of the same style and plan type are permitted side-by-side within a given block face. Developments with single household and two household dwellings must adhere to the following minimum standards:

3.4.1.6.1. Same plan, different elevation, same side of the street

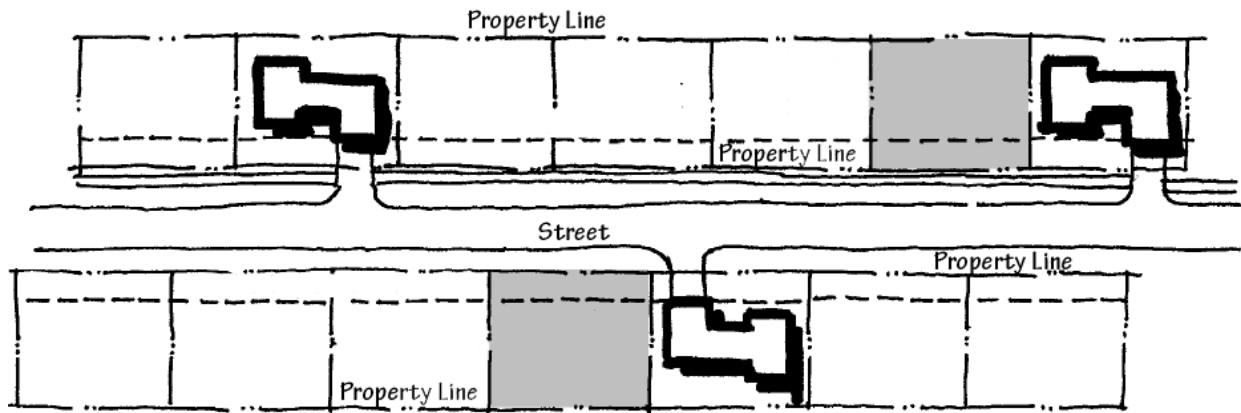
When building different elevations of the same plan on the same side of the street, two lots must be skipped ~~and the home before repeating the same elevation.~~ (same plan, different elevation) shall be placed on the third lot.



Same Plan, Different Elevation, Same Side of the Street

3.4.1.6.2. Same plan, different elevation, opposite side of the street

~~When building different elevations of the same plan on the opposite side of the street, one and a half lots must be skipped before repeating the same elevation.~~ When the same plan, different elevation is on the opposite side of the street, the lot fronting the property, and the one beside it shall be skipped, for a total of two skipped lots, and the home (same plan, different elevation) shall be placed on the third lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.



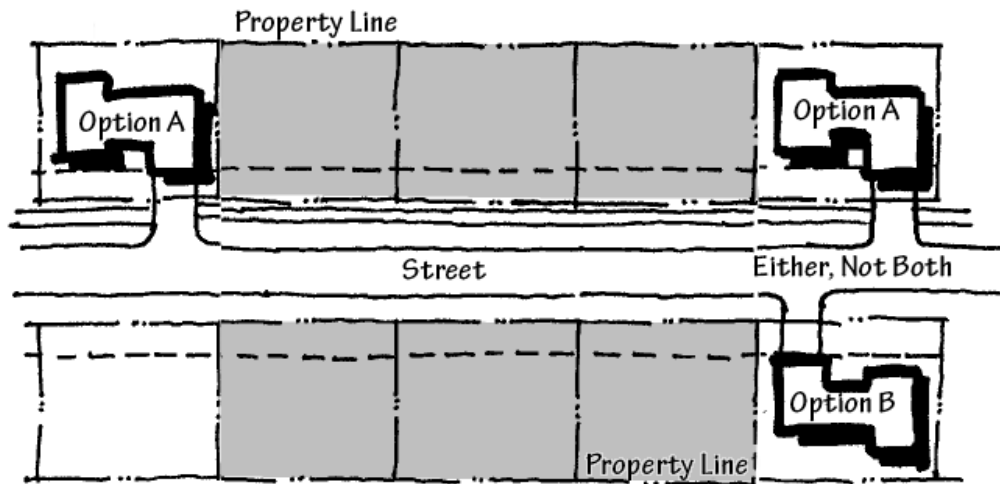
Same Plan, Different Elevation, Opposite Side of Street

3.4.1.6.3. Same plan, same elevation, same or opposite side of the street

~~When building same or similar elevations of the same plan on the same or opposite side of the street, four lots must be skipped before repeating the same elevation. Same elevations may not be facing opposite one another.~~

When the same plan, same elevation is on the same side of the street, three lots shall be skipped and the home (same plan, same elevation) shall be placed on the fourth lot.

When the same plan, same elevation is on the opposite side of the street, the lot fronting the property shall be counted as the first lot, then count an additional two lots and place the home (same plan, same elevation) on the fourth lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.



Same Plan, Same Elevation, Same or Opposite Side of Street



Same elevation on non-adjacent lots (2 lots must be skipped)



Diversity in elevations (even within the same architectural style), no duplicate elevations adjacent

3.4.1.7. Roofs

On buildings with pitched roofs, the minimum roof pitch is 6:12. Pitched roofs shall be clad in 25-year minimum composition shingles or low reflectivity galvanized metal roofing materials.

3.4.1.8. Mechanical equipment screening

Rooftop mechanical equipment is prohibited unless placed where they are not visible from the public ROW.

Ground mounted mechanical equipment (air conditioning units, utility boxes, etc.) must be hidden or screened with architecturally integral wing walls or landscape living screening material that will grow to the same height as the equipment being screened, or placed where they are not readily visible from the public right-of-way street, to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.

3.4.2. Single Household Attached and Multiple Unit Household Residence Design

3.4.2.1. Architectural style

Distinct groups of buildings on a site must share ~~a~~ common, identifiable, complementary design elements and/or detailing or style in a multiple household residential development. This includes non-residential structures in the development such as amenity centers, laundry and maintenance buildings, garages, carports, and dumpster enclosures.

3.4.2.2. Form and mass

A single, large, dominant building mass should be avoided.

Multiple household residential building designs should incorporate visually heavier and more massive elements, details or colors at the building base, and visually lighter elements, details or colors above the base.

Changes in mass or form should be related to entrances, the integral structure and/or the interior space organization ~~and activities~~, and not just for cosmetic effect.

3.4.2.3. Exterior walls

3.4.2.3.1. Pattern

Facades must be articulated with bays, insets, balconies, porches, ~~or~~ stoops or other similar design elements related to entrances and windows.

3.4.2.3.2. Four-sided design

All walls viewed must include materials and design characteristics consistent with those on the front. Lesser quality materials for side or rear walls are prohibited.

3.4.2.3.3. Long walls and facades

- The maximum length of a multiple household residential building is 200 ft.
- Wall and roof planes must have offsets or setbacks with a differential in horizontal plane of at least 2 ft. every no more than 50 ft.
- Up to six townhouse units may be attached in a single row.

3.4.2.3.4. Building entries

- Common balconies on perimeter walls providing access to two or more units are prohibited.
- Building entries next to a public street, private drive or parking area must be articulated to provide an expression of human activity or use in relation to building size ~~through the use of - Doors~~, windows, entranceways, and other design features such as corners, setbacks, and offsets can be used to create articulation.

3.4.2.3.5. Garage doors

Front loading garage doors on multiple household residential building must include the following elements:

- Front-loaded garage doors may comprise no more than 50% of the total length of the front façade of a multiple residential building's front façade. Every two single-bay garage doors or every double garage door must be offset by at least 4 ft. from the plane of an adjacent garage door,
- Garage doors must integrate into the overall building design of the site with color, ~~and~~ texture or other similar design elements.

3.4.2.3.6. Windows and transparency

- All walls and elevations on all floors of multiple household buildings must ~~have include~~ windows, except when necessary to assure privacy for adjacent property owners.
- Exterior Windows should be located to ~~maximize the possibility of~~ promote occupant surveillance of entryways and common areas.

3.4.2.3.7. Building roofs

- On buildings with pitched roofs, the minimum roof pitch is 6:12.
- Roof forms must be designed to correspond and denote building elements and functions such as entrances and arcades
- On buildings where flat roofs are the predominant roof type, parapet walls must vary in height and/or shape at least once every no more than 50 ft. along a wall façade. Exceptions to the parapet standards may be administratively approved by Development Services staff if it can be demonstrated that the building design character meets the intent of this Section.
- On buildings where sloping roofs are the predominant roof type, each building must have a variety of roof forms

3.4.2.4. Materials and color

3.4.2.4.1. Building materials

- Building exterior materials must be high quality and durable, ~~and used in their natural context and color~~. Masonry, stone and/or brick must be used as exterior materials for (at least 40% of exterior surface area ~~facades, excluding doors, windows and trim~~). Wood, fiber-cement siding, corrugated metal, and stucco are suitable examples of appropriate secondary exterior materials.
- A waiver ~~Deviations up to 10%~~ to building material standards may be considered administratively approved by Development Services staff if it can be demonstrated that the building material meets the design intent of this Section.
- .
- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated and pre-engineered buildings are prohibited.

3.4.2.4.2. Roof materials

- Roof materials must be high quality, and durable, and consistent with local architectural themes. Acceptable roof materials include concrete tile, high-profile architectural asphalt shingles, metal shingles and split seam metal.
- Flat roofs may utilize any roofing material but must include a parapet.

3.4.2.4.3. Material or color changes

- Material or color changes must only occur at a change of plane or reveal line.
- Exceptions to location of material or color change standards may be administratively approved by Development Services staff if it can be demonstrated that the location meets the design intent of this Section.

. Piecemeal embellishment and frequent material changes are prohibited.

3.4.2.4.4. Mechanical equipment screening

Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at least as high as the equipment to be screened. Makeshift equipment screens, such as wooden or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping.

Mechanical equipment must be located where their acoustics will not be disruptive to abutting residential dwelling units.

Solar panels and rain collection devices are exempt from mechanical equipment screening standards.

3.4.3. Commercial, Office, Public, Institutional and Mixed Use Building Design

3.4.3.1. Architectural style

~~Attached or~~ Distinct groups of buildings on a site must share a common identifiable, complementary design ~~elements and/or detailing or style~~. This includes accessory structures such as freestanding canopies, accessory and maintenance buildings, and dumpster enclosures.

A building must have a single definitive, consistent style; ~~M~~ixing of various architectural styles on the same building is discouraged.

3.4.3.2. Form and mass

A single, large, dominant building mass must be avoided in new buildings ~~and projects additions~~ involving changes to the mass of existing buildings. Changes in mass should be related to entrances, tenant spaces, the integral structure and/or the interior space organization and activities, ~~and not just for cosmetic effect. False fronts incorporating only changes in color and/or parapet treatment are prohibited.~~

3.4.3.3. Exterior walls

3.4.3.3.1. Base and top

- Façades and walls must have a recognizable base, with design examples achieving this criteria including ~~with~~ (but not limited to):
 - thicker walls, ledges or sills;
 - integrally textured materials such as stone or other masonry;
 - integrally colored and patterned materials such as smooth-finished stone;
 - lighter or darker colored materials, mullions or panels; or
 - planters;
 - wainscoting or plinth course

Façades and walls must have a recognizable top, with design examples achieving this criteria including (but not limited to):

~~And a recognizable top with (but not limited to):~~

- cornice treatments, other than colored stripes or bands alone, with integrally textured materials such as stone or other masonry or differently colored materials;
- sloping roof with overhangs extending a minimum of 18 inches ~~and brackets;~~
- stepped parapets.



Example of sloping roofed building with recognizable base and top.



Example of flat roofed building with recognizable base and top.

3.4.3.3.2. Four-sided design

All walls must include use materials and general design characteristics consistent those on the front.



Example of four sided design



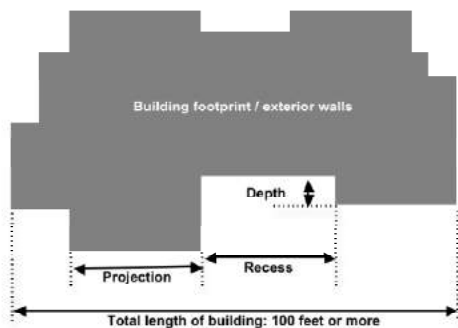


Example of four-sided design



3.4.3.3.3. Long walls and façade; projections and recesses

- Walls at least 100 ft. long must include wall plane projections or recesses having at least 3% depth of the façade length, and extending at least 20% of the façade length.
- Deviations up to 10% to wall plane projections or recesses may be administratively approved by Development Services staff if it can be demonstrated that the building wall design meets the design intent of this Section.



Projections/recesses must comprise 20% or more of the façade length with a minimum depth of 3% of the façade length



Large retail store with projections and recesses

3.4.3.3.4. Exterior walls

- Exterior walls cannot have a blank, uninterrupted length greater than 50 ft. greater than 30 ft. without including two one or more of these the following design features: change in plane, change in texture or masonry pattern, windows, or other equivalent element(s) that subdivide the wall into human scale proportions. Side or rear walls

may include false windows and door openings defined by frames, sills and lintels, or similarly proportioned modulations, only when actual doors and windows are not possible because of the building use. Deviations up to 10% to side or rear wall articulation may be administratively approved by Development Services staff if it can be demonstrated that the building wall design meets the design intent of this Section.

3.4.3.3.5. Primary building entrances

Primary building entrances must be clearly defined and shall be ~~and~~ recessed or framed by a sheltering element such as an awning, arcade or portico to provide shelter from the sun and inclement weather.



Well-defined building entrance

3.4.3.3.6. Retail building entrances

Anchor stores (defined as a retail building containing greater than 25,000 sf), at least 25% of the stores in a shopping center; and freestanding, single-use buildings, must have a clearly defined, highly visible customer entrance with four or more of the following elements (but not limited to):

- Arcades
- Arches
- Canopies or porticos
- Details such as tile work and moldings integrated into the building structure and design

- Display windows
- Integral planters or wing walls that include landscaped areas and/or places for sitting
- Outdoor patios
- Overhangs
- Peaked roof forms
- Raised corniced parapets over the door
- Recesses and/or projections
- Clinging vines
- Bas-relief artwork or mosaics
- Trellis

At least 25% of the additional stores in a shopping center must have two or more of the elements listed above.



Projections, arches, raised cornice parapet, integrated tile work and molding



Outdoor patio, display windows



Peaked roof form, canopy, display windows, projections



Peaked roof form, projections, arcade, display window, arches

3.4.3.3.7. Awnings

Hutto Crossing

April 16, 2013

PUD Amendment November 15, January 25, 2018

Awnings may only be used in detached increments above individual windows, doors and entries.



Separate awnings above individual windows

3.4.3.3.8. Transparency in commercial buildings

- At ground level floors, buildings must have a high level of transparency:-
Façades and walls that face a public street, plaza, or and primary customer parking areas (excluding the building rear and side facades and service areas) must be transparent between 2 ft. and 7 ft. above the grade or walkway along at least 75~~50~~% of its length along the front facade-, except
 - ~~Where~~ where the internal arrangement of a building makes it impractical impossible to provide transparency along a portion of a wall. In these conditions-, a combination of sculptural, mosaic, or bas-relief artwork and transparent window areas or displays may substitute for 50~~25~~% of required transparent areas, except when fronting on plaza areas.



Good door and window coverage on prominent elevations

3.4.3.3.9. Garage doors

- ~~Garage bay doors viewed from fronting on a public street: design elements shall include the following: right-of-way doors~~ must be segmented, with windows covering at least ~~50~~²⁵% of the garage surface. Roll-up garage doors are prohibited. Garage doors must be recessed at least 2 ft. behind the building façade. Garage bay doors must be integrated into the overall design of the host building with color, texture, windows and similar or compatible design elements. Bay doors may not be visible from a residential use.
- ~~Vehicle service areas and bays must be screened or sited so visibility from the a public street right-of-way is as low as possible:- landscape screening shall comply with requirements set forth with Section 3.5.3.4 Parking lot and vehicular use screening.~~
- ~~Roll-up garage doors are permitted in vehicle service areas and bays. Bay doors cannot face the street or be visible from residential zoning districts.~~
- ~~Garage bay doors must be integrated into the overall design of the site with color, texture, and windows.~~



Garage doors integrated into building architecture

3.4.3.4. Building roofs

3.4.3.4.1. Roof form design

Roof forms must correspond to and denote building elements and functions such as entrances, arcades and porches. Roof forms should relate to adjacent buildings to the greatest extent practical or developments.

3.4.3.4.2. Required features

Sloping roofs must have one of the following features:

- Overhanging eaves, extending at least 1.5 ft. past the supporting walls s_or facade.
- Sloping roofs that do not have an overhanging eave, or with an eave less than 1.5ft past the supporting wall or facade exceed the average height of the supporting walls, with must have an average slope of at least 1 ft. of vertical rise for every 3 ft. of horizontal run and no more than 1 ft. of vertical rise for every 1 ft. of horizontal run.

3.4.3.4.3. Roof lines

The continuous plane of a roof line must be no more than 100 ft. unless it can be demonstrated it meets the intent of this Section. Exceptions may be administratively approved by Development Services staff.



Example of varied roof line plane

3.4.3.4.4. Drive through facilities

Drive though facilities must be architecturally integrated into the host structure.

Drive through facilities must be located to minimize or avoid conflict with internal pedestrian routes. Pedestrian paths must be distinguished from vehicular driving surfaces by textured and colored pavement or other contrasting design element to emphasize conflict points and enhance pedestrian safety.



Drive-through architecturally integrated into host structure

3.4.3.5. Canopies

3.4.3.5.1. Architectural integration

Canopies must include design elements found on the main building, including such as color, exterior materials and /or roof pitch.

3.4.3.5.2. Canopy support poles

Canopy support poles must include decorative corbels design elements consistent with the overall architectural theme of the siteprimary building, or pole covers at least 18 in. in diameter or width, wide with a similar surface material and architectural treatments as the dominant material on the main host structurebuilding.

3.4.3.5.3. Canopy fasciae

Canopy fasciae must be the same color as the dominant color of the main host building. Striping and banding on canopies is prohibited.



Canopy design integrated into site

3.4.3.6. Materials and color

3.4.3.6.1. Building materials

- Predominant building exterior materials must be high quality and durable, and used in their natural context and color. Masonry (stone, brick, decorative CMU and similar materials) must be used as exterior materials for (at least 40% of exterior facades, excluding doors, windows and trim surface area. Wood, Fiber-cement siding and textured concrete EIFS are examples of appropriate secondary exterior materials.
- Corrugated metal may be used is an acceptable material to reinforce a vernacular design theme. Corrugated metal and ACM panels are examples of acceptable accent materials, and may have a cumulative surface area of no more than 5030% of the area of all exterior walls for on a building.
- Building-integrated photovoltaics (BIPV) may substitute for any amount of predominant and secondary exterior materials.
- Smooth-faced concrete block, painted masonry, and tilt-up and precast concrete panels are prohibited.
- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated metal buildings and panels are prohibited.

3.4.3.6.2. Roof materials

- Roof materials must be high quality and, durable and consistent with local architectural themes. Acceptable roof materials include concrete tile, high-profile architectural asphalt shingles, metal shingles, split seam metal, photovoltaic roof tiles and shingles, and solar panels.
- Planted green roofs are permitted and strongly encouraged.
- Flat roofs may utilize any roofing material but must have a continuous parapet.

3.4.3.6.3. Building colors

- Building colors must be low reflecting, muted and neutral or earth toned. Roof colors should be muted and compatible with the dominant building color.

- High intensity colors, metallic colors, black ~~or grey~~, fluorescent colors, single color schemes and groups of stripes are prohibited as the predominant building color or color scheme.
- High intensity colors, and black or grey, may be used on building trim and accents.

3.4.3.6.4. Material or color changes

- Material or color changes must occur only at a change of plane or reveal line, unless when, —administratively approved by Development Services staff.



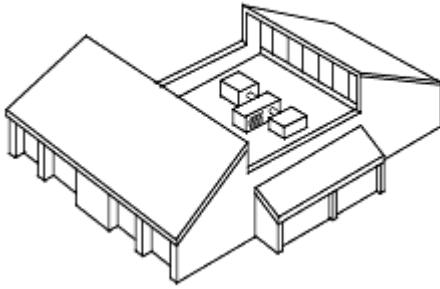
Change in materials at a change in plane.

3.4.3.7. Mechanical equipment screening

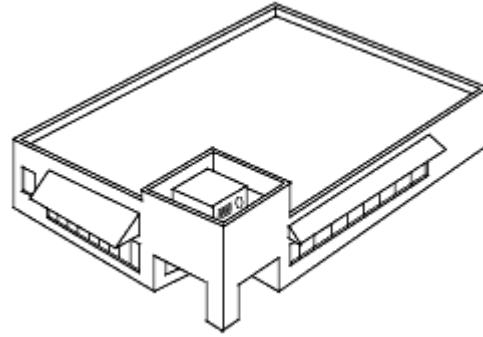
Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at a height least as high as the equipment to be screened. Makeshift equipment screens, such as wood or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.



Example of appropriate screening for rooftop mechanical equipment



Example of appropriate screening for rooftop mechanical equipment

3.4.3.8. Utility equipment screening

Electrical meters, switch boxes, panels, conduit, and related utility equipment must be placed in the most inconspicuous location ~~possible~~practical.

Utility equipment must be painted or coated to match the color of the mounting surface, to the greatest extent practical.

Utility equipment located in an area that may be frequently seen by the general public must be screened to the extent practical with landscape screening or a wing wall architecturally integrated into the host building structure.



Utility equipment at back of building painted to match wall



Utility equipment in more visible location screened by wing wall

3.4.3.8.1. Cobranded uses

Co-branded uses such as restaurants and convenience stores must be well integrated into the host structure. Using disharmonious architectural elements, such as a ~~different-non-compatible~~ façade materials or disharmonious roof pitch from the ~~rest of the host~~ building structure, ~~to emphasize the presence or corporate identity of a co-branded use,~~ is

prohibited, unless it can be demonstrated that it meets the intent of this Section.



Cobranded uses with harmonious architectural elements

3.4.4. Industrial building design

3.4.4.1. Intent

This section shall not apply to industrial structures over 200,000 sq. ft. in area.

3.4.4.2. Character and image

In industrial parks/developments located on a single site, each building must include predominant-compatible building design characteristics shared by all buildings in the development, such as façade materials and colors, so the development forms a cohesive place.

Distinct groups of buildings on a site must share a common, identifiable, complementary design or style. This includes accessory structures such as freestanding canopies, accessory and maintenance buildings, and dumpster enclosures.

3.4.4.3. Form and mass

A single, large, dominant building mass should be avoided in new buildings and, as much as possible, in projects involving changes to the mass of existing buildings. Changes in mass must be related to entrances, the integral structure and/or the organization of interior spaces and activities and not merely for cosmetic effect.

3.4.4.4. Exterior walls and facades

3.4.4.4.1. Pattern

Façades and walls must include a repeating pattern with an expression of architectural or structural bays through a change in plane, such as an offset, reveal, pilaster, projecting ribs, fenestration patterns, or piers; and any of the following elements:

- color change
- texture change
- material module change

All ~~Design~~ elements must repeat at intervals of no more than ~~30-60~~ ft. Deviations up to 10% to the interval repetition may be administratively approved by Development Services staff.

3.4.4.4.2. Four-sided design

All façades and walls must include materials and design characteristics consistent with those on the front façade. Inferior or lesser quality materials for side or rear walls are prohibited.

3.4.4.4.3. Garage doors

Bay doors must be screened using wing walls, carefully placed berms on the site, or other effective screening and site planning techniques, or otherwise sited so visibility from the public ~~right-of-way~~streets is minimized. Bay doors must be integrated into the overall design ~~theme~~ of the ~~site-host building~~ with color, texture, ~~and~~ windows and similar or compatible design elements. Segmented garage bay doors with windows are preferred to roll-up garage doors.

3.4.4.4.4. Primary building entrances

Primary building entrances must be clearly defined and recessed or framed by a sheltering element such as an awning, arcade or portico to provide shelter from the sun and inclement weather.

3.4.4.5. Building roofs

3.4.4.5.1. Planted green roofs

Planted green roofs, ~~and~~ solar panels and rain collection tanks are strongly encouraged

3.4.4.6. Materials and color

3.4.4.6.1. Building colors

- Building colors must be low reflecting, muted and neutral or earth toned. Roof colors must be muted and compatible with the dominant building color.

- High intensity colors, metallic colors, fluorescent colors, single color schemes and groups of stripes are prohibited as the predominant building color or color scheme.
- Brighter colors, and black or grey, may be used on building trim and accents.
- An exception to the color standards may be administratively approved by Development Services staff if it can be demonstrated that the color selection meets the design intent of this Section.
-

3.4.4.6.2. Building materials

Durable, high quality building materials must be used. Brick, stone, split-face CMU, EIFS, detailed tilt-up concrete panels, and building-integrated photovoltaics (BIPV) are examples of appropriate building materials.

- T-1-11 and other plywood-based siding materials are prohibited.
- Prefabricated and pre-engineered metal buildings and panels are prohibited.

3.4.4.6.3. Material or color changes

- Material or color changes must occur only at a change of plane or reveal line.
- An exception to the location of material or color change standards may be administratively approved by Development Services staff if it can be demonstrated that the location meets the design intent of this Section.
- Piecemeal embellishment and frequent material changes are prohibited.



Industrial building design: appropriate



Industrial building design: appropriate



Industrial building design: appropriate



Industrial building design: appropriate

3.4.4.7. Mechanical equipment screening

Rooftop mechanical equipment must be hidden or screened with architecturally integral elements at a height at least as high as the equipment to be screened. Makeshift equipment screens, such as wooden or plastic fences, are prohibited.

Ground mounted mechanical equipment must be hidden or screened with architecturally integral wing walls and/or landscaping to the greatest extent practical.

Solar panels and rain collection tanks are exempt from mechanical equipment screening standards.

3.4.4.8. Utility equipment screening

Electrical meters, switch boxes, panels, conduit, and related utility equipment must be placed in the most inconspicuous location possiblepractical.

Utility equipment must be painted or coated to match the color of the mounting surface to the greatest extent practical.

Utility equipment located in an area that may be frequently seen by the general public must be screened to the extent practical with landscape screening or with a wing wall architecturally integrated into the host building structure.

3.5. Landscaping

3.5.1. General standards

3.5.1.1. Visibility

Shrubs growing over 3 ft. tall at maturity must be placed at least 10 ft. from curb cuts. This is to maintain clear driver sight distance at driveway-street intersections.

3.5.1.2. Utilities

Trees trunks must be placed at least 10 ft. from streetlights and 5 ft. from wet utilities. Trees trunks must be placed at least 4 ft. from gas lines.

3.5.1.3. Clear zone at intersections

Trees in tree lawns must be at least 15 ft. from the curb return corner at street intersections.

3.5.2. Required landscaping: single and two-household dwellings

3.5.2.1. Tree number

Lots with single household and two household dwellings must have at least the following number of trees:

- Street tree - one native tall tree shall be installed per 25 ft. - 30 ft. of linear street frontage within the tree lawn area ~~or in the front yard,~~ provided trees are set back from utilities. Required street trees may be installed in the front yard only if inadequate tree lawn area is available to meet the street tree frontage requirements. It is the responsibility of the installer to insure there are no conflict with utilities and complies with clear vision area requirements. Intersection clear zones and curb cut visibility areas are not included in the street frontage calculations.
- One native tall tree or two ~~more~~-native short trees for every 3,000 sq. ft. of lot area.

Existing native tall and short trees conforming to Section 3.18.3.3 may be used to meet minimum tree planting requirements.

3.5.2.2. Shrub number

Lots with single household and two household dwellings must have one or more native shrubs for every 1,000 sq. ft. of lot area. All of the required shrubs must be placed in the front half of the lot. Lots at least 50,000 sq. ft. do not need more than 100 shrubs.

3.5.2.3. Tree and shrub size

Native tall trees must have a trunk of at least 2 in. caliper and 10-12 ft. ht. Native short trees must have a caliper of at least 1.5 in. and 8-10' ht. Planted shrubs must have at least 1 gallon container or be at least 2 ft. tall, and grow to a height of at least 2 ft.

3.5.2.4. Groundcover

Ground-cover must be planted on areas of developed parcels that are not part of an impervious surface, covered with porous paving, occupied by shrubbery or gardens, or under a tree drip line.

3.5.3. Required landscaping: non-residential and 3+ household residential development

3.5.3.1. Landscaping areas

Parcels with a non-residential use or 3+ household residential structures must be landscaped as follows. Additional plants may be required per buffer yard standards in Section ~~2-3-53.1.6~~, and mechanical equipment screening requirements.

-Planting requirements set forth in this Section shall comply with standards set forth in Section 3.5.1. Minor deviations to the standards set forth in this Section may be administratively approved by Development Services staff if it meets the intent of this Section.

3.5.3.2. Minimum percentage

A minimum percentage of the total area being developed shall be landscaped in accordance with the following percentages:

- Commercial uses: 15%
- Commercial pad sites: 5%
- Multifamily dwellings: 20%
- Office and professional uses: 15%
- Institutional and civic uses: 15%
- Industrial or manufacturing uses: 10%

3.5.3.3. Tree and shrub requirement

For every 500 square feet of landscaping required, or portion thereof, at least two (2) large trees and four (4) shrubs are required. Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

3.5.3.4. Parking lot and vehicular use screening

The perimeter of all vehicular use areas including parking areas, drive aisles, and loading areas shall be screened as follows:

- Vehicular use areas shall be screened from all abutting rights-of-way, including the UP Railroad, by a continuous landscaped area not less than 10 12 ft. deep.
- Vehicular use areas shall be screened from all abutting residential property by a continuous landscaped area not less than 8 ft. deep.
- Landscape screening shall contain one (1) large tree per thirty (30) linear feet, or portion thereof, and a continuous hedge not less than 3 ft. in height.
- In addition to the required vehicular use screening, all outdoor parking shall have landscaping islands within the parking area equal to not less than 7% of the gross parking lot area.
- Landscape islands shall be required on both ends of all parking aisles, if such spaces are not adjacent to another landscaped area or entry throat.
- Not more than ten (10) consecutive parking spaces shall be provided without a landscaped island.
- Landscape islands shall be a minimum of 9 ft. wide and 18 ft. deep, and shall contain at least one (1) large tree and four (4) shrubs.
- Driveways and entry throats shall contain at least one (1) large tree and five (5) shrubs on each side.
- Required parking lot landscaping may be counted toward the minimum landscaped area required in Section 3.5.3.2.

3.5.3.5. Tree and shrub standards applicable to this Section

The following standards apply to trees and shrubs:

- Planting areas for each tree provided shall have a minimum undisturbed pervious area of at least 100 square feet and shall be planted or covered with grass, mulch, or other appropriate ground cover.
- Each development shall provide at least three (3) different species. No more than 50% of all trees, per development, shall be of the same species.
- Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

Area	Native tall trees (minimum)	Native short trees (minimum)	Native shrubs (minimum)
Yards/landscape buffers along major arterials	1 per 40 ft. of linear buffer	1 per 40 ft. of linear buffer	1 per 5 ft. of linear buffer
Yards/landscape buffers along other streets, including internal private and village roads	1 per 40 ft. of linear buffer	1 per 40 ft. of linear buffer	1 per 5 ft. of linear buffer
Yards/landscape buffers at sides and rear of parcel	1 per 40 ft. of linear buffer	1 per 40 ft. of linear buffer	1 per 5 ft. of linear buffer
Building perimeter and wing walls	1 per 50 ft. of linear building perimeter and wing wall	1 per 50 ft. of linear façade and rear perimeter; 4 per 100 ft. of linear side building perimeter and wing wall	Required to cover 50% of a at least 3 ft. deep area along 50% of linear building and wing wall perimeter
	Building perimeter landscaping must be located no more than 20 ft. from the building unless prevented by loading areas.		
Parking lots: landscape areas at entry throats	1 per 30 ft. of linear landscape area on both sides of entry	1 per 30 ft. of linear landscape area on both sides of entry	1 per 2.5 ft. of linear buffer
Parking lots: landscape islands in rows and at row ends	1 per island if terminating or interrupting one row; 2 per island if terminating or interrupting two rows	Optional	2 per island if terminating one row; 4 per island if terminating or interrupting two rows
Parking lots: landscape islands/buffers that segment lots or separate rows	1 per 30 ft. of linear landscape area	1 per 30 ft. of linear landscape area	1 per 5 ft. of linear landscape area
Connecting internal walkways	1 per 40 ft. of linear walkway	1 per 40 ft. of linear walkway	1 per 5 ft. of linear walkway
	Not applicable for sidewalks, building perimeter walkways, and walkways in landscape islands/buffers that segment lots or separate rows		
Medians	1 per 30 ft. of linear median	1 per 30 ft. of linear median	Optional
Tree lawns, or front yard	1 per 30 ft. of linear tree lawn, if utilities are not under the tree lawn.	Optional, if utilities are not under the tree lawn.	Optional
Other areas (retention and detention basins, open space, etc.)	1 per 500 sq. ft.	1 per 500 sq. ft.	Optional

3.5.3.2-3.5.3.6. Tree and shrub size

Native tall trees must have a caliper of at least 2 in. and 10-12 ft. ht. Native short trees must have a caliper of at least 1.5 in. and 8-10' ht. Planted shrubs must have minimum 1-gallon container or be at least 18 in. tall.

3.5.3.3-3.5.3.7. Tree and shrub placement

Trees and shrubs may be clustered in groups, to present a natural environment and ease maintenance. All trees must be placed on the parcel being developed, unless otherwise permitted. If Development Services staff finds that it is impractical to plant trees and/or shrubs on parcels being developed, those trees and/or shrubs may be planted elsewhere

in the PUD. Minor deviations may be administratively approved by Development Services staff in cases where necessary due to site constraints.

3.5.3.4.3.5.3.8. Groundcover

Ground-cover must be planted on areas on a developed parcel that are not part of an impervious surface, covered with porous paving, occupied by shrubbery or gardens, or under a tree drip line.

3.5.4. Materials, maintenance, and replacement

3.5.4.1. Plant materials

Plant choice must be based on the Central Texas ecological setting and site microclimate conditions.

3.5.4.2. Native tall trees

Native and adapted tall trees that can be planted or used to meet landscaping requirements include the following.

Anaqua	(Ehretia anacua)
Bald Cypress	(Taxodium distichum var. distichum)
Bigtooth Maple	(Acer grandidentatum)
Black Walnut	(Juglans nigra)
Blackjack Oak	(Quercus marilandica)
Bur Oak	(Quercus macrocarpa)
Cedar Elm	(Ulmus crassifolia)
Chinquapin Oak	(Quercus muhlenbergii)
Durand Oak	(Quercus sinuate)
Escarpment Live Oak	(Quercus fusiformis)
Lacebark Elm	(Ulmus parvifolia)
Monterey Oak	(Quercus polymorpha)
Montezuma Cypress	(Taxodium mucronatum)
Pecan	(Carya illinoensis)
Red Maple	(Acer rubrum)
Red Oak	(Quercus lobatae)
Sawtooth Oak	(Quercus acutissima)
Shumard Oak	(Quercus shumardii)
Southern Live Oak	(Quercus virginiana)
Texas Ash (female only)	(Fraxinus texensis)
Texas Red Oak	(Quercus texana)
Western Soapberry	(Sapindus drummondii)
Winged Elm (female only)	(Ulmus alata)
Yellow Buckeye	(Aesculus pavia var. flavescens)

Established deciduous and semi-deciduous (not coniferous or palm) canopy trees at least 30 ft. tall with a trunk of at least 4 in. caliper of other species, that are not on the nuisance tree list.

3.5.4.3. Native short trees

Native and adapted short trees that can be planted or used to meet landscaping requirements include the following.

American Smoke Tree	(Cotinus obovatus)
Anacacho Orchid Tree	(Bauhinia lunarioides)
Big Tooth Maple	(Acer grandidentatum)
Blackhaw Viburnum	(Viburnum prunifolium)
Carolina Buckthorn	(Frangula caroliniana)
Cherry Laurel	(Prunus caroliniana)
Chitalpa	(Chitalpa)
Crape Myrtle	(Lagerstroemia indica)
Desert Willow	(Chilopsis linearis)
Downy Serviceberry	(Amelanchier arborea)
Eve's Necklace	(Styphnolobium affine)
Evergreen Sumac	(Rhus virens)
Goldenball Lead Tree	(Leucaena retusa)
Kidneywood	(Eysenhardtia texana)
Lacey Oak	(Quercus laceyi)
Mexican Buckeye	(Ungnadia speciosa)
Mexican Plum	(Prunus Mexicana)
Mexican Poinciana	(Caesalpinia mexicana)
Mexican Redbud	(Cercis canadensis var. Mexicana)
Mountain Laurel	(Calia secundiflora)
Possumhaw Holly	(Aquifoliaceae Ilex decidua)
Red Buckeye	(Aesculus pavia)
Rough Leaf Dogwood	(Cornaceae Cornus drummondii)
Rusty Blackhaw Viburnum	(Viburnum rufidulum)
Saucer Magnolia	(Magnolia x soulangiana)
Smokeberry	(Cotinus coggygria)
Soapberry	(Sapindus drummondii)
Spicebush	(Lauraceae Lindera benzoin)
Texas Mountain Laurel	(Sophora secundiflora)
Texas Persimmon	(Diospyros texana)
Texas Pistachio	(Pistacia texana)
Texas Redbud	(Cercis canadensis var. texensis)
Western Soapberry	(Sapindus drummondii)
Yaupon Holly	(Ilex vomitoria)

Established deciduous and semi-deciduous trees 10 ft. to 30 ft. tall with a trunk of at least 3 in. caliper of other species, that are not on the nuisance tree list.

3.5.4.4. Native shrubs

Recommended native and adapted shrubs that can be planted or used to meet landscaping requirements include the following.

Abelia	(Abelia)
Agarita	(Mahonia trifoliolata)
Agave	(Agavaceae)
American Beautyberry	(Callicarpa Americana)
Bamboo Muhly	(Muhlenbergia dumosa)
Barbados Cherry	(Malpighia glabra)
Beautybush	(Kolkwitzia amabilis)
Big Muhly	(Muhlenbergia lindheimeri)
Black Dalea	(Dalea frutescens)
Burford Holly	(Ilex cornuta 'Burfordii')
Bush Germander	(Teucrium fruticans)

Butterfly Bush	(Buddleja davidii, Buddleja marrubiifolia)
Caellia	(Camellia)
Cenizo/Texas Sage	(Eucophyllum frutescens)
Coralberry	(Symhoricarpos orbiculatus)
Cotoneaster	(Cotoneaste)
Deer Muhly	(Muhlenbergia rigens)
Dwarf Chinese Holly	(Ilex cornuta Rotunda)
Elaeagnus	(Elaeagnus pungens)
Flame Acanthus	(Anisacanthus quadrifidus)
Flowering Senna	(Senna corymbosa)
Forsythia	(Forsythia x intermedia)
Fragrant Mimosa	(Mimosa borealis)
Fragrant Sumac	(Rhus aromatica)
Germander	(Teucrium fruticans)
Gulf Muhly	(Muhlenbergia capillaris)
Inland Sea Oats	(Chasmanthium latifolium)
Japanese Barberry	(Berberis thunbergii)
Mexican Feather Grass	(Nassella tenuissima)
Mock Orange	(Philadelphus coronarius)
Mountain Sage	(Salvia regal)
Nandina	(Nandina domestica compacta)
Primrose Jasmine	(Jasminum mesnyi)
Rose of Sharon	(Hibiscus syriacus)
Sage	(Salvia)
Sideoats Grama	(Bouteloua curtipendula)
Skull Cap	(Leguminosae Scutellaris)
Sweet Mockorange	(Philadelphus coronarius)
Texas Dwarf Palmetto	(Sabal minor)
Texas Lantana	(Lantana horrida)
Texas Sage	(Leucophyllum frutescens)
Texas Sotol	(Dasylirion texanum)
Turk's Cap	(Malvaviscus arboreus)
Upright Rosemary	(Rosmarinus officinalis)
Viburnum (all)	(Viburnum)
Witch Hazel	(Hamamelidaceae Hamamelis)
virginiana)	
Wooly Butterfly Bush	(Buddleia marrubiifolia)
Yellow Bells	(Tecoma stans)
Yucca	(Yucca)

3.5.4.5. Nuisance plants

Nuisance plants include the following. Nuisance plants ~~cannot~~may not be planted or used to meet the City's landscaping requirements, and are not protected by tree preservation, replacement, protection and removal standards.

Trees:

American Sweetgum	(Liquidambar styraciflua)
Arizona Ash	(Fraxinus velutin)
Bois d'arc	(Maclura pomifera)
Boxelder Maple	(Acer negundo)
Bradford Pear	(Pyrus calleryana bradfordii)

Brazilian Pepper
 Chinaberry
 Chinese Parasol Tree
 Chinese Tallow
 Elephant Ear
 Eucalyptus (all)
 Euonymus (all)
 Hackberry
 Honey Locust
 Honeysuckle (all)

(Schinus terebinthifolius)
 (Melia azedarach)
 (Firmiana simplex)
 (Sapium sebiferum)
 (Alocasia spp., Colocasia spp.)
 (Eucalyptus)
 (Euonymus)
 (Celtis occidentalis)
 (Gleditsia triacanthos)
 (Lonicera)

Japanese Zelkova
 Juniper (males)
 Leland Cypress
 Lombardy Poplar
 Mesquite
 Mimosa, Silk Tree
 Monkey Puzzle
 Mulberry (all)
 Olive
 Paulownia
 Red-Tipped Photinia
 Silver Maple
 Tree of Heaven
 Vitex

(Zelkova serrata)
 (Juniperus)
 (Cupressocyparis leylandii)
 (Populus nigra)
 (Prosopis glandulosa)
 (Albizia julibrissin)
 (Araucaria araucana)
 (Morus)
 (Olea, Elenganus)
 (Paulownia tomentosa)
 (Photinia x fraseri)
 (Acer saccharinum)
 (Ailanthus altissima)
 (Vitex agnus-castus)

Shrubs:

Chinese Photinia
 Common Privet
 Japanese Ligustrum
 Nandina (berrying varieties)
 Photinia (all)
 Pyracantha, Firethorn
 Russian Olive
 Wax Leaf Ligustrum

(Photinia spp.)
 (Ligustrum sinense, L. vulgare)
 (Ligustrum lucidum)
 (Nandina domestica)
 (Photinia)
 (Pyracantha spp.)
 (Elaeagnus angustifolia)
 (Ligustrum japonicum)

Vines:

Cat's Claw Vine
 English Ivy
 Japanese Honeysuckle
 Kudzu
 Poison Ivy
 Vinca

(Macfadyena unguis-cati)
 (Hedera helix)
 (Lonicera japonica)
 (Pueraria lobata)
 (Toxicodendron radicans)
 (Vinca major, V. Minor)

Other:

Eurasian Watermilfoil
 Giant Cane
 Hydrillia
 Johnson Grass

(Myriophyllum spicatum)
 (Arundo donax)
 (Hydrilla verticillata)
 (Sorghum halepense)

Running Bamboo
Water Hyacinth

(Phyllostachys aurea)
(Eichhornia crassipes)

All plants listed in Texas Administrative Code Section 19.300 (Noxious and Invasive Plant List), and listed as Invasive and Noxious Weeds by the USDA Natural Resources Conservation Service, are also considered nuisance plants. Other plants may be prohibited at the discretion of Development Services staff on a case-by-case basis.

3.5.4.6. Low water use plants

Low water use trees, shrubs and groundcovers shall be used to the greatest extent practical.

3.5.4.7. Planting beds

Shrub and ground cover planting beds must be separated from turf grass with edging, and must have open surface areas covered with mulch or gravel.

3.5.4.8. Topsoil

Topsoil removed during construction activity must be conserved for later use on areas requiring re-vegetation and landscaping, to the maximum extent practicable.

3.5.4.9. Plant quality

Landscape plants must be free of defects, and of normal health, height, leaf density and spread appropriate to the species, as defined by American Association of Nurserymen standards.

3.5.4.10. Installation

Landscaping must be installed using sound horticultural practices, in a way that encourages quick establishment and healthy growth. Landscaping in each phase must either be installed or the installation must be secured with a letter of credit, escrow or performance bond for 150% of landscaping value before a certificate of occupancy for any building in a phase is issued.

3.5.4.11. Maintenance

Trees and vegetation, irrigation systems, fences, walls and other landscape elements are considered elements of the project in the same way as parking, building materials and other site details. The applicant, landowner or successors must be jointly and severally responsible for regular maintenance of all landscaping elements in good condition. Landscaping must be maintained free from disease, pests, weeds and litter.

3.5.4.12. Replacement

Required Landscape elements that are removed or dead must be promptly replaced.

3.5.5. Irrigation

3.5.5.1. Automatic irrigation required

All plants on newly developed parcels, except those developed for single household and two household dwellings, must be irrigated with underground or drip irrigation, with these exceptions:

- Plants that do not require irrigation for establishment.
- Mature xeriscape areas, with established plants that do not require irrigation for survival.
- Trees established for two years or more.
- Parkland or land designated for parkland in this PUD

3.5.5.2. Irrigation plan required

An irrigation plan must be included in the landscape plan for site plan review, if applicable.

3.5.6. Tree preservation and removal

3.5.6.1. Tree preservation, removal and replacement: undeveloped and redeveloped sites

3.5.6.1.1. Nuisance trees

Nuisance trees, as defined in Section 3.6.4.5, may be removed from a developed or undeveloped lot anytime. Replacement of nuisance trees is not required.

3.5.6.1.2. Diseased, dangerous and dead trees

Diseased, dangerous and dead trees of all species may be removed from an undeveloped lot anytime. Replacement of removed diseased, dangerous and dead trees is not required.

3.5.6.1.3. Healthy, protected trees (native, tall, and small trees)

Protected trees (trees with a DBH of at least 18 in. which are not nuisance trees) that are healthy and located on a vacant parcel or redevelopment site may only be removed when the parcel is developed or redeveloped. A tree inventory and survey, showing the location, size, species and condition of existing protected trees on a lot, must be submitted and approved with a preliminary subdivision, site plan or building permit for a development, whichever comes first.

Site features must be designed to minimize disturbance to protected trees. Tree wells or cut areas may be used to preserve the original grade around ~~the~~ an existing tree to the extent practical.

At least 50% of the total number of healthy protected trees must remain on the site or be relocated on a site within the PUD. Gross DBH loss of protected trees to be removed must be replaced at a 1:1 ratio. Replacement trees must be planted either on the development site or elsewhere in the PUD, in areas approved by Development Services staff. Replacement trees must have a DBH of at least 2 in.

A protected tree may be designated for removal if it meets one of the following criteria.

- It is in an existing or proposed easement or stormwater management system and cannot practically be saved.
- It is ~~placed-located~~ where it will create a potential safety or health hazard, or a nuisance to existing or proposed structures or vehicle or pedestrian routes.
- It is ~~placed-located~~ where it interferes with the installation, delivery, or maintenance of existing utility services to the site.

3.5.6.2. Tree preservation, removal, and replacement: developed lots

3.5.6.2.1. Nuisance trees

Nuisance trees may be removed from a developed lot anytime.
Replacement of nuisance trees is not required.

3.5.6.2.2. Diseased, dangerous, and dead trees

Diseased, dangerous and dead trees of all non-nuisance species may be removed from a developed lot anytime. -

3.5.6.2.3. Healthy, protected trees (native, tall, and small trees)

Healthy native tall and small trees with a DBH of 2.5 in. or more that cannot be considered diseased, dangerous or dead may be removed from a lot if the gross DBH loss is replaced at a 1:1 ratio (1 in. replaced for every 1 in. lost of caliper inches DBH). At least 50% of the total number of replacement caliper inches must be planted on the lot, to the extent practical, or may be planted elsewhere within the PUD as approved by Development Services staff.
Required mitigation trees planted elsewhere in the PUD shall be noted on the site plan, as well as the other site plan, and may not be counted towards future mitigation tree requirements on the other site plan.

3.5.6.3. Tree removal and replacement: signs

~~Signs are considered nonconforming uses that should eventually be removed; trees are living things that are far more difficult to replace.~~ Healthy trees of all species and sizes, except species defined as nuisance trees, ~~cannot may not~~ be removed with the intent of increasing the visibility of an existing sign, unless with administrative approval of Development Services staff.

3.5.6.4. Tree replacement conditions

3.5.6.4.1. Replacement plant types

Replacement trees ~~must may~~ be any combination of native tall and short trees that keeps or brings the site in conformance with minimum required landscaping standards.

3.5.6.4.2. Replacement trees

Replacement trees must be placed on site, or in areas approved by Development Services staff within the PUD.

3.5.6.4.3. Landscape requirements

Existing and replacement trees may be used to meet landscape requirements. After tree removal and replacement, the number and placement of trees on a parcel must continue to conform to landscaping requirements.

3.5.6.4.4. Maintenance

Replacement trees must be maintained in good condition for one year after planting. In that year, the property owner must guarantee survival.

3.5.6.4.5. Unauthorized removal

The gross DBH loss of trees that are removed in violation of this section by the property owner, developer or any party acting on their behalf must be replaced at a 2:1 ratio (2 in. replaced for every 1 in. lost of caliper inches) with native tall trees. For illegal vegetation clearance to increase the visibility of signs per Section 3.5.6.3, replacement native tall trees must be planted in the cleared area, with 1 in. DBH for every 10 sq. ft. cleared.

3.5.6.5. Tree protection during construction

3.5.6.5.1. Tree protection zone

During construction, perimeter fencing must be erected around protected trees, at least ~~6 ft. from the trunk or at~~ one-half of the drip line to the greatest extent practical, whichever is more, to establish a tree protection zone, unless otherwise approved by Development Services staff. Large parcels with protected trees ~~and that are~~ separated from construction or land clearing areas, street rights-of-way and utility easements may be “ribboned off,” by placing post stakes at least 50 ft. apart and tying ribbon or rope from stake to stake along the perimeter. Storage or movement of equipment, material, debris or fill in the tree protection zone is prohibited.

3.5.6.5.2. Storage near trees

During construction, equipment cleaning or storage or disposal or waste material such as paints, oils, solvents, asphalt, concrete, motor oil or other material harmful to trees cannot be placed in the drip line of protected trees or group of trees.

3.5.6.5.3. Attachment to trees

Damaging attachments, wires, signs or permits cannot be fastened to protected trees.

3.5.6.5.4. Trenching

Trenches or footings must be ~~at least 8 ft. from trunk bases~~outside the inner one-half of the dripline, to the greatest extent practical. ~~Under~~ the drip line of protected trees, no cut or fill may ~~be at least exceed~~ 4 in. ~~deep~~ unless a qualified arborist or forester evaluates and approves the disturbance. When trenching for utilities, tunneling under ~~large diameter~~ roots greater than 8 in. is diameter is required to prevent root damage. The developer is responsible for coordination with utility companies when trenching near protected trees, to the extent practical.

3.5.6.5.5. Root preservation

During grading, roots at least 1 in. in must be cut off cleanly with a handsaw about 12 in. behind the line of excavation. Exposed roots must be protected with moist backfill soil.

3.5.6.5.6. Grades

Raising the grade more than 6 in. around tree trunks is prohibited. This can causes trunk rotting, and serious damage or death to the tree. Finished grades must slope away from trunks to avoid water concentrated at tree bases.

3.5.7. Required site furniture

A parcel with a non-single family residential and a non-industrial use must have the following furniture installed, provided the condition(s) described in this Section exist on the site. Furniture must be functional. All amenities located on a site shall be owned, operated and maintained by the private property owner.

- ~~Sidewalks along a street: (choose 1 of the following) 1 bench, 1 trash can, 1 bike rack, or 1 masonry planter per 100 ft. linear sidewalk.~~
- Internal walkways: (choose 1 of the following) 1 bench, 1 trash can, 1 bike rack, or 1 masonry planter per 100-150 ft. linear walkway.
- Plazas: 1 bench per 50 sq. ft. and 1 trash can per 100 sq. ft. plaza area.
- Colonnades, loggias: 1 bench and 1 trash can per 50 ft.
- Bus stops: 2 benches and 1 trash can per stop (applicable to city adopted transit streets only).

3.6. Common Open Space

3.6.1. Required common open space

The PUD shall provide for a collection of privately owned, common open space lots set within a street system with access to the Brushy Creek park land. Common open space will be designed to (i) serve the recreational needs of the residents (ii) provide places and opportunities for

interaction within the community and (iii) provide opportunities for interaction with the natural environment.

A minimum of 5 acres of land located within the Carmel Creek 100-year floodplain shall be established and maintained as common open space. An additional 15 acres of common open space shall be established within the PUD at locations within or adjacent to residential areas.

All private open space and structures thereon shall be conveyed to and permanently owned and maintained by a Property Owner's Association (POA) or other responsible entity approved by the Director. The POA may adopt rules and regulations regarding access, permitted uses, security (policing) and maintenance responsibilities for the open spaces.

Each lot designated as common open space shall include at least six thousand (6,000) square feet. The area of the common open space lot shall be measured and calculated to the property line of the affected lot.

Parking for common open space uses within the PUD may be provided with adjacent on-street parking. Off-street parking may also be provided within a common open space lot, at the option of the Developer. On-street parking will be credited toward the required parking spaces of the affected lot.

Except for undisturbed and reestablished native landscape areas, common open space shall be maintained by one of the following watering methods: an underground irrigation system; a drip irrigation system; or a hose attachment within two hundred (200) feet of all landscaping. Watering may be suspended in times of drought.

Common open space may include detention ponds that are primarily earthen, planted with plants, and functionally serve as an aesthetic and/or recreational amenity for residents. Such elements may include trails on the pond lot, water aeration fountains, shade trees and other plantings and seating. Such detention or wet ponds do not require screening.

3.6.2. Access

Common open space must be reasonably accessible to all residents of the PUD. Convenient pedestrian and vehicular access to open space must be provided. Green links and trails must be provided to common open space not readily accessible to a public street.

3.6.3. Common open space design

Common open space must be configured as a meaningful and functional space. Common open space land must be compact and contiguous to the maximum extent practicable, unless the land is used as a greenway or other linear park. Small, narrow, or unassigned strips ~~in~~ behind or between buildings is unacceptable. Designated common open space may be in a natural, undisturbed state, landscaped for more formal, open play areas, or developed for active and/or passive recreation.

Common open space lots shall include park improvements, such as trails, lighting, ~~seating benches~~, landscape planting, irrigation and accessory buildings and shade structures that are appropriate for the intended use and site conditions of that site. Access for police, fire or ambulance emergency providers shall be provided to private and common open spaces.

3.6.4. Areas not considered as common open space

The following do not meet the requirement for common open space:

- Private lots or yards not available for common use
- Public right-of-way or private streets and drives.
- Land covered by structures except ancillary structures associated with use of open space such as gazebos, picnic shelters or meeting rooms
- Detention/retention facilities, including drainage swales, unless designed for use as accessible and useable year-round community amenities by the residents of the development (e.g., picnic areas, passive recreation areas, playgrounds, ponds for fishing and/or boating, walking trails, etc.).

Good Open Space Examples	Open Space Examples to Avoid
 Functional common open space, including shade trees, jogging trail, sports court, and irrigated grass turf fronting on a public street	 Avoid - expansive, unmaintained area with scattered play structures, lack of shade, trees and walking paths and perimeter fence separating residents from open space
 Wide concrete trail graded for bike and pedestrian use within linear open space area accessible from street, undisturbed wooded and natural area and perimeter stone wall	 Avoid - left over strip of land between street ROW and perimeter fence, lack of tree cover and perimeter fence separating residents from open space
 Concrete trail, native tall trees, natural wooded area, play area, seating, planted trees, and neighborhood pool and pool house	 Avoid - expansive area with limited improvements, lack of shade trees, poorly located bike parking

3.7. Fences and Walls

3.7.1. General standards

3.7.1.1. Placement

3.7.1.1.1. Public right-of-way

Fences and walls cannot be placed in the public right-of-way.

3.7.1.1.2. Tree preservation

Fences must be placed where they will not threaten significant vegetation.

3.7.1.2. Materials

3.7.1.2.1. Finished side out

Fences with an unfinished or rough side and a finished or smooth side must be placed so the finished or smooth side faces out.

3.7.1.2.2. Prohibited materials

Materials not originally intended for use in constructing a fence are prohibited as fencing and screening materials. Examples of prohibited materials include plywood, particleboard, corrugated metal sheets (not incorporated into a frame), railroad ties, tires, door panels, and other makeshift materials.

3.7.1.2.3. Barbed wire and electric fences

Electrically charged, barbed wire and razor wire fences are prohibited. Exceptions are fences used to enclose livestock on farms, serve a public or quasi-public institution for public safety or security purposes, and temporarily securing construction vehicles and materials on a construction site.

3.7.1.2.4. Columns

Columns, pilasters, piers, finials and posts may be no more than 6 in. taller than the fence it joins.

3.7.1.3. Maintenance

3.7.1.3.1. General maintenance

Fences and adjacent landscaping must be maintained by their owners in good structural condition and repair. This includes general maintenance, painting and staining, and the replacement of broken, warped or missing portions with materials of equal or better quality that are consistent in design. Fences, walls and hedges must be vertically aligned and maintained upright; and in good structural or living condition. Angled or non-vertical fence support posts are prohibited.

3.7.1.3.2. Development perimeter walls

Individual property owners cannot alter development perimeter walls that are owned or controlled by a property owner's association without prior permission of the property owner's association.

3.7.1.4. Landscaping

Landscaping at a fence or wall may be required per landscape requirements in Section 3.1875.

3.7.2. Permitted fences, walls, and hedges

The following fence, wall and hedge types are *permitted* and optional. Minor deviations to the fence standards set forth in this Section may be administratively approved by Development Services staff.

Permitted fence Area / purpose	Height	Linear Fence transparency	Acceptable types/materials
Agricultural use	no more than 5 ft.	at least 50% along at least 50% of height, excluding columns; at least 75% along entire height in clear vision area	Wire (smooth, high-tensile, woven, mesh, hog wire, cable rail) Chain link Pipe Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, similar materials) Shrubby hedge
Residential front yard	no more than 3 ft. (36 in.)	At least 75% along entire height in clear vision area	Wood frame wire Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, similar materials) Shrubby hedge
Residential side and rear yard	no more than 6.0 ft. (72") except that 8.0 ft. permitted on rear and side fences: <u>1) to stair step in height to finish grade at the base of the fence or slope changes and 2)</u> where adjacent to a commercial or other non-single family use.	at least 30 25% along <u>at least 50% of height</u> , excluding columns, when next to trail or park; otherwise, may be solid	Wood frame wire Chain link (plastic coated; no slats. Ornamental (metal, plastic) Picket (wood, plastic) Ranch (wood, plastic) Privacy (wood, plastic) Masonry (stone, brick, similar materials) Shrubby hedge
Tennis / basketball court	no more than 12-15 ft.	at least 50%	Ornamental (metal, plastic) Chain link (plastic coated only)
Cannot substitute for other fence types when forming a boundary fence.			
Perimeter security fencing (Industrial and recreational uses only)	no more than 8 ft.	at least 75%, excluding columns in front yard; may be solid behind the building line	Ornamental (metal) Masonry (stone, brick, split face CMU, similar materials)
Masonry must be used adjacent to outdoor storage areas <u>fencing requirements apply to equipment storage yards and similar areas visible from a street.</u>			

Permitted fence Area / purpose	Height	Linear Fence transparency	Acceptable types/materials
Temporary perimeter security fencing (construction sites only)	no more than 8 ft.	Any	Wire (smooth, high-tensile, woven, mesh, hog wire, cable rail) Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Privacy (wood, plastic) Chain link
The fence must be removed when construction ends.			
Park, open space	no more than 4 ft. 5 ft. for dog park	at least 50 25%, excluding columns	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Masonry (stone, brick, decorative CMU, similar materials) Shrubby hedge Chain link (plastic coated, for dog parks and athletic fields only)
Outdoor storage area fencing requirements apply to equipment storage yards and similar areas <u>visible from a street</u> .			
Parking area: non-residential and 3+ household residential development	no more than 3.5 ft. (42 in.)	at least 75% along entire height in clear vision area	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Ranch (wood, plastic) Bollard and chain Masonry (stone, brick, decorative CMU, similar materials) Shrubby hedge
Retention and detention pond or basin	no more than 6 ft.	at least 50%, excluding columns	Ornamental (metal)
Development perimeter walls along SH 130, FM 685 and UP Rail Road	6 ft. to 12 ft.	may be solid	Masonry (stone, brick, split face CMU, similar materials) <u>or</u> Shrubby hedge

3.7.3. Required fences, walls, and hedges

The following fence, wall and hedge types are required. Minor deviations to the fence standards set forth in this section may be administratively approved by Development Services staff.

Required fence Area / purpose	Height	Linear Fence transparency	Acceptable types/materials
Swimming pool	4 ft. - 6 ft.	at least 50%	Wood frame wire Ornamental (metal, plastic) Picket, lattice (wood, plastic) Chain link (but not at a public pool)
	Openings or gaps in the fence must be no more than 4 in. If the perimeter fencing on the lot meets these standards, an added fence surrounding the swimming pool is not required. Construction of fence must comply with ICC Building Code requirements, as adopted.		

Required fence Area / purpose	Height	Linear Fence transparency	Acceptable types/materials
Outdoor storage area	6 ft. - 8 ft.; may be taller if it screens tall objects	no more than 25%; must be solid when next to or visible from residential district or area use	Privacy (plastic) Masonry (stone, brick, decorative CMU, similar materials)
	Should include the same, <u>similar or compatible</u> materials, finishes and detailing as the host structure. Masonry (stone, brick, decorative CMU, similar materials) is required when the storage area is next to or visible from a residential district or area use .		
Vehicle inventory area next to residential districts	6 ft. - 8 ft.	Must be solid	Masonry (stone, brick, decorative CMU, similar materials)
	Should include the same materials, finishes and detailing as the host structure.		
Residential development RV storage area	8 ft. - 10 ft.	Must be solid; gate may have transparency	Masonry (stone, brick, decorative CMU, similar materials)
	Must include the same materials, finishes and architectural detailing as the development perimeter wall; otherwise, must conform to development perimeter wall design standards.		
Dumpster and utility area	7 ft. - 8 ft.	Must be solid	Masonry (stone, brick, decorative CMU, similar materials)
	Must include the same, <u>similar or compatible</u> materials, finishes and detailing as the host structure. Gates must be visually and structurally solid; must be metal. Dumpsters and compactors cannot be unscreened, unless they are used for a construction or demolition project on the site.		
Loading area wing wall	Up to the building parapet; height determined in site plan review	Must be solid	Masonry (stone, brick, decorative CMU, similar <u>or compatible</u> materials)
	Must include the same, <u>similar or compatible</u> materials, finishes and detailing as the host structure.		
Utility substation or facility	6 ft. - 12 ft., or sufficient to conceal the substation <u>or height required by the utility provider</u> .	Must be solid	Masonry (stone, brick, decorative CMU, similar <u>or compatible</u> materials)
Development perimeter wall	6 ft. min. 8 ft. max. 4ft. max. <u>(or 6 ft. ht. max with 10% fence transparency)</u> when adjacent to open space	Any	Ornamental (metal) Masonry (stone, brick, decorative CMU, similar <u>or compatible</u> materials) Ornamental metal <u>or combination metal and wood</u> must be used in areas adjacent to common open space to preserve public <u>promote</u> views. Precast concrete walls (h-post and single panel) may only be used to replace existing stockade fence-based perimeter walls.
	Required for residential subdivisions with more than one double frontage or corner lot, where the adjacent street at the rear or side of the lots is a collector , minor arterial or major arterial street. Walls must include masonry columns with a cross-section of at least 18 in. x 18 in. at no more than 50 ft. intervals, and turning and end points <u>of the wall</u> .		

Fencing may also be required under buffer yard requirements in Section 2.3.5.

3.7.4. Gated communities

Gated communities are prohibited.

3.8. Outdoor Lighting

3.8.1. General Standards

3.8.1.1. Display levels and light pollution

Lighting must be designed to minimize light pollution and spillage on adjacent properties.

Illumination at the property line must be no more than 5 lux for non-cut-off lights, and no more than 15 lux for cut-off lights. Streetlights are exempted.

Illumination spillover onto adjacent residential zoned properties must be no more than 5 lux. Streetlights are excepted

Streetlights in public right-of-way shall be solar-powered wherever possible.

3.8.1.2. Shielding

Outdoor lighting must be shielded, except ~~that~~ at athletic fields. Shielding is achieved when light rays are not emitted above the horizontal plane of a fixture. The cone of illumination must be at least 30° downward from the horizontal plane.

3.8.1.3. Illumination of background and foreground spaces

Background spaces such as parking lots must be illuminated as unobtrusively as possible to meet the functional needs of circulation, security and safety.

Foreground spaces, such as building entrances and plaza seating areas, must use proximate lighting that defines the space without glare to the extent practical.

3.8.1.4. Confusion with warning devices

Lighting devices that may be confused with warning, emergency or traffic signals are prohibited.

~~3.8.1.5. —Lighting as advertising~~

~~Lighting cannot be used for advertising or attracting attention.~~

3.8.2. Permitted on-site lighting sources

The following light sources are permitted:

- Incandescent. Fluorescent. Warm white and natural lamps must be used to reduce detrimental effects.
- Metal halide. Light must be filtered with a glass, acrylic or translucent enclosure of the light source.
- High-pressure sodium. Must be color corrected.
- Light-emitting diode. Warm white and natural lamps must be used to reduce detrimental effects.

- Glass tubes filled with neon, argon, or krypton. Limited decorative lighting only.

Types of light sources must be ~~compatible consistent~~ throughout a commercial center lot, to the extent practical or master-planned development.

Street light source shall be consistent throughout each development within the PUD, to the extent practical and as permitted by the utility provider.

3.8.3. Prohibited lighting

The following light sources are prohibited:

- Laser source light.
- Strobe light.
- Flashing, blinking, or variably intense light, intentional or resulting from a defect.
- Search lights

Exceptions are:

- Traditional holiday lighting not used to draw attention to a sign.
- Flashing or blinking lights required by law.
- Beacon or searchlight, including temporary display. Beacons are permitted on structures where the Federal Aviation Administration requires them.

3.8.4. Light poles

3.8.4.1. Height

Maximum light pole heights ~~is are as follows:~~ Streetlight light pole height shall be coordinated with the utility provider.

Parking areas: 20 ft.

Pedestrian areas and drive aisles: 16 ft.

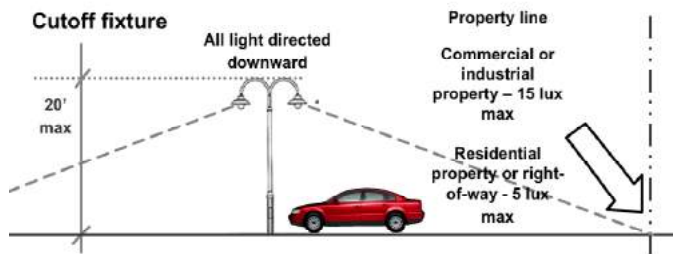
Sports fields: 50 ft.

Temporary lighting at construction sites: 50 ft.

Alley: 12 ft.

Street-local and collector: 16 ft.

Street-arterial: 24 ft.



3.8.4.2. Design

Light poles should have a base, middle and top.

Light pole design must be consistent or compatible with the style and, character and ~~period~~ of ~~architecture~~ the building design on the site.

Cobra head light poles are prohibited on pedestrian-oriented commercial streets, unless required by the utility provider. Decorative cobra head street light poles may be used on arterial streets, and streets in vehicle-oriented commercial and industrial areas. Where used, cobra head street light poles must incorporate a supplemental non-cobra style light mounted at a 12 ft. - 14 ft. height to illuminate the sidewalk, to the extent practical and as permitted by the utility provider.

Bare metal poles are prohibited.

Elevated form bases greater than 4 in. above grade are prohibited.

Light poles must be placed in landscape areas wherever ~~possible~~ practical. Light poles must not obstruct sidewalks or bicycle paths.

3.8.5. Attached light features

3.8.5.1. Sconces

Sconces or gooseneck lighting fixtures may be used to illuminate areas near building walls. Sconces must direct light downward against the building wall and immediately adjacent areas.

Light fixture design must be ~~consistent~~ compatible with the style and, character and ~~period~~ of the host structure.



An example of contemporary gooseneck lighting.

3.8.5.2. Wall packs

Wall packs may only be used at the rear of industrial buildings to light ~~unsafe-security~~ areas. They cannot be used to draw attention to the building or provide general building or site lighting.

Wall packs must be fully shielded to direct the light downward.

Source output per wall pack must be no more than 1500 lumens.

3.8.5.3. Awnings

Awnings and canopy fascia cannot be internally illuminated.

3.8.6. Gas station canopies

3.8.6.1. Design

Lighting fixtures, including lenses, must be completely recessed into to the canopy ceiling if it is flat or no lower than 1 ft. above the lowest point of the canopy roof or fascia if it is sloped.

Source output per fixture must be no more than 3750 lumens.

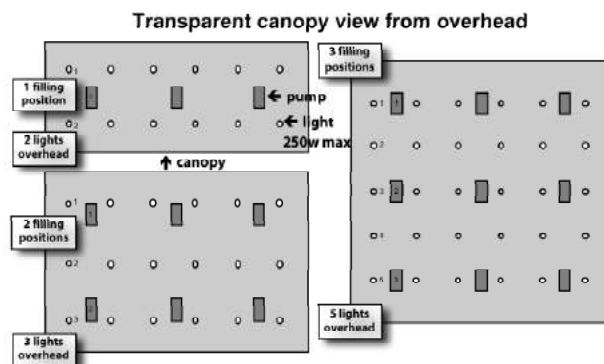
Canopy fascia cannot be illuminated, except logo signs permitted by sign requirements in Section 3.229.

3.8.6.2. Number

Canopies one pump deep may have up to two lighting fixtures per filling space.

Canopies two pumps deep may have up to three lighting fixtures per two filling spaces.

Canopies three pumps deep may have up to five lighting fixtures per three filling spaces.



3.8.7. Flood lights

Floodlights may be used only to light sports fields, outdoor recreation areas and construction sites.

Floodlights must be fully shielded or provided with sharp cut-off ability, to minimize uplight, spill-light and glare.

3.8.8. Accent lighting

Bottom-mounted lights used to illuminate landscaping and water features, or provide visual accents, are permitted.

Pole mounted accent lighting greater than 1 ft. tall is prohibited.

Roof-mounted and rooftop accent lighting is prohibited.

Banding of building plane changes (cornices, building corners, column edges, etc.) with neon or other illumination is prohibited.

3.8.9. Signs

Signs may be illuminated internally.

~~Bottom-Ground~~ mounted lights may illuminate a monument sign ~~no more than 8 ft. tall~~. Lighting should not spill over the edge of the sign wall face and must be shielded from oncoming traffic.

Exposed bulbs that outline a sign are prohibited.

Blinking, chasing, or other changes in illumination intensity, color, or direction, intentional or not, are prohibited. This includes electronic message centers.

Open faced neon channel letters are prohibited.

3.8.10. Alternative conformance

Development Services staff may ~~consider~~ administratively approve an alternative lighting plan. Alternative lighting plans must clearly identify and discuss modifications, proposed alternatives, and how the alternative plan will meet the intent of this section better than a plan conforming to this section. Development Services staff will consider whether the proposed alternative lighting design protects natural areas from light intrusion, enhances neighborhood continuity and connectivity, and shows innovative and creative design.

3.9. Signs

3.9.1. Permitted signs

3.9.1.1. ~~Agricultural uses~~ Undeveloped parcels

The following signs are permitted on lots with agricultural uses, and vacant or undeveloped parcels ~~not subdivided for residential use~~:

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent	Attached (wall) or freestanding (monument, pole), at farm stands, or retail operations selling products produced on site	1	32 sq. ft.	Freestanding: 6 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
	Freestanding (monument, pole), at farms, ranches, or similar operations	1 per driveway entrance	32 sq. ft.	6 ft.; 10 ft. to bottom if arched over driveway entrance	5 ft. from property lines
	A-frame	1; display only during business hours	12 sq. ft.	4 ft.	As close to the building entrance as possible
Temporary: real estate property with construction	Freestanding (pole) or attached (wall)	1 per 1,000 ft. of street frontage	3264 sq. ft. per sign	Freestanding: 610 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary: property for sale or rent	Freestanding (pole) or attached (wall)	1 per 1,000 ft. of street frontage	32 sq. ft. 64 sq. ft. per sign	Freestanding: 610 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
Temporary displays	Allowed only for agricultural usesAs permitted in Section 3.9				

3.9.1.2. Residential uses

The following signs are permitted on lots with residential uses:

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent: PUD development identification	Freestanding (pole, monument or integrated into entry feature)	2 per entrance into the PUD and 1 along each PUD property frontage development	32-128 sq. ft. per sign	6-12 ft.; may be taller 40 ft. ht if integrated into entry feature, sculpture, (monument wall, fountain, etc.)	5 ft. from property lines n/a
Permanent: development	Freestanding (pole, monument or attached (wall))	1 per each entrance into the development	32 sq. ft.	6 ft.	n/a
Permanent: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft.	6 ft.	n/a
Temporary: property with construction	Freestanding (pole) or attached (wall)	1 per street frontage	4 sq. ft. per sign	Freestanding: 6 ft. Attached – below roofline	Freestanding: 5 ft. from property lines
Temporary: property for sale or rent	Freestanding (pole) or attached (wall)	1 per street frontage	4 sq. ft. per sign	Freestanding: 6 ft. attached: below roofline	Freestanding: 5 ft. from property lines
Temporary: property with model home	Freestanding (pole)	1 per house	4-16 sq. ft. per sign	4 ft.	5 ft. from property lines
Temporary: new residential development	Freestanding (pole) or attached (wall)	1 per each entrance into the development	32 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline	Freestanding: 5 ft. from property lines
	Freestanding (flag)	1 per 50 linear feet of project frontage; up to 6 for the development	15 sq. ft. per flag	20 ft.	5 ft. from property lines
	Freestanding (pole)	1 per 50 linear feet of project frontage; up to 6 for the development	12 sq. ft. per sign	4 ft.	5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft. per sign	6 ft.	n/a
Temporary displays	Only for multiple unit household dwelling developments, subject to Section 3. 22-49				

3.9.1.3. Institutional and civic uses

The following signs are permitted on lots with institutional and civic uses.

Type		Number	Maximum sign face area	Maximum height	Minimum setback
Permanent	Freestanding (pole, monument)	1	32 sq. ft.	6 ft.	5 ft. from property lines
	Attached (awning, canopy, projecting, wall, window)	2 per wall	Building total = 0.5 sq. ft. per façade frontage ft.	Below roofline	n/a
Temporary: property with construction	Attached (wall) or freestanding (pole)	1 per street frontage	12 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary: property for sale or rent	Attached (wall) or freestanding (pole)	1 per street frontage	12 sq. ft. per sign	Freestanding: 6 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary: Wayfinding	Freestanding (pole, monument or attached wall)	50 ft. min. separation	32 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary displays	Subject to Section 3.22.49				

3.9.1.4. Commercial, retail and, industrial, ~~and recreational~~ uses.

The following signs are permitted on lots with commercial, retail and, industrial ~~and recreational~~ uses.

Type		Number	Maximum sign face area	Maximum height	Minimum setback
<u>Permanent: PUD identification</u>	<u>Freestanding (monument, pole or integrated into project entry feature)</u>	<u>2 per entrance into the PUD and 1 along each PUD property frontage</u>	<u>128 sq. ft. per sign</u>	<u>12 ft.; 40 ft. if integrated into entry feature (wall, architectural or sculptural feature, fountain, etc.)</u>	<u>n/a</u>
Permanent	Freestanding (monument): single use/building sites and outparcels	1, or 2 (1 per street frontage) if on corner lot with <u>≥1,000 ft. of linear frontage</u>	64 sq. ft. per sign	8 ft.	5 ft. from property lines. n/a 100 ft. from other freestanding signs on the site.
	Freestanding (monument): multi-tenant building/ retail <u>commercial or industrial</u> center <100,000 sq. ft. GFA	1 per street frontage <u>and 1 per 500 ft. of property frontage</u>	96 sq. ft. per sign	12 ft.	5 ft. from property lines. n/a 100 ft. from other freestanding signs on the site.
	Freestanding (monument): multi-tenant building/ retail <u>commercial or industrial</u> center ≥100,000 sq. ft. GFA	1 per street frontage or <u>and 1</u> per 1000 ft. of linear frontage	128 sq. ft. per sign	18 ft.	5 ft. from property lines. n/a 100 ft. from other freestanding signs on the site.
	Attached (awning, canopy, projecting, wall and window): single use/building sites	Any, up to maximum permitted area for the wall	Front/façade: 1.0 sq. ft. per linear wall frontage ft. Side and rear walls: 0.50 sq. ft. per linear wall frontage ft. 32 sq. ft. minimum signage allocation	Below roofline	n/a
	Attached (awning, canopy, projecting, wall and window): multi-tenant building/shopping center sites	Any, up to maximum permitted area for the tenant frontage of the wall where the signage will be placed	Same permitted area as single use/building sites, allocated by tenant frontage for an individual façade or wall. May be further restricted by master sign plan	Below roofline	n/a
	Attached (gas station canopy; instead of in <u>addition to</u> freestanding signs)	1 on each side	no more than 32 sq. ft. per sign. <u>(including logo)</u>	n/a	n/a

Type		Number	Maximum sign face area	Maximum height	Minimum setback
	Attached (sculptural)	1 per building or tenant space	no more than 64 sq. ft. (height at tallest point x width at widest point)	at least 50% of sculpture height below roofline or parapet wall	n/a
Permanent: Wayfinding	Freestanding (pole, monument or attached (wall))	50 ft. min. separation	32 sq. ft.	6 ft.	n/a
Temporary: property with construction	Freestanding	2 per vehicle entrance	32 sq. ft. per sign	6 ft.	5 ft. from property lines
Temporary: A-frame	A-frame	1; display only during business hours	12 sq. ft.	ft.4	As close to the building entrance as possible
Temporary: Wayfinding	Freestanding (pole) or attached (wall)	50 ft. min. separation	48 sq. ft. per sign	Freestanding: 6 ft.	n/a
Temporary: property for sale or rent	Attached (wall) or freestanding (pole)	1 per street frontage	1 sq. ft. per acre 1,000 sq. ft. per sign, 32 sq. ft. per sign minimum allocation, not to exceed 128 sq. ft. per sign.	Freestanding: 6-8 ft. Attached: below roofline.	Freestanding: 5 ft. from property lines
Temporary displays	Subject to provisions of Section 3. 22-49				

3.9.1.5. Open space and recreational uses.

The following signs are permitted on common open space lots and lots with recreational uses.

<u>Type</u>		<u>Number</u>	<u>Maximum sign face area</u>	<u>Maximum height</u>	<u>Minimum setback</u>
<u>Permanent</u>	<u>Attached (wall) or freestanding (monument, pole), within open space lot and recreational uses</u>	<u>1 per street frontage</u>	<u>32 sq. ft.</u>	<u>Freestanding: 6 ft.</u> <u>Attached: below roofline</u>	<u>Freestanding: 5 ft. from property lines</u>
<u>Permanent: District-oriented</u>	<u>Freestanding (pole) or attached (wall)</u>	<u>Unlimited; 50 ft. min. separation</u>	<u>32 sq. ft.</u>	<u>6ft.</u>	<u>n/a</u>
<u>Temporary: Wayfinding</u>	<u>Freestanding (pole) or attached (wall)</u>	<u>50 ft. min. separation</u>	<u>32 sq. ft.</u>	<u>6ft.</u>	<u>n/a</u>
<u>Temporary: property with construction</u>	<u>Freestanding (pole) or attached (wall)</u>	<u>1 per street frontage</u>	<u>32 sq. ft. per sign</u>	<u>Freestanding: 6 ft.</u> <u>Attached: below roofline</u>	<u>Freestanding: 5 ft. from property lines</u>
<u>Temporary displays</u>	<u>Allowed only for open space or recreational uses Subject to Section 3.9</u>				

3.9.2. Exempted signs, not requiring a sign permit

These signs are permitted in all development areas, unless noted. A sign permit is not required for exempt signs provided the sign complies with the standards set forth in this Section 3.9:

Wayfinding signs

A-frame signs, up to 12 SF in area

Address numbers and family name identification on residences.

City-owned/operated signs.

On and Off-site directional kiosk signs authorized by the City of Hutto.

Directional sign: one freestanding sign per curb cut in commercial, retail and industrial uses. Signs may be no more than 6 ft. tall and no more than 18 sq. ft. in area.

For sale, for rent and for lease signs on vehicles, boats, trailers and other personal property.

Garage sale signs: up to three signs, each no more than 4 sq. ft., may be displayed only while the garage sale is in progress. Garage sale signs must be placed outside of the right-of-way and public property. Garage sale signs may be placed within City of Hutto right-of-way (not County or State right-of-way) if written permission from an adjacent property owner is attached to said sign. Said garage sale sign must be removed before 5:00 PM on the last day of the sale. This amendment supersedes Chapter 8, Article 8.05 of the City of Hutto Code of Ordinances.

Hippopotamus statues no more than 3 ft. tall painted with the name, logo and/or trademark colors of the business or sponsor displaying them.



Native hippopotamus statue

Historical markers, plaques, grave markers, cornerstones and commemorative tablets.

Works of fine art that in no way identify or advertise a product or business.

National, state, local and decorative non-commercial flags, each no more than 50 sq. ft. in area, flown for their intended purpose under generally accepted flag protocol, on a flagpole or building mounted staff no taller than the maximum permitted building height in the underlying zoning district, and not acting as a form of advertising.

Open house signs: up to three signs may be used, displayed outside the public right-of-way and public property. Open house signs may be placed within City of Hutto right-of-way (not County or State right-of-way) if written permission from an adjacent property owner is attached to said sign. Said open house sign shall be displayed only while the open house is in progress or for 16 hours in a one-week period, whichever is shorter. The sign must be removed immediately after the open house. Signs may be no more than 4 sq. ft. in area, and no more than 4 ft. tall.

Public Information Signs, provided such signs are removed no more than 3 days after event.

Public utility warning and underground utility identification signs.

Religious symbols (cross, Star of David, star and crescent, etc.). Signs where the shape of a religious symbol is an integral part of the sign design are not exempted.

Signs manufactured as a standard, integral part of a mass-produced product accessory to a commercial, public or semi-public use, including telephone booths, mail and newspaper boxes, vending machines, automated teller machines, gas pumps and vacuums.

Signs, notices, placards, certificates and official papers authorized or required by statute, government agency or court.

Signs for rest rooms, accepted credit cards, business organization membership (Chamber of Commerce, Better Business Bureau, etc.), meetings of civic groups, and business hours, displayed at a business.

Signs identifying zones in parking lots, no more than 6 sq. ft. in area.

Signs on concessions and rides at special events such as fairs and festivals.

Signs painted on vehicles and trailers that are operating and registered, used in everyday business activities, parked in areas appropriate for their use as vehicles normally used during business hours, and not being used only for attracting business.

Temporary decorations and displays that are clearly associated with a national, local, or religious holiday or celebration, provided there are no fire, traffic, or pedestrian hazards.

3.9.3. Prohibited signs

The following signs are prohibited in all areas of the PUD, unless noted.

Off-premise signs, except for directional kiosk signs.

Signs with changing light, color or motion effects, intentional or resulting from a defect. This prohibition includes, but is not limited to:

- Blinking, flashing, chasing, strobe and alternating color lights, integrated into a sign or not.
- Electronic message centers.
- Signs incorporating “eye catchers” and similar shiny devices designed to reflect light and create a glimmering or flashing effect.
- Signs with animated or rotating parts.
- Signs emitting flame, smoke, steam or other visual matter.

This prohibition does not apply to:

- Electronic changeable copy/message board/variable message signs whose message portion is enclosed with glass, plastic, or other durable material and who provide an auto-dimming feature based on natural ambient light conditions. Auto-dimming feature must not allow any changeable copy/message board to exceed a brightness of 7,000 NITs in daylight or 500 NITs for night use. Such signs also cannot be animated; messages must remain static for at least sixty seconds, and display no more than four colors any one time in a static pattern.
- Signs with flashing or chasing lights on concessions and rides at special events such as fairs and festivals.
- Holiday decorations and light strings displayed during November, December and January. Light strings cannot outline or highlight a sign.
- Rotating barber poles at a legitimate barber or beauty shop.
- Rudimentary time and temperature displays that are not potentially distracting to drivers.
- Warning signs and markers placed by, or authorized by and on behalf of government agencies.

Temporary signs placed in or over the public right-of-way or public property require a sign permit. Permanent signs are not permitted in the right-of-way. The city may remove signs installed without a sign permit that are located in the public right-of-way or on public property. Temporary signs placed in or over the public right-of-way or public property are permitted with an approved R.O.W. permit and City license agreement.

This prohibition does not apply to:

- ~~Permanent development signs.~~
- Signs placed by government authorities.
- Banners placed on a light pole, utility pole, or over a street, as part of a special event of general civic interest.
- Kiosk ~~and way-finding~~ signs.
- Wayfinding signs
- Temporary garage sale and open house signs in compliance with Section 3.22.4 and this PUD.
- Signs placed on vehicles and trailers that are parked and used primarily as a sign.
- Signs and posters placed on trees, fences, light poles and utility poles, except parking lot zone signs on light poles.
- Banners, pennants, balloons, streamers, and other temporary signs, except on a temporary basis as permitted in Section 3.22.4.

Attached signs placed on a roof or above a parapet wall of a building. This prohibition does not apply to sculptural signs.

Attached domed, bullnose and bubble-style awning signs.

Freestanding signs placed where they might obscure a clear view of traffic on intersecting streets, and traffic warning and control signals and signs.

Signs that closely resemble or imitate official signs and traffic control devices.

Signs blocking doors, windows, vents, stairs and ramps.

Signs built and displayed without a sign permit, if a sign permit is required.

Signs built from materials usually used for temporary signs (cloth, thin plastic, corrugated plastic, etc.) displayed as permanent signs, except for no more than 30 days or less in place of a damaged, removed or permitted but unbuilt sign

Portable signs, including signs originally built as portable signs permanently mounted on a building or the ground.

Snipe, spam, and bandit signs.

Large objects such as motor vehicles, boats, aircraft, engine blocks, home appliances, heavy equipment, industrial machinery, and similar objects used as or included in signs.

Signs not expressly permitted in this section or elsewhere in this PUD.

3.9.4. Temporary signs and displays

3.9.4.1. Temporary displays

Temporary displays may include these items, ~~only as permitted in Section 3.22.4:~~

Banners, no more than 32 sq. ft.

Banners placed over the street to identify special events of general civic interest. The banners cannot be used for commercial advertising. Sponsor identification may be displayed on no more than 25% of the banner face area.

Pennants, streamers, and small (no more than 12 in. diameter) balloons.

Balloons and other inflatable objects no more than 12 ft. in height. Balloons and inflatable objects cannot be placed on top of a building. Inflatable objects cannot have flailing or animated elements.

New development marketing flags.

A business may have up to six temporary displays in a calendar year, with a time of no more than 30 days for each display.

3.9.4.2. Construction sign display time

Temporary signs on property under construction must be removed in ~~48 hours~~ **7 days** after construction is complete.

3.9.4.3. Real estate sign display time

Temporary signs on property for sale or rent must be removed in ~~48 hours~~ **7 days** after the lease or sale of the identified property.

3.9.4.4. Temporary development sign display time

Temporary signs ~~within the PUD may be displayed as long as the sign is maintained in good repair and has a valid sign permit~~ **for up to 2 years, at which time a new permit application must be submitted.** ~~at developments may be displayed for up to one year, or until the last house or unit in the development is sold, whichever is later.~~

Temporary development signs at rental communities may be displayed ~~for up to one year, or until 90% of units are occupied, whichever is later.~~ **as long as the sign is maintained in good repair and has a valid sign permit for up to 2 years, at which time a new permit application must be submitted.**

3.9.5. Substitution of non-commercial message

Noncommercial copy may be substituted for commercial copy on any permitted sign. If noncommercial copy is substituted, the resulting sign will continue to be treated as the original commercial sign under this code and will not be treated as an outdoor advertising display. Content of noncommercial copy on a sign otherwise permitted by this code may be changed without complying with provisions required for sign copy or design approval.

3.9.6. Sign design

3.9.6.1. Color

Colors for permanent on-site sign frames and supports must match, ~~or~~ compliment or be compatible with the primary finish and colors of buildings on the site.

3.9.6.2. Illumination

Illumination must be shielded so there is no glare in the public right-of-way and adjacent properties, and directed so it does not point towards the sky.

Illumination must be steady and even over the entire sign face, to the greatest extent practical. The full number of lighting elements must be kept in working condition.

3.9.6.3. Materials

Internally lit channel letters and halo lit letters are preferred for attached signs. Domed, bullnose and bubble-style awning signs, and internally illuminated box signs, are prohibited as attached signs.

The sign base of permanent freestanding signs must match, compliment or be compatible with the dominant ~~masonry~~ surface material of the main building on the site.

3.9.6.4. Attached sign placement

Attached signs cannot overlap features such as cornices, eaves, window and door frames, columns and other decorative elements, except with administrative approval of Development Services staff.

Signs must be placed at least 3 ft. from the vertical edge of a wall and other attached signs.

3.9.6.5. Attached sign height

Attached signs must be placed entirely below the lowest point of a building's parapet wall, except signs on water towers and smokestacks.

The lowest point of a projecting or awning sign must be at least 8 ft. above the sidewalk.

3.9.6.6. Window sign area

Window signs may cover no more than 25% of a window area.

Window signs are not considered in measuring the overall sign face area on a wall.

3.9.6.7. Free-standing sign placement

Freestanding signs cannot be placed where they obscure important architectural features such as entrances, display windows or decorative elements when seen from the public right-of-way.

Freestanding signs cannot be placed in or project over the public right-of-way, or create a visual obstruction in a vertical space between 3 ft. and 10 ft. above the curb in the clear vision area of a public street.

3.9.6.8. On-site ~~Free-standing~~ sign landscaping

Landscaping must form a cluster or massing at the base of freestanding signs, in an area at least 25% of the sign height around the footprint, except with administrative approval of Development Services staff.

3.9.6.9. A-frame signs

A-frame signs must be secured firmly in place, to the extent practical. ~~Securing may include anchoring to the wall of the building or weighing down with sandbags. Sandbags cannot protrude from the sides of sign.~~

3.9.6.10. Sign master plans

~~Development Services staff may require a~~ A Sign Master Plan is not required for the PUD, provided signs comply with provisions of this Section 3.9. If a lot contains multiple businesses and uses, the applicant may submit a Sign Master Plan. The plan shall to be submitted and approved with a with a concept plan or site development plan- permit for a parcel or site. for a development. Sign type, color, scheme, size and illumination in the center of the signs being submitted for approval must be coordinated and compatible with the architectural character on the site.

3.9.7. Sign permits

3.9.7.1. Sign permit required

Sign permits are required for the following sign types:

- New permanent signs, excluding window signs.
- New development signs.
- New real estate, construction and temporary development signs at least 12 sq. ft.
- Temporary displays.
- ~~A-frame signs (permit duration one year; may be renewed)~~
- Expansion to the face area or height, or change in the dimensions of an existing sign
- Change in the location of an existing sign.
- Change in the logo, name or message displayed on an existing sign, except altering the copy on changeable copy faces.

3.9.7.2. Sign permit and specific use permit approval required

Specific use permit review and approval, and a sign permit, is required for a sculptural sign.

3.9.7.3. Sign permit not required

Sign permits are not required for the following sign types:

- Wayfinding signs
- Exempted signs
- Window signs

3.9.7.4. Revocation

Sign permits will be revoked if there is any violation of this code or misrepresentation of any information in the permit application.

3.9.7.5. Pending violations

Sign permits will not be issued for businesses or locations where existing signs violate this PUD, except to replace an illegal sign with a legal sign.

3.9.7.6. Expiration

Sign permits expire six months after permit issuance, if the signs are not built.

3.9.8. Sign maintenance

3.9.8.1. Building code conformance

Signs must be built and maintained in conformance to structural, electrical and safety standards of the most current International Building Code, as adopted by the City.

3.9.8.2. Condition

Signs must be kept clean and in good repair, visually and structurally. Braces, bolts, clips, fastenings and supporting frames must be securely affixed to the support structure or wall. Signs must be kept free of rust, rot, insect infestations, bird nests and other deterioration.

3.9.8.3. Blank signs

Sign faces that are unreadable, not maintained, or removed, leaving only the shell or support structure, must be replaced in 30 days or the sign must be removed. This is not an exception to the prohibition of nonconforming sign replacement.

3.9.8.4. Unsafe signs

Signs that are unsecured, unsafe or in danger of falling; or damaged, destroyed, taken down or removed for any purpose other than copy change, must be removed or repaired to conform to this PUD.

3.9.8.5. Removal

When sign removal is required, the entire sign, supporting structure and any exposed foundation must be removed.

Signs painted directly on an exposed masonry wall must be removed by a process that strips the entire sign from the wall, not by painting over the sign. Signs declared historic by the Historic Preservation Commission are exempt.

3.9.9. Non-conforming and abandoned signs

3.9.9.1. Non-conforming signs

Provisions for nonconforming and abandoned signs are in **Section 10.206 of the UDC**.

3.9.9.2. Abandoned signs

Signs are considered abandoned if they:

Advertise or identify an object, person, institution, business, product, service, event or location that no longer exists or is no longer relevant; or

Abandoned signs must be removed by the sign owner, property owner or the city at the owner's expense. Abandoned signs cannot be reused. Signs declared historic by the Historic Preservation Commission are exempt.

3.9.10 On-premise signs

All permanent and temporary signs located within the PUD shall be considered on-premise signs.

4. SUBDIVISION STANDARDS

4.1. Lot Division and Adjustment Processes

4.1.1. Amended plat

4.1.1.1. Applicability

The amended plat process may be used for the following in the PUD:

- Adjust or relocate the boundary or lot lines between one or more adjacent lots on an approved plat, where the number of lots will not increase.
- Join two or more adjacent lots on an approved plat, where the entire plat will not be vacated.
- Correct an error or omission on an approved plat.
- Show monuments set after death, disability, or retirement from practice of the engineer or surveyor charged with responsibilities for setting monuments.
- Show the proper location or character of monuments that have been changed in location, character, or shown incorrectly on an approved plat.

4.1.1.2. Criteria and process

The amended plat process and review criteria are described in **Section 10.203.2 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.2. Major subdivision

4.1.2.1. Applicability

A major subdivision permits the division of a parcel into two or more lots and/or tracts. The major subdivision process may be used to subdivide legal lots, if the subdivision is not eligible for the short form subdivision process.

4.1.2.2. Criteria and process

The major subdivision process and review criteria are described in **Section 10.203.7 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.3. Short form subdivision (short form final plat, minor subdivision)

4.1.3.1. Applicability

A short form subdivision provides for the timely review of proposed land division that does not discernibly impact surrounding properties, environmental resources, city character or public facilities. The short form subdivision process may be used for the following land divisions:

- Division of existing legal uses with separate utilities, except nonconforming billboards. This process cannot be used to divide accessory uses from principal uses or create an opportunity for more principal uses.
- Division of an unplatted lot into four lots or less, with no new streets, with the condition that further subdivision must be approved through the major subdivision process.
- Divisions of land for public utilities, open space, schools or other public uses.

4.1.3.2. Criteria and process

The short form subdivision process and review criteria are described in **Section 10.203.14 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.4. Plat vacation

4.1.4.1. Applicability

Plat vacation provides for the vacation of an entire subdivision plat if development will not occur consistent with the approved plat.

4.1.4.2. Criteria and process

The plat vacation process and review criteria are described in **Section 10.203.11 of the UDC**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.1.5. Right-of-way vacation

4.1.5.1. Applicability

Right-of-way vacation permits the vacation of rights-of-way and easements that are no longer needed. Subject to review criteria, City Council may grant a right-of-way or easement vacation for any right-of-way or easement of record where the city has jurisdiction. Right-of-way vacation results in a new lot configuration, and also requires an amended plat.

4.1.5.2. Criteria and process

The right-of-way vacation process and review criteria are described in **Section 10.203.13**. Submittal material requirements and internal review procedure is determined by Development Services staff, and will be consistently applied for all similar projects.

4.2. Plat Types

4.2.1. Preliminary plat

4.2.1.1. Purpose

A preliminary plat provides detailed graphic information and associated text showing property boundaries, easements, land use, streets, utilities, drainage, and other information required to evaluate proposed subdivisions of land. The preliminary plat includes the location of required by this article and other applicable city ordinances, codes and policies. Preliminary plats cannot be recorded or used as a plat of record.

4.2.1.2. Criteria and process

Information required for preliminary plat submittal is described in the **City of Hutto Development Administrative Guide Manual**.

4.2.2. Final plat

4.2.2.1. Purpose

A final plat provides detailed graphic information and associated text showing property boundaries, easements, streets, utilities, drainage, and other information required for the maintenance of public records of the subdivision of land. Final plats are recorded and used as a plat of record, subject to the regulations in this chapter.

4.2.2.2. Criteria and process

Information required for concept plan submittal is described in the **City of Hutto Development Administrative Guide Manual**.

4.3. General Provisions

4.3.1. Required improvements

4.3.1.1. Required features

The developer or applicant must make all of the following improvements.

- Dedicate right-of-way necessary to achieve the width required by applicable transportation-related plans for streets adjoining the property.
- Reserve, but not dedicate, right-of-way for controlled access highways.
- Pave and install curbs and gutters along streets adjoining the property.
- Install sidewalks and pedestrian pathways.
- Install street signs.
- Install street lighting.
- Install development perimeter walls, if walls are required.
- For residential development, provide open space and recreational facilities.
- Install all utilities underground, excluding transmission lines.
- Provide landscaping, drainage, fire protection required for the project.

4.3.1.2. Developer responsibilities

All improvements which the developer is required to make shall be made at the developer's expense without reimbursement by the City, except as provided otherwise in this PUD or related development agreement. The City may contract with a developer to construct public improvements relating to the development in accordance with **Chapter 212, Subchapter C of the Texas Local Government Code**, as amended.

4.3.2. Timing and inspection of improvements

Unless otherwise stated, a subdivider developer cannot begin construction activities in the PUD, including clearing and/or rough grading, before first obtaining all city approvals required by this chapter.

4.3.3. Phasing plan requirements

Projects to be developed in multiple phases must meet all the following requirements unless otherwise approved by the Development Services staff.

If requested in the original application, a major subdivision may be considered for approval for phased development.

Phasing plans must be included in the first submittal and are reviewed by Development Services staff and/or other city staff and evaluated as part of the overall development plan.

Each phase of a development needs to be “stand alone” for utilities, fire protection, streets and stormwater management. Phase lines must follow reasonable and logical boundaries, such as terminating at intersections or following topographical breaks.

Phases must be constructed in the approved manner to ensure orderly and planned development.

Phases must be planned to ensure the efficient construction of adjacent future phases (phases immediately next to the subject phase, sharing a common boundary line), and to ensure that phased development is contiguous.

Lot numbers shall not be duplicated in different phases of the same subdivision.

Each proposed phase must, at a minimum, include the transportation, utility, and other public/private infrastructure shown on the proposed phasing plans, so each phase is independent of later phases.

Right-of-way and/or easements for public infrastructure servicing the respective phase must be recorded with the first plat.

Water and sewer extension permit applications for each individual phase of the project are required after plan approval.

4.3.4. Construction plans submission

4.3.4.1. Submittal

Subdivision improvement construction plans shall be submitted for review and approval by the City Engineer for all development for which public improvements are required.

4.3.4.2. Developer must retain engineer

The developer must retain the services of an engineer registered in the state of Texas, whose seal shall be placed on the subdivision improvement construction plans in accordance with the Texas Engineering Practice Act. The engineer shall be responsible for the services described in City Standards. The services performed by the engineer shall be as designated in the latest edition of the “Manual of Professional Practice – General Engineering Services,” published by the Texas Society of Professional Engineers, and shall include both design and inspection as defined in this code.

4.3.4.3. Submittal content

Except as provided in this code, after preliminary plat approval, subdivision improvement construction plans may be submitted to the City Engineer for approval. The subdivision improvement construction plans submittal shall include all of the information specified in the Development Administrative Guide.

4.3.4.4. State review

All subdivision improvement construction plans must comply with the Texas Accessibility Standards administered by the Texas Department of Licensing and Regulation (TDLR) and the Americans with Disabilities Act of 1990, as amended. The developer shall submit applicable portions of the subdivision improvement construction plans to TDLR for review. Upon the completion of construction, the developer shall request inspection of all pedestrian facilities by the TDLR and pay all necessary fees. The City will not accept the public improvements until the developer provides evidence that the plans have been reviewed and approved by TDLR and that payment of the required inspection fees has been made.

4.3.4.5. Expiration of approval subdivision improvement construction plan

The subdivision improvement construction plans will expire 2 years from the date of approval by the City Engineer if construction has not commenced. Even after construction has commenced, the approved subdivision improvement construction plans will expire 3 years from the date of approval. If approved subdivision improvement construction plans expire, the plans shall be resubmitted for review and approval to ensure compliance with the current design and construction standards.

4.3.4.6. Pre-construction conference

After the approval of the subdivision improvement construction plans, a pre-construction conference shall be required to commence construction of the public improvements. Said conference shall be held with the City Engineer and include the following persons: developer, developer's contractor, developer's engineer, and other parties as determined by the City Engineer.

4.3.5. Construction of public improvements

4.3.5.1. Requirement

All public improvements required by these regulations shall be installed and constructed by the developer, or his successors in title, within 3 years from the approval of the subdivision improvement construction plans. All improvements shall conform to the provisions of this PUD and approved plans.

4.3.5.2. Failure to complete improvements

Where public improvements are not completely installed and constructed within 3 years, the City may do the following:

- Where an additional fiscal surety was required, obtain the funds to complete the public improvements using a third party selected by the City; and/or
- Exercise any other rights available under the law.

4.3.5.3. Sidewalk construction

- Sidewalks for single-family and two-family lots

Except as provided in this PUD, a developer shall install sidewalks on the rear of double frontage lots, on the side of a corner lot, and where shown on the subdivision improvement construction plans.

- Sidewalks for single family attached, multifamily, and non-residential lots

A developer shall install sidewalks for single family attached, multifamily, and non-residential lots that abut a public street and where shown on the subdivision improvement construction plans. A subdivision shall not be accepted until the sidewalk has been constructed in accordance with the regulations of this PUD and has been inspected and approved by the City Engineer.

- Deferment of sidewalk construction

Sidewalks shall be installed in accordance with this section except under the following circumstances, as determined by the City Engineer:

- Where the existing cross-section of street makes immediate construction of a sidewalk impractical;
- Where a non-residential subdivision abutting an existing street is isolated from any other sidewalk by a distance of twice the frontage of the subdivision; or
- Where construction or reconstruction of the road where a sidewalk is to be placed is imminent and the sidewalk would be destroyed if constructed.

The City may require a cash payment by the developer in lieu of construction of the sidewalk if the Planning and Zoning Commission determines that the sidewalk should not be built within the 3-year period of the construction plans. The cash payment shall equal the cost of constructing and installing the sidewalk at the time of acceptance of the public improvements. The developer shall pay the cash payment prior to the acceptance of the public improvements by the City.

- State review

All sidewalks must comply with the Texas Accessibility Standards administered by the Texas Department of Licensing and Regulation (TDLR) and/or with the Americans with Disabilities Act of 1990, as amended, whichever is more restrictive. The developer shall submit its sidewalk plans to TDLR for review and, upon completion of its construction, for inspection. The City will not accept public improvements until the developer provides evidence that the sidewalk plans have been reviewed and approved by TDLR. The developer is responsible for all fees associated with the State plan review and inspection, and must submit to the City evidence of payment of all required inspection fees.

4.3.5.4. Benchmarks

- *Designation*

A permanent benchmark shall be designated with each addition or subdivision. Benchmarks shall be located on public property in a location acceptable to the City Engineer. Benchmarks are considered public improvements and shall consist of a brass disk, approved by the City Engineer, set in a concrete structure of such mass and dimensions and constructed on an unyielding foundation that, in the opinion of

the City Engineer, will ensure the integrity of the benchmark.

- *Installation*
Prior to the acceptance of the public improvements, benchmarks shall be installed by the developer. The elevation, horizontal datum, and description of each benchmark installed shall be certified by a surveyor and submitted to the City Engineer. In the event that public improvements are not required, benchmarks shall still be installed by the developer and the certification and description provided to the City Engineer prior to plat recordation.
- *Modification*
The City Engineer may modify the benchmark requirement if he/she determines one of the following:
 - The requirement would create needless redundancy of benchmarking because of an established public benchmark exists in the immediate vicinity, is readily accessible, and will not be removed or made inaccessible by construction associated with the addition or subdivision;
 - The requirement creates undue hardship on the developer;
 - There is no feasible opportunity to install a brass disk in a suitable structure. In this case, the City Engineer may approve a permanent benchmark established in conformance with generally accepted surveying and engineering practices; or Lack of development within the subdivision or addition

4.3.6. Restrictions on certificate of occupancy

City staff cannot issue certificates of occupancy for development until staff certifies the developer or subdivider has installed all improvements in conformance to the requirements of this section and the approved final plat and construction drawings. All improvements must be functional and under the warranty period for maintenance.

4.3.7. Construction traffic and alternative routes

Construction traffic from the development of new subdivisions and/or site plans shall be required to use a reasonable alternative route until 75% of the total certificates of occupancy are issued in the new development boundary as identified with the associated subdivision/site plan. If no reasonable alternative route exists, existing public streets may be used.

4.3.8. Street signs

Street name signs conforming to city design standards must be placed at street intersections. The subdivider or developer must install the signs before city acceptance of required improvements. Street signs are included in improvements where fiscal surety may be submitted instead of completed improvements. The subdivider or developer is required to replace or repair street signs that are damaged during construction.

4.3.9. Street lights

The property owner or developer must install street lighting along proposed public and/or private streets, streets, and along existing streets adjoining the property. Development Services and Public works staffs approve street light location and design. Illumination must conform to lighting regulations in Section 3.22. The subdivider or developer is required to replace or repair lights that are damaged during construction.

4.4. Assurances for Improvement Completion

4.4.1. Improvements or surety instrument before final plat recording

On approval of a final plat by City Council, but before recording, the applicant must:

Construct all improvements as required by this chapter, and provide a surety instrument guaranteeing their maintenance as required in this code; or

Provide a surety instrument in accordance with this PUD guaranteeing construction of all improvements required by this article and in this PUD and other applicable regulations.

4.4.2. Completion of improvements

Before the final plat is recorded, the developer must:

Complete all improvements required by this article according to the approved construction plans and subject to the City Engineer's approval and the City's acceptance, except as otherwise provided.

Construct all sidewalks in common areas and at street corners as shown on the approved final plat and according to the City's regulations or the City's standard details and specifications. Sidewalks must be constructed and approved for each lot before a certificate of occupancy is issued.

4.4.3. Fiscal security

A developer must post fiscal security with the City prior to a request for recordation of the final plat if the public improvements have not been accepted by the City and provided that the subdivision improvement construction plans have been approved by the City Engineer.

4.4.3.1. Amount

The amount of fiscal security posted by the developer shall equal the estimated cost plus ten percent to complete the public improvements that have not been accepted. The developer's engineer must provide the City Engineer with a sealed opinion of the probable cost for his approval.

4.4.3.2. Types

- A developer may post as fiscal security:
- A performance bond; or
- A letter of credit, approved by the City Attorney.

4.4.3.3. Return of fiscal security

The City shall return the fiscal security to the developer when the City accepts the public improvements.

4.4.3.4. Expenditures of fiscal security

The City may draw on the fiscal security and pay the cost of completing the public improvements if it determines that the developer has breached the obligations secured by the fiscal security or the 3-year time period for the installation of the required public

improvements has expired. The City shall refund the balance of the fiscal security, if any, to the developer. The developer shall be liable for the cost that exceeds the amount of fiscal security, if any.

4.4.4. Inspection and acceptance

4.4.4.1. Entry and inspection

The City Engineer and other City employees shall have the right to enter upon the construction site for the purpose of conducting inspections. The City Engineer shall conduct inspections of the public improvements during construction to ensure general conformity with plans and specifications as accepted. If the City Engineer finds, upon inspection, that any of the public improvements have not been constructed in accordance with City ordinances, then the developer shall be responsible for making the necessary changes to insure compliance.

Upon completion of the public improvements, the developer shall arrange with the City Engineer for a final inspection to determine that the public improvements have been installed in conformity with the approved subdivision improvement construction plans. The developer shall pay all necessary inspection fees prior to the acceptance of the public improvements by the City.

4.4.4.2. Acceptance of improvements

Request acceptance of improvements

Upon completion of the construction of the public improvements, the developer shall request that the City accept the improvements for maintenance. Concurrent with the request for acceptance of the public improvements for maintenance, the developer shall submit all information required for acceptance of improvements specified in the Development Administrative Guide.

4.4.5. Maintenance of improvements

The developer shall be responsible for the maintenance and repair of all public improvements for 2 years after acceptance of said public improvements by the City. Prior to acceptance of improvements by the City pursuant to Section 4.4.4.2, a 2-year maintenance guarantee, in favor of the City, shall be provided by the developer by means of a warranty bond, subject to approval of the City.

4.5. Construction Standards

4.5.1. General

Construction for streets and drainage must conform to the City of Hutto Standard Details and the City of Georgetown Construction Specifications and Standards.

Construction standards and specifications for electrical and gas utilities must be in conformance to the standards of the approved utility provider.

4.6. Lot Configuration

4.6.1. Lots

4.6.1.1. General standards

Size, shape, and location of lots must be established considering topographic conditions, contemplated uses, and the character of the surrounding area.

Lot sizes and building setback lines must conform to the minimum lot area, minimum lot width, and minimum yard standards required in the- ~~PUD~~underlying zoning district.

Lots that front on more than one street other than corner lots, resulting in the need for a large development perimeter wall facility, should be minimal or avoided.

Side lot lines must be substantially at right angles or radial to street alignments.

4.6.1.2. Lot width

Lot width at the street right-of-way line at the end of a cul-de-sac or the outside of a sharp curve must be at least 20 ft., to accommodate driveways, drainage facilities and utilities.

4.6.1.3. Lot shape

Lots should be as rectangular as practicable. Sharp angles between lot lines should be avoided.

4.6.1.4. Lot numbering

Lots must be numbered consecutively in each block. Lot numbering may be cumulative throughout the subdivision if the numbering continues from block to block in a uniform manner approved on a preliminary plat.

Blocks must be numbered consecutively in the overall plat and/or sections of an overall plat as recorded.

4.6.2. Easements

Easements must be dedicated for dry and wet utilities, drainage ways, and access paths where necessary, and may be required across parts of lots (including side lines) if in the opinion of the city, they are needed.

Utility easements should be located where they will not prevent tree planting in tree lawns.

4.7. Parkland Dedication

4.7.1. Dedication procedure

4.7.1.1. Parkland Dedication

Parkland dedication requirements set forth in this Ordinance shall satisfy all parkland requirements of the City with respect to the PUD. A minimum of 26.9 acres of land within the Brushy Creek 100-year floodplain within the PUD, as generally depicted **Exhibit A, PUD Concept Plan**, shall be dedicated to the City as parkland.

With the consent of the City, parkland may be conveyed to a third party for later conveyance to the City of Hutto, provided no additional costs are incurred by the developer.

Except as provided herein, no parkland dedication, cash payment in lieu of parkland dedication or improvements in lieu of parkland dedication shall be required for the PUD. The area to be dedicated must be shown on the preliminary plat and final plat; and must be included in the dedication statement. Dedicated parkland must meet the requirements and guidelines of this section.

4.7.1.2. Parkland trail improvement

The developer shall be responsible improving the parkland with a 10 ft. wide concrete shared use trail that is consistent with the City of Hutto Parks, Recreation, Open Space and Trails Master Plan. The ~~shared use~~10 ft. trail shall be located in the Brushy Creek 100-year floodplain and extend from the FM 685 ROW to the SH 130 ROW. The alignment of the trail shall be approved by the Parks and Recreation Director prior to construction. The trail ~~alignment improvements~~ must be shown on a detailed exhibit accompanying the ~~preliminary plat and~~ final plat of the parkland.

At the City's option, the trail may be constructed by the developer and conveyed to the City upon acceptance, or cash may be paid to the City in lieu of the trail construction. The cash amount will be based on a construction estimate of the trail. If constructed by the developer, the trail construction must be constructed and accepted ~~prior to the completion of the first phase of residential development, unless an alternative at a date is mutually~~ agreed upon by both the developer and Parks and Recreation Director. Maintenance of the trail shall be the responsibility of the City of Hutto upon City acceptance.

4.7.1.3. Dedication required before plat recording

Land requirements must be met before the plat is recorded.

4.7.1.4. Dedication by warranty deed

Parkland must be dedicated to the city by general warranty deed, and acceptable evidence of clear title and payment of all taxes must be provided to the city.

4.7.1.5. Improvements by park site

The subdivider or developer is responsible for installation of public improvements next to the park site including, but not limited to, curb and gutters, streets, sidewalks, and storm drainage facilities made necessary by the development.

4.7.2. Nature of parkland

4.7.2.1. Access

Convenient pedestrian and vehicular access to park land must be provided. In areas of parkland not fronting a public street, access by frequent green links or public paths must be provided.

4.8. Pedestrian and Bicycle Facilities

4.8.1. Sidewalks

4.8.1.1. Location

Sidewalks must be installed on both sides of all public streets, except limited access highways and loop lanes.

Sidewalks must be placed inside the public right-of-way as close to the outer edge of the right-of-way as possible, to provide a tree lawn at least 5 ft. deep to the extent practical, except that sidewalks may be placed in an access easement on private property. Development Services staff may administratively approve exceptions to the tree lawn requirement and sidewalk location where conditions warrant, such as provision for accessible routes.

Sidewalks may meander to avoid trees, utility poles and boxes, and other obstacles; ~~and~~ for aesthetics and to meet universal accessibility requirements.

4.8.1.2. Timing of sidewalk construction

The builder or developer of a site must build a sidewalk when the adjacent site is developed. When streets are built, the subdivider or developer must also build sidewalks along streets adjacent to amenity centers, open space, easement rights-of-way, and land dedicated for parks and other purposes.

Sidewalks located along collector and arterial streets must be built at when the thoroughfare is constructed.

All required sidewalks must be built before a certificate of occupancy is issued.

4.8.1.3. Connectivity

Sidewalks must connect to existing adjacent sidewalks, or be designed and placed to allow connection to future adjacent sidewalks. Required sidewalks serving non-residential lots must connect to parking in the lot and to primary building entrances. Required connections may include street crosswalks but may not span distances of at least 50 ft. without an improvement to protect pedestrians from vehicles.

Sidewalks must be installed to provide all residential areas with direct access to all neighborhood facilities, including schools, parks and playgrounds, places of worship and assembly, shopping centers, amenity centers, and public transit stops, wherever possible.

4.8.1.4. Pedestrian crossing

Pedestrian crossings must be made safer for pedestrians whenever possible by shortening crosswalk distance with curb extensions, reducing sidewalk curb radii, and eliminating free right-turn lanes, where practical. Signals allowing longer crossing times in shopping districts, mid-block crossings in high-pedestrians use areas, corner neckdowns, textured pavement, and medians must be provided as appropriate.

Adequate signs and street markings must be provided for all crosswalks

4.8.1.5. Easements

Easements for sidewalk connections to adjacent required sidewalks not yet built are required. Easements for all accessways are required.

Easements must be established to provide public access for sidewalks, pedestrian paths/trails / greenbelts, or bicycle trails identified in applicable city plans.

4.8.2. Bicycle paths and lanes

4.8.2.1. Location

Bicycle lanes must be incorporated in the design of arterial streets located within residential areas of the PUD, and wide outside lanes must be incorporated in the design of major collector streets. On local streets and residential collectors low traffic speeds and volumes allow bicyclists and motorists to safely share the street and bike lanes, therefore, are not required.

4.8.2.2. Construction standards

Design and construction of all bicycle facilities must meet or exceed standards in the "Guide for Development of Bicycle Facilities" published by the American Association of State Highway and Transportation Officials (AASHTO). Signing and pavement markings for such facilities must conform to the Manual on Uniform Traffic Control Devices (MUTCD).

4.8.3. Multi-use paths

While not encouraged to substitute for a good system of on-street facilities, multi-use paths may be used to enhance pedestrian and bicycle travel where the existing circulation system does not serve these patrons well or provide corridors free of obstacles. Paths must connect to the street and sidewalk system safely and conveniently, and must meet the following requirements and those in city design standards.

Path connections must be well signed with destination and directional signing.

Paths must be located in corridors that serve origin and destination points such as residential areas, schools, shopping centers, and parks.

Paths must be built in locations that are visible and easily accessible, for the personal safety of users.

Whenever possible, paths must be designed so motor vehicle crossings are removed or significantly minimized. Where crossings exist, they must be carefully designed to ensure the

safety of the users. Where multi-use paths are proposed to run parallel with streets, they must be offset at least 6 ft. from the back of the curb.

Paths must be constructed of durable, low-maintenance materials, with sufficient width and clearance to allow users to walk or bike at reasonable speeds. Paths must be at least 8 ft. wide.

Where multiple uses are intended (e.g., shared pedestrian and bicycle traffic) the path should be 8 ft. wide whenever possible.

4.9. Street Classifications

4.9.1. Alley

An alley (residential or commercial) is a public street designed to provide access to the rear or side of a lot including garage access, solid waste access, fire access and utility easements.

- Alleys are required for all residential lots fronting on a Residential Lane
- Alleys are required in Non-Residential areas where it is necessary to provide for adequate access for service vehicles, off-street loading or unloading, access for emergency vehicles or similar reasons consistent with the intent of this PUD.
- Alleys may not access arterial streets.
- All alleys shall have at least two direct access points to public streets and are subject to block length criteria included in this PUD.

Alleys shall be dedicated to the public.

4.9.2. Green lane

A green lane has no road surface, but rather takes the form of a park or pedestrian plaza fronted by single household dwellings, two to four household dwellings, and/or townhouses or rowhouses.

- Green lanes cannot access arterial streets
- Facades and front porches (if any) of dwellings on lots fronting green lane must face the lane, not the alley

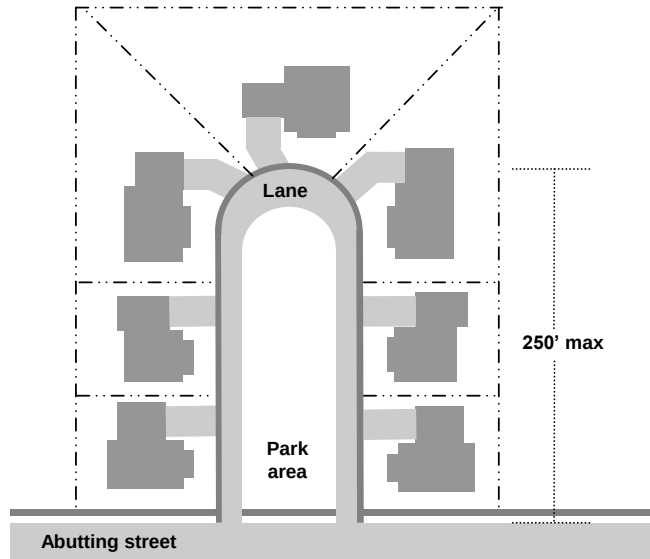
A homeowner association shall maintain the groundcover and vegetation of the green lane.

4.9.3. Loop lane

A loop lane is an alternate street design that offers a turnaround in place of a cul-de-sac. A loop lane provides open space instead of the expanse of asphalt paving found in a standard cul-de-sac.

- Loop lanes may not access arterial streets.
- The lane must be dedicated to the city.
- A homeowner association shall maintain the green space.

Utilities and water detention may be located in the green space.



4.9.4. Residential lane

A residential lane serves up to 80 dwelling units is expected to carry less than 800 vehicles per day.

- On-street parking, where provided, shall be provided in additional bays.
- Continuous sidewalks and street trees at regular intervals are required on both sides of the residential lane

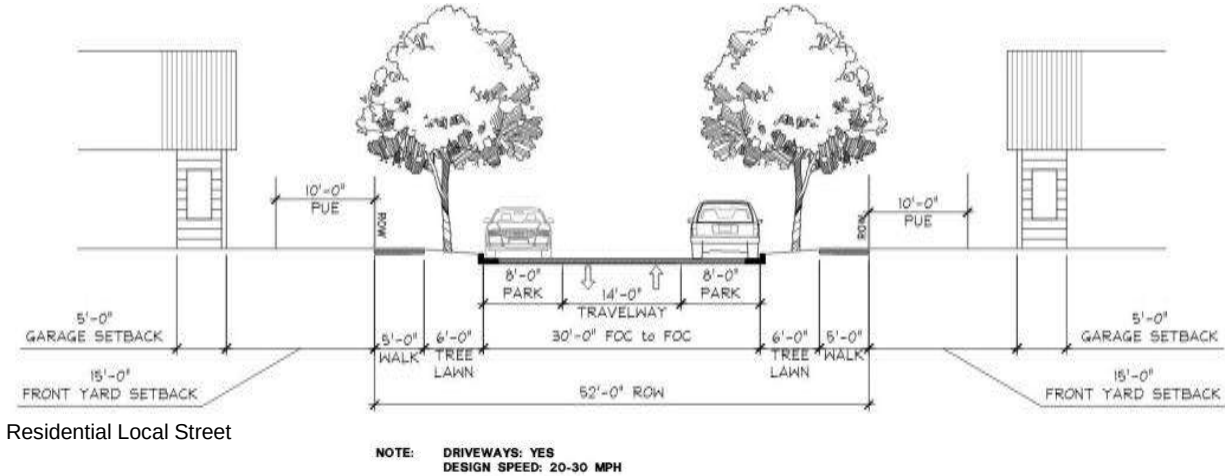


Street Trees in the tree lawns

4.9.5. Residential local street

A Residential Street generally serves up to 80 dwelling units and is expected to carry less than 800 vehicles per day.

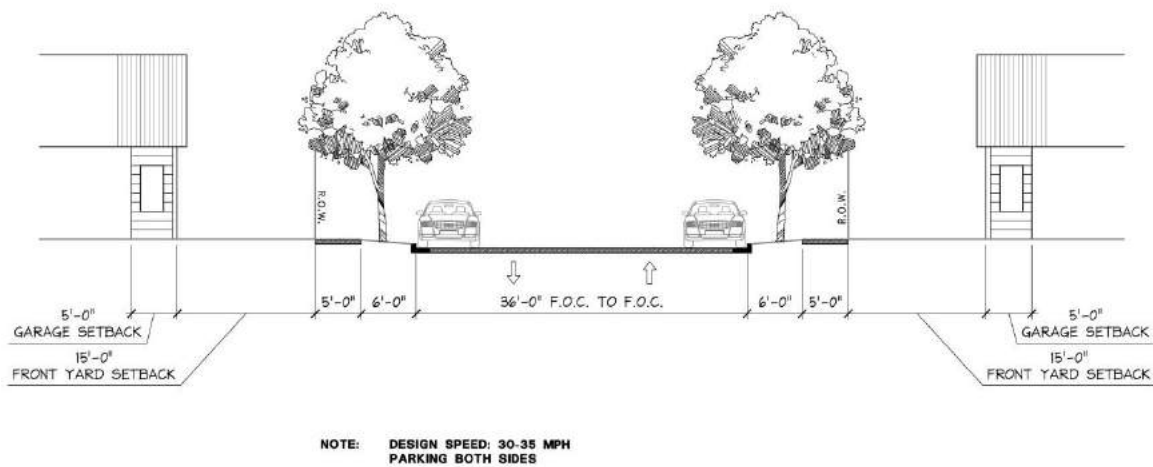
- Continuous sidewalks and street trees at regular intervals are required on both sides of a residential street
- Driveway access to residential units is permitted.
- Alleys are permitted in conjunction with Residential Streets, but are not required.
- On local streets, no driveway is permitted closer to a corner than 50 feet, except that if a lot is less than 50 ft. in width, then the driveway must be placed as close as possible to the property line opposite the street right of way line.



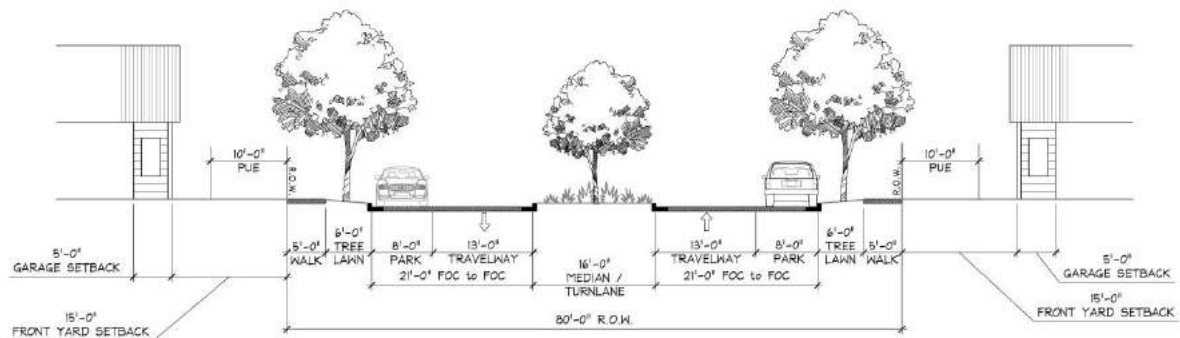
4.9.6. Residential collector

A Residential Collector and Divided Residential Collector is a street type that has an actual or anticipated traffic flow of 800 average daily trips (ADT) or greater.

- Continuous sidewalks and street trees at regular intervals are required on both sides of a residential collector.
- A Residential Collector may provide access to any type of residential unit.
- A Residential Collector shall provide two-through lanes for traffic
- A Residential Collector shall provide parking on both sides of the roadway.
- Driveway access to single-family or two-family dwelling units is permitted when spaced no less than 50 feet apart measured from center to center.
- On collector streets, no driveway is permitted closer to a corner than 100 feet.
- Planted medians are permitted on a Divided Residential Collector.



Residential Collector



Divided Residential Collector

4.9.7. Major collector street

A Major Collector is a street that has an actual or anticipated traffic flow of 2500 ADT or greater.

- A Major Collector is generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on the size and density of development.
- A Major Collector shall provide access to all types of commercial and industrial uses.
- A Major Collector shall provide for two through lanes with parking on each side or four through lanes.
- No driveway access to single-family or two-family dwelling units is permitted.
- Medians may be allowed with approval of City Staff.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a major collector street.

4.9.8. Minor arterial street

A Minor Arterial is a street whose main purpose is to serve as a major route through and between different areas of the City.

- A Minor Arterial is generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on the size and density of development.
- Minor Arterials have two through lanes in each direction separated by a median.
- No parking is permitted.
- No driveway access to single-family or two-family dwelling units is permitted.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a minor arterial street.

4.9.9. Major arterial street

A Major Arterial is a street, including Interstate Highway Service Roads, whose main purpose is to serve as a major route into, out of or across the City.

- These streets are generally shown in the City's Comprehensive Plan, however; they may be required in other locations based on size and density of development.
- Major Arterials have at least three lanes in each direction separated by a median.
- Interstate Highway Service Road standards are established by the Texas Department of Transportation and do not include a bicycle lane within the street Section.
- No parking is permitted.
- Continuous sidewalks and street trees at regular intervals are required on both sides of a major arterial street.

4.9.10. Private interior drive

Development within the PUD, including multifamily and single family uses, may be organized to include private interior drives which serve residents. Private interior drives, if any, shall be maintained by the Property Owners Association (POA) and shall comply with all City fire and emergency regulations. All private interior drives shall be a minimum pavement width of twenty (20) feet.

4.9.11. Street classification standards

Standard	Alley	Green Lane	Loop Lane	Residential Lane	Residential Local	Residential Collector	Divided Residential Collector	Major Collector	Minor Arterial	Major Arterial
ADT (Avg Daily Traffic)	---	--	<150	< 800	< 800	> 800	>800	> 2500	> 12,500	> 24000
<u>Min.</u> ROW (Right of Way)	20	50	<u>90</u> 92	49	52	58	80	66	110	135
FOC – FOC (Face of curb to Face of curb)	--	--	20	24	30	36	2 @21	44	82	106
Length	--	< 250	< 250	#	#	#	#	#	#	#
Lanes	1	n/a	1	2	2	2	2	2-4	4	6

Lane Width	20	36-40	11-12	10-12	8-14 (includes parking)	10	10	10-12	12	12
Median Width	---	---	---	---	---	---**	16'	---**	24	24
Design Speed	---	---	15	20-25	20-25	25-30	25-30	30-35	35-45	35-45
Driveways	Yes	Alley	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Parking	No	#	Yes	Yes*	Both Sides	Both Sides	One Side, Each Way	Both Sides***	No	No
Tree Lawn	No	No	No	5', both	6', both	6', both	6', both	6', both	6', both	6', both
Sidewalks	No	4', both	4', both	4', both	5', both	5', both	5', both	5', both	5', both	5', both
Commercial Driveway Spacing for City / County Controlled Roadways and State System Highways										
Posted Speed (MPH)					Driveway Spacing (Feet)					
< 30					200					
35					250					
40					305					
45					360					
50					425					

Unless otherwise specified, all width dimensions are in feet and speeds are in mph.

Refer to standards defined elsewhere in this chapter

* On-street parking, where provided, shall be provided in additional bays

** Median allowed with approval of City Staff

*** 2 Lane Roadways Only

4.10. Street Design

4.10.1. Right-of-way width measurement

Right-of-way width is measured from front lot line to front lot line of opposite lots.

4.10.2. Geometry

4.10.2.1. Horizontal alignment

Maximum deflection in alignment permitted without the use of a curve shall be ten degrees.

4.10.2.2. Arterial street curves

Curves in arterial streets shall be designed in accordance with design speed standards found in AASHTO manual, with exceptions to this standard granted only by the Final Approval Authority.

4.10.2.3. Collector street curves

Curves in collector streets shall be designed in accordance with design speed standards found in AASHTO manual, with exceptions to this standard granted only by the Final Approval Authority.

4.10.2.4. Local street curves

Curves in local streets shall be designed in accordance with design speed standards found in AASHTO manual. The requirement for local streets exempts 90-degree or 'elbow' curves provided a radius of 50 ft is provided.

4.10.2.5. Reverse curves

Reverse curves shall be separated with a minimum tangent of 100 feet.

4.10.2.6. Vertical curves

Vertical curves shall be designed in accordance with AASHTO standards.

4.10.2.7. Cul de sacs and temporary turnarounds

- Cul-de-sac bulbs or turnarounds must have a paved radius of at least 50 ft. for single household and two-household use, and at least 60 ft. for other uses. A landscape island located in the center of the bulb is permitted.
- No more than 200 projected average daily trips (using ITE standards) shall be allowed for any cul-de-sac longer than 200 feet.
- Temporary turnarounds meeting the requirements outlined in the most recently adopted IFC shall be provided at the end of streets more than 100 feet long that will be extended in the future. The following note should be placed on the plat: "Crosshatched area is temporary easement for turn-around until street is extended (give direction) in a recorded plat." No temporary dead-end street in excess of 400 feet may be created unless no other practical alternative is available. A sign must be posted at the turnaround stating the street may be extended in the future.

4.10.2.8. Reserve strips

Reserve strips or "spite strips" at the end of streets are prohibited.

4.10.3. Intersections

4.10.3.1. Intersection angle

Streets must generally intersect at a 90° angle, except that variations of greater than 10° on collector and local streets and greater than 5° on major and minor arterials must be approved by the city engineer.

4.10.3.2. Radius at corners

Local and collector street corners must have a 10 ft. - 15 ft. radii; acute corners must have a 20 ft. - 25 ft. radii.

Arterial street corners must have a 20 ft. - 25 ft. radii.

Buildings, signs or parking is prohibited in the area between the corner curves and the chord connecting the ends of the curves except as approved by planning staff or the city engineer.

Street intersections with one or more residential collector level and higher classified streets must include 25 ft. right of way flares/cutbacks. The flare/cutback is measured along tangents from the point of intersection of the two right of way lines.

4.10.3.3. Center line tie with existing streets

New streets intersecting with or extending to meet existing streets must be tied to the existing street on centerline with dimensions and bearings to show relationship.

4.10.3.4. Partial or half streets

Partial or half streets are strongly discouraged. Partial or half streets may be provided only where the city finds a street should be located on a property line, where the proposed road has a center median.

4.10.4. Traffic calming

4.10.4.1. Horizontal deflection improvements

Traffic calming improvements that use horizontal deflection, including traffic circles, corner neckdowns, chicanes, tapers, landscape medians, are permitted. Horizontal deflection improvements may encroach into the required paved area for a street type described in this Ordinance, if reasonable access is not obstructed. The city engineer and Development Services staff must approve the design and implementation of horizontal deflection improvements.

4.10.4.2. Vertical deflection improvements

Traffic calming improvements that use vertical deflection, including speed bumps, speed humps, speed cushions, and speed tables, are strongly discouraged. The city engineer and Development Services staff must approve the design and use of vertical deflection improvements.

Speed tables, if used, should be integrated into pedestrian crossings at intersections and green links.

Speed humps and speed cushions, while strongly discouraged, are preferable to speed bumps.

4.11. Street Grid, Circulation, and Connectivity

4.11.1. General alignment

The precise alignment of thoroughfares included in the Plan may be varied to allow adjustments that increase the compatibility of the right-of-way with natural or manmade features such as steep slopes, waterways, wildlife habitats, neighborhoods, historic structures or existing roadways.

4.11.2. Street arrangement and internal connectivity

4.11.2.1. Conformity to plan

Width and location of streets must conform to the underlying concept plan and the transportation element of community, neighborhood and other applicable land use and development plans.

4.11.2.2. Topography

The street system must have a logical relationship to the natural topography of the ground.

4.11.2.3. Street Connectivity

The street network in a residential development must be strongly promoted, unless Development Services staff finds it impractical due to creek and drainageways, existing right-of-way, and/or natural features. If this requirement is waived, 5 ft. wide pedestrian trails in at least 15 ft. green links must link cul-de-sacs and provide through-block access where Development Services staff finds pedestrian connectivity is needed.

4.11.2.4. Collector street connectivity

All collector-designated streets shall connect on both ends to an existing or planned collector or higher-level street.



4.11.2.5. Blocks

4.11.2.5.1. Maximum block length

Residential local street block lengths shall be no more than 600 ft., excepting along SH 130, the Union Pacific railroad right-of-way, 100 year floodplain and streets crossing a transmission line easement. Block lengths shall be measured along the block face from intersecting curb to intersecting curb.

4.11.2.5.2. Block depth

Blocks should have sufficient width to allow two tiers of lots of appropriate depth. Alleys giving access to the rear of lots on a block is strongly encouraged.

4.11.2.5.3. Single-tier blocks and double-frontage lots

- Residential blocks with one tier of double frontage lots are strongly discouraged. Alternative block configurations not relying on single tier blocks or long stretches of double frontage lots to separate residential development from through traffic and arterials, or placement of higher density multiple household residential development along arterial streets, is encouraged.
- For residential double frontage lots, there must be an easement at least 10 ft. deep abutting a traffic arterial or other disadvantageous use, dedicated to the appropriate governmental entity, with no right of cross access. There must also be at least a 10 ft. deep tract or easement on the other side of the property line abutting a traffic arterial or other disadvantageous use, for a development perimeter wall and landscaping buffer.

4.11.2.6. Mid-block green lengths

Except for perimeter block frontages along SH130, UP railroad and FM 685, green links at least 12 ft. wide including a sidewalk that is at least 5 ft. wide must be placed near the center and entirely across blocks that are greater than 800 ft. long, to give convenient pedestrian circulation through the development. Green links must be landscaped in conformance to landscaping standards for connecting walkways in this PUD, and maintained by the underlying homeowner association.

4.11.2.7. Circulation

- Each subdivision shall provide for the continuation of all arterial streets and highways as shown on the City's Comprehensive Plan. Arterial streets should be located on the perimeter of the residential neighborhood.
- Collector and local streets should be designed to provide access to each parcel of land within the residential neighborhood and within industrial areas. They should be planned so that future urban expansion will not require the conversion of minor streets to arterial routes.
- Collector streets should be designed to provide a direct route from other minor streets to the major street and expressway system and to provide access to public facilities within the neighborhood; however, collector streets should not be aligned in a manner that will encourage their use by through traffic.
- Collector-designated streets must connect on both ends to an existing or planned collector or higher-level street.

Permitted alternatives to cul-de-sacs include loop lanes and T-streets, and any similar alternative approved by the City Engineer.

4.11.2.8. Required subdivision access points

- To the extent practical, subdivisions with <100 residential units must provide vehicular access to two or more existing or planned public streets

- To the extent practical, subdivisions with 100 to 199 residential units must provide vehicular access to three or more existing or planned public streets.
- To the extent practical, one or more additional access points must be provided for each 100 lots exceeding 199 lots.
- Development Services staff may reduce the required number of access points due to topography, natural features, or the configuration of adjacent developments, or other constraints including SH130, Brushy Creek floodplain, and Union Pacific railroad.
- Access points must be shown on the plat and construction plans for the development. Construction of the street may be postponed to a later phase of development. The Planning and Zoning Commission may require the construction of any access point when the final plat is approved.

4.11.2.9. Relation to adjoining street systems

To provide connectivity to other neighborhoods existing streets in adjacent or adjoining areas shall be continued in the new development, in alignment therewith. Whenever connections to anticipated or proposed surrounding streets are required by this Section, the right-of-way shall be extended and the street developed to the property line of the subdivided property (or to the edge of the remaining undeveloped portion of a single tract) at the point where the connection to the anticipated or proposed street is expected. The permit-issuing authority may also require temporary turnarounds to be constructed at the end of such streets pending their extension when such turnarounds appear necessary to facilitate the flow of traffic or accommodate emergency or service vehicles. Notwithstanding the other provisions of this subsection, no temporary dead-end street in excess of 400 feet may be created unless no other practical alternative is available.

- *Street jogs*
Offsets in street alignment are permitted, provided the distance between center lines is not less than 125 feet.
- *Large lot subdivision*
If the lots in the proposed subdivision are large enough to suggest re-subdivision in the future, or if part of the parent tract is not platted, consideration must be given to possible future street openings and access to future lots which could result from such re-subdivision.
- *Through traffic*
Local streets shall be designed so as to meet the local street connectivity requirements of Section 4.12.2.3.
- *Half streets*
No half streets shall be platted or constructed except for arterial streets.
- *Dead-end streets*
Dead-end streets shall be prohibited except short stubs to permit extension. Temporary turnarounds shall be required where the street stub exceeds one lot or 100 feet in length, whichever is greater. The developer shall provide a sign at the stub declaring that the particular street will connect with future development.

- *Topography*
The street system shall bear a logical relationship to the natural topography of the ground.
- *Private streets*
 - Private streets are prohibited.
 - All streets shall be constructed to City standards for public streets. Common access easements may be required.
- *Unpaved street rights-of-way*
The portion of the street right-of-way between a private lot line and the curb or pavement edge shall be designed and constructed to meet the requirements of the City's Construction Standards and Specifications for Roads, Streets, Structures and Utilities.
- Access to public streets from private property
 - No person shall cut a curb or gutter Section nor pave a street right-of-way without first obtaining a permit from the City, and complying with City Codes. Where no curb and gutter street construction is permitted, no person shall construct or pave the borrow ditch street Section without first obtaining a permit from the City and complying with City Code.

No temporary utility service will be provided to the building lot or site until a curb cut, street right-of-way permit has been issued and no permanent utility service will be provided until the work authorized by permit is satisfactorily completed and approved by the City.

4.11.2.10. Intersections

- Sight triangle
According to the following requirements, a sight triangle shall be established at all intersections.
 - On local streets the sight triangle shall be based on the back of the curb, on all other streets it shall be based on the right-of-way.
 - The sides of the sight triangle shall extend for 25 feet along the right-of-way/curb from the projected intersection of said right-of-way/curb. Where the right of-way/curb curves as the intersection is approached, the tangents at the points of beginning for the corner curve shall be projected to determine the origination of the sides of the sight triangle.
 - No construction, planting or grading shall be permitted to interfere with the sight triangle between the heights of three and seven feet as measured from the crowns of the adjacent streets.
- Angle of intersection

Except where existing conditions will not permit, all streets, major and minor, shall intersect at a 90 degree angle. Variations of more than ten degrees on minor streets and more than five degrees on major streets must first be approved by the City Engineer.

- Radius at corners
 - All local and collector street corners shall have 15 foot radii and shall meet required fire apparatus access, except acute corners which shall have a radius of 25 feet. Arterial streets shall have a minimum corner radius of 25 feet. No buildings, sign or parking shall be allowed in the area between the corner curves and the chord connecting the ends of the curves.
 - All street intersections containing one or more residential collector level and above streets shall include 25 foot right of way flares/cutbacks. The 25 foot flare/cutback will be measured along the tangents from the point of intersection of the 2 right of way lines.
- Center line tie with existing streets

Each new street intersecting with or extending to meet an existing street shall be tied to the existing street on center line with dimensions and bearings to show relationship.

4.12. Driveways and Easements

4.12.1. Easements

4.12.1.1. Utility easements

All easements must be dedicated to the City and their locations shall be clearly denoted on plat documents.

- Uniform and continuous easements shall be provided along lot lines for utility service. The City may approve a location other than along a lot line.
- Easements for water, sewer, and storm sewer lines shall be at least 20 feet in total width if between lots. 10-foot public utility easements should be included along all street rights-of-way.

Other utility easements (for other than water, sewer, and storm sewer lines) shall be a minimum of five feet in width when abutting the street lot lines and at least three feet in width when abutting interior lot lines.

4.12.1.2. Emergency access easements

Emergency access easements shall be defined by the local fire code as amended. Emergency access easements shall not be divided by lot lines.

4.12.2. Driveway spacing from intersections

- 4.12.2.1. No driveway is permitted closer to a corner than the driveway separation standard provided in Section 4.7.12.

4.12.2.2. Driveway spacing shall be measured from the edge of the street to the center of the driveway.

4.12.2.3. Any request to deviate from these standards may be submitted to the City Engineer.

4.12.3. Design requirements and standards

4.12.3.1. Additional access

The City Engineer may require more than one access point onto a collector or arterial street for a single parcel during Site Plan review provided that the number and location of access points onto local streets and the additional access points onto collector and arterial streets must be approved by the highway authority having jurisdiction over the roadway from which access is being taken.

4.12.3.2. Width of access

The width of access driveways shall be determined by the highway authority having jurisdiction over the roadway from which access is being taken. However, in no case shall an individual driveway width be greater than 35 feet. Where a highway authority has not established driveway width requirements and standards, the standards and requirements of the Texas Department of Transportation shall apply.

4.12.3.3. Closure or relocation of existing access points

The City Engineer, in conjunction with the highway authority having jurisdiction over the roadway from which access is being taken, shall have the authority to require the closure or relocation of existing access points where multiple access points to the site are available.

4.12.3.4. Curb cuts at intersections

A curb cut for a corner parcel at the intersection of any streets shall be located the maximum practical distance from the center of the intersecting streets, without intrusion into any required buffer. The number and location of the curb cut must be approved by the highway authority having jurisdiction over the street from which access is being taken. Where a highway authority has not established curb cut requirements and standards, the standards and requirements used by the Texas Department of Transportation shall apply.

4.13. Road Adequacy Standards

4.13.1. Street naming

Proposed street names must appear on a preliminary plat. Street names become official with the city after the following takes place:

- The plat is recorded; and Williamson County 911 Addressing accepts the street name.

4.13.2. Traffic impact analysis, when required

The TIA shall conform to the requirements set forth in **Section 10.515.4 of the Hutto UDC**. A Traffic Impact Analysis shall be required with any application for a subdivision or plat approval, Site Plan approval, or other procedure for which the proposed development generates traffic in

excess of 2,000 average daily trips, based upon the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. In the event that specific land uses for the development are not specified at the time of subdivision or plat application, the daily trip generation rate for the most intensive land use from the ITE Manual for the land use classification of the application shall be used to compute the estimated average daily trips.

4.13.3. Stormwater and drainage standards

Except as set forth in this Section 4.14.3, the stormwater and drainage standards established in **Section 10.701 of the UDC** shall apply to development of this PUD.

4.13.3.1. Stormwater drainage system

- Drainage channels and detention ponds that are to be maintained by the public shall be contained within drainage lots. Adequate room for access shall be provided for drainage channels and detention ponds. Ramps no steeper than 5 feet horizontal to 1 foot vertical shall be provided at appropriate locations to allow access to drainage channels and detention ponds. The minimum bottom width for any channel with vegetative side slopes shall be 8 feet, except that drainage channels associated with streets have no minimum width. If required, a 5-inch thick reinforced concrete trickle channel shall be provided in all newly constructed channels and from detention pond inlets to outlets. The area adjacent to trickle channels shall slope at a minimum of 2 percent.
- Open drainage sections:
Minor collectors (draining less than 20 acres) shall be constructed using best practices for stormwater drainage to the greatest extent practical. Surface conveyance may be utilized if it can be established to the satisfaction of the City Engineer that it is physically feasible and preferred to storm sewers. Open ditches may be used, provided that such ditches are lined with permanent materials accepted by the City Engineer.

4.13.4. Grading

Grading of lots with existing slopes of 1 percent or greater will not be required, provided it is demonstrated to the satisfaction of the City Engineer that there are no existing or proposed features that will prevent the lots from adequately draining.

4.13.5. Water and wastewater standards

The water and wastewater standards established in **Section 10.801 of the UDC** shall apply to development of this PUD.

Hutto Crossing Planned Unit Development**PUD Comparison Chart**

January 25, 2018

Section No.	Adopted PUD	PUD Amendment	Justification
1. General Provisions			
1.1. Title			
1.1. Title	Establishes name of PUD ordinance	Adds "the District" as name of the PUD	To clearly establish that this mixed use PUD development is within a unified district and under unified control
1.7. Definitions			
1.7. Definitions	Sign height: distance from the sidewalk grade to the top of the sign.	Sign height: distance from the bottom of the sign to the top of the sign, not including support posts, if any are part of the sign assembly.	Clarifies the height measurement of a sign to address the sign only and does not include support posts below the sign.
	(not addressed)	<i>Sign, PUD identification:</i> sign identifying the name and/or logo of the Hutto PUD district without advertising individual developments within the PUD. A PUD identification sign is characterized by expressing a coherent character or features of the District and is distinct from a development sign internal to the PUD that identifies a neighborhood, apartment, residential subdivision or other development within the PUD.	Provides for a sign type that identifies the District as a coherent whole and does not advertise individual uses within the District.
	(not addressed)	<i>Sign, wayfinding:</i> sign which provides orientation, information, directions or wayfinding within or about the District. Wayfinding signs may be free standing (pole), kiosk, monument wall or other permitted sign type within the District.	Provides for a sign type that provides informative information and orientation within and about the District that is useful for customers, users, visitors and residents.
	<i>Sign face area:</i> area of the smallest rectangle enclosing the extreme limits of the sign message, frame, box, and other areas intended to highlight or draw attention to the sign message. Back-to-back faces separated by at least a 30 degree angle are counted separately in measuring sign area (referenced to UDC)	<i>Sign face area:</i> area of the smallest rectangle enclosing the extreme limits of the sign lettering. The sign area calculated shall be measured on a single side. Sign face area does not include a supporting structure, monument, monument base, pole cover, or landscape feature unless used to convey a message.	Clarifies definition of sign measurement when the sign is part of a wall or other structure and that each sign face on a two-sided sign is measured separately.
	<i>Clear vision area:</i> unobstructed view area at corner lots and curb cuts. The clear vision area is a triangle formed between points on flow lines following property lines 30 ft. from an intersection at a corner lot, and 20 ft. along a property line and a traffic lane edge at a curb cut (referenced to UDC)	<i>Clear vision area:</i> unobstructed view area at corner lots and curb cuts. The clear vision area is a triangle formed between points on flow lines following property lines 30 ft. from the point of intersection at a corner lot, and 20 ft. along a property line and a driveway edge of pavement at a curb cut.	Clarifies definition of a "traffic lane edge" to meet intent of this standard.

	<i>Fence height:</i> distance from the top of the fence or wall to the original finished grade of the lot directly under it. Berms, walls or similar features constructed for increasing the height of a fence or wall are considered a part of the fence or wall.	<i>Fence height:</i> distance from the top of the fence or wall to the finish grade of the lot directly under it. Berms, walls or similar features constructed for increasing the height of a fence or wall are considered part of the fence or wall.	Clarifies that height is measured from finished grade of lot
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1.10. Reviewing and Administration Parties			
1.10. Reviewing and Administration Parties	(not addressed)	Development Services staff as identified in this PUD shall include City of Hutto Planning, Engineering, Parks and Recreation and other City departments as appropriate.	Clarifies City departments responsible for administrating the PUD.

2. Development Plan			
2.2. Use Descriptions and Standards			
2.2.3.1. New and undefined uses	If Development Services staff finds the proposed land use is not appropriate for the district, the applicant may appeal the decision to the City Council within 30 days of determination.	If Development Services staff finds the proposed land use is not appropriate for the District, the applicant may appeal the decision to the City Council within 60 days of determination.	Extends appeal period to a reasonable period of time.

3. Site Design Standards			
3.1. General Standards			
3.1.3.2. Primary and accessory structures	Building height (max) for Vertical mixed use, Institutional, Commercial and Retail: 3 stories; 5 stories along US 79 and FM 685	Building height (max) for Vertical mixed use, Institutional, Commercial and Retail: 3 stories; 5 stories along US 79, FM 685 and SH 130	Included SH 130 to be consistent with UDC
3.1.6.1. Buffer yards between lots	Buffer yards planted and/or screened in conformance to landscape and fencing standards in this PUD, are required between lots as follows.	Buffer yards planted and/or screened in conformance to landscape and fencing standards in this PUD, are required between adjacent lots as follows. A buffer yard shall be measured from property line of the adjacent development use. Sidewalks and internal walkways are a permitted use within a buffer yard.	Clarification of measuring from a buffer yard and allowance for permitted uses to be included in buffer yard.
3.2. Site Design			
3.2.1.2.3.3. Areas not considered as common open space	Land areas between buildings, and between building and parking lots or driveways, of less than 30 ft.	Land areas between buildings less than 30 ft., and land area between a building and parking lots or driveways less than 30 ft.	Provides for an appropriate reduction of buffer yards to meet purpose and intent of this compact and connected PUD and clarifies that buffers apply to rear and side setbacks
3.2.1.2.3.3. Areas not considered as common open space	Required perimeter setbacks.	Required rear and side yard setbacks.	Provides for the reasonable use of front yards as common open space

3.2.3.3. Pedestrian connectivity	Connecting walkways, at least 6 ft. wide for commercial development and at least 5 ft. for MF development, must link perimeter public sidewalks with building entries through parking areas, all points in the development, and buildings on adjacent parcels. Circulation patterns must be as obvious and simple as possible. All likely pedestrian routes must be considered to minimize shortcuts to the extent practical through parking and landscape areas.	Connecting walkways, at least 5 ft. wide for a commercial development and at least 5 ft. for MF development, must link perimeter public sidewalks to primary building entries, including through parking areas, and to buildings on adjacent parcels, to the greatest extent practical. Circulation patterns must be as obvious and simple as possible. All likely pedestrian routes must be considered to minimize shortcuts to the extent practical through parking and landscape areas.	Clarifies intent that walkway circulation routes are directed to primary pedestrian entries, provides uniform 5 ft. sidewalks and connecting walkways within PUD, and promotes interconnect walks between adjacent parcels to the extent practical
3.2.5.2 Orientation	Service areas cannot be placed where they will be readily visible from primary facades of adjacent buildings or where they will harm important or identified view corridors.	Service areas may not be located where they will be readily visible from primary facades of adjacent buildings without appropriate screening to screen service area views from the primary facades of adjacent or where they will harm important or identified view corridors.	Clarifies language to appropriately locate service areas to meet intent of standard
3.2.6.2. Project incorporation	Provide a plaza or courtyard at least 200 sq. ft. with a bench and/or picnic table next to the water body.	Provide a plaza or pedestrian gathering area at least 200 sq. ft. with a bench and/or picnic table close to the water body.	Provides design flexibility to accomplish goal of achieving a pedestrian oriented environment
3.2.6.3. Slope	Fenced retention basins will only be approved in extreme situations, and will be placed to the side and/or rear of the parcel as far from the public right-of-way as possible.	Fenced retention basins will be approved administratively by City Engineer staff only in extreme situations, and may be placed to the side and/or rear of the parcel as far from a public street as possible.	Clarifies basin location and provides for administrative approval using stated criteria to meet intent of standard

3.3. Parking and Access			
3.3.2.2. Curb cuts	When a parcel fronts on two different streets, or a street and a rearage road, the curb cut must be from the street with the lower functional classification.	When a parcel fronts on two different streets, or a street and a rearage road, the curb cut must be from the street with the lower functional classification, unless otherwise administratively approved by Development Services staff.	To provide limited flexibility, if warranted and meets intent of this section
3.3.5. Stacking/Queing Areas			
3.3.5.1. Drive-through aisles	Drive-through aisles, elements and windows cannot be on a street-facing side of the building.	Drive-through aisles and pickup windows cannot be on a street-facing side of the building. Reduction of minimum length of queuing length may be approved by Development Services staff if it can be demonstrated that it is necessary and feasible.	Clarification of prohibition of pick-up window on street-facing facades (vs. regular windows) and provision for que length modification based on site specific use
3.3.6.2.1. Lots and Parcels Fronting along FM 685, Carl Stern Boulevard and SH 130	Frontage along FM 685, UP Railroad and SH 130	Lots and Parcels Fronting along FM 685, Carl Stern Boulevard and SH 130	This standard adds Carl Stern Boulevard to this category for parking location and provides for a new category for parking along the UP Railroad.
3.3.6.2.2. Lots and Parcels Fronting along internal streets	Parking for retail uses in buildings larger than 50,000 sf. is exempt from this parking space location requirement.	Parking for retail, commercial and industrial uses in buildings larger than 50,000 sf. is exempt from this parking space location requirement.	Adding commercial and industrial to retail is reasonable for for bldgs larger than 50K SF

3.3.6.2.3. Lots and Parcels Fronting along UP Railroad Right-Of-Way	Frontage along FM 685, UP Railroad and SH 130	Parking for non-residential uses may be located without limitation, provided that landscape screening is provided along the UP Railroad right-of-way that comply with requirements set forth with Section 3.5.3.4 Parking lot and vehicular use screening	Creation of a separate category of parking limitation along the UP Railroad ROW, given lack of vehicular access across the railroad. A provision for vegetative screening is added to meet intent of this Section.
3.3.7 Parking and Loading Space Number Standards			
3.3.7.1. Required parking spaces	Table 3.3.7.1 includes Maximum parking spaces category for all PUD uses	Maximum parking spaces category deleted from table	Land costs and construction costs within the compact PUD self-regulate parking spaces that users will build for the operation and convenience of employees and customers, given the higher standards required in this PUD. Placing a maximum parking space limitation is an overly restrictive standard. Minimum spaces requirements remain unchanged.
3.3.7.2. Variance to minimum parking requirements and parking space location	Exceeding maximum parking requirements may be approved by the Board of Adjustment if it can be demonstrated that the permitted maximum number of spaces will not meet the normal day-to-day needs of a proposed use. Exceeding parking space location requirements may be approved by the Development Services staff if it can be demonstrated that the permitted parking space location will not meet the normal day-to-day needs of a proposed use.	Reducing minimum parking requirements may be approved by the Board of Adjustment if it can be demonstrated that the permitted maximum number of spaces will not meet the normal day-to-day needs of a proposed use.	Removed "maximum parking requirements" and replaced with "reducing minimum requirements". Land and construction costs self-regulate the parking spaces that users will build, given costs associated with the higher standards in this PUD. Users need a regulatory avenue through the Board of Adjustments to request relief.

3.4. Architectural design			
3.4.1 Single Household and Two- to Four-Household Residence Design			
3.4.1.5.2. Garage doors -articulation	Paint colors and/or stain for garage doors shall be compatible with the building elevation	Paint colors and/or stain for garage doors shall be compatible with the color palette of the building elevation on which the garage door is located	Clarifies intent of color compatibility of garage door with the house elevation color palette
3.4.1.5.2. Garage doors -articulation	The use of garage doors for 3 cars on a street facing facade is discouraged; At least one of the garage doors must be recessed a minimum of 4 ft.	The use of 3 garage doors on a street facing facade is discouraged; At least one of the 3 garage doors must be side facing or recessed a minimum of 4 ft. from the other garage doors.	Clarifies intent to discourage 3 garage doors, and establishes how these doors must be arranged
3.4.1.5.4.3. Garage - flush with façade	Pronounced garage door detailing, windows are a preferred element	Garage door relief detailing and windows are a preferred element	Clarifies language and intent of standard to be met
3.4.1.6.1. Same plan, different elevation, same side of the street	When building different elevations of the same plan on the same side of the street, two lots must be skipped before repeating the same elevation.	When building different elevations of the same plan on the same side of the street, two lots must be skipped and the home (same plan, different elevation) shall be placed on the third lot.	Clarifies intent of standard to be met to match intent of pictorial diagram (note: staff clarified this language in memo format at earlier date)

3.4.1.6.2. Same plan, different elevation, opposite side of the street	When building different elevations of the same plan on the opposite side of the street, one and a half lots must be skipped before repeating the same elevation.	When the same plan, different elevation is on the opposite side of the street, the lot fronting the property, and the one beside it shall be skipped, for a total of two skipped lots, and the home (same plan, different elevation) shall be placed on the third lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.	Clarifies intent of standard to be met to match intent of pictorial diagram (note: staff clarified this language in memo format at earlier date)
3.4.1.6.3. Same plan, same elevation, same or opposite side of the street	When building same or similar elevations of the same plan on the same or opposite side of the street, four lots must be skipped before repeating the same elevation. Same elevations may not be facing opposite one another.	When the same plan, same elevation is on the same side of the street, three lots shall be skipped and the home (same plan, same elevation) shall be placed on the fourth lot. When the same plan, same elevation is on the opposite side of the street, the lot fronting the property shall be counted as the first lot, then count an additional two lots and place the home (same plan, same elevation) on the fourth lot. The lot fronting the subject lot is defined as a lot that has one or more side property lines directly across the street from the subject lot.	Clarifies intent of standard to be met to match intent of pictorial diagram (note: staff clarified this language in memo format at earlier date)
3.4.2 Single Household Attached and Multiple Unit Household Residence Design			
3.4.2.4.1. Building materials	A waiver to building material standards may be considered.	Deviations up to 10% to building material standards may be administratively approved by Development Services staff if it can be demonstrated that the building material meets the design intent of this Section.	Clarifies language for intent and provides for a quantified deviation for administrative approval, provided it meets intent of PUD
3.4.3. Commercial, Office, Public, Institutional and Mixed-Use Building Design			
3.4.3.3.4. Exterior walls	Exterior walls cannot have a blank, uninterrupted length greater than 30 ft. without including two or more of these features: change in plane, change in texture or masonry pattern, windows, or other equivalent element(s) that subdivide the wall into human scale proportions. Side or rear walls may include false windows and door openings defined by frames, sills and lintels, or similarly proportioned modulations, only when actual doors and windows are not possible because of the building use.	Exterior walls cannot have a blank, uninterrupted length. greater than 50 ft. without including one or more of these the following design features: change in plane, change in texture or masonry pattern, windows, or other equivalent element(s) that subdivide the wall into human scale proportions. Side or rear walls may include false windows and door openings defined by frames, sills and lintels, or similarly proportioned modulations, only when actual doors and windows are not possible because of the building use. Deviations up to 10% to side or rear wall articulation may be administratively approved by Development Services staff if it can be demonstrated that the building wall design meets the design intent of this Section.	Clarifies language for intent and provides for a reasonable façade treatment, including pattern and rhythm, for design features in scale with commercial uses, with a quantified deviation for administrative approval, provided that it meets intent of PUD
3.4.3.3.6. Retail building entrances	Anchor stores, at least 25% of the stores in a shopping center; and freestanding, single-use buildings, must have a clearly defined, highly visible customer entrance with four or more of the following elements (but not limited to):	Anchor stores (defined as a retail building containing greater than 25,000 sf), and freestanding, single-use buildings, must have a clearly defined, highly visible customer entrance with four or more of the following elements (but not limited to):	Defines size of an anchor store and clarifies intent of standard to be met by providing language to address arrangement of a commercial center

3.4.3.3.8. Transparency in commercial buildings	At ground level, buildings must have a high level of transparency. Façades and walls that face a street, plaza and parking areas (excluding the building rear and service areas) must be transparent between 2 ft. and 7 ft. above the grade or walkway along at least 75% of its length along the front facade. Where the internal arrangement of a building makes it impossible to provide transparency along a portion of a wall, a combination of sculptural, mosaic, or bas-relief artwork and transparent window areas or displays may substitute for 50% of required transparent areas, except when fronting plaza areas.	At ground level floors, buildings must have a high level of transparency: façades and walls that face a public street, plaza, or primary customer parking areas (excluding the building rear and side facades and service areas) must be transparent between 2 ft. and 7 ft. above the grade or walkway along at least 50% of its length along the front facade, except where the internal arrangement of a building makes it impractical to provide transparency along a portion of a wall. In these conditions, a combination of sculptural, mosaic, or bas-relief artwork and transparent window areas or displays may substitute for 25% of required transparent areas, except when fronting on plaza areas.	Clarifies intent of the standard to create adequate transparency and/or building articulation for areas of commercial buildings that customers typically frequent
3.4.3.3.9. Garage doors	Vehicle service areas and bays must be screened or sited so visibility from the public right-of-way is as low as possible. Bay doors cannot face the street or be visible from residential zoning districts.	Vehicle service areas and bays must be screened or sited so visibility from a public street is as low as possible: landscape screening shall comply with requirements set forth with Section 3.5.3.4 parking lot and vehicular use screening	Clarifies that this standard applies to a unified, mixed-use PUD development and provides for compliance with screening standards established in the PUD
3.4.3.4.3. Roof lines	The continuous plane of a roof line must be no more than 100 ft.	The continuous plane of a roof line must be no more than 100 ft. unless it can be demonstrated it meets the intent of this Section. Exceptions may be administratively approved by Development Services staff.	Provides for flexible application of this Section to achieve variety and diversity of roof design
3.4.3.5.2. Canopy support poles	Canopy support poles must include decorative corbels consistent with the overall architectural theme of the site, or pole covers at least 18 in. wide with a similar surface material and architectural treatments as the dominant material on the main structure.	Canopy support poles must include design elements consistent with the overall architectural theme of the primary building, or pole covers at least 18 in. in diameter or width with a similar surface material and architectural treatments as the dominant material on the host building.	Provides for flexible application of this Section to achieve variety and diversity of canopy roof pole design
3.4.3.6.1. Building materials	Predominant building exterior materials must be high quality, and used in their natural context and color. Masonry (stone, brick, decorative CMU and similar materials) must be used as exterior materials (at least 40% of exterior surface area). Fiber-cement siding and textured concrete EIFS are examples of appropriate secondary exterior materials. Corrugated metal may be used to reinforce a vernacular design theme. Corrugated metal may have a cumulative surface area of no more than 50% of the area of all exterior walls for a building.	Predominant building exterior materials must be high quality and durable. Masonry (stone, brick, decorative CMU and similar materials) must be used as exterior materials for at least 40% of exterior facades, excluding doors, windows and trim. Wood, fiber-cement siding and textured concrete EIFS are examples of appropriate secondary exterior materials. Corrugated metal is an acceptable material. Corrugated metal and ACM panels are examples of acceptable accent materials, and may have a cumulative surface area of no more than 30% of the area of all exterior walls on a building.	Clarifies language to achieve high quality building material standards; allows for accent use of standard building materials typical in the region, and provides for use of durable accent materials of corrugated metal and ACM panels

3.4.3.6.4. Material or color changes	Material or color changes must occur only at a change of plane or reveal line.	Material or color changes must occur only at a change of plane or reveal line, unless when administratively approved by Development Services staff.	Provides for reasonable design flexibility to meet intent of this Section
3.4.4.4.1. Pattern	All elements must repeat at intervals of no more than 30 ft.	Design elements must repeat at intervals of no more than 60 ft. Deviations up to 10% to the interval repetition may be administratively approved by Development Services staff	Modifies an arbitrary standard and provides for resonable design flexibility to meet intent of this Section

3.5. Landscaping

3.5.3. Required landscaping: non-residential and 3+ household residential development

3.5.3.1. Landscaping areas	Parcels with a non-residential use or 3+ household residential structures must be landscaped as follows. Additional plants may be required per buffer yard standards in Section 2.3.5, and mechanical equipment screening requirements.	Parcels with a non-residential use or 3+ household residential structures must be landscaped as follows. Additional plants may be required per buffer yard standards in Section 3.1.6, and mechanical equipment screening requirements. Planting requirements set forth in this Section shall comply with standards set forth in Section 3.5.1. Minor deviations to the standards set forth in this Section may be administratively approved by Development Services staff if it meets the intent of this Section.	Strengthens minimum planting requirements, corrects citation (Section 3.1.6) and provides for minor deviations, provided the intent of the referenced Sections are met.
3.5.3.2. Minimum percentage	Former PUD landscape standards, in table format, based on previous version of UDC)	A minimum percentage of the total area being developed shall be landscaped in accordance with the following percentages: Commercial uses: 15% - Commercial pad sites: 5% - Multifamily dwellings: 20% - Office and professional uses: 15% - Institutional and civic uses: 15% - Industrial or manufacturing uses: 10%	(Note: this landscape standard replaces the adopted PUD landscape standard) Establishes minimum percent of landscape area associated with specific uses. Note that compliance with landscape standards cited elsewhere within the PUD must also be met, e.g., buffer yards)
3.5.3.4. Parking lot and vehicular use screening	Former PUD landscape standards, in table format, based on previous version of UDC)	The perimeter of all vehicular use areas including parking areas, drive aisles, and loading areas shall be screened as follows: - Vehicular use areas shall be screened from all abutting rights-of-way, including the UP railroad, by a continuous landscaped area not less than 10 ft. deep. - Vehicular use areas shall be screened from all abutting residential property by a continuous landscaped area not less than 5 ft. deep. - Landscape screening shall contain one (1) large tree per thirty (30) linear feet, or portion thereof, and a continuous hedge not less than 3 ft. in height. The large tree requirement may be omitted if large trees	(Note: this landscape standard replaces the adopted PUD landscape standard) Establishes minimum landscape screening requirements for parking lots and vehicular use area that adds landscape screening requirements along the UP railroad, to address views from US 79, and clarifies that residential property be screened

3.5.3.3. Tree and shrub placement	Trees and shrubs may be clustered in groups, to present a natural environment and ease maintenance. All trees must be placed on the parcel being developed, unless otherwise permitted.	Trees and shrubs may be clustered in groups, to present a natural environment and for ease maintenance. All trees must be placed on the parcel being developed, unless otherwise permitted. If Development Services staff finds that it is impractical to plant trees and/or shrubs on parcels being developed, those required trees and/or shrubs may be planted elsewhere in the PUD. Minor deviations may be administratively approved by Development Services staff in cases where necessary due to site constraints.	Provides some flexibility in meeting the landscape standards in the compact PUD development and clarifies the mechanism for planting in alternative locations if impractical on the parcel.
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3.5.5 Irrigation			
3.5.5.1 Automatic irrigation required	n/a	Includes Parkland or land designated for parkland in this PUD as not requiring automatic irrigation	The existing, natural condition of the parkland is consistent with the intent of this standard of native, xeriscape vegetation not requiring irrigation water.
3.5.6 Tree preservation and removal			
3.5.6.2.3. Healthy, protected trees (native, tall, and small trees)	Healthy native tall and small trees with a DBH of 2.5 in. or more that cannot be considered diseased, dangerous or dead may be removed if the gross DBH loss is replaced 1:1 (1 in. replaced for every 1 in. lost).	Healthy native tall and small trees with a DBH of 2.5 in. or more that cannot be considered diseased, dangerous or dead may be removed from a lot if the gross DBH loss is replaced at a 1:1 ratio (1 in. replaced for every 1 in. lost of caliper inches DBH). At least 50% of the total number of replacement caliper inches must be planted on the lot, to the extent practical, or may be planted elsewhere within the PUD as approved by Development Services staff. Required mitigation trees planted elsewhere in the PUD shall be noted on the site plan, as well as the other site plan, and may not be counted towards future mitigation tree requirements on the other site plan.	Clarifies the standard for tree replacement on a lot and, if impractical, the requirement for tree replacement within the PUD, and provides for a tracking method to account for tracking off-site mitigation trees
3.5.6.3. Tree removal and replacement: signs	Signs are considered nonconforming uses that should eventually be removed; trees are living things that are far more difficult to replace. Healthy trees of all species and sizes, except species defined as nuisance trees, cannot be removed with the intent of increasing the visibility of an existing sign.	Healthy trees of all species and sizes, except species defined as nuisance trees, may not be removed with the intent of increasing the visibility of an existing sign, unless with administrative approval of Development Services staff	Clarifies the standard by which a tree may be removed related to a sign
3.5.6.5.1. Tree protection zone	During construction, perimeter fencing must be erected around protected trees, at least 6 ft. from the trunk or one-half of the drip line, whichever is more.	During construction, perimeter fencing must be erected around protected trees, at least at one-half of the drip line to the greatest extent practical, to establish a tree protection zone, unless otherwise approved by Development Services staff.	Clarifies the standard for tree protection during construction

3.5.6.5.4. Trenching	Trenches or footings must be at least 8 ft. from trunk bases, to the greatest extent practical. In the drip line of protected trees, no cut or fill may be at least 4 in. deep unless a qualified arborist or forester evaluates and approves the disturbance. When trenching for utilities, tunneling under large diameter roots is required to prevent root damage. The developer is responsible for coordination with utility companies when trenching near protected trees.	Trenches or footings must be outside on-half of the dripline, to the greatest extent practical. Under the drip line of protected trees, no cut or fill may exceed 4 in. unless a qualified arborist or forester evaluates and approves the disturbance. When trenching for utilities, tunneling under roots greater than 8 in. diameter is required to prevent root damage. The developer is responsible for coordination with utility companies when trenching near protected trees, to the extent practical.	This standard is modified to eliminate an arbitrary 8 ft trenching setback and replace with a offset distance based on the size of the tree, defines a 'large diameter root' as 8 inches, thereby strengthening the standard
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3.7. Fences and Walls

3.7.3. Required fences, walls, and hedges	The following fence, wall and hedge types are required.	The following fence, wall and hedge types are required. Minor deviations to the fence standards set forth in this section may be administratively approved by Development Services staff.	Without altering the standard, provides for minor deviations based on site specific conditions
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3.8. Outdoor Lighting

3.8.3. Prohibited lighting	(not addressed)	Search lights	Adds search lights as a prohibited lighting type
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3.9. Signs

3.9.1.1. Undeveloped parcels	3.9.1.1. Agricultural uses	3.9.1.1. Undeveloped parcels	The PUD does not include any agricultural uses as permanet uses so this sign table category has been revised to delete agricultural uses and replaced to address temporary signs on undeveloped parcels within the PUD.
3.9.1.1. Undeveloped Parcels Sign Table	The following signs are permitted on lots with agricultural uses, and vacant parcels not subdivided for residential use.	The following signs are permitted on lots with agricultural uses, and vacant, and undeveloped parcels (see attached table 3.9.1.1).	Permanent signs have been deleted from this category, as this sign category addresses only vacant or undeveloped parcels. Temporary sign standards for vacant land within the PUD have been modified to address attracting future commercial uses, along with temporary wayfinding signs for user orientation to features within the development.
3.9.1.2. Residential uses	(See adopted Residential uses sign table 3.9.1.2)	(See amended Residential uses sign table 3.9.1.2)	Permanent sign types have been modified to reflect the new definitions (see Section 1.7 Definitions of this chart), including a new category for PUD identification signs that identify the name and/or logo of the PUD District without advertising individual developments within the PUD, development signs that identify individual developments within the PUD, and permanent wayfinding signs, new sign category, that provide orientation, information, direction or wayfinding within the PUD district. Temporary flags have been deleted. Temporary wayfinding sign standards have been established.

3.9.1.3. Institutional and civic uses	(See adopted Institutional and civic uses sign table 3.9.1.2)	(See amended Institutional and civic uses sign table 3.9.1.2)	Temporary wayfinding sign standards have been established.
3.9.1.4. Commercial, retail and industrial uses	(See adopted Commercial, retail, industrial and recreational uses sign table 3.9.1.4)	(See amended Commercial, retail and industrial uses sign table 3.9.1.4)	Recreational sign standards have been relocated to a new sign table category with open space uses, as a more compatible sign category (table 3.9.1.5.). Permanent sign types have been modified to include a PUD identification sign standard to identify the PUD District, permanent and temporary commercial development signs that attract and identify individual commercial, retail and industrial developments within the PUD have been modified to address the variety of potential commercial uses and orientation to adjacent roadways and permanent and temporary wayfinding sign standards have been added.
3.9.1.5. Open space and recreational uses	(not addressed, except that recreational signs were considered a commercial sign type, see Table 3.9.1.4. Commercial, retail, industrial and recreational uses)	(See new, amended category for Open space and recreational uses sign table 3.9.1.5.)	The PUD includes a substantial amount of open space. The PUD amendment recognizes sign standards not recognized in the existing PUD sign standards. Sign standards are established for this use, along with recreational use, consistent with permitted sign standards elsewhere in the PUD. Both permanent and temporary sign standards are established for these uses.
3.9.2. Exempted signs, not requiring a sign permit	Exempted signs includes address numbers and family name id on residences and City-owned/operated signs	Exempted signs, not requiring a sign permit is modified to also include wayfinding signs and A-frame signs, up to 12 SF in area	Wayfinding signs are a beneficial sign type in a 345-ac mixed use development to provide orientation, information, direction and wayfinding within the District. A-frame signs provide needed flexible advertisement for small retail and other uses
3.9.3. Prohibited signs	Signs placed in or over the public right-of-way or public property. The city may remove signs in the public right-of-way or on public property.	Temporary signs placed in or over the public right-of-way or public property require a sign permit. Permanent signs are not permitted in the right-of-way. The city may remove signs installed without a sign permit that are located in the public right-of-way or on public property. Temporary signs placed in or over the public right-of-way or public property are permitted with an approved R.O.W. permit and City license agreement.	The revised language clarifies the requirement for city approvals, requirements and permits for both temporary and permanent signs located within the R.O.W. or public property.
3.9.4.4. Temporary development sign display time	Temporary signs at developments may be displayed for up to one year, or until the last house or unit in the development is sold, whichever is later. Temporary development signs at rental communities may be displayed for up to one year, or until 90% of units are occupied, whichever is later.	Temporary signs within the PUD may be displayed as long as the sign is maintained in good repair and has a valid sign permit for up to 2 years, at which time a new permit application must be submitted.	The revised language establishes language that permitted temporary signs meet reasonable standards, be maintained adequately. and provides for a sign permit length, thereby providing the City greater control on temporary signs.

3.9.6.10. Sign master plans	Development Services staff may require a Sign Master Plan to be submitted and approved with a concept plan or site plan for a development. Sign type, color, scheme, size and illumination in the center must be coordinated and compatible with the architectural character on the site.	A Sign Master Plan is not required for the PUD, provided signs comply with provisions of this Section 3.9. If a lot contains multiple businesses and uses, the applicant may submit a Sign Master Plan. The plan shall be submitted with a site development plan permit for a parcel or site. Sign type, color, scheme, size and illumination of the signs being submitted for approval must be coordinated and compatible with the architectural character on the site.	The revised language clarifies the purpose, intent and description of a Sign Master Plan.
3.9.7.3. Sign permit not required	Sign permits are not required for the following sign types: exempted signs and window signs	Wayfinding signs added	Wayfinding signs are a beneficial sign type in a 345-ac mixed use development to provide orientation, information, direction and wayfinding within the District.

4. Subdivision Standards

4.7. Parkland Dedication

4.7.1.2. Parkland trail improvement	The developer shall be responsible improving the parkland with a 10 ft. wide concrete shared use trail that is consistent with the City of Hutto Parks, Recreation, Open Space and Trails Master Plan. The shared use trail shall be located in the Brushy Creek 100-year floodplain and extend from the FM 685 ROW to the SH 130 ROW. The alignment of the trail shall be approved by the Parks and Recreation Director prior to construction. The trail alignment must be shown on the preliminary plat and final plat of the parkland. At the City's option, the trail may be constructed by the developer and conveyed to the City upon acceptance, or cash may be paid to the City in lieu of the trail construction. The cash amount will be based on a construction estimate of the trail. If constructed by the developer, the trail construction must be constructed and accepted prior to the completion of the first phase of residential development, unless an alternative date is agreed upon by both the developer and Parks and Recreation Director. Maintenance of the trail shall be the responsibility of the City of Hutto.	The developer shall be responsible improving the parkland with a 10 ft. wide concrete shared use trail that is consistent with the City of Hutto Parks, Recreation, Open Space and Trails Master Plan. The 10 ft. trail shall be located in the Brushy Creek 100-year floodplain and extend from the FM 685 ROW to the SH 130 ROW. The trail improvements must be shown on a detailed exhibit accompanying the final plat of the parkland. At the City's option, the trail may be constructed by the developer and conveyed to the City upon acceptance, or cash may be paid to the City in lieu of the trail construction. The cash amount will be based on a construction estimate of the trail. If constructed by the developer, the trail construction must be constructed and accepted at a date mutually agreed upon by both the developer and Parks and Recreation Director. Maintenance of the trail shall be the responsibility of the City of Hutto upon City acceptance. The alignment of the trail shall be approved by the Parks and Recreation Director prior to construction.	The preliminary plat of the parkland already exists without the trail improvements and showing the trail improvements on the final plat would permanently fix the limits. It is more appropriate to show the developer installed trail improvements on a detailed exhibit accompanying the final plat, clarifies that the developer installed trail construction timing shall be at a date mutually acceptable to the City and developer, and that City maintenance of the trail shall be preceded by acceptance by the City.
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**CITY OF HUTTO
CITY COUNCIL AGENDA**

AGENDA ITEM NO.:

9C.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration of a public hearing and possible action on the first reading of an ordinance approving the zoning change for the property known as 212 FM 1660 South, 0.665 acres, more or less, of land, Lot 4 (N/PT), Block P of the City of Hutto, from OT-4R (Urban Residential) to SD-A (Special District) zoning district. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY:

Well Balanced & Diversified Economy

ITEM BACKGROUND:

The property located at 212 FM 1660 South is approximately 0.66 acres of land, a portion of Lot 4 from the City of Hutto 1911 plat. It is located on the east side of FM 1660 South just north of Hague Street. The applicant is requesting a zoning change from OT-4R (Transition Zone) to SD-A (Arterial Special District) zoning district. The update to the UDC that occurred in 2017 removed some of the commercial uses from the OT-4R district, thus the owner has applied to change the zoning to allow for additional commercial uses.

As per Section 10.1003 of the Unified Development Code (UDC), Arterial Special District Zone consists of lower intensity Commercial (Retail, Office, light industrial) located in low Density auto-oriented buildings; some parking permitted along the public right-of-way; limited pedestrian activity FM 1660 South is considered a non-local minor arterial. A minor arterial carries medium levels of traffic volume and a medium to high traffic speed, and serves areas that generate less traffic than those along major arterials.

The property to the North is also zoned SD-A and allows for retail, office and mixed-use by –right. Other commercial uses, like self-storage or a convenience store with gasoline pumps are required to obtain a separate Specific Use Permit approval. A Specific Use Permit (S) may require specific standards or conditions for a particular use in the zoning district.

There is an existing building on site, but should any expansions or additions to the lot be proposed in the future, those plans will be reviewed for code compliance during the permitting process. Zoning designation runs with the land and will not change until a request is submitted.

All property owners within 200-feet have been notified by mail of the proposed zoning change request. Out of 25 notifications sent there were two responses received. The main concerns stem from the original approval granted for the existing outdoor entertainment use and noise concerns for the adjacent neighborhood.

If additional responses are submitted, Staff will share them at the meeting. Published notice of the request was placed in the Taylor Press and on the City of Hutto website.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Planning and Zoning Commission recommended approval to City Council on July 17, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends that the City Council approve the first reading of the ordinance. The Council may dispense with the second reading of this ordinance.

SUPPORTING MATERIAL:

1. [Notice Posted](#)
2. [Ordinance - 212 FM 1660 South - Zoning Change](#)

PUBLIC NOTICE NOTICE OF A PUBLIC HEARING

NOTICE IS HEREBY GIVEN TO
ALL INTERESTED PERSONS
THAT THE HUTTO CITY COUNCIL WILL
HOLD A PUBLIC HEARING REGARDING:

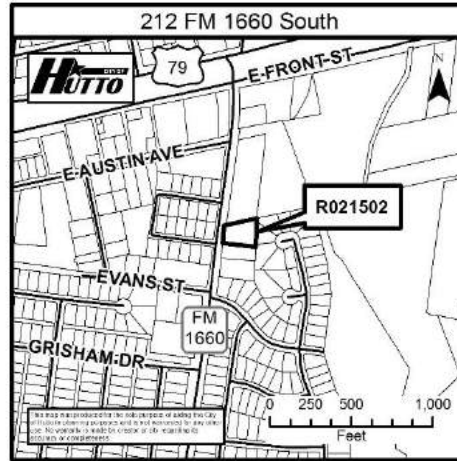
The zoning change for 212 FM 1660 South,
(0.665 acres) Lot 4 (N/PT), Block P of the
City of Hutto Subdivision, located on the east
side of FM 1660 South across from Hague
Street, from OT-4R (Urban Residential) to
SD-A (Special District) zoning district.

The public hearing will be held on:
July 19, 2018 at 7:00 p.m.

Hutto City Hall
401 W. Front St., Hutto, Texas

For additional information the public
may contact Development Services at
512-759-3479 or planning@huttotx.gov

Publication Date: July 1, 2018



ORDINANCE NO.

AN ORDINANCE OF THE CITY OF HUTTO, TEXAS AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF HUTTO, AND MAKING THIS AMENDMENT A PART OF THE SAID OFFICIAL ZONING MAP, TO WIT: TO CHANGE THE ZONING FOR THE PROPERTY KNOWN AS 212 FM 1660 SOUTH, 0.665 ACRES, MORE OR LESS, OF LAND, LOT 4 (N/PT), BLOCK P OF THE CITY OF HUTTO; IN WILLIAMSON COUNTY, TEXAS, BEING MORE PARTICULARLY DESCRIBED IN EXHIBIT "A", FROM OT-4R (TRANSITION) TO SD-A (SPECIAL DISTRICT) ZONING DISTRICT; PROVIDING FOR A PUBLICATION CLAUSE, SEVERABILITY CLAUSE, REPEALING CLAUSE, OPEN MEETING CLAUSE, PENALTY CLAUSE AND EFFECTIVE DATE.

WHEREAS, a request has been made to the City Council of the City of Hutto, Texas to amend the Official Zoning Map to zone the properties described in Exhibit "A" being attached hereto and incorporated herein, and;

WHEREAS, the Planning and Zoning Commission recommended approval of the proposed change in zoning on the 17th day of July, 2018, and;

WHEREAS, on the 19th day of July, 2018, after proper notification, the City Council held a public hearing on the requested amendment, and;

WHEREAS, the City Council determines that the zoning provided for herein promotes the health, safety, morals and protects and preserves the general welfare of the community, and;

WHEREAS, each and every requirement set forth in Chapter 211, Sub-Chapter A., Texas Local Government Code concerning public notices, hearings, and other procedural matters has been fully complied with, Now therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

SECTION I.

That the City Council has considered and made findings on the following matters regarding the proposed amendment:

- 1) Consistency (or lack thereof) with the Comprehensive Plan; and
- 2) Compatibility with the present zoning and conforming uses of nearby property and with the character of the neighborhood; and
- 3) Suitability of the property affected by the amendment for uses permitted by the district that would be made applicable by the proposed amendment; and
- 4) Suitability of the property affected by the amendment for uses permitted by the district applicable to the property at the time of the proposed amendment; and
- 5) Availability of water, wastewater and stormwater facilities suitable and adequate for the proposed use.

That the Official Zoning Map of the City of Hutto, Texas, is hereby amended so that the zoning classification of the property described in the Exhibit "A", attached hereto and incorporated herein shall be, and is hereafter to now be designated as SD-A (Special District) Zoning District.

SECTION II. Publication Clause

The City Secretary of the City of Hutto is hereby authorized and directed to publish the caption of this ordinance in the manner and for the length of time prescribed by law.

SECTION III. Severability Clause

The provisions of this ordinance are severable, and if any sentence, section, or other parts of this ordinance should be found to be invalid, such invalidity shall not affect the remaining provisions, and the remaining provisions shall continue in full force and effect.

SECTION IV. Repealing Clause

All ordinances and resolutions and parts thereof in conflict herewith are hereby expressly repealed insofar as they conflict.

SECTION V. Open Meeting Clause

The City Council hereby finds and declares that written notice of the date, hour, place, and subject of the meeting at which this ordinance was adopted was posted and that such meeting was open to the public as required by law at all times during which this ordinance and the subject hereof were discussed, considered, and formerly acted upon, all as required by the Open Meetings Act, Chapter 551, Texas Government Code, as amended.

SECTION VI. Effective Date

This ordinance shall take effect and be in force from and after its passage.

READ and **APPROVED** on first reading on this the **19th** day of **July, 2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

By motion duly made, seconded and passed with an affirmative vote of all the Councilmembers present, the requirement for reading this ordinance on two separate days was dispensed with.

READ, PASSED and **ADOPTED** on first reading of ordinance this **19th** day of **July, 2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

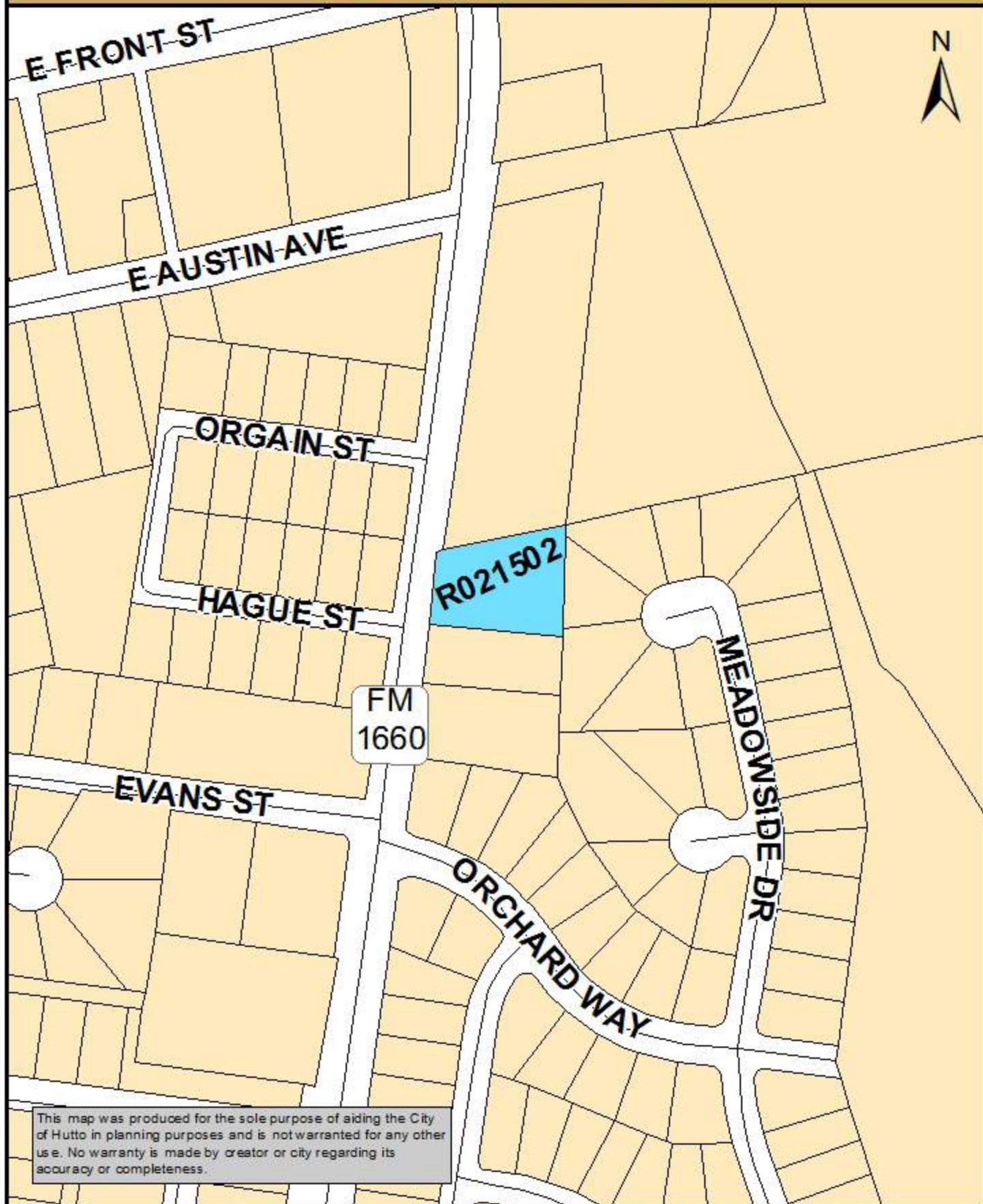
THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

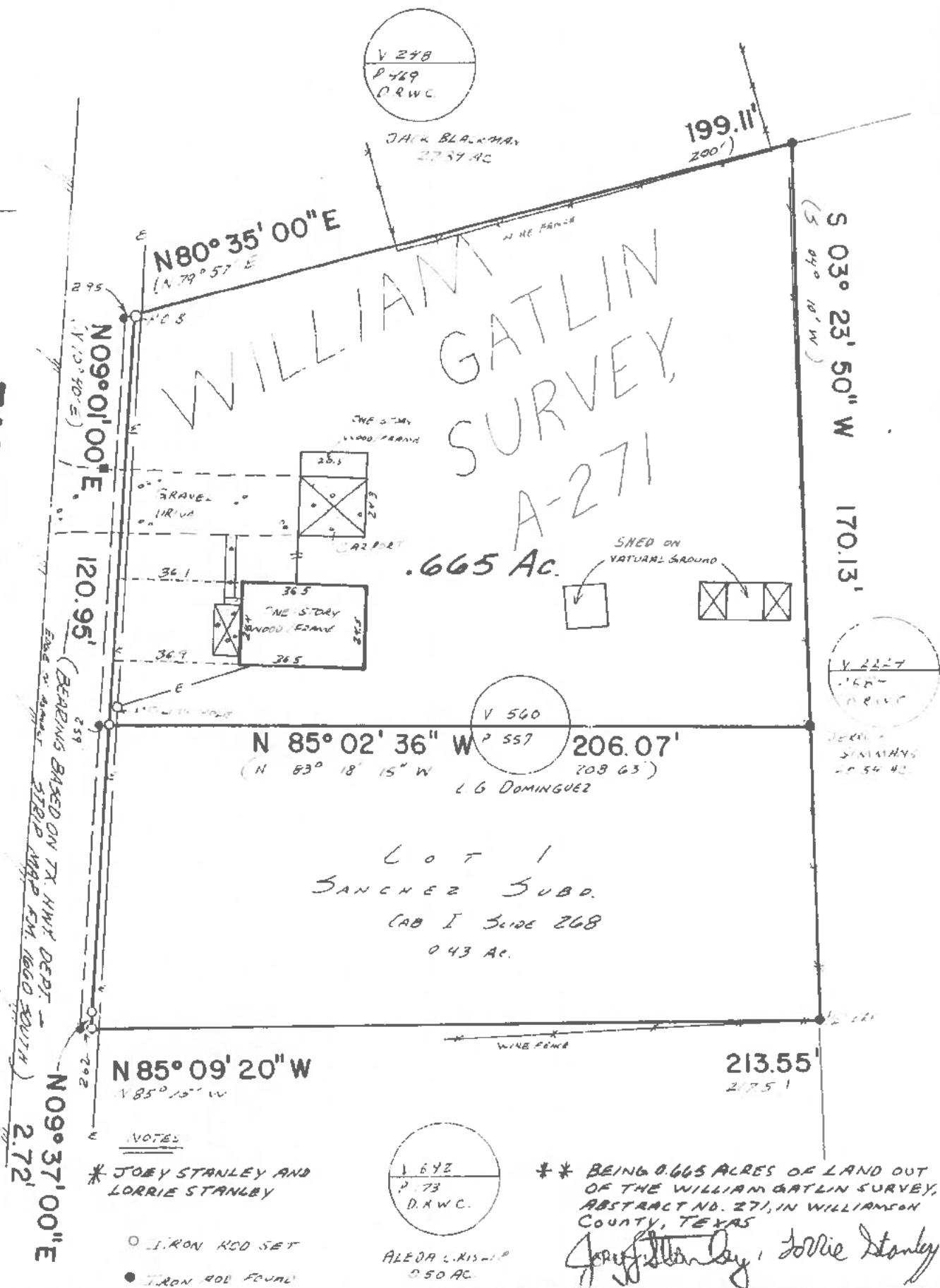
Attest:

Lisa L. Brown, City Secretary

212 FM 1660 South



This map was produced for the sole purpose of aiding the City of Hutto in planning purposes and is not warranted for any other use. No warranty is made by creator or city regarding its accuracy or completeness.



CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.: 9D. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Ashley Lumpkin, AICP, Executive
Director, Business & Development
Services

ITEM:

Consideration of a public hearing and possible action on a Specific Use Permit request for 6081 FM 1660 North to allow a car wash in the B-2 (General Commercial) zoning district. (Ashley Lumpkin)

STRATEGIC GUIDE POLICY: Well Balanced & Diversified Economy

ITEM BACKGROUND:

Property Owner: Tactical Nightmare LLC, Najib Wehbe

Current Land Use: Vacant

Proposed Land Use: Convenience Store with Car Wash

Future Land Use Designation: Commercial (Current); Commercial (Proposed Map)

Current Zoning: B-2 General Commercial

Surrounding Land Use and Zoning:

North: Vacant land; Hutto Development Agreements

South (Across Limmer Loop): Vacant land; Zoned PUD Planned Unit Agreement

East: Vacant land; Hutto Development Agreements

West (across FM 1660): Vacant land; B-2

Summary of Request

The property is approximately 2.59 acres of land, described as Lot 1, Block A of the Canutillo Corner Subdivision, located at 6081 FM 1660. It is located on the northeast corner of FM 1660 at Limmer Loop.

The applicant is requesting a specific use permit (SUP) to include a car wash which will be located at a new convenience store development in a B-2 (General Commercial) zoning district. Car washes are

considered subject to specific use permit review in the B-2 district, as outlined in Unified Development Code (UDC) Section 10.304.6.

A Specific Use Permit request is evaluated with the following criteria:

- The proposed use conforms to this code and is consistent with the comprehensive, neighborhood and other applicable land use and development plans.
 - The current Future Land Use Map identifies this area as Commercial. The requested use is in compliance.
- The proposed use is compatible with existing and permitted uses in the surrounding area and would not adversely affect property near the site.
 - The property will be required to come into compliance with current development standards.
- The site is a legal building lot.
 - The property is a legally platted and appropriate for development.

Details of building orientation are provided as conceptual. Site plan, building plans and landscaping will be reviewed for code compliance during the permitting process. A specific use permit approval does not run with the land, and expires with the end of the approved use.

All property owners within 200-feet have been notified by mail of the proposed specific use permit request. If responses are submitted staff will share them at the meeting. Published notice of the request was placed in the Taylor Daily Press and on the City of Hutto website.

BUDGETARY AND FINANCIAL SUMMARY:

Not applicable.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Planning and Zoning Commission recommended approval on July 17, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends that the Council approve the first reading of the ordinance. The Council may dispense with the second reading of the ordinance.

SUPPORTING MATERIAL:

1. [Notice Posted](#)
2. [Ordinance - 6081 FM 1660 North](#)

PUBLIC NOTICE NOTICE OF A PUBLIC HEARING

NOTICE IS HEREBY GIVEN TO ALL INTERESTED PERSONS THAT THE HUTTO CITY COUNCIL WILL HOLD A PUBLIC HEARING REGARDING:

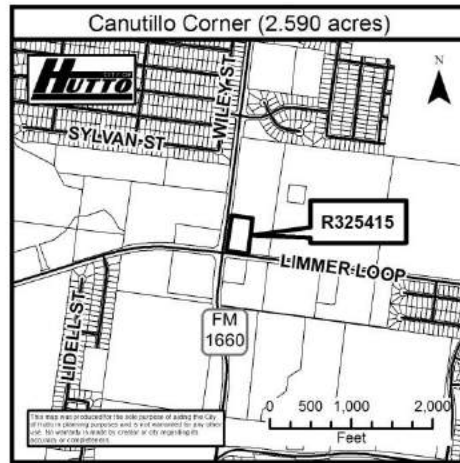
The request for a Specific Use Permit to allow a car wash in the B-2 (General Commercial) zoning district at 6081 FM 1660 North, Lot 1, Block A of the Canutillo Corner Subdivision, located at the northeast corner of FM 1660 North and Limmer Loop.

A public hearing will be held on
July 19, 2018 at 7:00 p.m.

Hutto City Hall
401 W. Front St., Hutto, Texas

For additional information the public may contact Development Services at 512-759-3479 or planning@huttotx.gov

Publication Date: July 1, 2018



ORDINANCE NO.

AN ORDINANCE GRANTING A SPECIFIC USE PERMIT TO ALLOW A CAR WASH ON 2.590 ACRES, MORE OR LESS, OF LAND, KNOWN AS 6081 FM 1660 NORTH, LOT 1, BLOCK A OF THE CANUTILLO CORNER SUBDIVISION, BEING MORE PARTICULARLY DESCRIBED IN EXHIBIT "A", ATTACHED HERETO AND INCORPORATED HEREIN; PROVIDING FOR A PUBLICATION CLAUSE, SEVERABILITY CLAUSE, REPEALING CLAUSE, OPEN MEETING CLAUSE, PENALTY CLAUSE AND EFFECTIVE DATE.

WHEREAS, a request has been made to the City Council of the City of Hutto, Texas to grant a Specific Use Permit to allow a car wash on the property known as 6081 FM 1660 North, Lot 1, Block A of the Canutillo Corner Subdivision, described in Exhibit "A", being attached hereto and incorporated herein, and;

WHEREAS, on the 17th day of July, 2018, after proper notification, the Planning and Zoning Commission held a public hearing on the proposed Specific Use Permit request, and;

WHEREAS, the Planning and Zoning Commission recommended approval of the proposed Specific Use Permit request on the 17th day of July, 2018, and;

WHEREAS, on the 19th day of July, 2018, after proper notification, the City Council held a public hearing on the proposed Specific Use Permit request, and;

WHEREAS, the City Council determines that the regulations provided for herein promotes the health, safety, morals and protects and preserves the general welfare of the community, and;

WHEREAS, each and every requirement set forth in Chapter 211, Sub-Chapter A., Texas Local Government Code, and Article 14.02.002, Code of Ordinances (2007 Edition), City of Hutto, Texas concerning public notices, hearings, and other procedural matters has been fully complied with, Now therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS:

SECTION I.

1.

In accordance with the Unified Development Code Sections 10.203.18 and 10.204.2, the City Council has considered and made findings on the following matters regarding the proposed Specific Use Permit request:

10.203.18.3 Criteria

- The proposed use conforms to the Unified Development Code and is consistent with the comprehensive, neighborhood and other applicable land use and development plans.
- The proposed use is compatible with existing and permitted uses in the surrounding area and would not adversely affect property near the site.
- The site is a legal building lot.

10.203.18.5 Conditions

- The Planning and Zoning Commission and/or City Council may impose conditions on a specific use permit.
- Specific use permit approval does not run with the land, and expires with the end of the approved use.

10.203.18.6 Amendments

- Technical or engineering considerations during construction may call for minor deviations from approved specific use permits. Development Services staff may approve minor deviations if they conform to City regulations, and are consistent with the intent of the original specific use permit approval.
- Changes to approved specific use permits that Development Services staff finds are not minor deviations, including Planning and Zoning Commission imposed conditions, require approval through specific use permit review process, requiring a new application.

10.204.2 Effective date and expiration

- Specific use permits expire one (1) year from the date of approval by City Council.

2.

This Specific Use Permit request is subject to the conditions as identified by the City Council and incorporated herein. No permits shall be issued unless all of the following requirements are satisfied:

- Any future development, other than the use specified for this request, on the lot is required to obtain City Council approval prior to permitting.

SECTION II. Publication Clause

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SECTION III. Severability Clause

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READ, PASSED and **ADOPTED** on first reading of ordinance this **19th** day of **July, 2018** at a meeting of the Hutto, Texas City Council; there being a quorum present.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

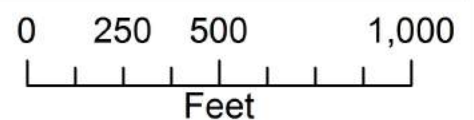
Attest:

Lisa L. Brown, City Secretary

Canutillo Corner (2.590 acres)



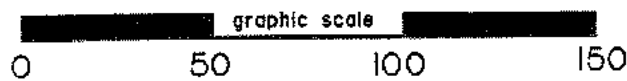
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CANUTILLO CORNER

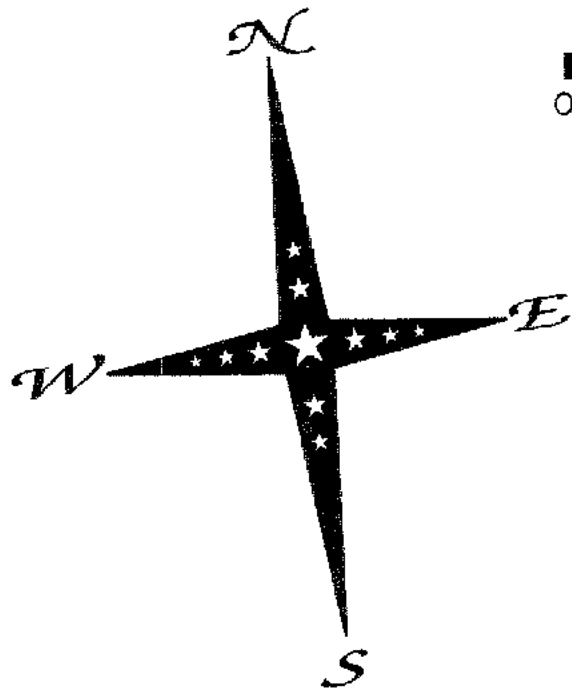
City of Hutto
Williamson County, Texas

SCALE: 1" = 50'

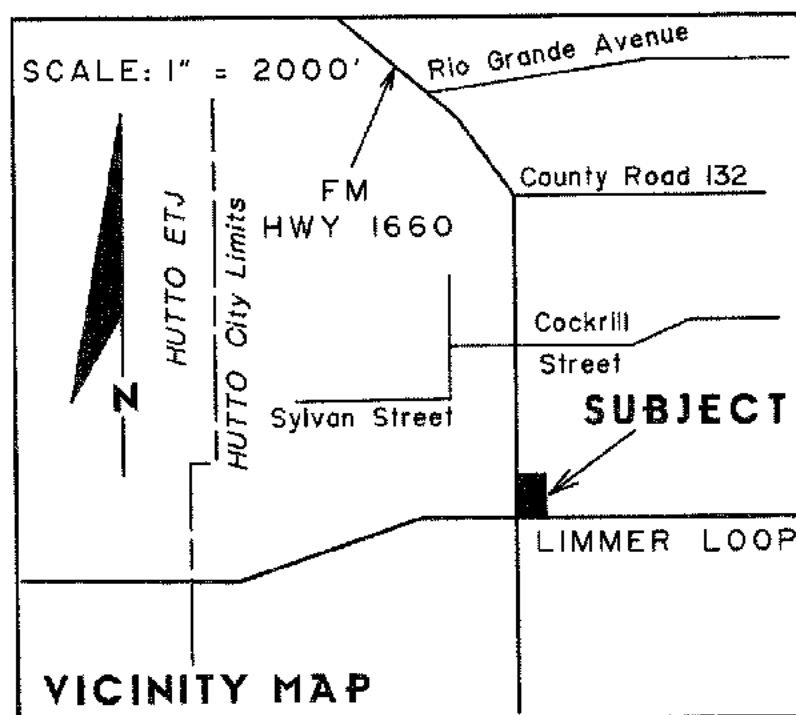


Legend

- ⊙ 1/2" Iron Rod Found
 - ⊕ 1/2" Capped Iron Rod Found
 - 1/2" Iron Rod Set with plastic cap imprinted with "Holt Carson, Inc."
- (Record Bearing and Distance)



KEITH ALAN OLANDER, et al
"Tract Two"
(59.945 Acres) remainder
Partition Deed
Document No. 2008002364



PLAT INFORMATION

AREA OF SUBDIVISION: 2.590 Acres

LINEAR FEET OF NEW STREETS: none

NUMBER OF BLOCKS: 1

NUMBER OF LOTS: 1

Total Area of Lots = 2.386 Acres
LOT Usage = Commercial

SURVEY:

Canutillo Colony Ditch Co. Survey
Abstract No. 693

REMAINDER OF
HUGH S. DAVENPORT SR. AND BILLIE B. DAVENPORT
VOLUME 1079 PAGE 938
WILLED TO
HUGH S. DAVENPORT JR.

F.M. HIGHWAY 1660 (80' R.O.W.)

This area is hereby dedicated
for additional right-of-way.

BEARING BASIS
N07°29'00"E 421.32'

N07°29'00"E 415.05'

LOT 1
BLOCK A
2.385 ACRES

S82°29'40"E 258.43'

243.43'

15.00'

425.25'

435.25'

S07°16'00"W

30' Oil Pipeline Easement per Doc. 2017003560

Electric Line Easement
and Right-of-Way
per Document No. 2011041560

calculated point
currently inaccessible
to set

N82°31'00"W 79.82'

N82°43'08"W 233.78'

N82°43'08"W 245.00'

N82°43'08"W 245.00'

N82°43'08"W 245.00'

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N82°43'08"W 245.00'

N82°43'08"W 245.00'

LOT 1
BLOCK A
NORTHTOWN COMMONS
BLOCK A, LOT 1
Cabinet G-G SLIDE 298

CANUTILLO COLONY DITCH CO. SURVEY
ABSTRACT NO. 693

KEITH ALAN OLANDER, et al
"Tract Two"
(59.945 Acres) remainder
Partition Deed
Document No. 2008002364

JOYCE COLLIN OLANDER, Testamentary Trustee
"Tract One" (40.000 Acres)
Document No. 2008029956

LIMMER LOOP (90' R.O.W.)

PROPERTY OWNERS:
Janet Lynn Olander Barnard
Karen Ann Olander
Keith Alan Olander
Timothy Edward Barnard
Brian Anthony Barnard
Elizabeth Barnard Davis

ENGINEER:
Mirza Tahir Baig
Professional StruCivil Engineers, Inc.
Registered Engineering Firm F-4951
1270 Research Boulevard Suite 390
Austin, Texas 78759
(512) 238-6422

SURVEYOR:
Holt Carson RPLS 5166
Holt Carson, Inc.
1904 Fortview Road
Austin, Texas 78704
Firm Registration 10050700
(512) 442-0990

989056

SHEET 1 of 2

CANUTILLO CORNER

City of Hutto
Williamson County, Texas

FIELD NOTE DESCRIPTION OF 2.590 ACRES OF LAND OUT OF THE CANUTILLO COLONY DITCH Co. SURVEY ABSTRACT No. 693 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN (59.945 ACRE) TRACT OF LAND DESCRIBED AS "TRACT TWO" IN DEED TO JOYCE COLLIN OLANDER AS TESTAMENTARY TRUSTEE AND RECORDED IN DOCUMENT No. 2008029956 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at a capped iron rod found (marked "SAM, Inc.") in the North right-of-way line of Limmer Loop for the Southeast corner of that certain (59.945 acre) tract of land described as "Tract Two" and for the Southwest corner of that certain (40.000 acre) tract of land described as "Tract One" in Deed to Joyce Collin Olander as Testamentary Trustee as recorded in Document No. 2008029956 of the Official Public Records of Williamson County, Texas.

THENCE with the North right-of-way line of Limmer Loop and with the South line of said Olander (59.945 acre) tract, N 82 deg. 43' 08" W 1601.16 ft. to a 1/2" iron rod set with a plastic cap imprinted with "Holt Carson, Inc." for the Southeast corner and PLACE OF BEGINNING of the herein described tract of land.

THENCE continuing with the North right-of-way line of Limmer Loop and with the South line of said Olander (59.945 acre) tract, the following two (2) courses:

- 1) N 82 deg. 43' 08" W 245.00 ft. to a capped iron rod found (marked "Capital Surveying")
- 2) N 37 deg. 52' 08" W 21.18 ft. to a calculated point of intersection in the East right-of-way line of F.M. Highway 1660 for the Southwest corner of said Olander (59.945 acre) tract and being the Southwest corner of this tract.

THENCE with the East right-of-way line of F.M. Highway 1660 and with the West line of said Olander (59.945 acre) tract, N 07 deg. 29' 00" E 421.32 ft. to a 1/2" iron rod set with a plastic cap imprinted with "Holt Carson, Inc." for the Northwest corner of this tract, and from which a capped iron rod found (marked "SAM, Inc.") in the East right-of-way line of F.M. Highway 1660 for the Northwest corner of said Olander (59.945 acre) tract bears N 07 deg. 29' 00" E 965.38 ft..

THENCE leaving the East right-of-way line of F.M. Highway 1660 and entering the interior of said Olander (59.945 acre) tract with the North line of this tract, S 82 deg. 29' 40" E 258.43 ft. to a 1/2" iron rod set with a plastic cap imprinted with "Holt Carson, Inc." for the Northeast corner of this tract.

THENCE continuing across the interior of said Olander (59.945 acre) tract with the East line of this tract, S 07 deg. 16' 00" W 435.25 ft. to the PLACE OF BEGINNING, containing 2.590 acres of land.

DEDICATION
STATE OF TEXAS
COUNTY OF WILLIAMSON
KNOW ALL MEN BY THESE PRESENTS THAT WE, JANET LYNN OLANDER BARNARD, KAREN ANN OLANDER, KEITH ALAN OLANDER, TIMOTHY EDWARD BARNARD, BRIAN ANTHONY BARNARD AND ELIZABETH BARNARD DAVIS, OWNERS OF ALL OF THAT CERTAIN (40.000 ACRE) TRACT OF LAND OUT OF THE CANUTILLO COLONY DITCH Co. SURVEY ABSTRACT No. 693 AND THE JOSIAS B. BEALE SURVEY ABSTRACT No. 97 IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED TO US BY VIRTUE OF PARTITION DEED RECORDED IN DOCUMENT Nos. 2008002364 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY SUBDIVIDE A 2.590 ACRE TRACT OF LAND AND DO HEREBY JOIN, APPROVE AND CONSENT TO ALL DEDICATIONS AND PLAT NOTE REQUIREMENTS SHOWN HEREON. WE DO HEREBY APPROVE THE RECORDATION OF THIS SUBDIVISION PLAT AND DEDICATE TO THE PUBLIC USE FOREVER ANY EASEMENTS AND ROADS THAT ARE SHOWN HEREON.
THIS SUBDIVISION IS TO BE KNOWN AS "CANUTILLO CORNER".

Keith Alan Olander
KEITH ALAN OLANDER
Individually and as Power of Attorney for
KAREN ANN OLANDER
TIMOTHY EDWARD BARNARD
BRIAN ANTHONY BARNARD
ELIZABETH BARNARD DAVIS

Janet Lynn Olander Barnard
JANET LYNN OLANDER BARNARD

ACKNOWLEDGEMENT
THE STATE OF Georgia
COUNTY OF Fulton

ACKNOWLEDGEMENT
THE STATE OF Texas
COUNTY OF Harris

BEFORE ME, THE UNDERSIGNED AUTHORITY, DID HEREBY APPEAR KEITH ALAN OLANDER, KNOWN TO ME TO BE THE PERSON WHOSE NAME SUBSCRIBED TO THE FOREGOING STATEMENT, AND HE ACKNOWLEDGED BEFORE ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS STATED THEREIN.

NOTARY PUBLIC: Ramona Dodds

PRINTED NAME: Ramona Dodds

COMMISSION EXPIRES: March 13, 2018

BEFORE ME, THE UNDERSIGNED AUTHORITY, DID HEREBY APPEAR JANET LYNN OLANDER BARNARD, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING STATEMENT, AND SHE ACKNOWLEDGED BEFORE ME THAT SHE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS STATED THEREIN.

NOTARY PUBLIC: Cheryl White

PRINTED NAME: Cheryl White

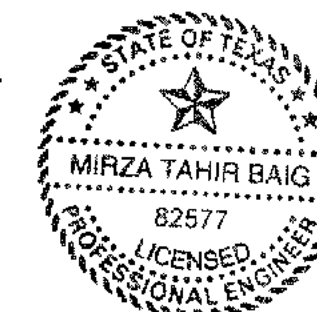
COMMISSION EXPIRES: 03/27/14

ENGINEER'S CERTIFICATION

NO PORTION OF THIS TRACT OF LAND IS WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON FLOOD INSURANCE RATE COMMUNITY PANEL No. 48491C 0520 E, DATED SEPTEMBER 26, 2008 FOR WILLIAMSON COUNTY, TEXAS.
THIS TRACT IS NOT LOCATED IN THE EDWARDS AQUIFER RECHARGE ZONE.

Mirza Tahir Baig
MIRZA TAHIR BAIG
PROFESSIONAL ENGINEER No. 82577

7 November 2017
DATE

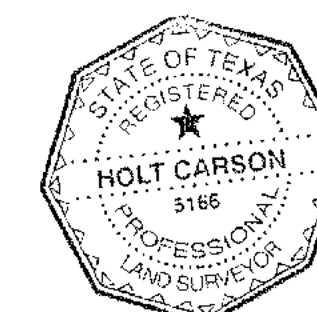


SURVEYOR'S CERTIFICATION

I, HOLT CARSON, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ON THE GROUND SURVEY OF THE LAND SHOWN HEREON AND THAT THE CORNER MONUMENTS SHOWN HEREON WERE PROPERLY PLACED UNDER MY SUPERVISION.

Holt Carson
HOLT CARSON
REGISTERED PROFESSIONAL LAND SURVEYOR No. 5166

10-22-2017
DATE



APPROVAL CITY OF HUTTO

THIS PLAT WAS APPROVED FOR RECORDING BY THE CITY COUNCIL ON THE 6th DAY OF July 2017.

Ray Gaud
MAYOR CITY OF HUTTO

Joe
CITY SECRETARY

STANDARD PLAT NOTES:

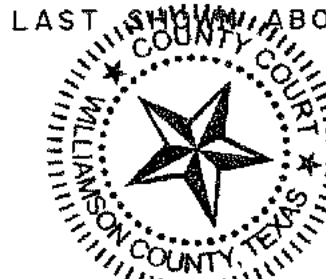
1. NO BUILDINGS, FENCING, LANDSCAPING OR STRUCTURES ARE ALLOWED WITHIN ANY DRAINAGE OR WASTEWATER EASEMENT UNLESS EXPRESSLY PERMITTED BY THE CITY OF HUTTO.
2. BUILDING SETBACKS SHALL CONFORM TO CITY CODES AND REGULATIONS.
3. A TEN (10) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ALONG AND ADJACENT TO ALL STREET SIDE PROPERTY LINES.
4. A FIVE (5) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ON EACH SIDE OF ALL REAR LOT LINES.
5. A FIVE (5) FOOT PUBLIC UTILITY EASEMENT (PUE) IS HEREBY DEDICATED ON EACH SIDE OF ALL SIDE LOT LINES.
6. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTION IS MADE TO PUBLIC WATER AND WASTEWATER UTILITIES.
7. AN ARTERIAL FENCE SHALL BE CONSTRUCTED PER CITY CODES AND REGULATIONS.
8. STREET LIGHTING SHALL BE PROVIDED BY THE DEVELOPER IN CONFORMANCE WITH CITY CODES AND REGULATIONS.
9. NO PORTION OF THIS TRACT OF LAND IS ENCLOSED BY THE ULTIMATE 1% ANNUAL CHANCE FLOODPLAIN.
10. NO PORTION OF THIS TRACT OF LAND IS ENCLOSED BY ANY SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 1% ANNUAL CHANCE FLOODPLAIN AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY BOUNDARY MAP (FLOOD INSURANCE RATE MAP) COMMUNITY PANEL No. 48491C 0520 E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.
11. ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CITY OF HUTTO CODES AND REGULATIONS, CONSTRUCTION STANDARDS AND GENERALLY ACCEPTED ENGINEERING PRACTICES.
12. ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.
13. UTILITY PROVIDERS:
Water: Jonah Special Utility District
Wastewater: Jonah Special Utility District
Electric: Oncor
Gas: Atmos
Telephone: Spectrum

STATE OF TEXAS
COUNTY OF WILLIAMSON
KNOW ALL MEN BY THESE PRESENTS
THAT I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE 27th DAY OF November 2017 A.D. AT 2:00 O'CLOCK, P.M. AND DULY RECORDED ON THE 27th DAY OF November 2017 A.D. AT 2:24 O'CLOCK, P.M. IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT No. 2017108840

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK, COUNTY COURT
WILLIAMSON COUNTY, TEXAS

BY: Connie Phelps
DEPUTY Connie Phelps



GENERAL LEGEND	
---	PROPERTY LINE
---	LIMITS OF CONSTRUCTION
---	SILT FENCE
---	SILT FENCE & LOC
PUE	PUBLIC UTILITY EASEMENT
DE	DRAINAGE EASEMENT
EE	ELECTRICAL EASEMENT
SSE	SANITARY SEWER EASEMENT
WSEL	WATER SURFACE ELEVATION
CMP	CORRUGATED METAL PIPE
---	ELEV. EXISTING CONTOURS
---	ELEV. PROPOSED GRADING CONTOURS

UTILITY LEGEND	
⊙	FIRE HYDRANT
⊕	GATE VALVE
⊕	PLUG OR CAP
⊕	STORM SEWER MANHOLE
⊕	WASTEWATER MANHOLE
⊕	WW CLEAN-OUT
---	WATER LINE
---	WASTEWATER LINE
---	STORM SEWER LINE
---	FLOW INDICATOR (SHOWN TO RIGHT)
---	PROPOSED SERVICE TAP
---	WATER METER
---	IRRIGATION METER
---	STORM SEWER INLET
---	WATER SERVICE (SINGLE)
---	WATER SERVICE (DOUBLE)
---	UTILITY POLE
---	LIGHT POLE
---	OVERHEAD ELECTRIC
---	WIRE FENCE

EROSION CONTROL LEGEND	
⊙	TREE (EXISTING)
⊙	TREE (TO BE REMOVED) (R)
---	TREE PROTECTION

SITE INFORMATION TABLE			
LOT AREA	112,835.11 SF	2.59 ACRES	
IMPERVIOUS COVER EXISTING	0.00 SF	0.0 ACRES	(0.0%)
IMPERVIOUS COVER PROPOSED	57,945.52 SF	1.33 ACRES	(51.35%)
TOTAL IMPERVIOUS COVER	57,945.52 SF	1.33 ACRES	(51.35%)
ZONING	B-2		
PROPOSED USAGE	RETAIL SALES & SERVICE, GAS STATION, CAR WASH		
ALLOWABLE IMPERVIOUS COVER	80%		
LIMIT OF CONSTRUCTION	2.27 ACRES		

IMPERVIOUS COVER TABLE			
BUILDING	9,770.69 SF	(8.66%)	
PARKING	43,108.34 SF	(38.21%)	
SIDEWALK	8,265.49 SF	(7.34%)	
TOTAL	57,945.52 SF	1.33 ACRES	51.35%

BUILDING INFORMATION TABLE			
BUILDING COVERAGE	9,770.69 SF	(8.66%)	
NUMBER OF STORIES	1		
TYPE OF CONSTRUCTION	II-B (STEEL STRUCTURE)		
MAX. BUILDING HEIGHT	25'-0"		
ALLOWABLE BUILDING HEIGHT	N/A		
ALLOWABLE STRUCTURE COVERAGE	N/A		
OCCUPANCY CLASSIFICATION	M		

PARKING TABLE			
TOTAL PARKING SPACES REQUIRED	19 (min.) - 39 (max.)		
GENERAL RETAIL	7,700/200ft=39		
GENERAL RETAIL	7,700/400ft=19		
TOTAL PARKING SPACES PROVIDED	31		

SUMMARY OF PARKING SPACES			
PROVIDED STANDARD SPACES	29		
PROVIDED HANDICAP VAN	1		
PROVIDED STANDARD HANDICAP	1		
PROVIDED LOADING SPACE	0		

PROVIDED STANDARD SPACES 29

PROVIDED HANDICAP VAN 1

PROVIDED STANDARD HANDICAP 1

PROVIDED LOADING SPACE 0

PROVIDED STANDARD SPACES 29

PROVIDED HANDICAP VAN 1

PROVIDED STANDARD HANDICAP 1

PROVIDED LOADING SPACE 0

PROVIDED STANDARD SPACES 29

PROVIDED HANDICAP VAN 1

PROVIDED STANDARD HANDICAP 1

PROVIDED LOADING SPACE 0

PROVIDED STANDARD SPACES 29

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PROVIDED LOADING SPACE 0

PROVIDED STANDARD SPACES 29

PROVIDED HANDICAP VAN 1

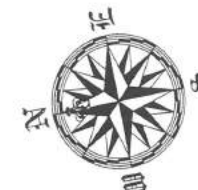
PROVIDED STANDARD HANDICAP 1

PROVIDED LOADING SPACE 0

ACCESSIBLE SITE PLAN NOTE:

- 1) ACCESSIBLE ROUTES WITHIN THE BOUNDARY OF THE SITE MUST BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING AND PASSENGER LOADING ZONES, AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE THEY SERVE. [BC1104.1]
- 2) ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [ANSI 403.3]
- 3) OUTDOOR RAMPS AND THEIR APPROACHES MUST BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES. [ANSI 405.10]
- 4) CHANGES IN LEVEL GREATER THAN 1/2 INCH MUST BE ACCOMPANIED BY MEANS OF A CURB RAMP, RAMP, ELEVATOR, OR PLATFORM LIFT. STAIRS SHALL NOT BE PART OF AN ACCESSIBLE ROUTE. [ANSI 405.9]
- 5) GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT. [ANSI 302.1] SURFACE TEXTURE SHALL BE PROVIDED.
- 6) PARKING ACCESS AISLES MUST BE PART OF THE ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND MUST HAVE A RUNNING SLOPE NO GREATER THAN 1:20 AND A CROSS SLOPE NO GREATER THAN 1:50. [ANSI 502.5]
- 7) PARKED VEHICLE OVERHANGS MUST NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE CIRCULATION ROUTE TO LESS THAN 36". WHEN THE SIDEWALK TO A MINIMUM OF 5 FEET OR PROVIDE WHEEL STOPS 1.5 FEET FROM THE CURB. [ANSI 403.5, TABLE 403.5]
- 8) CURB RAMPS MUST BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB. [ANSI 406.1]
- 9) IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, IT MUST HAVE FLARED SIDES. IF THE LEVEL LANDING AT THE TOP OF THE RAMP IS LESS THAN 48" WIDE, THE SLOPE OF THE FLARE MAY NOT EXCEED 1:12; OTHERWISE, THE MAXIMUM SLOPE OF THE FLARE IS 1:10. CURB RAMPS WITH RETURNED CURBS MAY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. [ANSI 406.3, FIG. 406.3, TCM FIG. 4-1, 4-5]
- 10) CURB RAMPS AT MARKED CROSSINGS MUST BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. [ANSI 406.6]
- 11) EVERY ACCESSIBLE PARKING SPACE MUST BE IDENTIFIED BY A SIGN, CENTERED AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. CHARACTERS AND SYMBOLS ON SUCH SIGNS MUST BE LOCATED 60" MINIMUM ABOVE GROUND SO THAT THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
- 13) APPROVAL OF THESE PLANS BY THE CITY OF HUNTER INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. COMPLIANCE WITH ACCESSIBILITY STANDARDS SUCH AS THE 2010 STANDARDS FOR ACCESSIBLE DESIGN OR THE 2012 TEXAS ACCESSIBILITY STANDARDS WAS NOT VERIFIED. THE APPLICANT IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE ACCESSIBILITY STANDARDS.
- 14) ALL SIDEWALK AND ACCESSIBLE ROUTE SHALL BE CONCRETE FINISH.

F.M. 1660 (R.O.W. varies)



SCALE 1"=30'

LOT 1, BLOCK A
NORTH TOWN COMMONS
BLOCK A, LOT 1
Cabinet GG SLIDE 298

LIMMER LOOP (90' R.O.W.)

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MIRZA TAHIR BAKI, P.E., #62577 ON 05/01/2018
FIRM REGISTRATION F-4951

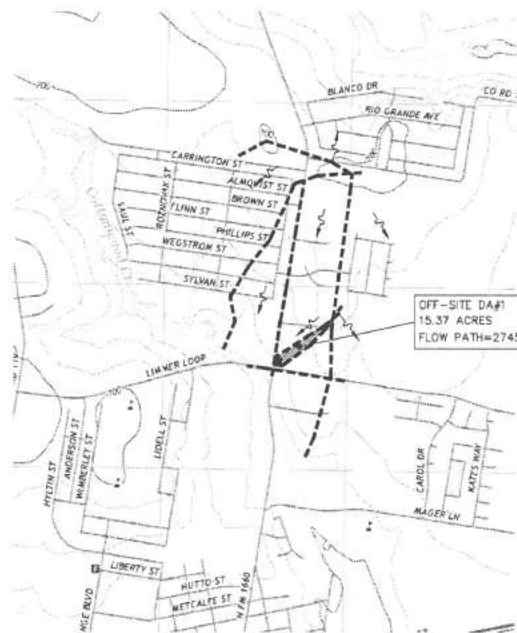
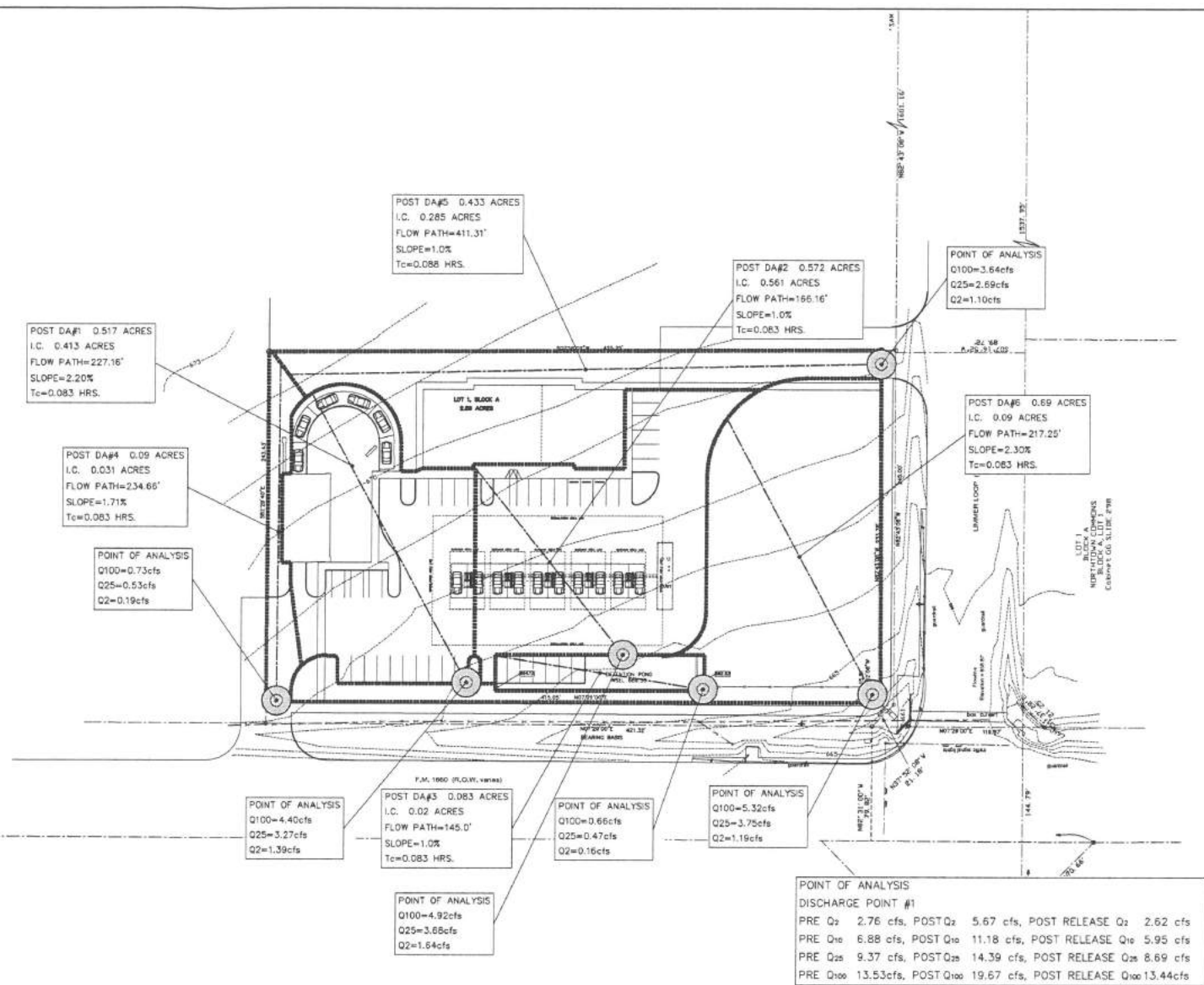
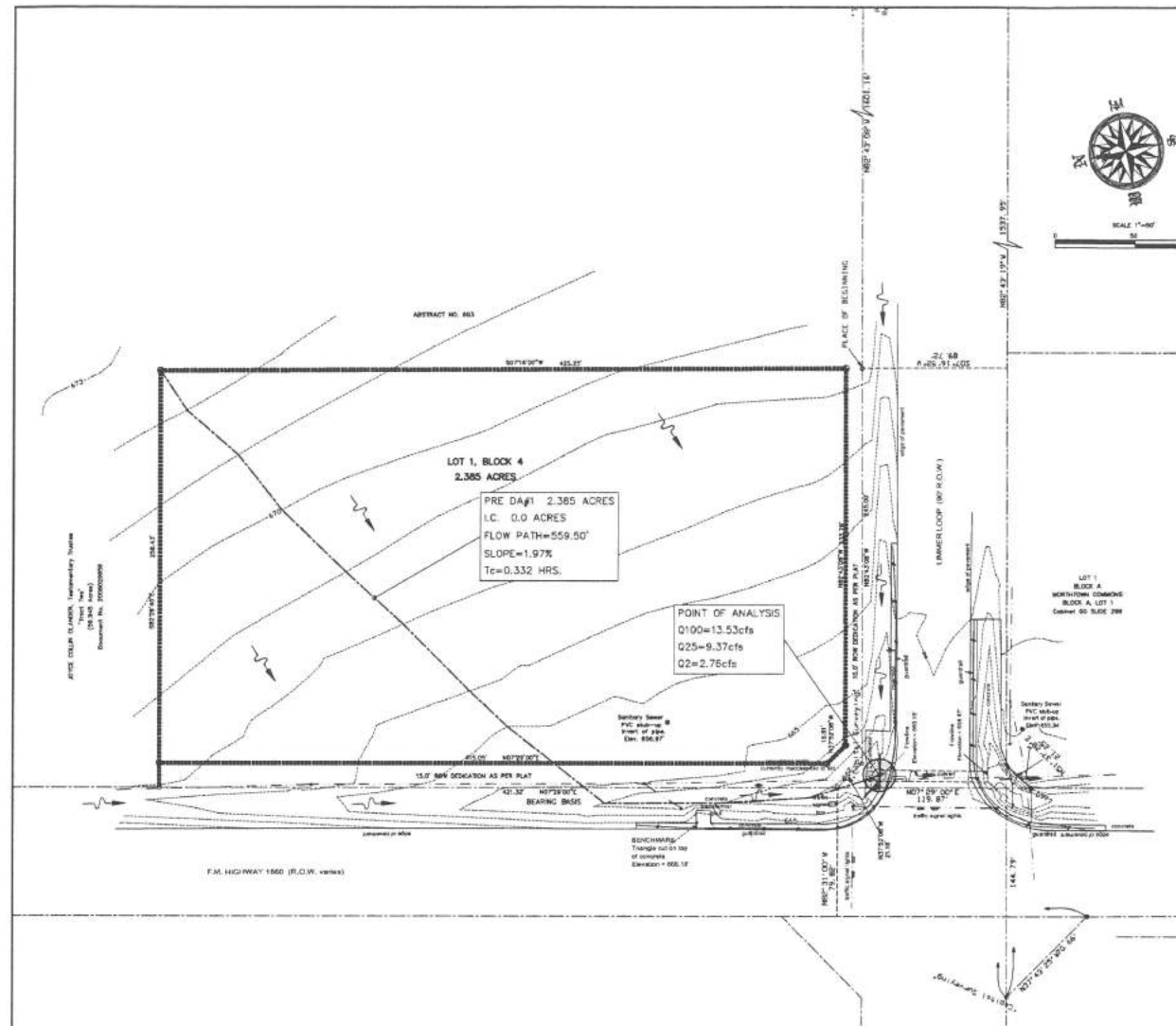
Rev.	Description	Date
0	ISSUED FOR APPROVAL	05/07/18

PROFESSIONAL STRUCTURAL ENGINEERS, INC.
CONSULTING CIVIL AND STRUCTURAL ENGINEERS

12710 RESEARCH BLVD., SUITE 300, AUSTIN, TX 78758 | TEL: 512.384.4421 | FAX: 512.384.8065

Project: **FM 1660 GAS STATION**
6081 FM 1660, HUNTER, TEXAS 78634

Sheet: **5** OF 20



OFF-SITE DRAINAGE AREA MAP
SCALE 1"=3000'-0"

DRAINAGE SUMMARY TABLE (PRE & POST CONDITIONS)

BASIN NAME	PRE DA#1	POST DA#1	POST DA#2	POST DA#3	POST DA#4	POST DA#5	POST DA#6	TOTAL PRE "Q"	TOTAL POST "Q"	TOTAL POST "Q" RELEASE
DRAINAGE AREA (acres)	2.385	0.517	0.572	0.083	0.09	0.433	0.69			
IMPERVIOUS COVER (acres)	0.0	0.413	0.561	0.02	0.031	0.285	0.09			
ON (PRE)	79	79	79	79	79	79	79			
ON (POST)	79	94.17	97.63	83.57	85.54	91.50	81.47			
Tc (hrs.)	0.332	0.083	0.083	0.083	0.083	0.088	0.083			
2YRS. (cfs)	2.76	1.39	1.64	0.16	0.19	1.10	1.19	2.76	5.67	2.62
10YRS. (cfs)	6.88	2.58	2.93	0.36	0.40	2.11	2.80	6.88	11.18	5.95
25YRS. (cfs)	9.37	3.27	3.68	0.47	0.53	2.69	3.75	9.37	14.39	8.69
100YRS. (cfs)	13.53	4.40	4.92	0.66	0.73	3.84	5.32	13.53	19.67	13.44

COMPOSITE OUTFLOW SUMMARY TABLE
ELEVATION ORIFICE-1 WEIR-1 TOTAL Q

ft	cfs	cfs	cfs
662.50	0.0	0.0	0.0
663.00	0.07	0.0	0.07
663.50	0.10	0.0	0.10
664.00	0.12	0.0	0.12
664.50	0.15	0.0	0.15
665.00	0.16	0.0	0.16
665.50	0.18	0.35	0.53
666.00	0.19	1.00	1.19
666.50	0.21	1.84	2.04
667.00	0.22	2.83	3.05
667.50	0.23	3.95	4.18
668.00	0.24	5.19	5.44
668.50	0.26	6.54	6.80

OUTLET STRUCTURE SUMMARY TABLE

EVENTS	ELEVATION	ALLOWABLE "Q"	PROVIDED "Q"
PRE			
2YRS.	665.02	2.76	2.62
10YRS.	666.23	6.88	5.95
25YRS.	666.84	9.37	8.69
100YRS.	667.74	13.53	13.44

DETENTION POND AREA & VOLUME

ELEVATION	AREA	VOLUME
FT	ACRES	AC-FT
662.50	0.00	0.00
662.87	0.039	0.005
663.25	0.079	0.027
664.00	0.079	0.086
665.00	0.079	0.165
666.00	0.079	0.243
667.00	0.079	0.322
668.00	0.079	0.401
668.50	0.079	0.440

2, 10, 25, & 100YRS. ELEVATIONS & VOLUME

EVENTS	POND VOLUME	ELEVATION
AC-FT	FT	
2YRS.	0.166	665.02
10YRS.	0.261	666.23
25YRS.	0.310	666.84
100YRS.	0.380	667.74

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MRZA TAYLOR BARR, P.E., #82577 ON 05/21/2018
FIRM REGISTRATION: F-4951

PROFESSIONAL STRUCTURAL ENGINEERS, INC.
CONSULTING CIVIL AND STRUCTURAL ENGINEERS
10710 RESEARCH BLVD. SUITE 300 AUSTIN, TX 78750 TEL: 512.236.4422 FAX: 512.298.8005

PROJECT: FM 1660 GAS STATION
6081 FM 1660, HUTTO, TEXAS 78634

SHEET: 8 OF 20

DATE: 05/21/18

DESCRIPTION: ISSUED FOR APPROVAL

REVISIONS:

Rev.	Date	Description
0		ISSUED FOR APPROVAL

**CITY OF HUTTO
CITY COUNCIL AGENDA**

AGENDA ITEM NO.:

9E.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Helen Ramirez

ITEM:

Consideration and possible action on an ordinance for a cooperative program to serve the youth in the City of Hutto, Texas, and making available space within city facilities for the program. (Helen Ramirez)

STRATEGIC GUIDE POLICY:

Quality of Life & Services

ITEM BACKGROUND:

The attached Ordinance provides for a cooperative agreement between the City of Hutto and the Sandbox at Madeline's Place ("Provider") to serve the teenage community of the City of Hutto.

The programs offered through the Provider include, and are limited to the following;

PROGRAMS:

Teen Center

- Grades & Grub after school program for middle and high school students, providing free dinner, homework help, time with friends, recreation, and informal mentoring.
- Fun events for teens to include campfire nights, movie nights, volleyball/sports tournaments, ice cream socials, pizza parties, etc.

Recreation

- Hippo Wrestling Club. Provides coaching, tournaments, camps, support and mentoring for kids and teens ages 5 – 18. Prices are kept low with volunteer coaching and fundraising allows for more kids to attend.
- Summer League Volleyball. Middle school girl hard court volleyball league offered to all area middle schools. School based league. Offers area high school players the opportunity to coach younger girls and act as mentors as well as giving the middle school girls fun and experience that helps with their tryouts for their school teams.
- Ad hoc sand volleyball tournaments, washers tournaments, and other activities.

Mental Health

- Teens4Teens suicide awareness and prevention training for the teens. Jason Foundation curriculum used to help teens know what to look for and what to do in the case of a crisis.
- Special open nights as needed for emotional support or comfort upon traumatic events in the community. Often attended by licensed professional counselors

Other

- Community service opportunities as the teens express interest. Food pantry, Dell Children's visit, Lion's club flag project are examples of service projects in which our teens have participated.
- Scholarships awarded to area high school seniors each year

The City considers that it would be a benefit to the citizens of Hutto to cooperate with the Provider of these programs in order to provide space in City facilities to benefit the youth of the City.

BUDGETARY AND FINANCIAL SUMMARY:

A City Facility Rental and Use Agreement is being drafted that will exempt the Provider from paying fees or security deposits.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not Applicable.

CITY ATTORNEY REVIEW:

City Attorney has drafted the Ordinance.

STAFF RECOMMENDATION:

Staff recommends approval.

SUPPORTING MATERIAL:

1. [Youth Cooperative Ordinance between the City of Hutto and Sandbox](#)

ORDINANCE NO. _____

AN ORDINANCE PROVIDING FOR A COOPERATIVE PROGRAM TO SERVE YOUTH IN THE CITY OF HUTTO, TEXAS, AND MAKING AVAILABLE SPACE WITHIN CITY FACILITIES FOR THE PROGRAM.

WHEREAS, youth within the City of Hutto (“City”) have a need to receive supplemental programs, in addition to, the public and private educational opportunities currently provided; and

WHEREAS, the Sandbox at Madeline’s Place (“Provider”) is a tax-exempt qualified 501 (c) (3) nonprofit entity offering programs for youth in the Hutto community; and

WHEREAS, the Provider offers programs for youth in the Hutto community including a teen center, recreational and special events, suicide awareness, and community service opportunities for teens; and

WHEREAS, it would be of benefit to the citizens of Hutto to cooperate with the Provider of these programs to provide space in City facilities to benefit the youth of the City; and

WHEREAS, the City has available in its facilities’ space to provide these programs without interfering with the public duties and responsibilities required of the City;

NOW, THEREFORE, be it ordained by the City Council of the City of Hutto, Texas:

Section 1. The City shall enter into a cooperative agreement with the Sandbox at Madeline’s Place to provide programs to serve educational and recreational needs of the youth of the City.

Section 2. The City Manager will, from time to time, designate locations within City facilities which may be used for the program. The City Manager will designate such facilities to ensure that there will be no interference with the provision of municipal services.

Section 3. City facilities shall be provided without charge to the Provider. The Provider will be responsible for obtaining and continuing in force such insurance as may be required by the City Manager. The Provider will also be responsible for any damages to the City facilities caused by the Provider or its participants. The Provider shall comply with the City Facility Rental and Use Agreement except the Provider shall not pay fees or security deposits.

Section 4. The Provider shall be entitled to use City facilities for a period of two (2) years from the effective date of this ordinance.

Section 5. In order to allow the Provider to develop specific activities for youth in the City and to plan for long-term provision of these programs, this ordinance shall not be repealed except upon a vote by at least five (5) members of the City Council for the City of Hutto.

Section 6. This Ordinance shall be published _____, 2018 and _____, 2018 and become effective in accordance with the laws of the State of Texas on the ____ day of _____, 2018.

READ, CONSIDERED, PASSED, and APPROVED ON FIRST READING by the City Council of the City of Hutto at a regular meeting on the ____ day of _____, 2018, at which a quorum was present and for which due notice was given pursuant to Section 551.001, et seq., of the Texas Government Code.

READ, CONSIDERED, PASSED, APPROVED and ADOPTED ON SECOND and FINAL READING by the City Council of the City of Hutto at a regular meeting on the ____ day of _____, 2018, at which a quorum was present and for which due notice was given pursuant to Section 551.001, et seq., of the Texas Government Code.

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.: 10A. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Matthew A. Rector Sr., PE, CFM,
Executive Director of Engineering and
Public Works

ITEM: Consideration and possible action on the proposed City of Hutto Five
Year FY 2019 – 2023 Capital Improvements Plan (CIP) . (Matt Rector)

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

The City of Hutto's Capital Improvements Plan (CIP) is a planning document that has been developed to better serve the citizens of Hutto by identifying current and anticipated future infrastructure needs to plan for responsible growth within the City. Through a multi-year capital improvements plan the City can address needs with a comprehensive and fiscally responsible approach. Capital projects are intended to address infrastructure needs and are generally divided into the following categories:

- Water and Wastewater
- Transportation and Drainage
- Parks and Recreation
- Municipal Facilities
- Fleet

BUDGETARY AND FINANCIAL SUMMARY:

Not Applicable

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Planning and Zoning Commission recommends approval.

CITY ATTORNEY REVIEW:

Not Applicable

STAFF RECOMMENDATION:

Staff recommends approval.

SUPPORTING MATERIAL:

1. [Resolution](#)
2. [CIP Summary Document](#)

RESOLUTION NO. R-

A RESOLUTION APPROVING THE FIVE YEAR (FY 2019-2023) CAPITAL IMPROVEMENT PROGRAM (CIP).

WHEREAS, the City of Hutto Charter requires the adoption of a Capital Improvement Program (CIP), and;

WHEREAS, the CIP is a necessary component for the Fiscal Year 2019 budget, and;

WHEREAS, has been presented and recommended for approval by the Planning and Zoning Commission, and;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUTTO, TEXAS: the Hutto City Council hereby adopt the Capital Improvement Program (CIP) for the fiscal year beginning October 1, 2018 and ending September 30, 2019.

CONSIDERED and RESOLVED by the City Council of the City of Hutto on this the **19th** day of **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary



FIVE YEAR CAPITAL
IMPROVEMENT PLAN
FY 2019-2023



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OVERVIEW

INTRODUCTION

The City of Hutto's Capital Improvements Plan (CIP) is a planning document that has been developed to better serve the citizens of Hutto by identifying current and anticipated future infrastructure needs to plan for responsible growth within the City. Through a multi-year capital improvements plan the City can address needs with a comprehensive and fiscally responsible approach. Capital projects are intended to address infrastructure needs and are generally divided into the following categories

- Water and Wastewater
- Transportation and Drainage
- Parks and Recreation
- Municipal Facilities
- Fleet

In the past, the City has implemented a five-year CIP, but the City Council has expressed concerns about the process by which the plan was derived. This CIP will directly address needs for FY 2019 and FY 2020 and project possible projects for FY 2021, 2022, and 2023. In late 2018 or early 2019, a formalized capital planning process by which projects will be selected, ranked and evaluated will be presented.

The CIP will continue to be revised annually in order to accommodate new projects, revise current projects, reflect current City initiatives and extend the plan for an additional year. The first year of the plan will be incorporated into the budget and funds will be appropriated. Subsequent years are intended for planning purposes only. Scopes of projects and cost estimates will be reviewed on an annual basis.

GUIDING PLANS

The City Council has adopted several plans to guide the City's development.

Strategic Plan

The Strategic Plan was approved in May 2017 and was updated in March 2018. This plan establishes the vision, values, focus areas, objectives, and goals for the City. The ten (10) objectives identified in this plan are:

1. Construct and maintain infrastructure to provide identified levels of service.
2. Create an "open for business" culture.
3. Create an aggressive, progressive economic development strategy for the community.
4. Enhance mobility within the City.
5. Generate a strategic path forward for enhancing the public safety apparatus including police, fire, and emergency medical services.
6. Enhance the overall governance of the community.
7. Ensure responsible fiscal stewardship through transparency and reporting.



OVERVIEW

8. Implement a quality city-wide customer service program.
9. Maintain a positive and inspired workforce.
10. Maintain an environment and quality of life that encompasses a safe, friendly, and an entertaining atmosphere for all ages.

These ten (10) objectives in addition to the following adopted plans or assessments will assist in the selection and prioritization of CIP projects

CATEGORIES

TABLE 1: EXISTING PLANS OR ASSESSMENTS		The CIP is generally divided into five categories to facilitate a better understanding of the grouping and the needs that are being addressed. <u>Water and Wastewater</u>
PLAN/ASSESSMENT	ADOPTED/REVISED	
Wastewater Master Plan	2013	
Water Master Plan	2016	
Comprehensive Plan	2015	
Pedestrian Mobility Plan	2012	
Thoroughfare Plan	2011	
Parks Master Plan	2015	
Old Town Master Plan	2006	
Hutto Facility Needs Assessment	2010	
Transit Plan	2016	
Future Land Use Map	2017	

To better plan utility infrastructure, the City has developed ten-year capital improvements plans contained in the Water Master Plan and the Wastewater Master plan. This enables staff to better plan for future improvements as they relate to development. The timing of many utility projects can only be estimated as many of the projects are related to service extensions and are dependent on the timing of development. The Water Master Plan was updated in May 2016. The Wastewater Master Plan was last updated in 2013 and is scheduled to be updated later in 2018.

Transportation and Drainage

The Transportation and Drainage category of the Capital Improvements Plan outlines projects related to traffic-flow/mobility, pedestrian mobility, intersection improvements, roadway rehabilitation and drainage improvements. Projects may be funded through a number of mechanisms including the general fund, developer participation, inter-agency cooperation, debt proceeds, etc. A Mobility Master Plan is scheduled to be completed later in 2018.



OVERVIEW

Parks and Recreation

The Parks and Recreation category of the CIP outlines future parkland and park improvements based on the Parks Master Plan.

Municipal Facilities

The Municipal Facilities category of the Capital Improvements Plan includes the renovation and upkeep of existing facilities in addition to the construction of new facilities.

Fleet

The Fleet category of the Capital Improvements Plan includes the replacement of the growing lists of expensive vehicles and equipment utilized by city staff.

FUNDING

The City has a number of potential funding sources available in order to finance Capital Improvement Projects. These include:

- Operating Revenues
- Fund Balance (Reserves)
- Dedicated Fees (e.g., water and wastewater impact fees and parkland dedication fees)
- Grants (e.g., TWDB, Texas Parks & Wildlife, various state/federal highway programs)
- Debt
- Partnerships (e.g., Williamson County, Hutto ISD)

Per the City Charter, before the City can award a contract for any phase of a Capital Improvement Project, it must have sufficient funds on hand and appropriate those funds to satisfy its funding obligation or commitment. Consequently, a sound financing plan relies heavily upon realistic project scheduling. A sound financing plan also attempts to minimize the impact of infrastructure funding on the ratepayer and/or taxpayer as well as minimize the Capital Improvement Plan's overall cost. The Finance and management staff must work closely with each project's design professional(s) and the City's financial advisor to achieve these objectives.

In 2017, the City of Hutto adopted a five year Capital Improvements Plan for FY 2018-2022. The projects included in FY 2018 and their status are included below for reference purposes.



TABLE 2: FY 2018 CIP PROJECTS

PROJECT	STATUS	ESTIMATED COST	ACTUAL EXPENSES YTD
East Street Reconstruction	Complete	\$1,030,214.90	\$1,307,625.58
Pavement Management	Complete	\$990,000.00	\$709,514.65
Limmer Loop Improvements Agreement	Reimbursement	\$100,000.00	\$100,000
CR 119 Extension	Reimbursement	\$1,000,000.00	\$500,000
Limmer Loop Sidewalk	Construction	\$1,000,000.00	\$163,730.25
Front Street Waterline Replacement	Complete	\$1,800,000.00	\$1,256,611.41
Innovation Infrastructure Improvements	Construction	\$5,100,000.00	\$1,477,628.61
Co-Op Infrastructure Improvements	Construction	\$6,000,000.00	\$3,031,130.61
Carmel Crossing Wastewater Interceptor	Reimbursement	\$181,851.00	-
Construct Wastewater North of Limmer Loop	Design	\$3,000,000.00	-
Hutto Park at Brushy Creek Amphitheater	Construction	\$3,400,000.00	\$106,816.81
Brushy Creek Gap Trail	Review	\$90,000.00	-
Fritz Park Improvements	-	\$55,000.00	\$33,182.50
Creskide Park Improvements	-	\$55,000.00	-
Parkland Acquisition	Complete	\$1,710,000.00	\$1,806,699.23
Heart of Texas	Complete	\$63,000,000.00	\$60,919,786.48
Williamson County Animal Shelter Expansion	Complete	\$223,949.00	\$236,857.02
Hutto Engineering Manual	In House	-	-
Drainage Masterplan	Study	\$150,000.00	\$148,163.06
Mobility Masterplan	Study	\$250,000.00	\$184,488.29
Wastewater Master Plan	Study	\$175,000.00	\$143,944.00
Develop a New 5-Year CIP Prioritization System	In House	-	-



FIVE YEAR CAPITAL IMPROVEMENT PLAN

FY 2019 - 2023

PARKS AND RECREATION



PARKS & RECREATION

GENERAL

The City of Hutto's Park and Recreation Department provides Hutto families with safe parks and facilities for recreation and leisure opportunities. The Parks and Recreation Capital Improvement Projects are aimed at improving the quality of life for citizens. This specifically aligns with Objective ten (10) which is to "maintain an environment and quality of life that encompasses a safe, friendly, and an entertaining atmosphere for all ages." Specific projects have been selected to improve the City's existing parks and accommodate the growing community needs.

TABLE 3: PARKS AND RECREATION CIP FUNDING

Sources of Funding	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -2023 Total
General Fund	\$90,000	-	\$250,000	-	-	-	\$250,000
General Obligation	-	\$5,000,000	-	-	-	-	\$5,000,000
Certificated of Obligation	\$3,000,000	-	-	-	-	-	-
Grant	\$110,000	\$500,000	-	-	-	-	\$500,000
Other	\$1,710,000	-	-	-	\$500,00	\$500,00	\$1,000,000
Total	\$4,910,000	\$5,500,000	\$250,000	-	\$500,000	\$500,000	\$6,750,000



TABLE 4: PARKS AND RECREATION FUND UTILIZATION

Use of Funds	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -23 Total
Brushy Creek Gap Trail	\$90,000	-	-	-	-	-	-
Parkland Acquisition	\$1,710,000	\$5,000,000	-	-	-	-	\$5,000,000
Fritz Park Improvements	\$55,000	\$258,250	-	-	-	-	\$258,250
Creeside Park Improvements	\$55,000	\$241,750	-	-	-	-	\$241,750
Pollard Park Amphitheater	\$3,000,000	-	-	-	-	-	-
Park Improvements	-	-	\$250,000	-	\$500,000	\$500,000	\$1,250,000
Total	\$4,910,000	\$5,500,000	\$250,000	-	\$500,000	\$500,00	\$6,750,000



[illegible]

FIVE YEAR CAPITAL IMPROVEMENT PLAN

FY 2019 - 2023

MUNICIPAL FACILITIES



MUNICIPAL FACILITIES

GENERAL

The Municipal Facilities Capital Improvement Projects are aimed at accommodating growth of staff and equipment as the need for additional services continue to grow with the increase in population. In addition to these projects funds are proposed for infrastructure at the Co-Op site where City Hall is proposed to be constructed through a public-private partnership.

TABLE 5: MUNICIPAL FACILITIES CIP FUNDING

Sources of Funding	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -2023 Total
General Fund	-	-	-	-	-	-	-
General Obligation	-	-	-	-	-	-	-
Certificate of Obligation	\$63,223,949	\$2,000,000	-	-	-	-	\$2,000,000
Grant	-	-	-	-	-	-	-
Other	-	\$1,200,000	-	-	\$1,500,000	-	\$2,700,000
Total	\$63,223,949	\$3,200,000	-	-	\$1,500,000	-	\$4,700,000

TABLE 6: MUNICIPAL FACILITIES FUND UTILIZATION

Use of Funds	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -23 Total
Heart of Texas Acquisition	\$63,000,000	-	-	-	-	-	-
Williamson County Animal Shelter Expansion	\$223,949	-	-	-	-	-	-
Police Communication Center	-	\$2,000,000	-	-	-	-	\$2,000,000
Existing City Hall to PD Renovation	-	\$200,000	-	-	-	-	\$200,000
Co-Op / New City Hall	-	\$1,000,000	-	-	-	-	\$1,000,000
Public Works Facility	-	-	-	-	\$1,500,000	-	\$1,500,000
Total	\$63,223,949	\$3,200,000	-	-	\$1,500,000	-	\$4,700,000



YEAR

[illegible]

FY 2019 - 2023

WATER AND WASTEWATER

GENERAL

The Water and Waste Water Capital Improvement Projects align with multiple objectives from the Strategic Plan. The specific objectives are

1. Construct and maintain infrastructure to provide identified levels of service.
2. Create an “open for business” culture.
3. Create an aggressive, progressive economic development strategy for the community.
7. Ensure responsible fiscal stewardship through transparency and reporting.

These projects are anticipated to be funded from a combination of cash and debt. The actual amount of any debt issuance will be evaluated each year in light of project cost estimates, resources available, coverage requirements and other considerations. In addition to the projects shown below, there are a number of Water and Wastewater infrastructure projects in the works that will be funded by developers. These projects are vital to the ability of the City to continue to provide capacity for ongoing growth and development. If any of these anticipated developer funded projects were to fall through the City would need to look into options for completing necessary infrastructure improvements to allow development to continue.

TABLE 7: WATER AND WASTEWATER CIP FUNDING

Sources of Funding	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -2023 Total
General Fund	-	\$450,000	-	-	-	-	\$450,000
General Obligation	-	-	-	-	-	-	-
Certificate of Obligation	\$1,975,000	\$6,375,000	\$4,850,000	-	-	-	\$8,225,000
Grant	-	-	-	-	-	-	-
Other	\$181,851	\$181,851	\$181,851	\$668,851	\$681,851	\$2,181,851	\$3,896,255
Total	\$2,156,851	\$7,006,851	\$5,031,851	\$668,851	\$681,851	\$2,181,851	\$15,571,255



TABLE 8: WATER AND WASTEWATER FUND UTILIZATION

Use of Funds	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -2023 Total
Carmel Crossing Wastewater Interceptor	\$181,851	\$181,851	\$181,851	\$181,851	\$181,851	\$181,851	\$909,255
Front Street Waterline Replacement	\$1,800,000	-	-	-	-	-	-
Wastewater North of Limmer Loop (RSI)	-	\$3,000,000	-	-	-	-	\$3,000,000
FM 1660 Utility Relocation	-	\$450,000	-	-	-	-	\$450,000
Pecan Tower	-	-	\$250,000	-	-	-	\$250,000
Shiloh Tank	-	\$675,000	-	-	-	-	\$675,000
Tank Rehab	-	\$2,500,000	-	-	-	-	\$2,500,000
Rehabilitation and Upgrades to Existing WWTP	-	-	\$4,600,000	-	-	-	\$4,600,000
Wastewater Interceptor	-	-	-	\$62,000	\$500,000	\$1,000,000	\$1,562,000
Water System Improvements	-	-	-	-	-	\$1,000,000	\$1,000,000
Permit Capacity Increase	-	\$200,000	-	-	-	-	\$200,000
Wastewater Master Plan	\$175,000	-	-	\$225,000	-	-	\$225,000
Water Master Plan Update	-	-	-	\$200,000	-	-	\$200,000
Total	\$2,156,851	\$7,006,851	\$5,031,851	\$668,851	\$681,851	\$2,181,851	\$15,571,255



Wastewater Treatment Plant Permit Capacity Increase									
Project Client:		Project Location:		Project Description:		Project Schedule:		Project Budget:	
City of Hutto		Hutto, Texas		Increase in capacity to 10.5 MGD		2024 - 2026		Total: \$1,200,000	
19	20	21	22	23	Total				
---	---	---	---	---	---				
\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000				
Project Description: The City of Hutto is planning to increase the capacity of its wastewater treatment plant from 10 MGD to 10.5 MGD. This project is a capital improvement project that will involve the construction of new infrastructure, including a new influent pump station, a new effluent pump station, and a new sludge handling system. The project is expected to be completed by the end of 2026.									
Project Schedule: The project is scheduled to start in 2024 and will be completed by the end of 2026. The project is divided into three phases: design, construction, and commissioning. The design phase is expected to take 12 months, the construction phase is expected to take 24 months, and the commissioning phase is expected to take 6 months.									
Project Budget: The total project budget is \$1,200,000. The budget is broken down as follows: design (\$500,000), construction (\$500,000), and commissioning (\$200,000). The budget is subject to change based on the final scope of the project.									

FIVE YEAR CAPITAL IMPROVEMENT PLAN

FY 2019 - 2023

TRANSPORTATION AND DRAINAGE



GENERAL

The Transportation and Drainage Capital Improvement Projects also align with multiple objectives from the Strategic Plan. The specific objectives are

1. Construct and maintain infrastructure to provide identified levels of service.
2. Create an “open for business” culture.
3. Create an aggressive, progressive economic development strategy for the community.
4. Enhance mobility within the City.
7. Ensure responsible fiscal stewardship through transparency and reporting.
10. Maintain an environment and quality of life that encompasses a safe, friendly, and an entertaining atmosphere for all ages.

These projects are anticipated to be funded from a combination of cash and debt. The actual amount of any debt issuance will be evaluated each year in light of project cost estimates, resources available, coverage requirements and other considerations.

TABLE 9: TRANSPORTATION AND DRAINAGE CIP FUNDING

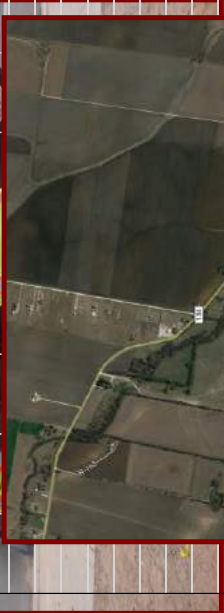
Sources of Funding	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 -2023 Total
General Fund	-	\$930,000	\$1,125,000	\$2,221,000	-	-	\$4,276,000
General Obligation	-	-	-	-	-	-	-
Certificated of Obligation	-	-	-	-	-	-	-
Grant	-	\$50,000	-	-	-	-	\$50,000
Other	-	-	\$2,500,000	\$2,635,819	\$2,450,379	\$2,825,000	\$10,411,198
Total	\$6,350,000	\$980,000	\$3,625,000	\$4,856,819	\$2,450,379	\$2,825,000	\$14,737,198



TRANSPORTATION & DRAINAGE

TABLE 10. TRANSPORTATION AND DRAINAGE FUND UTILIZATION											
Use of Funds											
FY 2019											
FY 2020											
FY 2021											
FY 2022											
FY 2023											
2019 -2023 Total											
Total											
Pavement Management											
Traffic Impact Study											
Traffic Sign Maintenance											
Cottonwood Creek Drainage											
Old Town Streets and Drainage Phase 1											
Street Reconstruction											
Innovation Infrastructure Improvements											
Limmer Loop Improvement Agreement											
CR 119 Extension											
SH 130 Frontage Road											
CR 137 Capacity Improvement											
Mager Lane City Limits											
ADA Transition Plan											
Drainage Master Plan											
Mobility Plan											
Total											



Traffic Signal Maintenance																																																																																													
Project Client: Engineering & Public Works																																																																																													
Project Expenditures by Fiscal Year:																																																																																													
years	19	20	21	22	23	Future	CIP No.	ST-0004																																																																																					
Creekside Cottonwood Creek Drainage Improvements																																																																																													
Project Client:	Engineering & Public Works	\$75,000.00	\$75,000.00	\$75,000.00	\$75,000.00	\$0.00	ST-0005		\$350,000.00																																																																																				
Description: Expenditures by Fiscal Year:																																																																																													
With the installation of the new traffic signal at Limmer Loop and Ed Schmidt.																																																																																													
Scope:	19	20	21	22	23	Future	Total																																																																																						
	\$50,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50,000.00																																																																																						
Description:																																																																																													
Recent storm events which have led to flood damage occurring along Cottonwood creek have demonstrated the need for riparian improvements along the creek.																																																																																													
Scope:																																																																																													
Project provides for initial phase for design and obtaining a CLOMR from FEMA. This will include survey and water modeling/analysis of the existing drainage and proposed drainage based on proposed channel improvements to mitigate potential flood damage along the creek.																																																																																													
obtain a CLOMR.																																																																																													
 																																																																																													
<table><tr><th colspan="2">Project Task</th><th>Duration</th></tr><tr><td>Planning/Design</td><td>8</td><td>months</td></tr><tr><td>Operational Impact</td><td>10</td><td>months</td></tr><tr><td>Personnel</td><td>-</td><td></td></tr><tr><td>Supplies & Materials</td><td>18 months</td><td></td></tr><tr><td>Repair & Maint.</td><td>\$350,000.00</td><td></td></tr><tr><td>Capital & Other</td><td>-</td><td></td></tr><tr><td>Total</td><td>-</td><td></td></tr><tr><td colspan="2">Operational Impact</td><td></td></tr><tr><td>Personnel</td><td>-</td><td></td></tr><tr><td>Estimated Project Cost:</td><td>-</td><td></td></tr><tr><td>Design/Utility Coordination</td><td>-</td><td></td></tr><tr><td>Repair & Maint.</td><td>-</td><td></td></tr><tr><td>Utilities</td><td>-</td><td></td></tr><tr><td>Construction</td><td>-</td><td></td></tr><tr><td>General Obligation</td><td>-</td><td></td></tr><tr><td>ROW</td><td>-</td><td></td></tr><tr><td>Other</td><td>-</td><td></td></tr><tr><td>Total</td><td>-</td><td></td></tr><tr><td colspan="2">Estimated Project Cost:</td><td></td></tr><tr><td>Total</td><td>\$0</td><td></td></tr><tr><td colspan="2">Funding:</td><td></td></tr><tr><td>Design/Utility Coordination</td><td>\$0</td><td></td></tr><tr><td>General Obligation</td><td>\$350,000</td><td></td></tr><tr><td>Construction</td><td>\$0</td><td></td></tr><tr><td>General Obligation</td><td>\$0</td><td></td></tr><tr><td>Other</td><td>\$0</td><td></td></tr><tr><td>Total</td><td>\$350,000</td><td></td></tr></table>										Project Task		Duration	Planning/Design	8	months	Operational Impact	10	months	Personnel	-		Supplies & Materials	18 months		Repair & Maint.	\$350,000.00		Capital & Other	-		Total	-		Operational Impact			Personnel	-		Estimated Project Cost:	-		Design/Utility Coordination	-		Repair & Maint.	-		Utilities	-		Construction	-		General Obligation	-		ROW	-		Other	-		Total	-		Estimated Project Cost:			Total	\$0		Funding:			Design/Utility Coordination	\$0		General Obligation	\$350,000		Construction	\$0		General Obligation	\$0		Other	\$0		Total	\$350,000	
Project Task		Duration																																																																																											
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Total	\$350,000																																																																																												
Funding:																																																																																													
General Fund																																																																																													
General Obligation																																																																																													
Other																																																																																													
Total																																																																																													

FLEET



FLEET

There are no fleet projects at this time.



CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.: 10B. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Anthony Emadi, CFO

ITEM:

Resolution authorizing the City Manager to execute an engagement letter with the audit firm Eide Bailly, LLP for fiscal year 2018 audit. (Anthony Emadi)

STRATEGIC GUIDE POLICY: Fiscal Responsibility

ITEM BACKGROUND:

It is a requirement of the City Charter to perform a audit each year over the financial statements of the City. The staff is presenting new audit firms for selection as we believe a new auditor would be beneficial.

BUDGETARY AND FINANCIAL SUMMARY:

Proposed auditor would either cost less or very similar to cost of the previous auditor.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Not applicable.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends selection of the CPA firm EideBailley.

SUPPORTING MATERIAL:

1. [Resolution](#)

RESOLUTION NO. R-

A RESOLUTION APPROVING THE CITY MANAGER TO EXECUTE AN ENGAGEMENT LETTER WITH THE AUDIT FIRM EIDE BAILLEY, LLP FOR THE FISCAL YEAR 2018 AUDIT.

WHEREAS, The City Charter, Section 8.14, requires at the close of each fiscal year and at other times as necessary, the City Council shall have a certified public accountant conduct an independent audit of all accounts of the City. The certified public accountant shall have no personal interest in the financial affairs of the City or of its officers. A summary of the results of the completed audit shall be on file in the City Secretary's office as a public record and shall be posted on the City's website and;

WHEREAS, The City accepted bids and the staff choice Eide Bailley, LLP has been presented.

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

The City Manager is authorized to execute an engagement letter with the audit firm Eide Bailley, LLP for the fiscal year 2018 audit.

CONSIDERED and RESOLVED by the City Council of the City of Hutto on this the 19th day of **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.: 10C. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Matthew A. Rector, P.E., Executive
Director Engineering and Public Works

ITEM: Consideration and possible recommendation on the 2018 - 2028
Master Drainage Plan. (Matt Rector)

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

The development of the City's first Drainage Master Plan was included in the 2018 Capital Improvements Plan (CIP). On December 7, 2017 the Hutto City Council approved a resolution to contract with Hejl Lee and Associates (HLA) for Drainage Planning services.

The purpose of the Drainage Master Plan (DMP) was to perform an evaluation of the City of Hutto's drainage system. Due to the limited funding and the size and number of drainage systems through the city this plan focused primarily on the developed portions of the city limits.

HLA has reviewed the available data, studies, and existing infrastructure. HLA utilized typical modeling tools to determine future needs in the studied areas and develop a CIP list with cost estimates.

BUDGETARY AND FINANCIAL SUMMARY:

The approved cost of the contract was \$150,000.00. No further budget implications are noted at this time. All budget implications from completion of projects and implementation of recommendations will be included in future budgets and CIP discussions.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

The Drainage Master Plan was presented to the Planning and Zoning Commission on June 5, 2018 and recommended for approval.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends approval.

SUPPORTING MATERIAL:

1. [Resolution](#)
2. [Drainage Master Plan](#)

RESOLUTION NO. R

A RESOLUTION ADOPTING THE HUTTO DRAINAGE MASTER PLAN.

WHEREAS, the City Council of the City of Hutto, Texas, recognizes the need to provide a safe and flood protected community for the citizens of Hutto, Texas, and;

WHEREAS, the City recognizes the need for long term drainage master planning that aims to protect Hutto, and;

WHEREAS, The City recognizes the need for the infrastructure to mitigate certain flood events in key areas, and;

WHEREAS, the Drainage Master Plan addresses and is tailored to meet Hutto's needs has been prepared.

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

That the City Council hereby adopts on behalf of the City the Hutto Drainage Master Plan.

CONSIDERED and RESOLVED by the City Council of the City of Hutto on this the **19th** day of **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary



DRAINAGE MASTER PLAN

May, 2018

HLA Project No. 11232



TBPE Firm No. F-755, TBPLS Firm No. 1058500

HEJL, LEE & ASSOCIATES, INC.

321 Ed Schmidt Blvd., Suite 100, Hutto, TX 78634
Ph. (512) 642-3292 hlainc@austin.rr.com

ENGINEERING • SURVEYING • PLANNING

City of Hutto Drainage Master Plan

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EXHIBITS

- A Planning Area Drainage Basins
- B FEMA Map Panel Overlay
- C Detention Pond Locations
- D Old Town Drainage
- E Flood Damage Locations
- F Proposed Project Location Map

APPENDIXES

- 1.a. Hydrologic & Hydraulic Analysis of Brushy Creek Tributary 9 (from Hutto Co-Op to Legend of Hutto) by MillerGRAY
- 1.b. Hydrologic & Hydraulic Analysis of Cottonwood Creek (from South Hwy. 79 to Creekbend Detention Pond) by MillerGRAY
- 2. Project Cost Estimate Worksheets
- 3. Detention Ponds Inventory
- 4. Project Ranking Form

EXECUTIVE SUMMARY

The City of Hutto authorized this first ever master drainage plan report in response to a dire need to address drainage and flood related issues. Prior to this report, drainage and flood related events were documented “after the fact” and typically were not followed on due to a lack of available resources. The City began assessing and collecting a drainage fee to utility customers starting in March 2018. These two actions set in place this planning document necessary to identify the most critical projects and followed up with a funding tool that in its first year will generate approximately \$350,000.

The master plan included the following tasks:

- ✓ Gather available information and store it for future use
- ✓ Document staff’s knowledge about past flood events
- ✓ Perform two hydraulic and hydrologic (H&H) at locations of significant interest based on development activities on-going at the time of this master plan and areas known to have flood damage to residential structures based on a 1% probability storm event (a.k.a., 100-year flood)
- ✓ Inventory existing detention pond system
- ✓ Develop a list of proposed projects and prepare cost estimates
- ✓ Discuss available funding alternatives
- ✓ Present final drainage master plan to City council

The City’s planning area comprises over 50 square miles. Within the planning area there are multiple creek watersheds with Brushy Creek and Cottonwood Creek being the most significant creeks. Cottonwood Creek is located close to the center of Hutto’s planning area and generally flows from upstream to downstream in a northwest to southeast direction, respectively and drains into Brushy Creek. Brushy Creek is located in the City’s southern planning area and generally runs upstream to downstream in a west to east direction, respectively. Both watersheds contain FEMA statutory floodplain and both have contributed to flood damage within Hutto.

Hutto experienced two recent, major flood events. In Year 2010, Tropical Storm Hermine and in Year 2015 the Memorial Day floods each dumped a reported 11 inches of rainfall in a 24-hour period. Brushy Creek crested to 23’ above normal elevation in the vicinity of FM 685 (now known as Chris Kelley Boulevard). Numerous flooding events were documented by City staff during the 2015 event and are presented in this plan. A lot of information was gathered on how those floods impacted the Hutto planning area. Most residential flooding occurred within the Hutto Parke North, Creekside Estates and Creekbend subdivisions. These areas are discussed in greater detail in the plan. One of the two H&H models developed by this plan included Cottonwood Creek south of Highway 79 to downstream of Creekbend subdivision. The model results provide recommendations for channel hydraulic improvements.

HUTTO DRAINAGE MASTER PLAN

The City's recent influx of development activity particularly at the Hutto Co-Op location is discussed. A second H&H model is included in this plan and evaluates the receiving stream at the Co-Op downstream through the Legends of Hutto off-site channel which is directly impacted by this project. The model results provide recommendation for channel and culvert improvements.

The master drainage plan provides recommendations for over nine capital improvement program projects totaling over \$30 million. A ranking and prioritization of the nine projects is included. The City may use this plan to implement one or more of the projects in coming years.



SECTION 1: MASTER DRAINAGE PLAN & PURPOSE

PLAN

The City of Hutto has recently experienced intense development pressure from both residential and commercial developers that have inundated City staff with new projects. Much of the development is located in the city Old Town area that will convert pasture land to roof tops. As a result, the development intensity poses a strain on drainage and flood control infrastructure. Combine this development with the Year 2015 Memorial Day flood event and the Year 2010 tropical storm Hermine flood event which caused existing creek systems to overflow and cause local flood damage and flooding to residences, the City implemented a Capital Improvement Project (CIP) to perform its first ever master drainage plan. In prior years, the City has managed drainage planning using a combination of plans performed over the years and by developing and modifying design criteria for new subdivisions and site plans. The following provides a list of plans reviewed for use in supporting the master plan:

- Old Town Master Plan dated circa 2009
- Hutto 2040 Comprehensive Plan dated circa 2015
- Parks, Recreation, Open Space & Trails Master Plan dated circa 2015
- Hutto Thoroughfare Plan dated circa 2011

Hutto development guidelines, standard details, drainage criteria requirements, etc. generally referenced and followed the City of Round Rock Drainage Criteria Manual. City of Hutto Standard Details and City of Georgetown Specifications also were referenced as the City standard. During Hutto's growth span approaching three decades starting in the 1980's, much of the undeveloped properties surrounding Hutto became residential subdivisions. These residential subdivisions were required to provide engineered drainage plans including in most cases the installation of detention ponds, subsurface and at-grade drainage improvements and requirements for "no adverse impacts" to adjacent or downstream properties. Due to the intense, on-going development pressure, the City has found it necessary to develop a master drainage plan.

HUTTO DRAINAGE MASTER PLAN

To develop drainage related Capital Improvement Program (CIP) projects for the coming fiscal year for immediate implementation, the City contracted Hejl, Lee & Associates, Inc. (HLA) on December 07, 2017 to perform a limited scope drainage master plan study with a focus on the following drainage concerns:

- Gather, collect and assimilate available data into one document;
- Consider drainage impacts to the City center and how Old Town Hutto can be developed into an urban roadway with subsurface stormwater management system;
- Perform hydraulic and hydrological (H&H) studies of the Co-Op area downstream to the Legends of Hutto detention facility (a.k.a., Tributary 9 and 9A of the Brushy Creek FEMA Floodplain system) and Highway 79 downstream along Cottonwood Creek to the Creekside Estates detention pond;
- Evaluate current drainage design criteria and make recommendations on improving the criteria if deemed appropriate;
- Develop a list of Capital Improvement Program projects with cost estimates;
- Prioritize the CIP projects; and,
- Construct the framework for future master plan updates by incorporating historical flood data, H&H studies, FEMA floodplain data, etc. into a single document.

Hydrological and hydraulic study for Brushy Creek, Carmel Creek, McNutt Creek, Mustang Creek, and San Gabriel River within the City's growth planning area was not included as part of this limited drainage planning.

SECTION 2: DRAINAGE BASIN IDENTIFICATION & DESCRIPTION

The City of Hutto planning area includes a river, several creeks and their related drainage basins. The following creeks and river are located within the City's planning area:

- Brushy Creek
- Carmel Creek
- Cottonwood Creek
- McNutt Creek
- Mustang Creek
- San Gabriel River

The location of the creek and river systems and related drainage/watershed basins are presented in Exhibit A.

Within these drainage basins, there are Federal Emergency Management Agency (FEMA) published floodplain reports and maps. These maps include identification of flood hazard areas, floodway and floodplain. The FEMA map data for Brushy and Cottonwood Creeks provides detailed flood study information with 2, 10, 25 and 100-year flood event information. Available FEMA published floodplain map from Year 2008 has been layered on the drainage basin maps and creek watersheds to provide a better understanding of the floodplain boundary and extent of floodplain for these drainage basins. For information purposes, the 100-year FEMA flood designation is based on a one percent chance of flooding in any given year. FEMA is in process of performing amendments to the current floodplain maps. The amended floodplain map may be adopted this year. Exhibit B provides existing 2008 floodplain limits overlaid with the FEMA 2017 preliminary floodplain limits. Round Rock has opted to include the "ultimate flood" or 500-year flood event as the target flood for drainage evaluation and consideration. It is recommended that the City of Hutto be cautious before considering adopting the 500-year event as the standard since it may cause an economic impact on the current planning area and how properties that fall within these designated areas can be developed.

The following provides a brief narrative of each drainage basin:

Brushy Creek

Brushy Creek is a major watershed that runs west to east through the southern City Limit and planning area of Hutto. McNutt, Carmel and Cottonwood Creeks all flow into Brushy Creek. Brushy Creek has contributed to overflowing existing roadways in the Hutto planning area and property damage due to flooding. The latest significant events, tropical storm Hermine in 2010 and the Memorial Day Flood of 2015 caused an approximate 23' rise in the Creek in the vicinity of Chris Kelley Boulevard (f.k.a., FM 685). The low water Farm to Market roadway and culvert structure was in place at the time and the road was completely under flood waters. Both events caused floodwaters to overtop Riverwalk Boulevard and flooded several residential units located along Riverwalk Boulevard. Figure 1 shows the flooded water reached to the bridge bend elevation. Upon completion of the new pier and beam bridge on Chris Kelley Boulevard circa 2016, future flooding overtopping the roadway is not anticipated.



Figure 1 Brushy Creek and FM 685/Chris Kelley Boulevard bridge support structure under construction during May 2015 Memorial Day flood event. Top of bent caps can be seen just above Brushy Creek flood water. Bridge has subsequently built and in operation.

The City of Hutto should continue to coordinate with Williamson County and the City of Round Rock in pursuit of projects which could limit damages to existing structures due to flood events and develop early warning system for residents within the impact area of Brushy Creek floodplain.

Cottonwood Creek

Cottonwood Creek flows into Brushy Creek at a southeastern most point of the City's planning area. Cottonwood meanders north and west through Hutto to its uppermost location. Most of Cottonwood Creek is unimproved with intermittent streamflow. The contributing watershed is interspersed with mostly single-family subdivisions, park facilities and rural farms and pasture lands. The flood events of tropical storm Hermine and the Memorial Day flood caused localized flooding of residential houses within the Creekside Estates and Creekbend Subdivisions. Figure 2 shows flooded Meadowside Drive during the event. The backwater from the Highway 79 bridge through Fritz Park caused flooding of park structures including the City's parks and recreation building. Incident reports, photos and videos were captured during the Memorial Day flood and provided valuable information to compare against FEMA map data to guesstimate the flood event. Currently, Cottonwood Creek is probably the major creek basin impacting the Hutto planning area. FEMA floodplain data is available for Cottonwood Creek and certain locations within the basin.

Carmel Creek

The Carmel Creek drainage basin is limited to the City's planning boundary on the west to the Heights of Deerfield residential subdivision located in the City's ETJ and east to the basin limits along Chris Kelley Boulevard (a.k.a. FM 685). Currently, development of the Carmel Creek drainage basin within the City's planning area is on-going and drainage system planning is being managed through a combination of plans developed for the Hutto Crossing Subdivision and upstream for the Innovation Business Park and the existing East Williamson County Higher Education Center. FEMA flood hazard data is published for Carmel Creek within the Hutto planning area.

McNutt Creek

The McNutt Creek drainage basin is limited to the City's planning area boundary on the west by



Figure 2 Meadowside Drive in Creekside Estates Subdivision during Year 2015 Memorial Day flood event.

City of Round Rock ETJ and the east at County Road 123. McNutt Creek has a large drainage basin however only a small portion of this creek basin falls within Hutto's planning area. There is FEMA published map data for McNutt Creek within the Hutto planning area.

Mustang Creek

The Mustang Creek drainage basin is limited to the northern most portion of the City's planning area. As of the publishing of this master plan, there are two proposed subdivisions being planned that contribute to the Mustang Creek basin within Hutto's planning area. Both subdivisions are required to provide engineered drainage plans with "no adverse impact" evaluation. It is anticipated that these subdivisions will install, operate and maintain detention facilities. A small portion of Mustang Creek has FEMA floodplain designation within the Hutto planning area. In the future, the City may consider the need to perform a detailed hydrologic/hydraulic study for Mustang Creek within Hutto's planning area. Future study of this watershed will determine whether it is warranted to coordinate with FEMA for Letter of Map Revisions (LOMR).

San Gabriel River

The San Gabriel River drainage basin is located in the northernmost reaches of the Hutto Planning area. As of the date of this master plan, there is no on-going development within this watershed that would impact the Hutto planning area.

Upper Brushy Creek Water Control Improvement District

The Upper Brushy Creek WCID was originally created in 1957 and served as the local sponsor for the U.S. Department of Agriculture-Soil Conservation Services' construction of 46 dams within the Brushy Creek watershed. In 2001 voters approved splitting the original WCID into two separate districts. In 2002 voters authorized an ad valorem tax of 2 cents per \$100 of property valuation to fund a Dam Safety Program for the District's 23 dams. The City of Hutto planning area includes 4 of the 23 dams. These dams are shown on Exhibit A. The Upper Brushy Creek WCID improved one dam in 2007 and the remaining three dams in 2011 to accommodate the 100% probable maximum flood. The Upper Brushy Creek WCID provides an important service to the City of Hutto for operating and maintaining these structures and the City should continue to participate and coordinate with the WCID on flood protection and planning projects.

Water & Wastewater Facility Damage

Another issue would be wastewater lift station flooding which causes the station to become unoperable thereby restricting wastewater service to a part of the community. The City reported some flooding at a couple of lift stations, however flood damage was minimal and no reported loss of service was reported. Both the downtown and south side wastewater plants were unaffected by the two flood events noted. Since the City purchases all of its wholesale water supply, no impacts to water supply sources were reported and no damage to water storage, pump or treatment facilities were reported.

SECTION 3: DETENTION POND IDENTIFICATION & DESCRIPTION

The City of Hutto has over 30 existing detention ponds serving various sizes of developments located throughout the planning area. Exhibit C provides location map and table of these ponds including area(s) they serve, operation and maintenance responsibility (City or a private entity such as a Homeowner's Association) and approximate dimensions. Appendix 3 of this report provides pictures of each pond inventoried.

All of the ponds were studied, designed and constructed during the development to provide no adverse impact to surrounding and downstream properties. As evidenced by the location and number of these facilities, the majority of the Hutto planning area has been evaluated by various engineers to mitigate the impact of flooding as a result of the developments they serve.

The City is currently reviewing engineering plans for the Co-Op development to improve the Hutto Square detention pond by modifying storage capacity and converting the pond to a wet pond. The new wet pond will provide an aesthetic feature to the development while maintaining storage capacity to manage storm water runoff from the fully developed condition of the Hutto Square subdivision. The improved pond will function as a regional storm water management system and may include opportunities to accommodate storm water runoff from Old Town through a proposed underground storm water management system.

City staff has acknowledged that the existing pond system appears to function well during various wet weather events. The Year 2015 Memorial Day flood and the September 2010 tropical storm Hermine events brought some of the most intense rainfall the area has experienced in recent memories. Tropical storm Hermine dropped nearly 11 inches of rainfall during a 24-hour period. Brushy Creek reached high bank elevations caused several houses along the creek being inundated. The areas of inundation occurred outside the influence of the existing detention pond locations and were concentrated in areas that were historically flooded.

SECTION 4: HYDROLOGY & HYDRAULICS: CO-OP DOWNSTREAM TO LEGENDS OF HUTTO & COTTONWOOD CREEK FROM HIGHWAY 79 DOWNSTREAM TO CREEKBEND

The City of Hutto recognized two areas of concern where flooding and flood damage were of high priority. The two areas were targeted for hydrologic and hydraulic modeling and were incorporated into this master plan.

The first area analyzed included the Co-Op site downstream including the Legends of Hutto off-site channel to the confluence with the discharge of the Country Estates wet detention pond. A portion of the study area was classified by FEMA as Segment 9.

The second area analyzed included Cottonwood Creek from downstream of the Highway 79 bridge to the Creekbend detention pond. This area was classified by FEMA as main stream of Cottonwood Creek.

FEMA is currently studying these areas and their study information and model data were available from the City of Hutto. The FEMA study is on-going with anticipated adoption date end of 2018 calendar year.

HLA subcontracted with MillerGRAY Consulting Engineers to prepare the H&H analysis for both the Co-Op and Cottonwood Creek studies. FEMA study information was incorporated into the H&H models and the studies discussed in this report included data that was deemed relevant from FEMA for consistency.

The following provides a summary of the H&H flood studies for both areas. Highlights of each study and project recommendations are discussed. Appendices 1a and 1b include MillerGRAY's deliverables which include detailed narrative and analysis of each study area, model information and conclusions.

Co-Op H&H Flood Study

The Co-Op H&H study was developed using FEMA model information with several add-ons and adjustments. The following items were considered during the model development:

- The FEMA study did not include the Co-Op development activities
- The upstream limit of the FEMA study ends just downstream of Front Street
- The H&H study for this report extends through US Hwy. 79 and incorporates the Co-Op development which includes the Hutto Co-Op detention pond modifications currently under construction
- The H&H study considers impacts to the Highway 79 culvert structure, the Union Pacific Rail Road (UPRR) bridge structure, Front Street culvert structure, Legends of Hutto off-site channel and Carl Stern Boulevard culvert at the intersection with the Legends of Hutto channel
- The H&H study identified that the Hutto Square Subdivision's original H&H study drainage area map included portions of Old Town Hutto that actually do not drain to the existing detention pond. The H&H study was adjusted to accurately represent areas that are draining to the existing pond
- The H&H study identified that the FEMA model assumed that stormwater runoff from the developed areas of the Legends of Hutto Subdivision discharged stormwater to the existing Legends of Hutto off-site channel. This is not accurate as the developed areas within the Legends of Hutto Subdivision convey stormwater to the existing Legends of Hutto detention pond

After preparing the above updates to the FEMA model, a "corrected effective" model was developed for the subject area. The "corrected effective" model was subsequently used to develop a proposed hydraulic model to evaluate Legend of Hutto channel improvements. The following recommendations were made after analyzing the model results:

- The Legends of Hutto off-site channel should be widened approximately 10' to facilitate anticipated 100-year flood event
- The Carl Stern Boulevard culvert structure requires an additional box culvert to facilitate anticipated 100-year flood event
- The existing box culvert structure under Hwy. 79, existing bridge structure under the UPRR and existing Front Street culvert structure appear to be adequately sized to facilitate the 100-year flood event

Cottonwood Creek H&H Flood Study

The Cottonwood Creek H&H study was developed using FEMA model information. The following items were considered during the model development:

- The H&H study includes revisions to the FEMA assumptions to more accurately represent current local conditions in the watershed;
- The existing pedestrian bridge in between US 79 and the railroad bridge was included in this study.

After incorporating the above updates to the FEMA model, a “corrected effective” model was developed for the subject area. There were slight changes in the 1% probability flood event elevations; however, the elevation differences were less than one-tenth of a foot which is equivalent to approximately one inch.

The “corrected effective” model was used to develop a proposed hydraulic model to consider Cottonwood Creek channel improvements by widening the existing creek section by a nominal width of 30’ to 60’ with limited sections as much as 90’. The proposed channel modifications were input to the base model to assess the impact. The result indicates that the proposed channel section:

- increased conveyance capacity for the 1% annual probability storm event;
- lowered the 1% annual probability storm elevations along the reach for an average of 1.3’;
- removed most of the residential lots and the majority of houses along the west bank of the creek out of the floodplain.

SECTION 5: DOCUMENT REVIEW

The following planning documents were reviewed to determine any drainage management plans that could be incorporated into this master plan.

- ✓ Hutto 2040 Comprehensive Plan
- ✓ Old Town Master Plan
- ✓ Hutto Thoroughfare Plan
- ✓ Parks, Recreation, Open Space & Trails Master Plan
- ✓ Hutto Engineering Manual –Stormwater and Drainage System Design Requirements

A general summary of each plan is provided as follows.

Hutto 2040 Comprehensive Plan

The Hutto 2040 Comprehensive Plan was developed circa May, 2015. The purpose of the plan was to incorporate by reference previous planning efforts and update the City's comprehensive plan and future land use map. The plan did not include a specific drainage plan; however the future land use map lends value for the vision of how land uses within the Hutto Planning Area may be foreshadowed.

Old Town Master Plan

The Old Town Master Plan (a.k.a., Heart of Hutto Master Plan) was developed circa February, 2009. The planning area outlined the Historic City Center of Hutto. The boundary limits are generally described as Park Street and Cottonwood Creek on the east, south to Evans Street, west to the Co-Op site and north to approximately the unimproved rights-of-way of Capitol Street and certain tracts along North FM 1660 to the Cottonwood Subdivision. Exhibit D illustrates Old Town Hutto drainage patterns.

The study was comprehensive and proposed a plan of development including future land uses, street types, water, wastewater, storm water and underground utility improvements. In summary, the plan considered that in the future, the Old Town area residential neighborhood environment would be improved to curb and gutter streets with underground storm water conveyance. The plan included a "Conceptual Storm Water Management" system which discussed local drainage patterns and how they could be managed with future projects. It addressed the Co-Op development

to contain mixed uses with a City Complex component and entertainment district. Based on the on-going Co-Op development, this plan will soon be a reality.

Hutto Thoroughfare Plan – 2011

The Hutto Thoroughfare Plan was developed in 2011. The plan narrative included listing “Creeks, water bodies, and other flood-prone areas” as a constraint in developing a thoroughfare system. The intention of the plan was to develop a consensus among staff, elected officials and local planning bodies such as Williamson County and TxDOT that the City would be adopting this plan as a tool for coordinating future roadway classifications with developers, the County and TxDOT. The roadway classification standards considered rights-of-way (ROW) width dedication requirements, lane widths, design speeds, driveway spacings, etc.

Parks, Recreation, Open Space & Trails Master Plan

The Parks, Recreation, Open Space & Trails Master Plan was originally adopted circa 2007. The City performed an update of the plan circa October 2015. The plan is very detailed and outlines multiple projects, cost estimates and recommendations. The plan also includes a summary of existing facilities. The plan intended to provide a footprint for future CIP projects and make recommendations for future community parks, trail systems, etc.

It is important that as the City develops its existing and future park system and considering the fact that many of the park system improvements are located within floodplain or flood prone areas, that drainage planning integrate with park plans. For instance, a well maintained open space park located within a floodplain can provide a benefit to the flow characteristics of the local creek or stream.

One of the recommendations from this master plan includes a detailed flood study of Cottonwood Creek including a FEMA Conditional Letter of Map Revision (CLOMR) followed by a FEMA Letter of Map Revision (LOMR). Several residential structures located adjacent to the parkland and greenbelt of the Creekside Estates and Creekbend Subdivisions have experienced flooding conditions. The City also has existing park and trail located within or adjacent to Cottonwood Creek that have experienced severe flood damage. There may be an opportunity to perform

channel improvements to Cottonwood Creek that could mitigate flood related damages to these areas. The City could also consider developing a future trail system parallel to and aligned with the Cottonwood Creek improvements thereby leveraging assets and putting in place a permanent operation and maintenance system to maintain the channel integrity and assist with flood prevention.

City of Hutto Engineering Manual – Stormwater and Drainage System Design Requirements

At the time of this master plan, City staff is developing updates to its drainage design engineering manual. The update includes a stormwater and drainage section intended to consolidate previous design and standards criteria. The drainage section will discuss opportunities for regional stormwater management and coordination with multiple entities such as Williamson County to enact flood protection projects. The City intends to adopt this stormwater and drainage design manual within the near future.

Pursuant to review of the current Unified Development Code, the following are highlights of review comments:

1. The code requires development to be in compliance with the City of Round Rock's water quality facilities. Currently, City is not enforcing the requirement. Requiring the installation of water quality facilities may create financial impact to the potential development.
2. The code requires that finished floor slab elevation shall be a minimum of two feet above the ultimate 100-year floodplain. As the ultimate developed condition is subject to interpretation, the ultimate 100-year floodplain elevation is arguable. Considering utilizing existing 100-year floodplain as a datum would be more realistic.

SECTION 6: IDENTIFICATION OF FLOOD PROBLEM LOCATIONS

The Year 2010 tropical storm Hermine and Year 2015 Memorial Day flood events were significant storms that impacted central Texas including the Hutto planning area. The Memorial Day flood took lives in the Wimberley area and washed out major roadway bridges and intersections. Locally, Brushy Creek experienced a rise up to 23' above normal elevation at the intersection with Chris Kelley Boulevard (a.k.a., FM 685), flooded Riverwalk Drive at its intersection with Chris Kelley Boulevard and caused Fritz Park and Creekside Park to go under water. Hutto Parks & Recreation office inundated by up to 12 to 24 inches of water. The Creekside Estates Subdivision experienced street flooding and several houses located adjacent to the park and greenbelt had 6" to 12" of water inside the house. There were several other locations where isolated events of residential flooding were reported.

By comparing high water mark elevations within the City with the FEMA floodplain maps for the area would seem to indicate that the City experienced close to or at a 100-year flood event in both instances. The Year 2015 Memorial Day flood recorded approximately 10-12 inches of rainfall in an approximate 24-hour period. This rain event was equivalent to the Year 2010 tropical storm Hermine flood which similarly dumped nearly 11 inches of rain in a 24-hour period. The Soil Conservation Service (SCS) rainfall duration and rate table for a 24-hour 1% storm event (a.k.a, 100-year event) for the Hutto area is approximately 11.3 inches.

The City staff was instrumental in identifying flood problem locations associated with the Year 2015 Memorial Day flood event. City staff and several local citizens witnessed flood damage areas and many pictures and several videos were provided to document the event and resulting damages. The following flood problem locations were identified:

- ✓ Creekside Estates Subdivision local street flooding and several residences
- ✓ Creekbend Subdivision isolated residence flooding
- ✓ Country Estates Subdivision isolated residence flooding
- ✓ Old Town Hutto along West & Metcalfe Streets isolated residential flooding
- ✓ Riverwalk Subdivision entrance & isolated residence flooding along Riverwalk Drive
- ✓ Fritz Park including the parks & recreation building and park assets
- ✓ Creekside Estates park assets

HUTTO DRAINAGE MASTER PLAN

- ✓ County Road 137 at the Hutto Farley Middle School road entrance
- ✓ Hutto Lake Park

Exhibit E presents the locations of recorded flood damage provided by City staff. The majority of areas identified by witness events have much in common. They are located adjacent to or within close reach of the City's two major watersheds; Cottonwood and Brushy Creeks. Hutto Parke North, Creekside Estates and Creekbend Subdivisions are located adjacent to Cottonwood Creek. Several residences in Creekside Estates experienced flood damage and one residence located in Creekbend reported flood damage. All these residences are located adjacent to existing greenbelts, detention ponds and parklands. There were two residences located in Old Town Hutto that experienced flood damage, one on Metcalfe Street and the other on West Street. The cause of the house flooding remains under investigation, however there is speculation that either the houses were built to grade and due to improper lot grading the houses flooded or the existing bar ditch affront the houses experienced overtopping and contributed to the flood damage. There was also an isolated event with two houses on both sides of the channel experienced flood damage in the Country Estates Subdivision that remains under investigation as to the cause of the flood damage to the house.



Figure 3 Flood elevation appears on residential structure Located at 522 Meadowside Drive in the Creekbend Subdivision after May 2015 Memorial Day flood event



Figure 4 Flood water receding from roadway after May 2015 Memorial Day flood event

SECTION 7: DEVELOP DRAINAGE SOLUTIONS, LIST OF IMPROVEMENT PROJECTS & COST ESTIMATES

Solutions

Solutions are by definition acts, methods or processes of solving a problem. Usually solutions include an explanation or clarification to problem solving. In the case of this master drainage study, solutions to flood and drainage related problems identified during the course of this study were categorized by using public health, safety and welfare as the most critical component, followed by impairment to deploy critical lifesaving services such as fire or EMS personnel and equipment due to impassable streets or bridges with the less critical category of public inconvenience and damage(s) to non-critical or life dependent assets such as minor roadway flooding, parkland features and sidewalks.

Cottonwood and Brushy Creeks experience the greatest probability of causing public health, safety and welfare related problems due to extreme rainfall and flood related events. It is within these watersheds that solutions to flooding and drainage problems were focused.

Due to flooding in residences within the Creekside Estates Subdivision located along the floodplain section of Cottonwood Creek, it is recommended that the City implement a Cottonwood Creek Flood Study and evaluate projects such as upstream on-stream or off-stream detention pond(s) to attenuate and lessen the impact of peak rainfall events before they reach the City proper. There remains open land within the upper reaches of Cottonwood Creek that could be acquired and set aside for future detention pond improvements and possibly used for the added benefit of parkland. However, due to the current real estate market conditions, this land is steadily being bought up and developed. The City will need to act quickly to seek and acquire a tract or tracts for this type of project. It is recommended that at least 30 to 40 acres be acquired adjacent to Cottonwood Creek for construction of this type of project.

Cottonwood Creek is a relatively unimproved creek section. The H&H model recommends improving the Creek cross-section which would increase conveyance capacity. The City should consider performing improvements to Cottonwood Creek from CR 199 downstream past the Creekbend detention pond. The improvements may include the following items:

- Perform a flood study which evaluates the effects of improving Cottonwood Creek conveyance capacity by channel reconfiguration and riparian improvements to increase the channel hydraulics
- Based on favorable flood study and proposed improvement project results, submit and process with FEMA a Conditional Letter of Map Revision (CLOMR)
- After FEMA approves the CLOMR, design and construct the improvements described in the CLOMR and submit to FEMA a Letter of Map Revision (LOMR)

The FEMA CLOMR/LOMR is a lengthy process; however the H&H study indicated that improving Cottonwood Creek hydraulics within the aforementioned reach will effectively reduce the impact of a 100-year flood event. Flooding during the 1% annual probability (a.k.a. 100-year) flood event could be mitigated and the adjacent residences and properties could benefit substantially. The first phase of improving the hydraulic characteristics of Cottonwood Creek could be repeated with future phases downstream in an effort to alleviate flood damage related problems within this area of Hutto's planning area and possibly reclaiming acres of land from the 100-year floodplain.

The Year 2015 Memorial Day flood event inundated Fritz Park, however based on witness video of the event; the flood waters did not cross Highway 79. Backwater conditions within Fritz Park caused flooding of park facilities; however the flood waters did not appear to impact residences and businesses located due west of Park Street.

The Hutto Fire and Rescue team reported that Brushy Creek flooding caused Riverwalk Drive to flood and become impassable for safe passage of automobiles and emergency service vehicles. The improved Chris Kelley Boulevard (a.k.a., FM 685) bridge across Brushy Creek has been a sound solution to safe transportation for emergency vehicle access. The 2015 Memorial Day flood event is a good example of how the previous low water bridge was flooded but the new bridge (under construction at the time) passed the flood event safely under the bridge support structure. It is important for the City of Hutto to partner with the City of Round Rock, Upper Brushy Creek WCID and Williamson County on identifying and implementing possible projects along Brushy Creek upstream of Hutto and within Hutto watershed boundaries that could stabilize the impact of

future flood related events and minimize damage to properties located within the Brushy Creek watershed and close to the Creek streambed.

Proposed Improvement Projects

The following projects were identified during development of this plan:

a. Perform Cottonwood Creek Flood Study w/Solution(s) to Reduce Flooding Impact Including a FEMA CLOMR

This project intends to perform a flood study of Cottonwood Creek from downstream of County Road 199 (CR 199) through Creekbend subdivision detention pond and include alternative for improving the creek channel characteristics with a goal of effectively lowering the 100-year floodplain elevation within this reach. The H&H study included in this plan indicates that this project could lower elevations within this reach and could mitigate flooding to residential structures for the 100-year flood event which are located adjacent to the existing detention pond and greenbelt. The project would include a FEMA Conditional Letter of Map Revision (CLOMR) to request approval of a project designed to lower the 100-year floodplain elevation within this reach.

b. Perform Cottonwood Creek Channel/Riparian Waterway Improvements from CR 199 downstream past the Creekbend Subdivision & FEMA LOMR

This project is the second part of the Cottonwood Creek channel improvement project and includes the construction activity as well as a FEMA Letter of Map Revision (LOMR). The proposed project includes Cottonwood Creek channel improvements from downstream of CR 199 through the Creekbend subdivision detention pond. It is anticipated that some additional rights-of-way (ROW) may be necessary to perform the project. There is an existing pedestrian sidewalk that will need to be reconstructed with a pedestrian bridge creek crossing and the channel improvements will include channel excavation, structural reinforcement, possible concrete or rock rip-rap slope improvements, sideslope grading, utility relocation, etc. This is a significant project that could be repeated downstream of Creekbend to improve the channel characteristics with a secondary for park pedestrian pathway improvements and reclamation of property from the FEMA 100-year floodplain designation.

c. Legends of Hutto Channel & Carl Stern Boulevard Culvert Improvement Project

This project is highlighted in the Co-Op/Hutto Square detention pond H&H report included with this plan. The project includes expanding the existing Legends of Hutto channel by 10' on the west side and installing another 8' X 4" reinforced box culvert (RCB) structure under Carl Stern Boulevard at the intersection with the Legends of Hutto channel. The proposed project will mitigate flooding conditions along the channel reach and at Carl Stern Boulevard.

d. Old Town Hutto Drainage Improvement Project

i. Re-grade bar ditches to original condition

This project is proposed to be performed by City crews. The existing bar ditches in Old Town has not been maintained and this project intends to re-establish the ditches to their original condition. The City could consider budgeting funds each year to perform a certain amount of these improvements with a 5 or 10-year plan to complete all ditch grading work.

ii. Phased approach to convert existing bar ditch drainage system to enclosed storm sewer and curb and gutter street system

This project will include major road and drainage rehabilitation improvements to the Old Town street system. The proposed cost estimate includes one block of improvements. The City could budget one or more blocks to be designed and bid out to a private contractor as budget permits. Due to the expensive nature of this urban roadway revitalization project, it is anticipated that City staff, City council and the residents will perform a decision making process to determine the order of which streets are improved. This project was recommended in the original Old Town plan and the City has performed streetscape improvements to most of Farley Street and one block of East Street. The current Co-Op improvement project includes extending some streets through the project area but does not include improving a block of Farley and Short Streets located adjacent to the Co-Op development. Also, the City commissioned the preliminary design of Taylor Streetscape project but later placed the project on hold.

e. CR 137 & Farley Middle School Driveway Road Drainage Improvement Project

This project intends to mitigate flooding at the intersection of CR 137 and the Hutto ISD driveway to Farley Middle School. During certain rainfall events, this intersection has been known to flood. To date, the City has considered two possible solutions to this problem. One solution is to procure a drainage easement from “The Narrows” tract located across CR 137, west of the project site, extending across the property and to Brushy Creek. This easement may be difficult to procure since it effectively cuts across the property and would require the landowner to design any future subdivision or site improvements around this drainage easement. However, from a construction and problem resolution, this would be the most straightforward solution and economical of the two solutions. The second solution considered is to re-grade the east bar ditch of CR 137 for a distance of approximately 2,800 feet to Brushy Creek. This solution is the most costly and would require cooperation from Williamson County as CR 137 is County operated and maintained. For this plan, the second solution is considered and cost estimate is provided for budget and discussion purposes. This project includes performing bar ditch grading along the east side of CR 137, installing low profile box culverts at the current intersection of CR 137 and Farley Middle School driveways and performing downstream improvements at the ditch discharge location to Brushy Creek.

f. Install Flood Gauges at Detention Ponds & Implement Flood Monitoring Program

This project could be performed in-house by City crews and intends to install simple depth elevation gauges at detention ponds. The project includes installing a physical elevation gauge, surveying the as-built elevation of the base of the gauge including features of the pond discharge and overflow weir system, setting up a spreadsheet to record rainfall and elevation information during rain events and continuously monitoring the flood gauge system. The importance of this program is to assimilate data over time to determine how the detention ponds function, whether adjustments to one or more ponds will enhance the City’s flood protection system and whether some ponds provide more benefit than others.

g. The Landing Subdivision Off-Site Channel & Hutto Exchange Boulevard Drainage Structure Improvement Project

This project will improve the existing unimproved channel system located north of Home Depot and along the south property line of the Landing extending east of Exchange Boulevard and terminating at the discharge to the existing box culvert structure located under Highway 79. The existing ditch appears to be well defined; however it is currently overgrown with trees, brush and debris. The proposed project includes removing existing vegetation, ditch profiling, sidewall structure support such as concrete or rock rip-rap, installing a pedestrian walkway along the north side (the Landing) side of the ditch and extending the improvements past Hutto Exchange Boulevard all the way to the Highway 79 ROW. The existing ditch manages stormwater from the Landing as well as the Hanson property north to Limmer Loop. This project will provide improved conveyance features and transform the ditch into a well-defined public improvement project with pedestrian friendly features.

This project also includes improving the Hutto Exchange Boulevard drainage structure and roadway at the intersection with the Landing off-site channel. The existing drainage will be removed and replaced with a multiple reinforced concrete box culvert structure with concrete headwalls, rip-rap and miscellaneous other improvements. The roadway will be reconstructed with concrete pavement, sidewalks installed to connect to the existing sidewalk system located north and south of this location and pedestrian friendly crossing to facilitate pedestrian access from the Landing across the Boulevard to the Co-Op development.

h. Emory Farms Subdivision Detention Pond Outfall Structure Improvement Project

This project intends to remove and replace or restore the existing structure to provide greater service and improve the aesthetic features of the structure. The existing structure appears to be overgrown with trees and vegetation some of which appear to have damaged the structure. It is debatable whether the structure should be repaired and restored in lieu of complete replacement. For this plan, a cost estimate has been included to demolish, remove and replace the existing structure.

i. Hutto Co-Op/Square Detention Pond Outfall Structure Improvement Project

This project intends to remove and replace or restore the existing structure to provide pond outfall regulation and improve the aesthetic features of the structure. The existing structure appears to be overgrown with trees and vegetation some of which appear to have damaged the structure. It is debatable whether the structure should be repaired and restored in lieu of complete replacement. For this plan, a cost estimate has been included to demolish, remove and replace the existing structure.

j. Clark's Crossing Subdivision Regrade Drainage Through City Easements

This project includes regrading approximately 1,350 linear feet of earthen ditch through Clark's Crossing subdivision. It is anticipated that the City staff could perform this project. A project cost estimate is included in the plan.

k. Hutto Planning Area Master Drainage Plan

This project includes performing a master drainage plan for the entire approximately 51 square miles of Hutto planning area. The plan would include performing hydrologic and hydraulic model study for pre- and post-developed conditions. Proposed condition shall be determined based on proposed land use map at the time of the study. Topographic data will be used from latest available LIDAR (Light Detection & Ranging) information from Williamson County. The analysis would include analysis and evaluation of performing creek/channel improvements, regional stormwater management improvements, culvert and bridge improvements for a fully-developed watershed condition based on future land use planning. The plan will include a list of proposed projects for each watershed, the associated engineer's opinion of probable project costs, and a ranking and prioritization evaluation.

The location of all the proposed projects is shown on Exhibit F.

Project Cost Estimates

Cost estimates were developed for each of the listed projects. The projects estimates involving construction activities include contingencies for legal, surveying, engineering, construction administration, etc. The recommended projects have been bundled into the following estimated budget categories:

Project Budget:

- ❖ \$50,000 or less
- ❖ \$50,000 to \$250,000
- ❖ Over \$250,000

Projects within the \$50k or less category could be funded over one or two fiscal years and implemented by City force account. Projects within the greater than \$50k up to \$250k budget category should be considered longer term and could be funded using a 5-year financing period. Projects in excess of \$250k budget category should be considered longer term projects best suited for CIP funds that extend up to a 20-year financing period.

The cost estimate work sheet for each project is included in Appendix 2. Improvements are classified as potential capital improvement program (CIP) project or City's force account project.

The following tables present the summary of cost estimates for each of the listed projects:

No.	Capital Improvement Program Project Description	Cost Estimate
1	<i>Cottonwood Creek Flood Study, FEMA CLOMR/LOMR & Channel/Riparian Imp's from CR 199 South Past Creedbend Subdivision Detention Pond</i>	\$15,950,000
2	<i>Cottonwood Creek Flood Study, FEMA CLOMR/LOMR & Channel/Riparian Imp's from Hutto Parke North to Approximately 1,000' South of Mager Lane</i>	\$11,200,000
3	<i>Legends of Hutto Channel & Carl Stern Boulevard Culvert Imp. Project</i>	\$900,000
4	<i>Old Town Hutto Streetscape, Conversion to Underground Storm & Curb & Gutter Section (Per Block)</i>	\$650,500
5	<i>The Landing Subdivision Off-Site Channel & Exchange Boulevard Culvert Imp. Project</i>	\$2,000,000
6	<i>Hutto Co-Op Detention Pond Outfall Structure Imp. Project</i>	\$700,000
7	<i>Emory Farms Subdivision Detention Pond Outfall Structure Imp. Project</i>	\$430,000
8	<i>Hutto Planning Area Master Drainage Plan</i>	\$400,000

No.	City Force Account Project Description	Cost Estimate
1	<i>CR 137 & Farley Middle School Driveway Imp. Project</i>	\$810,000
2	<i>Clark's Crossing Channel Restoration</i>	\$140,000
3	<i>Old Town Channel Restoration (Per Block)</i>	\$12,000
4	<i>Flood Gauge Installation at Detention Ponds</i>	\$40,000

Funding Options

The City has multiple funding tools available to finance these projects. A few of these options are discussed below.

The City has implemented a Municipal Drainage Utility (MDU) fee of \$4 per month which is projected to generate approximately \$350,000 in its first full year of implementation. The MDU fee can assist in financing a portion of the flood and drainage projects identified with this plan. The funds generated from the MDU could also be used to perform routine operation and maintenance expenses associated with the MDU goals and mission statement. Construction related improvements less than \$50k could be funded on an annual basis with the revenue generated by the MDU fee. Projects in excess of \$50k could be performed by borrowing funds through local banks, issuing Certificates of Obligation, municipal bonds or through the Texas Water Development Board (TWDB).

The City should also consider leveraging Municipal Drainage Utility (MDU) funds with road or park bond funds. For instance, the Old Town Hutto roadway and drainage improvement project is proposed to transition the existing open channel bar ditch roadway cross-section into a curb and gutter section with underground stormwater system qualifies as such a project. A CIP project would target both the street and drainage improvement aspects and intends to improve and preserve the integrity and value of Old Town Hutto. The MDU could pledge a portion of its revenues to pay back the bond proceeds.

Certificates of Obligation (Cos) are a commonly used funding tool and do not require a citizen vote for authorization. The MDU fee revenue would be pledged to pay back debt associated with this funding tool.

A municipal bond will require voter approval to fund drainage improvement projects. This option usually requires a longer planning period to implement the financing.

Capital loan through local banks also serves as an alternative financing mechanism for drainage improvement projects. While the interest rate may not be competitive with other funding options, it usually does not require significant administrative cost associated with the loan. Local banks have a better understanding of the City's financial capability and tend to be more flexible in terms and conditions.

The Tax Reinvestment Zone (TRZ) and Public Improvement District (PID) created around the Co-Op development and pending approval for the Landing development could also be used to fund projects which directly benefit those respective developments. TRZ's can generate significant revenue over time. It is generally set in place for specific periods of time to retire debt from projects which directly benefit the development. Once the debt is retired, the TRZ is typically resolved.

SECTION 8: RANKING & PRIORITIZING PROJECTS

Introduction

It is important that the City consider an orderly approach to identifying and addressing drainage projects. The process by which projects are identified, addressed and ranked should include first and foremost a preliminary screening assessment. Some drainage problems may not be eligible for consideration even though a resident may disagree. As an example, there may be pooling of rainfall on a lot that has not been properly graded and the house may be located at or below grade of the surrounding, available public drainage system. This is the case on certain lots located in Old Town Hutto. These type conditions are not the City's issue should not be considered as a public improvement project. Staff must educate the residents whenever this condition is encountered and be prepared to have an intelligent conversation about the preliminary screening assessment the City adopts as part of this master plan.

On the other hand, residential flooding caused by a drainage way such as Cottonwood Creek overtopping and flowing into residents' yards and structures is an important issue and should be at the top of the list of prioritizing a municipal solution to the problem.

Assessing and objectively characterizing the severity of a drainage problem includes the relative degree of severity when compared with other problems. As an example, overtopping a roadway on a collector street which is used as primary access for emergency vehicles is a priority over a local roadway that may overtop but allow accessibility for ingress and egress. Another example is flood damage to park facilities versus a structure primarily used by families such as a house, duplex, etc. Although flood damage to park infrastructure is a nuisance and a cost to replace, it is not as urgent as potential loss of life or damage to a habitable structure.

The prioritization of competing projects should focus on public health, safety and welfare as the first order of priority, followed by asset protection and lastly, operation and maintenance solutions. This master plan has identified a myriad of projects that fall into all three categories. Lockstep with prioritization is determining possible funding sources and availability of funds to perform the project in a timely and orderly fashion. There have been many great projects identified but never

performed due to budget constraints. For this master plan, the projects will be differentiated by cost to provide flexibility in how the projects are funded. Projects less than \$50,000 may be included within the annual operating expenses for the MDU. In this manner, the City may be able to accomplish one or more of these projects without the need for external financing. Project over \$50,000 but less than \$250,000 could be financed by short term (5 years) financing while projects in excess of \$250,000 could be financed by longer term (15-20 years) notes.

Ranking

The ranking process includes an objective evaluation of each project, a determination of the severity of the need, identifying a possible solution and the cost impact and a comparative analysis between the projects. For the purpose of this master plan, the following type of impacts is ranked in the following order:

I. Structural Flooding

Structural flooding is documenting a flood event and its impact on residential, business and public facilities (such as public buildings, park facilities, etc.). The highest ranking obviously is reserved for residential and/or business structures subject to flood inundation which include potential for loss of life. Second on the priority list would be residential structures subject to flooding but not life threatening. Following these priorities are businesses subject to flooding (non-life threatening) and public infrastructure (i.e., park buildings, restrooms, pavilions, etc.)

II. Roadway Flooding

Roadway flooding is documenting a flood event and its impact on roadways, bridges, culverts, etc. The highest ranking project in this category is a roadway that is impassable by vehicles including emergency vehicles which “strand” residents and/or emergency vehicles and severely limits their ability to ingress and egress to the flood damaged area. Second to this type roadway flooding is one in which the public use of the roadway is limited, however emergency vehicles can access the roadway for providing life safety services.

III. Quality of Life Impacts

This type of activity is associated with minor inconveniences such as flooding of the residents lawn for extended amount of time as to create a nuisance and potential health (mosquito) related problem. Also, road capacity being reduced to one-lane travel or bridge disrupted and detour is available but inconvenient to the public.

IV. Operation & Maintenance

A flooding event may expose a “weakness” in public infrastructure that requires more than a normal effort on behalf of a crew to repair and/or replace damaged infrastructure. The master plan notes several concrete overflow structures located at detention ponds that appear to be structurally compromised and in need of major repair and/or replacement. There are existing grass lined channels located within the City that probably should be improved with concrete to perform a more long term solution to the problem as opposed to re-grading the grass lined ditch. These projects are not necessarily high on a ranking of projects, but constitute a need to be fixed to eliminate them from the inventory of projects due to inability to budget funds in the past to make these repairs. As a for instance, the concrete overflow structures may still provide a degree of function, but left unattended will create a more dire life safety and/or roadway access issue and cause a burden to future budgets if left undone.

RECOMMENDED PRIORITY & RANKING OF SELECTED PROJECTS

Representatives from public works, engineering and inspection departments were asked to rank the proposed projects referenced in this master plan which were estimated above \$250,000 and did not involve using force account manpower and equipment resources.

The ranking criteria considered the following:

- ***Life Safety***
(0 Points No Life in Danger, 5 Points Possible Life Danger, 10 Points Imminent Life Danger)
- ***Damage to Private Infrastructure***
(0 Points No Damage, 5 Points Minor Damage, 10 Points Water in Structure, Major Damage)
- ***Damage to Public Infrastructure***
(0 Points No Damage, 4 Points Minor Damage, 8 Points Water in Structure, Major Damage)

HUTTO DRAINAGE MASTER PLAN

- ***Re-Occurring Event***
(No-0 Points, Yes-4 Points)
- ***Priority of Need***
(Fix Latter-0 Points, Fix Now-5 Points)

A project ranking form is presented in Appendix 4. After receiving scoring results, the following represents the list of projects in order of priority:

Project Ranking

Capital Improvement Program

<u>No.</u>	<u>Description</u>
1.	<i>Cottonwood Creek Flood Study, FEMA CLOMR/LOMR & Channel/Riparian Imp's from CR 199 South Past Creekbend Subdivision Detention Pond</i>
2.	<i>Cottonwood Creek Flood Study, FEMA CLOMR/LOMR & Channel/Riparian Imp's from Hutto Parke North to Approximately 1,000' South of Mager Lane</i>
3.	<i>Legends of Hutto Channel & Carl Stern Boulevard Culvert Improvement Project</i>
4.	<i>Old Town Hutto Streetscape, Conversion to Underground Storm & Curb & Gutter Section</i>
5.	<i>The Landing Subdivision Off-Site Channel & Exchange Boulevard Culvert Improvement Project</i>
6.	<i>Hutto Co-Op Detention Pond Outfall Structure Improvement Project</i>
7.	<i>Emory Farms Subdivision Detention Pond Outfall Structure Improvement Project</i>
8.	<i>Hutto Planning Area Master Drainage Plan</i>

City Force Account

<u>No.</u>	<u>Description</u>
1.	<i>CR 137 & Farley Middle School Driveway Improvement Project</i>
2.	<i>Clark's Crossing Channel Restoration</i>
3.	<i>Old Town Channel Restoration</i>
4.	<i>Flood Gauge Installation at Detention Ponds</i>

SECTION 9: SUMMARY & CONCLUSION

The master drainage plan included the following tasks:

- *Gather data*
- *Inventorize existing detention ponds*
- *Coordinate with City staff to identify historical flood related damage to both private and public infrastructure*
- *Perform Hydrologic and Hydraulic (H&H) studies for the channel from Co-Op development downstream to Legends of Hutto detention basin and Cottonwood Creek from south of Highway 79 through the Creekbend Subdivision detention pond*
- *Identify and scope out Capital Improvement Program (CIP) projects and perform cost estimates*
- *Coordinate with staff to rank and prioritize projects*

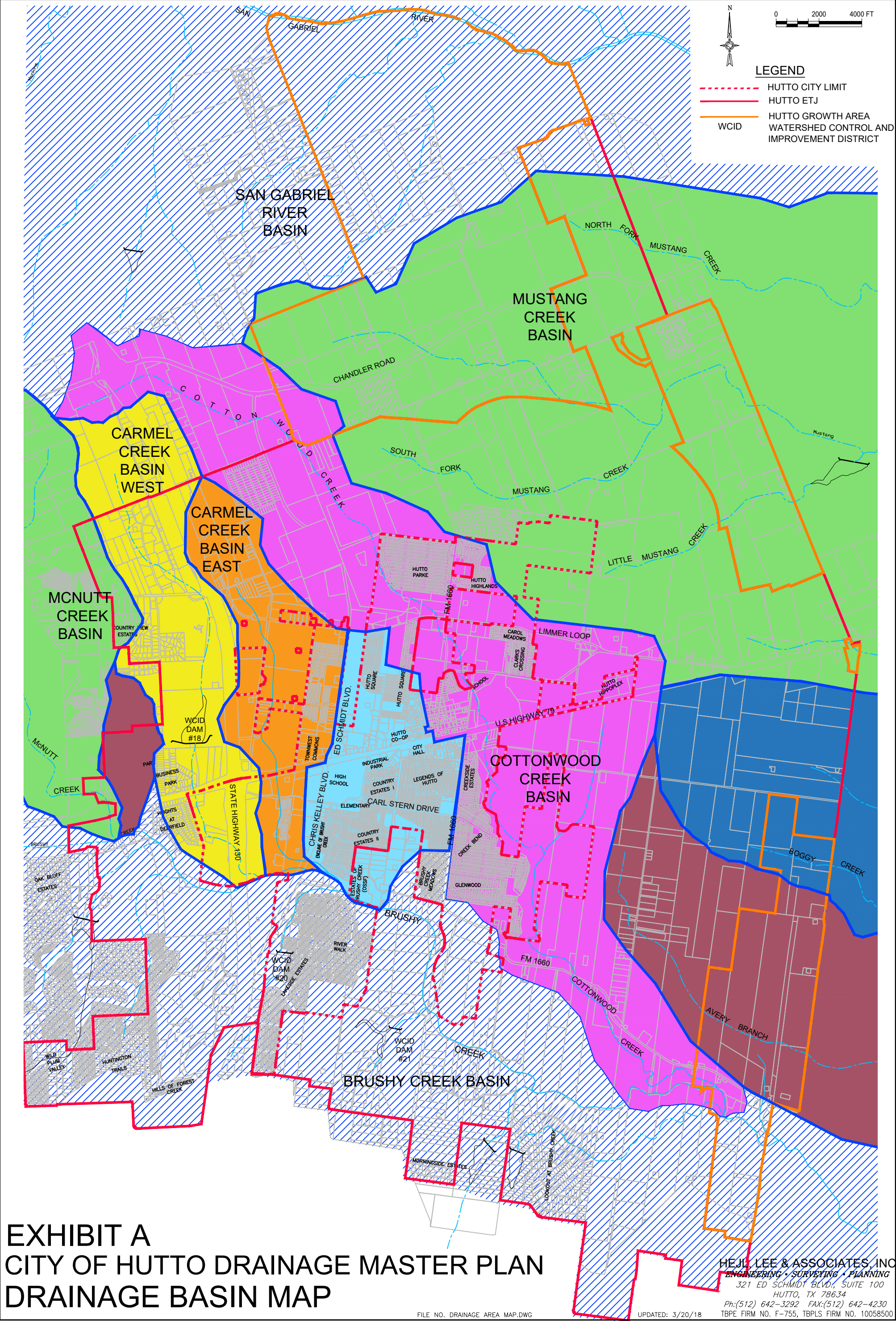
The City recognized the need to identify and implement drainage improvement projects; however, it did not possess the means by which the work could be funded.

In March 2018 the City adopted and assessed a stormwater utility fee of \$4 per month. The forecasted revenue stream of approximately \$350,000 per year is intended to specifically fund drainage improvement projects.

The master drainage plan identified numerous projects of which several could be performed by City crews. Nine projects totaling over \$30,000,000 have been identified and cost estimated. It is anticipated that the City will select one or more of the projects to be funded in the Fiscal Year (FY) 2019 CIP budget. City staff assisted in ranking and prioritizing the projects. This plan with the recommended projects will be provided to Council for final decision on which of the projects receives funding authorization.

In conclusion, this master plan serves as a beginning point for the City's drainage planning process. Future updates to this plan should build on the information, data and hydrologic/hydraulic models developed through this effort. The proposed projects include several that were identified by City staff but were not acted upon due to lack of funds. Several projects were identified through the modelling process and will require significant resource allocation.

Finally, the City may consider a future master plan that includes modelling all the watersheds located within the City's planning area with alternative analysis of existing and future land use assumptions. This activity would consider stream, channel, structure and regional detention pond evaluation with a goal of determining how and if regional stormwater management is a practical alternative for future implementation.



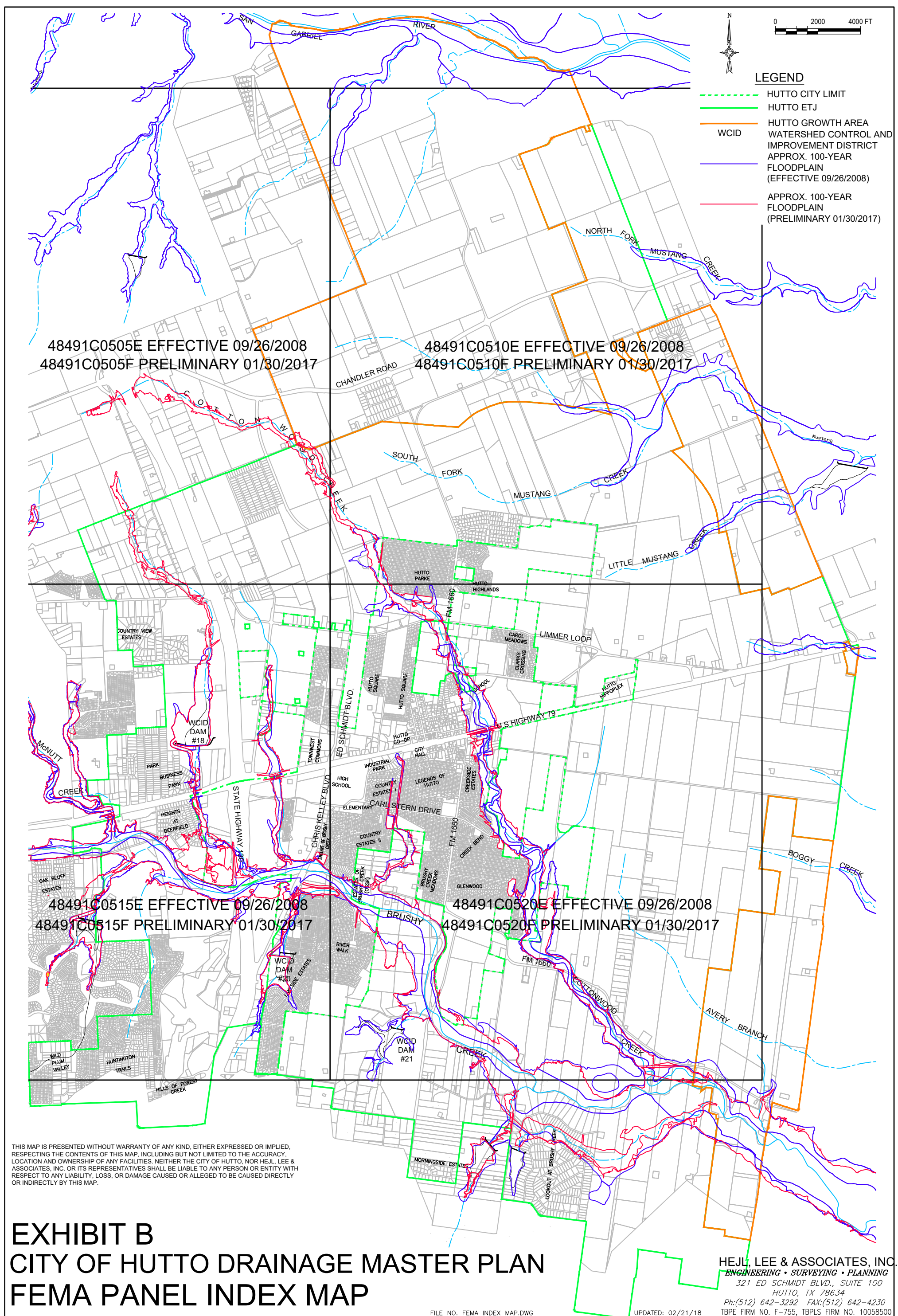


EXHIBIT B

CITY OF HUTTO DRAINAGE MASTER PLAN

FEMA PANEL INDEX MAP

HEJL, LEE & ASSOCIATES, INC.
ENGINEERING • SURVEYING • PLANNING
 321 ED SCHMIDT BLVD., SUITE 100
 HUTTO, TX 78634
 Ph: (512) 642-3292 FAX: (512) 642-4230
 TPBE FIRM NO. F-755, TPBLS FIRM NO. 10058500

FILE NO. FEMA INDEX MAP.DWG

UPDATED: 02/21/18

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Texas State Plane Central zone (FIPSZONE 4203). The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRM's for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOLA, NINGS 12
National Geodetic Survey
SSMC-3, #5202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was provided in digital format by CAPCOG. This information was digitized at a scale of at least 1:2,400 from aerial photography dated 2002.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

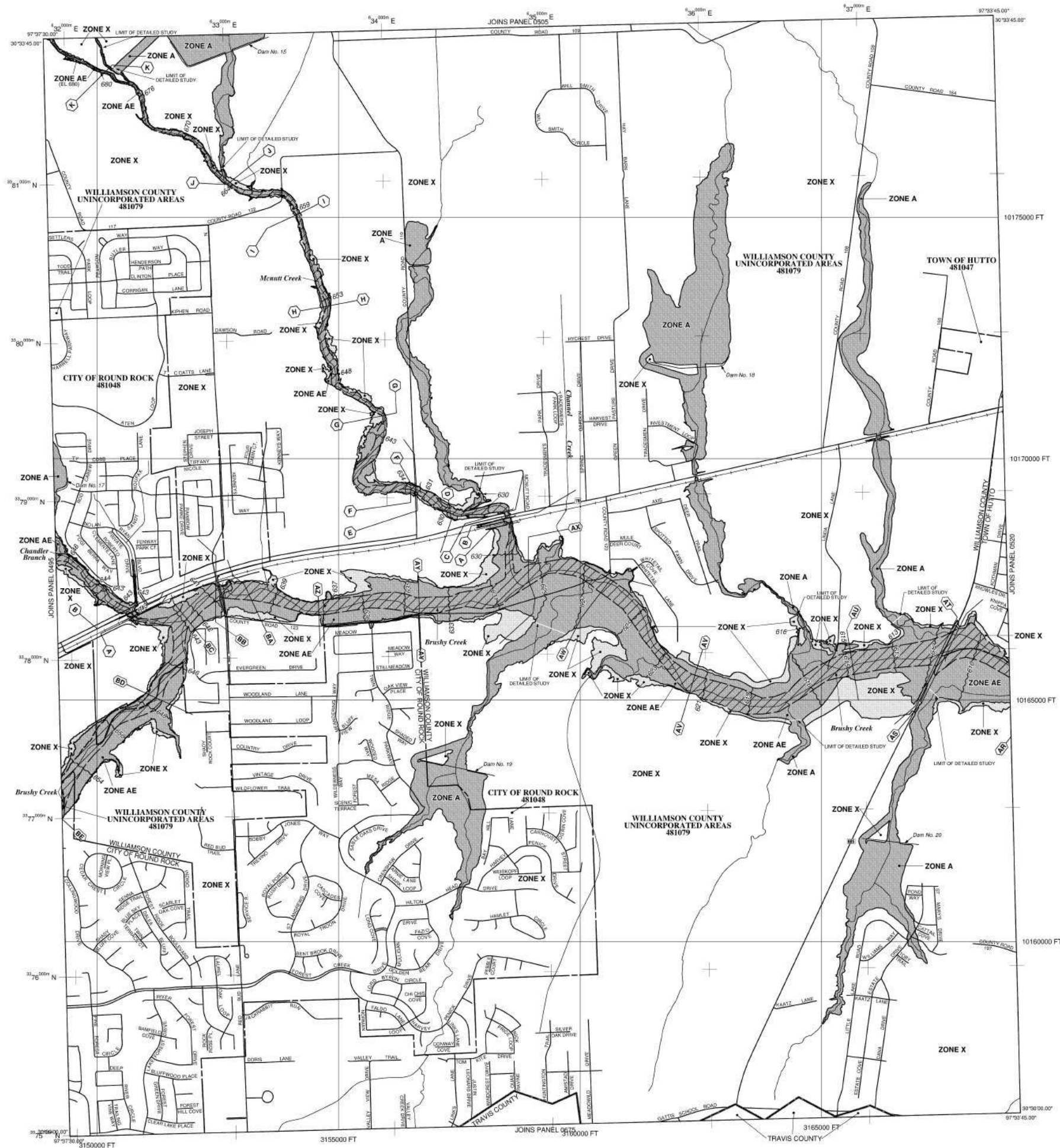
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.nsc.fema.gov/>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.

WITHIN THE CORPORATE LIMITS OF THE CITY OF ROUND ROCK THE 0.2% ANNUAL CHANCE FLOODPLAIN BOUNDARY APPROXIMATES THE 1% ANNUAL CHANCE ULTIMATE CONDITION FLOODPLAIN BOUNDARY. REFER TO THE FLOOD PROFILES SHOWN IN THE FLOOD INSURANCE STUDY REPORT TEXT FOR EXACT 1% ANNUAL CHANCE ULTIMATE FLOOD ELEVATIONS.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal Flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

Base Flood Elevation line and value; elevation in feet*

Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

Cross section line

Transect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

1000-meter Universal Transverse Mercator grid, zone 14

5000-foot grid : Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic

Bench mark (see explanation in Notes to Users section of this FIRM panel)

DX5510

M1.5

River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

September 27, 1991

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

November 2, 1993, January 3, 1997

September 25, 2009 - to update corporate limits, to update map format, to add roads and road names, to incorporate previously issued Letters of Map Revisions, to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 500 1000 2000 FEET METERS

PANEL 0515E

FIRM
FLOOD INSURANCE RATE MAP
WILLIAMSON COUNTY,
TEXAS
AND INCORPORATED AREAS

PANEL 515 OF 750
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY			
WILLIAMSON COUNTY	481079	0515	E
HUTTO TOWN OF	481047	0515	E
ROUND ROCK, CITY OF	481048	0515	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
48491C0515E
MAP REVISED
SEPTEMBER 26, 2008

Federal Emergency Management Agency

NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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The **projection** used in the preparation of this map was the Texas State Plane Central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

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NGS Information Services
NOAA/NMCS-12
National Geodetic Survey
SSMC-3, #5202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

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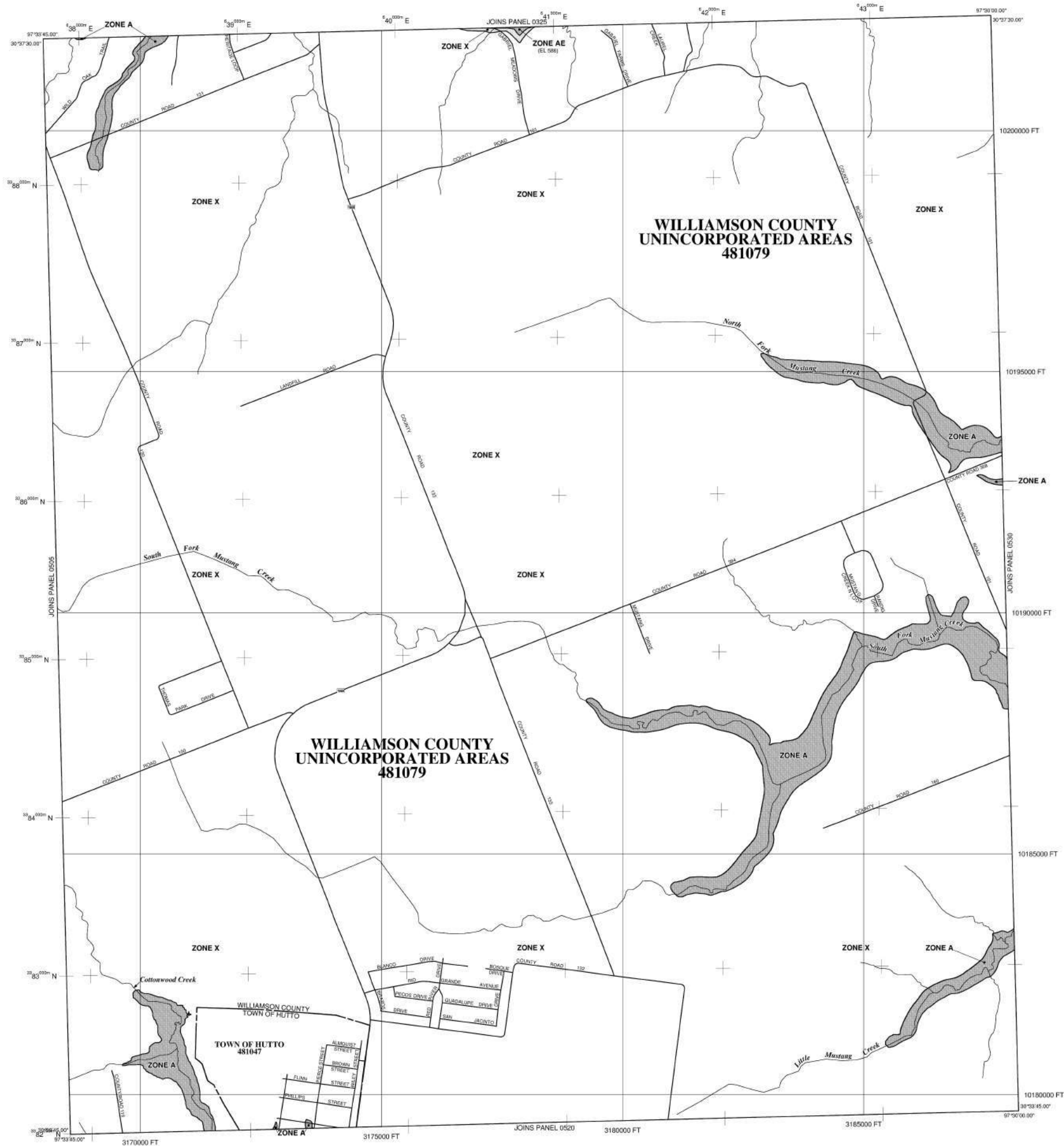
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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988 (NAVD 88)
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid, zone 14
- 5000-foot grid : Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- DX5510
- M1.5
- River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

September 27, 1991

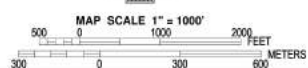
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

November 2, 1991; January 3, 1992

September 25, 2005 - to update corporate limits, to update map format, to add roads and road names, to incorporate previously issued Letters of Map Revisions, to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



PANEL 0510E

FIRM FLOOD INSURANCE RATE MAP WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 510 OF 750 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY			
WILLIAMSON COUNTY	481079	0510	E
HUTTO TOWNS OF	481047	0510	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
48491C0510E
MAP REVISED
SEPTEMBER 26, 2008

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

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Coastal Base Flood Elevations shown on this map apply only to landward of 6.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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NGS Information Services
NCEA, NINGS 12
National Geodetic Survey
SSMC-3, #5202
1315 East-West Highway
Silver Spring, MD 20910-3282

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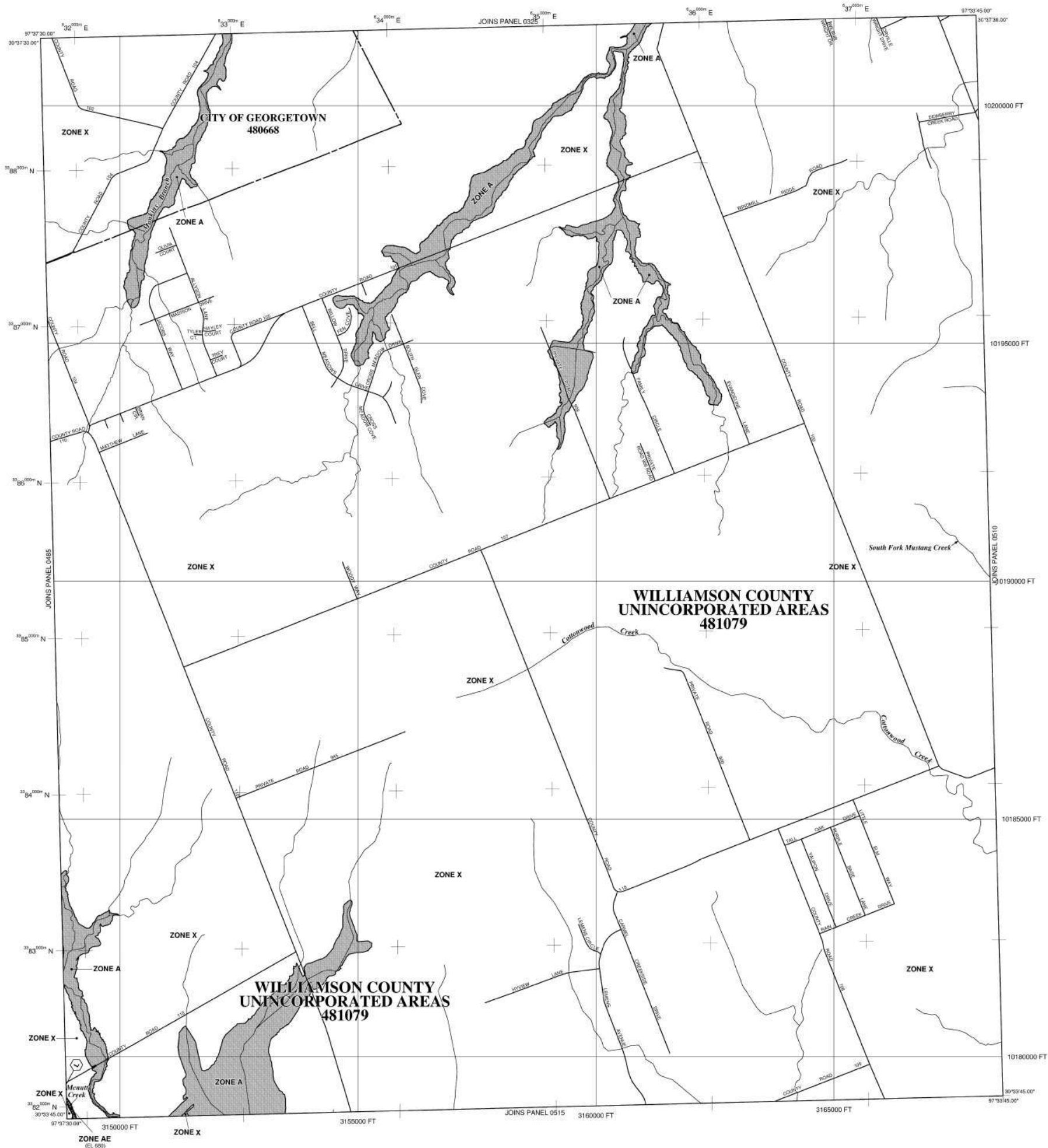
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LEGEND

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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988 (NAVD 88)
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid, zone 14
- 5000-foot grid : Texas State Plane coordinate system, central zone (FIPS/ZONE 4203), Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

September 27, 1991

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

November 2, 1992; January 3, 1993

September 25, 2005 - to update corporate limits, to update map format,

to add roads and road names, to incorporate previously issued Letters of Map

Revisions, to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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MAP SCALE 1" = 1000'

0 1000 2000 FEET

300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0505E

FIRM FLOOD INSURANCE RATE MAP WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 505 OF 750 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY	481079	0505	E
WILLIAMSON COUNTY	480668	0505	E

GEORGETOWN, CITY OF

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER

48491C0505E

MAP REVISED

SEPTEMBER 26, 2008

Federal Emergency Management Agency

NOTES TO USERS

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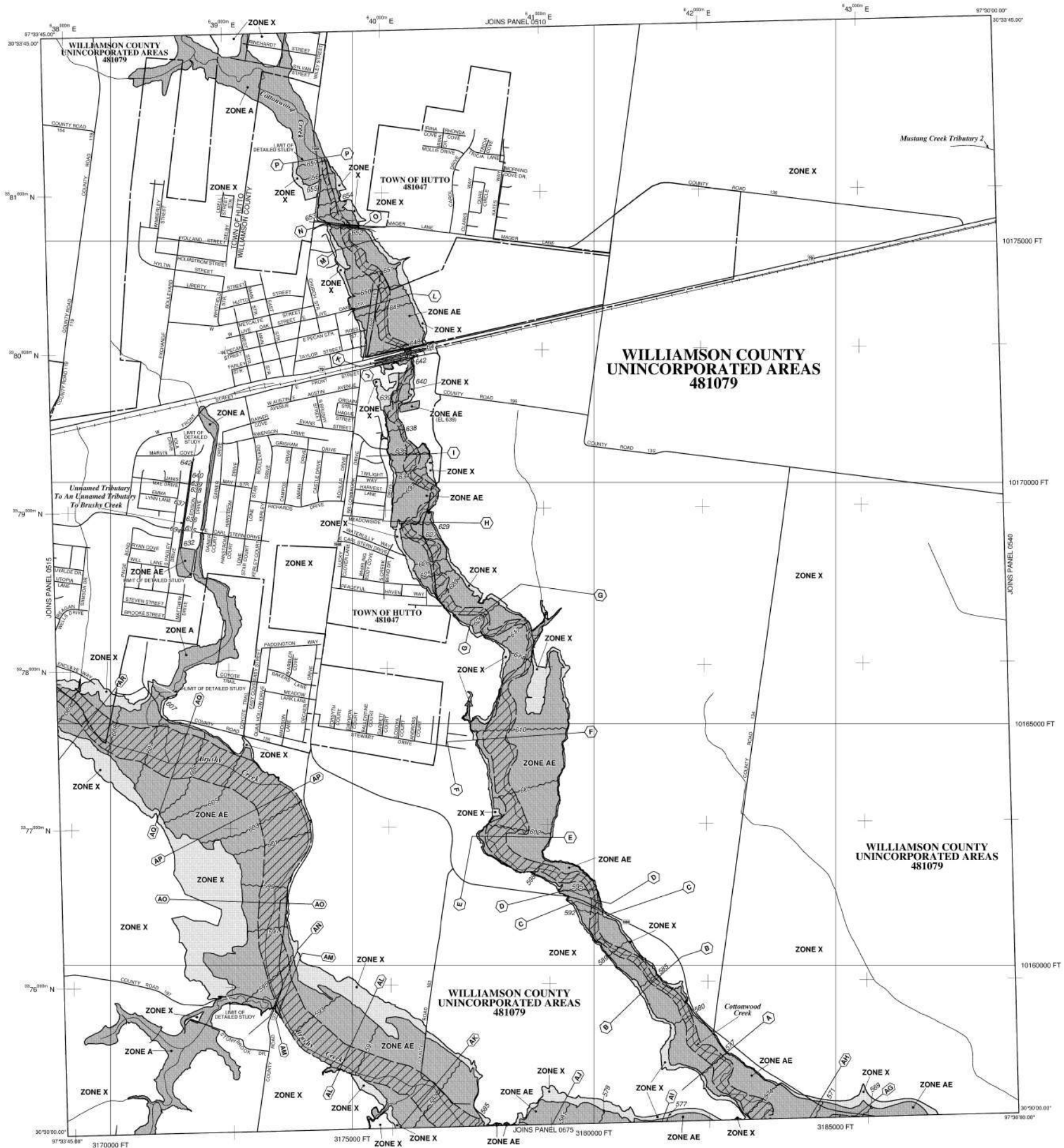
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LEGEND

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

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Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- Cross section line
- Transient line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid, zone 14
- 5000-foot grid : Texas State Plane coordinate system, central zone (FIPSZONE 4203).
Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

September 27, 1991

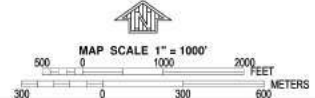
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

November 2, 1991; January 3, 1992

September 25, 2005 - to update corporate limits, to update map format, to add roads and road names, to incorporate previously issued Letters of Map Revisions, to reflect updated topographic information.

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PANEL 0520E

FIRM FLOOD INSURANCE RATE MAP WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 520 OF 750 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

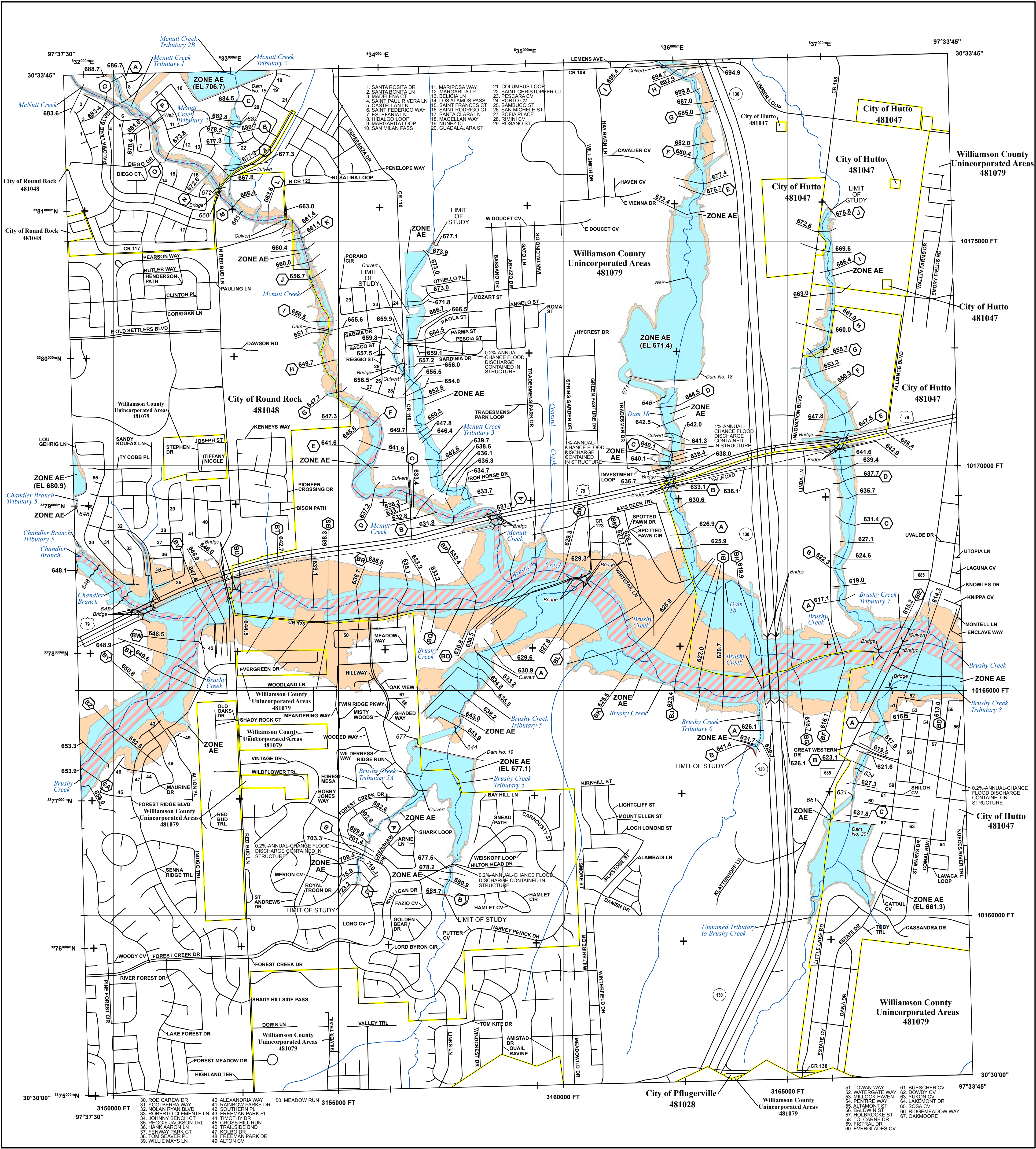
CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY			
WILLIAMSON COUNTY	481079	0520	E
HUTTO TOWNS OF	481047	0520	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



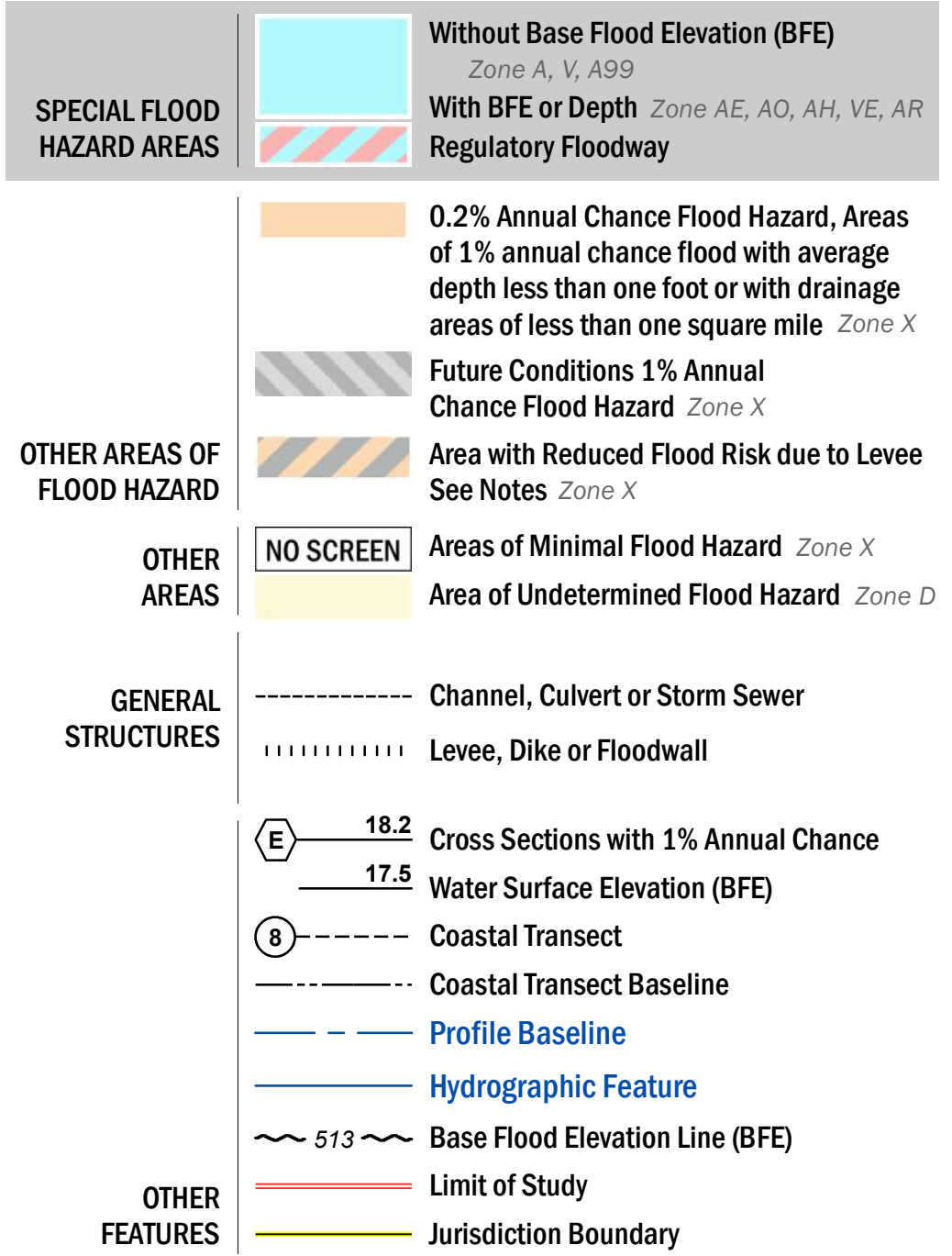
MAP NUMBER
48491C0520E
MAP REVISED
SEPTEMBER 26, 2008

Federal Emergency Management Agency



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://MSC.FEMA.GOV](http://msc.fema.gov)



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6271) or visit the FEMA Flood Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

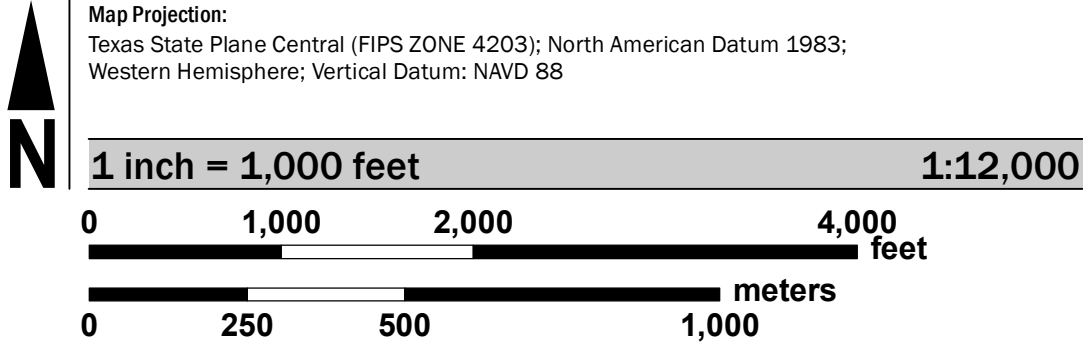
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

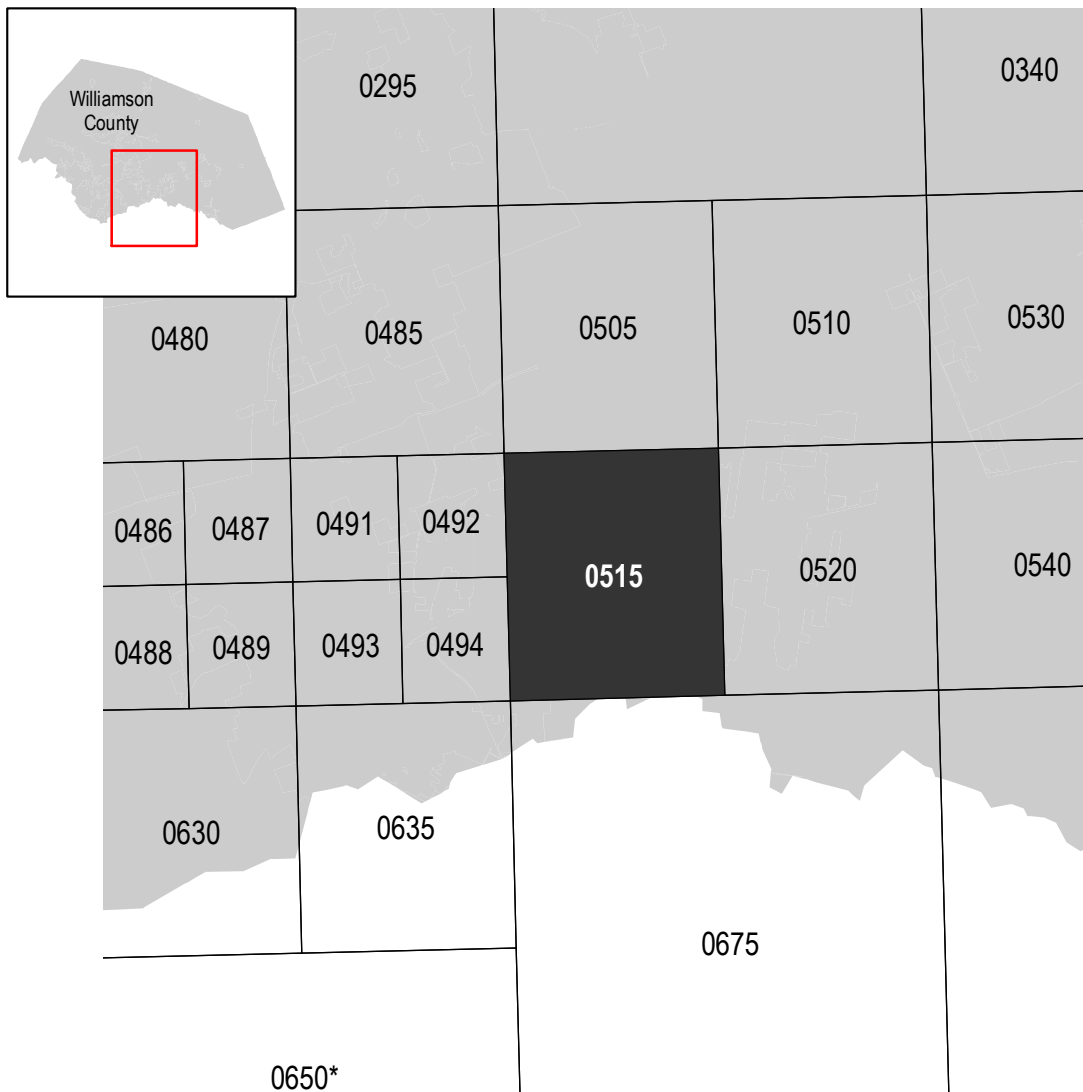
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Base map information shown on this FIRM was derived from digital data obtained from the Williamson County Geographic Information Systems (GIS) Department dated 2016.

SCALE



PANEL LOCATOR



*PANEL NOT PRINTED

FEMA

National Flood Insurance Program

WILLIAMSON COUNTY, TEXAS

and Incorporated Areas

PANEL 515 OF 750

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
HUTTO, CITY OF	481047	0515	F
PFLUGERVILLE, CITY OF	481028	0515	F
ROUND ROCK, CITY OF	481048	0515	F
WILLIAMSON COUNTY	481079	0515	F

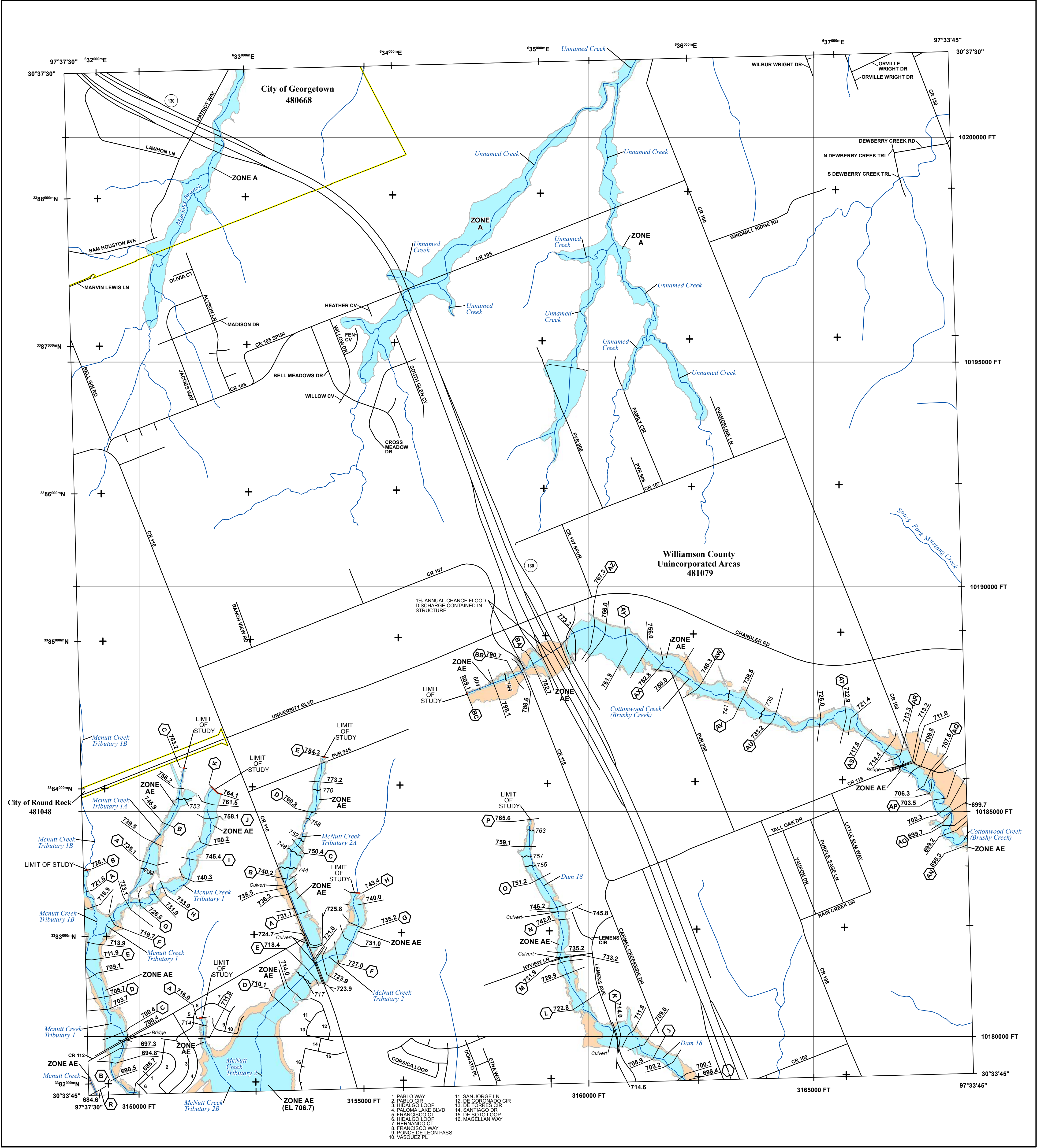
PRELIMINARY

1/30/2017

VERSION NUMBER 2.3.3.3

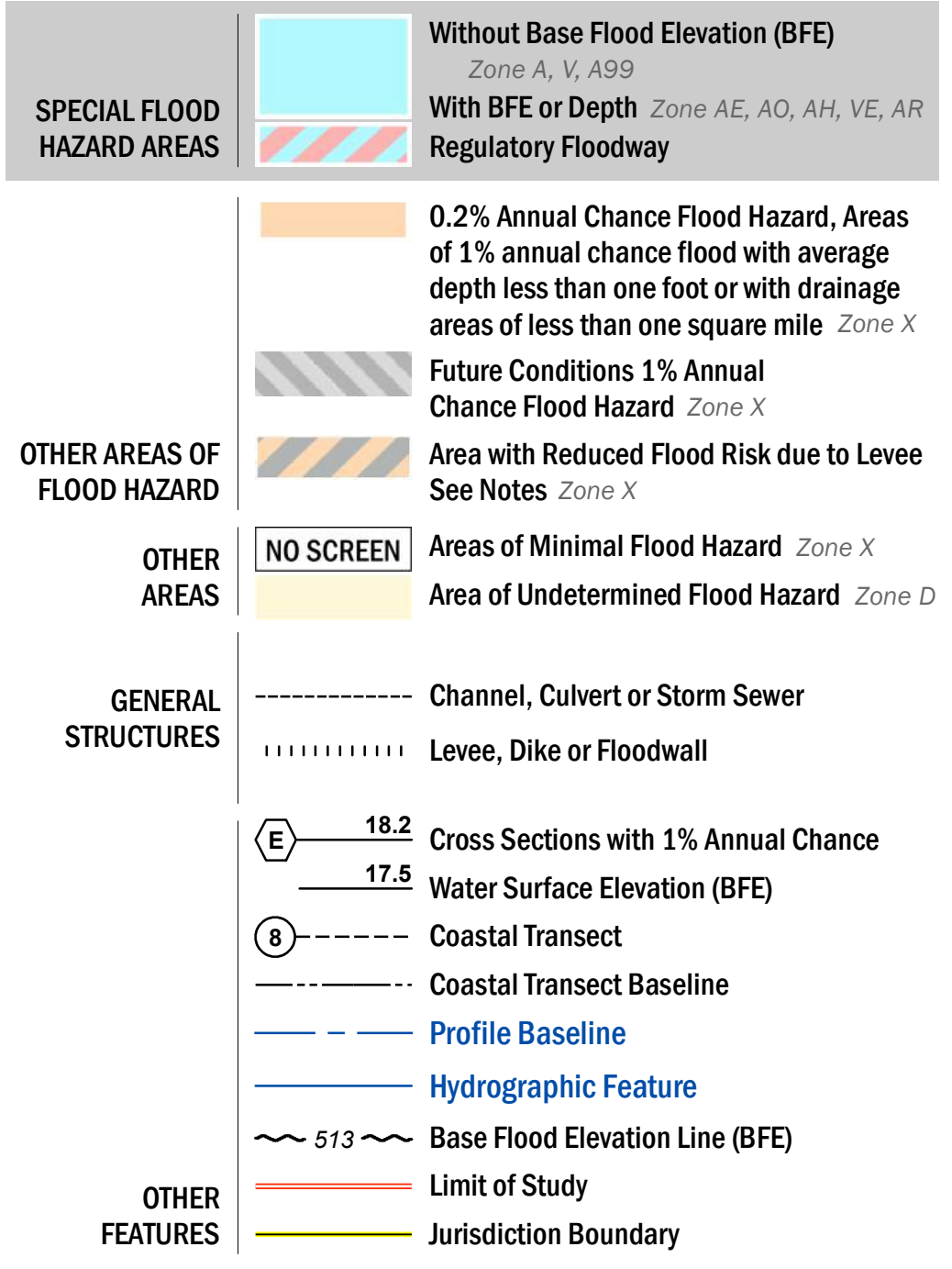
MAP NUMBER 48491C0515F

MAP REVISED



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://msc.fema.gov)



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

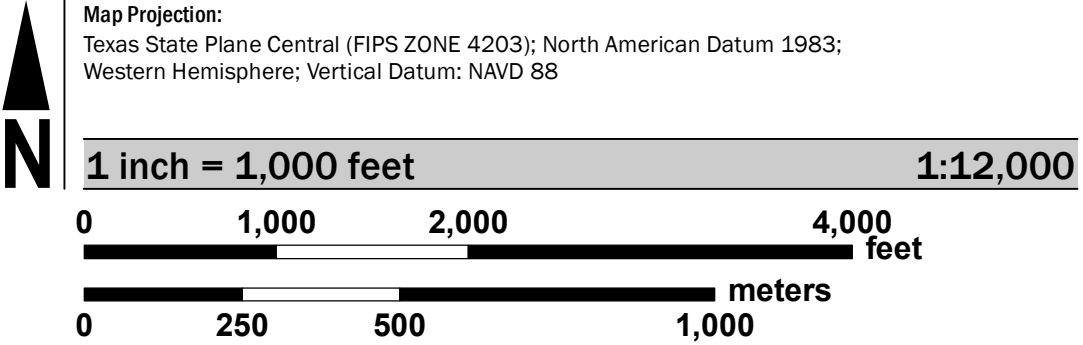
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

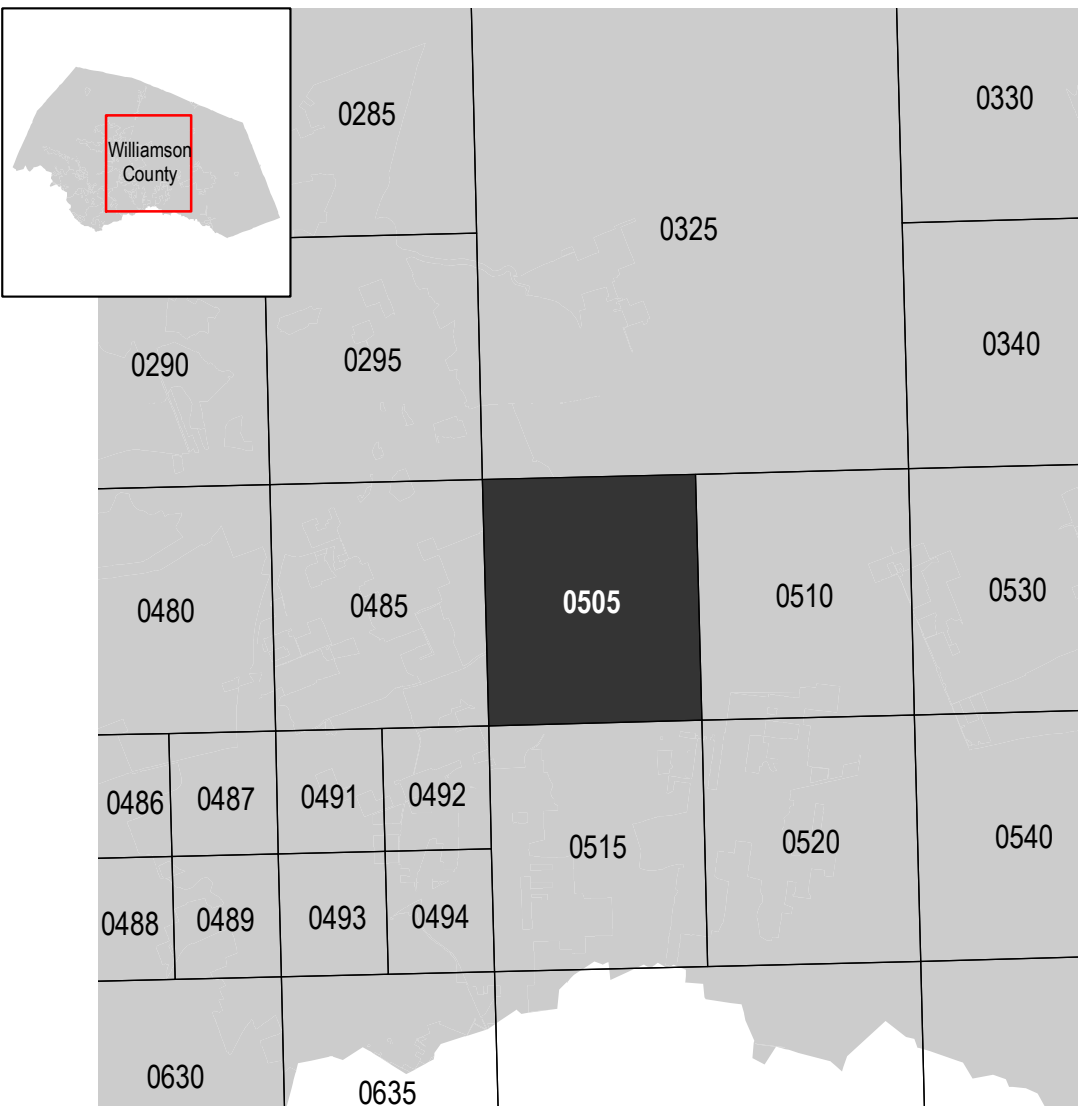
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from the Williamson County Geographic Information Systems (GIS) Department dated 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

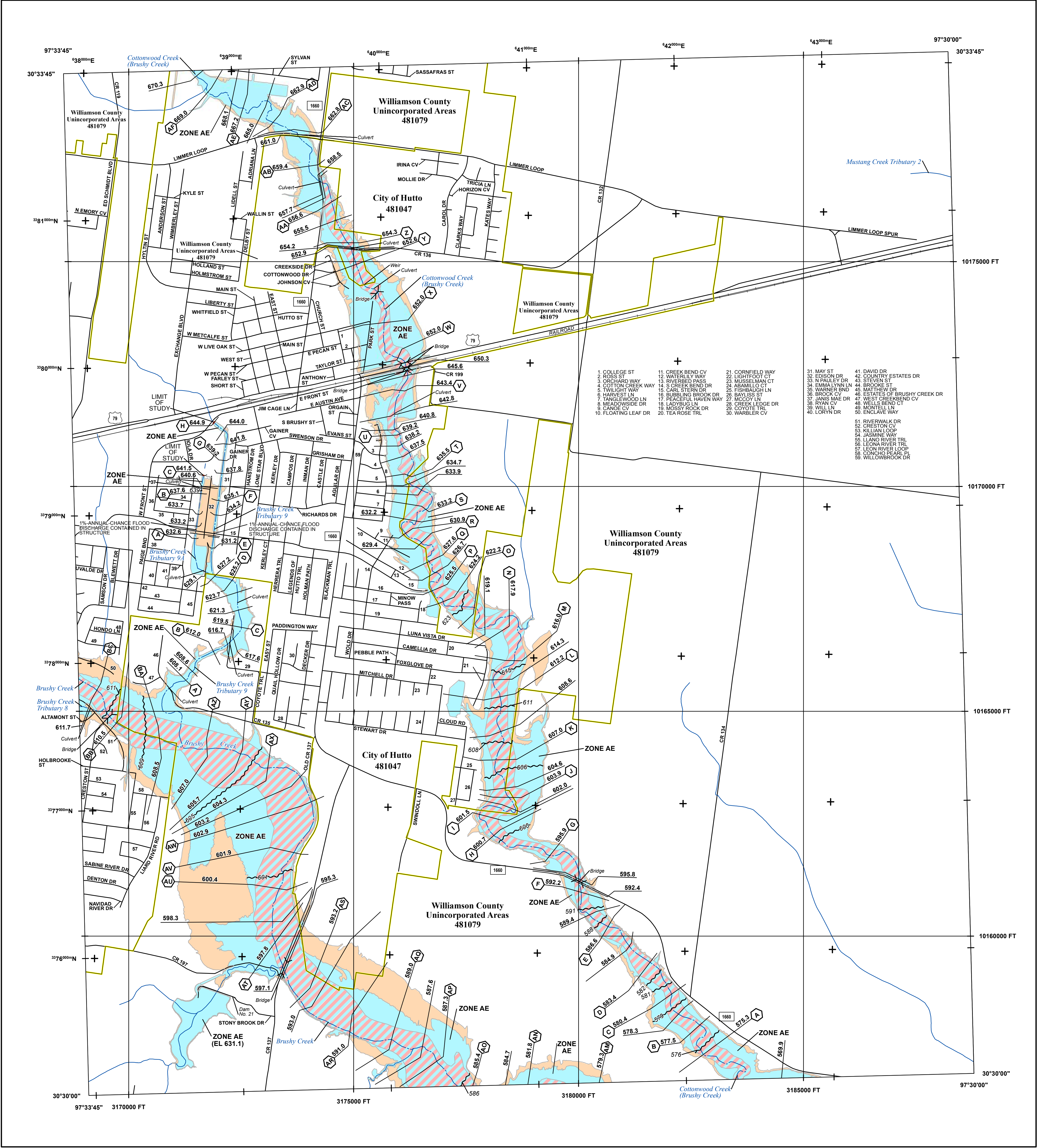
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
WILLIAMSON COUNTY, TEXAS
and Incorporated Areas
PANEL 505 OF 750

Panel Contains:
COMMUNITY
GEORGETOWN, CITY OF
ROUND ROCK, CITY OF
WILLIAMSON COUNTY

NUMBER	PANEL	SUFFIX
480668	0505	F
481048	0505	F
481079	0505	F

PRELIMINARY
1/30/2017

VERSION NUMBER
2.3.3.3
MAP NUMBER
48491C0505F
MAP REVISED



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://MSC.FEMA.GOV](http://msc.fema.gov)

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
OTHER AREAS		Area with Reduced Flood Risk due to Levee See Notes Zone X
		NO SCREEN Areas of Minimal Flood Hazard Zone X
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert or Storm Sewer
OTHER FEATURES		Levee, Dike or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
		Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

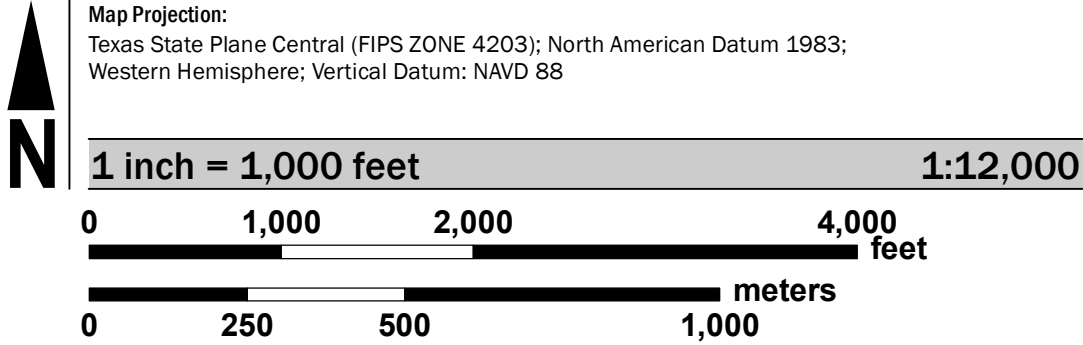
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

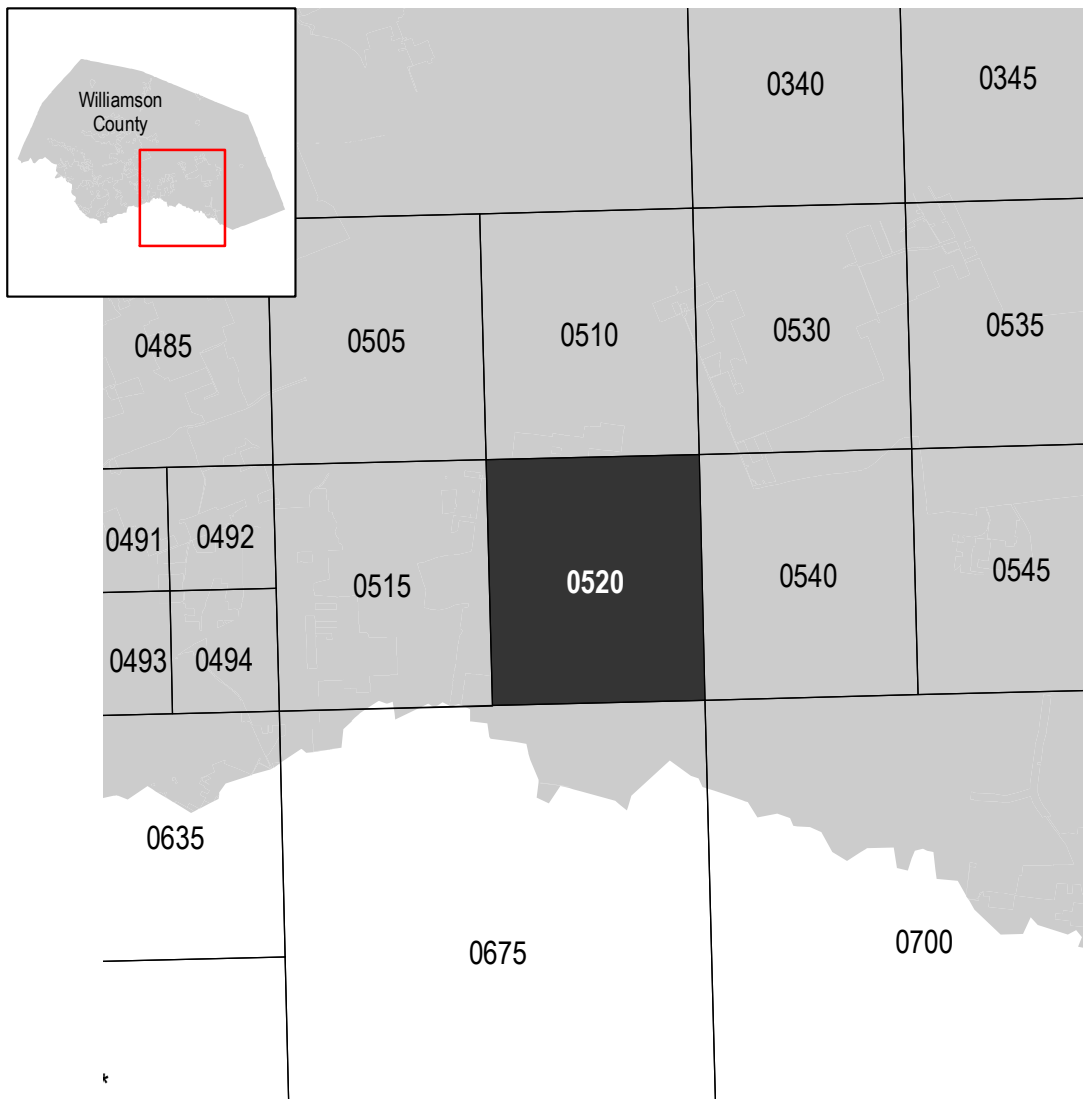
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from the Williamson County Geographic Information Systems (GIS) Department dated 2016.

SCALE



PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
WILLIAMSON COUNTY,
TEXAS
and Incorporated Areas
PANEL 520 OF 750

Panel Contains:
COMMUNITY
HUTTO, CITY OF
WILLIAMSON COUNTY

NUMBER
481047
481079

PANEL
0520

SUFFIX
F
F

PRELIMINARY
1/30/2017

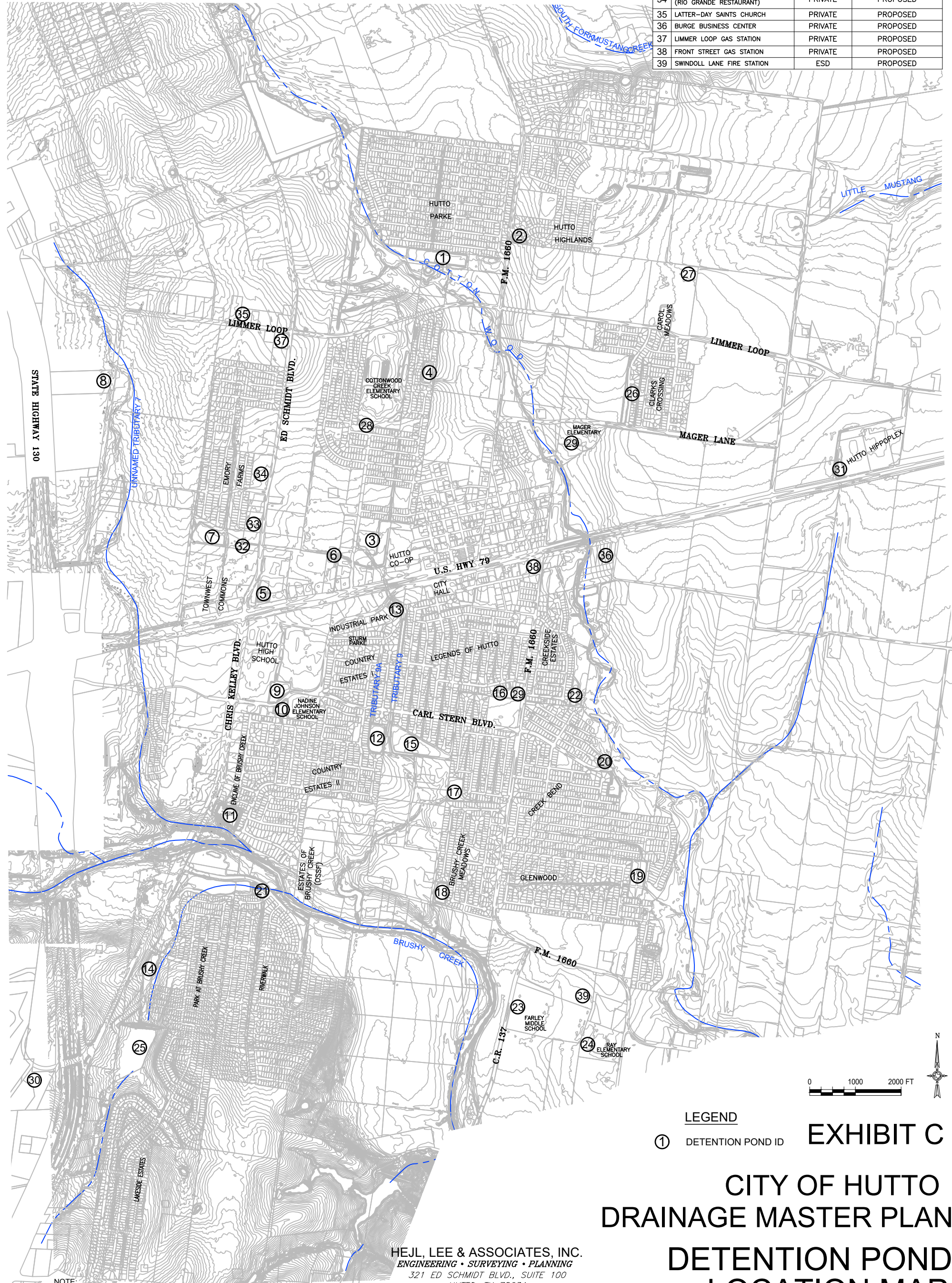
VERSION NUMBER
2.3.3.3
MAP NUMBER
48491C0520F
MAP REVISED

DETENTION POND LIST			
ID NO	DEVELOPMENT SERVED	O&M RESPONSIBILITY	APPROX. LxWxDDEPTH, ACREAGE
1	HUTTO PARKE	HOA	1,300'x270'x11', 8.5Ac *
2	HUTTO HIGHLANDS	—	7' DEEP, 1.1 Ac *
3	HUTTO SQUARE/ CO-OP (S. POND)	CITY	8' DEEP, 7 Ac *
4	HUTTO SQUARE (NORTH POND)	—	450'x200'x3.3', 2 Ac *
5	HANSON'S CORNER I	—	8' DEEP, 1.4 Ac *
6	HANSON'S CORNER II	—	7' DEEP, 0.44 Ac *
7	EMORY FARMS/ LOWES	CITY	8.5' DEEP, 8 Ac *
8	EAST WILLIAMSON COUNTY HEC	—	—
9	HUTTO HIGH SCHOOL	ISD	—
10	NADINE JOHNSON ELEMENTARY	ISD	3' DEEP, 1.6 Ac
11	THE ENCLAVE AT BRUSHY CREEK	CITY	19.5' DEEP, 4.7 Ac *

DETENTION POND LIST			
ID NO	DEVELOPMENT SERVED	O&M RESPONSIBILITY	APPROX. LxWxDDEPTH, ACREAGE
12	COUNTRY ESTATES	CITY	5.5' DEEP, 5.5 Ac *
13	INDUSTRIAL PARK	CITY	3' DEEP, 1.1 Ac
14	PARK AT BRUSHY CREEK (POND #2)	CITY	15' DEEP, 9.4 Ac *
15	LEGENDS OF HUTTO (W. POND)	HOA	8' DEEP, 10 Ac *
16	LEGEND OF HUTTO (E. POND)	HOA	3.6' DEEP, 1.5 Ac *
17	LEGEND OF HUTTO (S. POND)	HOA	5.7' DEEP, 3.9 Ac *
18	BRUSHY CREEK MEADOWS (S. POND)	CITY	6' DEEP, 2.7 Ac *
19	GLENWOOD	HOA	7.4' DEEP, 6.0 Ac *
20	CREEK BEND (NORTH & SOUTH POND)	CITY	7' DEEP, 3.3 Ac *
21	RIVERWALK	—	—
22	CREEKSIDE ESTATES	CITY	6.9' DEEP, 2.0 Ac *

DETENTION POND LIST			
ID NO	DEVELOPMENT SERVED	O&M RESPONSIBILITY	APPROX. LxWxDDEPTH, ACREAGE
23	FARLEY MIDDLE SCHOOL	ISD	2.5' DEEP
24	RAY ELEMENTARY	ISD	—
25	LAKESIDE ESTATES	CITY	WCID#20 DAM
26	CAROL MEADOWS (S. POND)	CITY	8' DEEP, 1.59 Ac
27	CAROL MEADOWS (N. POND)	—	PROPOSED
28	COTTONWOOD CREEK ELEMENTARY	ISD	3' DEEP, 0.3 Ac
29	TEXACO GAS STATION	PRIVATE	3' DEEP, 0.04 Ac
30	STAR RANCH	—	—
31	COVERT DEALERSHIP	PRIVATE	3' DEEP, 1.2 Ac
32	HOLIDAY INN EXPRESS	PRIVATE	100'x21'x3', 0.05 Ac
33	CENTER COMMON	PRIVATE	3' DEEP, 0.1 Ac *
34	HIGHLIGHTS OF HUTTO PLAZA (RIO GRANDE RESTAURANT)	PRIVATE	PROPOSED
35	LATTER-DAY SAINTS CHURCH	PRIVATE	PROPOSED
36	BURGE BUSINESS CENTER	PRIVATE	PROPOSED
37	LIMMER LOOP GAS STATION	PRIVATE	PROPOSED
38	FRONT STREET GAS STATION	PRIVATE	PROPOSED
39	SWINDOLL LANE FIRE STATION	ESD	PROPOSED

* DIMENSION IS ESTIMATED FROM CONSTRUCTION PLAN. ALL OTHER DIMENSION IS ESTIMATED FROM FIELD MEASUREMENT OR AERIAL PHOTO



NOTE:
CONTOUR INFORMATION IS FROM WILLIAMSON
COUNTY 2006 2-FT CONTOUR DATA
FILE NO. POND LOCATION.DWG

UPDATED: 5/11/18

HEJL, LEE & ASSOCIATES, INC.
ENGINEERING • SURVEYING • PLANNING
321 ED SCHMIDT BLVD., SUITE 100
HUTTO, TX 78634
Ph:(512) 642-3292 FAX:(512) 642-4230
TBPE FIRM NO. F-755, TBPLS FIRM NO. 10058500

LEGEND

① DETENTION POND ID

EXHIBIT C

CITY OF HUTTO

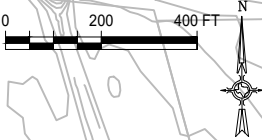
DRAINAGE MASTER PLAN

DETENTION POND

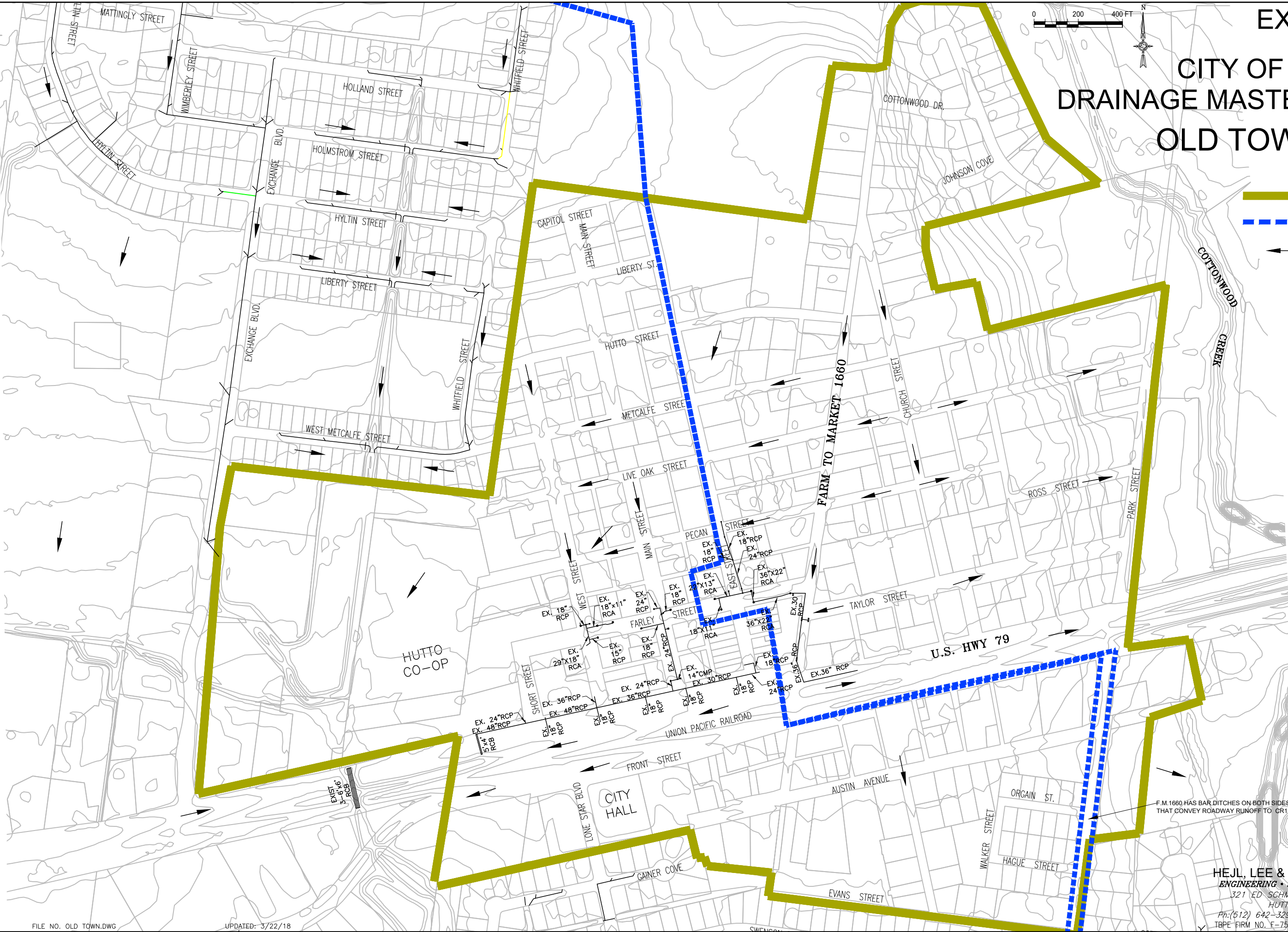
LOCATION MAP

EXHIBIT D

CITY OF HUTTO
DRAINAGE MASTER PLAN
OLD TOWN MAP



- LEGEND**
- HUTTO OLD TOWN BOUNDARY
 - DRAINAGE BASIN BOUNDARY
 - FLOW DIRECTION

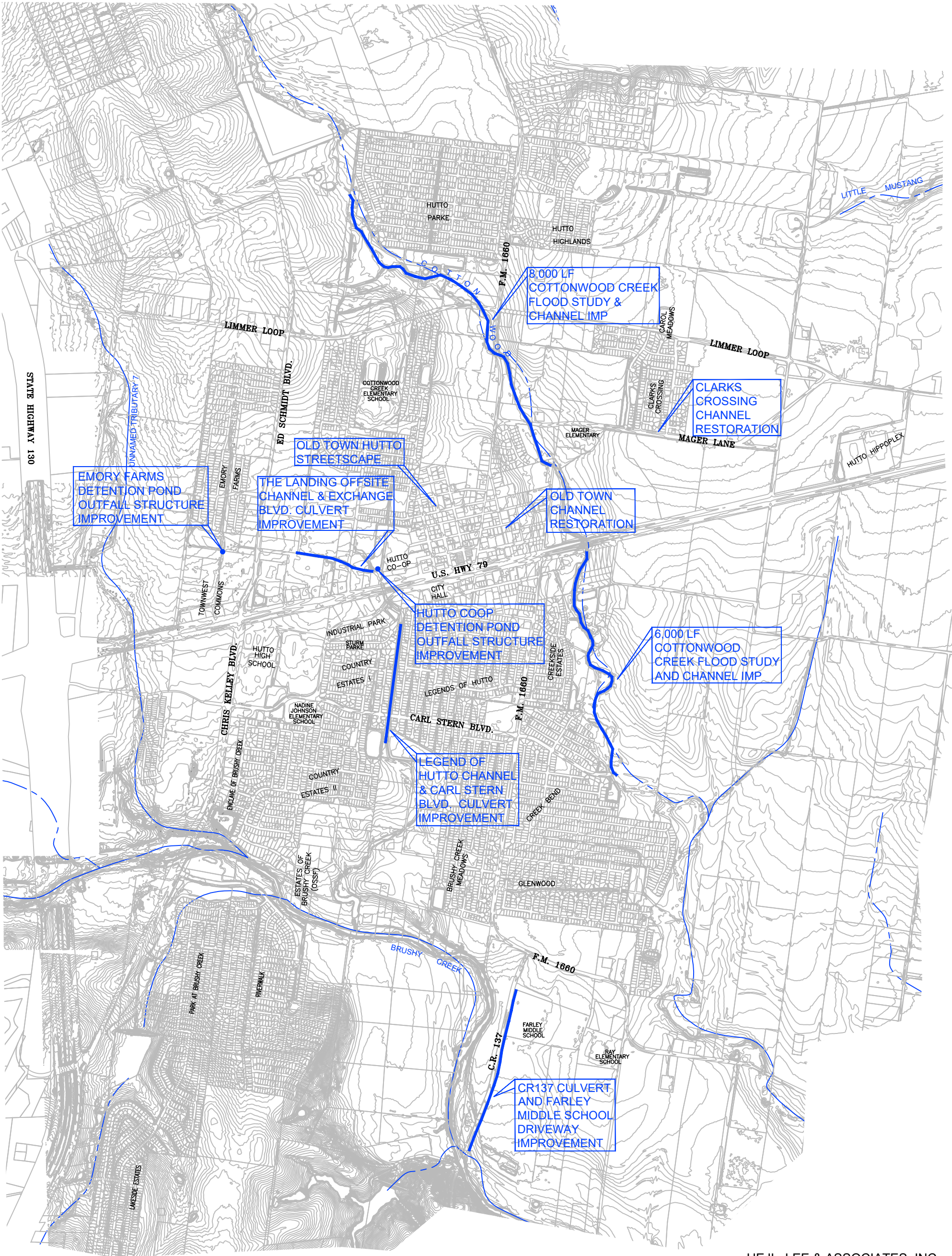
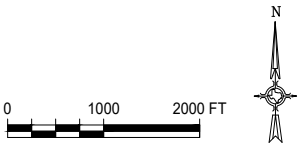


F.M.1660 HAS BAR DITCHES ON BOTH SIDES OF ROADWAY THAT CONVEY ROADWAY RUNOFF TO CR135/ CR137

HEJL, LEE & ASSOCIATES, INC.
ENGINEERING • SURVEYING • PLANNING
321 ED SCHMIDT BLVD., SUITE 100
HUTTO, TX 78634
Ph:(512) 642-3292 FAX:(512) 642-4230
TBPE FIRM NO. F-755, TBPLS FIRM NO. 10058500

CITY OF HUTTO
DRAINAGE MASTER PLAN
PROPOSED PROJECT LOCATION MAP

EXHIBIT F



NOTE:
CONTOUR INFORMATION IS FROM WILLIAMSON
COUNTY 2006 2-FT CONTOUR DATA
FILE NO. PROJECT LOCATION.DWG

UPDATED: 5/11/18

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ENGINEERING • SURVEYING • PLANNING
321 ED SCHMIDT BLVD., SUITE 100
HUTTO, TX 78634
Ph:(512) 642-3292 FAX:(512) 642-4230
TBPE FIRM NO. F-755, TBPLS FIRM NO. 10058500



DRAINAGE MASTER PLAN

APPENDIX 1.a

**Hydrologic & Hydraulic Analysis of
Brushy Creek Tributary 9
(from Hutto Co-Op to Legend of Hutto)
by MillerGRAY**

HUTTO

MASTER DRAINAGE PLAN

HYDROLOGIC AND HYDRAULIC ANALYSIS OF BRUSHY CREEK TRIBUTARY 9

Hutto, Williamson County, Texas

Prepared for:

Hejl, Lee, & Associates, Inc.
321 Ed Schmidt Blvd., Suite 100
Hutto, TX 78634

Prepared By:

MillerGRAY
Consulting. Engineering. Infrastructure.

TBPE Firm Reg. No. F-16302

Miller Gray LLC
7320 N. MoPac Expy, Suite 203, Austin, Texas 78731
www.miller-gray.com

February 2018

MG Project No. 00115-002



[Handwritten signature]
2/28/18

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LIST OF APPENDICES

APPENDIX A

EXHIBITS

Exhibit 1	Tributary 9 Study Limits
Exhibit 2	Tributary 9 Corrected Effective Drainage Area Map
Exhibit 3	Tributary 9 Corrected Effective 1% Annual Chance Floodplain Map
Exhibit 4	Tributary 9 Proposed_v1 1% Annual Chance Floodplain Map
Exhibit 5	Tributary 9 Proposed_v2 1% Annual Chance Floodplain Map
Exhibit 6	Tributary 9 Culvert and Channel Improvements

APPENDIX B

DIGITAL DATA DISK CONTAINING HYDROLOGIC AND HYDRAULIC MODELS

- Hydrologic Model, HEC-HMS Format
 - Effective Basin
 - Duplicate Effective Basin
 - Corrected Effective Basin
 - Proposed_v1 Basin
- Hydraulic Model, HEC-RAS Format
 - Effective Plan
 - Duplicate Effective Plan
 - Corrected Effective Plan
 - Proposed_v1 Plan
 - Proposed_v2 Plan
- Digital Mapping Data
 - Stream Centerline Shapefile
 - Cross Section Shapefile
 - Corrected Effective 1% Annual Chance Floodplain Shapefile
 - Proposed_v1 1% Annual Chance Floodplain Shapefile
 - Proposed_v2 1% Annual Chance Floodplain Shapefile

1.0 INTRODUCTION

This report documents the development of the hydrologic and hydraulic analysis of Brushy Creek Tributary 9 (Tributary 9) as part of the Hutto Master Drainage Plan on behalf of the City of Hutto. The study limits include approximately 4,000 linear feet of Tributary 9 from an upstream limit at US Highway 79 (US 79) to a downstream limit upstream of the confluence with Brushy Creek Tributary 9A as depicted on Exhibit 1 within Appendix A of this report. The preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 48491C0520F dated January 30, 2017, denotes most of Tributary 9 as Zone AE with base flood elevations determined. However, the upstream limit of the FEMA study reach is just downstream of Front Street. This analysis includes an extension of the hydraulic analysis through US 79.

2.0 IDENTIFICATION OF THE EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

This analysis is based on the preliminary FEMA effective hydrologic and hydraulic models of Tributary 9 as a base condition to perform the analysis. AECOM (formerly URS) conducted the preliminary FEMA study and provided a copy of the hydrologic and hydraulic models to Miller Gray on February 9, 2018. The hydrologic model is in HEC-HMS format and the hydraulic model is in HEC-RAS format. AECOM also provided a Microsoft Excel flow relationship spreadsheet showing the relationship between computed peak flow rates from HEC-HMS and steady state peak flow rates used in the HEC-RAS model. According to AECOM, the provided models identical to the models transmitted to the City of Hutto by AECOM on November 18, 2016.

- Computed water surface elevations (WSEL) in the HEC-RAS hydraulic model correspond to the mapped base flood elevations shown on the preliminary FEMA Firm Panel 48491C0520F dated January 30, 2017.
- Steady state peak flows and flow change locations in the HEC-RAS hydraulic model correspond to flow rates listed in the flow relationship spreadsheet.
- Flow rates listed in the flow relationship spreadsheet correspond to computed peak flow rates in the HEC-HMS hydrologic model.

Based on these comparisons, this HEC-HMS model and HEC-RAS model are designated as the **Effective Hydrologic and Hydraulic Models** of the Hutto Master Drainage Plan Project.

3.0 DUPLICATION OF THE EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

Before any modifications are made, the effective models were duplicated (re-run) using Miller Gray hardware and software. The hydrologic model is duplicated with HEC-HMS version 3.5. The hydraulic model is duplicated with HEC-RAS version 5.0.3. The model output is consistent with the effective model; therefore, these models are designated as the **Duplicate Effective Hydrologic and Hydraulic Models**.

4.0 DEVELOPMENT OF THE CORRECTED EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

4.1 CORRECTED EFFECTIVE HYDROLOGIC MODEL

The duplicate effective HEC-HMS model was revised as part of the development of the corrected effective (existing conditions) hydrologic model. These revisions more adequately represent current local conditions in the Tributary 9 Watershed.

The existing Hutto Co-op Pond (the pond prior to the 2018 proposed pond improvements currently under construction) is not represented in the Effective Hydrologic Model. The watershed subareas are modified to reflect the contributing watershed to the existing Hutto Co-op Pond. The elevation-storage-discharge rating curve data for the Hutto Co-op Pond is input in the model based on record drawing data from the City of Hutto. The subarea delineation is based on a review of recent modeling data derived by LandDev Consulting as part of the 2018 proposed pond improvements. Overall, the increase in contributing drainage area at the Railroad increases from 0.40 square miles to 0.62 square miles—a 55% increase in area.

Lag times for the subareas are adjusted as necessary. Curve numbers are retained to remain consistent with the AECOM study model; however, it should be noted that there are significant differences in raw land curve number assumptions between the AECOM model and the LandDev Consulting model. Impervious cover values are adjusted based on a review of existing field conditions.

The AECOM model utilizes a 24-hour NRCS Type III distribution using precipitation depths for eastern Williamson County from the *USGS Atlas of Depth-Duration-Frequency of Precipitation Annual Maxima for Texas (USGS Atlas)*. The LandDev model utilizes a 24-hour NRCS Type III distribution using precipitation depths from the City of Austin from the *USGS Atlas*. For the purposes the design storm is retained to remain consistent with the AECOM study model.

This HEC-HMS model is designated as the **Corrected Effective Hydrologic Model**. The table shown below provides a comparison of peak flow rates along Tributary 9 between the Duplicate Effective and Corrected Effective Hydrologic Models. Most of the change in flow rates can be attributed to the increase in contributing drainage area described above.

Table 1 Duplicate Effective vs. Corrected Effective 1% Annual Chance Peak Flow Comparison

HEC-HMS Node	Location	1% Annual Chance Storm Event			
		Duplicate Effective		Corrected Effective	
		Drainage Area (sq mi)	Peak Discharge (CFS)	Drainage Area (sq mi)	Peak Discharge (CFS)
J_BRCT9_020	US 79	0.402	660	0.527	863
wJ_BRCT9_021	Railroad	-	-	0.621	1,047
J_BRCT9_030	Legends of Hutto Pond	0.813	1,320	1.031	1,796

4.2 CORRECTED EFFECTIVE HYDRAULIC MODEL

The duplicate effective HEC-RAS model was revised as part of the development of the corrected effective (existing conditions) hydraulic model. Revisions to the model are summarized as follows:

- The steady flow data in the HEC-RAS model is revised to reflect the computed peak flow rates from the Corrected Effective Hydrologic Model described earlier in this report.
- Steady flow data distribution within HEC-RAS was adjusted along the portion of Tributary 9 adjacent to the Legends of Hutto neighborhood to reflect the presence of a detention pond capturing flow and point loading the channel downstream of Carl Stern Drive.
- The upstream limit of the duplicate effective HEC-RAS model is just downstream of Front Street—the duplicate effective model does not include Front Street, the Railroad, or US 79 hydraulic structures. Cross sections and bridge/culvert data are added to extend the model further upstream to include these hydraulic structures. Survey data is not currently available for these three hydraulic structures—data is input in the model using field measurements, Williamson County LIDAR topography, and record drawings.

This HEC-RAS model is designated as the **Corrected Effective Hydraulic Model**. The table shown below provides a comparison of computed water surface elevations along Tributary 9 between the Duplicate Effective and Corrected Effective Hydraulic Models. The 1% annual chance water surface elevation is close to the top of bank at several locations along Tributary 9 and there is a backwater condition at Carl Stern Drive that causes water to exceed the top of bank. The corrected effective 1% annual chance floodplain is shown on Exhibit 3 within Appendix A of this report.

Table 2. Duplicate Effective vs. Corrected Effective 1% Annual Chance WSEL Comparison

HEC-RAS Station	1% Annual Chance Storm Event		Difference (ft.)
	Duplicate Effective	Corrected Effective	
	Water Surface Elevation (ft.)	Water Surface Elevation (ft.)	
Front Street	-	-	-
91+18	644.94	645.69	0.75
69+03	634.22	634.43	0.21
65+36	633.87	634.17	0.30
Carl Stern Drive	-	-	-
64+41	633.20	633.51	0.31
59+14	629.73	630.81	1.08

5.0 DEVELOPMENT OF THE PROPOSED HYDROLOGIC AND HYDRAULIC MODELS

The Corrected Effective Hydrologic and Hydraulic Models are revised to reflect various improvement scenarios as described in the sections below.

5.1 HUTTO CO-OP POND 2018 PROPOSED MODIFICATIONS

The corrected effective HEC-HMS model was revised to reflect the Hutto Co-op Pond 2018 Proposed Modifications reflect a design by LandDev Consulting that is currently under construction. The modifications include reduced flood storage volume and the addition of a permanent wet pool. The permanent wet pool does not have any effect on the detention performance of the pond. There are no proposed modifications to the existing concrete outfall structure. The pond elevation-storage rating curve in the hydrologic model is modified to reflect the reduced flood storage volume. Development of the Hutto Co-op site is represented in the model with additional impervious cover and reduced lag time for the applicable subarea. This model revision is designated as the **Proposed_v1 Hydrologic Model**. The table shown below provides a comparison of peak flow rates along Tributary 9 between the Corrected Effective Hydrologic Model and the Proposed_v1 Hydrologic Model.

Table 3 Corrected Effective vs. Proposed_v1 1% Annual Chance Peak Flow Comparison

HEC-HMS Node	Location	1% Annual Chance Storm Event	
		Corrected Effective	Proposed_v1
		Peak Discharge (CFS)	Peak Discharge (CFS)
J_BRCT9_020	US 79	863	848
wJ_BRTC9_021	Railroad	1,047	1,032
J_BRCT9_030	Legends of Hutto Pond	1,796	1,787

The corrected effective HEC-RAS model was revised to reflect the changes in peak flow rates associated with the Proposed_v1 Hydrologic Model. No changes are made to the creek geometry. This model revision is designated as the **Proposed_v1 Hydraulic Model**. The table shown below provides a comparison of 1% annual chance water surface elevations along Tributary 9 between the Corrected Effective Hydraulic Model and the Proposed_v1 Hydraulic Model. The proposed_v1 1% annual chance floodplain is shown on Exhibit 4 within Appendix A of this report.

Table 4 Corrected Effective vs. Proposed_v1 1% Annual Chance WSEL Comparison

HEC-RAS Station	1% Annual Chance Storm Event		Difference (ft.)
	Corrected Effective	Proposed_v1	
	Water Surface Elevation (ft.)	Water Surface Elevation (ft.)	
Front Street	-	-	-
91+18	645.69	645.62	-0.07
69+03	634.43	634.39	-0.04
65+36	634.17	634.12	-0.05
Carl Stern Drive	-	-	-
64+41	633.51	633.49	-0.02
59+14	630.81	630.81	0.00

5.2 TRIBUTARY 9 CHANNEL AND CULVERT IMPROVEMENTS

The corrected effective HEC-RAS model was revised to reflect the changes in peak flow rates associated with the Proposed_v1 Hydrologic Model. The creek geometry is also revised to reflect possible channel and culvert improvements to reduce the 1% annual chance water surface elevations to be below the top of bank along the reach. Revisions to the creek geometry are summarized as follows:

- Channel improvements include widening the channel along the west bank by a nominal width of 10 feet. The downstream limit of the channel improvement is at the confluence with Tributary 9A; the upstream limit of the channel improvement is at Front Street.
- One 8'X4' barrel culvert is added at the Carl Stern Drive stream crossing.

A graphical representation of the channel and culvert improvements is included in Appendix A of this report as Exhibit 6.

This model revision is designated as the **Proposed_v2 Hydraulic Model**. The table shown below provides a comparison of 1% annual chance water surface elevations along Tributary 9 between the Corrected Effective Hydraulic Model and the Proposed_v2 Hydraulic Model. The proposed_v2 1% annual chance floodplain is shown on Exhibit 5 within Appendix A of this report.

Table 5 Corrected Effective vs. Proposed_v2 1% Annual Chance WSEL Comparison

HEC-RAS Station	1% Annual Chance Storm Event		Difference (ft.)
	Corrected Effective	Proposed_v2	
	Water Surface Elevation (ft.)	Water Surface Elevation (ft.)	
Front Street	-	-	-
91+18	645.69	645.57	-0.12
69+03	634.43	633.65	-0.78
65+36	634.17	633.35	-0.82
Carl Stern Drive	-	-	-
64+41	633.51	632.87	-0.64
59+14	630.81	630.63	-0.18

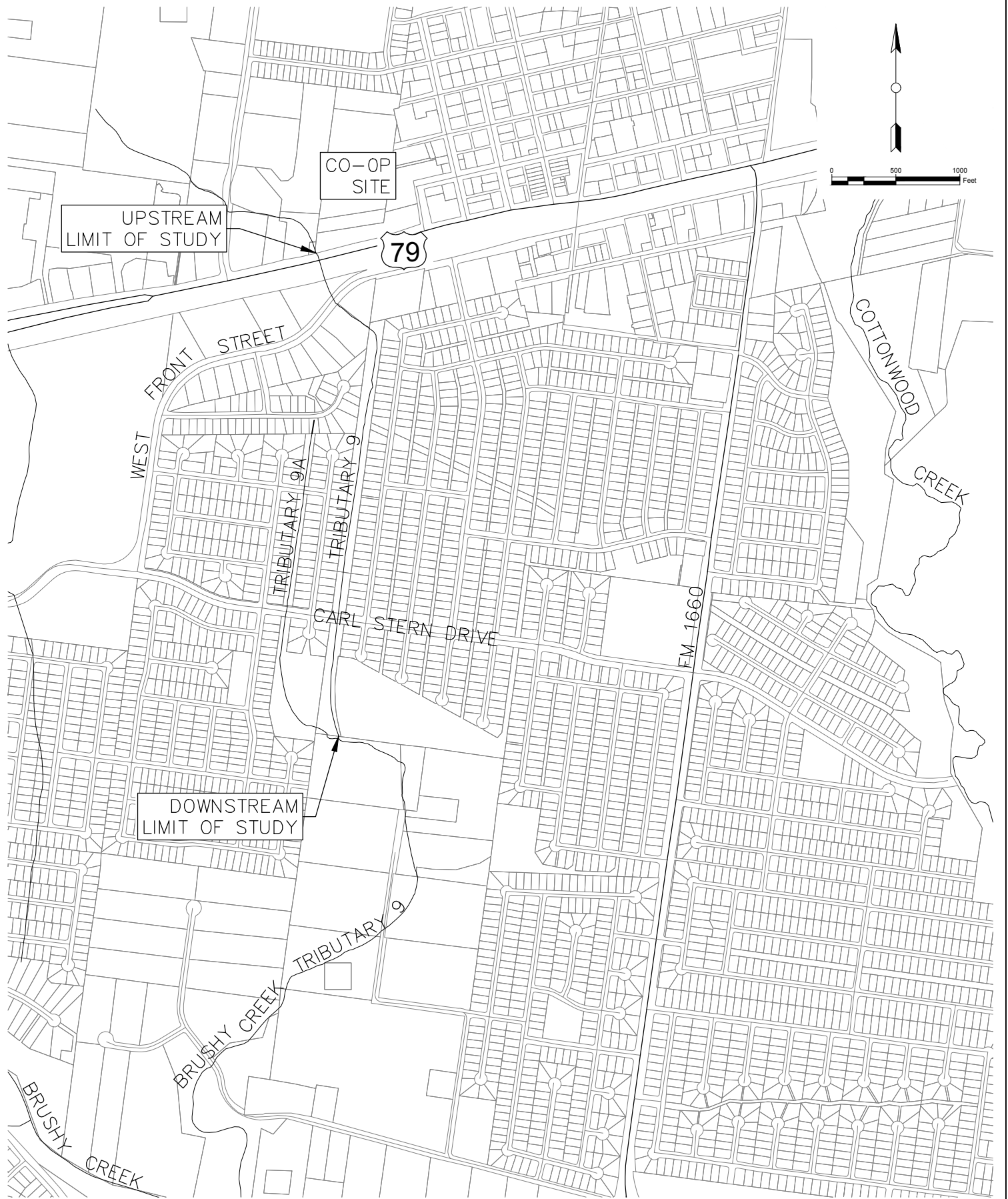
6.0 CONCLUSION

Brushy Creek Tributary 9 drains approximately 1.03 square miles just upstream of the confluence with Tributary 9A. The limits of this study extend from just upstream of the confluence with Tributary 9A to just upstream of US 79. The total length of study is approximately 4,000 linear feet. There are four hydraulic structures along this reach. Under existing conditions, the stream is at capacity for the 1% annual chance event with the top of bank exceeded in a few locations. The proposed channel and culvert improvements described in this report provide for increased conveyance with a 1% annual chance level of service.

APPENDIX A
EXHIBITS

Exhibit 1	Tributary 9 Study Limits
Exhibit 2	Tributary 9 Corrected Effective Drainage Area Map
Exhibit 3	Tributary 9 Corrected Effective 1% Annual Chance Floodplain Map
Exhibit 4	Tributary 9 Proposed_v1 1% Annual Chance Floodplain Map
Exhibit 5	Tributary 9 Proposed_v2 1% Annual Chance Floodplain Map
Exhibit 6	Tributary 9 Culvert and Channel Improvements

EXHIBIT 1
TRIBUTARY 9 STUDY LIMITS



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EXHIBIT 1
TRIBUTARY 9 STUDY LIMITS

HUTTO MASTER DRAINAGE PLAN

HUTTO, WILLIAMSON COUNTY, TX

EXHIBIT 2
TRIBUTARY 9 CORRECTED EFFECTIVE DRAINAGE AREA MAP

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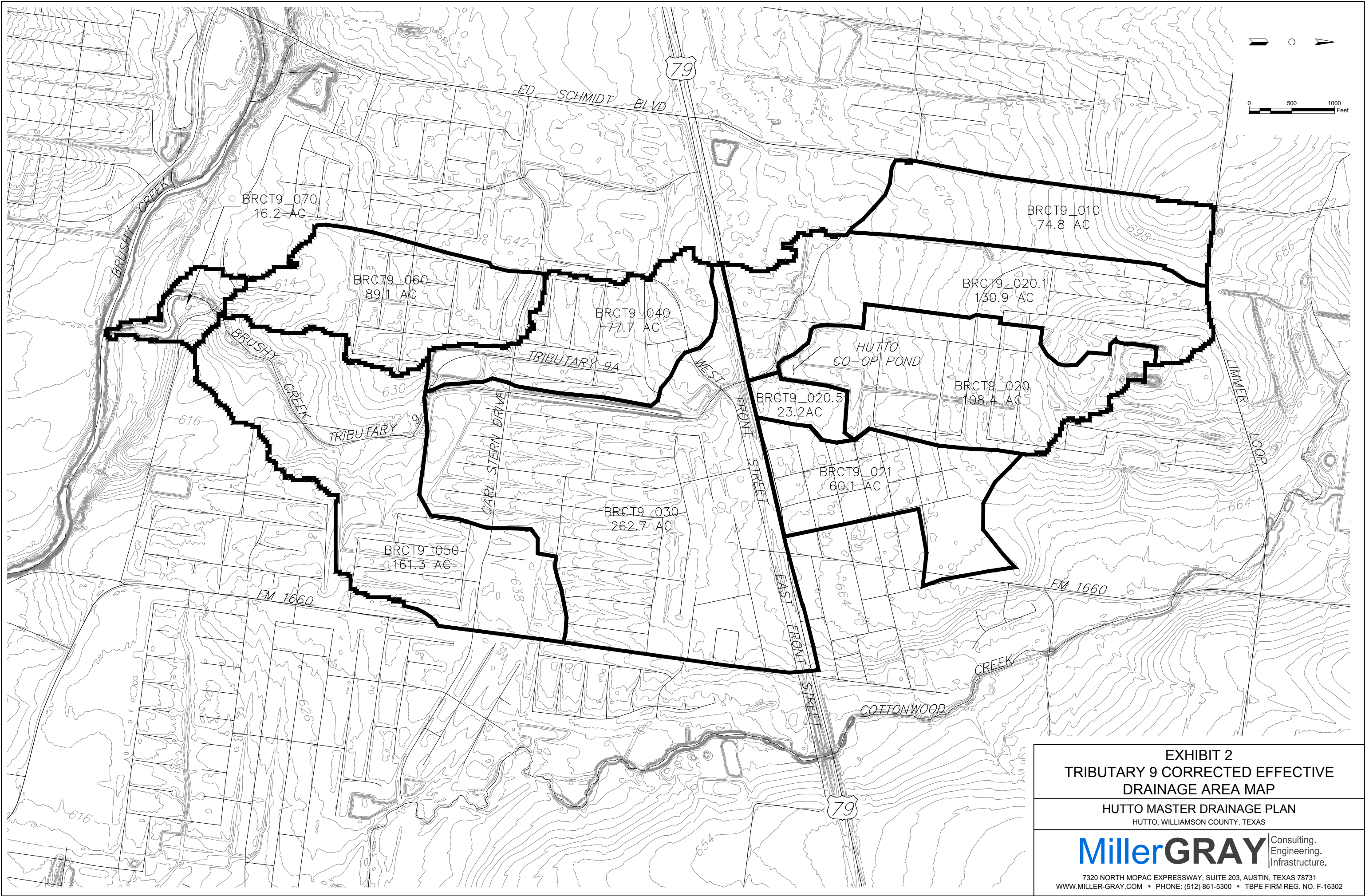


EXHIBIT 2
TRIBUTARY 9 CORRECTED EFFECTIVE
DRAINAGE AREA MAP

HUTTO MASTER DRAINAGE PLAN
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EXHIBIT 3
TRIBUTARY 9 CORRECTED EFFECTIVE 1% ANNUAL CHANCE FLOODPLAIN MAP

EXHIBIT 4
TRIBUTARY 9 PROPOSED_V1 1% ANNUAL CHANCE FLOODPLAIN MAP

EXHIBIT 5
TRIBUTARY 9 PROPOSED_V2 1% ANNUAL CHANCE FLOODPLAIN MAP

EXHIBIT 6
TRIBUTARY 9 CULVERT AND CHANNEL IMPROVEMENTS

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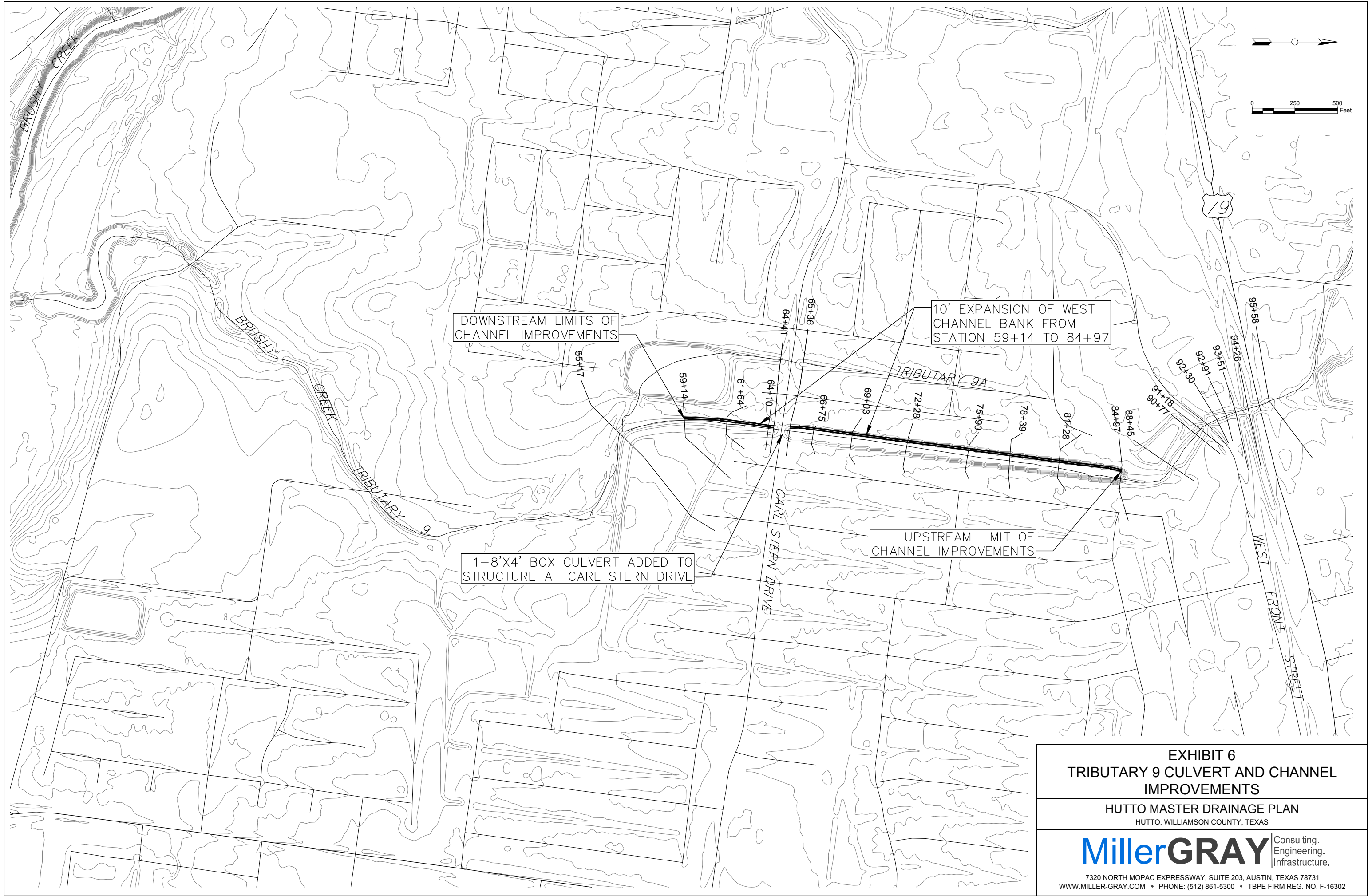


EXHIBIT 6
TRIBUTARY 9 CULVERT AND CHANNEL
IMPROVEMENTS

HUTTO MASTER DRAINAGE PLAN
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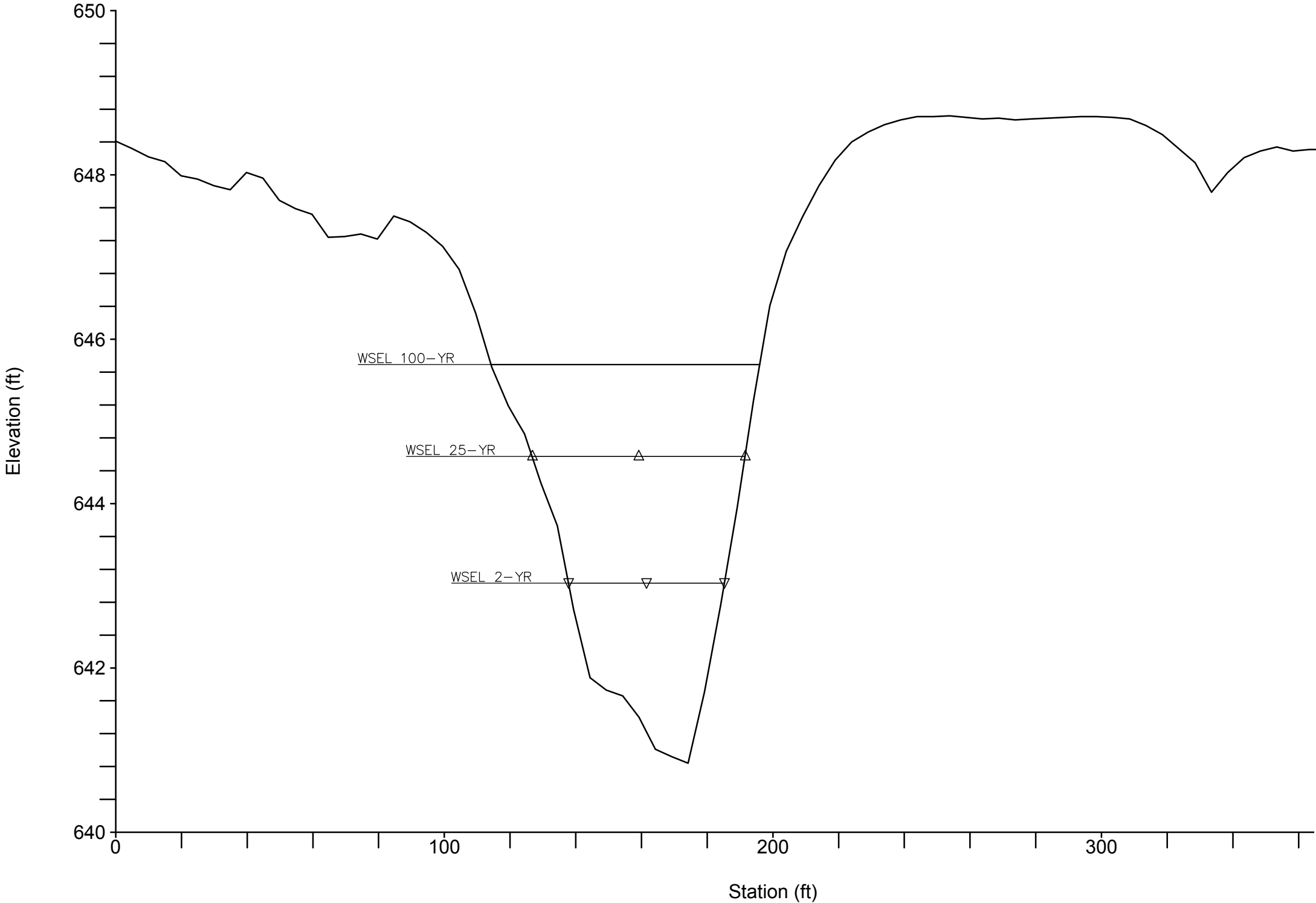
APPENDIX B
DIGITAL DATA DISK CONTAINING HYDROLOGIC AND HYDRAULIC MODELS

- Hydrologic Model, HEC-HMS Format
 - Effective Basin
 - Duplicate Effective Basin
 - Corrected Effective Basin
 - Proposed_v1 Basin
- Hydraulic Model, HEC-RAS Format
 - Effective Plan
 - Duplicate Effective Plan
 - Corrected Effective Plan
 - Proposed_v1 Plan
 - Proposed_v2 Plan
- Digital Mapping Data
 - Stream Centerline Shapefile
 - Cross Section Shapefile
 - Corrected Effective 1% Annual Chance Floodplain Shapefile
 - Proposed_v1 1% Annual Chance Floodplain Shapefile
 - Proposed_v2 1% Annual Chance Floodplain Shapefile

APPENDIX B
DIGITAL DATA DISK
HUTTO MASTER DRAINAGE
PLAN

TRIBUTARY 9
FEBRUARY 2018

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\User\HECRAS\vs_dxf_BRUSHYREPORT_XSs_CorrEff_AllEvents.dwg 5/10/2018 2:03 PM



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91+18	100yr Existing	BRT9_Corr_Eff	645.69

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WS 002yr_Corrected_Effective

Ground

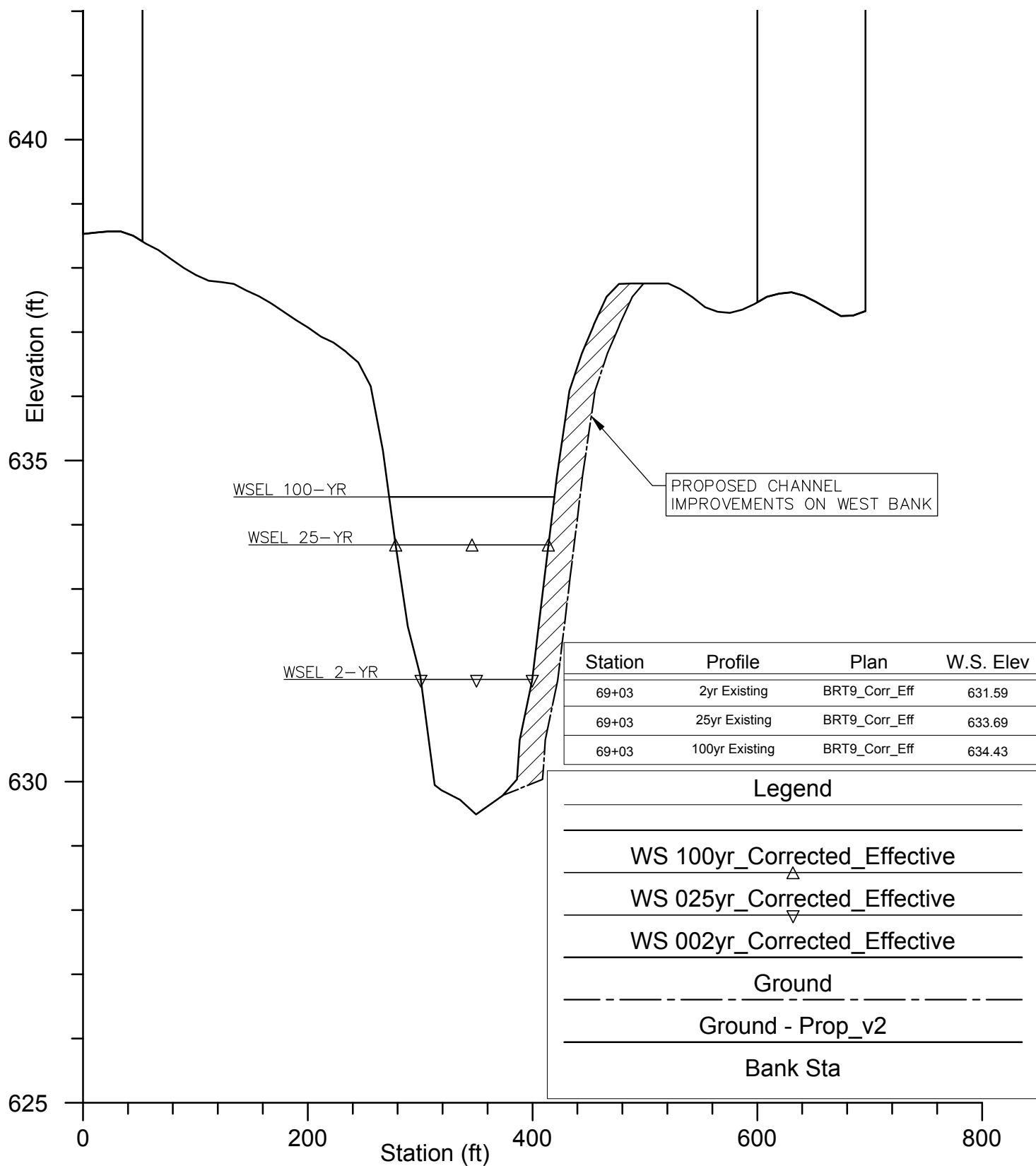
Bank Sta

EXHIBIT 1

CORR. EFF. CROSS SECTION 91+18

HUTTO MASTER DRAINAGE PLAN
BRUSHY CREEK TRIB. 9 STUDY
HUTTO, WILLIAMSON COUNTY, TEXAS

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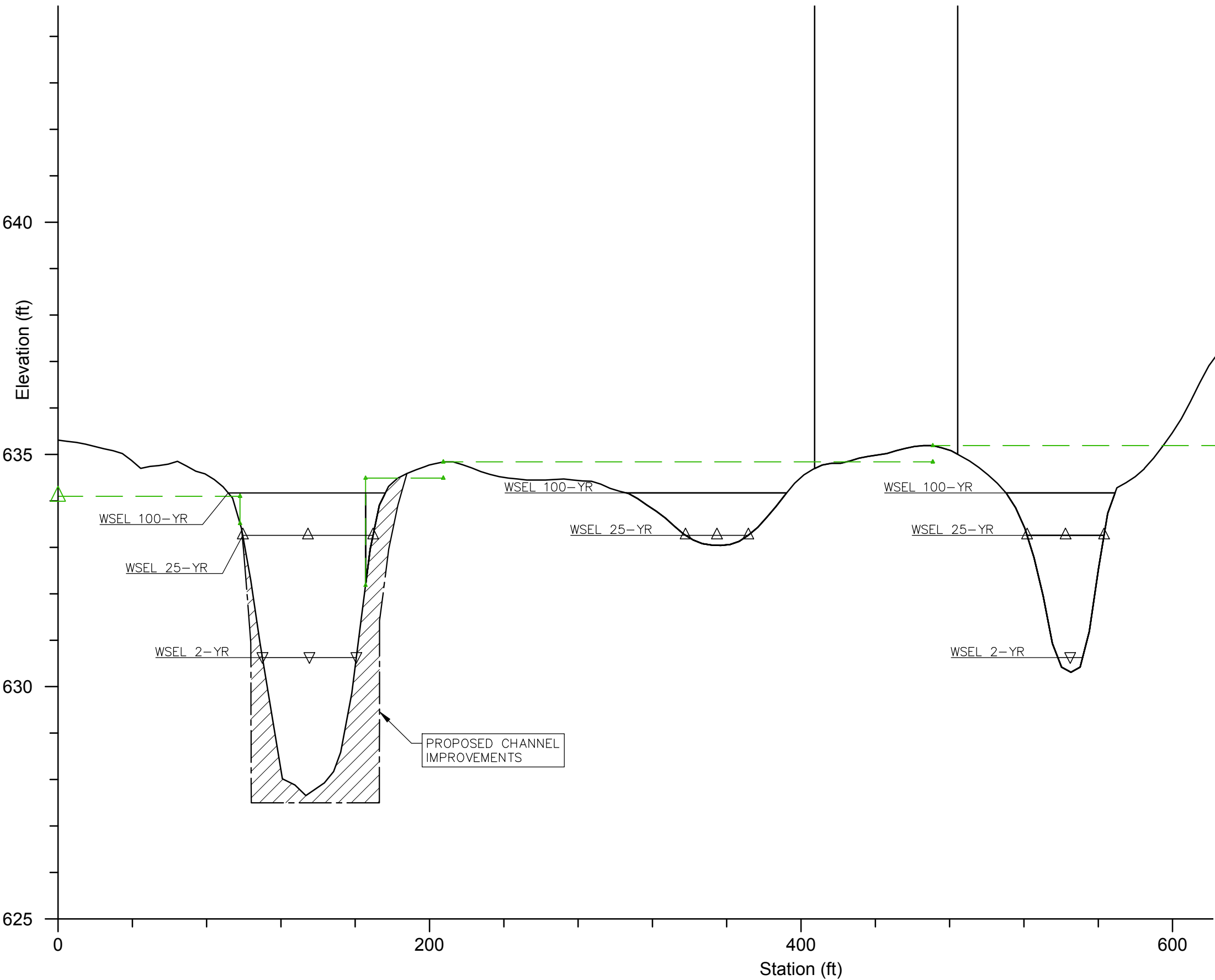
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EXHIBIT 2
CORR. EFF. CROSS SECTIONS 69+03

HUTTO MASTER DRAINAGE PLAN
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HUTTO, WILLIAMSON COUNTY, TEXAS

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65+36	25yr Existing	BRT9_Corr_Eff	633.26
65+36	100yr Existing	BRT9_Corr_Eff	634.17

Legend
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WS 025yr_Corrected_Effective
WS 002yr_Corrected_Effective
Ground
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Ineff
Bank Sta

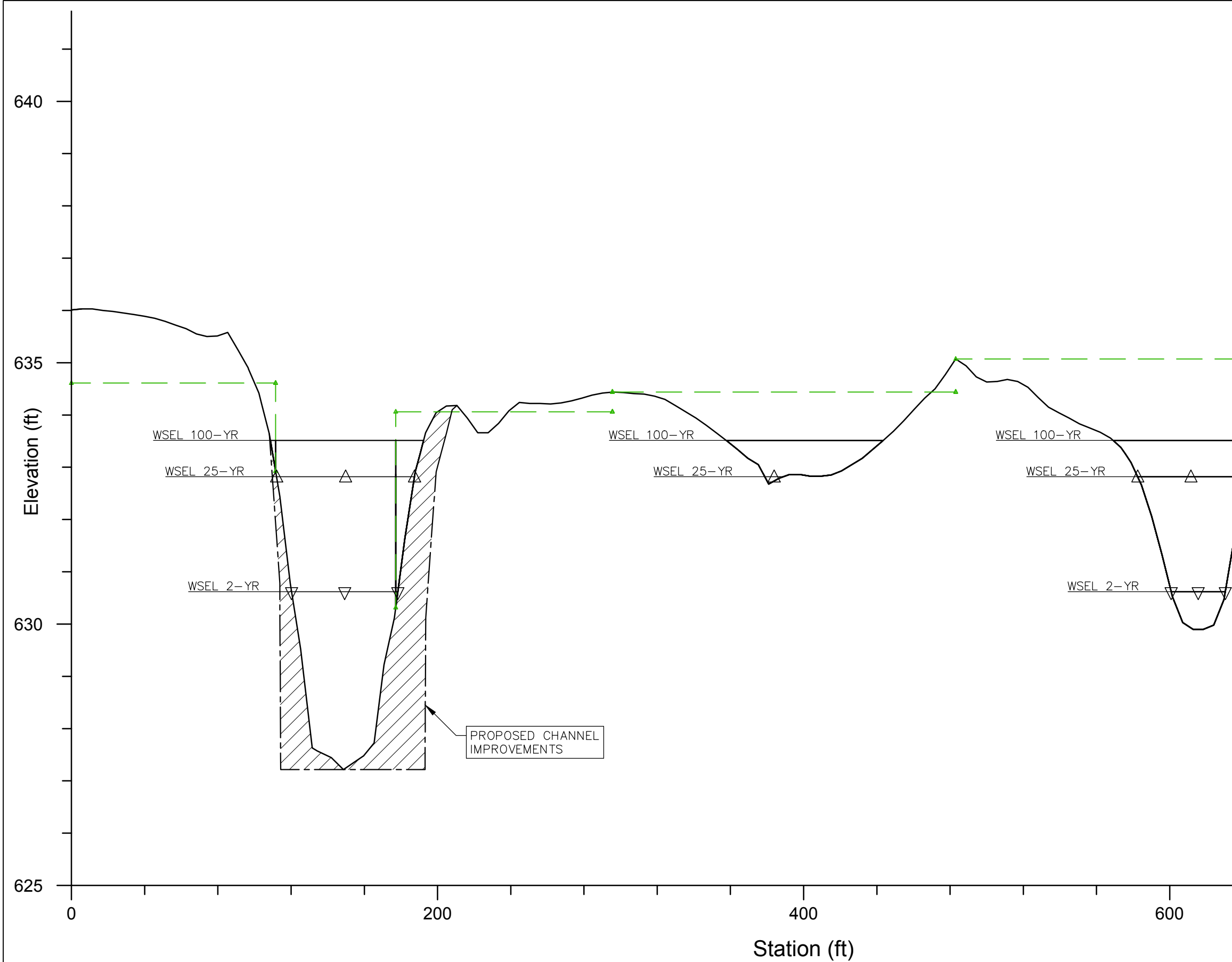
EXHIBIT 3
CORR. EFF. CROSS SECTION 65+36

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64+41	100yr Existing	BRT9_Corr_Eff	633.51

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Ground
Ground - Prop_v2
Ineff
Bank Sta

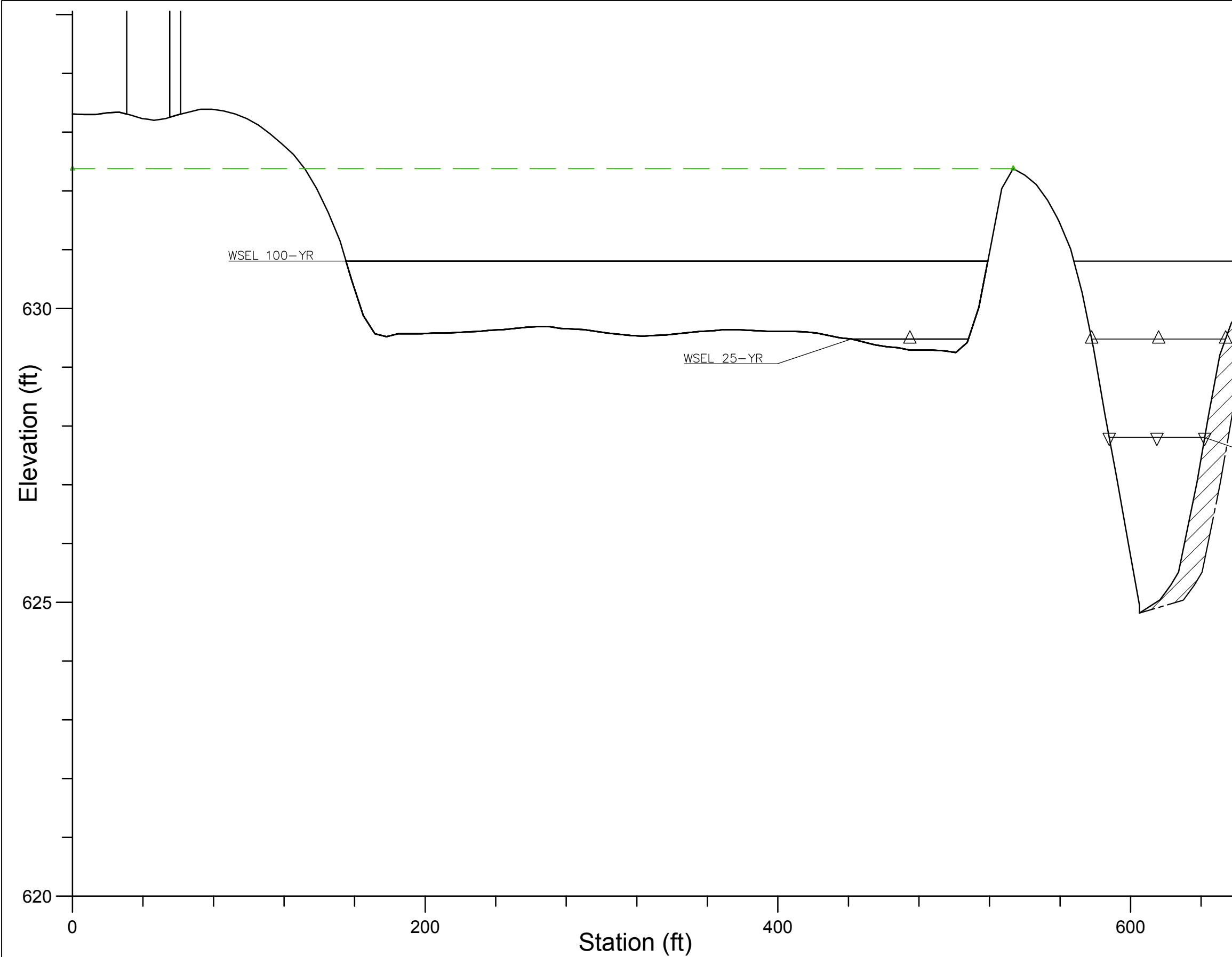
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CORR. EFF. CROSS SECTION 64+41

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Station	Profile	Plan	W.S. Elev
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59+14	25yr Existing	BRT9_Corr_Eff	629.48
59+14	100yr Existing	BRT9_Corr_Eff	630.81

Legend

WS 100yr_Corrected_Effective

WS 025yr_Corrected_Effective

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Ground

Ground - Prop_v2

Ineff

Bank Sta

EXHIBIT 5

CORR. EFF. CROSS SECTION 59+14

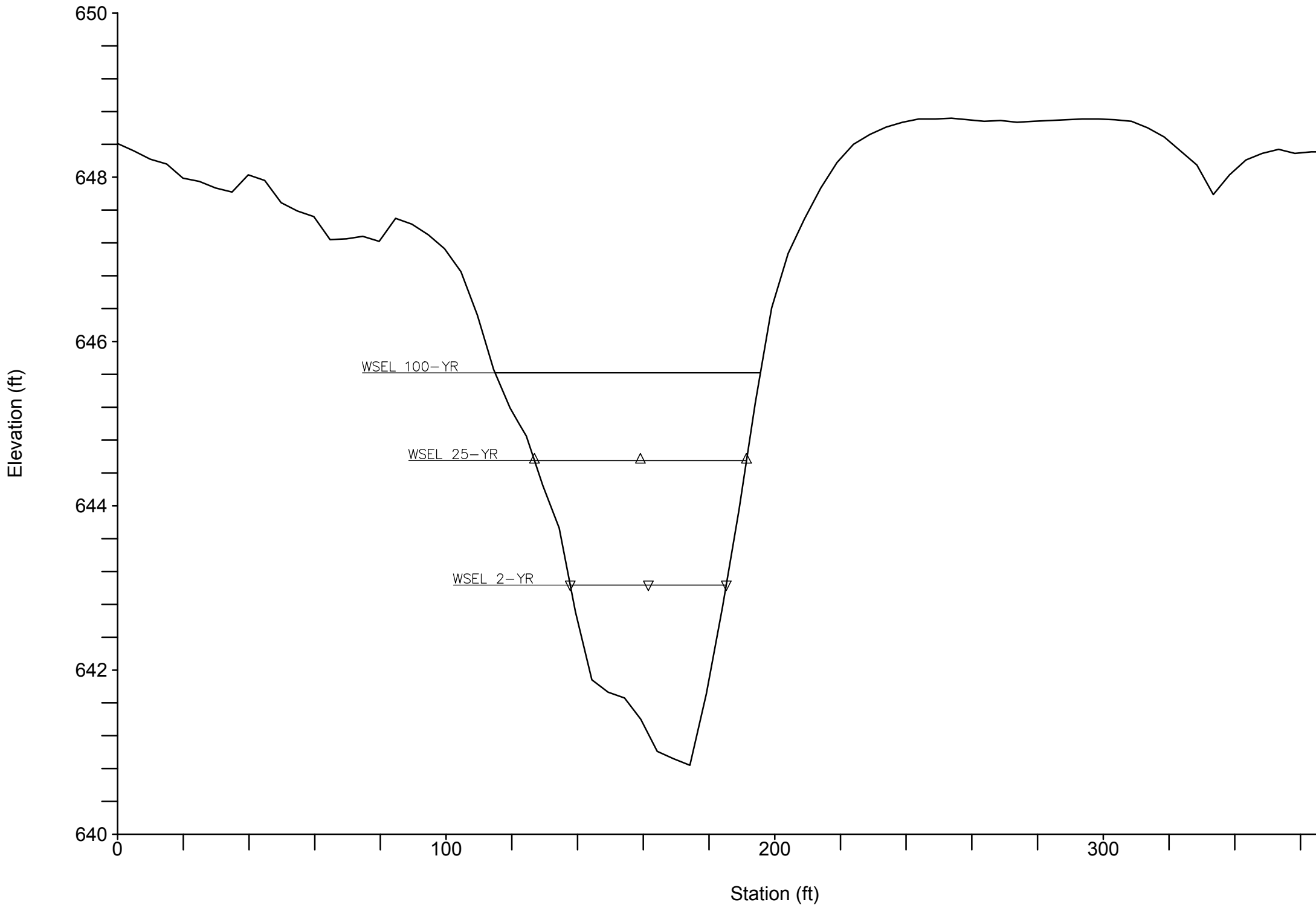
HUTTO MASTER DRAINAGE PLAN
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91+18	100yr Existing	BRT9_Prop_v1	645.62

Legend
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Bank Sta

EXHIBIT 6
PROP_v1 CROSS SECTION 91+18

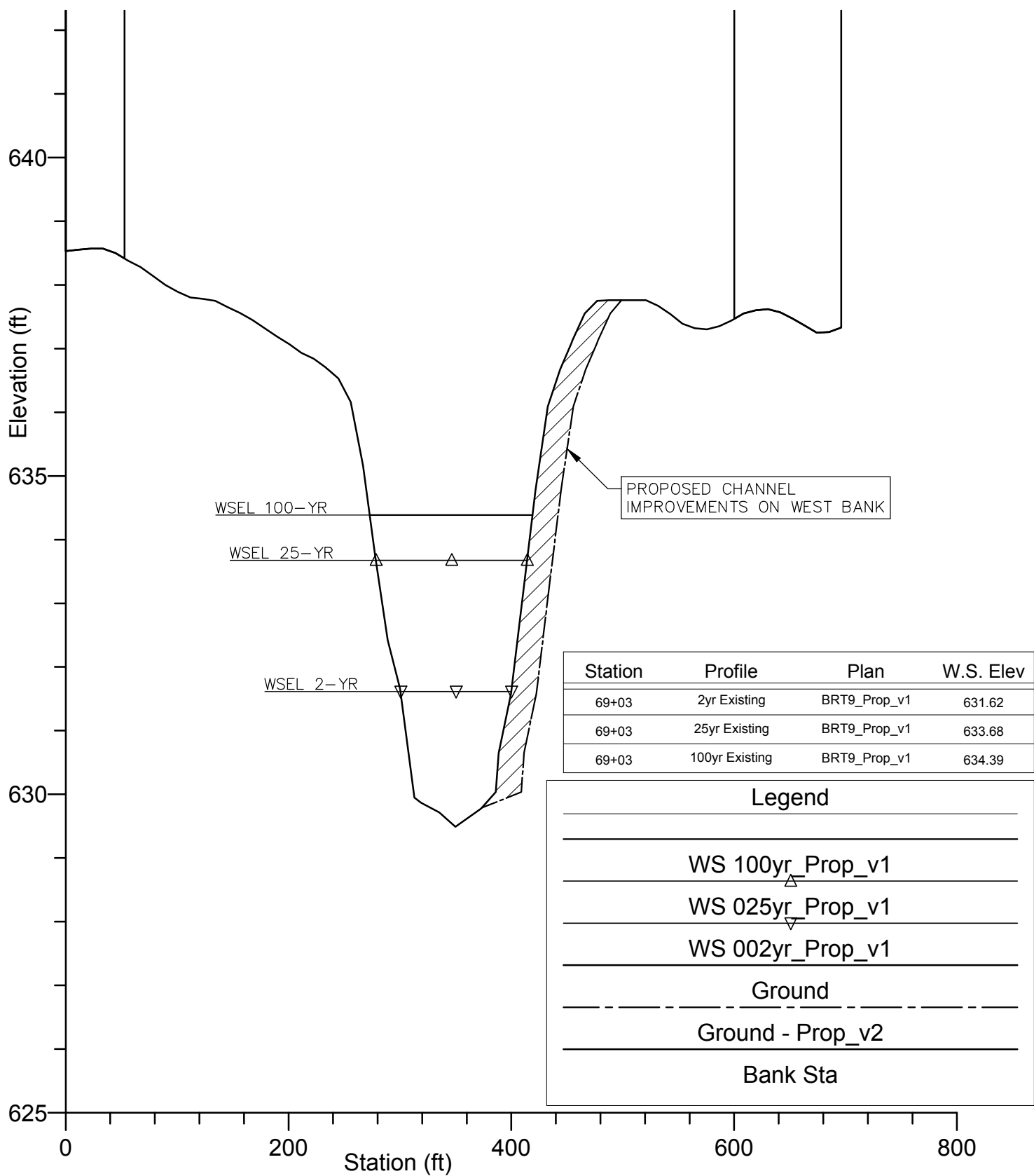
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EXHIBIT 7
PROP_v1 CROSS SECTIONS 69+03

HUTTO MASTER DRAINAGE PLAN
BRUSHY CREEK TRIB. 9 STUDY
HUTTO, WILLIAMSON COUNTY, TEXAS



EXHIBIT 8

PROP_v1 CROSS SECTION 65+36

HUTTO MASTER DRAINAGE PLAN

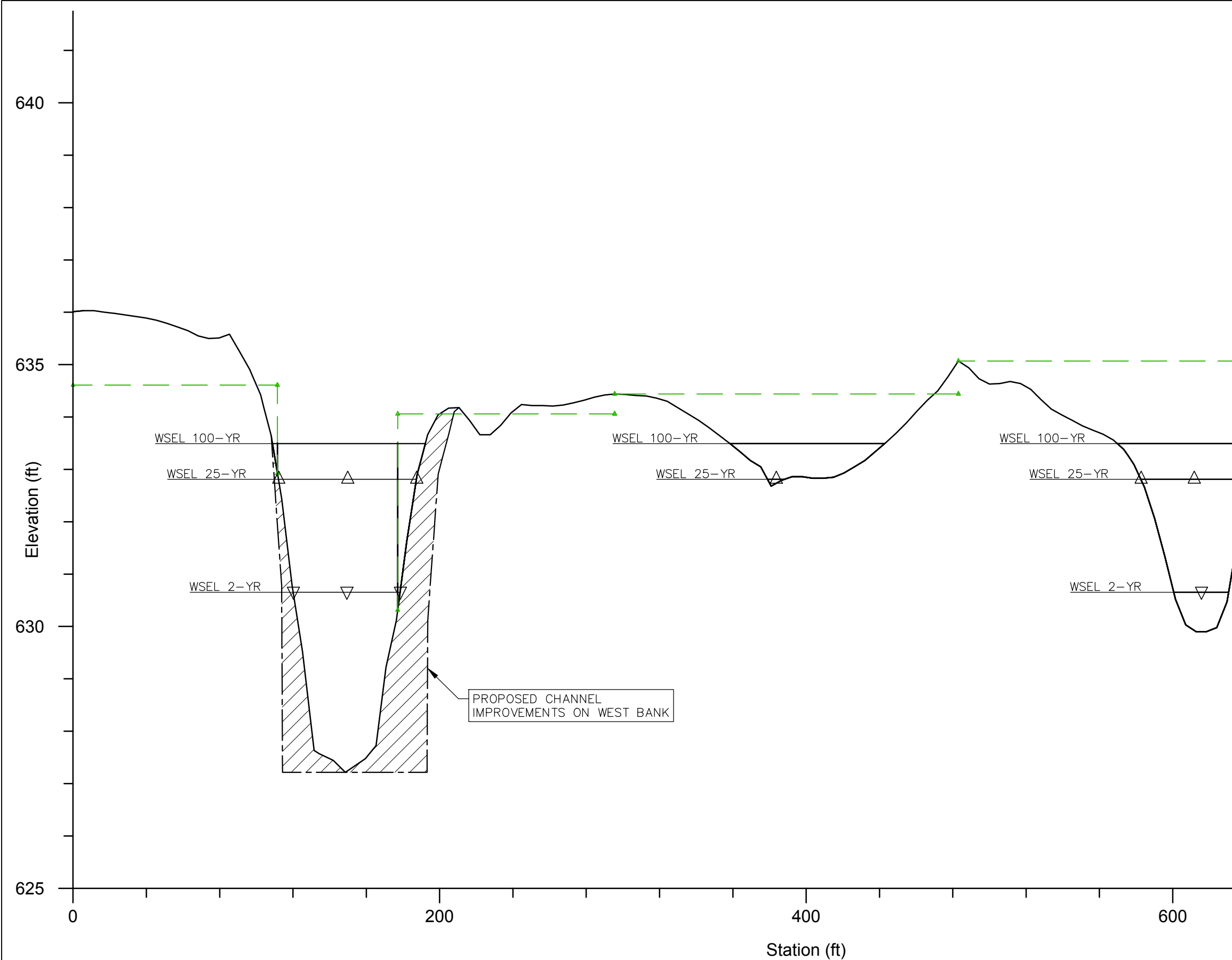
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64+41	25yr Existing	BRT9_Prop_v1	632.81
64+41	100yr Existing	BRT9_Prop_v1	633.49

Legend
WS 100yr_Prop_v1
WS 025yr_Prop_v1
WS 002yr_Prop_v1
Ground
Ground - Prop_v2
Ineff
Bank Sta

EXHIBIT 9
PROP_v1 CROSS SECTION 64+41

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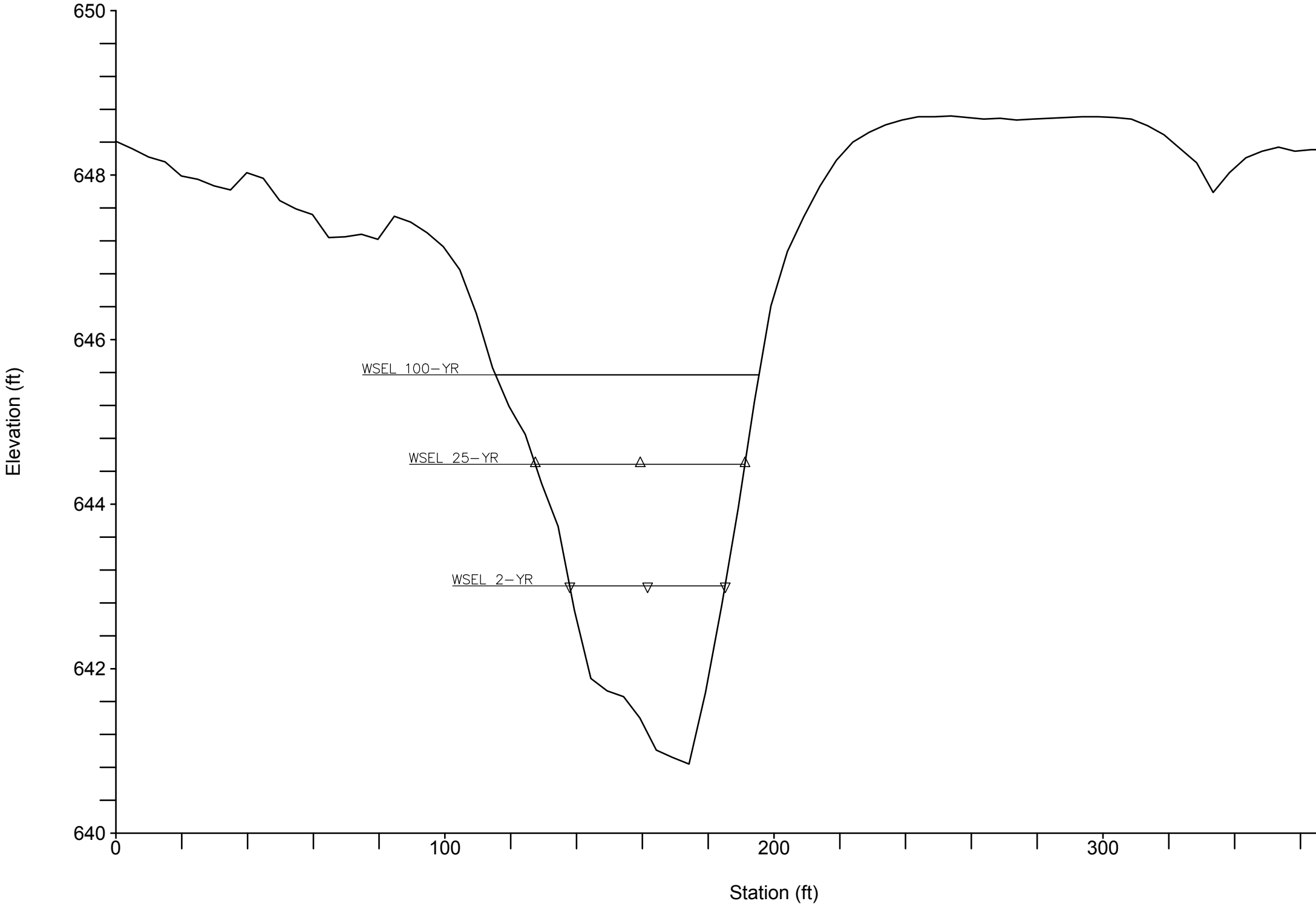
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- Ground
- Ground - Prop_v2
- Ineff
- Bank Sta

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91+18	25yr Existing	BRT9_Prop_v2	644.49
91+18	100yr Existing	BRT9_Prop_v2	645.57

Legend

WS 100yr_Prop_v1

WS 025yr_Prop_v1

WS 002yr_Prop_v1

Ground

Bank Sta

EXHIBIT 11

PROP_v2 CROSS SECTION 91+18

HUTTO MASTER DRAINAGE PLAN

BRUSHY CREEK TRIB. 9 STUDY

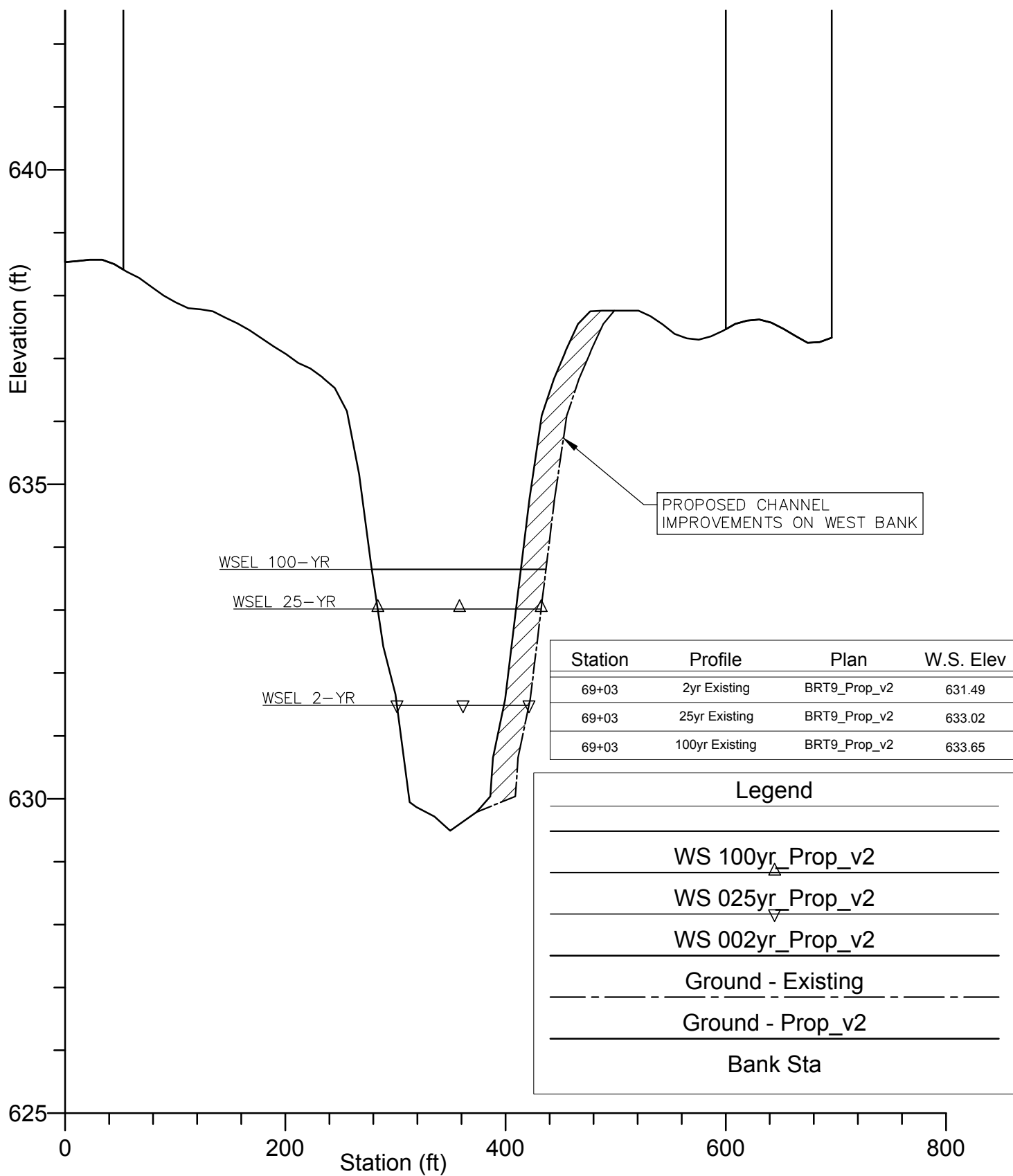
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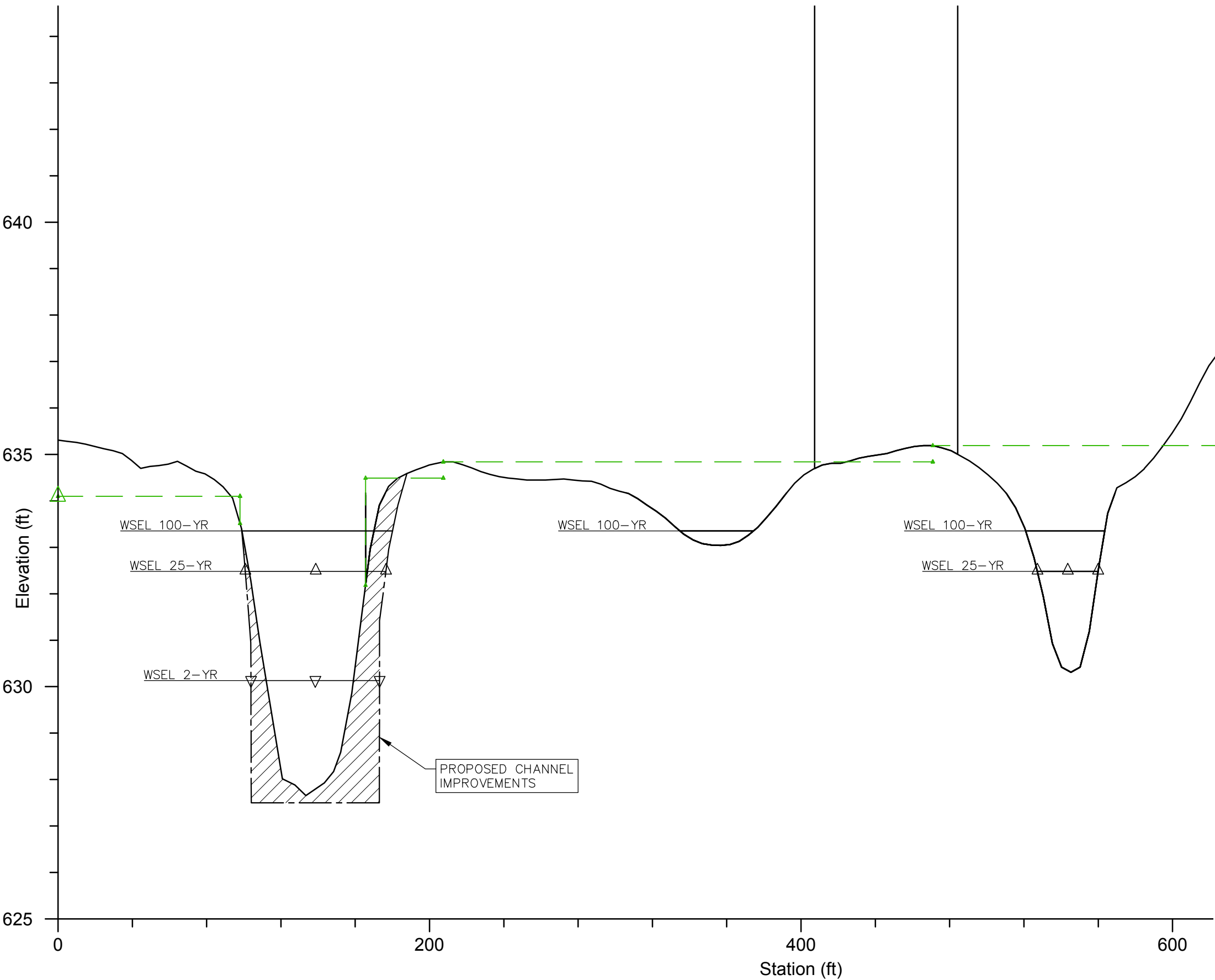
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EXHIBIT 12
PROP_v2 CROSS SECTIONS 69+03

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HUTTO, WILLIAMSON COUNTY, TEXAS

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Station	Profile	Plan	W.S. Elev
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65+36	25yr Existing	BRT9_Prop_v2	632.48
65+36	100yr Existing	BRT9_Prop_v2	633.35

Legend
WS 100yr_Prop_v2
WS 025yr_Prop_v2
WS 002yr_Prop_v2
Ground - Existing
Ground - Prop_v2
Ineff
Bank Sta

EXHIBIT 13
PROP_v2 CROSS SECTION 65+36

HUTTO MASTER DRAINAGE PLAN
BRUSHY CREEK TRIB. 9 STUDY
HUTTO, WILLIAMSON COUNTY, TEXAS

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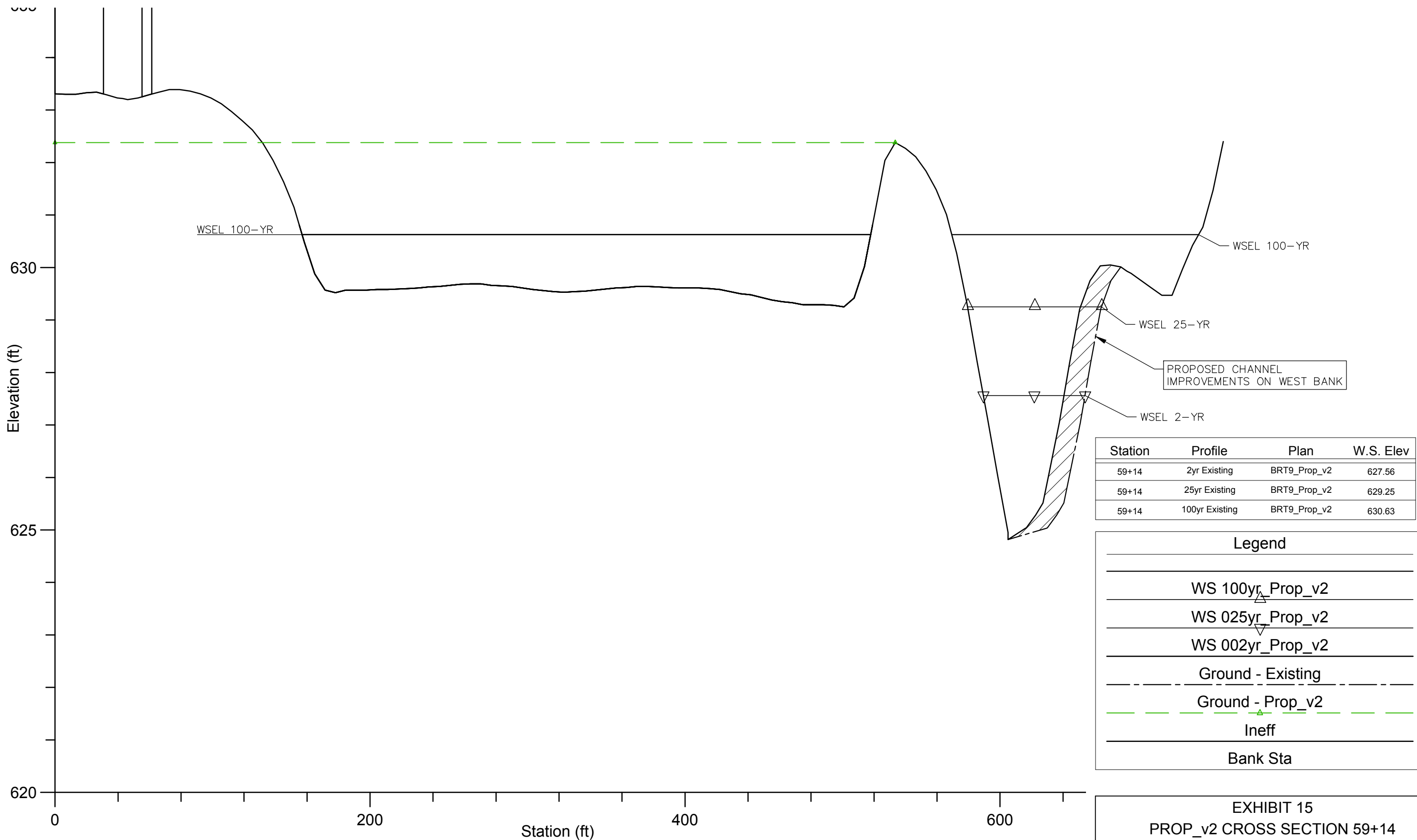
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- WS 025yr_Prop_v2
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- Ground - Existing
- Ground - Prop_v2
- Ineff
- Bank Sta

HUTTO MASTER DRAINAGE PLAN
BRUSHY CREEK TRIB. 9 STUDY
HUTTO, WILLIAMSON COUNTY, TEXAS

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Legend

WS 100yr_Prop_v2

WS 025yr_Prop_v2

WS 002yr_Prop_v2

Ground - Existing

Ground - Prop_v2

Ineff

Bank Sta

EXHIBIT 15

PROP_v2 CROSS SECTION 59+14

HUTTO MASTER DRAINAGE PLAN

BRUSHY CREEK TRIB. 9 STUDY

HUTTO, WILLIAMSON COUNTY, TEXAS

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DRAINAGE MASTER PLAN

APPENDIX 1.b

**Hydrologic & Hydraulic Analysis of
Cottonwood Creek**

**(from South Hwy. 79 to
Creekbend Detention Pond)**

by MillerGRAY

HUTTO

MASTER DRAINAGE PLAN

HYDROLOGIC AND HYDRAULIC ANALYSIS OF

COTTONWOOD CREEK

Hutto, Williamson County, Texas

Prepared for:

Hejl, Lee, & Associates, Inc.
321 Ed Schmidt Blvd., Suite 100
Hutto, TX 78634

Prepared By:

MillerGRAY
Consulting. Engineering. Infrastructure.

TBPE Firm Reg. No. F-16302

Miller Gray LLC
7320 N. MoPac Expy, Suite 203, Austin, Texas 78731
www.miller-gray.com

March 2018

MG Project No. 00115-002



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3.0 DUPLICATION OF THE EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS..... 1

4.0 DEVELOPMENT OF THE CORRECTED EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS..... 2

4.1 CORRECTED EFFECTIVE HYDROLOGIC MODEL..... 2

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EXHIBITS

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Exhibit 4	Cottonwood Creek Proposed 1% Annual Chance Floodplain Map
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Exhibit 6	Example 30' Channel Cut – XS 309+43 WSEL Comparison
Exhibit 7	Example 90' Channel Cut – XS 288+40 WSEL Comparison
Exhibit 8	Example 60' Channel Cut – XS 254+51 WSEL Comparison
Exhibit 9	Cottonwood Creek 1% Annual Chance Comparison

APPENDIX B

DIGITAL DATA DISK CONTAINING HYDROLOGIC AND HYDRAULIC MODELS

- Hydrologic Model, HEC-HMS Format
 - Effective Basin
 - Duplicate Effective Basin
 - Corrected Effective Basin
- Hydraulic Model, HEC-RAS Format
 - Effective Plan
 - Duplicate Effective Plan
 - Corrected Effective Plan
 - Proposed Plan
- Digital Mapping Data
 - Stream Centerline Shapefile
 - Cross Section Shapefile
 - Corrected Effective 1% Annual Chance Floodplain Shapefile
 - Proposed 1% Annual Chance Floodplain Shapefile

APPENDIX C

Cottonwood Creek Duplicate Effective vs Corrected Effective WSEL Comparison Table

APPENDIX D

Cottonwood Creek Corrected Effective vs Proposed Improvements WSEL Comparison Table

1.0 INTRODUCTION

This report documents the development of the hydrologic and hydraulic analysis of Cottonwood Creek as part of the Hutto Master Drainage Plan on behalf of the City of Hutto. The study limits include approximately 10,000 linear feet of Cottonwood Creek from an upstream limit at the upstream face of US Highway 79 (US 79) to a downstream limit of the confluence with an unnamed tributary of Cottonwood Creek as depicted on Exhibit 1 within Appendix A of this report. The preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 48491C0520F dated January 30, 2017, denotes Cottonwood Creek as Zone AE with base flood elevations determined.

2.0 IDENTIFICATION OF THE EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

This analysis is based on the preliminary FEMA effective hydrologic and hydraulic models of Cottonwood Creek as a base condition to perform the analysis. AECOM (formerly URS) conducted the preliminary FEMA study and provided a copy of the hydrologic and hydraulic models to Miller Gray on February 9, 2018. The hydrologic model is in HEC-HMS format and the hydraulic model is in HEC-RAS format. AECOM also provided a Microsoft Excel flow relationship spreadsheet showing the relationship between computed peak flow rates from HEC-HMS and steady state peak flow rates used in the HEC-RAS model. According to AECOM, the provided models identical to the models transmitted to the City of Hutto by AECOM on November 18, 2016.

- Computed water surface elevations (WSEL) in the HEC-RAS hydraulic model correspond to the mapped base flood elevations shown on the preliminary FEMA Firm Panel 48491C0520F dated January 30, 2017.
- Steady state peak flows and flow change locations in the HEC-RAS hydraulic model correspond to flow rates listed in the flow relationship spreadsheet.
- Flow rates listed in the flow relationship spreadsheet correspond to computed peak flow rates in the HEC-HMS hydrologic model.

Based on these comparisons, this HEC-HMS model and HEC-RAS model are designated as the **Effective Hydrologic and Hydraulic Models** of the Hutto Master Drainage Plan Project.

3.0 DUPLICATION OF THE EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

Before any modifications are made, the effective models were duplicated (re-run) using Miller Gray hardware and software. The hydrologic model is duplicated with HEC-HMS version 3.5. The hydraulic model is duplicated with HEC-RAS version 5.0.3. The model output is consistent with the effective model; therefore, these models are designated as the **Duplicate Effective Hydrologic and Hydraulic Models**.

4.0 DEVELOPMENT OF THE CORRECTED EFFECTIVE HYDROLOGIC AND HYDRAULIC MODELS

4.1 CORRECTED EFFECTIVE HYDROLOGIC MODEL

The duplicate effective HEC-HMS model was revised as part of the development of the corrected effective (existing conditions) hydrologic model. These revisions more adequately represent current local conditions in the Cottonwood Creek Watershed.

Based on site visits and field inspections, the drainage area delineation for subbasin COT_150 was modified. The area was reduced from 0.59684 square miles to 0.4888 square miles. This delineation modification did not affect lag times or curve numbers.

This HEC-HMS model is designated as the **Corrected Effective Hydrologic Model**. The table shown below provides a comparison of peak flow rates along Cottonwood Creek in the study area between the Duplicate Effective and Corrected Effective Hydrologic Models. Most of the change in flow rates can be attributed to the decrease in contributing drainage area described above.

Table 1. Duplicate Effective vs. Corrected Effective 1% Annual Chance Peak Flow Comparison

HEC-HMS Node	Location	1% Annual Chance Storm Event			
		Duplicate Effective		Corrected Effective	
		Drainage Area (sq mi)	Peak Discharge (CFS)	Drainage Area (sq mi)	Peak Discharge (CFS)
J_COT_150	Fritz Park	5.31	5,892	5.20	5,795
J_COT_160_150	U/S face of US 79	5.59	6,078	5.48	5,981
J_COT_160	U/S of confluence with unnamed tributary	6.23	6,257	6.13	6,171

4.2 CORRECTED EFFECTIVE HYDRAULIC MODEL

The duplicate effective HEC-RAS model was revised as part of the development of the corrected effective (existing conditions) hydraulic model. Revisions to the model are summarized as follows:

- Steady flow data distribution within HEC-RAS was adjusted along this portion of Cottonwood Creek to account for the decrease in drainage area COT_150, north of US 79.
- The existing pedestrian bridge between US 79 and the RR was added to the HEC-RAS geometry. Survey data is not currently available for this structure—data is input into the model using field measurements and Williamson County LIDAR topography.

This HEC-RAS model is designated as the **Corrected Effective Hydraulic Model**. The table in Appendix C provides a comparison of computed water surface elevations along Cottonwood Creek between the Duplicate Effective and Corrected Effective Hydraulic Models. The 1% annual chance water surface elevation is on most of the residential lots on the west side of Cottonwood Creek, north of Mossy Rock Drive. The corrected effective 1% annual chance floodplain is shown on Exhibit 3 within Appendix A of this report.

5.0 DEVELOPMENT OF THE PROPOSED HYDRAULIC MODEL

The corrected effective HEC-RAS model was revised to reflect the changes in creek geometry associated with possible channel improvements to reduce the 1% annual chance water surface elevations on the residential lots along the west bank of the creek. Revisions to the creek geometry are summarized as follows:

- Channel improvements include widening approximately 7,100 LF of the channel along the west bank by a nominal width of 30 to 60 feet with limited sections as much as 90 feet. The downstream limit of the channel improvements is 365 feet upstream of the confluence with an unnamed tributary, approximately 1,800 linear feet east of Mossy Rock Drive; the upstream limit of the channel improvements is approximately 50 linear feet south of CR199/East Front Street. Cross sections with proposed channel improvements are shown on Exhibits 6, 7 and 8 in Appendix A of this report.

A graphical representation of the channel improvements is included in Appendix A of this report as Exhibit 5.

This model revision is designated as the **Proposed Hydraulic Model**. With the proposed channel improvements, the 1% annual chance water surface elevations decrease along the reach by an average of 1.3 feet. The proposed channel improvements reduce the 1% annual floodplain from most of the existing residential lots along the west bank of Cottonwood Creek between station 313+30 and station 219+20. The table in Appendix D provides a comparison of 1% annual chance water surface elevations along Cottonwood Creek between the Corrected Effective Hydraulic Model and the Proposed Hydraulic Model. The proposed 1% annual chance floodplain is shown on Exhibit 4 within Appendix A of this report.

6.0 CONCLUSION

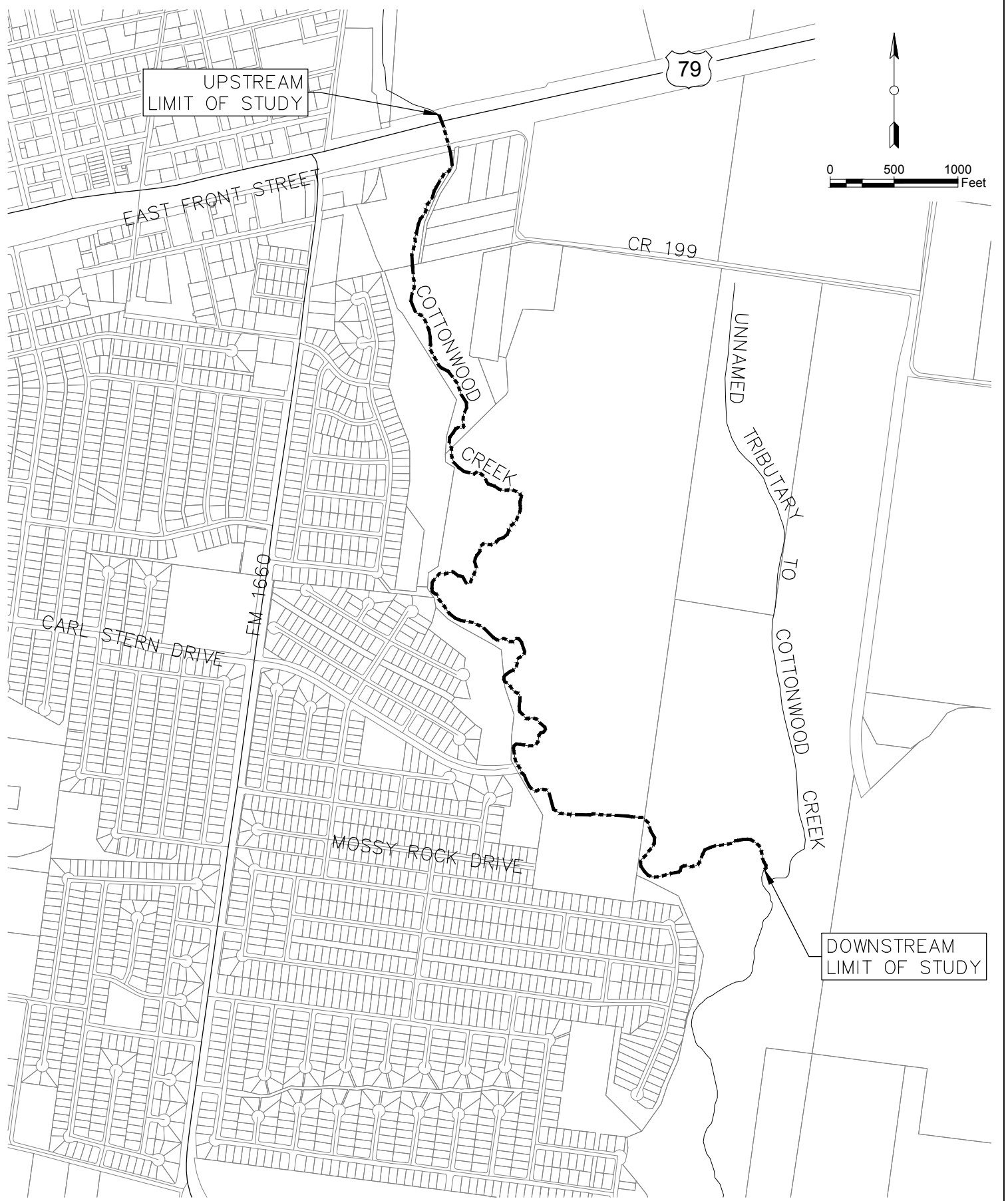
Cottonwood Creek drains approximately 6.13 square miles just upstream of the confluence with an unnamed tributary approximately 1,800 linear feet east of Mossy Rock Drive. The limits of this study extend from just upstream of the confluence with an unnamed tributary to the upstream face of US 79. The total length of study is approximately 10,000 linear feet. There are five hydraulic structures along this reach. Under existing conditions, the stream is at capacity for the 1% annual chance event with the top of bank exceeded in all locations and flooding neighboring residential lots. The proposed channel improvements described in this report provide for increased conveyance and a reduction to the 1% annual chance water surface elevations along Cottonwood Creek. With the proposed channel improvements, the 1% annual chance water surface elevations decrease along the reach by an average of 1.3 feet. The proposed channel improvements reduce the 1% annual floodplain from most of the existing residential lots along the west bank of Cottonwood Creek between station 313+30 and station 219+20.

APPENDIX A
EXHIBITS

Exhibit 1	Cottonwood Creek Study Limits
Exhibit 2	Cottonwood Creek Corrected Effective Drainage Area Map
Exhibit 3	Cottonwood Creek Corrected Effective 1% Annual Chance Floodplain Map
Exhibit 4	Cottonwood Creek Proposed 1% Annual Chance Floodplain Map
Exhibit 5	Cottonwood Creek Channel Improvements
Exhibit 6	Example 30' Channel Cut – XS 309+43 WSEL Comparison
Exhibit 7	Example 90' Channel Cut – XS 288+40 WSEL Comparison
Exhibit 8	Example 60' Channel Cut – XS 254+51 WSEL Comparison
Exhibit 9	Cottonwood Creek 1% Annual Chance Comparison

EXHIBIT 1
COTTONWOOD CREEK STUDY LIMITS

P:\00115 Hejl Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh01-CWC-Study Limits.dwg 3/28/2018 1:21 PM



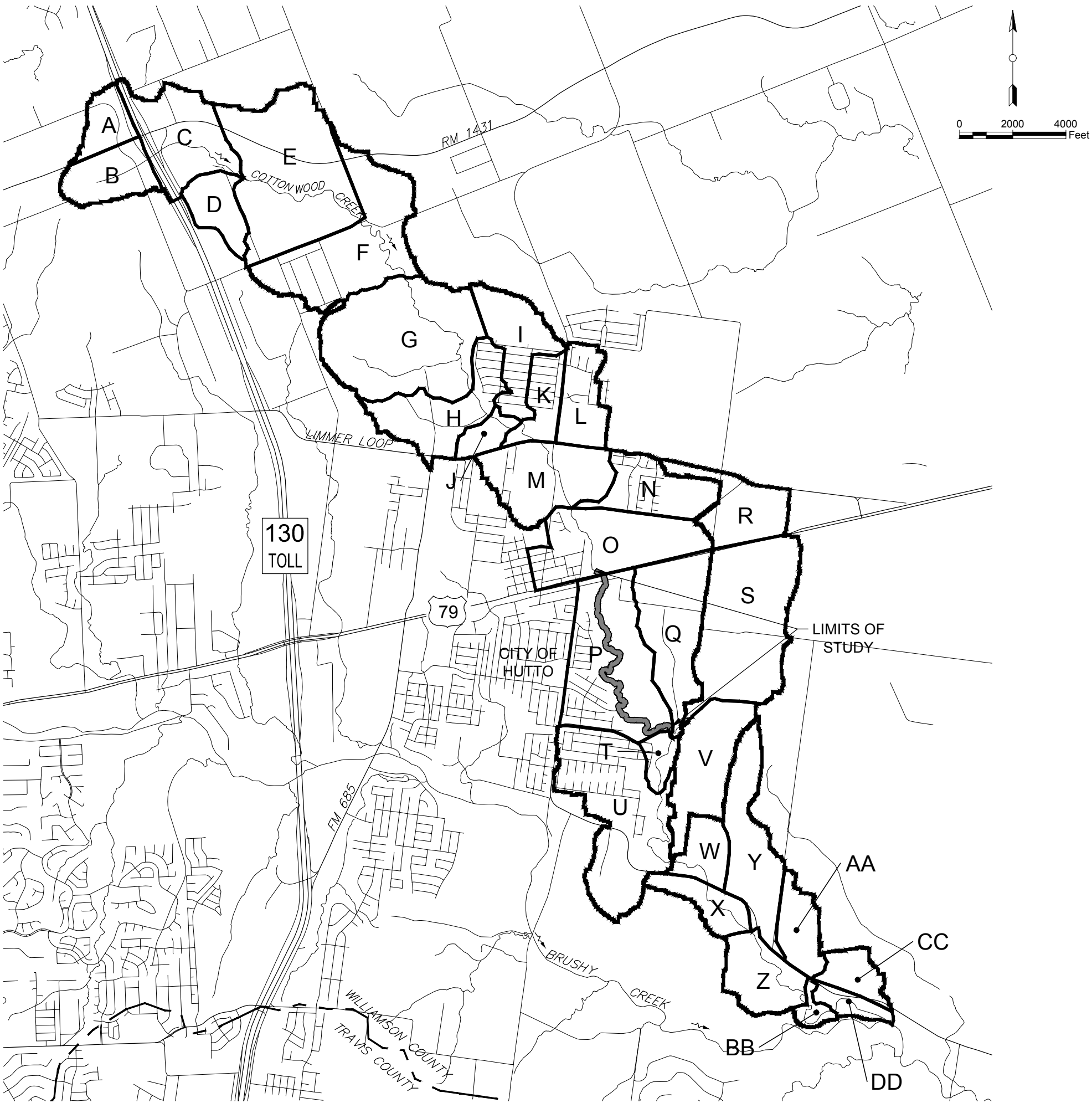
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EXHIBIT 1
COTTONWOOD CREEK STUDY LIMITS
HUTTO MASTER DRAINAGE PLAN
HUTTO, WILLIAMSON COUNTY, TX

EXHIBIT 2
COTTONWOOD CREEK CORRECTED EFFECTIVE DRAINAGE AREA MAP

P:\100115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh02-CWC-Corrected Effective Drainage Area Map.dwg 3/28/2018 1:22 PM

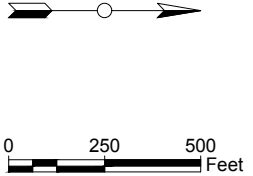
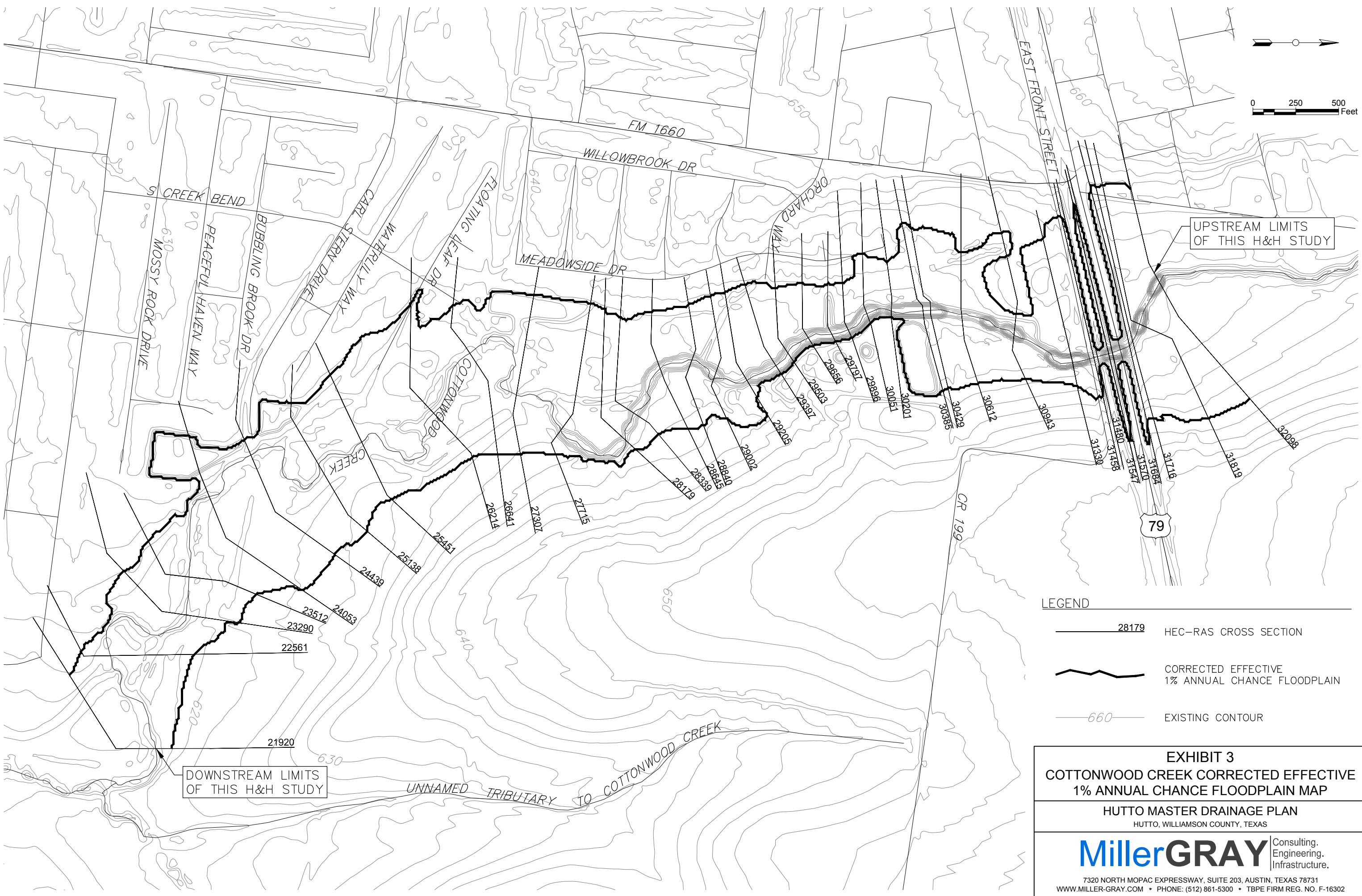


TAG	SUBBASIN NAME	SUBBASIN AREA (SQ MI)
A	COT_010	0.1369
B	COT_020	0.2199
C	COT_030	0.3968
D	COT_040	0.1692
E	COT_050	0.8218
F	COT_060	0.6292
G	COT_070	0.8168
H	COT_080	0.3603
I	COT_090	0.2906
J	COT_100	0.0868
K	COT_110	0.1623
L	COT_120	0.2146
M	COT_130	0.4100
N	COT_140	0.2757
O	COT_150	0.4888
P	COT_160	0.6469
Q	COT_170	0.4441
R	COT_180	0.2698
S	COT_190	0.7130
T	COT_200	0.0791
U	COT_210	0.7143
V	COT_220	0.3658
W	COT_230	0.1511
X	COT_240	0.1544
Y	COT_250	0.3908
Z	COT_260	0.2495
AA	COT_270	0.1725
BB	COT_280	0.0490
CC	COT_290	0.1268
DD	COT_300	0.0819
TOTAL COTTONWOOD CREEK DRAINAGE AREA:		10.0887

EXHIBIT 2
COTTONWOOD CREEK CORRECTED
EFFECTIVE DRAINAGE AREA MAP
HUTTO MASTER DRAINAGE PLAN
HUTTO, WILLIAMSON COUNTY, TEXAS

EXHIBIT 3
COTTONWOOD CREEK CORRECTED EFFECTIVE 1% ANNUAL CHANCE FLOODPLAIN MAP

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh03-CWC-Corrected Effective 1% Annual Chance Floodplain Map.dwg 3/28/2018 1:24 PM



- LEGEND
- 28179 HEC-RAS CROSS SECTION
 - CORRECTED EFFECTIVE 1% ANNUAL CHANCE FLOODPLAIN
 - 660 EXISTING CONTOUR

EXHIBIT 3
COTTONWOOD CREEK CORRECTED EFFECTIVE
1% ANNUAL CHANCE FLOODPLAIN MAP

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HUTTO, WILLIAMSON COUNTY, TEXAS

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EXHIBIT 4
COTTONWOOD CREEK PROPOSED 1% ANNUAL CHANCE FLOODPLAIN MAP

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh04-CWC-Proposed 1% Annual Chance Floodplain Map.dwg 3/28/2018 1:24 PM

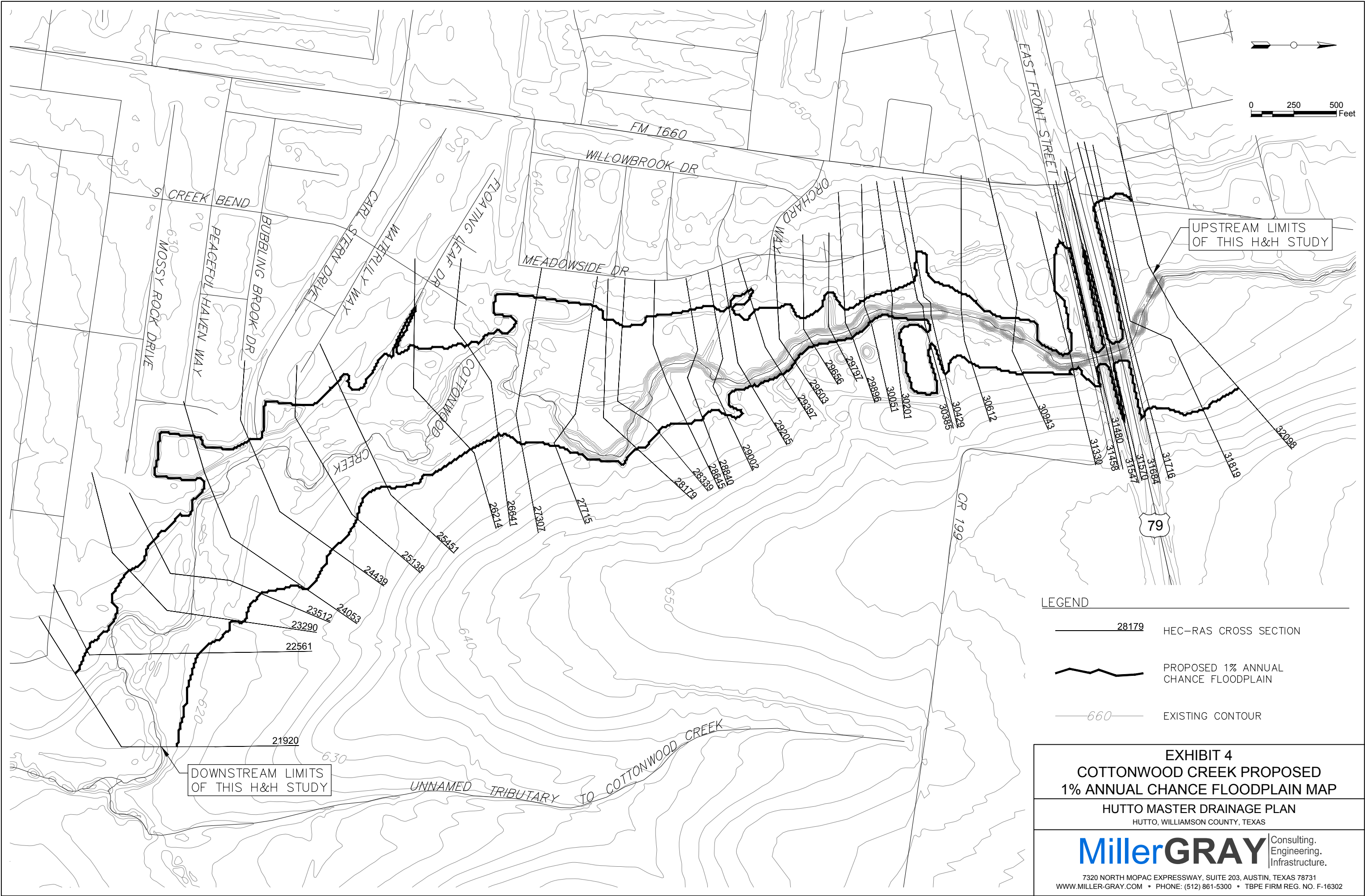


EXHIBIT 5
COTTONWOOD CREEK CHANNEL IMPROVEMENTS

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh05-CWC-Channel Improvements.dwg 3/28/2018 1:24 PM

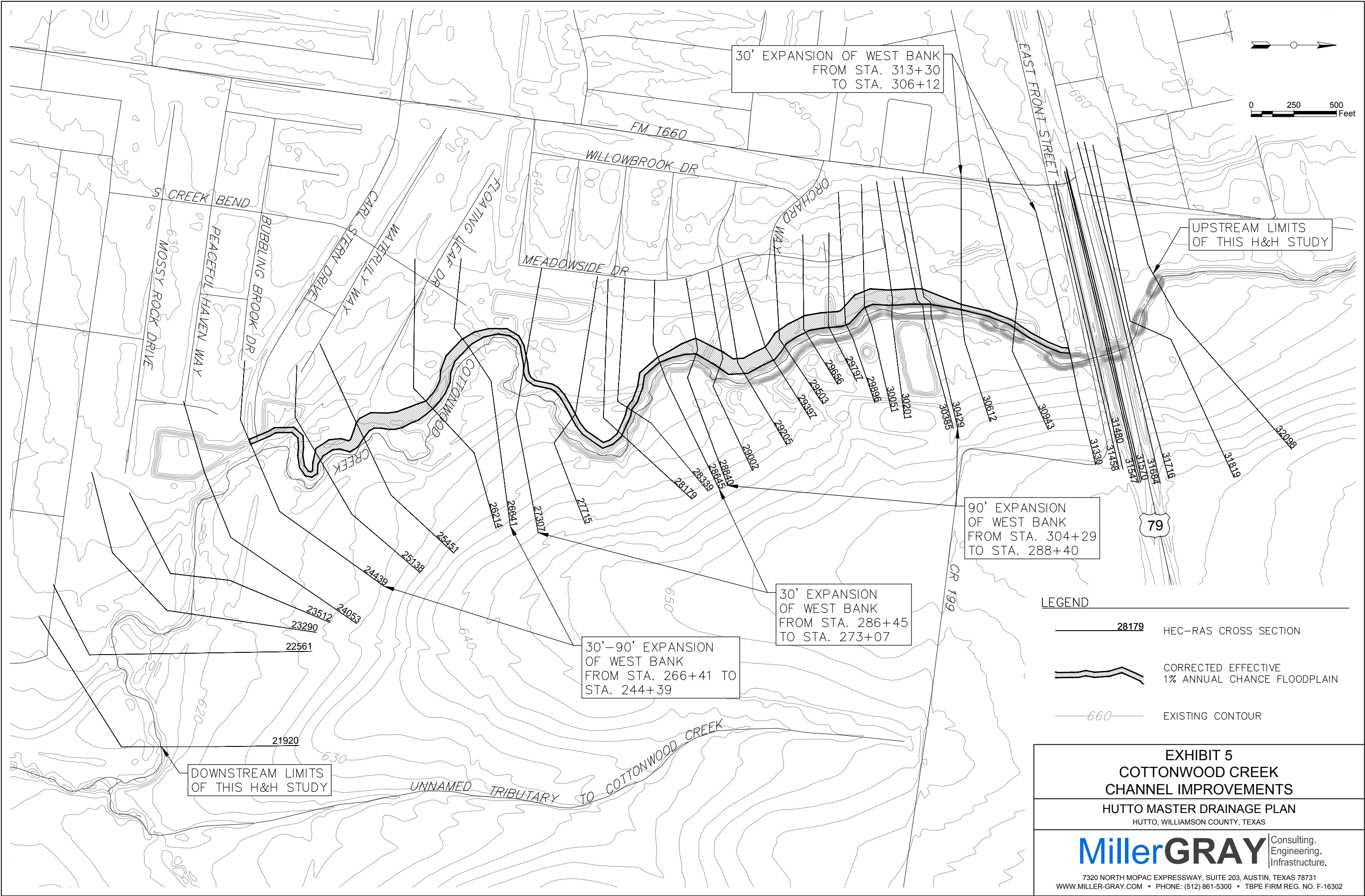
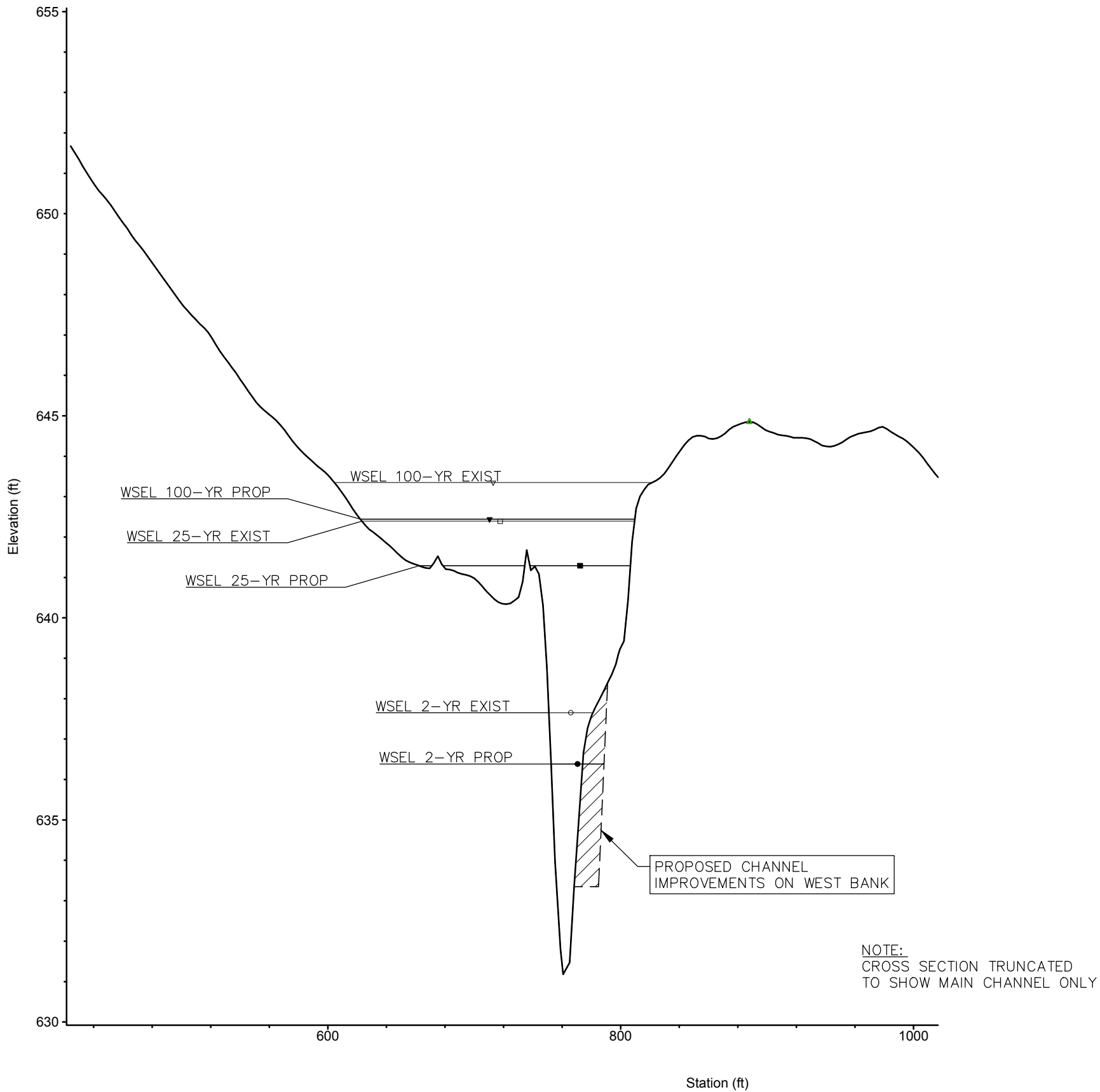


EXHIBIT 6
EXAMPLE 30' CHANNEL CUT – XS 309+43 WSEL COMPARISON

P:\00115 Hejl Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh06-CWC-Proposed HEC-RAS XS 309+43.dwg XS 309+43.dwg 5/9/2018 5:12 PM



Legend

WSEL 100-YR EXIST	▼
WSEL 100-YR PROP	▼
WSEL 25-YR EXIST	□
WSEL 25-YR PROP	■
WSEL 2-YR EXIST	○
WSEL 2-YR PROP	●
EXIST GRADE/CHANNEL	—
PROP CHANNEL IMPROVEMENTS	- - - - -

Station	Profile	Plan	W.S. Elev
309+43	2yr Existing	CWC_Prop	636.42
309+43	2yr Existing	Cotton_Corr_Eff	637.68
309+43	25yr Existing	CWC_Prop	641.29
309+43	25yr Existing	Cotton_Corr_Eff	642.39
309+43	100yr Existing	CWC_Prop	642.44
309+43	100yr Existing	Cotton_Corr_Eff	643.34

EXHIBIT 6 - EXAMPLE 30' CHANNEL CUT
XS 309+43 WSEL COMPARISON

CITY OF HUTTO MASTER DRAINAGE PLAN
HUTTO, WILLIAMSON COUNTY, TEXAS

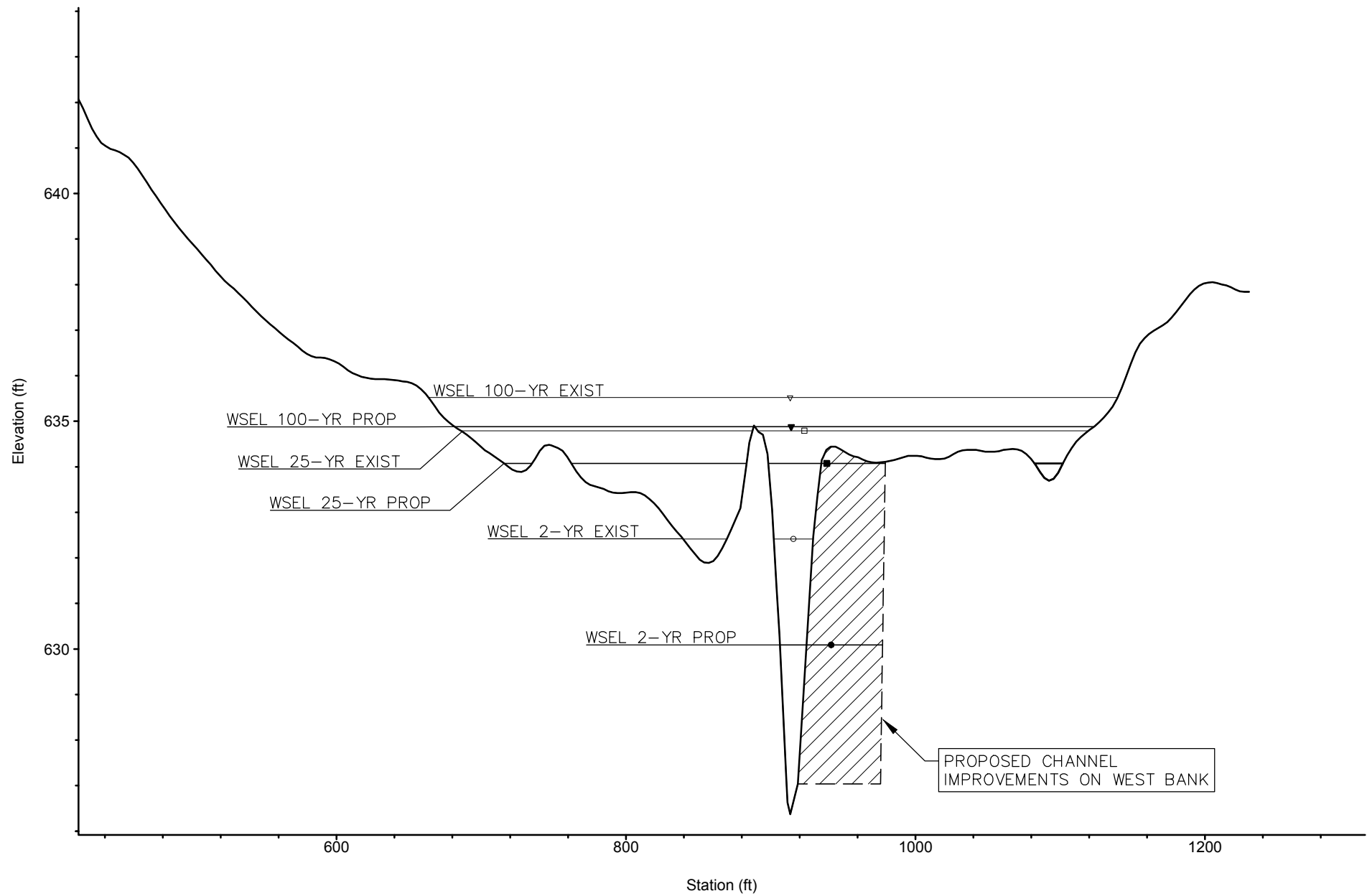
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EXHIBIT 7
EXAMPLE 90' CHANNEL CUT – XS 288+40 WSEL COMPARISON

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh07-CWC-Proposed HEC-RAS XS 288+40.dwg 5/9/2018 5:11 PM



Legend

WSEL 100-YR EXIST	▽
WSEL 100-YR PROP	▼
WSEL 25-YR EXIST	◻
WSEL 25-YR PROP	■
WSEL 2-YR EXIST	○
WSEL 2-YR PROP	●
EXIST GRADE/CHANNEL	—
PROP CHANNEL IMPROVEMENTS	- - - - -

Station	Profile	Plan	W.S. Elev
288+40	2yr Existing	CWC_Prop	630.13
288+40	2yr Existing	Cotton_Corr_Eff	632.44
288+40	25yr Existing	CWC_Prop	634.09
288+40	25yr Existing	Cotton_Corr_Eff	634.80
288+40	100yr Existing	CWC_Prop	634.88
288+40	100yr Existing	Cotton_Corr_Eff	635.52

EXHIBIT 7 - EXAMPLE 90' CHANNEL CUT XS 288+40 WSEL COMPARISON

CITY OF HUTTO MASTER DRAINAGE PLAN

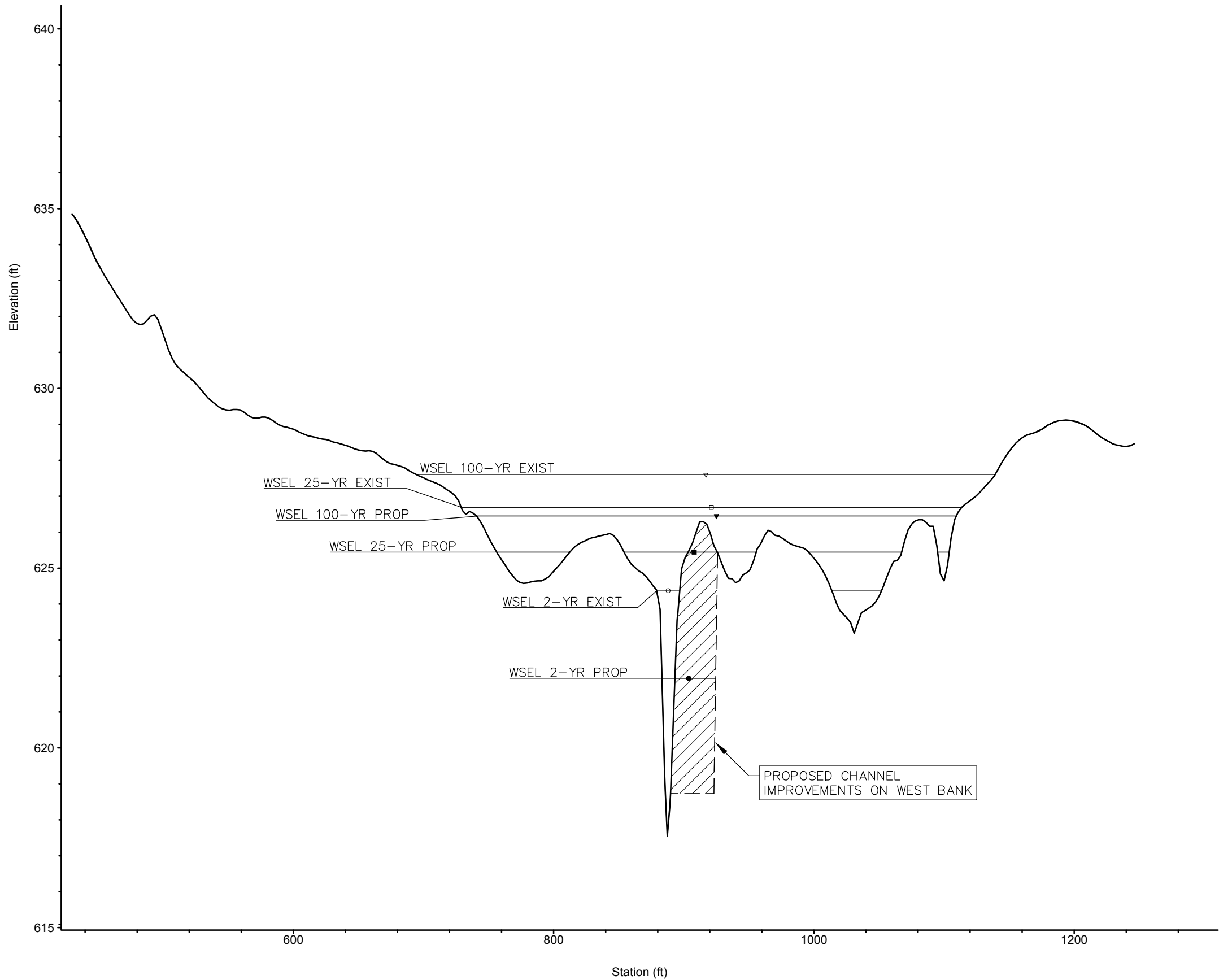
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EXHIBIT 8
EXAMPLE 60' CHANNEL CUT – XS 254+51 WSEL COMPARISON

P:\00115 Hej\ Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\00115-002exh08-CWC-Proposed HEC-RAS XS 254+51.dwg XS 254+51.dwg 5/9/2018 5:12 PM



Legend

WSEL 100-YR EXIST	▽
WSEL 100-YR PROP	▼
WSEL 25-YR EXIST	□
WSEL 25-YR PROP	■
WSEL 2-YR EXIST	○
WSEL 2-YR PROP	●
EXIST GRADE/CHANNEL	—
PROP CHANNEL IMPROVEMENTS	- - -

Station	Profile	Plan	W.S. Elev
254+51	2yr Existing	CWC_Prop	621.96
254+51	2yr Existing	Cotton_Corr_Eff	624.38
254+51	25yr Existing	CWC_Prop	625.45
254+51	25yr Existing	Cotton_Corr_Eff	626.69
254+51	100yr Existing	CWC_Prop	626.45
254+51	100yr Existing	Cotton_Corr_Eff	627.60

EXHIBIT 8 - EXAMPLE 60' CHANNEL CUT XS 254+54 WSEL COMPARISON

CITY OF HUTTO MASTER DRAINAGE PLAN

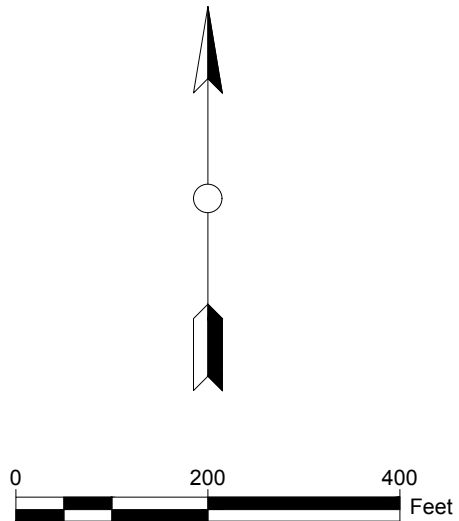
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EXHIBIT 9
COTTONWOOD CREEK 1% ANNUAL CHANCE COMPARISON

P:\001115 Hejl Lee & Associates\002 Hutto Master Drainage Plan\05_CADD\Exhibits\Cottonwood Creek\001115-002exh09-CWC-1% Annual Chance Comparison.dwg 3/29/2018 9:28 AM



- LEGEND
- 28179 HEC-RAS CROSS SECTION
 - - - CORRECTED EFFECTIVE 1% ANNUAL CHANCE FLOODPLAIN
 - ~~~~~ PROPOSED 1% ANNUAL CHANCE FLOODPLAIN
 - 1% ANNUAL CHANCE FLOODPLAIN REDUCTION AREA
 - 660 EXISTING CONTOUR

COTTONWOOD CREEK				
River Station	1% Annual Chance Computed Water Surface Elevation (ft)		Difference (Prop - Corr Eff)	Comment
	Corrected Effective	Proposed		
320+98	651.95	650.54	-1.41	U/S limit of study (Fritz Park baseball field)
318+19	651.95	650.48	-1.47	
317+16	651.94	650.21	-1.73	
316+84	651.94	650.08	-1.86	U/S US 79
316+11	0.00	0.00	0.00	
315+70	650.67	647.98	-2.69	D/S US 79; U/S pedestrian bridge
315+66	0.00	0.00	0.00	Pedestrian bridge added in Corrected Effective Model
315+47	650.88	648.39	-2.49	D/S pedestrian bridge
315+21	650.22	647.21	-3.01	U/S RR tracks
315+03	0.00	0.00	0.00	
314+80	646.53	644.88	-1.65	D/S RR tracks
314+58	647.36	645.35	-2.01	U/S CR 199
314+38	0.00	0.00	0.00	
314+16	647.33	645.22	-2.11	D/S CR 199
313+30	645.33	643.20	-2.13	
309+43	643.34	642.44	-0.90	
306+12	642.82	641.33	-1.49	
304+29	642.65	641.44	-1.21	U/S pedestrian bridge
304+02	0.00	0.00	0.00	
303+85	642.69	638.88	-3.81	D/S pedestrian bridge
302+01	640.98	638.11	-2.87	
300+51	640.74	637.65	-3.09	
298+96	639.19	636.73	-2.46	
297+97	638.89	636.92	-1.97	
296+56	638.18	636.36	-1.82	
295+03	637.49	635.87	-1.62	
293+97	637.49	635.72	-1.77	
292+05	636.79	635.53	-1.26	
290+02	636.03	634.99	-1.04	
288+40	635.52	634.88	-0.64	
286+45	634.66	634.27	-0.39	
283+39	633.84	633.41	-0.43	
281+79	633.66	633.25	-0.41	
277+15	633.12	632.36	-0.76	
273+07	632.21	631.51	-0.70	
266+41	630.91	628.90	-2.01	
262+14	629.37	628.09	-1.28	
254+51	627.60	626.45	-1.15	
251+38	626.71	626.12	-0.59	
244+39	625.52	625.25	-0.27	
240+53	624.16	624.16	0.00	
235+12	622.75	622.75	0.00	
232+90	622.18	622.18	0.00	
225+61	619.08	619.08	0.00	D/S limit - 365' U/S of confluence with unnamed tributary of CWC

EXHIBIT 9
COTTONWOOD CREEK
1% ANNUAL CHANCE COMPARISON

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APPENDIX B
DIGITAL DATA DISK CONTAINING HYDROLOGIC AND HYDRAULIC MODELS

- Hydrologic Model, HEC-HMS Format
 - Effective Basin
 - Duplicate Effective Basin
 - Corrected Effective Basin
 - Proposed Basin
- Hydraulic Model, HEC-RAS Format
 - Effective Plan
 - Duplicate Effective Plan
 - Corrected Effective Plan
 - Proposed Plan
- Digital Mapping Data
 - Stream Centerline Shapefile
 - Cross Section Shapefile
 - Corrected Effective 1% Annual Chance Floodplain Shapefile
 - Proposed 1% Annual Chance Floodplain Shapefile

APPENDIX B
DIGITAL DATA DISK
HUTTO MASTER DRAWAGE PLAN

COTTON WOOD CK
MARCH 2018

APPENDIX C
COTTONWOOD CREEK DUPLICATE EFFECTIVE VS CORRECTED EFFECTED
WSEL COMPARISON TABLE

HUTTO MASTER DRAINAGE PLAN
Cottonwood Creek Duplicate Effective vs Corrected Effective Water Surface Elevation Comparison Table

COTTONWOOD CREEK

River Station	1% Annual Chance Computed Water Surface Elevation (ft)		Difference (CorrEff - DupEff)	Comment
	Duplicate Effective	Corrected Effective		
320+98	652.04	651.95	-0.09	U/S limit of study (Fritz Park baseball field)
318+19	652.04	651.95	-0.09	
317+16	652.03	651.94	-0.09	
316+84	652.03	651.94	-0.09	U/S US 79
316+11	0.00	0.00	0.00	
315+70	650.75	650.67	-0.08	D/S US 79; U/S pedestrian bridge
315+66	#N/A	0.00	#N/A	Pedestrian bridge added in Corrected Effective Model
315+47	650.95	650.88	-0.07	D/S pedestrian bridge
315+21	650.29	650.22	-0.07	U/S RR tracks
315+03	0.00	0.00	0.00	
314+80	646.58	646.53	-0.05	D/S RR tracks
314+58	647.42	647.36	-0.06	U/S CR 199
314+38	0.00	0.00	0.00	
314+16	647.39	647.33	-0.06	D/S CR 199
313+30	645.36	645.33	-0.03	
309+43	643.38	643.34	-0.04	
306+12	642.88	642.82	-0.06	
304+29	642.72	642.65	-0.07	U/S pedestrian bridge
304+02	0.00	0.00	0.00	
303+85	642.75	642.69	-0.06	D/S pedestrian bridge
302+01	641.02	640.98	-0.04	
300+51	640.78	640.74	-0.04	
298+96	639.23	639.19	-0.04	
297+97	638.91	638.89	-0.02	
296+56	638.21	638.18	-0.03	
295+03	637.50	637.49	-0.01	
293+97	637.51	637.49	-0.02	
292+05	636.82	636.79	-0.03	
290+02	636.04	636.03	-0.01	
288+40	635.54	635.52	-0.02	
286+45	634.68	634.66	-0.02	
283+39	633.87	633.84	-0.03	
281+79	633.68	633.66	-0.02	
277+15	633.15	633.12	-0.03	
273+07	632.23	632.21	-0.02	
266+41	630.93	630.91	-0.02	
262+14	629.40	629.37	-0.03	
254+51	627.62	627.60	-0.02	
251+38	626.73	626.71	-0.02	
244+39	625.54	625.52	-0.02	
240+53	624.18	624.16	-0.02	
235+12	622.78	622.75	-0.03	
232+90	622.22	622.18	-0.04	
225+61	619.09	619.08	-0.01	
219+20	617.91	617.88	-0.03	D/S limit - 365' U/S of confluence with unnamed tributary of CWC

APPENDIX D
COTTONWOOD CREEK CORRECTED EFFECTIVE VS PROPOSED IMPROVEMENTS
WSEL COMPARISON TABLE

HUTTO MASTER DRAINAGE PLAN
Cottonwood Creek Corrected Effective vs Proposed Improvements Water Surface Elevation Comparison Table

COTTONWOOD CREEK

River Station	1% Annual Chance Computed Water Surface Elevation (ft)		Difference (Prop - Corr Eff)	Comment
	Corrected Effective	Proposed		
320+98	651.95	650.54	-1.41	U/S limit of study (Fritz Park baseball field)
318+19	651.95	650.48	-1.47	
317+16	651.94	650.21	-1.73	
316+84	651.94	650.08	-1.86	U/S US 79
316+11	0.00	0.00	0.00	
315+70	650.67	647.98	-2.69	D/S US 79; U/S pedestrian bridge
315+66	0.00	0.00	0.00	Pedestrian bridge added in Corrected Effective Model
315+47	650.88	648.39	-2.49	D/S pedestrian bridge
315+21	650.22	647.21	-3.01	U/S RR tracks
315+03	0.00	0.00	0.00	
314+80	646.53	644.88	-1.65	D/S RR tracks
314+58	647.36	645.35	-2.01	U/S CR 199
314+38	0.00	0.00	0.00	
314+16	647.33	645.22	-2.11	D/S CR 199
313+30	645.33	643.20	-2.13	
309+43	643.34	642.44	-0.90	
306+12	642.82	641.33	-1.49	
304+29	642.65	641.44	-1.21	U/S pedestrian bridge
304+02	0.00	0.00	0.00	
303+85	642.69	638.88	-3.81	D/S pedestrian bridge
302+01	640.98	638.11	-2.87	
300+51	640.74	637.65	-3.09	
298+96	639.19	636.73	-2.46	
297+97	638.89	636.92	-1.97	
296+56	638.18	636.36	-1.82	
295+03	637.49	635.87	-1.62	
293+97	637.49	635.72	-1.77	
292+05	636.79	635.53	-1.26	
290+02	636.03	634.99	-1.04	
288+40	635.52	634.88	-0.64	
286+45	634.66	634.27	-0.39	
283+39	633.84	633.41	-0.43	
281+79	633.66	633.25	-0.41	
277+15	633.12	632.36	-0.76	
273+07	632.21	631.51	-0.70	
266+41	630.91	628.90	-2.01	
262+14	629.37	628.09	-1.28	
254+51	627.60	626.45	-1.15	
251+38	626.71	626.12	-0.59	
244+39	625.52	625.25	-0.27	
240+53	624.16	624.16	0.00	
235+12	622.75	622.75	0.00	
232+90	622.18	622.18	0.00	
225+61	619.08	619.08	0.00	D/S limit - 365' U/S of confluence with unnamed tributary of CWC



DRAINAGE MASTER PLAN

APPENDIX 2

PROJECT COST ESTIMATE

WORKSHEETS

DATE PREPARED
APRIL 2018

PREPARED BY
HEJL, LEE & ASSOCIATES, INC.
321 ED SCHMIDT BLVD. SUITE 100
HUTTO, TEXAS 78634

CITY OF HUTTO DRAINAGE MASTER PLAN

**COTTONWOOD CREEK FLOOD STUDY & CHANNEL IMPROVEMENTS****DESCRIPTION (SOUTH)**

This project proposes to perform hydrological and hydraulic study of Cottonwood Creek from County Road 199 to downstream of Creekbend subdivision detention pond, prepare/submit to the Federal Emergency Management Agency (FEMA) for Conditional Letter of Map Revision (CLOMR), perform channel improvement, install sidewalk for pedestrian access, and subsequently prepare/submit Letter of Map Revision (LOMR) to FEMA for flood insurance rate map (FIRM) revision.

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & PREPARING ROW	60	STA.	\$ 2,500	\$ 150,000
2	CHANNEL EXCAVATION (6' AVG. CUT)	6,000	L.F.	350	2,100,000
3	CHANNEL ARMORING (60' AVG. WIDTH)	6,000	L.F.	300	1,800,000
4	RIPARIAN IMPROVEMENTS	1	L.S.	270,000	270,000
5	EMBANKMENT STABILIZATION	6,000	L.F.	1,000	6,000,000
6	SIDEWALK & PEDESTRIAN IMPROVEMENTS	5,000	L.F.	130	650,000
7	ROCK RIP-RAP	1	L.S.	50,000	50,000
8	FLOW DIVERSION DURING CONSTRUCTION	6,000	L.F.	20	120,000
9	VEGETATION RESTORATION	1	L.S.	150,000	150,000
10	EROSION & SEDIMENTATION CONTROL	1	L.S.	150,000	150,000
11	CLEAN UP & DEMOBILIZATION	1	L.S.	600,000	600,000
SUB-TOTAL CONSTRUCTION COST					\$ 12,040,000
CONTINGENCIES (+/- 15% of Construction)					1,800,000
TOTAL CONSTRUCTION COST					\$ 13,840,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design			\$ 620,000	
	Final Design			765,000	
	Advertise & Bid			15,000	
	Construction Administration			125,000	
	Record Drawing Preparation			25,000	
Special -	Route & Easement Survey			100,000	
	Geotechnical (Design Phase)			50,000	
	FEMA CLOMR/LOMR Submittal			35,000	
	Environmental			75,000	
Total Professional Fees					\$ 1,810,000
ROW/EASEMENT ACQUISITION (+/- 10 Ac)					300,000
TOTAL NON-CONSTRUCTION COST					2,110,000
ESTIMATED TOTAL PROJECT COST					\$ 15,950,000

NOTES

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CITY OF HUTTO DRAINAGE MASTER PLAN



COTTONWOOD CREEK FLOOD STUDY & CHANNEL IMPROVEMENTS

DESCRIPTION (NORTH)

This project proposes to perform hydrological and hydraulic study of Cottonwood Creek from north of Hutto Parke subdivision to approximately 1,000 LF south of Mager Lane, prepare/submit to the Federal Emergency Management Agency (FEMA) for Conditional Letter of Map Revision (CLOMR), perform channel improvement, install sidewalk for pedestrian access, and subsequently prepare/submit Letter of Map Revision (LOMR) to FEMA for flood insurance rate map (FIRM) revision.

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & PREPARING ROW	80	STA.	\$ 1,600	\$ 128,000
2	CHANNEL EXCAVATION (4' AVG. CUT)	8,000	L.F.	210	1,680,000
3	CHANNEL ARMORING (45' AVG. WIDTH)	8,000	L.F.	225	1,800,000
4	RIPARIAN IMPROVEMENTS	1	L.S.	250,000	250,000
5	EMBANKMENT STABILIZATION	1	L.S.	3,200,000	3,200,000
6	SIDEWALK & PEDESTRIAN IMPROVEMENTS	8,000	L.F.	50	400,000
7	ROCK RIP-RAP	1	L.S.	52,000	52,000
8	FLOW DIVERSION DURING CONSTRUCTION	8,000	L.F.	10	80,000
9	VEGETATION RESTORATION	1	L.S.	185,000	185,000
10	EROSION & SEDIMENTATION CONTROL	1	L.S.	120,000	120,000
11	CLEAN UP, MOB, DEMOB, & BONDS	1	L.S.	425,000	425,000
SUB-TOTAL CONSTRUCTION COST					\$ 8,320,000
CONTINGENCIES (+/- 15% of Construction)					1,100,000
TOTAL CONSTRUCTION COST					\$ 9,420,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design			\$ 450,000	
	Final Design			570,000	
	Advertise & Bid			10,000	
	Construction Administration			115,000	
	Record Drawing Preparation			15,000	
Special -	Route & Easement Survey			75,000	
	Geotechnical (Design Phase)			35,000	
	FEMA CLOMA/LOMA Submittal			35,000	
	Environmental			75,000	
Total Professional Fees					\$ 1,380,000
ROW/EASEMENT ACQUISITION (+/- 20 Ac)					400,000
TOTAL NON-CONSTRUCTION COST					1,780,000
ESTIMATED TOTAL PROJECT COST					\$ 11,200,000

NOTES

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LEGEND OF HUTTO CHANNEL IMPROVEMENT

DESCRIPTION

This project proposes to widen approximately 2,600 LF of the existing grass-lined flat bottom channel with additional 10' width and install an additional 8'x4' concrete box culvert at Carl Stern Blvd. The project will increase the flow characteristics of the channel and reduce operation and maintenance expense.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

REMARKS: ESTIMATE OF WORK OF PROPOSED COST					
ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & PREPARING ROW	2,600	L.F.	\$ 15	\$ 39,000
2	CHANNEL WIDENING	2,600	L.F.	100	260,000
3	EMBANKMENT STABILIZATION	1	L.S.	50,000	50,000
4	CARL STERN CULVERT IMPROVEMENTS	1	L.S.	250,000	250,000
5	ROCK RIP-RAP	1	L.S.	35,000	35,000
6	VEGETATION RESTORATION	1	L.S.	15,000	15,000
7	EROSION & SEDIMENTATION CONTROL	1	L.S.	12,500	12,500
8	CLEAN UP & DEMOBILIZATION	1	L.S.	8,500	8,500
SUB-TOTAL CONSTRUCTION COST					\$ 670,000
CONTINGENCIES (+/- 15% of Construction)					105,000
TOTAL CONSTRUCTION COST					\$ 775,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design				\$ 38,975
	Final Design				50,125
	Advertise & Bid				3,400
	Construction Administration				15,000
	Record Drawing Preparation				2,500
Special -	Route Survey				10,000
	Getoech				5,000
TOTAL NON-CONSTRUCTION COST					\$ 125,000
ESTIMATED TOTAL PROJECT COST					\$ 900,000

NOTES

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CITY OF HUTTO DRAINAGE MASTER PLAN



FARLEY MIDDLE SCHOOL CULVERT & CHANNEL IMPROVEMENT

DESCRIPTION

This project proposes to install culverts at Farley Middle School's north and south driveways and install drainage channel along the east side of County Road 137 for storm water conveyance to Brushy Creek. This project is to mitigate constant flooding at the north driveway that poses safety concern for school access.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	SITE PREP	1	L.S.	\$ 25,000	\$ 25,000
2	NEW CULVERT STRUCTURE W/SET	2	Site	125,000	250,000
3	RE-GRADE BAR DITCH	2,800	L.F.	25	70,000
4	INSTALL CONCRETE CHANNEL	2,800	L.F.	80	224,000
5	SIDEWALK & CROSSING STRUCTURE	1	L.S.	10,000	10,000
6	TRAFFIC CONTROL, BARRICADES & DETOUR	2	Mon.	7,500	15,000
7	VEGETATION RESTORATION	1	L.S.	15,000	15,000
8	EROSION & SEDIMENTATION CONTROL	1	L.S.	12,500	12,500
9	CLEAN UP & DEMOBILIZATION	1	L.S.	5,500	5,500
SUB-TOTAL CONSTRUCTION COST					\$ 621,500
CONTINGENCIES (+/- 15% of Construction)					93,500
TOTAL CONSTRUCTION COST					\$ 715,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design				\$ 27,500
	Final Design				35,750
	Advertise & Bid				3,750
	Construction Administration				12,500
	Record Drawing Preparation				1,500
Special -	Route Survey				6,500
	Geotechnical (Design Phase)				7,500
TOTAL NON-CONSTRUCTION COST					\$ 95,000
ESTIMATED TOTAL PROJECT COST					\$ 810,000

NOTES

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SUMMARY SHEET - FARLEY MIDDLE SCHOOL CULVERT.XLS

CITY OF HUTTO DRAINAGE MASTER PLAN



OLD TOWN ROADWAY CONVERSION TO URBAN DESIGN

DESCRIPTION

This project proposes to convert existing rural streets to urban street design with roadway reconstruction, curb and gutter, curb inlet, and storm sewer for storm water conveyance. Sidewalk, landscape, street lighting will be incorporated into the improvements. Budget is based on associated improvement cost per city block.

**PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST**

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	PREPARING ROW	300	L.F.	\$ 120	\$ 36,000
2	SUBGRADE CONDITIONING W/GEOGRID	300	L.F.	185	55,500
3	FLEXIBLE BASE	300	L.F.	150	45,000
4	HMAC	300	L.F.	180	54,000
5	CONCRETE CURB & GUTTER	600	L.F.	35	21,000
6	SIDEWALK WITH RAMPS	1	L.S.	25,000	25,000
7	ADJUSTING MANHOLES & VALVES	1	L.S.	10,000	10,000
8	STORM SEWER, INLET & MANHOLE SYSTEM	1	L.S.	60,000	60,000
9	UTILITY RELOCATION	1	L.S.	30,000	30,000
10	REMOVAL & DISPOSAL OF EXIST. CULVERTS	1	L.S.	25,000	25,000
11	LANDSCAPING	1	L.S.	35,000	35,000
12	DRIVEWAY RECONSTRUCTION	1	L.S.	45,000	45,000
13	STREET SIGNS & PAVEMENT MARKINGS	1	L.S.	7,500	7,500
14	TRAFFIC DETOUR & BARRICADE CONTROL	3	MO.	9,000	27,000
15	EROSION & SEDIMENTATION CONTROL	1	L.S.	7,500	7,500
16	CLEAN UP & DEMOBILIZATION	1	L.S.	7,500	5,000
SUB-TOTAL CONSTRUCTION COST					\$ 488,500
CONTINGENCIES (+/- 15% of Construction)					73,500
TOTAL CONSTRUCTION COST					\$ 562,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design			\$	29,750
	Final Design				34,750
	Advertise & Bid				2,500
	Construction Administration				7,500
	Record Drawing Preparation				1,500
Special -	Route Survey				3,500
	Subsurface Utility Engineering				6,500
	Geotechnical (Design Phase)				2,500
TOTAL NON-CONSTRUCTION COST					\$ 88,500
ESTIMATED TOTAL PROJECT COST					\$ 650,500

NOTES

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CITY OF HUTTO DRAINAGE MASTER PLAN

**HUTTO EXCHANGE BLVD. CULVERT & CHANNEL IMPROVEMENT****DESCRIPTION**

This project proposes to install concrete box culvert crossing Exchange Blvd. and perform channel improvement from the Landing development to the Co-op site to improve storm water conveyance along the existing channel and provide pedestrian access for connecting to Co-op development.

**PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST**

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & PREPARING ROW	1	L.S.	\$ 25,000	\$ 25,000
2	CONCRETE CHANNEL	1,800	L.F.	230	414,000
3	ROADWAY IMPROVEMENTS	1	L.S.	125,000	125,000
4	INSTALL RCB CULVERTS & HEADWALLS	1	L.S.	395,000	395,000
5	EMBANKMENT STABILIZATION	1	L.S.	50,000	50,000
6	CONCRETE PAVEMENT	1	L.S.	35,000	35,000
7	PEDESTRIAN PATHWAY & SIDEWALK	2,000	L.F.	120	240,000
8	STRUCTURAL RIP-RAP	1	L.S.	100,000	100,000
9	VEGETATION RESTORATION	1	L.S.	35,000	35,000
10	EROSION & SEDIMENTATION CONTROL	1	L.S.	28,500	28,500
11	TRAFFIC CONTROL & DETOUR	1	L.S.	12,500	12,500
12	CLEAN UP & DEMOBILIZATION	1	L.S.	20,000	20,000
SUB-TOTAL CONSTRUCTION COST					\$ 1,480,000
CONTINGENCIES (+/- 15% of Construction)					220,000
TOTAL CONSTRUCTION COST					\$ 1,700,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design			\$	84,000
	Final Design				101,000
	Structural Engineering				45,000
	Advertise & Bid				7,500
	Construction Administration				28,500
	Record Drawing Preparation				4,500
Special -	Route Survey				14,500
	Geotechnical (Design Phase)				15,000
TOTAL NON-CONSTRUCTION COST					\$ 300,000
ESTIMATED TOTAL PROJECT COST					\$ 2,000,000

NOTES

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CO-OP DETENTION POND OUTFALL STRUCTURE

DESCRIPTION

This project proposes to demolish existing damaged outfall structure and install a new outfall structure for integrating into Co-op development to restore its intended function of storm water detention.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & SITE PREP	1	L.S.	\$ 12,500	\$ 12,500
2	DEMO & REMOVAL OF EXISTING STRUCTURE	1	L.S.	30,000	30,000
3	INSTALL NEW OUTFALL STRUCTURE	1	L.S.	330,000	330,000
4	EMBANKMENT STABILIZATION	1	L.S.	35,000	35,000
5	STRUCTURAL RIP-RAP	1	L.S.	80,000	80,000
6	VEGETATION RESTORATION	1	L.S.	17,500	17,500
7	EROSION & SEDIMENTATION CONTROL	1	L.S.	7,500	7,500
8	CLEAN UP & DEMOBILIZATION	1	L.S.	7,500	7,500
SUB-TOTAL CONSTRUCTION COST					\$ 520,000
CONTINGENCIES (+/- 15% of Construction)					80,000
TOTAL CONSTRUCTION COST					\$ 600,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering Preliminary Design					\$ 27,500
Final Design					30,000
Structural Engineering					24,000
Advertise & Bid					1,500
Construction Administration					7,000
Record Drawing Preparation					2,500
Special - Route Survey					3,500
Geotechnical (Design Phase)					4,000
TOTAL NON-CONSTRUCTION COST					100,000
ESTIMATED TOTAL PROJECT COST					\$ 700,000

NOTES

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2. This estimate was derived without engineering design plan to substantiate the estimate. It is prepared for budgetary consideration only.

EMORY FARM DETENTION POND OUTFALL STRUCTURE

DESCRIPTION

This project proposes to demolish existing damaged outfall structure and install a new outfall structure to restore its intended function of storm water detention.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CLEARING VEGETATION & SITE PREP	1	L.S.	\$ 12,500	\$ 12,500
2	DEMO & REMOVAL OF EXISTING STRUCTURE	1	L.S.	15,000	15,000
3	INSTALL NEW OUTFALL STRUCTURE	1	L.S.	185,000	185,000
4	EMBANKMENT STABILIZATION	1	L.S.	32,500	32,500
5	STRUCTURAL RIP-RAP	1	L.S.	25,000	25,000
6	VEGETATION RESTORATION	1	L.S.	10,000	10,000
7	EROSION & SEDIMENTATION CONTROL	1	L.S.	7,500	7,500
8	CLEAN UP & DEMOBILIZATION	1	L.S.	7,500	7,500
SUB-TOTAL CONSTRUCTION COST					\$ 295,000
CONTINGENCIES (+/- 15% of Construction)					45,000
TOTAL CONSTRUCTION COST					\$ 340,000
NON-CONSTRUCTION COSTS					
PROFESSIONAL SERVICES					
Engineering -	Preliminary Design				\$ 21,250
	Final Design				27,500
	Structural Engineering				20,000
	Advertise & Bid				1,500
	Construction Administration				10,000
	Record Drawing Preparation				1,250
Special -	Survey				3,500
	Geotechnical (Design Phase)				5,000
TOTAL NON-CONSTRUCTION COST					\$ 90,000
ESTIMATED TOTAL PROJECT COST					\$ 430,000

NOTES

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2. This estimate was derived without engineering design plan to substantiate the estimate. It is prepared for budgetary consideration only.

CLARK'S CROSSING CHANNEL RESTORATION

DESCRIPTION

This project proposes to perform clearing and channel restoration of approximately 1,350 LF of existing channel in Clark's Crossing subdivision to mitigate localized flooding condition.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

REESTIMATE OF WORK OF PROBABLE COST						
ACTIVITY		QTY	UNIT	UNIT PRICE		AMOUNT
CONSTRUCTION COSTS						
1	CLEAR VEGETATION & PREPARE ROW	1,350	L.F.	\$ 10	\$	13,500
2	CHANNEL RESTORATION	1,350	L.F.	25		33,750
3	EMBANKMENT STABILIZATION	1	L.S.	18,500		18,500
4	ROCK RIP-RAP	1	L.S.	15,000		15,000
5	VEGETATION RESTORATION	1	L.S.	12,500		12,500
6	EROSION & SEDIMENTATION CONTROL	1	L.S.	7,500		7,500
7	CLEAN UP & DEMOBILIZATION	1	L.S.	5,000		5,000
SUB-TOTAL CONSTRUCTION COST						\$ 105,750
CONTINGENCIES (+/- 15% of Construction)						15,250
TOTAL CONSTRUCTION COST						\$ 121,000
NON-CONSTRUCTION COSTS						
PROFESSIONAL SERVICES						
Engineering -	Preliminary Design				\$	5,250
	Final Design					7,000
	Advertise & Bid					1,250
	Construction Administration					2,500
	Record Drawing Preparation					500
Special -	Route Survey					2,500
	TOTAL NON-CONSTRUCTION COST					\$ 19,000
ESTIMATED TOTAL PROJECT COST						\$ 140,000

NOTES

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CITY OF HUTTO DRAINAGE MASTER PLAN



OLD TOWN CHANNEL RESTORATION

DESCRIPTION

This project proposes to perform channel restoration on both sides of the roadway in Old Town for proper channel/ditch grading and related maintenance work. Cost estimate is based on work per city block using city force account.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE	AMOUNT
CONSTRUCTION COSTS					
1	CHANNEL RESTORATION	600	L.F.	\$ 9	\$ 5,400
2	VEGETATIVE EROSION CONTROL MAT	600	L.F.	4	2,400
3	TRAFFIC SAFETY, DETOUR & BARRICADES	1	WEEK	350	350
4	EROSION, SEDIMENTATION CONTROL	1	L.S.	300	300
5	CLEAN UP & DEMOBILIZATION	1	L.S.	350	350
SUB-TOTAL FLOOD STUDY					\$ 8,800
CONTINGENCIES					1,200
TOTAL FLOOD GAUGE INSTALLATION AND YEAR ONE MONITORING COST					\$ 10,000
PROFESSIONAL FEE COSTS					
1	MISC. ENGINEERING EVALUATION				\$ 800
2	OFFICE & FIELD SURVEY TASKS				1,200
SUB-TOTAL ENGINEERING/SURVEYING FEES					\$ 2,000
TOTAL ESTIMATED PROJECT COST					\$ 12,000

NOTES

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SUMMARY SHEET - OLD TOWN CHANNEL RESTORATION.XLS

CITY OF HUTTO DRAINAGE MASTER PLAN



FLOOD GAUGE INSTALLATION AT DETENTION PONDS

DESCRIPTION

This project proposes to install approximately 20 flood gauges at existing detention ponds, perform initial year flow monitoring to establish database, and assess pond performance.



PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY		QTY	UNIT	UNIT PRICE		AMOUNT	
CONSTRUCTION COSTS							
1	INSTALL FLOOD GAUGES	20	EA.	\$	1,000	\$	20,000
2	FIELD SURVEY ELEVATION	20	EA.		500		10,000
3	ESTABLISH FLOOD GAUGE DATABASE	1	L.S.		1,500		1,500
4	MONITOR FLOOD GAUGES	1	L.S.		5,000		5,000
SUB-TOTAL FLOOD STUDY							\$ 36,500
CONTINGENCIES							3,500
TOTAL FLOOD GAUGE INSTALLATION AND YEAR ONE MONITORING COST							\$ 40,000

NOTES

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SUMMARY SHEET - FLOOD GAUGE INSTALLATION.XLS

CITY OF HUTTO DRAINAGE MASTER PLAN



HUTTO PLANNING AREA DRAINAGE MASTER PLAN

DESCRIPTION

This project includes performing a master drainage plan for the entire approximately 51 square miles of Hutto planning area. The plan would include performing hydrologic and hydraulic model study for pre- and post-developed conditions. Proposed condition shall be determined based on proposed land use map at the time of the study. Topographic data will be used from latest available LIDAR (Light Detection & Ranging) information from Williamson County. The analysis would include analysis and evaluation of performing creek/channel improvements, regional stormwater management improvements, culvert and bridge improvements for a fully-developed watershed condition based on future land use planning. The plan will include a list of proposed projects for each watershed, the associated engineer's opinion of probable project costs, and a ranking and prioritization evaluation.

PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST

ACTIVITY	AMOUNT	
PROFESSIONAL SERVICES		
Data Collection	\$ 40,000	
Hydrological & Hydraulic Model Review	\$ 20,000	
Master Plan & CIP Review	20,000	
Watershed Ultimate Development Land Use Plan	15,000	
Topographic Survey for Field Reconnaissance	15,000	
Hydrological Evaluation for Existing Condition	15,000	
Hydraulic Evaluation for Existing Condition	15,000	
Hydrological Evaluation for Proposed Condition	25,000	
Hydraulic Evaluation for Proposed Condition	25,000	
Development Drainage Solutions	25,000	
Regional Detention Development	30,000	
Flood Mitigation Evaluation	50,000	
Capital Improvement Program	25,000	
Project Cost Estimate	25,000	
Project Ranking & Priority	20,000	
Drainage Master Plan Report	30,000	
Public & Council Presentation	5,000	
TOTAL PROFESSIONAL FEES		\$400,000
ESTIMATED TOTAL PROJECT COST		\$400,000

NOTES

1. The engineer has no control over the cost of labor, materials or equipment or over the Contractor(s) methods of determining prices. The Engineer cannot and does not guarantee the proposals, bids or construction cost will not vary from the opinion of probable cost prepared by him.
2. This estimate was derived without engineering design plan to substantiate the estimate. It is prepared for budgetary consideration only.



DRAINAGE MASTER PLAN

APPENDIX 3

DETENTION PONDS

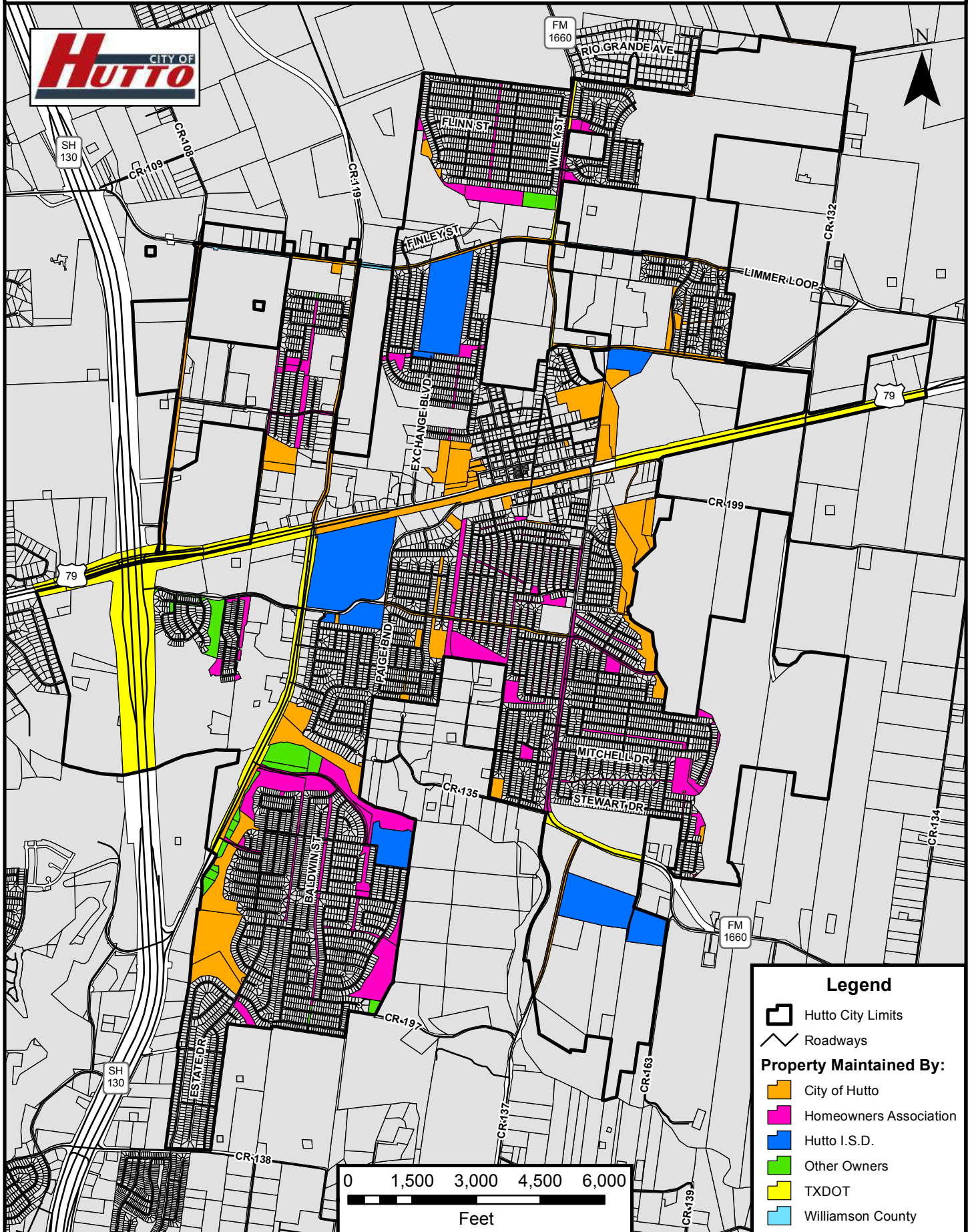
INVENTORY

DATE PREPARED
APRIL 2018

PREPARED BY
HEJL, LEE & ASSOCIATES, INC.
321 ED SCHMIDT BLVD. SUITE 100
HUTTO, TEXAS 78634

**DETENTION POND PICTURES
(LISTED ALPHABETICALLY)**

City of Hutto Property Maintenance Map



Legend

- Hutto City Limits
- Roadways
- Property Maintained By:**
 - City of Hutto
 - Homeowners Association
 - Hutto I.S.D.
 - Other Owners
 - TXDOT
 - Williamson County

**DETENTION POND PICTURES
(LISTED ALPHABETICALLY)**

BRUSHY CREEK MEADOWS



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERFLOW STRUCTURES (LOOKING FROM UPSTREAM)



OVERFLOW STRUCTURES (LOOKING FROM DOWNSTREAM)

CAROL MEADOWS



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERFLOW STRUCTURE (UPSTREAM SIDE)

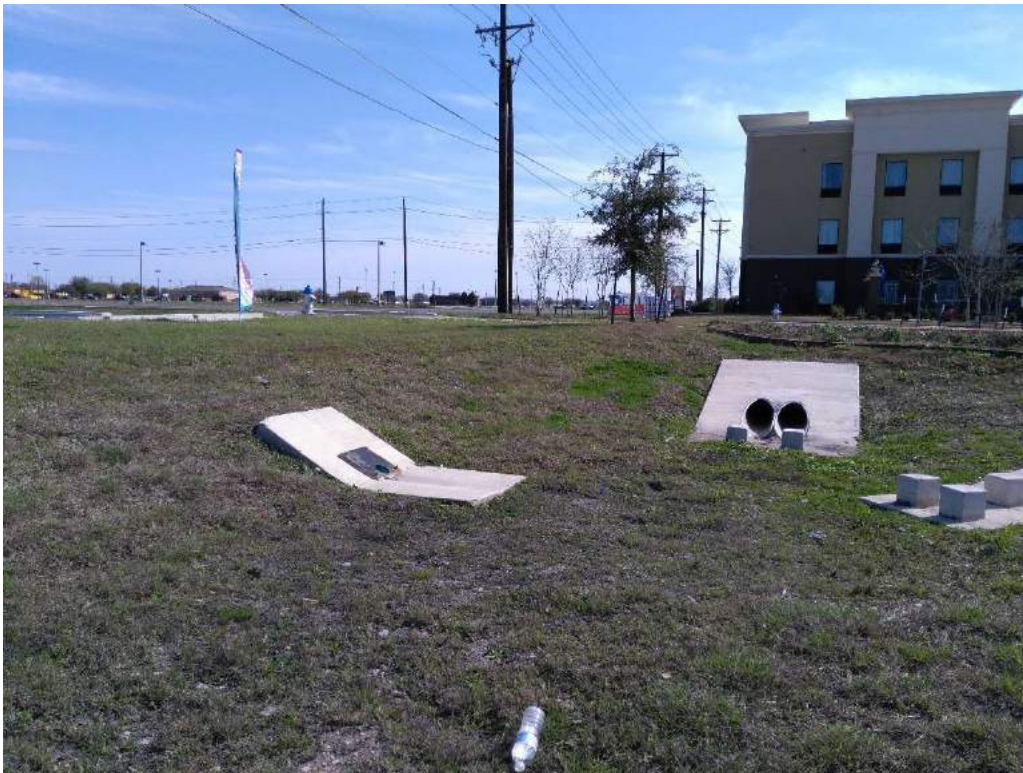


OVERFLOW STRUCTURE (DOWNSTREAM SIDE)

CENTER COMMON



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERFLOW STRUCTURE (LEFT)

**COTTONWOOD CREEK
ELEMENTARY**



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERFLOW STRUCTURE (LOOKING NORTHEAST)

COUNTRY ESTATES



OVERALL VIEW OF DETENTION POND (LOOKING NORTHWEST)



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERFLOW STRUCTURE



OVERFLOW STRUCTURE

COVERT HUTTO



OVERALL VIEW OF DETENTION POND (LOOKING NORTH AT OVERFLOW STRUCTURE)



LOOKING DOWNSTREAM FROM OVERFLOW STRUCTURE

CREEKBEND



OVERALL VIEW OF NORTH DETENTION POND (LOOKING SOUTH)



SOUTH DETENTION POND



SOUTH DETENTION POND (LOOKING SOUTH, NOTE LOW PERMANENT POOL IN BACKGROUND)



OVERFLOW WEIR

CREEKSIDE ESTATES



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERFLOW WEIR



OVERFLOW WEIR (LOOKING AT DOWNSTREAM)



OVERFLOW WEIR

**EAST WILLIAMSON COUNTY
HIGHER EDUCATION CENTER**



DETENTION POND (LOOKING NORTH)



DETENTION POND (LOOKING SOUTH)



DETENTION POND (LOOKING EAST)

EMORY FARMS/ LOWES



OVERALL VIEW OF DETENTION POND (LOOKING NORTH AT EMORY FARMS SUBDIVISION)



TIPPED OUTFALL STRUCTURE

ENCLAVE AT BRUSHY CREEK



OVERALL VIEW OF DETENTION POND (LOOKING WEST)



OVERALL VIEW OF DETENTION POND (LOOKING NORTHWEST)



LOOKING DOWNSTREAM AT OVERFLOW STRUCTURE



LOOKING AT OVERFLOW STRUCTURE

FARLEY MIDDLE SCHOOL



DETENTION POND (LOOKING SOUTH)



DETENTION POND (LOOKING NORTH)



EAST DETENTION POND

GLENWOOD



OVERFLOW WEIR



TRICKLE CHANNEL OVERGROWN WITH VEGETATION



DETENTION POND (LOOKING SOUTHWEST, GLENWOOD LIFT STATION AT BACKGROUND)



TRICKLE CHANNEL, OVERGROWN VEGETATION AND STANDING WATER

HANSON CORNER 1 (HOME DEPOT)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTHWEST)

HANSON CORNER 2 (GOODWILL)



OVERALL VIEW OF DETENTION POND (LOOKING EAST)



OVERFLOW STRUCTURES (LOOKING NORTH)

HOLIDAY INN EXPRESS



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERFLOW STRUCTURE (LOOKING SOUTHEAST)

HUTTO ELEMENTARY AND HIGH SHCOOL



OVERALL VIEW OF ELEMENTARY SCHOOL DETENTION POND (LOOKING WEST)



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



LOOKING DOWNSTREAM AT OVERFLOW STRUCTURE (NOTE SAFETY GRATE AT CULVERT)



LOOKING AT HIGH SCHOOL DETENTION POND

HUTTO HIGHLAND



OVERALL VIEW OF DETENTION POND (LOOKING SOUTHWEST)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERFLOW STRUCTURE

HUTTO PARKE



OVERALL VIEW OF DETENTION POND (LOOKING SOUTHEAST)



OVERALL VIEW OF DETENTION POND (LOOKING SW)



OVERFLOW STRUCTURE

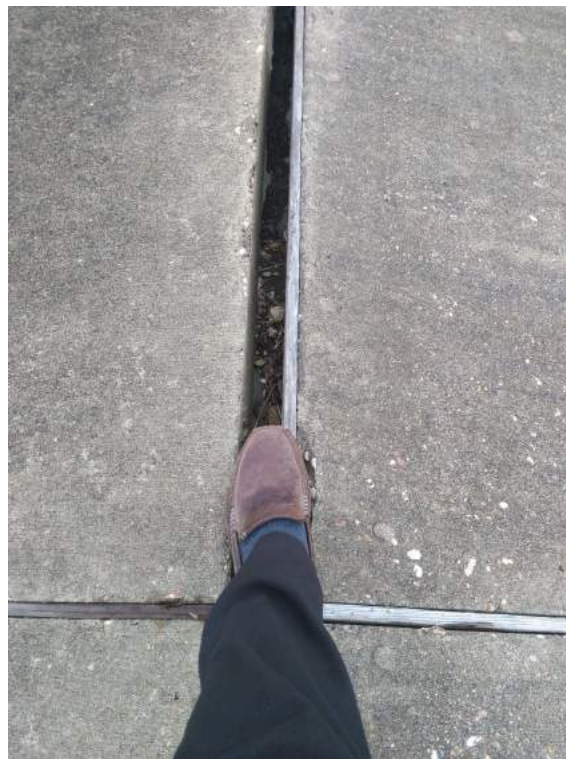


POND INLET

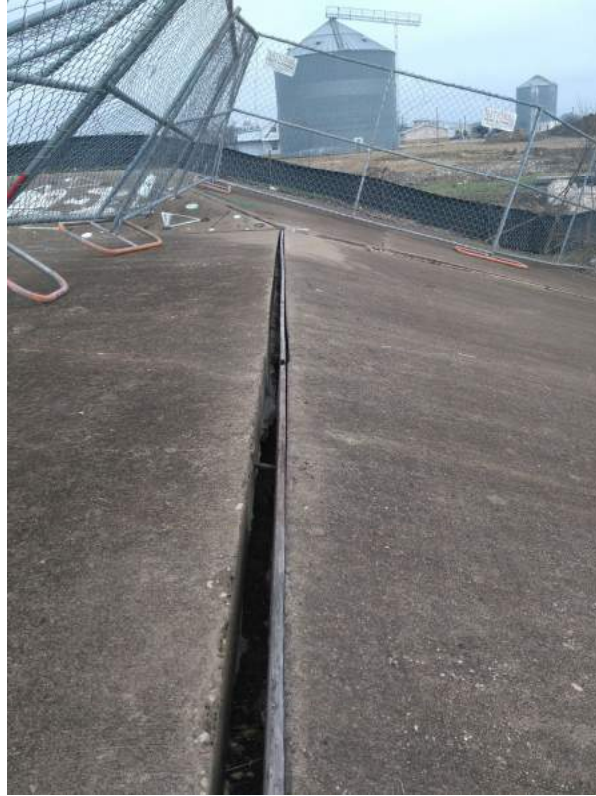
HUTTO SQUARE CO-OP



OVERFLOW STRUCTURE (LOOKING EAST)



OVERFLOW STRUCTURE SOUTH WALL SEPARATION



OVERFLOW STRUCTURE SEPARATION



VEGETATION AND DEBRIS AT OUTFALL

HUTTO SQUARE NORTH



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERFLOW STRUCTURE (LOOKING EAST)



OUTFALL STRUCTURE UNDERMINING



OUTFALL STRUCTURE UNDERMINING

**INDUSTRIAL PARK
(FRONT ST.)**



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)

LAKE SIDE ESTATES
WCID DAM #20



OVERALL VIEW OF WCID #20 DAM (LOOKING NORTH)



DOWNSTREAM OF DAM



LOOKING SOUTH FROM THE DAM

LEGEND OF HUTTO (EAST POND)



OVERALL VIEW OF DETENTION POND (LOOKING EAST)



OVERFLOW STRUCTURES (LOOKING FROM UPSTREAM)



OVERFLOW STRUCTURES (NOTE SLIGHT UNDERMINING AT DOWNSTREAM)

LEGEND OF HUTTO (SOUTH POND)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERALL VIEW OF DETENTION POND (LOOKING EAST)



OVERFLOW STRUCTURE (LOOKING FROM UPSTREAM)



OVERFLOW STRUCTURE (NOTE OVERGROWN AT DOWNSTREAM)



OVERFLOW STRUCTURE (NOTE CONCRETE CRACKING AT OVERFLOW WEIR)

LEGEND OF HUTTO (WEST POND)



OVERALL VIEW OF DETENTION POND (LOOKING EAST)



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



**OVERFLOW STRUCTURE (STANDING WATER, UNDERMINING AND OVERGROWN VEGETATION AT
DOWNSTREAM)**



OVERFLOW STRUCTURE (CONCRETE CRACKING AND SEPARATION)

PARK AT BRUSHY CREEK



OVERALL VIEW OF DETENTION POND# 2 (LOOKING NORTH)



DETENTION POND# 2 (LOOKING SOUTH)

RAY ELEMENTARY



DETENTION POND

RIVERWALK



OVERALL VIEW OF DETENTION POND (LOOKING NORTH)



DETENTION POND (LOOKING EAST)



DETENTION POND (LOOKING WEST)



DETENTION POND (LOOKING WEST)

TEXACO



OVERALL VIEW OF DETENTION POND (LOOKING SOUTH)



OVERFLOW STRUCTURE



DRAINAGE MASTER PLAN

APPENDIX 4

PROJECT RANKING FORM

PREPARED BY
HEJL, LEE & ASSOCIATES, INC.
321 ED SCHMIDT BLVD. SUITE 100
HUTTO, TEXAS 78634

CITY OF HUTTO
MASTER DRAINAGE PLAN
PROPOSED IMPROVEMENT PROJECT SCORING SHEET



HLA PROJ. NO. **11232**

PROJ. NO.	DESCRIPTION	SCORING CRITERIA					TOTAL PROJECT SCORE
		Life Threatening	Damage to Private Infrastructure	Damage to Public Infrastructure	Re-Occurring Event	Priority of Need	
		(0-10 POINTS)	(0-10 POINTS)	(0-8 POINTS)	(0-5 POINTS)	(0-5 POINTS)	
1	Cottonwood Creek Flood Study, CLOMR, LOMR, Creek Improvement Project (North) from Hutto Parke to approx. 1,000 LF south of Mager Lane						
2	Cottonwood Creek Flood Study, CLOMR, LOMR, Creek Improvement Project (South) from CR 199 to downstream of Creedbend subdivision						
3	Legends of Hutto Channel and Carl Stern Boulevard Culvert Improvements						
4	Emory Farms Subdivision Detention Pond Outfall Structure Improvements						
5	CR 137 & Farley Middle School Driveway and Drainage Improvements						
6	Old Town Hutto Street Conversion to U/G Storm & Curb & Gutter Section						
7	Hutto Exchange Boulevard Drainage Structure & Channel Improvements						
8	Hutto Square/Co-Op Detention Pond Outfall Structure Improvements						
9	Hutto planning area watershed hydrological and hydraulic modeling						

Recommended Point Score for Each Criteria

Life Threatening (0 Points No Life Damage, 5 Points Possible Life Damage, 10 Points Imminent Life Damage)

Damage to Private Infrastructure (0 Points No Damage, 5 Points Minor Damage, 10 Points Water In Structure, Major Damage)

Damage to Public Infrastructure (0 Points No Damage, 4 Points Minor Damage, 8 Points Water In Structure, Major Damage)

Re-Occurring Event (No-0 Points, Yes-5 Points)

Priority of Need (Fix Latter-0 Points, Fix Now-5 Points)

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.: 10D. **AGENDA DATE:** July 19, 2018

PRESENTED BY: Matthew A. Rector Sr., PE, CFM,
Executive Director of Engineering and
Public Works

ITEM: Consideration and possible action on the 2018 - 2028 Mobility
Master Plan.

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

The development of a Mobility Master Plan was included in the 2017 Capital Improvements Plan. On September 21, 2017 the Hutto City Council approved a resolution awarding a contract for the Mobility Master Plan.

The purpose of the Mobility Master Plan is to perform an evaluation of the City of Hutto's transportation networks and make recommendations for improvements and other options that the City should consider in future Capital Improvements Planning and policy updates.

DKS has reviewed the data, studies, existing infrastructure, ran predictive modeling and developed a list of recommendations for CIP projects as well as other policy recommendations.

BUDGETARY AND FINANCIAL SUMMARY:

There is no budget implication for the adoption of the plan. The contract for the completion of the plan was for \$245,185.00.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Planning and Zoning Commission reviewed the plan on July 17, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends adoption of the plan.

SUPPORTING MATERIAL:

1. [Mobility Master Plan \(DRAFT\)](#)
2. [Resolution](#)



CITY OF HUTTO

MOBILITY MASTER PLAN

JULY 2018



DKS

ACKNOWLEDGMENTS

Project Team

DKS Associates

Renee Hurtado, Project Manager
Carl Springer, Principal in Charge
Kevin Chewuk, Senior Transportation Planner

City of Hutto

Helen Ramirez, Assistant City Manager
Matt Rector, Director of Public Works and Engineering
Jessica Bullock, Economic Development Director
Eliska Smith-Padilla, Communications Director

Kennedy Consulting Inc

Rafael Cruz-Rodriguez
Joseph Croci

Project Advisory Committee (PAC)

Jessica Bullock, City of Hutto
Mark Nuñez, City of Hutto
Larry Foos, City of Hutto
Samuel Pearson, City of Hutto
Ryan Morgan, City of Hutto
Blaine Dudgeon, City of Hutto
David Uecker, Hutto ISD
Terron Evertson, Williamson County
Bob Daigh, Williamson County
Lori Ortiz, Mobility Advisory Planning Commission
Jessica Romigh, Mobility Advisory Planning Commission
Richard Hudson, Mobility Advisory Planning Commission

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Section I

Hutto Roadway Impact Fee Study

AT A GLANCE

Foundation

This chapter describes the process followed to develop the Hutto MMP.

Vision

The Vision chapter establishes the community's vision, goals, and objectives for the city's transportation system.

Hutto Today

This chapter describes the city of Hutto and its existing transportation system. Current issues are outlined and funding constraints are described.

Hutto Tomorrow

This chapter describes the Hutto transportation system in 2040. Potential issues are outlined.

Master Plan

This chapter outlines the lists of Master Plan projects for the transportation system.

Standards

The Standards chapter outlines the requirements that the system must meet in order to fulfill the goals and objectives identified by the community.

Outcome

This chapter includes the outcomes of the MMP.

FOUNDATION

WHAT IS A MOBILITY MASTER PLAN?

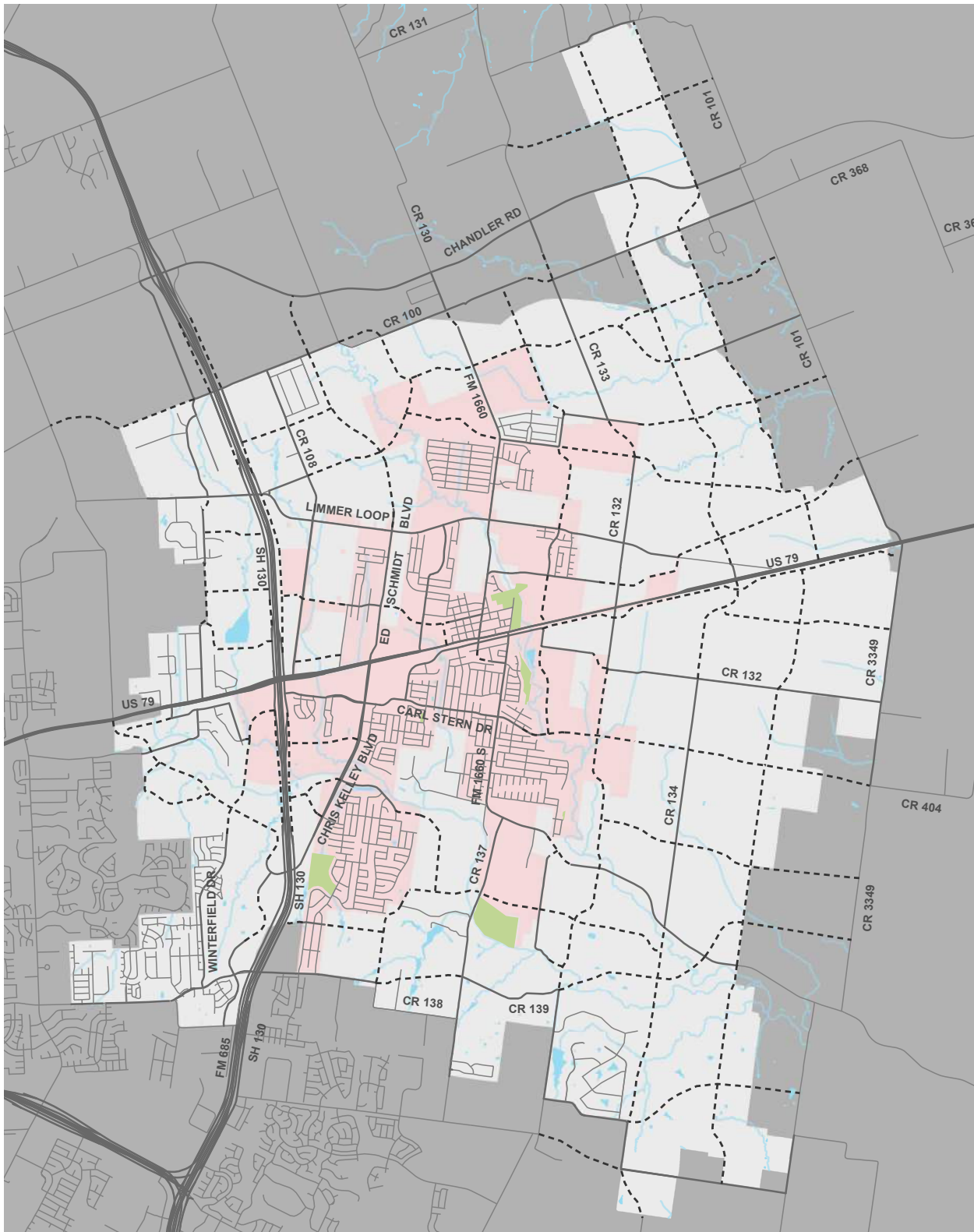
A Mobility Master Plan (MMP) is a long-range plan that sets the vision for a community's transportation system for the next 20 years. This vision is developed through community and stakeholder input and is based on the system's existing needs, opportunities, and anticipated available funding.

The Hutto MMP establishes a 2017 baseline condition and identifies transportation improvements needed through the year 2040. It includes master plan projects for the transportation system for all modes of travel, including walking, biking, driving and transit. The MMP also identifies the requirements that the transportation system must meet in order to fulfill the goals and objectives identified by the community.

The MMP applies to the Hutto city limits and its extended planning area within the Extraterritorial Jurisdiction (ETJ).



Figure 1. Study Area and ETJ



Legend

- | | | |
|---------|---|-------------------------------|
| — | Arterial or Collector Roadway | City Limits |
| - - - - | Planned Arterial or Collector Roadway
(Conceptual Alignment) | Extraterritorial Jurisdiction |
| | | Parks |

How was the MMP created?

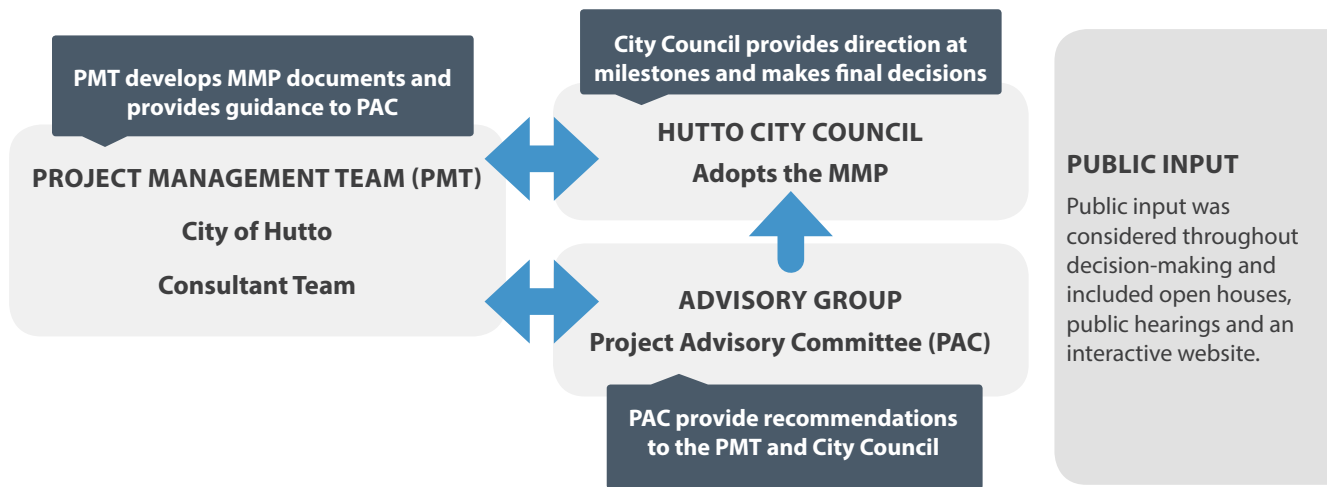
The best way to build a community-supported MMP is through an open, inclusive process. The decision-making structure for this MMP was developed to establish clear roles and responsibilities throughout the project.

Hutto City Council was responsible for all final decisions for this MMP project.

The Project Advisory Committee (PAC) was approved by the City Council to provide community-based recommendations. The PAC was the primary recommendation body for the project team. PAC meetings were open to the public.

Project Management Team (PMT) made recommendations to the City Council based on technical analysis and stakeholder input.

Figure 2. Hutto MMP Decision-Making Structure

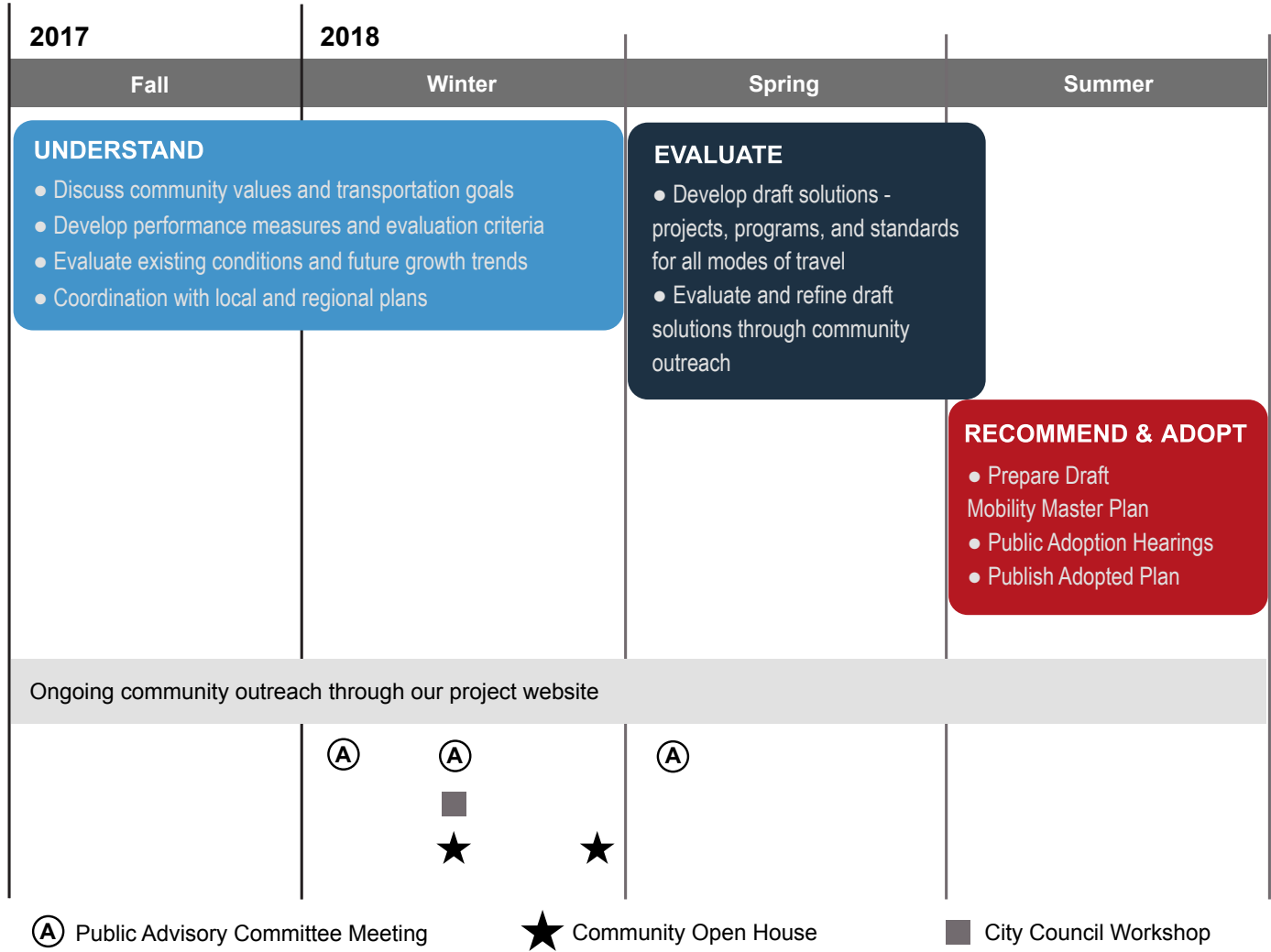


Public Involvement

The strategy used to guide stakeholder and public involvement throughout the MMP process reflects the commitment of the City of Hutto to carry out public outreach that provided community members with the opportunity to weigh in on local transportation concerns and to provide input on the future of transportation within their city.

The City of Hutto involved the public and stakeholders through a series of committee meetings, public open houses, and work sessions with elected officials and by providing project materials through the city’s website. Engaging community members and organizations in the MMP process included engaging with the PAC.

Figure 3. City of Hutto MMP Development Process



VISION

A vision statement is an imaginative description of the desired condition in the future and must align with the community's core values. Goals and objectives create the stepping-stones by which the broad vision is achieved. Goals are brief clear statements of the outcomes that must be achieved to realize the Vision. Goals are broad, measurable, and achievable. Each goal is supported by objectives, which outline the specific actions to be taken to achieve the outcomes described by the goals. The solutions recommended by the MMP must be consistent with the goals and objectives.

SETTING THE DIRECTION

The process of identifying a vision, goals, and objectives uncovers the transportation system that best fits Hutto's values and sets the guide for development and implementation of the MMP.

The goals and objectives from Hutto's 2040 Comprehensive Plan, 2035 Strategic Guide, and Capital Area Metropolitan Planning Organization's (CAMPO) 2040 Regional Transportation Plan provided a starting point for setting the direction for the MMP.

From that review, the project team developed an initial set of goals and objectives for the Hutto MMP. The draft goals and objectives were shared with the Project Advisory and the general public, with further input sought to refine them. After receiving input, the project team created a final set of goals and objectives, and developed corresponding evaluation criteria.

For more information on MMP goals, objectives and evaluation criteria, see Volume 2.

VISION

The design of transportation infrastructure promotes safe, comfortable travel, and shows respect for the city's resources. All transportation modes flow smoothly and safely to and throughout the city, meeting the needs of residents, businesses, visitors, and people of all physical and financial conditions. Connectivity facilitates travel between and within each neighborhood, where walking and biking environments complement development.

MMP GOALS AND OBJECTIVES

Goal 1: An equitable, balanced and well-connected multi-modal transportation system.

OBJECTIVE 1A: Ensure that the transportation system provides equitable access to under-served and vulnerable populations, and is friendly and accommodating to travelers of all ages.

OBJECTIVE 1B: Ensure the pedestrian, and bike thoroughways are clear of obstacles and obstructions (e.g., utility poles, grates).

OBJECTIVE 1C: Provide connections for all modes that meet applicable Hutto and Americans with Disabilities Act (ADA) standards.

Goal 2: Efficient travel to and through the city.

OBJECTIVE 2A: Develop and preserve north-south arterial and collector corridors through the city to provide alternative routes to FM 685 for local traffic, and improve connectivity for local trips.

OBJECTIVE 2B: Develop and preserve east-west arterial and collector corridors through the city to provide alternative routes to Highway 79 for local traffic, and improve connectivity for local trips.

OBJECTIVE 2C: Make new or improved transportation connections to enhance system efficiency.

OBJECTIVE 2D: Encourage efficient usage of Highway 79 and FM 685 by distributing travel information to motorists and optimizing operations.

OBJECTIVE 2E: Implement a city mobility standard to help maintain a minimum level of motor vehicle travel efficiency for local streets. State and county standards for mobility will be supported by the city on facilities under the respective jurisdiction.

Goal 3: Safe and active residents.

OBJECTIVE 3A: At high collision locations, improve safety for walking, biking, and driving.

OBJECTIVE 3B: Enhance existing crossings of Highway 79 for safe walking and biking (e.g., install rapid flashing beacons, and aids for vulnerable populations, such as chirpers, at signalized pedestrian crossings).

OBJECTIVE 3C: Provide new crossings for pedestrians and bicyclists where needed.

OBJECTIVE 3D: Improve the visibility of travelers in constrained areas, such as on blind curves.

OBJECTIVE 3E: Promote walking and bicycling by educating users regarding good traffic behavior and consideration for all.

Goal 4: Convenient facilities for pedestrians and bicyclists.

OBJECTIVE 4A Allow more walking and biking by providing for their needs (e.g., street lighting, bike parking).

OBJECTIVE 4B Improve commuting and recreational walking and biking connections to community facilities and amenities.

OBJECTIVE 4C: Enhance way finding signage for those walking and biking, directing them to key routes and destinations.

OBJECTIVE 4D: Make necessary changes to the land development code to allow compatible uses to locate within walking and biking distance of each other (e.g., residential use and employment).

Goal 5: Transit service and amenities that encourage a higher level of ridership.

OBJECTIVE 5A: Locate transit stops where safe and convenient for users.

OBJECTIVE 5B: Encourage transit services and coordinate with transit providers to improve the coverage, quality and frequency of services, where needed.

OBJECTIVE 5C: Provide for transit user needs beyond basic provision of service (e.g., by providing sidewalk and bicycle connections, shelters, benches, technology) to encourage higher levels of use.

OBJECTIVE 5D: Provide connections to designated Park-and-Ride lots.

Goal 6: A resilient transportation system that supports a prosperous and competitive economy.

OBJECTIVE 6A: Avoid impacts to the scenic, natural and cultural resources in the city.

OBJECTIVE 6B: Maintain the existing transportation system assets to preserve their intended function and useful life.

OBJECTIVE 6C: Improve travel reliability and safety with system management solutions.

OBJECTIVE 6D: Establish stable and diverse revenue sources to meet the need for transportation investments in the city.

OBJECTIVE 6E: Design elements of the transportation system to be aesthetically pleasing to through travelers, residents, visitors, and users of adjoining land.

OBJECTIVE 6F: Identify transportation improvements that will enhance access to downtown and other employment.

OBJECTIVE 6G: Improve the freight system efficiency, access, capacity and reliability.

Goal 7: Coordinate with local and state agencies and transportation plans.

OBJECTIVE 7A: Work with the Capital Area Metropolitan Planning Organization and the Central Texas Regional Mobility Authority to promote projects that improve regional linkages.

OBJECTIVE 7B: Develop policy and municipal code language to implement the Mobility Master Plan.

OBJECTIVE 7C: Coordinate transportation projects, policy issues, and development actions with all affected government agencies in the area, including Williamson County and the Texas Department of Transportation.

OBJECTIVE 7D: Coordinate local neighborhood plans and visions with the Mobility Master Plan.

HUTTO TODAY

Hutto is a town full of neighborly charm, located on the outskirts of the Austin-Round Rock Metropolitan Area. Approximately 100 concrete hippos are scattered throughout the “Hippo Capital of Texas,” in tribute to an escaped circus hippo from the early 1900s. This unique town mascot, a family-friendly culture, and a historic downtown full of shops and restaurants has brought over 20,000 new residents to Hutto in the past two decades. The formerly small town — only 1,000 people in 2000 — is now home to nearly 25,000 permanent residents, making it one of the fastest growing cities in America. Extraordinary growth has presented the City of Hutto with the challenge of accommodating new residents while preserving the town’s history and culture. The City has made great strides in improving infrastructure in recent years and will continue to do so in years to come.

Hutto lies at the intersection of State Highway 130 and US Highway 79, about twenty miles north of Austin and eight miles east of Round Rock. These nearby cities attract thousands of commuters from Hutto daily, who primarily use the two major highways to reach their destinations.

Hutto has nine schools, spread out across the city, to accommodate children in the many sprawling residential developments. Despite the proximity to their respective schools, many children are still driven to school.

These characteristics make Hutto unique — and define the key transportation issues that the city seeks to overcome. For more information on current transportation conditions, see Technical Memorandum #2 included in Volume 2.

KEY DESTINATIONS

The first step in planning an effective transportation system is understanding the key destinations throughout the city. These destinations, also called ‘activity generators’, typically fall into the categories of residential areas, employment, shopping, schools, civic buildings, recreation, and entertainment, such as: Downtown Hutto, Hutto Co-Op District and Fritz Park; schools, including Hutto Elementary School, Hutto Middle School, and Hutto High School; places of employment like Hutto Independent School District; and spaces for civic engagement and community like City Hall and the Hutto Public Library.

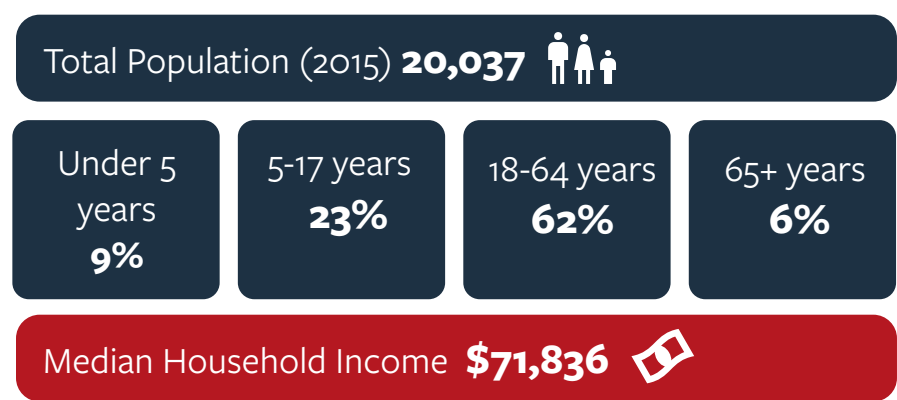
COMMUNITY

Residents

Demographic characteristics such as age and income play a key role in determining mode of transportation. Hutto residents with lower incomes, as well as the youngest and oldest residents, often account for more walking or bicycle trips. Figure 4 highlights key demographics in Hutto.

In Hutto, 48 percentage of residents are minority population, which is below the average of 56 percent in Texas. A higher density of the minority population is located south of Carl Stern Drive and west of Ed Schmidt Boulevard. Low-income residents represent about 18 percent of the population, well below the state average of 38 percentage. The low-income population is evenly distributed throughout the city, with a higher density towards the southeast.

Figure 4. Key Demographics for the City of Hutto



Approximately 9 percent of residents are under five years of age, which is over the statewide average of 7 percent. Approximately 6 percent of residents are 65 years of age or older, which is lower than the statewide average of 11 percent. Residents age 65 years or older are distributed more densely on the east side of the city.

LIVE

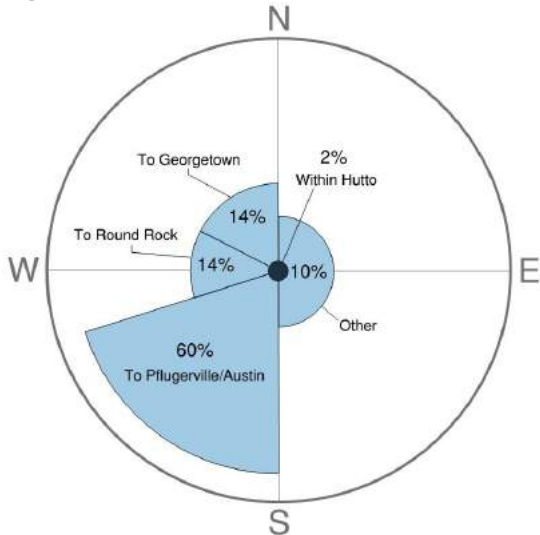
Many of the existing neighborhoods in Hutto are located south of US 79, with only a few located to the north of US 79. Outside of Downtown Hutto, many of these neighborhoods were constructed with large blocks and disconnected streets that make travel distances longer, especially for those walking or biking.

WORK

Most of Hutto’s residents commute to work destinations outside of the city of Hutto. Only 2% of Hutto residents work within Hutto. The commuting patterns of the remaining 98% largely determines the travel demand on major roadways near Hutto during peak travel hours.

Figure 5 shows the directional commuting patterns of Hutto’s residents. The majority of Hutto residents (60%) commute to the south or southwest towards Austin or Pflugerville. Another 28% of commuters travel to either Round Rock or Georgetown. Only 10% of residents commute to a location east of Hutto.

Figure 5. Where Hutto Residents Work



LEARN

School trips account for a sizable portion of travel in Hutto. Having a complete walking and biking network along travel routes surrounding schools and nearby neighborhoods is critical for the overall safety of students. A 2012 parent survey showed that over twenty percent of parents would prefer that their children walk to school. However, gaps in pedestrian or bike facilities prevents many of these students from utilizing these travel options. Currently, only about five percent of students walk to school. The following summarizes schools with incomplete walking networks surrounding them. Newer Schools in Hutto, including Howard Norman Elementary, meet the pedestrian network standards required by the Unified Development Code.

Farley Middle School/Ray Elementary School

Farley Middle School and Ray Elementary School are located in the southeast corner of Hutto, with most students traveling from residential developments to the north or west. A recent project adding sidewalks along FM 1660 South has improved walkability for many students. However, children living in the Glenwood subdivision to the north are still separated from their schools by the high-speed road and must walk significantly longer distances to utilize the new sidewalk facilities. Additional sidewalks connecting the Glenwood subdivision with Swindoll Lane or Country Road (CR) 137 will significantly decrease the walking time for many students and encourage those who currently drive their children to school to allow them to walk.

Hutto High School

Hutto High School is located on the west end of Hutto, adjacent to US Highway 79 and Chris Kelley Boulevard. As the only high school in Hutto, it serves students city-wide. For students who live farther away, walking is not a practical option. Several gaps in the surrounding sidewalk network may discourage those within walking distance. Recent improvements to Chris Kelley Boulevard added a sidewalk on the east side of the road, between US 79 and Carl Stern Drive, as well as a signalized pedestrian crossing at US 79. Sidewalks are also provided through the commercial developments to the north of US 79, but do not extend to nearby residential developments. Potential improvements to the sidewalk network surrounding Hutto High School include the addition of sidewalks along Chris Kelly Boulevard south of Carl Stern Drive, and the extension of existing sidewalks from the commercial area north of US 79 to nearby residences to the north and east.



Sidewalks will connect west of Carl Stern to new developments and subdivisions.

Hutto Elementary School

Hutto Elementary School is located on the east end of Hutto, approximately half a mile north of US 79. The attendance zone for this school includes all residences to the north of US 79 and east of FM 1660. The zone also extends south of US 79 to Carl Stern Drive, between Lone Star Boulevard and CR 199.

The location of Hutto Elementary poses a problem for students living south of US 79, as they must cross the high-speed, high-volume roadway, as well as the

parallel railroad. Students can cross US 79 at FM 1660 South which has a signalized crosswalk on the east side of the intersection. The second option is the Creekside Park trail, which crosses underneath US 79. This option is safer, but is the longer route for most students. In addition to sidewalks along FM 1660 South and Park Street, the overall walkability near Hutto Elementary could be improved with additional sidewalks along Live Oak Street and Mager Lane.

Hutto Middle School/Cottonwood Creek Elementary School

Hutto Middle School and Cottonwood Creek Elementary School are located along Exchange Boulevard to the south of Limmer Loop. The adjacent residences are well connected to the two schools via the sidewalk networks. However, students who live in the development to the north of Limmer Loop or the development on the west side of Ed Schmidt Boulevard must travel along Limmer Loop, which currently lacks sidewalks.

PLAY

Hutto has parks spread throughout the city, with many of the newer neighborhoods having parks within their boundary. The parks, including Hutto Park at Brushy Creek, Fritz Park, Hutto Lake Park, Creekside Park, Country Estates Park, and Glenwood Splash Pad, serve as host sites for several community events and programs.

SHOP

Much of the existing retail and commercial areas for shopping are located in Downtown Hutto, near the US 79 intersection with FM 1660. Additional shopping is located at the west end of the city near Ed Schmidt Boulevard, north of US 79.

CURRENT ISSUES

Hutto's existing transportation system poses issues for all users, including the following:



Pedestrians

- Lack of sidewalks and enhanced pedestrian crossings along major roadways including US 79, portions of Limmer Loop, Ed Schmidt Boulevard, portions of Chris Kelley Boulevard, and other collector roads.
- North-South pedestrian connectivity along US 79 is difficult due to the railroad tracks being the major barrier.
- Crossing US 79 is unsafe without marked crossings and pedestrian signal heads at signalized intersections. Only the signals at Ed Schmidt Boulevard and FM 1660 south offer controlled pedestrian crossings, spaced 1.2 miles apart.
- Inadequate spacing between collector roadways results in long and indirect pedestrian trips within Hutto.
- The east-west railroad tracks create obstacles and safety issues to pedestrians that need to cross the railroad.

Bicyclists

- Lack of bike lanes or sufficient shoulders along arterial and collector roadways, except for a portion of Carl Stern Drive.
- Lack of bicycle wayfinding signage and shared-lane pavement markings on streets.
- Limited bicycle parking near destinations
- Inadequate spacing between collector roadways results in long and indirect bicycle trips within Hutto. Street spacing standards for new neighborhoods should consider more efficient spacing requirements.
- The east-west railroad tracks create obstacles and safety issues to bicyclists that need to cross the railroad tracks.

Transit Users

- Very limited transit services in the city.
- Lack of bus stops and other transit oriented facilities (such as park and ride facilities, and shelters).
- Absence of transit services in residential neighborhoods.

Drivers

- Intersection and roadway performance standards should be adopted.
- Intersections along US 79 often experience increased congestion and long queues during peak hours. Queues are significant at both intersections with FM 1660 during the peak hours.
- The crash rates at two intersections were identified as high when compared to similar intersections in the city: CR 137 and CR 138, US 79 and Chris Kelley Boulevard/Ed Schmidt Boulevard
- Compared to statewide crash data, a segment of Limmer Loop was identified as high crash location: Limmer Loop between State Highway 130 and Saint Patrick's Church.
- Inadequate spacing between collector roadways results in long and indirect driving trips within Hutto. Street spacing standards for new neighborhoods should consider more efficient spacing requirements.



HUTTO TOMORROW

Future land use changes and growth in population, housing, and employment within Hutto and its Extraterritorial Jurisdiction (ETJ) will have a significant impact on the existing transportation system and will create new travel demands. These growth projections and how they translate to new trips on the transportation network are key elements of the future conditions and performance analysis.

The Capital Area Metropolitan Planning Organization (CAMPO) travel demand model is the primary tool used to determine future traffic volumes in Hutto and the surrounding region. CAMPO forecasts travel changes in response to future land use and transportation scenarios. This model translates estimated land uses into person trips, selects travel modes and assigns motor vehicle trips to the roadway network. The CAMPO model was developed with input from local agencies. It is an informational tool to assist with decision making, providing objective and quantitative information exploring the potential impacts of alternative transportation system investments.

FORECASTED POPULATION AND EMPLOYMENT GROWTH

Understanding the influence of area land uses on the transportation system is a key factor in transportation system planning. The amount of land that is to be developed, the types of land uses, and their proximity to each other have a direct relationship to expected demands on the transportation system.

The CAMPO model includes forecasted land uses for the Hutto MMP study area. The land uses reflect Hutto's Comprehensive Plan and growth assumptions identified for the year 2040. Complete land use data sets are developed for both the 2020 base year and 2040 future year (planning horizon). Local land uses were developed with input and review from local agencies. The land use information has been coordinated with all the other jurisdictions in the CAMPO travel area.

Table 1 summarizes baseline and projected future totals for population, households, and employment within the Hutto MMP study area, from which traffic growth estimates were made. These values indicate that growth in employment is expected to outpace residential development as a percentage increase. Today, there is about one job per every two households in Hutto. By 2040, that will increase to about one job per household. This means more residents can live and work in Hutto, potentially decreasing the vehicle miles driven and overall travel time for residents.

Most household growth is assumed to occur around Downtown Hutto and towards the eastern and southern ends of the city, while employment growth is generally assumed to occur around Downtown Hutto and towards the north and southeast ends of the city.

Table 1. Hutto Forecasted Land Use Change

HUTTO AREA	2020	2040	PERCENT INCREASE
Population	51,185	118,599	132%
Household	17,193	42,094	145%
Total Employment	8,453	39,124	363%

Source: CAMPO Travel Demand Model

Note: *These locations are not limited to the city limits and is based on boundaries approximated by the TAZ boundaries and may not match current and future city limits.

FUTURE CONDITIONS WITHOUT IMPROVEMENTS

The population, housing, and employment growth projected to occur through 2040 will result in increased travel demands within and through the city. An evaluation of Hutto's transportation system under these conditions was performed to understand how transportation needs might change if no further investments to improve the system were made.

The forecast generated by analysis of the future 2040 roadway system identifies the following findings. For more information on future traffic volumes and conditions, see Technical Memorandum #3 in Volume 2.

- Motor vehicle congestion will likely exceed acceptable levels at some intersections, with 15 of the 17 study intersections not meeting their respective mobility standard during the 2040 peak hour conditions.
- The demand for walking and biking will increase, but key gaps in the infrastructure to support it will remain and crossing busy streets and the railroad tracks will continue to discourage some trips. This includes gaps around schools, residential neighborhoods, and other key destinations.
- There will likely continue to be safety concerns at several locations in the city, including at two of the 17 study intersections, and along two arterial/collector roadway segments.
- Increased congestion along highways may necessitate the need for improvements for freight travel, including along US 79.
- The railroad tracks will continue to hinder roadway connectivity and access north and south of US 79.



MASTER PLAN

RECOMMENDED PROJECTS

Recommended solutions were developed to be consistent with the project vision and goals and to focus on creating a balanced system able to provide travel options for a wide variety of needs and users. The list of recommended projects was prioritized using guidance provided by the project goals and objectives and with input from three main sources:

- **Stakeholders** (via committee meetings, public open houses, and project website comments)
- **Previous Plans** (such as the Hutto Pedestrian Mobility Plan and Hutto Transit Development Plan)
- **Independent Project Team Evaluation** (Technical Memorandum #2 and #3)

While the recommended projects include all identified projects for improving Hutto's transportation system, regardless of their priority or their likelihood to be funded, the MMP planning process eliminated projects that may not be feasible for reasons other than financial limitations (such as environmental or existing development limitations). The recommended project list is composed of the following categories.

Pedestrian and Bicycle Master Plan projects include sidewalk, path and roadway crossing improvements, and an integrated network of bicycle lanes, marked on-street routes and shared-use paths to facilitate safe and convenient travel citywide.

The Hutto MMP combines a number of pedestrian and bicycle projects with roadway projects. However, the city may seek to develop some walking and biking projects separately from associated roadway projects for a variety of reasons:

- Walking and biking projects are generally less expensive and have less impact than roadway widening projects and most can be accomplished within the existing right-of-way.
- Construction of walking and biking projects can be done in smaller phases or combined with a related maintenance activity like a pavement rehabilitation job.
- Walking and biking projects are generally non-controversial in nature and provide clear safety benefits to the more vulnerable users of the transportation system.

Motor Vehicle Master Plan projects would improve safety and mobility throughout the city for motorists.

To accommodate the forecasted east-west traffic demand through 2040, the US 79 segment through Hutto would need to be widened to at least seven lanes. Highway widening projects were considered but eliminated through the MMP planning process because they would have significant community, environmental, and right-of-way impacts and would require further environmental and technical analysis. In addition, highway widening projects are not financially feasible. Widening of the least expensive minimum logical highway segment would cost in the range of \$15 to \$20 million. The city should continue to pursue, with the region, an alternative east-west high capacity route to accommodate the traffic traveling to locations east of Hutto.

Transit Master Plan projects would enhance the quality and convenience for passengers.

Priorities may change over time and unexpected opportunities may arise to fund particular projects. The city is free pursue any of these opportunities at any time. The development of transportation solutions is summarized in Technical Memorandum #5 included in Volume 2.

ANTICIPATED AVAILABLE FUNDING

For planning purposes, each solution was assigned a primary source of funding (county, state, or other), although such designations do not create any obligation for funding. An estimated \$728 million worth of master plan projects were identified to meet identified needs through 2040. The city expects to fund some of the master plan projects through a Roadway Impact Fee that will be paid by new development. However, a large portion of the investments may not be funded.

Hutto's adopted Roadway Impact Fee will fund a portion of the roadway master plan projects that are located within the current city limits. These projects are identified with an A# on the on the Roadway Master Plan project list and figure. Projects identified with an X# on the Roadway Master Plan project list and figure are located outside of the current city limits and are not included on the roadway impact fee capital improvements plan.

Impact fees are a mechanism for funding the public infrastructure necessitated by new development. They are meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs. In the case of roadway impact fees, the infrastructure need is the increased capacity on arterial and collector roadways that serve the overall transportation system. Statutory requirements mandate that impact fees be based on a specific list of improvements identified in the program and only the cost necessitated by new growth over a ten-year period may be considered.

The impact fee capital improvements plan is based on forecasted growth in the city limits of Hutto over a ten-year planning period. This growth was estimated based on population and employment assumptions prepared by the city. Refer to the Hutto Roadway Impact Fee Study in Volume 2 for more information.

MASTER PLAN PROJECTS

The following pages include the Master Plan Projects in table form and on an accompanying maps.

The project design elements depicted are identified for the purpose of creating a reasonable cost estimate for planning purposes. The actual design elements for any project are subject to change and will ultimately be determined through a preliminary and final design process, and are subject to city, county and/or state approval.

Table 2. Roadway Master Plan Projects

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
Roadway Projects in City Limits						
A1	CR 109	CR 108 to CR 118 extension	1.42	3	Major Collector	\$9,550,000
A2	CR 118	CR 109 extension to W. of FM 1660	0.07	5	Minor Arterial	\$1,175,000
A3	CR 118	FM 1660 to CR 132 extension	0.50	5	Minor Arterial	\$6,150,000
A4	CR 132	FM 1660 to CR 109 extension	0.90	2	Minor Collector	\$3,500,000
A5	CR 132	FM 1660 to Carol Drive extension	0.53	2	Minor Collector	\$850,000
A6	CR 132	CR 118 extension to N. of Bosque Drive	0.54	2	Minor Collector	\$2,125,000
A7	CR 132	Carol Drive extension to S. of Bosque Drive	0.20	2	Minor Collector	\$400,000
A8	CR 132	W. of CR 133 to E. of CR 133	0.41	2	Minor Collector	\$825,000
A9	CR 132 Realignment	CR 132 to CR 133	0.42	5	Minor Arterial	\$4,925,000
A10	CR 132	CR 132 Realignment to S. of CR 132 extension	0.17	5	Minor Arterial	\$1,800,000
A11	CR 132	Carol Drive extension to CR 132 Realignment	0.68	3	Major Collector	\$3,675,000
A12	Carol Drive	Limmer Loop to CR 132	0.79	2	Minor Collector	\$3,075,000
A13	Carol Drive	Magner Lane to US 79	0.44	2	Minor Collector	\$1,700,000
A14	FM 1660	City limits to 982 ft. S. of City limits	0.19	3	Major Collector	\$725,000
A15	FM 1660	982 ft. S. of City limits to N. of Blanco Drive	0.29	3	Major Collector	\$750,000
A16	FM 1660	N. of Blanco Drive to CR 132	0.21	3	Major Collector	\$800,000
A17	FM 1660	CR 132 to Carrington Street	0.08	3	Major Collector	\$475,000
A18	FM 1660	Sylvan Street to N. of Limmer Loop	0.17	3	Major Collector	\$450,000
A19	FM 1660	N. of Limmer Loop to Limmer Loop	0.09	3	Major Collector	\$325,000
A20	FM 1660	Limmer Loop to S. of Limmer Loop	0.12	3	Major Collector	\$400,000
A21	FM 1660	Magner Lane to Front Street	0.65	3	Major Collector	\$3,500,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
A22	Limmer Loop	E. of Innovation Boulevard to Ed Schmidt Boulevard	0.61	5	Minor Arterial	\$4,725,000
A23	Limmer Loop	E. of Ed Schmidt Boulevard to Adriana Lane	0.49	5	Minor Arterial	\$3,575,000
A24	Limmer Loop	Adriana Lane to FM 1660	0.23	5	Minor Arterial	\$1,575,000
A25	Limmer Loop	FM 1660 to Carol Drive	0.60	5	Minor Arterial	\$4,325,000
A26	Limmer Loop	Carol Drive to City limits	0.19	5	Minor Arterial	\$1,325,000
A27	Magner Lane	E. of CR 132 to Limmer Loop	0.38	3	Major Collector	\$2,050,000
A28	Magner Lane	Carol Drive to E. of Kates Way	0.25	3	Major Collector	\$750,000
A29	Magner Lane	E. of Kates Way to City limits	0.09	3	Major Collector	\$275,000
A30	Silo Street	US 79 to Live Oak Street	0.20	3	Major Collector	\$1,075,000
A31	Live Oak Street	Short Street to E. of Ed Schmidt Boulevard	0.50	3	Major Collector	\$2,675,000
A32	Ed Schmidt Boulevard	S. of Emory Farms Avenue to Limmer Loop	0.84	5	Minor Arterial	\$5,175,000
A33	Emory Farms Avenue	Alliance Boulevard to Innovation Boulevard	0.41	3	Major Collector	\$2,200,000
A34	Emory Farms Avenue	W. of Innovation Boulevard to SH 130 NB Service Road	0.16	3	Major Collector	\$875,000
A35	SH 130 NB Service Road	Emory Farms Avenue extension and N. City limits	0.39	2	Major Arterial	\$1,575,000
A36	Spotted Fawn Drive	W. City limits to the Winterfield Drive extension	0.04	2	Minor Collector	\$150,000
A37	Winterfield Drive	Kirkhill Street to SH 130 SB Service Road	0.77	3	Major Collector	\$5,150,000
A38	SH 130 SB Service Road	S. City limits to S. of Carl Stern Drive	0.66	2	Major Arterial	\$2,625,000
A39	SH 130 NB Service Road	S. City limits to S. of Carl Stern Drive	0.63	2	Major Arterial	\$2,500,000
A40	Carl Stern Drive	Cyril Drive to SH 130 NB Service Road	0.37	5	Minor Arterial	\$4,750,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
A41	Knowles Drive	Chris Kelley Boulevard to SH 130 Service Road	0.62	2	Minor Collector	\$2,400,000
A42	Great Western Drive	Chris Kelley Boulevard to W. City limits	0.05	2	Minor Collector	\$225,000
A43	Riverwalk Drive	Chris Kelley Boulevard to W. City limits	0.18	3	Major Collector	\$1,375,000
A44	Riverwalk Drive	E. of Creston Cove to E. City limits	0.22	3	Major Collector	\$1,500,000
A45	CR 138	W. of Little Lake Road to E. of Dana Drive	0.20	5	Minor Arterial	\$1,300,000
A46	CR 138	CR 197 to E. of Navidad River Drive	0.16	3	Major Collector	\$1,100,000
A47	E-W Roadway	W. of CR 137 to CR 163	0.56	3	Major Collector	\$4,175,000
A48	CR 137	FM 1660 to S. of new E-W Roadway	0.72	3	Major Collector	\$3,500,000
A49	CR 163	S. of FM 1660 to S. of E-W Roadway	0.56	2	Minor Collector	\$1,375,000
A50	FM 1660	King Lane to Swindoll Lane	0.64	3	Major Collector	\$2,650,000
A51	FM 1660	Evans Street to US 79	0.28	3	Major Collector	\$800,000
A52	Jim Cage Lane	Austin Avenue to Evans Street	0.17	2	Minor Collector	\$675,000
A53	US 79	FM 1660 South Intersection	0.09	1	Major Arterial	\$350,000
A54	Front Street	FM 1660 to Front Street extension	0.31	2	Major Collector	\$1,150,000
A55	Front Street	CR 199 to W. of CR 132	0.53	3	Major Collector	\$3,400,000
A56	Front Street	E. of CR 132 to W. of CR 134 extension	0.36	3	Major Collector	\$2,300,000
A57	CR 199	CR 199 extension to W. of CR 199 realignment	0.31	3	Major Collector	\$1,000,000
A58	CR 199 realignment	CR 199 to CR 132	0.20	3	Major Collector	\$1,100,000
A59	CR 199	Front Street to CR 199 extension	0.14	3	Major Collector	\$450,000
A60	CR 199	CR 199 to Carl Stern Drive extension	0.81	2	Minor Collector	\$3,125,000
A61	Carl Stern Drive	Riverbed Pass to CR 199 extension	0.24	3	Minor Arterial	\$1,800,000
A62	Carl Stern Drive	CR 199 extension to E. City limits	0.77	5	Minor Arterial	\$8,600,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
A63	CR 132	US 79 to N. of Front Street extension	0.03	5	Minor Arterial	\$1,050,000
A64	CR 132	CR 199 to CR 132	0.11	5	Minor Arterial	\$1,300,000
A65	CR 132	CR 199 Realignment to S. City limits	1.06	5	Minor Arterial	\$12,100,000
Total Roadway Project Costs (inside city limits)						\$112,350,000
Roadway Projects outside City Limits						
X1	New E-W Roadway A	Green Pasture to the SH 130 Service Road	0.80	2	Minor Collector	\$2,125,000
X2	New E-W Roadway B	CR 108 to Alliance Boulevard	0.42	2	Minor Collector	\$1,050,000
X3	Live Oak Street	Ed Schmidt Boulevard to city limits	0.17	3	Major Collector	\$850,000
X4	Emory Farms Avenue	Innovation Boulevard to city limits	0.06	3	Major Collector	\$325,000
X5	SH 130 NB Service Road	North of US 79 to Emory Farms Avenue extension	0.50	2	Major Arterial	\$2,225,000
X6	SH 130 SB Service Road	Emory Farms Avenue extension to north of US 79	0.27	2	Major Arterial	\$1,200,000
X7	New E-W Roadway C	Green Pasture to the SH 130 Service Road	0.57	3	Major Collector	\$2,775,000
X8	Green Pasture extension	Hycrest Drive to Haybarn Lane	0.58	3	Major Collector	\$2,875,000
X9	New E-W Roadway D	Haybarn Lane to the SH 130 Service Road	0.53	2	Minor Collector	\$1,325,000
X10	SH 130 NB Service Road	Emory Farms Avenue extension to Limmer Loop	0.52	2	Major Arterial	\$2,500,000
X11	Haybarn Lane realignment	Haybarn Lane Realignment to intersect with Lemens Avenue at Limmer Loop. Close the existing Haybarn Lane connection to Limmer Loop upon completion	0.14	3	Major Collector	\$675,000
X12	Limmer Loop	Etna Way to Lemens Avenue	0.54	3	Minor Arterial	\$2,075,000
X13	Limmer Loop	Lemens Avenue to E. of Innovation Boulevard	1.10	5	Minor Arterial	\$6,650,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
X14	Limmer Loop	Ed Schmidt Boulevard to city limits	0.16	5	Minor Arterial	\$1,125,000
X15	Ed Schmidt Boulevard	Limmer Loop to Chandler Road	2.39	5	Minor Arterial	\$17,750,000
X16	CR 109	CR 108 to the CR 118 extension	1.42	3	Major Collector	\$7,150,000
X17	CR 109	Limmer Loop to CR 108	0.41	3	Major Collector	\$1,275,000
X18	New E-W Roadway E	SH 130 Service Road and the CR 119 extension	0.86	2	Minor Collector	\$2,125,000
X19	SH 130 NB Service Road	North of Limmer Loop to south of CR 118	0.27	2	Major Arterial	\$1,225,000
X20	SH 130 SB Service Road	North of Limmer Loop to south of CR 118	0.20	2	Major Arterial	\$900,000
X21	CR 108	Limmer Loop to CR 118	1.42	3	Major Collector	\$4,575,000
X22	SH 130 NB Service Road	CR 118 to south of Chandler Road	0.69	2	Major Arterial	\$3,250,000
X23	SH 130 SB Service Road	CR 118 to south of Chandler Road	0.72	2	Major Arterial	\$3,350,000
X24	CR 118	Carmel Creekside Drive to CR 110 at the CR 112 intersection	1.37	5	Minor Arterial	\$11,025,000
X25	CR 118	Carmel Creekside Drive to CR 100	1.38	5	Minor Arterial	\$8,600,000
X26	CR 118	CR 100 to CR 109 extension	0.90	5	Minor Arterial	\$7,325,000
X27	CR 118	CR 109 extension to FM 1660	0.52	5	Minor Arterial	\$4,300,000
X28	FM 1660	City limits to south of CR 100	0.37	3	Major Collector	\$1,050,000
X29	CR 100 / CR 130 intersection	Extend FM 1660 north to connect with the CR 130 intersection with CR 100, and realign the segment of FM 1660 east of the water facility to connect with CR 100. Close the existing FM 1660 connection to CR 100 (west of the water facility) and remove the curved segment of FM 1660 (southeast of the water facility) upon completion	0.19	3	Major Collector	\$925,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
X30	CR 100	CR 118 extension to CR 130	0.62	3	Major Collector	\$1,950,000
X31	FM 1660	CR 130 to CR 133	0.77	3	Major Collector	\$2,175,000
X32	Chandler Road	SH 130 to FM 1660	3.46	7	Major Arterial	\$28,675,000
X33	Chandler Road	FM 1660 to CR 101	1.99	5	Major Arterial	\$12,000,000
X34	New E-W Roadway F	CR 133 to CR 101	1.94	3	Major Collector	\$9,525,000
X35	CR 101	City limits to Laurel Creek Drive	0.72	3	Minor Arterial	\$2,925,000
X36	New N-S Roadway A	CR 160 extension to CR 101	2.98	3	Major Collector	\$14,600,000
X37	New N-S Roadway B	CR 160 extension to CR 101	3.12	3	Major Collector	\$15,300,000
X38	CR 394	CR 133 to CR 101	1.92	3	Major Collector	\$5,950,000
X39	FM 1660	Chandler Road to north of CR 394	0.30	5	Minor Arterial	\$1,975,000
X40	CR 133 / CR 394 intersection	Realign FM 1660 to connect with CR 394 and extend FM 1660 south to connect with CR 133. Close the existing CR 133 connection to FM 1660 and remove the curved segment of FM 1660 upon completion	0.51	3	Major Collector	\$2,525,000
X41	CR 132	CR 118 extension to FM 1660	0.55	2	Minor Collector	\$1,375,000
X42	CR 132	CR 132 to city limits	0.20	2	Minor Collector	\$575,000
X43	CR 132	CR 132 extension to Rio Grande Avenue	0.09	2	Minor Collector	\$250,000
X44	CR 132	CR 132 extension to west of CR 133	0.26	2	Minor Collector	\$650,000
X45	FM 1660	S. of Limmer Loop to north of Magner Lane	0.33	3	Major Collector	\$950,000
X46	Magner Lane	City limits to west of CR 132	0.13	3	Major Collector	\$400,000
X47	Magner Lane	West of CR 132 to east of CR 132	0.45	3	Major Collector	\$2,200,000
X48	Limmer Loop	City limits to Magner Lane extension	0.93	5	Minor Arterial	\$5,600,000
X49	CR 132	US 79 to city limits	1.19	5	Minor Arterial	\$7,500,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
X50	CR 133	CR 132 to CR 394	1.33	5	Minor Arterial	\$8,350,000
X51	CR 160	CR 132 extension to CR 160	1.73	5	Minor Arterial	\$13,875,000
X52	New E-W Roadway G	CR 160 extension to CR 101	1.56	3	Major Collector	\$7,650,000
X53	CR 160	CR 101 to CR 160 extension	0.95	5	Minor Arterial	\$6,025,000
X54	CR 132	CR 133 to CR 101	1.74	2	Minor Collector	\$4,300,000
X55	New N-S Roadway C	Limmer Loop to CR 160 extension	1.95	3	Major Collector	\$9,575,000
X56	New N-S Roadway D	CR 132 extension to CR 160	1.45	3	Major Collector	\$7,100,000
X57	CR 132	CR 132 to US 79	2.21	3	Major Collector	\$10,850,000
X58	Limmer Loop	Magner Lane extension to CR 101	1.88	5	Minor Arterial	\$15,075,000
X59	CR 101	US 79 to Limmer Loop extension	0.84	3	Minor Arterial	\$3,400,000
X60	CR 3349	US 79 to CR 404	2.18	3	Minor Arterial	\$8,425,000
X61	Front Street	E. of CR 132 to CR 3349	2.06	3	Major Collector	\$10,100,000
X62	New E-W Roadway H	CR 134 extension to CR 3349	1.53	2	Minor Collector	\$3,775,000
X63	Front Street	W. of CR 132 to E. of CR 132	0.35	3	Major Collector	\$1,725,000
X64	CR 132	N. of Front Street extension to CR 199	0.40	5	Minor Arterial	\$2,675,000
X65	CR 199	W. of CR 199 realignment to CR 199 realignment	0.12	3	Major Collector	\$400,000
X66	CR 132	CR 199 realignment to CR 3349	2.45	3	Major Collector	\$7,600,000
X67	CR 134	CR 132 to US 79	1.04	3	Major Collector	\$5,100,000
X68	New N-S Roadway E	Front Street extension to the Carl Stern Drive extension	1.80	3	Major Collector	\$8,825,000
X69	Carl Stern Drive	City limits to CR 3349	2.13	5	Minor Arterial	\$17,075,000
X70	CR 134	CR 132 to FM 1660	2.23	3	Major Collector	\$6,900,000
X71	New N-S Roadway F	Carl Stern Drive extension to CR 139	3.79	3	Major Collector	\$18,550,000
X72	CR 139	FM 1660 to CR 3349	1.47	3	Major Collector	\$7,225,000
X73	New E-W Roadway I	CR 132 extension to CR 3349	2.38	3	Major Collector	\$11,650,000
X74	CR 132	City limits to CR 139	1.95	5	Minor Arterial	\$15,675,000

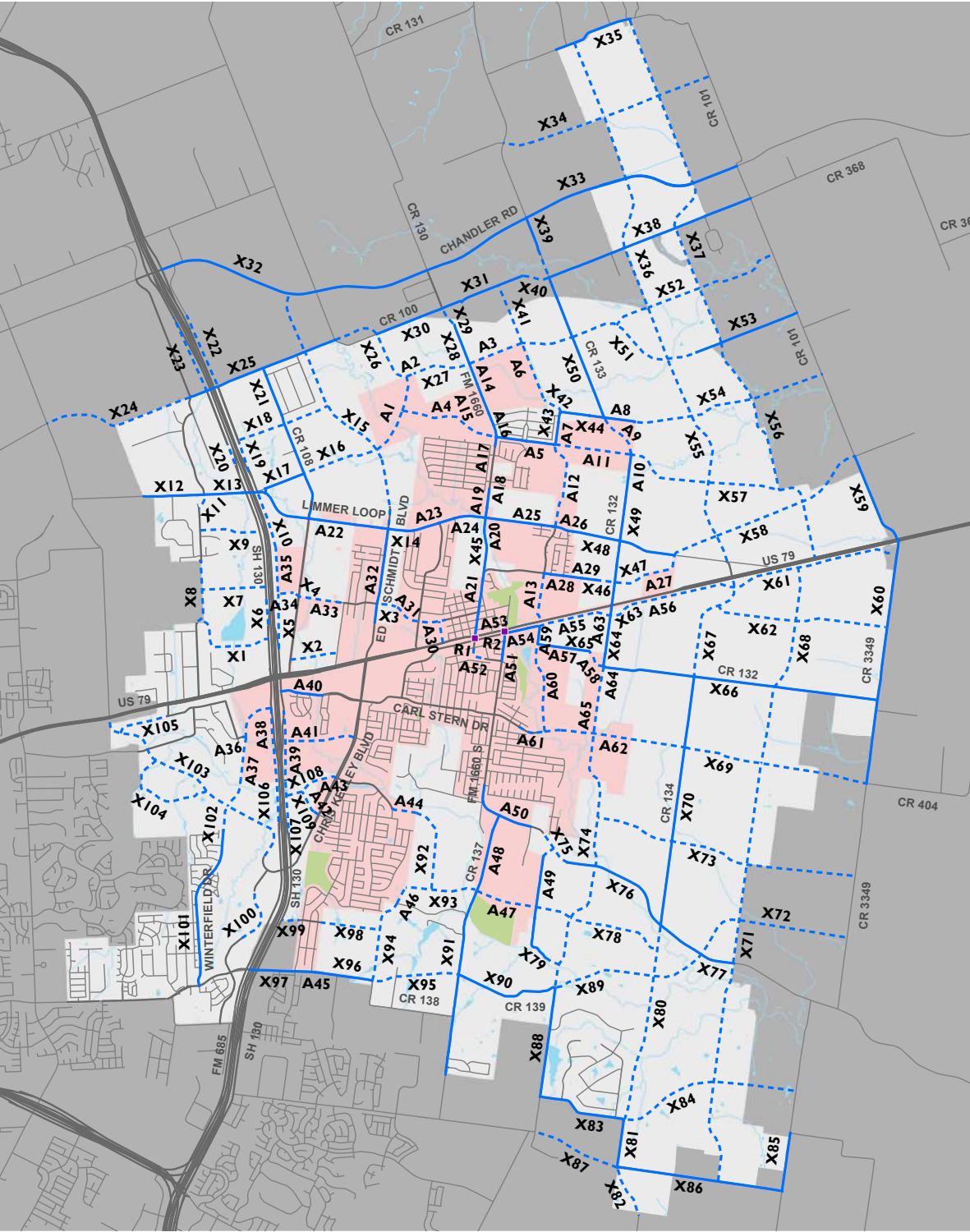
PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
X75	FM 1660 realignment at Mccoy Lane	Realign FM 1660 to smooth out the curve near Mccoy Lane. Close the realigned segment of FM 1660 and extend CR 163 as a 2-lane Minor Collector to the FM 1660 realignment	0.42	3	Major Collector	\$2,075,000
X76	FM 1660	FM 1660 realignment to the CR 139 extension	1.53	3	Major Collector	\$4,300,000
X77	FM 1660	CR 139 extension to west of CR 3349	0.31	5	Minor Arterial	\$1,975,000
X78	New E-W Roadway J	CR 163 to the CR 134 extension	0.86	3	Major Collector	\$4,200,000
X79	CR 163	South of FM 1660 to the CR 139 extension	0.55	2	Minor Collector	\$425,000
X80	CR 134	FM 1660 to the CR 132 extension	1.76	3	Major Collector	\$8,625,000
X81	CR 198	East of Apache Pass to Melber Lane	0.43	3	Major Collector	\$1,325,000
X82	Melber Lane realignment at CR 139	Realign Melber Lane to smooth out the curve near CR 139. Close the realigned segment of Melber Lane	0.47	3	Major Collector	\$2,325,000
X83	CR 198	CR 139 to east of Apache Pass	0.80	3	Major Collector	\$2,500,000
X84	CR 198	East of Apache Pass to CR 129	1.63	3	Major Collector	\$7,975,000
X85	Englemann Lane	CR 139 to CR 129	0.52	3	Minor Arterial	\$2,175,000
X86	CR 139	CR 198 to Englemann Lane	1.47	3	Minor Arterial	\$5,775,000
X87	CR 139	Rowe Lane to Melber Lane	0.80	3	Minor Arterial	\$4,675,000
X88	CR 139	CR 139 to FM 1660	1.40	5	Minor Arterial	\$11,300,000
X89	CR 139	CR 139 to CR 198	0.97	5	Minor Arterial	\$6,150,000
X90	CR 139	CR 137 to CR 139	0.92	5	Minor Arterial	\$5,850,000
X91	CR 137	New E-W Roadway to Morningside Circle	0.44	3	Major Collector	\$1,375,000
X92	Riverwalk Drive	City limits to the CR 138 extension	0.78	3	Major Collector	\$3,800,000
X93	CR 138	E. of Navidad River Drive to west of CR 137	0.62	3	Major Collector	\$3,075,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
X94	CR 138	CR 138 to CR 197	0.76	3	Major Collector	\$3,725,000
X95	CR 138	CR 138 to CR 137	0.78	5	Minor Arterial	\$6,375,000
X96	CR 138	East of Dana Drive to CR 138	0.20	5	Minor Arterial	\$1,400,000
X97	CR 138	West of Little Lake Road to SH 130 Service Road	0.37	5	Minor Arterial	\$2,500,000
X98	Kaatz Lane	Dana Drive to the CR 138 extension	0.53	2	Minor Collector	\$1,300,000
X99	Kaatz Lane	Little Lake Road to the SH 130 Service Road	0.16	2	Minor Collector	\$400,000
X100	Klattenhoff Lane	Klattenhoff Lane to Muirfield Bend Drive	0.53	3	Major Collector	\$2,600,000
X101	Winterfield Drive	Kirkhill Street to Gattis School Road	1.45	3	Major Collector	\$25,000
X102	Winterfield Drive	Winterfield Drive to Kirkhill Street	0.52	3	Major Collector	\$2,550,000
X103	Star Ranch Boulevard	Klattenhoff Lane to CR 110	2.11	5	Minor Arterial	\$16,925,000
X104	New N-S Roadway G	Star Ranch Boulevard extension to the Star Ranch Boulevard extension	0.94	2	Minor Collector	\$2,325,000
X105	Benelli Drive	Extend Benelli Drive to the CR 110 extension	0.45	2	Minor Collector	\$1,125,000
X106	SH 130 SB Service Road	North of Star Ranch Boulevard to south of Carl Stern Drive	0.37	2	Major Arterial	\$1,625,000
X107	SH 130 NB Service Road	North of Star Ranch Boulevard to south of Carl Stern Drive	0.46	2	Major Arterial	\$2,050,000
X108	Riverwalk Drive	Chris Kelley Boulevard to W. City limits	0.32	3	Major Collector	\$1,575,000
X109	Great Western Drive	Chris Kelley Boulevard to W. City limits	0.21	2	Minor Collector	\$525,000
Total Roadway Project Costs (outside city limits)						\$558,525,000

PROJECT #	ROADWAY	LIMITS	LENGTH (MI)	NUMBER OF LANES	FUNCTIONAL CLASSIFICATION	TOTAL PROJECT COST
Railroad Projects						
R1	Jim Cage Lane Railroad Crossing	Quiet Zone improvements	N/A	N/A	N/A	\$300,000
R2	FM 1660 Railroad Crossing	Quiet Zone improvements	N/A	N/A	N/A	\$300,000
Total Railroad Project Costs						\$600,000
Total Roadway Master Plan Projects						\$712,450,000



Figure 6. Planned Roadway Investments



Legend

Roadway and Rail Projects

- Planned Roadway Improvement
- - - Planned Roadway Extension (conceptual alignment)
- Planned Railroad Crossing Improvement

Project ID

- A #** Roadway Project inside city limits
- X #** Roadway Project outside city limits
- R #** Railroad Crossing Project

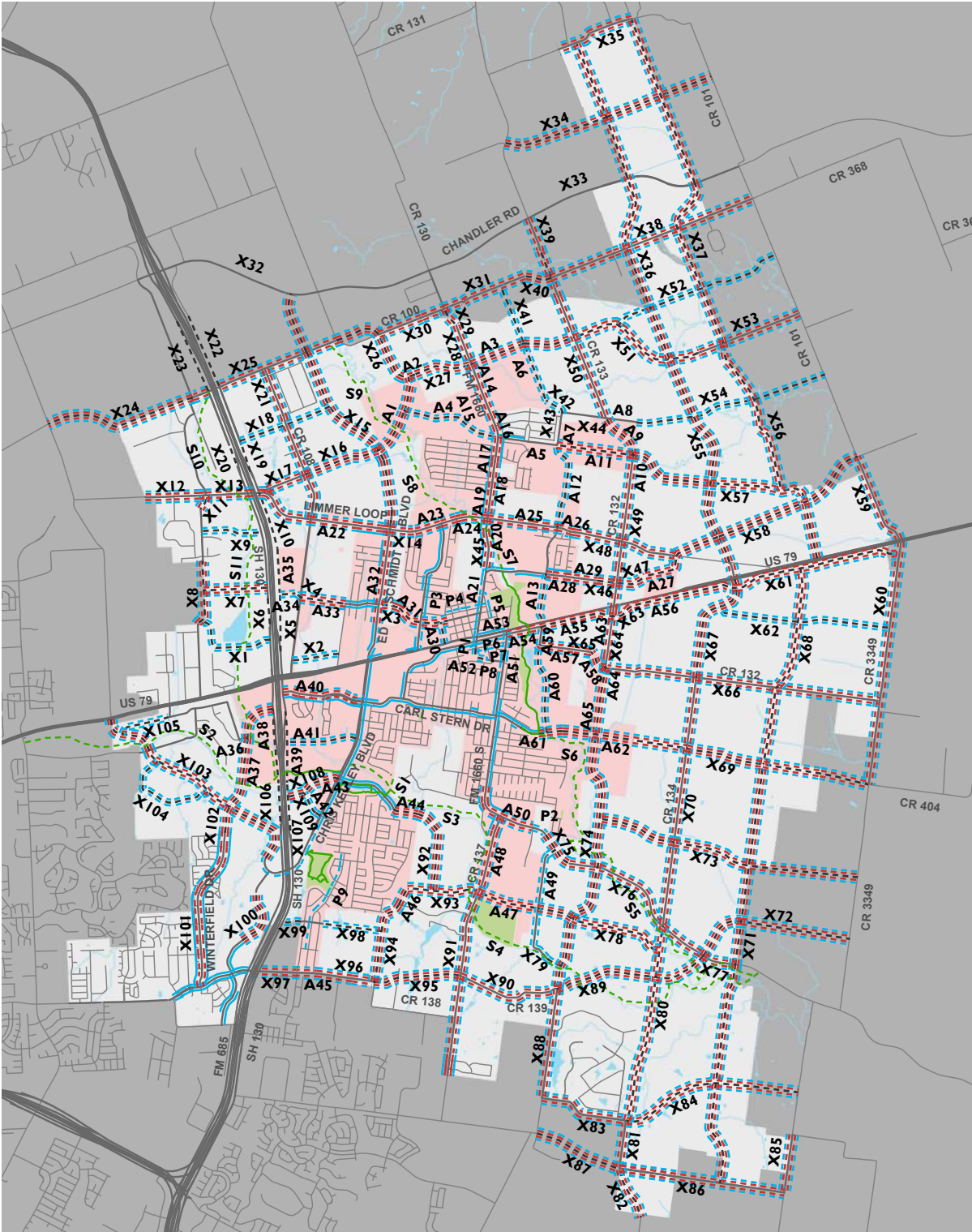
- City Limits
- Extraterritorial Jurisdiction
- Parks

Table 3. Pedestrian Master Plan Projects

PROJECT #	ROADWAY	LIMITS	TOTAL PROJECT COST
Pedestrian Projects (this list only includes those that are not grouped with a roadway project)			
P1	US 79 / Jim Cage Lane Pedestrian Improvements	Construct a sidewalk on Jim Cage Lane between Austin Avenue and US 79. Install crosswalks on all approaches of the US 79 / Jim Cage Lane intersection	\$100,000
P2	Mccoy Lane Pedestrian Improvements to FM 1660	Construct a sidewalk between Mccoy Lane and FM 1660	\$50,000
P3	Exchange Boulevard Pedestrian Improvements between Metcalfe Street and US 79	Construct a sidewalk on Exchange Boulevard between Metcalfe Street and US 79	\$75,000
P4	Metcalfe Street Pedestrian Improvements between Whitfield Street and Church Street	Construct a sidewalk on Metcalfe Street between Whitfield Street and Church Street	\$175,000
P5	Church Street Pedestrian Improvements between FM 1660 and Pecan Street	Construct a sidewalk on Church Street between FM 1660 and Pecan Street	\$100,000
P6	Front Street Pedestrian Improvements between Jim Cage Lane and the Cottonwood Trail	Construct a sidewalk on Front Street between Jim Cage Lane and the Cottonwood Trail	\$200,000
P7	Austin Avenue Pedestrian Improvements between Cottonwood Street and FM 1660	Construct a sidewalk on Austin Avenue between Cottonwood Street and FM 1660	\$150,000
P8	Brushy Street Pedestrian Improvements between Austin Avenue and Evans Street	Construct a sidewalk on Brushy Street between Austin Avenue and Evans Street	\$75,000
P9	Estate Drive Pedestrian Improvements between Marjorie Drive and Yukon Cove	Construct a sidewalk on Estate Drive between Marjorie Drive and Yukon Cove	\$400,000
Total Pedestrian Project Costs			\$1,325,000
Shared-Use Path Projects			
S1	Brushy Creek Trail between Riverwalk Drive and Enclave Way	Construct a shared-use path north of Brushy Creek to connect Riverwalk Drive with Enclave Way	\$175,000
S2	Brushy Creek Trail between Chris Kelley Boulevard and Red Bud Lane in Round Rock	Create an off-street shared-use path along Brushy Creek between Chris Kelley Boulevard and Red Bud Lane in Round Rock	\$2,200,000
S3	Brushy Creek Trail between Chris Kelley Boulevard and CR 137	Create an off-street shared-use path along Brushy Creek between Chris Kelley Boulevard and CR 137	\$1,475,000
S4	Brushy Creek Trail between CR 137 and Cottonwood Creek	Create an off-street shared-use path along Brushy Creek between CR 137 and Cottonwood Creek	\$2,100,000

PROJECT #	ROADWAY	LIMITS	TOTAL PROJECT COST
S5	Cottonwood Trail between FM 1660 South and Brushy Creek	Create an off-street shared-use path along Cottonwood Creek between FM 1660 South and Brushy Creek	\$1,300,000
S6	Cottonwood Trail between Carl Stern Drive and FM 1660 South	Create an off-street shared-use path along Cottonwood Creek between Carl Stern Drive and FM 1660 South	\$1,425,000
S7	Cottonwood Trail between Magner Lane and Limmer Loop	Create an off-street shared-use path along Cottonwood Creek between Magner Lane and Limmer Loop	\$400,000
S8	Cottonwood Trail between Limmer Loop and Flinn Street	Create an off-street shared-use path along Cottonwood Creek between Limmer Loop and Flinn Street	\$450,000
S9	Cottonwood Trail between Flinn Street and CR 118	Create an off-street shared-use path along Cottonwood Creek between Flinn Street and CR 118	\$1,200,000
S10	Carmel Creek Trail between Limmer Loop and CR 119	Create an off-street shared-use path along Carmel Creek between Limmer Loop and CR 118	\$725,000
S11	Carmel Creek Trail between US 79 and Limmer Loop	Create an off-street shared-use path along Carmel Creek between US 79 and Limmer Loop	\$1,450,000
S12	Carmel Creek Trail between Brushy Creek and US 79	Create an off-street shared-use path along Carmel Creek between Brushy Creek and US 79	\$775,000
Total Shared-Use Path Project Costs			\$13,675,000
Total Pedestrian and Bicycle Project Costs			\$15,000,000

Figure 1. Pedestrian and Bike Investments



Legend

Pedestrian and Bike Facilities

Existing

Planned

- Sidewalk
- Bike Lanes
- Shared-Use Path

**Roadway Facilities with
Pedestrian or Bike Projects**

- Planned Street Extension
(Conceptual Alignment)

Project ID

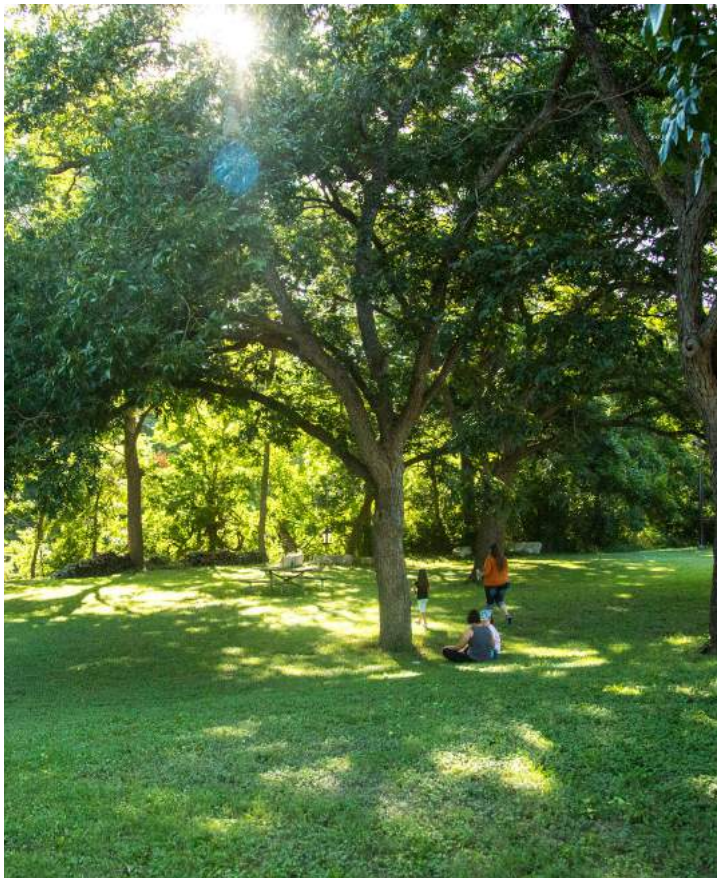
- A / X #** Pedestrian and/or Bike Project
with Roadway Project

- City Limits**
- Extraterritorial Jurisdiction**
- Parks**

- P #** Pedestrian Project
- S #** Shared-Use Path Project

Table 4. Transit and Demand and System Management Projects

PROJECT #	ROADWAY	LIMITS	TOTAL PROJECT COST
Transit Projects			
T1	Transit Service	Phase 1 – Austin Express and Tech Ridge Service	\$250,000
T2	Transit Service	Phase 2 – US Highway 79 Flex	\$250,000
Total Transit Project Costs			\$500,000
Demand and System Management Projects			
A	Neighborhood Traffic Calming Program	Implement program to process community requests for neighborhood traffic calming, investigate options, and implement improvements.	\$100,000
B	Bike Parking Program	Install new bike parking throughout the city.	\$30,000
C	Wayfinding Signage Program	Install wayfinding signage to assist pedestrians and bicyclists in choosing comfortable routes and to help visitors navigate through the city.	\$75,000
D	Future Study	Future Impact Fee Update Cost (2 five-year updates)	\$100,000
Total Demand and System Management Project Costs			\$13,675,000
Total Transit and Demand and System Management Projects Costs			\$15,000,000



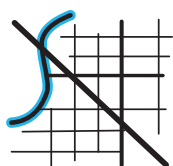
STANDARDS

Hutto applies transportation standards and regulations to the construction of new transportation facilities and to the operation of all facilities to ensure that the system functions as intended and investments are not wasted. These standards reflect the goals of the city for a safe and efficient transportation system and enable consistent future actions.

Street design guidelines are provided by the City's Unified Development Code (UDC) which lays out the dimensions and facilities included in street improvements. The following sections of this chapter identify potential modifications to the UDC that will be considered by City staff at a future date. However, until the UDC is updated, the current roadway dimensions and standards will still apply to city roadway projects.

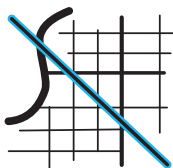
STREET FUNCTIONAL CLASSIFICATION

Street functional classification is an important tool for managing the roadway network. The street functional classification system recognizes that individual streets do not act independently of one another but instead form a network of street types that work together to serve travel needs on a local and regional level. By designating the management and design requirements for each roadway classification, this hierarchical system supports a network of streets that perform as desired. The functional classification system for roadways in Hutto is described below. The functional classification map, Figure x, shows the classification for all roadways in the city, including planned future arterial and collector street extensions.



Freeways

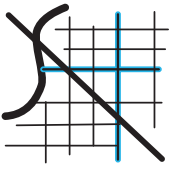
Freeways are designed for moving traffic at high volumes and high speeds within and through an urban area. They have multiple traffic lanes, divided sections, limited access, and few, if any, intersections. The only Freeway in Hutto is SH 130.



Major and Minor Arterials

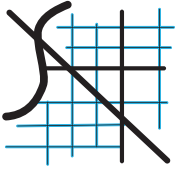
Major Arterials provide a high degree of mobility and can serve both major metropolitan centers and rural areas. They serve high volumes of traffic over long distances, typically maintain higher posted speeds, and minimize direct access to adjacent land to support the safe and efficient movement of people and goods. Inside city limits, speeds may be reduced to reflect the roadside environment and surrounding land uses.

Minor Arterials serve trips of moderate length and smaller geographic areas than Major Arterials and are often used as a transition between Major Arterials and Collectors. Minor Arterials typically serve higher volumes of traffic at moderate to high speeds, with posted speeds generally no lower than 30 mph.



Major and Minor Collectors

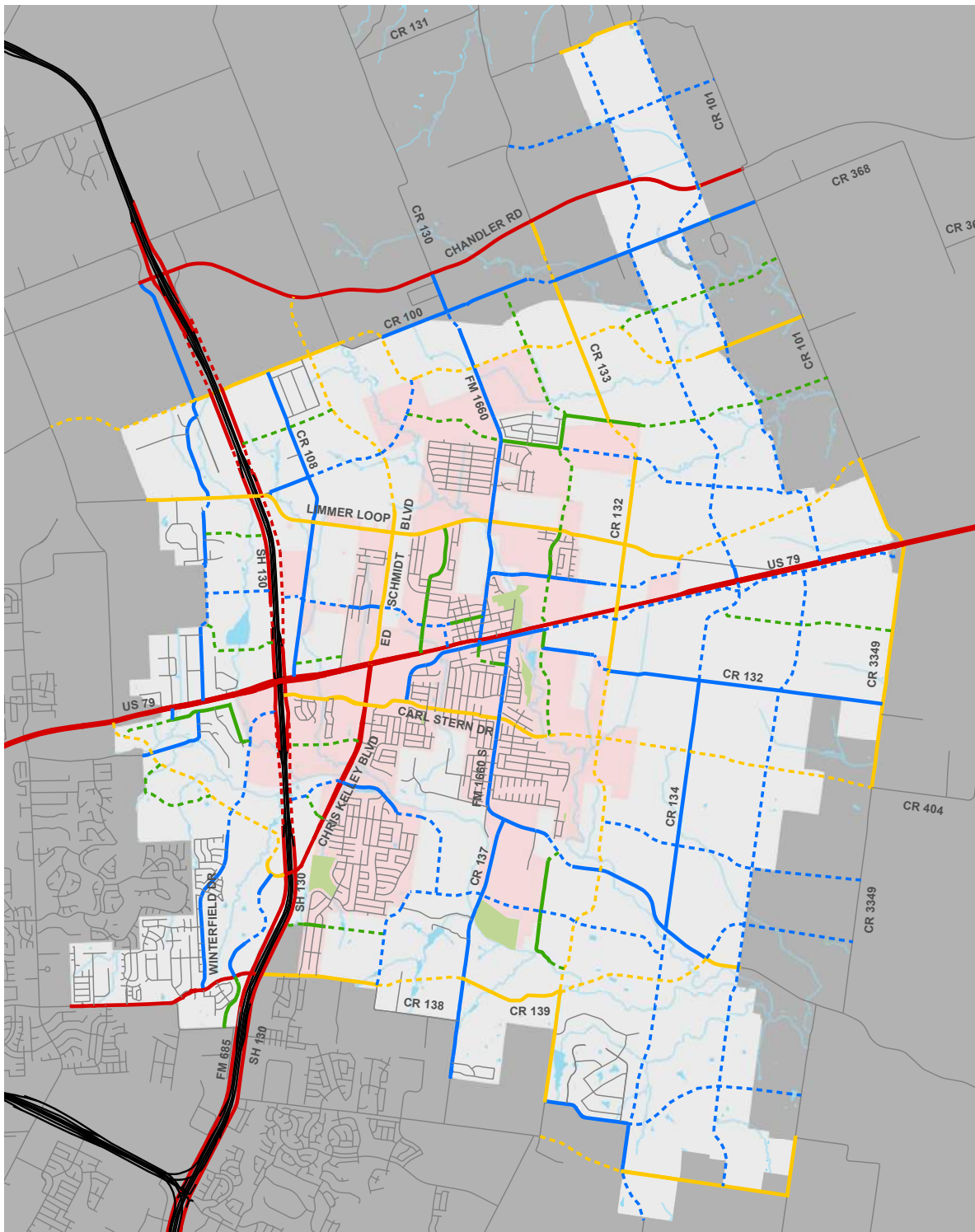
Collectors serve a critical role in the roadway network by connecting traffic from Local Streets with the Arterial network. Major Collector routes are generally distinguished from Minor Collector routes by longer length; lower connecting driveway densities; higher speed limits; greater spacing intervals; and higher traffic volumes. While access and mobility are more balanced than on Arterials, new driveways serving residential units should not be permitted where traffic volume forecasts exceed 5,000 vehicles per day.



Local Streets

Local streets prioritize provision of immediate access to adjacent land. These streets should be designed to enhance the livability of neighborhoods and should generally accommodate less than 2,000 vehicles per day. When traffic volumes reach 1,000 to 1,200 vehicles per day through residential areas, safety and livability can be degraded. A well-connected grid system of relatively short blocks can minimize excessive volumes of motor vehicles and encourage more use by pedestrians and bicyclists. Local streets are not intended to support long distance travel and are often designed to discourage through traffic.

Figure 7. Functional Classification



Legend

Roadways:

Existing Planned (Conceptual Alignments)

Freeways

Major Arterial Streets

Minor Arterial Streets

———— Major Collector Streets

 Minor Collector Streets

 Local Streets (or streets outside of the city ETJ)

 City Limits

 Extraterritorial Jurisdiction

 Parks

Truck Route Designations

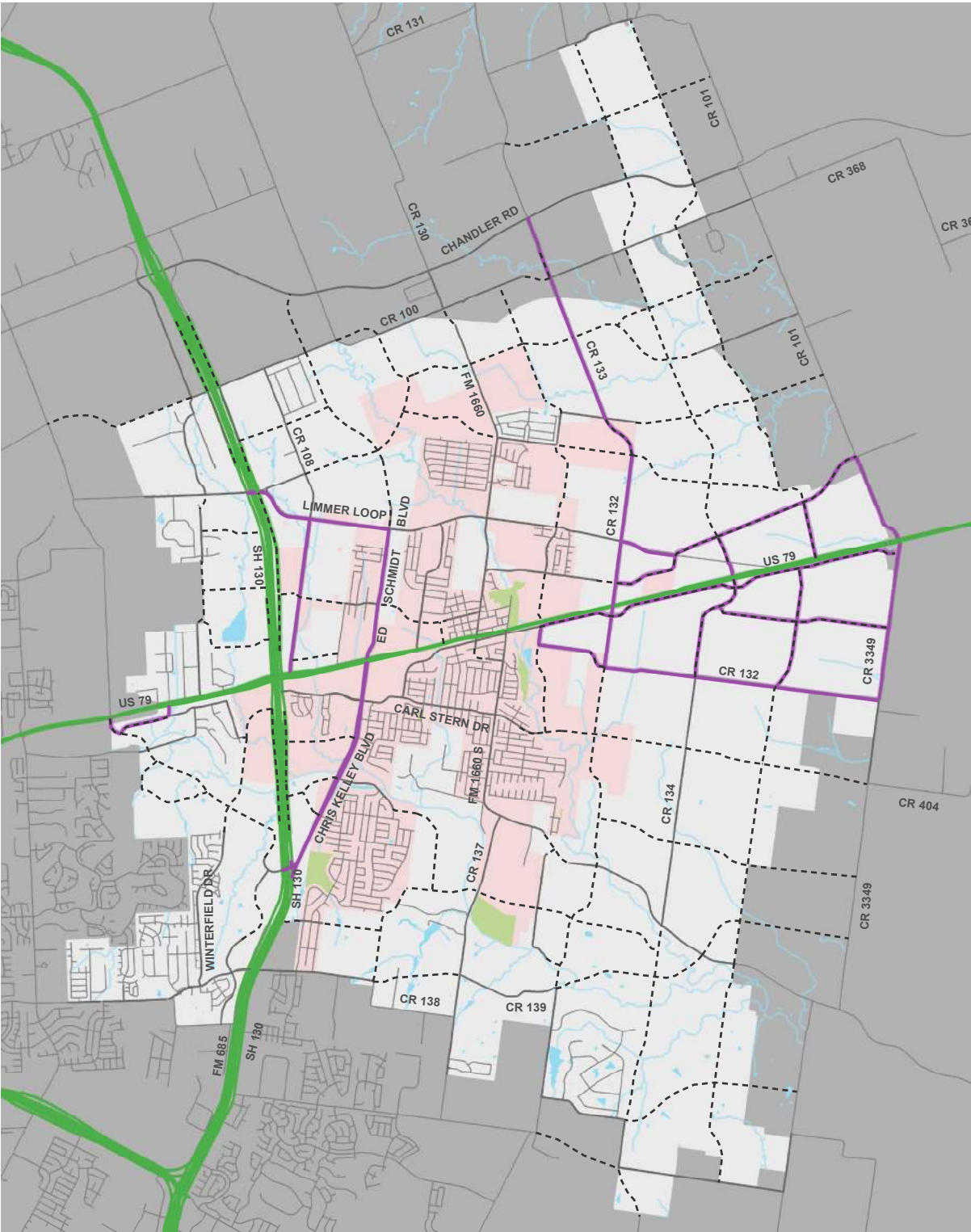
Safe and efficient truck freight movement to and through Hutto is important for both the local and statewide economies. Hutto roadways designated as Truck Routes are recognized as being appropriate and commonly traveled corridors for truck passage. Decisions affecting maintenance, operation, or construction on a designated truck route must address potential impacts on the safe and efficient movement of truck traffic. However, the intent is not to compromise the safety of other street users to accommodate truck traffic, especially in areas where many conflicts may be present. In such areas, the operational objectives of the street must prioritize safe travel for vulnerable users (e.g., pedestrians and bicyclists) while continuing to accommodate passage by truck traffic. On-street parking along truck routes is discouraged where feasible.

TXDOT has classified SH 130 and US 79 as secondary freight routes in Hutto. Therefore, the design and management of these highways through Hutto is subject to a number of policies and standards intended to maintain safe and efficient movement of large vehicles.

The city has local truck routes designed to facilitate the movement of truck freight between major destinations and the state freight network. These roadways serve an important role in the city roadway network and should be designed and managed to safely accommodate the movement of goods.

Figure 8 reflects the routes designated as Truck Routes.

Figure 8. Freight and Truck Routes



Legend

Freight Routes

- State Secondary Freight Route
- Local Truck Route

- Arterial or Collector Roadway
- Planned Arterial or Collector Roadway (Conceptual Alignment)

- City Limits
- Extraterritorial Jurisdiction
- Parks

TYPICAL ROADWAY CROSS-SECTION STANDARDS

Roadway Cross-Section Standards identify the design characteristics needed to meet the function and demand for each facility type for city of Hutto streets. Since the actual design of a roadway can vary from segment to segment due to adjacent land uses and demands, this system allows standardization of key characteristics to provide consistency, while providing application criteria that allows some flexibility while meeting the design standards.

Figures 9-13 illustrate the standard cross-sections for arterials, collectors, local streets, and private streets in the city of Hutto. They are intended to be used as guidelines in the development of new roadways and the upgrade of existing roadways. Planning level right-of-way needs can be determined using these figures. Under some conditions a variance to the street standards may be requested from the Engineering Director to consider the constrained roadway design options or other adjustments. Typical conditions that may warrant consideration of a variance include:

- Infill sites
- Innovative designs (e.g., roundabouts)
- Severe constraints presented by topography, environmental, or other resources present
- Existing developments and/or buildings that make it extremely difficult or impossible to meet the standards

Figure 9. Major Arterial Typical Cross-Section Standards

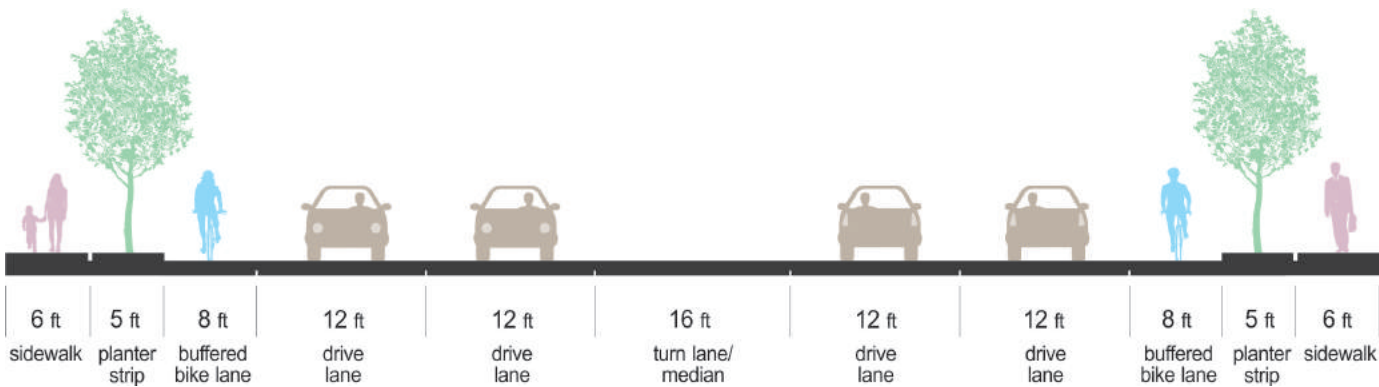


Table 5. Major Arterial Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	126 ft.	118 ft.	The Standard design should be provided where feasible. In constrained areas where providing the Standard widths are not practical, Alternative Minimum design requirements may be applied with approval of the Engineering Director.
Paved Width Curb-to-Curb	80 ft.	74 ft.	
Drive Lane	12 ft.	12 ft.	
Turn Lane/ Median	16 ft.	14 ft.	On designated Truck Routes, reductions in the Standard roadway paved width (curb-to-curb) are discouraged and should be limited to only short, constrained segments.
On-Street Parking	Not permitted	Not permitted	
Bike Lane	8 ft.	6 ft.	On-street parking is not permitted on major arterial streets. Major arterial roadways require right-of-way for three drive lanes in each direction (seven total lanes including the center turn lane/ median).
Planter Strip	5 ft.	5 ft.	
Sidewalk	6 ft.	5 ft.	

Figure 10. Minor Arterial Typical Cross-Section Standards

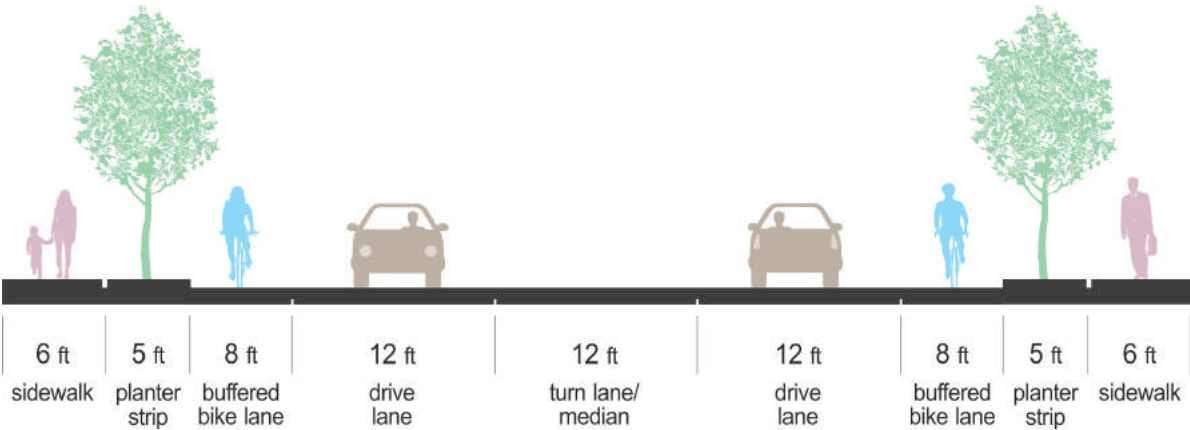


Table 6. Minor Arterial Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	86 ft.	77 ft.	The Standard design should be provided where feasible. In constrained areas where providing the Standard widths are not practical, Alternative Minimum design requirements may be applied with approval of the Engineering Director. On designated Truck Routes, reductions in the Standard roadway paved width (curb-to-curb) are discouraged and should be limited to only short, constrained segments. On-street parking is not permitted on major arterial streets. On-street parking is not permitted on minor arterial roadways. Minor arterial roadways require right-of-way for two drive lanes in each direction (five total lanes including the center turn lane/ median).
Paved Width Curb-to-Curb	52 ft.	45 ft.	
Drive Lane	12 ft.	11 ft.	
Turn Lane/ Median	12 ft.	11 ft.	
On-Street Parking	Not permitted	Not permitted	
Bike Lane	8 ft.	6 ft.	
Planter Strip	5 ft.	5 ft.	
Sidewalk	6 ft.	5 ft.	

Figure 11. Major Collector Typical Cross-Section Standards

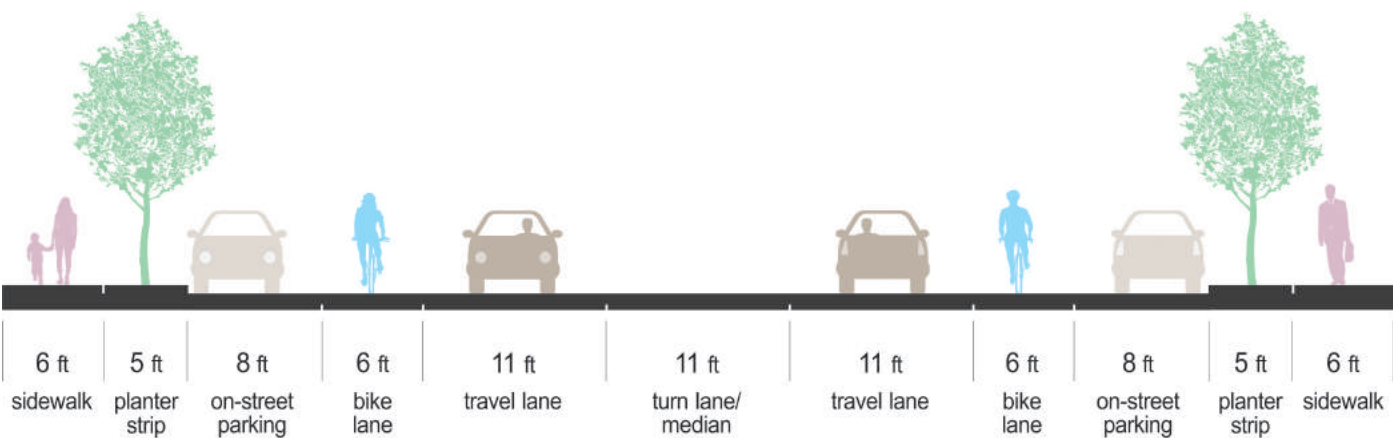


Table 7. Major Collector Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	83 ft.	75 ft.	The Standard design should be provided where feasible. In constrained areas where providing the Standard widths are not practical, Alternative Minimum design requirements may be applied with approval of the Engineering Director.
Paved Width Curb-to-Curb	61 ft.	44 ft.	
Drive Lane	11 ft.	10 ft.	
Turn Lane/ Median	11 ft.	11 ft.	On designated Truck Routes, reductions in the Standard roadway paved width (curb-to-curb) are discouraged and should be limited to only short, constrained segments.
On-Street Parking	8 ft.	7 ft.	Center left turn lane is optional depending on surrounding land use and available right-of-way.
Bike Lane	6 ft.	5 ft.	On-street parking is optional and may be provided where it would support adjacent land uses. On-street parking is discouraged where posted speeds are greater than 35 mph.
Planter Strip	5 ft.	5 ft.	
Sidewalk	6 ft.	5 ft.	

Figure 12. Minor Collector Typical Cross-Section Standards

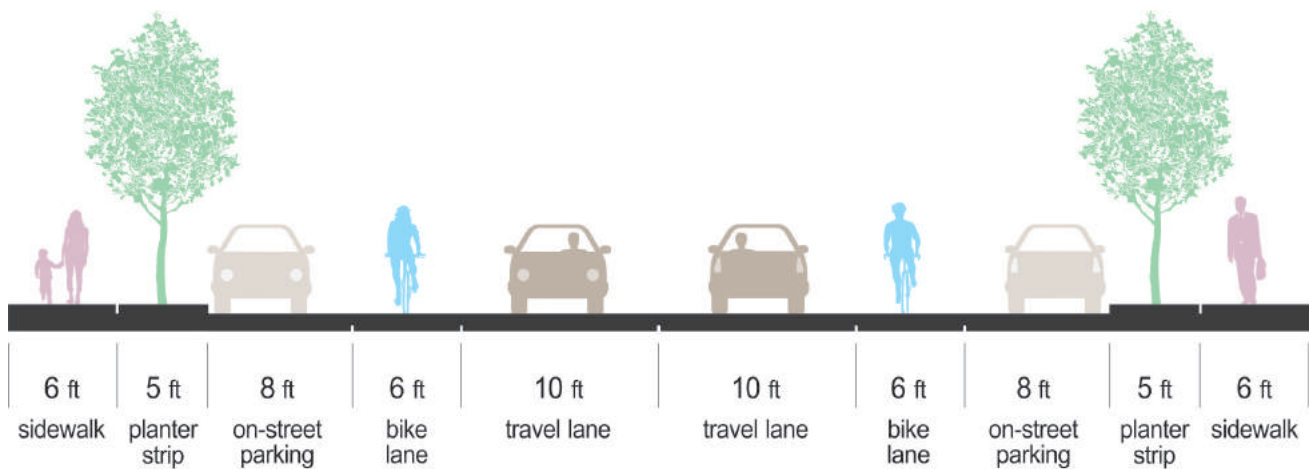


Table 8. Minor Collector Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	70 ft.	64 ft.	The Standard design should be provided where feasible. In constrained areas where providing the Standard widths are not practical, Alternative Minimum design requirements may be applied with approval of the Engineering Director.
Paved Width Curb-to-Curb	48 ft.	44 ft.	
Drive Lane	10 ft.	10 ft.	Bike lanes are optional depending on surrounding land use, and the availability of nearby adjacent bike routes. Minor collector roadways without bike lanes should provide pavement markings/ signage designating shared travel lanes.
On-Street Parking	8 ft.	7 ft.	
Bike Lane	6 ft.	5 ft.	On-street parking is optional and may be provided where it would support adjacent land uses. On-street parking is discouraged where posted speeds are greater than 35 mph.
Planter Strip	5 ft.	5 ft.	
Sidewalk	6 ft.	5 ft.	

Figure 13. Local Street Typical Cross-Section Standards

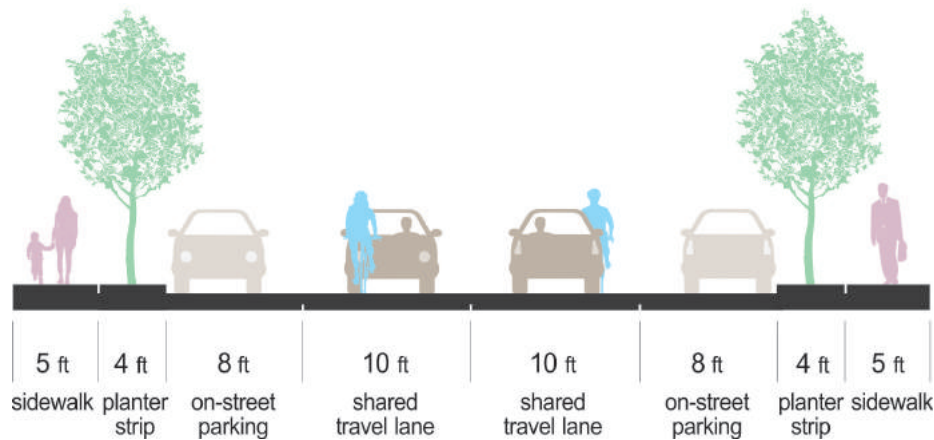


Table 9. Local Street Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	54 ft.	54 ft.	The Standard design should be provided where feasible. In constrained areas where providing the Standard widths are not practical, Alternative Minimum design requirements may be applied with approval of the Engineering Director.
Paved Width Curb-to-Curb	36 ft.	36 ft.	
Shared Travel Lane	10 ft.	10 ft.	Bike lanes are optional depending on surrounding land use, and the availability of nearby adjacent bike routes. Minor collector roadways without bike lanes should provide pavement markings/ signage designating shared travel lanes.
On-Street Parking	8 ft.	8 ft.	
Planter Strip	4 ft.	4 ft.	On-street parking is optional and may be provided where it would support adjacent land uses. On-street parking is discouraged where posted speeds are greater than 35 mph.
Sidewalk	5 ft.	5 ft.	

WALKING AND BIKING DESIGN STANDARDS

The following sections detail various walking and biking standards and treatment guidelines.

Walking and Biking Facilities

As shown in Figures 9-13, the typical roadway cross-section standards require a minimum five-foot sidewalk along both sides of all public streets and bike lanes on arterial and collector roadways. Newly constructed roadways should typically provide accommodations to walking and biking users via a six-foot sidewalk and six-foot bike lane with 2-foot buffer along major and minor arterial roadways, a six-foot sidewalk and six-foot bike lane along major and minor collector roadways and a five-foot sidewalk along local roadways. Shared streets for bikes will also be designated throughout the city and will include pavement markings/signage.

Shared-Use Paths

Shared-use paths provide off-roadway facilities for walking and biking travel. Depending on their location, they can serve both recreational and transportation needs. Shared-use path designs vary in surface types and widths. Hard surfaces are generally better for bicycle travel. Widths need to provide ample space for both walking and biking and should be able to accommodate maintenance vehicles.

In Hutto, a paved shared-use path should be 12 feet wide (see Figure 14). The city may reduce the width of the typical paved shared-use path to a minimum of 10 feet in constrained areas (e.g., steep, environmentally sensitive, historic, or previously developed areas).

Figure 14. Shared-Use Path Typical Cross-Section Standards

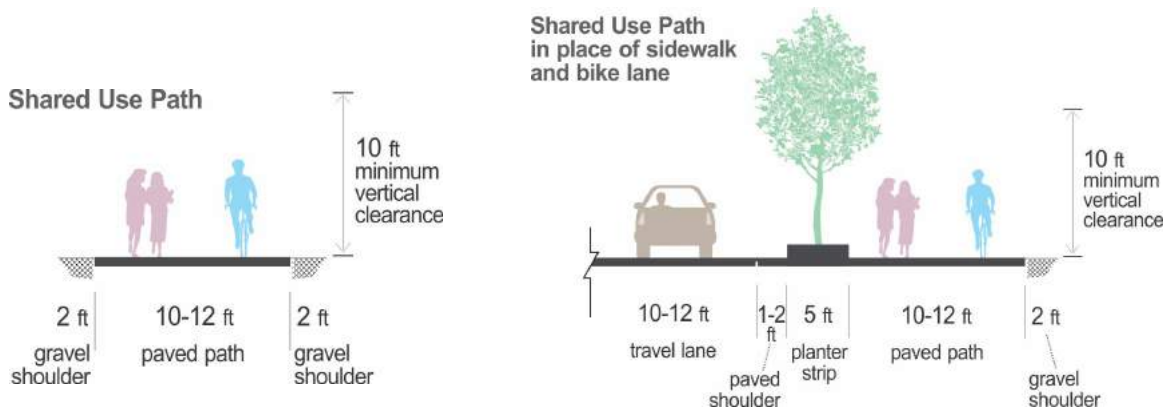


Table 10. Shared-Use Path Typical Cross-Section Standards and Alternative Minimum Standards

WIDTH	UDC STANDARD	SUGGESTED ALTERNATIVE MINIMUM	CONSIDERATIONS
Right-of-Way	16 ft.	16 ft.	Paved path width may be narrowed to 8 feet wide only over short segments in constrained areas.
Paved Path	12 ft.	10 ft.	Path surface must be ADA accessible. In areas with significant walking or biking demand, the paved shared use path should be at least 12 feet wide.
Gravel Shoulder	2 ft.	2 ft.	In corridors served by a shared-use path, the Engineering Director may grant variance to allow a shared-use path to replace a sidewalk and bike lane on one side of a roadway cross-section standard. Where this is done, the treatment should be continuous along the corridor. Standard cross-section is a 10-12 foot drive lane, a 1-2 foot paved shoulder, a 5 foot planter strip, and a 10-12 foot shared-use path.
Vertical Clearance	10 ft.	10 ft.	

Street Crossings

Roadways with high traffic volumes and/or speeds in areas with nearby transit stops, residential uses, schools, parks, shopping and employment destinations generally require enhanced street crossings with treatments, such as marked crosswalks, high visibility crossings, and curb extensions to improve the safety and convenience. Crossings should be consistent with the block spacing standards shown in Table 11. Blocks longer than the maximum block size shown in Table 11 should have mid-block pedestrian and bicycle access ways at spacing no more than 300 feet. Exceptions include where the connection is impractical due to topography, inadequate sight distance, high vehicle travel speeds, or other factors that may prevent safe crossing (as determined by the city).

ACCESS MANAGEMENT

The number and spacing of access points, such as driveways and street intersections, along a roadway affects its function and capacity. Access Management is the control of these access points to match the functionality and capacity intended by the roadway's functional classification. Balancing access and good mobility can be achieved through various access management strategies, including establishing access management spacing standards for driveways and intersections.

Access management is especially important on arterial and collector facilities to reduce congestion and crash rates and to provide for safe and efficient travel. Since each access point is an additional conflict point, reducing or consolidating driveways on these facilities can decrease collisions and preserve capacity on high volume roads, maintaining traffic flow and mobility within the city.

New access points shall meet or exceed the minimum spacing requirements outlined in Table 11. However, where no reasonable alternatives exist or where strict application of the standards would create a safety hazard, the city may allow a variance.

Table 11. Roadway and Access Spacing Standards

	MAJOR ARTERIAL ROADWAY	MINOR COLLECTOR ROADWAY	MAJOR COLLECTOR ROADWAY	MINOR ROADWAY	LOCAL ROADWAY
Maximum Block Size * (Public Roadway to Public Roadway)	600	600	600	600	600
Minimum Block Size (Public Roadway to Public Roadway)	250	250	250	200	200
Minimum Driveway Spacing (Public Street to Driveway and Driveway to Driveway)	Not allowed **	250	150	100	15

Note: All distances measured from center to center of adjacent approaches.

Note: For corner lots, accesses must be at least 35 feet or ½ the lot width from the intersection, whichever is greater.

* If the maximum block size is exceeded, mid-block pedestrian and bicycle accessways on public easements or rights-of-way must be provided at spacing no more than 300 feet, unless the connection is impractical due to existing development, topography, environmental constraints or other factors (as determined by the city).

** New private driveway access to Major Arterial Roadways is not allowed. If access is not available to a lower classified street, an access may be allowed but restricted to right-in, right-out movements only.

MOBILITY STANDARDS

Mobility targets for streets and intersections in Hutto provide a metric for assessing the impacts of new development on the existing transportation system and for identifying where capacity improvements may be needed. They are the basis for requiring improvements needed to sustain the transportation system as growth and development occur. Two methods used to gauge operational conditions for motor vehicles include volume-to-capacity (v/c) ratios and level of service (LOS).

Volume-to-Capacity (v/c) ratio: A v/c ratio is a decimal representation (between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. The ratio is the peak hour traffic volume divided by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. A ratio approaching 1.00 indicates increased congestion and reduced performance.

Level of Service (LOS): LOS is a “report card” rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay is excessive and demand exceeds capacity, typically resulting in long queues and delays.

All roadways and intersections owned by Hutto must operate at or below the following mobility targets.

Signalized, All-way Stop, or Roundabout Controlled Intersections: The intersection as a whole must operate with a Level of Service (LOS) “E” or better and a volume to capacity (v/c) ratio not higher than 0.85 during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m. during the spring or fall).

Two-way Stop and Yield Controlled Intersections: All intersection approaches during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m. during the spring or fall) shall operate with a LOS “E” or better and v/c ratio not higher than 0.90. Mobility standards do not apply to approaches at unsignalized intersections serving 20 vehicles or fewer during the peak hour.

NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

Neighborhood Traffic Management (NTM) describes strategies that can be deployed to slow traffic, and potentially reduce traffic volumes, creating a more inviting environment for pedestrians and bicyclists. NTM strategies are primarily traffic calming techniques for improving neighborhood livability on local streets, though a limited set of strategies can also be applied to collectors and arterials. Mitigation measures for neighborhood traffic impacts must balance the need to manage vehicle speeds and volumes with the need to maintain mobility, circulation, and function for service providers, such as emergency responders. Any NTM project must include coordination with emergency response staff to ensure that public safety is not compromised. Any new NTM device shall only be used upon review and approval by the city engineer.

Figure 15. Neighborhood Traffic Management Strategies

CHICANES



[www.pedbikeimages.org/Dan Burden](http://www.pedbikeimages.org/Dan_Burden)

CHOKERS



[www.pedbikeimages.org/Dan Burden](http://www.pedbikeimages.org/Dan_Burden)

CURB EXTENSIONS



[www.pedbikeimages.org/Carl Sundstrom](http://www.pedbikeimages.org/Carl_Sundstrom)

DIVERTERS



[www.pedbikeimages.org/Adam Fukushima](http://www.pedbikeimages.org/Adam_Fukushima)

MEDIAN ISLANDS



[www.pedbikeimages.org/Dan Burden](http://www.pedbikeimages.org/Dan_Burden)

RAISED CROSSWALKS



[www.pedbikeimages.org/Tom Harned](http://www.pedbikeimages.org/Tom_Harned)

SPEED CUSHIONS



NACTO Urban Street Design Guide

SPEED HUMP



[www.pedbikeimages.org/Dan Burden](http://www.pedbikeimages.org/Dan_Burden)

TRAFFIC CIRCLES



[www.pedbikeimages.org/Carl Sundstrom](http://www.pedbikeimages.org/Carl_Sundstrom)

Table 12. Application of Neighborhood Traffic Management Strategies

NTM APPLICATION	USE BY FUNCTION CLASSIFICATION			IMPACT	
	Arterials	Collectors	Local Streets	Speed Reduction	Traffic Diversion
Chicanes			■	■	■
Chokers			■	■	■
Curb Extensions	■	■	■	■	■
Diverter (with emergency vehicle pass-through)		■	■		■
Median Islands	■	■	■	■	■
Raised Crosswalks			■	■	■
Speed Cushions (with emergency vehicle pass-through)		■	■	■	■
Speed Hump			■	■	■
Traffic Circles			■	■	■
Pavement Texture		■	■	■	
Narrowing Travel Lanes	■	■	■	■	
Placing buildings, street trees, on-street parking, and landscaping next to the street	■	■	■	■	
Roundabout	■	■	■	■	
Mini-Roundabouts		■	■	■	

The City of Hutto currently does not have a formal neighborhood traffic management program. If such a program were desired to help respond to future issues, suggested elements include:

- Provide a formalized process for citizens who are concerned about the traffic on their neighborhood street. The process could include filing a citizen request with petition signatures and a preliminary evaluation. If the evaluation finds cause for concern, a neighborhood meeting would be held and formal data would be collected and evaluated. If a problem is found to exist, solutions would be identified and the process continued with neighborhood meetings, feedback from service and maintenance providers, cost evaluation, and traffic calming device implementation. Six months after implementation the device would be evaluated for effectiveness.
- For land use proposals, in addition to assessing impacts to the entire transportation network, traffic studies for new developments must also assess impacts to residential streets. A recommended threshold to determine if this additional analysis is needed is if the proposed project at ultimate build out increases through traffic on any one residential street by 200 or more vehicles per day. Once the analysis is performed, the threshold used to determine if residential streets are impacted would be if their daily traffic volume exceeds 1,200 vehicles.

TRAFFIC IMPACT ANALYSIS (TIA) GUIDELINES

Hutto Transportation Impact Analysis (TIA) requirements help minimize impacts on and protect transportation facilities.

Section 10.51.5.4 of the UDC includes the city's required content for a Transportation Impact Analysis (TIA). In general terms, the TIA applies to developments that are presumed to have a transportation impact. A professional engineer must prepare the TIA and must use appropriate data, methods, and standards. The recent adoption of a Roadway Traffic Impact Fee for new development in Hutto will require adjustments to the existing TIA guidelines. The TIF provides funding for many roadway projects needed to serve growth, but it is not a comprehensive list of all transportation improvements that will be required. The City is expected to re-assess when traffic studies are required to supplement the solutions that are provided for by the TIF, and update Section 10.51.5.4 of the UDC, accordingly.

OUTCOME

If constructed, the projects in this MMP would significantly improve transportation to and through Hutto for all modes of travel and would provide the transportation system described in the community's vision statement. Through steady implementation, which will require the constant pursuit of new funding sources, Hutto expects the following results by 2040:

Efficient Motor Vehicle Travel

Planned new streets enhance connectivity and ensure that efficient travel routes are provided when future development occurs. The greatest source of recurring congestion for Hutto residents is along arterial streets in the city, where local and regional travel converge to create bottlenecks. Continued cooperation with regional partners to secure funding and advance improvements along these corridors is a priority.

Affordable Travel Options

Investing in expanded transit service provides greatly enhanced utility by allowing more interested riders to make round trips to and from work, school, or other types of trips. A more useful transit system, along with user-friendly investments such as bus stop amenities, promote increased ridership and provide affordable means to travel between cities and access a wider range of services.

Safe Routes to Schools and Active Lifestyles

The network of active transportation facilities, including several new shared-use paths, provides comfortable non-motorized travel access across town and to regional attractions. Integration with regional active transportation networks and improved access to local parks provide new opportunities for healthy living. Sidewalk infill, enhanced street crossings, and dedicated bicycle facilities create safer routes between neighborhoods and schools. Improved local street connectivity shortens travel routes through neighborhoods, making walking and biking trips easier.

Safer Streets

Hazardous locations have been mitigated. More street lighting, enhanced street crossings, and a complete network of separate sidewalks, bike lanes, and shared-use paths across the city reduce risks for people walking and biking.

Preparing for Smart Mobility

Emerging vehicle technology and design approaches will shape our roads, communities, and daily lives. As vehicles become more connected, automated, shared, and electric, the way we plan, design, build, and use our transportation system will change.

When discussing these vehicles as a whole, they can be referred to as connected, automated, shared, and electric (CASE) vehicles. Many of these vehicles will not be exclusive of the others and it is important to think of the host of implications that arise from the combination of these technologies.



Connected Vehicles (CVs) will enable communications between vehicles, infrastructure, and other road users. This means that our vehicles will be able to assist human drivers and prevent crashes while making our system operate more smoothly.



Automated Vehicles (AVs) will, to varying degrees, take over driving functions and allow travelers to focus their attention on other matters. Today, we already have vehicles with combined automated functions such as lane keeping and adaptive cruise control. However, these still require constant driver oversight. In the future, more sophisticated sensing and programming technology will allow vehicles to operate with little to no operator oversight.



Shared Vehicles (SVs) are already on the road today that allow ride-hailing companies to offer customers access to vehicles through smart phone applications. Ride-hailing applications allow for on-demand transportation with comparable convenience to car ownership without the hassle of maintenance and parking. Ride-hailing applications can enable customers to choose whether share a trip with another person along their route, or travel alone.



Electric Vehicles (EVs) have been on the road for decades and are becoming more economically feasible as the production costs of batteries decline.

Planning for Change

The impacts of CASE vehicles on road capacity are uncertain. After CASE vehicles are widely adopted, there is a high likelihood that increases in road capacity will correspond with increasing traffic demand. We can expect that congestion will continue to persist.

The expected congestion can be used to encourage use of transit, shared vehicles, and bike share. These modes could all be encouraged through pricing mechanisms that are vastly less expensive to implement than building more road capacity. A variety of pricing mechanisms are enabled with CASE technology because these vehicles will be tracked geographically, and by time of day. With time/location data, transportation system operators will be able to develop pricing mechanisms that reduce congestion at a lower cost than other roadway improvements. Larger cities will be the first to implement these strategies and smaller cities should follow these developments closely.

Potential Impacts, Questions and Policy Considerations

CONGESTION AND ROAD CAPACITY

Anticipated Impacts

- AVs will provide a more relaxing or productive experience and people will have less resistance to longer commutes.
- Shared AVs will likely cost significantly less on a per mile basis, increasing demand for travel.
- CVs will allow vehicles to operate safely at closer following distances. In the long run, this will increase road capacity as CVs and AVs comprise increasing portions of the public and private fleet of vehicles.
- In the near term, as AVs still make up a fraction of the fleet of vehicles, road capacity could decrease as AVs operate more slowly and cautiously than regular vehicles.
- A new class of traffic — zero-occupant vehicles — will increase traffic congestion
- Roadways may need to be redesigned or better maintained to accommodate the needs of automated driving systems.

Questions

- How much will AVs cost for people to own them personally?
- How much will AVs cost if they are used as a shared fleet?
- How does cost and the improved ride experience of AVs influence travel behavior?
- How much more efficiently will AVs operate compared to regular human driven vehicles once they dominate the vehicle fleet?
- How will AVs impact road capacity in the near term as they are deployed in mixed traffic with human driven vehicles?
- What portion of traffic will be zero-occupant vehicles and what areas will likely generate the highest portion of zero-occupant vehicles looking for parking or waiting for their next passenger?

PARKING

Because AVs and Shared AVs will be able to park themselves, travelers will elect to get dropped off at their destination while the vehicle goes to find parking or its next passenger. With parking next to their destination no longer a priority for the traveling public, parking may be over-supplied in many areas and new opportunities to reconfigure land use will emerge.

Questions

- How does vehicle ownership impact parking behavior?
- What portion of the AV fleet will be shared?
- How far out of the downtown area will AVs be able to park while remaining convenient and readily available?

Considerations

- Consider building new parking garages that can be converted (with flat instead of ramped floors) to other uses in case AVs make them underutilized in their lifetime. If that isn't financially feasible, consider alternative transportation demand management strategies.
- Consider revising minimum parking requirements for new developments, especially in areas that are within one mile of transit.
- Consider system development charges that fund the installation of charging stations in new developments.

CURB SPACE

The ability to be dropped off at your destination will also create more potential for conflicts in the right-of-way between vehicles dropping off passengers, vehicles moving through traffic, and vehicles parked on the street. In urban areas with ride-hailing companies, popular destinations are already experiencing significant double-parking issues. Curb-space management is a growing consideration. Jurisdictions should inventory parking utilization and identify areas that could be converted from parking to curbside pick-up and drop-off zones.

PACKAGE DELIVERY

With the use of AVs to deliver packages, food, and expanded services, these vehicles will need to be accommodated in the right-of-way. For instance, if the AV parks at the curb in a neighborhood and smaller robots are used to deliver packages to the door, new conflicts will arise between vehicles, pedestrians, and bicyclists.

TRANSIT

AVs could become cost competitive with transit and undermine transit ridership as riders prefer a more convenient alternative. However, transit will remain the most efficient way to move high volumes of people through constricted urban environments. AVs will not eliminate congestion and as discussed above, could exacerbate it — especially in the early phases of AV adoption. In addition, shared AVs may not serve all areas of a community and under-served communities still require access to transit to meet daily needs.

To avoid potential equity and congestion issues, transit agencies need to work together to integrate the use of automated vehicles and transit. Transit needs to adapt to new competition in the transportation marketplace as well as consider adopting CASE technologies to support transit operations.

Considerations

- Partnering with ride-hailing companies to provide first and last-mile solutions.
- Working with ride-hailing companies and bike share to integrate payment platforms and enable one button purchase of a suite of transportation options for multi-modal trips.
- Creating fixed route autonomous shuttles to provide first and last-mile solutions.
- Creating on-demand autonomous shuttles to provide first and last-mile solutions.

ELECTRIC VEHICLE CHARGING

To accommodate a future where electric vehicles will come to dominate our vehicle fleet, charging station capacity will need to be increased. Cities, electric utilities, regions, and states will need to work together to meet the significant increase in demand.

MOBILITY HUBS

A mobility hub is a central location that serves as a multi-modal connection point for transit, car share, bike share, and ride share stations, see Figure 21. This system can serve as a tool to encourage travelers to take seamless multi-modal trips that are well timed and convenient. Mobility hubs make the most sense to put in transit centers that are located near urbanized areas with multi-modal supportive infrastructure (e.g., protected bike lanes) to maximize connectivity for first and last-mile solutions.

Figure 16. Mobility Hub



RESOLUTION NO. R

A RESOLUTION ADOPTING THE HUTTO MOBILITY MASTER PLAN.

WHEREAS, the City Council of the City of Hutto, Texas, recognizes the need to provide a safe and mobility networks for the citizens of Hutto, Texas, and;

WHEREAS, the City recognizes the need for long term mobility master planning that aims to serve Hutto, and;

WHEREAS, The City recognizes the need for the infrastructure to mitigate continued growth and mobility concerns, and;

WHEREAS, the Mobility Master Plan addresses and is tailored to meet Hutto's needs has been prepared.

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

That the City Council hereby adopts on behalf of the City the Hutto Mobility Master Plan.

CONSIDERED and RESOLVED by the City Council of the City of Hutto on this the **19th** day of **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

CITY OF HUTTO CITY COUNCIL AGENDA

AGENDA ITEM NO.:

10E.

AGENDA DATE: July 19, 2018

PRESENTED BY:

Matthew A. Rector Sr., PE, CFM,
Executive Director of Engineering and
Public Works

ITEM:

Consideration and possible action on the 2018 - 2028 Wastewater Master Plan.

STRATEGIC GUIDE POLICY: Infrastructure & Growth

ITEM BACKGROUND:

The update of the Wastewater Master Plan was included in the 2018 Capital Improvements Plan. On September 21, 2017 the Hutto City Council approved a resolution awarding a contract for the Wastewater Master Plan.

The purpose of the Wastewater Master Plan is to perform an evaluation of the City of Hutto's wastewater infrastructure and make recommendations for improvements and other options that the City should consider in future Capital Improvements Planning and policy updates.

DCS has reviewed the data, studies, existing infrastructure, ran predictive modeling and developed a list of recommendations for CIP projects as well as other policy recommendations.

BUDGETARY AND FINANCIAL SUMMARY:

There is no budget implication for the adoption of the plan. The contract for the completion of the plan was for \$158,780.00.

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

Planning and Zoning Commission reviewed the plan on July 17, 2018.

CITY ATTORNEY REVIEW:

Not applicable.

STAFF RECOMMENDATION:

Staff recommends adoption of the plan.

SUPPORTING MATERIAL:

1. [Wastewater Master Plan \(7-12-18\)](#)
2. [Resolution](#)

CITY OF HUTTO



WASTEWATER MASTER PLAN

July 2018

Prepared by:



DCS Engineering, LLC
1101 S. Capital of Texas Highway, Building G-100
Austin, Texas 78746
Tel: (512) 614-6171
T.B.P.E. Firm No. F-13162
Project Number: 20101346

CITY OF HUTTO



WASTEWATER MASTER PLAN

July 2018



7/12/18
11 Darren Strozewski

Prepared by:



DCS Engineering, LLC
1101 S. Capital of Texas Highway, Building G-100
Austin, Texas 78746
Tel: (512) 614-6171
T.B.P.E. Firm No. F-13162
Project Number: 20101346

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Section 1

Executive Summary

1.1 PURPOSE

The purpose of this Wastewater Master Plan (WWMP) is to perform an evaluation of the City of Hutto's (City) wastewater collection and treatment system inclusive of the current and ultimate conditions. The City completed its first WWMP in 2012. However, this 2012 study was primarily focused on the treatment process to be selected for the South Wastewater Treatment Plant (WWTP) and didn't include areas of emphasis on the wastewater collection system and/or WWTP service area limits for short term or long term needs. Since the 2012 study was completed, the South WWTP has been constructed and is now in service; and a number of collection system projects have been planned, designed, and built.

The quantitative data contained in this WWMP will help guide the City in managing its wastewater utility growth and assess regulatory compliance. It will also provide the necessary tools to efficiently analyze and propose modifications to the City's wastewater systems as part of an overall strategic plan. The WWMP is planned to be revised every five years and coordinated with related plans by the City, including but not limited to the City's Capital Improvement Plan (CIP) and Growth Guidance Plan. This will assist in the selection and prioritization of CIP projects. The WWMP is an integral part of the City's mission to ensure the proper collection system and treatment facilities are in place to handle its citizen's current needs and match the City's needs of a growing community.

This 2018 WWMP includes a more comprehensive and holistic analysis including the collection system, WWTP service areas for interim and ultimate conditions, lift stations and forcemains for interim and ultimate conditions, and receiving stream discharge limits from interim and ultimate WWTP discharges. This report expands the planning required for the efficient continued growth of the collection system and treatment facilities. Excluded from this effort was surveying and field analysis of existing infrastructure. As the City's population continues to grow, updating the WWMP will be warranted to accommodate the latest land use and population projections so that current and future wastewater demands are proactively met.

1.2 INTRODUCTION AND BACKGROUND

The City of Hutto is one of the fastest growing cities in Williamson County, experiencing its most rapid growth in the early 2000s. The 2000 Census reported a population of 1,250 residents within the City limits (U.S. Census Bureau, Census 2000 Summary) and by 2005 the City's population had grown to an estimated 7,401 residents. By 2010 the population had almost doubled since 2005, and as of 2017 the City has recorded a population of 26,950 in City limits. With the latest recorded population in 2017, the population increase for the City since 2000 is over 2,100 percent. While these numbers demonstrate the

rapid growth within City limits, this report will focus on growth within the much larger boundary, the City's WW CCN.

In November 2017, the City requested a significant expansion to their WW CCN through the Public Utility Commission of Texas (PUC). This expanded the City CCN primarily north and east, to the San Gabriel River and FM 3349/CR 101, respectively. There were a few tracts along FM 3349 that opted out of the City's WW CCN expansion. The City's new WW CCN limits extend to the extraterritorial jurisdictions (ETJ's) and/or WW CCN's of the City of Georgetown and City of Taylor to the northwest and northeast, respectively. To the south and west, Hutto's WW CCN limits are currently bounded by the City of Pflugerville and City of Round Rock, respectively. As a result, this WW CCN expansion for all practical purposes will be the City's ultimate WW CCN, barring any unforeseen WW CCN adjustments with the above listed neighboring cities. It should be noted here that the City recently negotiated taking possession of Jonah Special Utility District's entire WW CCN (about 1,500 acres) into the City's WW CCN limits. This trapezoidal area located just north of Limmer Loop joined the City's WW CCN effective January 29, 2018. Thus, the City's WW CCN (i.e. study area) includes approximately 32,208 acres as shown in Figure No. 2.1. Neighboring ETJ and WW CCN boundaries are also shown in this figure.

Closely tied to the rapid population growth, the number of wastewater connections has steadily climbed in recent history. The City saw its largest periods of growth in the years prior to the financial crisis of 2007-2008. From 2004 to 2008, total wastewater connections increased from 2,068 in January 2004 to 4,846 in January 2008. This resulted in an average of 19% growth each year. After the financial crisis, growth slowed but continued year after year. Over the last 10 years, the number of wastewater connections has climbed to 7,912. As of December 2017, the average growth was 4.9% annually from 2004 to 2017. The growth in wastewater connections is shown in Figure No. 2.4.

As the wastewater connections grow, the total wastewater flow will typically increase as well. DCS obtained the recorded flows for the past 12 years for the Central WWTP and South WWTP and added them together to obtain a total wastewater flow growth as shown in Figure No. 2.3. It should be noted here that the South WWTP has only been active since February 2017. From 2006 to 2015, the total flow had increased by 196%. Conversely, the flow has remained fairly flat in 2016 and 2017 with an average flow of about 1.29 mgd.

Several areas in the WW CCN are in different stages of the development process with the City, reflecting the active growth in Hutto. Proposed developments include a combination of single family housing sub divisions, multifamily housing, industrial spaces, retail/mixed use, and office space. DCS has coordinated with the City on location, wastewater contribution, and timeframe for each of the planned developments. In total, about 8,000 LUEs are in the various stages of development activity for addition into the wastewater system. Approximately 52% of these (i.e. 4,160 LUEs) are within the existing service area of the Central WWTP; and the other 48% are located in the South WWTP's existing service area.

The City contracted with DCS Engineering, LLC (DCS) to develop this WWMP. The scope of work for developing the WWMP included past system analysis, existing wastewater system analysis, future wastewater demand projections, modeling of the future system, and recommendations for system improvements. The recommended system improvements are included in the CIP List as Table No. 4-1.

1.3 ANALYSIS OF EXISTING WASTEWATER SYSTEM

The City has been growing steadily over the past 15 years and recorded a population of 26,950 in 2017 per City staff. This population represents only those customers who are within the city limits of the City of Hutto. However, this WWMP reflects population projections for the much larger area as described above for the City's WW CCN. Infrastructure in Hutto has continued to develop to match the population growth in the area. The City's collection system is comprised of two trunk line interceptors, numerous small diameter collection lines, six lift stations with associated force mains, and two WWTPs as shown in Figures No. 2.2 and 2.3. The two interceptors are Cottonwood Creek Interceptor and Brushy Creek Interceptor. The lift stations (LS) vary in size and include: Country Estates LS, Creekside LS, Glenwood LS, Farley School LS, Enclave LS, and Lakeside Estates LS. There are three existing WWTPs within Hutto's ETJ. Two of these WWTPs are owned and operated by the City within the limits of the City's WW CCN which include the Central WWTP and South WWTP.

The Central WWTP receives flow from the Cottonwood Creek Interceptor by gravity and three existing lift stations with associated forcemains (i.e. Country Estates LS, Creekside LS, and Glenwood LS) as shown in Figure No. 2.3. The South WWTP receives flow from the Brushy Creek Interceptor via the Enclave LS via a 20" forcemain which is the only point of entry to the South WWTP for wastewater. It should be noted here that the Farley LS forcemain has been rerouted to connect into the Enclave LS forcemain. Thus, the flow from the Farley LS is being pumped to the South WWTP. Lastly, the Lakeside Estates LS and FM currently pumps its flow to the City of Pflugerville's wastewater system per an agreement which ends in January 2020.

Capacity analysis on existing interceptors was performed in accordance with the criteria outlined in Section 2.4.1 for Design Requirements. The models developed for existing interceptors included branches of the network in concert with data collected from record drawings to confirm pipe size and slope. The flows generated from upstream sub-basins were incrementally added, at their respective manhole/node, to the interceptor as flows were conveyed downstream. Thus, existing and ultimate interceptor diameters were confirmed so that future development could obtain adequate wastewater capacity and/or requisite improvements identified to provide additional capacity for service.

The Central WWTP and South WWTP are operated by Brazos River Authority (BRA) under a contract with the City. These two WWTPs are currently permitted to treat a total of 3.7 mgd (1.7 mgd at the Central WWTP and 2.0 mgd at the South WWTP). Average flow from 2017 at the Central WWTP was 0.945

mgd and 0.324 mgd at the South WWTP (Feb 2017-Dec 2017). The total combined flow equals 1.27 mgd for the City. However, the strength of the wastewater (i.e. biological oxygen demand) is significantly higher than what these two WWTPs were originally designed to treat in 2006 and 2014, respectively. The biological oxygen demand (BOD) will be discussed in more detail in the below sections. Thus, the WWTP capacities have to be rerated to account for this so that the WWTPs can meet the TCEQ regulated discharge limits per their respective permits. Thus, the approximated rerated capacity totals 2.49 mgd versus the above mentioned 3.7 mgd of capacity. Discussion of these plants is described in the sections below and it must be emphasized here that a detailed process analysis must be conducted to verify the above estimated rerated capacity. This process analysis was beyond the scope of work for this WWMP.

The third plant, Forest Creek WWTP, is owned and operated by Southwest Water Company (SWWC). The Forest Creek WWTP is located on Star Ranch Golf Course and serves land within the City's ETJ. However, the service area for this WWTP, shown in Figure No. 2.2, is comprised of land that lies within two utility districts (i.e. not part of Hutto's WW CCN) including Williamson County Municipal Utility District 22 and Water Sewer and Irrigation District 3. Presently, City infrastructure doesn't exist within these areas and these areas are not within the City's WW CCN. Thus, the Forest Creek WWTP service area was excluded from this WWMP effort.

Lastly, there are additional areas of existing development in the City's WW CCN that are currently on septic sewer systems and which are not being served by the City's collection system and WWTPs. These areas are shown in Figure No. 2.2. These developed areas for all practical purposes will remain on their septic systems due to the cost prohibitive nature of extending City services to them. Thus, these existing developments are excluded from the sizing of the collection system or WWTP capacities for the City's facilities.

1.4 ANALYSIS OF FUTURE WASTEWATER SYSTEM

Continued development and population growth within the City will place higher demands on the existing wastewater system. The City's population began to skyrocket in the early 2000's, growing exponentially and earning the title of fastest-growing city in the U.S. Although the pace of growth decelerated with the 2007-2009 recession, it has picked back up in recent years. While future population estimates can vary greatly depending on the methodology used, population projections serve as the primary basis for determining future wastewater demands and evaluating how the future wastewater system can be planned and structured to meet these demands.

Population projections considered multiple sources of information including the 2012 Wastewater Master Plan, 2016 Water Master Plan, U.S. Census Bureau, Texas Water Development Board, and the Hutto 2040 Plan. The projections from each of these were compared, but could not be solely used due to the fact that they only projected growth within the City limits. Because this study's area is the City's recently

expanded WW CCN, which does not coincide with the City limits, growth percentages per year were considered rather than using the actual population numbers to develop projections. The resulting growth percentages were then applied to wastewater connections/LUEs to obtain wastewater flow projections.

After lengthy conversations with City Staff, growth rates based on a percent basis were used for the next three years at which time the growth has been assumed to level off and be maintained at a fixed rate (i.e. LUEs per year). More specifically, over the next three years, growth rates of 8%, 10%, and 12% have been utilized to estimate the expected growth, respectively. In terms of wastewater connections, a total of 2,615 LUEs are added over the next three years. After these first three years, a market saturation rate has been assumed to be reached where the market cannot produce and absorb any additional LUEs due to availability of materials, labor, financing, agency review/approvals, etc. Based on growth rates and LUEs seen from the cities of Round Rock, City of Hutto, and City of Pflugerville in the 2006-2007 timeframe, this saturation point is expected to be about 1,128 LUEs per year for the City of Hutto. Projections were begun with the existing number of connections/LUEs being served by the City as of December 2017 of 7,912. Projections for the next 10 years are shown below in Table No. 3.1 based on the above methodology.

Based on growth rates outlined above, the City's WW CCN will reach its projected ultimate build-out of about 86,000 LUEs by 2088. Using the City's 3.04 people per LUE, the WW CCN service area population is projected to reach about 56,000 people by 2028, more than doubling the City-limit 2017 population of 26,950. At ultimate build out, the WW CCN service area's total population will be approximately 262,000. For clarity, this population projection is for the WW CCN limit (i.e. master plan study area) which is significantly larger than the City's existing City Limits and ETJ. The Central WWTP will ultimately be expanded to treat 3.25 mgd and the South WWTP will ultimately be expanded to treat 15.38 mgd.

The Central WWTP is located south of Hwy 79 along Cottonwood Creek and serves most of the developed acreage in the wastewater system as shown in Figure No. 2.2. This WWTP's service area is expected to be reduced in the future, as shown in Figure No. 3.2, with the decommissioning of Country Estates, Creekside, and Glenwood Lift Stations which currently flow to the Central WWTP. These lift stations serve 3,244 existing LUEs which generate approximately 0.606 mgd of actual flow (i.e. 187 gpd/LUE per Section 2). The actual flow is calculated here using 187 gpd/LUE so that when flows are discussed for diversion to the South WWTP later in this section, an accurate volume is reflected in the flow projection graphs. However, for long term planning of interceptor sizes and WWTP capacities, 225 gpd/LUE is still be used for planning and discussion purposes. The current flow to this WWTP is averaging 0.940 mgd.

As discussed in Section 2 with respect to BOD loading, the existing Central WWTP's derated capacity is 0.990 mgd. With a measured flow in 2018 averaging 0.940 mgd, the WWTP is operating at 95% of its derated capacity. Moreover, approximately 8,000 LUEs currently are actively being pursued for development in the City's WW CCN and are planned to be added in the near future. Approximately 52% of these geographically fall within the ultimate service area limits of the Central WWTP. This results in an

additional 4,160 LUEs or 0.936 mgd being added to the Central WWTP. Based on this, a flow projection graph has been generated as shown in Figure No. 3.3. This graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 0.990 mgd derated capacity line, 1.70 mgd permitted capacity line, 3.25 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE.

The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached in 2042 at 3.25 mgd, if the Glenwood, Creekside, and Country Estates Lift Stations are not diverted to the South WWTP.
2. The WWTP has 50,000 gpd of capacity left in it (i.e. 222 additional LUEs).
3. 0.990 mgd capacity is projected to be reached in January 2019 (7 months from today) and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 1.7 mgd. Approximately 24 months would be required to design, bid, and build these improvements. Thus, sufficient time to implement this doesn't exist.
4. A WWTP capacity of 1.70 mgd would be fully utilized by September 2026. At this date, construction to expand capacity to 3.25 mgd would need to be completed.
5. Alternatives to divert one or more lift station flows coming from Glenwood, Creekside, and/or Country Estates Lift Stations to the South WWTP would defer the above required construction at Central WWTP.

The South WWTP is located adjacent to FM 1660 along Brushy Creek and serves the developed acreage in the wastewater system as shown in Figure No. 2.2. This WWTP's service area is expected to be expanded in the future, as shown in Figure No. 3.2, with the decommissioning of Country Estates, Creekside, and Glenwood Lift Stations which currently flow to the Central WWTP. These lift stations serve 3,244 existing LUEs which generate approximately 0.606 mgd of actual flow (i.e. 187 gpd/LUE per Section 2). The current flow to the South WWTP is averaging 0.320 mgd. As discussed in Section 2 with respect to BOD loading, the existing South WWTP's derated capacity is 1.50 mgd. With a measured flow in 2018 averaging 0.320 mgd, the WWTP is operating at 21% of its derated capacity. Moreover, approximately 8,000 LUEs currently are actively being pursued for development in the City's WW CCN and are planned to be added in the near future. Approximately 48% of these geographically fall within the ultimate service area limits of the South WWTP. This results in an additional 3,840 LUEs or 0.864 mgd being added to the South WWTP. Based on this, a flow projection graph has been generated as shown in Figure No. 3.4.

This graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 1.50 mgd derated capacity line, 2.0 mgd permitted capacity line, 4.0 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. Although not shown on the graph, the projected build out year for the service area is reached in 2089 at 15.38 mgd, if the Glenwood, Creekside, and Country Estates Lift Stations are not diverted to the South WWTP.
2. The WWTP has 1.18 mgd of capacity left in it (i.e. 5,244 additional LUEs).
3. 1.50 mgd capacity is projected to be reached in August 2031 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 2.0 mgd. Thus, sufficient time to implement this project exists.

4. A WWTP capacity of 2.0 mgd would be fully utilized by December 2036. At this date, construction to expand capacity to 4.0 mgd would need to be completed.
5. Alternatives to divert one or more lift station flows coming from Glenwood, Creekside, and/or Country Estates Lift Stations to the South WWTP would move up the dates required to achieve the above milestones.

As identified in flow projection graphs shown in Figure No. 3.3 and 3.4, the City is at a point in time that action is required to be taken to address capacity issues for the Central WWTP service area. Thus, DCS generated the following flow projection graphs for a potential solution that reflects a project to divert the Glenwood and Creekside Lift Stations to the South WWTP; and divert the Lakeside Lift Station to the South WWTP within about 18 months from today (i.e. by March 2020). This opportunity identifies an incremental way to implement a solution set so the capital expenditures by the City may be deferred as long as possible including but not limited to the phased transfer of flow from the Central WWTP to the South WWTP.

For the Central WWTP Flow Projection graph shown in Figure 3.5, the graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 0.990 mgd derated capacity line, 1.70 mgd permitted capacity line, 3.25 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached 5 years later in 2047 for 3.25 mgd, if the Glenwood and Creekside Lift Stations (i.e. 0.484 mgd) are diverted to the South WWTP.
2. 0.484 mgd of capacity is freed up at the Central WWTP to accommodate about 2,588 LUEs.
3. 0.990 mgd capacity is projected to be reached 5.75 years later in August 2024 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 1.7 mgd. Thus, sufficient time to implement this project exists.
4. A WWTP capacity of 1.70 mgd would be fully utilized by August 2031. At this date, construction to expand capacity to 3.25 mgd would need to be completed.
5. In 2047, flows from the Megasite development would be required to be diverted to the South WWTP for permanent treatment.

For the South WWTP Flow Projection graph shown in Figure 3.6, the graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 1.50 mgd derated capacity line, 2.0 mgd permitted capacity line, 4.0 mgd permitted capacity line, 6.0 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached 5 years earlier in 2084 for 15.38 mgd, if the Glenwood and Creekside Lift Stations (i.e. 0.484 mgd) are diverted to the South WWTP.
2. 0.484 mgd of capacity is used at the South WWTP for about 2,588 LUEs leaving 2,656 LUEs of capacity at this WWTP.
3. 1.50 mgd capacity is projected to be reached 6.75 years earlier in January 2025 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 2.0 mgd. Thus, sufficient time to implement this project exists.
4. A WWTP capacity of 2.0 mgd would be fully utilized by July 2030. At this date, construction to expand capacity to 4.0 mgd would need to be completed.

5. In 2046, flows from the Megasite development would be required to be diverted to the South WWTP for permanent treatment which would require the South WWTP to be expanded to 6.0 mgd by this date.

Improvements to the wastewater collection and treatment system include additional interceptors, lift stations with force mains, lift station decommissioning, improvements at the existing WWTPs, and expansion of existing WWTPs. Improvements were designed to meet the projected system growth (population and demands) over time by planning for adequate infrastructure to collect and treat the flow. These recommendations include implementing the improvements at the Central WWTP to restore the actual capacity back to the permitted capacity of 1.7 mgd and are summarized in more detail in the Figures and Tables included in Section 4.

1.5 CAPITAL IMPROVEMENT PLAN OVERVIEW

The WWMP is one of several strategic plans adopted by the City to assist in the selection and prioritization of CIP projects. It should be noted that the timing of many wastewater utility projects can only be estimated, as many wastewater projects are directly related to additional collection or treatment demands that may be dependent on the timing of development within the City. With the recommended improvements to the system, the City will be able to accomplish its goal meeting the wastewater demands of a growing community of residents and businesses within its WW CCN.

The proposed projects in the five year CIP have been identified as priority due to the ongoing activity in the City. Two of the most immediate projects address compliance with WWTP compliance with TCEQ; and an expiring contract for flows being treated by City of Pflugerville. First, the improvements at the Central WWTP site are critical to ensure effluent is being treated to the required levels per the TCEQ discharge permit; and capacity for growth in this service area is provided. Second, the Lakeside Estates LS is pumping 557 LUEs to Pflugerville for which the City must pay for them to treat. This contract expires in January 2020 and is an opportunity for the City to treat this flow and gain revenue from existing Hutto WW CCN customers.

Projects in the five year CIP list include interceptors and WWTP improvements totaling \$17.1 million. The ten year CIP list includes interceptors that will flow to the South WWTP as well as on-site lift stations totaling \$94.7 million. This yields a total CIP List cost of \$111.8 as shown in Figure No. 4-1 and listed in Table No. 4-1. The Brushy Creek Interceptor will serve areas currently already contributing to the system but will also allow the decommissioning of City lift stations. The other major interceptor, CR 3349, will set up ultimate service along the eastern half of the WW CCN. The two South WWTP on-site lift stations will serve these interceptors to bring their flow into the headworks at the plant. Similar to the Central WWTP, the South WWTP must make improvements to upgrade its actual capacity to the permitted 2.0 mgd due to the higher BOD concentrations.

Section 2

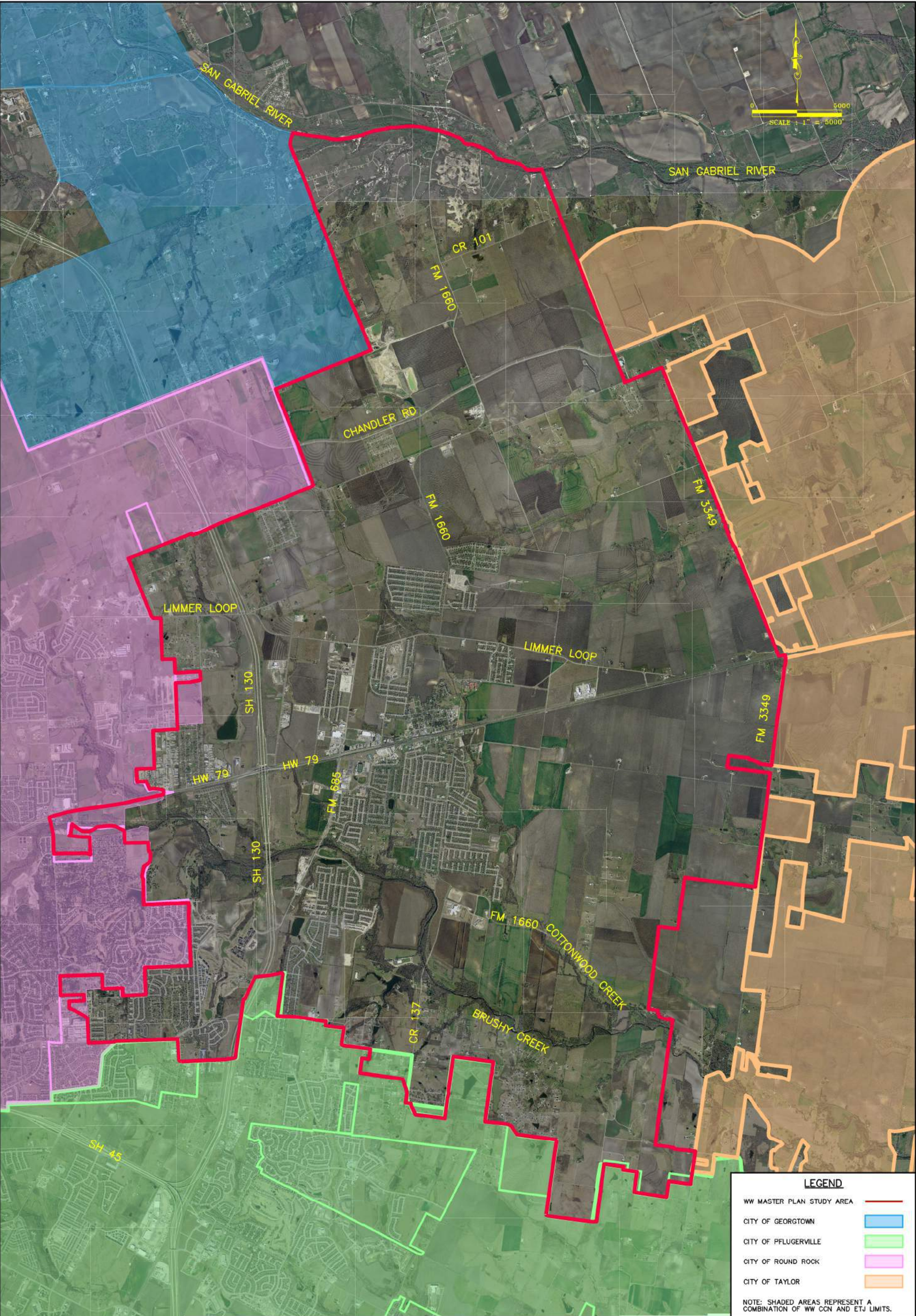
Existing Wastewater System

2.1 SYSTEM OVERVIEW

In November 2017, the City requested a significant expansion to their WW CCN through the Public Utility Commission of Texas (PUC). This expanded the City CCN primarily north and east, to the San Gabriel River and FM 3349/CR 101, respectively. There were a few tracts along FM 3349 that opted out of the City's WW CCN expansion. The City's new WW CCN limits extend to the extraterritorial jurisdictions (ETJ's) and/or WW CCN's of the City of Georgetown and City of Taylor to the northwest and northeast, respectively. To the south and west, Hutto's WW CCN limits are currently bounded by the City of Pflugerville and City of Round Rock, respectively. As a result, this WW CCN expansion for all practical purposes will be the City's ultimate WW CCN, barring any unforeseen WW CCN adjustments with the above listed neighboring cities. It should be noted here that the City recently negotiated taking possession of Jonah Special Utility District's entire WW CCN (about 1,500 acres) into the City's WW CCN limits. This trapezoidal area located just north of Limmer Loop joined the City's WW CCN effective January 29, 2018. Thus, the City's WW CCN (i.e. study area) includes approximately 32,208 acres as shown in Figure No. 2.1. Neighboring ETJ and WW CCN boundaries are also shown in this figure.

The City has been growing steadily over the past 15 years and recorded a population of 26,950 in 2017 per City staff. This population represents only those customers who are within the city limits of the City of Hutto. However, this WWMP reflects population projections for the much larger area as described above for the City's WW CCN. Infrastructure in Hutto has continued to develop to match the population growth in the area. The City's collection system is comprised of two trunk line interceptors, numerous small diameter collection lines, six lift stations with associated force mains, and two WWTPs as shown in Figures No. 2.2 and 2.3. The two interceptors are Cottonwood Creek Interceptor and Brushy Creek Interceptor. The lift stations (LS) vary in size and include: Country Estates LS, Creekside LS, Glenwood LS, Farley School LS, Enclave LS, and Lakeside Estates LS. There are three existing WWTPs within Hutto's ETJ. Two of these WWTPs are owned and operated by the City within the limits of the City's WW CCN which include the Central WWTP and South WWTP.

The Central WWTP receives flow from the Cottonwood Creek Interceptor by gravity and three existing lift stations with associated forcemains (i.e. Country Estates LS, Creekside LS, and Glenwood LS) as shown in Figure No. 2.3. The South WWTP receives flow from the Brushy Creek Interceptor via the Enclave LS via a 20" forcemain which is the only point of entry to the South WWTP for wastewater. It should be noted here that the Farley LS forcemain has been rerouted to connect into the Enclave LS forcemain. Thus, the flow from the Farley LS is being pumped to the South WWTP. Lastly, the Lakeside Estates LS and FM

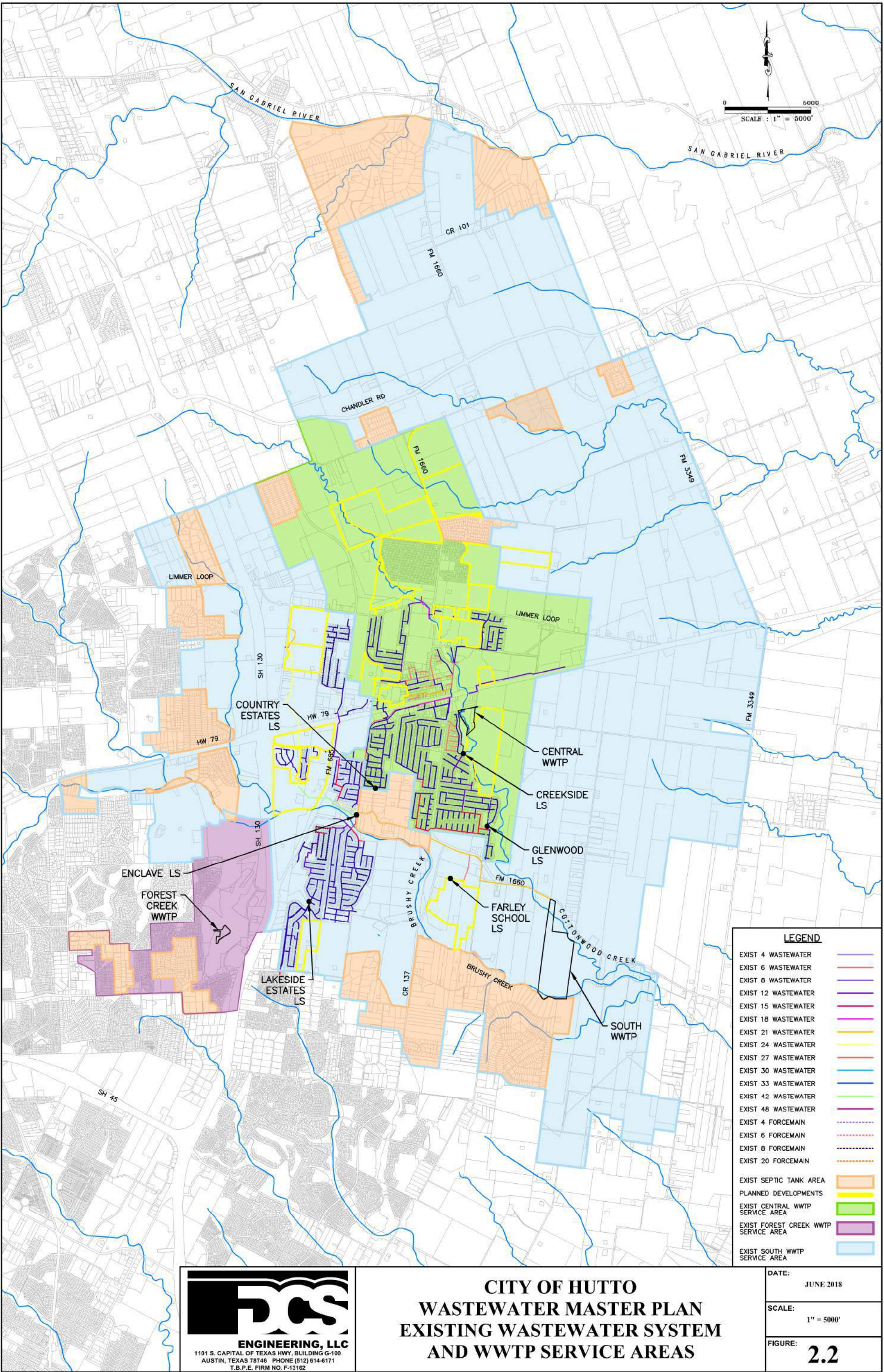


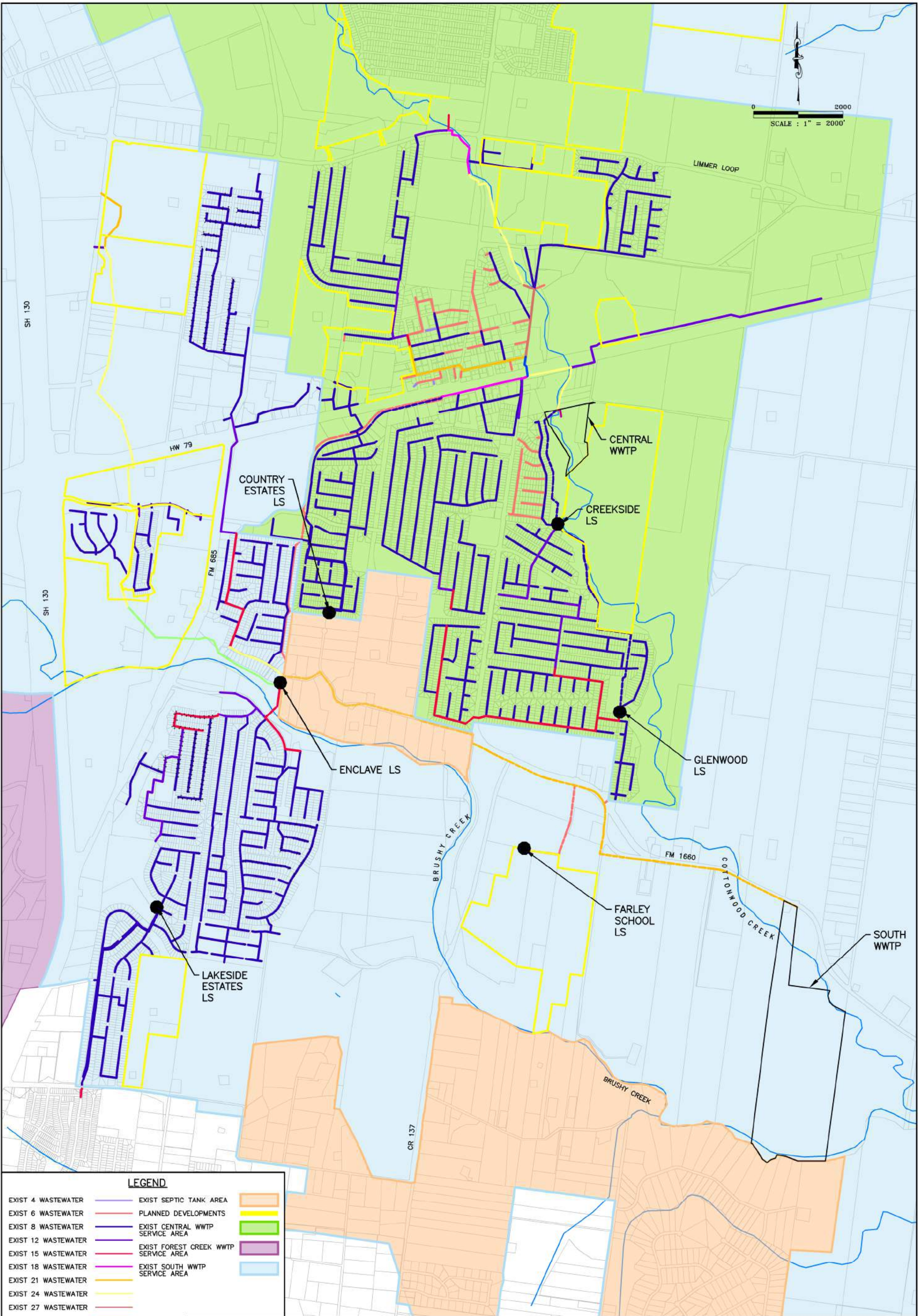
CITY OF HUTTO WASTEWATER MASTER PLAN STUDY AREA MAP

DATE:
JUNE 2018

SCALE:
1" = 5000'

FIGURE:
2.1





LEGEND

EXIST 4 WASTEWATER	EXIST SEPTIC TANK AREA	
EXIST 6 WASTEWATER	PLANNED DEVELOPMENTS	
EXIST 8 WASTEWATER	EXIST CENTRAL WWTP SERVICE AREA	
EXIST 12 WASTEWATER	EXIST FOREST CREEK WWTP SERVICE AREA	
EXIST 15 WASTEWATER	EXIST SOUTH WWTP SERVICE AREA	
EXIST 18 WASTEWATER		
EXIST 21 WASTEWATER		
EXIST 24 WASTEWATER		
EXIST 27 WASTEWATER		
EXIST 30 WASTEWATER		
EXIST 33 WASTEWATER		
EXIST 42 WASTEWATER		
EXIST 48 WASTEWATER		
EXIST 4 FORCEMAIN		
EXIST 6 FORCEMAIN		
EXIST 8 FORCEMAIN		
EXIST 20 FORCEMAIN		



ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HWY, BUILDING G-100
AUSTIN, TEXAS 78746 PHONE (512) 614-6171
T.B.P.E. FIRM NO. F-13162

CITY OF HUTTO
WASTEWATER MASTER PLAN
EXISTING WASTEWATER SYSTEM

DATE:	JUNE 2018
SCALE:	1" = 2000'
FIGURE:	2.3

currently pumps its flow to the City of Pflugerville's wastewater system per an agreement which ends in January 2020.

The Central WWTP and South WWTP are operated by Brazos River Authority (BRA) under a contract with the City. These two WWTPs are currently permitted to treat a total of 3.7 mgd (1.7 mgd at the Central WWTP and 2.0 mgd at the South WWTP). Average flow from 2017 at the Central WWTP was 0.945 mgd and 0.324 mgd at the South WWTP (Feb 2017-Dec 2017). The total combined flow equals 1.27 mgd for the City. However, the strength of the wastewater (i.e. biological oxygen demand) is significantly higher than what these two WWTPs were originally designed to treat in 2006 and 2014, respectively. The biological oxygen demand (BOD) will be discussed in more detail in the below sections. Thus, the WWTP capacities have to be rerated to account for this so that the WWTPs can meet the TCEQ regulated discharge limits per their respective permits. Thus, the approximated rerated capacity totals 2.49 mgd versus the above mentioned 3.7 mgd of capacity. Discussion of these plants is described in the sections below and it must be emphasized here that a detailed process analysis must be conducted to verify the above estimated rerated capacity. This process analysis was beyond the scope of work for this WWMP.

The third plant, Forest Creek WWTP, is owned and operated by Southwest Water Company (SWWC). The Forest Creek WWTP is located on Star Ranch Golf Course and serves land within the City's ETJ. However, the service area for this WWTP, shown in Figure No. 2.2, is comprised of land that lies within two utility districts (i.e. not part of Hutto's WW CCN) including Williamson County Municipal Utility District 22 and Water Sewer and Irrigation District 3. Presently, City infrastructure doesn't exist within these areas and these areas are not within the City's WW CCN. Thus, the Forest Creek WWTP service area was excluded from this WWMP effort.

Lastly, there are additional areas of exiting development in the City's WW CCN that are currently on septic sewer systems and which are not being served by the City's collection system and WWTPs. These areas are shown in Figure No. 2.2. These developed areas for all practical purposes will remain on their septic systems due to the cost prohibitive nature of extending City services to them. Thus, these existing developments are excluded from the sizing of the collection system or WWTP capacities for the City's facilities.

2.2 HISTORICAL GROWTH

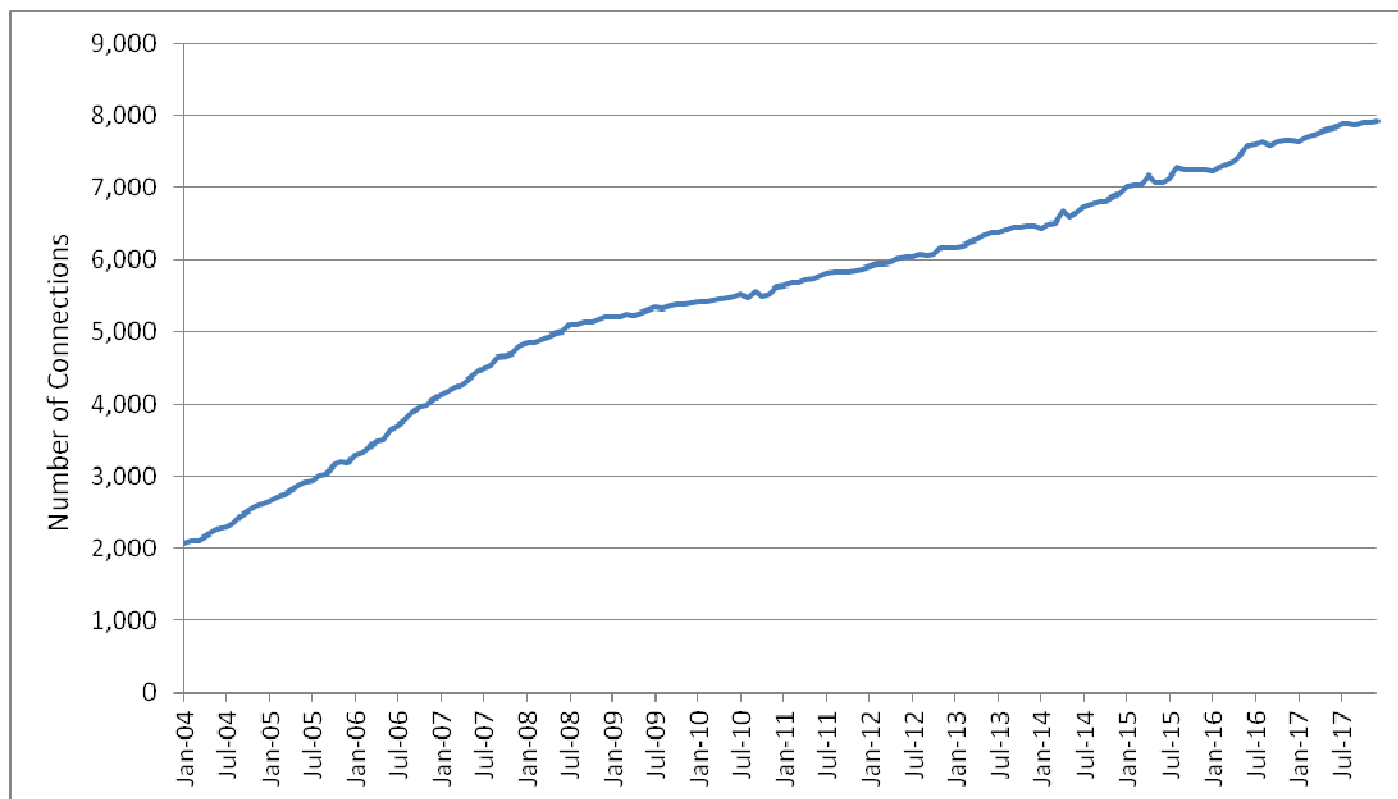
The City of Hutto is one of the fastest growing cities in Williamson County, experiencing its most rapid growth in the early 2000s. The 2000 Census reported a population of 1,250 residents within the City limits (U.S. Census Bureau, Census 2000 Summary) and by 2005 the City's population had grown to an estimated 7,401 residents. By 2010 the population had almost doubled since 2005, and as of 2017 the City has recorded a population of 26,950 in City limits. With the latest recorded population in 2017, the population increase for the City since 2000 is over 2,100 percent. While these numbers demonstrate the

rapid growth within City limits, this report will focus on growth within the much larger boundary, the City's WW CCN.

2.2.1 WASTEWATER CONNECTION GROWTH

The City of Hutto provides wastewater service to both residential and commercial customers. Closely tied to the rapid population growth, the number of wastewater connections has steadily climbed in recent history. The City saw its largest periods of growth in the years prior to the financial crisis of 2007-2008. From 2004 to 2008, total wastewater connections increased from 2,068 in January 2004 to 4,846 in January 2008. This resulted in an average of 19% growth each year. After the financial crisis, growth slowed but continued year after year. Over the last 10 years, the number of wastewater connections has climbed to 7,912. As of December 2017, the average growth was 4.9% annually from 2004 to 2017. The growth in wastewater connections is shown below in Figure No. 2.4.

Figure No. 2.4 - Wastewater Connection Growth

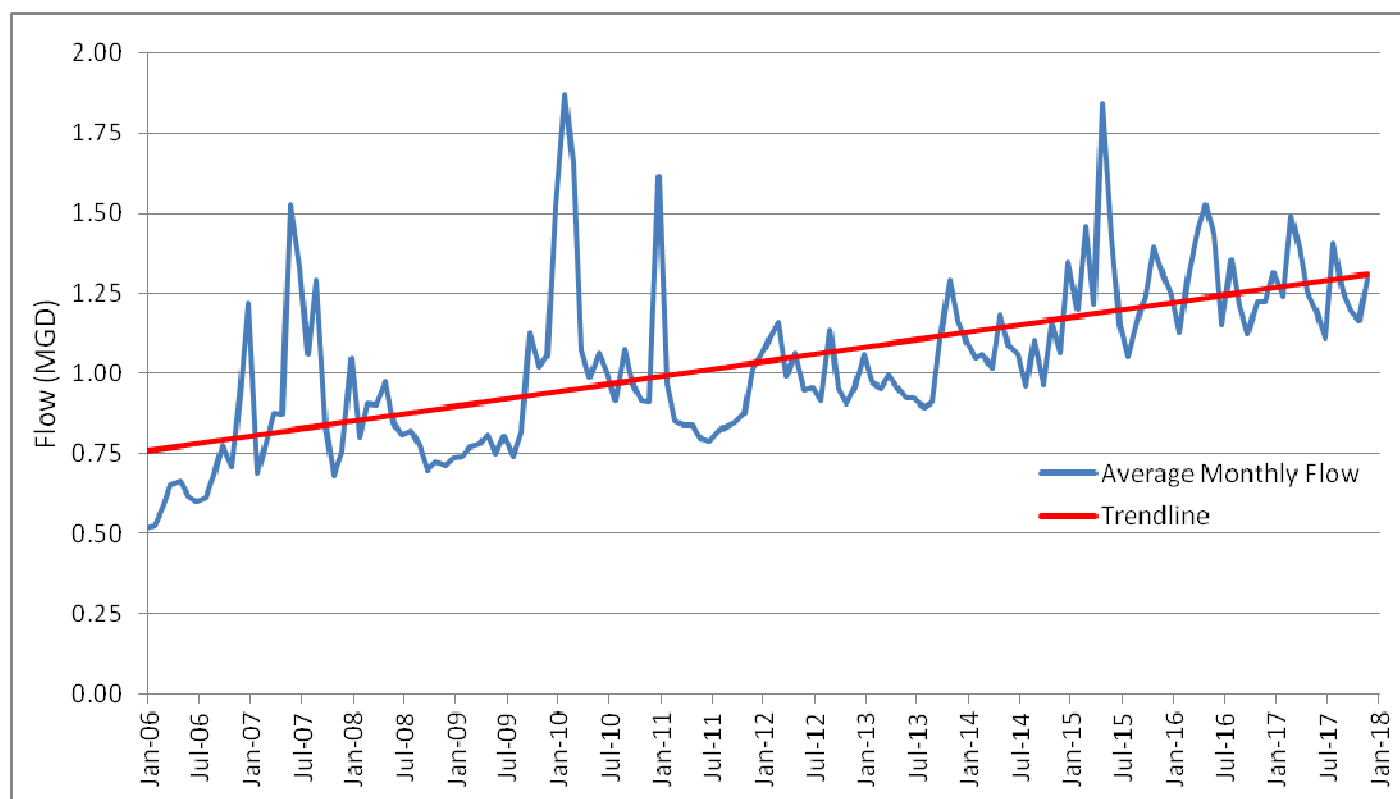


2.2.2 WASTEWATER FLOW GROWTH

As the wastewater connections grow, the total wastewater flow will typically increase as well. DCS obtained the recorded flows for the past 12 years for the Central WWTP and South WWTP and added them together to obtain a total wastewater flow growth as shown in Figure No. 2.3. It should be noted here that the

South WWTP has only been active since February 2017. From 2006 to 2015, the total flow had increased by 196%. Conversely, the flow has remained fairly flat in 2016 and 2017 with an average flow of about 1.29 mgd. Monthly spikes shown in the graph are attributed to periods with significant rainfalls where large amounts of rain water entered the wastewater collection system via inflow and infiltration (I/I).

Figure No. 2.5 – Total Wastewater Flow Growth



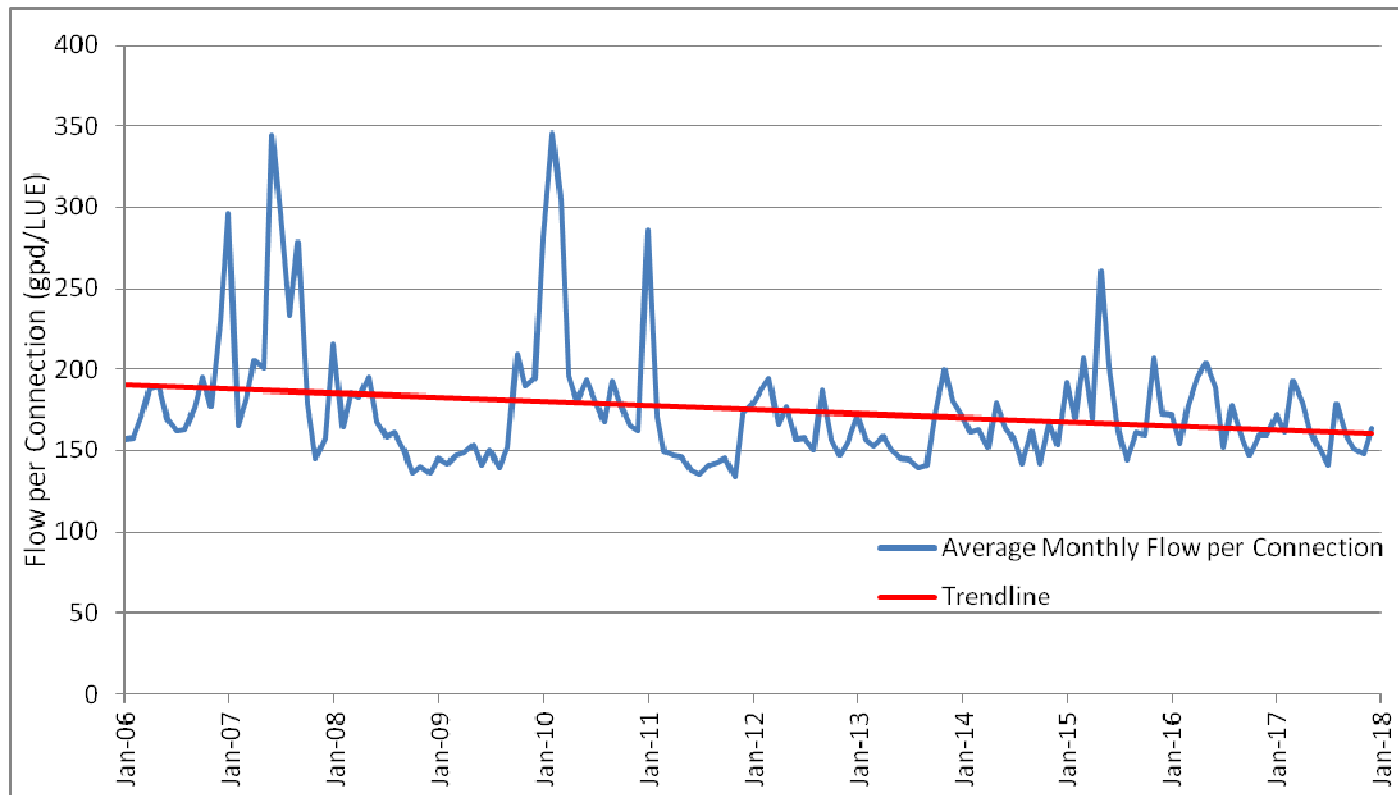
2.2.3 FLOW PER CONNECTION ANALYSIS

The sizing of the collection system lines and treatment facilities is in part based on the flow being contributed from each connection (i.e. single family residence or living unit equivalent (LUE)). Due to a number of variables including but not limited to water saving devices, consumer conservation of water, new infrastructure, and improvements in pipe and manhole materials, DCS has seen a steady decline in the flow per connection received at WWTPs across our clients in Texas. Thus, it is prudent that this variable be analyzed for the City based on historical data so that the sizing of the City's infrastructure is "right sized" for the near and long term anticipated service life conditions.

In order to identify the average flow per connection (i.e. gpd/connection) within the City, DCS analyzed the flow measured at the WWTP and the corresponding wastewater connections per month from June 2006 through January 2018 as shown in the Figure No. 2.6. The data used included the total flow from

the City's two WWTPs and the total connections per month for which the City was serving. Since the City is still predominantly made up of single family residential customers, one connection (i.e. one LUE) still

Figure No. 2.6 - Flow Per Connection



reasonably equates to each sewer bill mailed out by the City. Thus, for the purposes of this analysis, one connection equates to one LUE. It should be recognized that as the City customer base becomes more diversified in the future with commercial, office, and industrial customers, the above assumptions will become less accurate and will eventually have to be replaced with more detailed methods. It should be noted here that the connections that flow to the Lakeside Estates LS, and are subsequently pumped to the City of Pflugerville for treatment, were excluded from this analysis since they were not contributing flow to City's WWTPs.

As shown in Figure No. 2.6, the average flow per connection has been trending downward over several years for the City. This is a common trend we have seen occurring over the last 20 to 25 years for many of our clients due to the above mentioned reasons. For the City in 2017, the average flow was 176 gpd/LUE. Over the last four years, the City average has been 183 gpd/LUE. Over the last ten years, the City average has been 187 gpd/LUE. It should also be noted, as a point of reference, that the City of Austin is currently using 245 gpd/LUE. Based on this data, the City's design value of 280 gpd/LUE is measurably over the actual flow per connection.

Per discussions with the City during the course of this master plan, the reduction of this design value for use in this study and/or for use in the City's engineering design criteria manual was evaluated. From these discussions, DCS and the City agreed upon using a value of 225 gpd/LUE rather 280 gpd/LUE to efficiently size the interceptors since this lower value is more representative the field collected data. Thus, interceptor sizing calculations and WWTP average daily flow capacities for this master plan used 225 gpd/LUE.

2.3 SEPTIC SEWER DEVELOPMENTS

As analysis of the City's wastewater system was performed, sizable acreages and areas of development within the study area were identified which aren't connected to the City's wastewater collection system. These areas, primarily on the outer edges of the study area, are treating their wastewater via on-site septic systems. The majority of these areas are large-lot single family homes. However, on the west side of SH-130, Tradesmen Park and Business Park 79 are commercial/light industrial developments which are being served by septic systems.

Presently, the City's collection system shown in Figure No. 2.3 is developed centrally within the City along Cottonwood Creek and Brushy Creek and has not yet had the need to be extended to; or be constructed in proximity to these areas. In order to have these existing residential and commercial developments taken off of septic systems and connected to the City's collection system, larger diameter wastewater interceptors, lift stations, and/or forcemains will be required to be constructed to within proximity of these developments. Moreover, smaller diameter collection system lines would have to be constructed along all the interior roadways, sewer service lines extended to each building, and the septic systems decommissioned.

In order for the cost/benefit ratio to be favorable for all parties involved, the above project construction costs must be offset by the revenue generated by serving these properties from either taxes or wastewater service fees. Additionally, due to recent legislation which became effective in October 2017, cities can no longer annex property owners into their WW CCN and extend service to them without written consent from each customer who will be served. These factors produce additional challenges for the City in addition to the physical construction of the infrastructure described above. Due to the large percentage of existing developments being single family homes and the magnitude of infrastructure needing to be constructed, the cost/benefit ratio isn't anticipated in the near or long term to be favorable to extend City wastewater service to these existing developments. Thus, these existing developments which total approximately 4,500 acres with about 1,900 existing LUEs are planned to remain on septic systems and are hereby excluded from this master planning effort. Refer to Figure No. 2.2 for the location of these areas.

However, it should be noted here that there are some large agricultural tracts of land with a few buildings on them being served by septic systems which have not been subdivided. These tracts have a high degree of probability that they will be developed into residential or commercial properties at some point in the

future. Thus, these acreages were included in future development projections and service by the City in these master planning efforts.

2.4 EXISTING COLLECTION SYSTEM

The City of Hutto's existing wastewater collection system was evaluated as part of the master planning effort. The existing sanitary sewers, interceptors, lift stations, and force mains were analyzed to determine their existing capacity and their ability to serve future development and convey future wastewater flow. Collection system improvements were planned to serve existing and future growth. The existing wastewater system is shown in Figure No. 2.3.

2.4.1 INTERCEPTOR DESIGN REQUIREMENTS

Modeling and sizing of interceptors was based on the City of Hutto's Water and Wastewater Section of the Utility Criteria Manual and in accordance with Texas Commission on Environmental Quality (TCEQ) Chapter 217. These guidelines and standards include:

- Inflow and Infiltration (I/I) shall be assumed to be 750 gallons per day (gpd) per acre of the drainage area of the service area.
- Average Dry Weather Flow (F) equals 225 gpd per Living Unit Equivalent (LUE) per above discussion versus using 280 gpd per LUE.
- Peak Dry Weather Flow (PDWF) shall be calculated by the following formula:

$$PDWF = \frac{(18 + (.018 * F)^{0.5})}{(4 + (0.18 * F)^{0.5})} * F$$

- Peak Wet Weather Flow (PWWF) shall be the sum of PDWF and I/I as defined above.
- Sanitary Sewer Lines less than or equal to 15" diameter shall not exceed 65% capacity at PDWF.
- Sanitary Sewer Lines less than or equal to 15" diameter shall not exceed 85% capacity at PWWF.
- Sanitary Sewer Lines greater 15" diameter shall not exceed 80% capacity at PWWF.
- Minimum design pipe velocities using PDWF shall not be less than 2 feet per second (fps).
- Maximum design pipe velocities using PWWF shall not exceed 10 fps.
- Velocities shall be calculated based on Manning's formula using an "n" value of 0.013.

Minimum and maximum slopes are also specified per pipe size in the City's Utility Criteria Manual, which correlate to a design velocity of 2 and 10 fps, respectively.

2.4.2 INTERCEPTORS

During the master plan work, it was found that the collection system in the City's GIS database does not always match the information shown on record drawings. In select cases, interceptor alignments had conflicting pipe sizes or connection points to larger interceptors when compared to record drawings. In cases

of conflict, record drawing information was determined to be the more accurate information and thereby used in the models. Where required, record drawing information was added to figures in this study.

The City's collection system is comprised of two primary trunk lines/interceptors including the Cottonwood Creek Interceptor and Brushy Creek Interceptor which deliver flow to the WWTPs as shown in Figure No. 2.3. These two interceptors are fed by the various subdivisions and commercial areas via smaller diameter collection lines that are either 6" or 8". For these smaller diameter collection lines, it became apparent when counting up existing customers that these lines were adequately sized. This is due to the fact that the small contributing service areas and their total LUE contributions generated a flow which did not exceed the capacity of the pipe using the minimum TCEQ standard grades. Thus, collection lines 8" or smaller were not analyzed as part of this master planning effort. However, the above two mentioned interceptors and larger diameter collectors (i.e. 12" to 15" lines) were analyzed for the existing conditions when future LUEs are planned to be added.

Capacity analysis on existing lines was performed in accordance with the criteria outlined in Section 2.4.1 for Design Requirements. The models developed for existing interceptors included branches of the network in concert with data collected from record drawings to confirm pipe size and slope. The flows generated from upstream sub-basins were incrementally added, at their respective manhole/node, to the interceptor as flows were conveyed downstream. Thus, existing and ultimate interceptor diameters were confirmed so that future development could obtain adequate wastewater capacity and/or requisite improvements identified to provide additional capacity for service.

The City's first constructed interceptor was the Cottonwood Creek Interceptor which begins at the Central WWTP site, runs north and then west along Front Street, crosses Hwy 79 following FM 1660, and ultimately terminates at the northwest corner of Limmer Loop and FM 1660 intersection. Branches of the interceptor collect subdivisions north of Hwy 79, Hutto Downtown, Covert Car Dealership, and businesses along Front Street. The main trunk of the interceptor ranges in diameter from 15" to 33" prior to reducing down to a 24" south of Hwy 79 until discharging into the Central WWTP. The reduction from a 33" to a 24" is somewhat atypical for a collection system but not necessarily an issue so long as adequate slope is provided to generate the required hydraulic capacity in the pipe due to a smaller diameter. Per record drawings for this 24" interceptor from 2014, the 24" interceptor replaced an existing 18" interceptor which was ultimately abandoned in place and the manholes flowable filled. It should be noted here that at the time of this interceptor project, the City had completed a 2012 Regional Wastewater Study (the City's first wastewater master plan). However, this study didn't focus on ultimate interceptor locations and their sizing in a coordinated relationship with the ultimate WWTP service areas and their respective ultimate WWTP capacities. The study was focused primarily on the options regarding treatment for the upcoming South WWTP design. Thus, the design basis and respective service area for the sizing of this 24" interceptor isn't discernible from the record drawings or previous studies.

This has resulted in the Cottonwood Creek Interceptor being undersized for its ultimate flows. Presently, this 24" interceptor segment south of Hwy 79 to the WWTP is at 55% capacity for Peak Wet Weather Flow (PWWF) conditions. At the northernmost section of the interceptor, several developments have expressed their plan to extend the interceptor to the north to obtain service. These developments include an additional 500 acres and 1,800 LUE's (i.e. RSI, Pack Saddle, and HISD school complex). DCS analyzed this additional flow through all existing Cottonwood Creek pipe segments with only existing development contributing flows. We found that the interceptor has sufficient capacity to accommodate this planned development with the PWWF reaching 80% in the most restrictive segment. This most restrictive segment occurs in the upstream reach of the 18" interceptor in proximity to Limmer Loop. The next most restrictive pipe segment is in the 24" reach south of Hwy 79 which will reach 75% capacity with the addition of the above mentioned 1,800 LUEs. However, there are several other tracts under active planning for development that will require service from the Cottonwood Creek Interceptor including subdivisions, multifamily housing, and retail property. Depending on the point of connection to the Cottonwood Creek Interceptor, capacity will become problematic without the construction of the future parallel Cottonwood Creek Interceptor.

It should be noted here that a wastewater study, completed for R.S.I. Hutto in December 2017, proposed upsizing the sections of Cottonwood Creek Interceptor north of Hwy 79 from the existing diameters of 15", 18", 24", 27", and 33" to the proposed diameters of 27", 30", 36", 41", and 41", respectively. DCS confirmed that these pipe diameter increases would accommodate the ultimate flow conditions. However, a discussion of how this would be physically accomplished (i.e. pipe bursting or a second parallel interceptor) was not discussed in the above mentioned report. With respect to pipe bursting, this method is not feasible due to constructability issues since it exceeds a 6" diameter increase for all the segments (i.e. 6 inches is the upper limit of pipe bursting diameter increase). Therefore, a new parallel interceptor is the remaining option and is the proposed solution in this master planning effort. The route to accommodate the required parallel interceptor is discussed in more detail in Section 3. This parallel interceptor will convey the ultimate flows to the Central WWTP along with the existing interceptor so that the ultimate treatment capacity is obtained from this service area.

The City's second constructed interceptor was the Brushy Creek Interceptor which runs along a tributary of Brushy Creek from Texas State Technical College on CR 108, running south and crossing Hwy 79, through the Hutto Crossings Development, crossing FM 685, and terminating at the Enclave Lift Station. This interceptor presently ranges in size from 21" to 42". Ultimately, the interceptor will serve the area bounded by Ed Schmidt, SH-130, and Brushy Creek to the south. Much of the ultimate service area for the Brushy Creek Interceptor is undeveloped at this time which results in a large amount of available interceptor capacity. The active and proposed developments planned to add flow to this interceptor include Titan Innovation Parks to the north of Hwy 79 and the Hutto Crossings Development to the southeast of the SH-130 and Hwy 79 intersection. Since this interceptor was more recently constructed and the service area defined

per previous work efforts, DCS didn't identify the need to add a parallel interceptor to the existing Brushy Creek Interceptor in order to serve the adjacent areas and be compliant with City design regulations outlined in this report.

2.4.3 LIFT STATIONS

The City's collection system includes six lift stations and associated force mains. Five of these lift stations pump to City owned WWTPs and one pumps to the City of Pflugerville's WWTP. DCS analyzed each lift station capacity based on current pumps installed and the existing development in each lift station's service area. The lift stations are summarized in Table No. 2.1 and shown in Figure No. 2.3. These lift stations are within the South WWTP and Central WWTP service areas as shown in Figure No. 2.3.

The South WWTP service area contains two lift stations. The Enclave LS is pumped to the South WWTP via a 20" forcemain. The Enclave LS collects flow from Riverwalk, The Park at Brushy Creek, The Enclave at Brushy Creek, Hutto Crossing, and Emory Farms subdivisions as well as the Brushy Creek Interceptor. The Farley LS forcemain has been recently rerouted to connect into the Enclave LS forcemain. Thus, the flow from the Farley LS is being pumped to the South WWTP.

Table No. 2.1 - Existing Lift Station Capacities

Lift Station	Number of Pumps	Capacity (gpm)	Capacity (LUEs)	Constructed LUEs	Remaining Capacity (LUEs)	WWTP Service Area	Peaking Factor
Enclave	4	4,200 ⁴	8,960	2,651	6,309	South WWTP	3.0
Glenwood	3	1,650	3,200	2,192 ¹	1,008 (1,589 ⁵)	Central WWTP	3.3
Lakeside	2	535	1,038	557	481	Pflugerville	3.3
Country Estates	2	575 ³	1,115	656	459	Central WWTP	3.3
Creekside	2	466 ³	904	396	508	Central WWTP	3.3
Farley	2	160	340 ²	107	84	South WWTP	3.0

¹Existing LUEs are based on the assumption that Farley LS does not flow to Glenwood LS.

²Farley LS can be upgraded to a maximum capacity of 921 LUEs per DCS capacity analysis report dated May 2016.

³Country Estates & Creekside gpm capacity per pump testing by others.

⁴Total capacity of Enclave LS is 5,200 gpm but 1,000 gpm was subtracted to account for future force main contributions into the Enclave force main. The rated capacity of Enclave LS is 4,200 gpm.

⁵Glenwood LS remaining capacity can be increased to 1,589 LUEs by buying a spare pump to keep in storage. This spare pump will allow the three existing pumps to be used for calculating the firm capacity of the LS per TCEQ.

The Central WWTP service area contains three lift stations. The Country Estates LS collects flow from the Country Estates subdivisions along with the Sturm Park subdivision and pumps the flows north to Front Street where it discharges into a manhole into the Cottonwood Creek Interceptor and flows to the Central WWTP. Likewise, the Creekside LS and Glenwood LS collect flow from the subdivisions south of Hwy 79 where their force mains discharge into a junction box connected to the Cottonwood Creek Interceptor just upstream of the Central WWTP's on-site lift station.

The sixth lift station is the Lakeside Estates LS and is the lift station that currently pumps its flows to the City of Pflugerville WWTP for treatment. This LS receives flow from 557 existing residential houses. The agreement between Pflugerville and Hutto that permits this flow to enter Pflugerville's collection system has been in effect since 2002 and expires in January 2020. Prior to January 2020, the City will need to either construct infrastructure to bring the flow into Hutto's collection system, or work with Pflugerville to extend the agreement. Since the Enclave LS and South WWTP have capacity for this flow and it will also generate a wastewater revenue stream to the City instead of sending it to the City of Pflugerville, DCS recommends working to transfer this flow into Hutto's system permanently.

As seen in Table No. 2.1, each lift station has existing capacity to serve additional LUEs from its respective service area. The City may elect to utilize this existing capacity on a case by case basis to accommodate proposed developments. Moreover, these lift stations may have the potential to be optimized to provide additional capacity above that listed in the table. For example, adding one additional pump to the Glenwood LS, to convert it from a triplex to quadruplex pumping system, would increase the available LUE capacity from 1,008 to 1,589 LUEs. In this instance, the cost to achieve this additional capacity equals the cost of one pump (i.e. about \$35,000).

Lastly, it should be noted here that the Enclave LS and FM design included an additional capacity of 1,000 gallons per minute (gpm) so that future unspecified lift stations along the route of the 20" forcemain to the South WWTP could be tied into the 20" forcemain. At the time of this master plan, the City has only allowed the Farley LS to be tied into the 20" forcemain to provide capacity for 160 gpm from the Farley LS.

2.5 EXISTING WASTEWATER TREATMENT PLANTS

The City currently owns two WWTPs that treat the flow from the collection system. A third plant, Forest Creek WWTP, is within the City's ETJ but isn't a City owned WWTP and it doesn't treat any of the City's wastewater flows. The City's South WWTP and Central WWTPs are permitted to treat a total of 3.7 mgd; 2.0 mgd and 1.7 mgd, respectively. A detailed process analysis for each WWTP was specifically excluded from this master planning scope of work. Thus, the actual capacity of each WWTP based on current influent strength and facility performance is not addressed in this master plan. However, this section does include information or analysis on each WWTP's existing service area, influent characteristics, wastewater strength, and existing permitted capacities.

2.5.1 WASTEWATER STRENGTH

The decreased flow per connection discussed above does not necessarily mean the amount of waste in pounds per day that is being delivered to the WWTP has also decreased. Conversely, the volume of waste in pounds per day will typically remain the same. The result is that the wastewater strength will typically increase as the flow goes down because as the volume of waste in the stream remains the same and the

volume of flow decreases. Wastewater strength is referred to as the Biological Oxygen Demand (BOD). BOD is defined as the amount of oxygen needed to break down the organic material in the water and is thereby used as the wastewater strength. BOD is a key variable in the design of a WWTP. Thus, if a WWTP receives a stronger wastewater at the flow per day it was designed for, the capacity of the WWTP will be exceeded and result in the treated water violating the permitted water quality limits. Since WWTPs are regulated based on water quality and the volume per day discharged to the creek, a WWTP flowing by volume per day could be below its permitted flow limit but from a BOD loading perspective be at or above its treatment capacity.

The measured influent strength for each of the City's two WWTPs is in fact significantly higher than what the WWTP was originally designed for per lab results reviewed as part of this master planning effort. The impacts of this are discussed below for each WWTP.

2.5.2 FOREST CREEK WWTP

As mentioned above, Forest Creek WWTP is within the City's ETJ, but is not a City owned or operated plant. The TCEQ discharge permit states a permitted capacity of 0.500 mgd with a second phase of 0.990 mgd for discharge into a tributary of Brushy Creek. It is not known which phase the plant is operating under. However, review of aerial photos indicates that the WWTP is likely constructed to treat 0.990 mgd based on the identifiable plant infrastructure.

The plant is located on Star Ranch Golf Course just west of SH-130; and is owned and operated by Southwest Water Company (SWWC). DCS contacted SWWC to coordinate the existing and ultimate service area limits for this WWTP so that the City's wastewater master plan would not unnecessarily plan for interceptors and/or WWTP capacities which would be served by others. DCS wasn't successful in acquiring a point of contact or map information from SWWC regarding the existing and ultimate service areas.

Alternatively, DCS utilized publically available data to discern the likely service area limits for this WWTP which are shown in Figure No. 2.2. DCS analyzed the wastewater collection system via GIS for the City, the City of Pflugerville, and the City of Round Rock to determine the service area limits for WWTPs owned by these cities. This wastewater infrastructure aligned with the respective ETJ's and WW CCN's boundaries of the three cities. Additionally, much of the land to the southwest of the Brushy Creek and SH-130 intersection, while within the City's ETJ, is outside of the City's WW CCN. In the end, it was determined that this land is contained within Williamson County Municipal Utility District 22 or Water Sewer and Irrigation District 3. Thus, through the process of elimination, a likely WWTP service area was discerned for the Forest Creek WWTP shown in Figure No. 2.2. Therefore, this area has been excluded from this wastewater master planning effort along with any required capacity to serve this area via existing or future City interceptors and/or WWTPs.

2.5.3 CENTRAL WWTP

The Central WWTP currently serves the majority of the City's wastewater flows by either gravity flow from the Cottonwood Creek Interceptor or from three lift stations down slope and to the south of the WWTP as shown in Figure No. 2.3. The topography of the area naturally falls towards Cottonwood Creek which is north of Hwy 79. Thus, the WWTP is located in an intuitive location since the City has experienced the majority of its growth to date around the adjacent Hwy 79. Flows from the three existing lift stations (Glenwood LS, Creekside LS, and Country Estates LS) will ultimately be redirected when a gravity interceptor is extended to the lift stations to allow them to flow to the South WWTP. Naturally, these lift stations were originally installed to defer the construction costs associated with a second permanent WWTP to the south. The existing service area for the Central WWTP is shown in Figure No. 2.2 and 2.3 along with the collection system and lift stations.

The Central WWTP is built on approximately 15 acres, directly to the east of Cottonwood Creek and its associated 100-year floodway and/or 100-year flood plain. The 15 acres includes about 4.5 acres within the 100-year floodway which aren't allowed by FEMA to have permanent structures built within these limits. This leaves about 10.5 acres that can be used for WWTP facilities that are in the 100-year flood plain or beyond this limit. The City also owns the two tracts bordering the east side of the plant which adds another 2.7 acres of land which could be incorporated into the WWTP site.

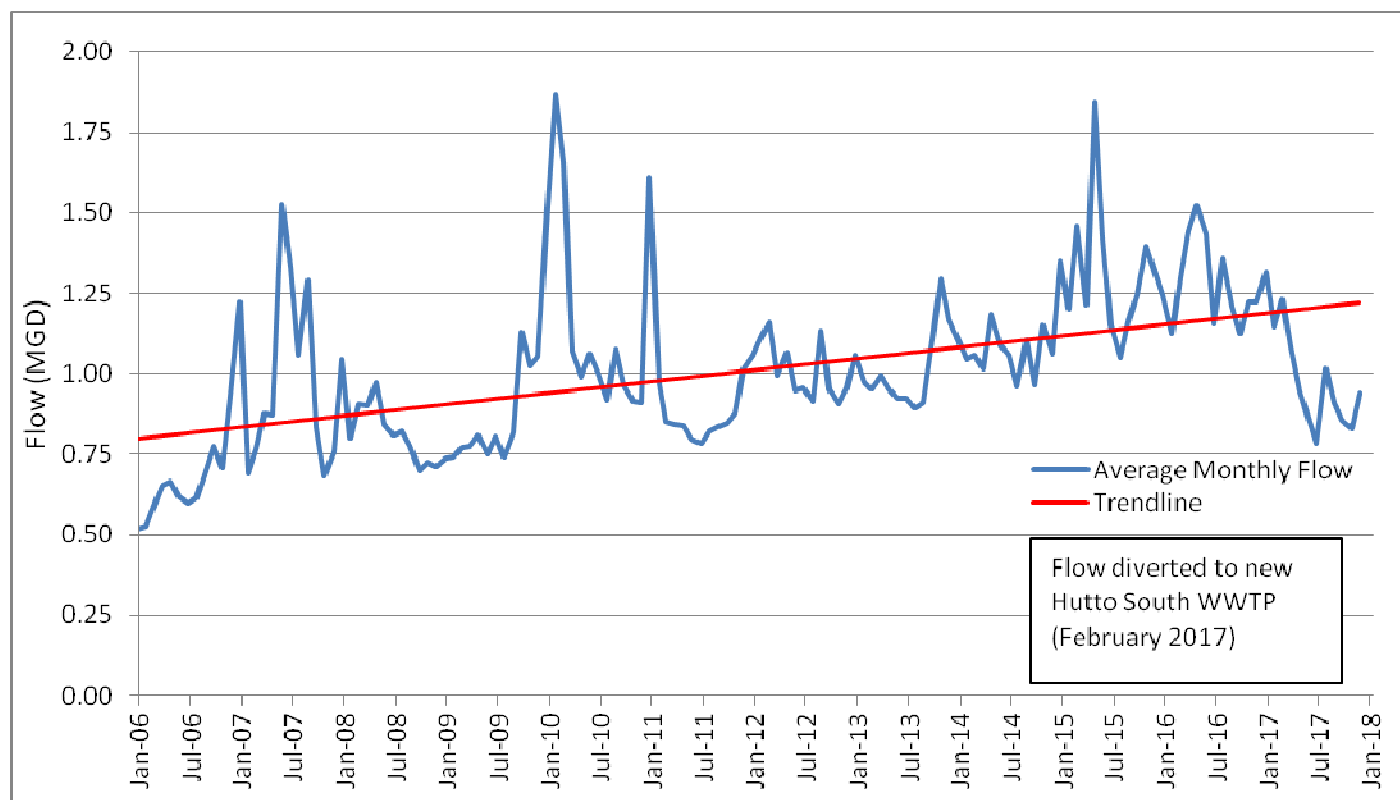
Presently, the WWTP is comprised of two treatment trains built at different times and initially planned to function together to provide the 1.7 mgd of treatment capacity for an influent BOD concentration of 200 mg/L per the record drawings. However, the treatment units on the west side of the site were never brought into service after being integrated in 2007 and have fallen into a state of disrepair over the last 11 years rendering them unusable. Though both plants are part of the overall Central WWTP, they are identified as Plant 1 and Plant 2 by the Operators. Plant 1 is the unused WWTP which is not part of the active treatment process but is noted to have a capacity of 0.200 mgd per the record drawings. Plant 2 was built in phases and last expanded in 2007 to 1.5 mgd capacity per the record drawings. There is one on-site lift station with three submersible pumps sized to deliver 5.61 mgd (i.e. 1.7 mgd times 3.3 peaking factor) to the headworks.

The Central WWTP is currently permitted for an average annual flow of 1.7 mgd under Texas Pollutant Discharge Elimination System Permit (TPDES) No. WQ0011324001. The permit will expire on December 1, 2018. This WWTP has more stringent discharge limits than typically seen for WWTPs in this area. Those limits are BOD = 7 mg/L, Total Suspended Solids (TSS) = 12 mg/L, and Ammonia-nitrogen (NH₃) = 1.5 mg/L. Typical limits are expected to be BOD = 10 mg/L, TSS = 15 mg/L, and NH₃ = 2.0 mg/L which is what the South WWTP effluent limits are set at.

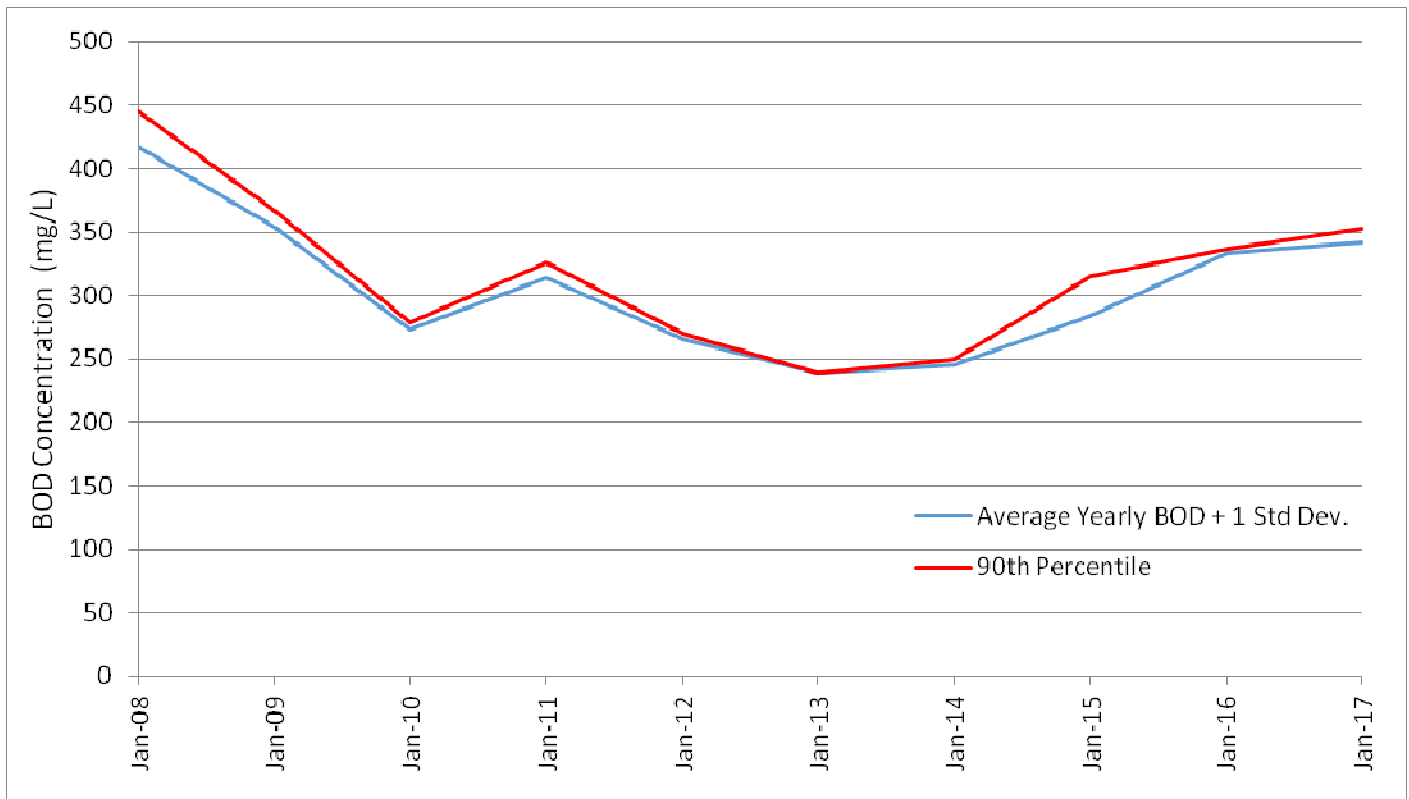
The last 12 years of flows are shown in Figure No. 2.7 for the Central WWTP. While the trend line clearly indicates the rising flow over the last decade, the dip in flow in February 2017 was at the time of the South WWTP coming online. For the Central WWTP, flow after February 2017 averaged approximately 0.94

mgd. Since the induction of the South WWTP, the Central WWTP is handling roughly 74% of the City's approximately 1.30 mgd total flow.

Figure No. 2.7 - Central WWTP Flows



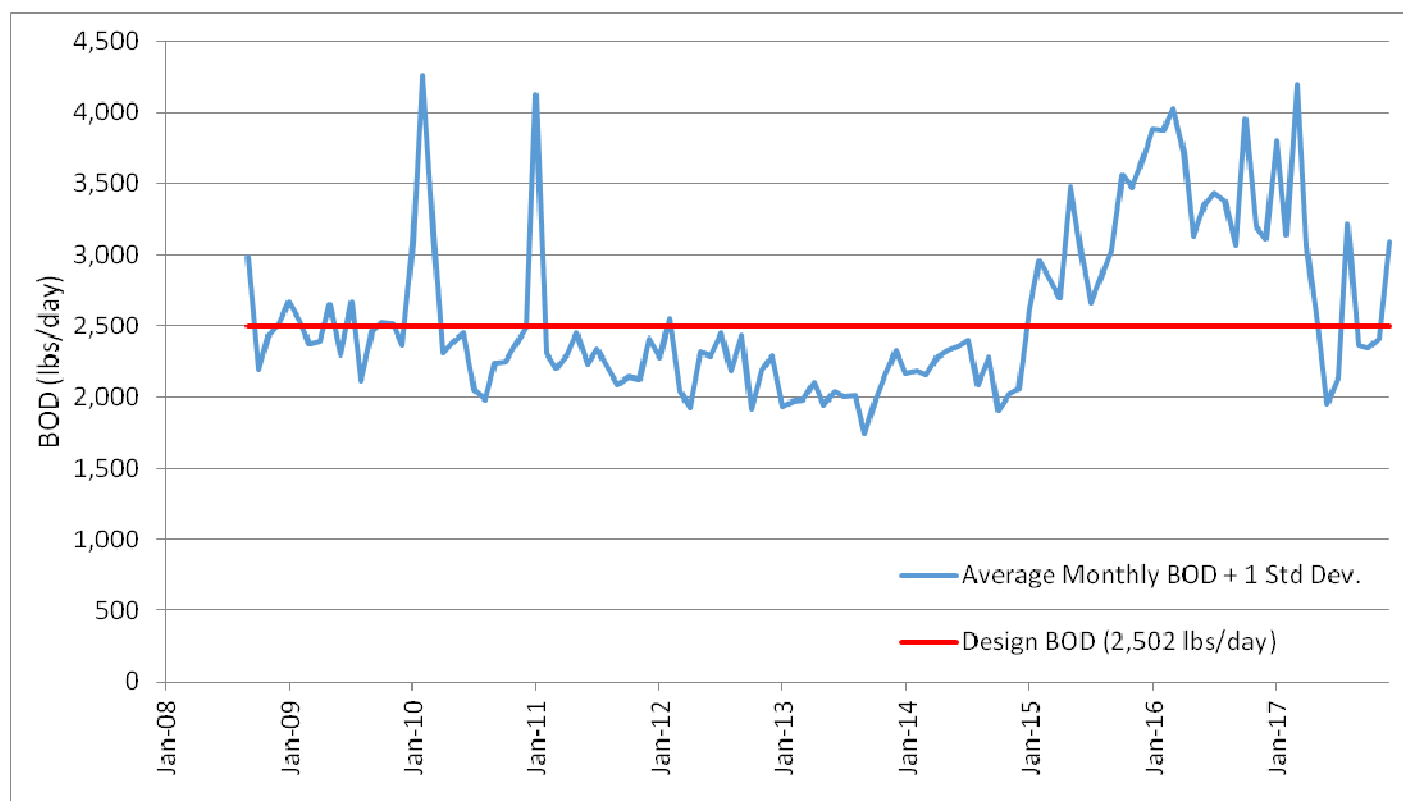
With respect to the influent wastewater strength, influent sample results from 2008 to December 2017 were analyzed. Samples were taken twice per week for BOD, TSS, and NH₃-N. This data was analyzed according to TCEQ regulations regarding WWTP design parameters for BOD which dictates the average plus one standard deviation is used as the design basis when field collected data is available. The data set is required to be three composite samples per week for one year. The sample results analyzed included two composite samples per week for each year. Thus, although this sample set doesn't strictly abide by TCEQ regulations, it is a detailed sample set with significant representation for the WWTP. The average BOD for each year with one standard deviation is shown in Figure No. 2.8 along with the 90th percentile BOD reading for each year. The 90th percentile is another method used to evaluate data sets to determine the optimal influent design parameters, specifically BOD in this instance. As shown in Figure No. 2.8, the average plus one standard deviation and 90th percentile methods yield nearly identical influent BOD results for the recommended influent BOD design condition over the last 10 years. This graph also shows a long history in the City of influent BOD concentrations ranging from approximately 450 mg/L to about 250 mg/L which is well over the 200 mg/L design condition for this 1.5 mgd WWTP.

Figure No. 2.8 – Central WWTP Influent BOD Strength

This represents a likely immediate issue for the Central WWTP with respect to its actual capacity versus its permitted capacity of 1.7 mgd due to a higher BOD and 0.200 mgd of capacity not being in service. Thus, this data was converted into pounds of BOD entering the plant per day. The average plus one standard deviation for BOD per month and the average flow per month were used to calculate the average loading per month and graphed in Figure No. 2.9. The red line shown in the graph is BOD pounds per day that the plant was designed for using 200 mg/L and 1.5 mgd equaling 2,502 lbs/day. Figure No. 2.9 readily shows that the Central WWTP has exceeded its BOD loading on a pounds per day basis over the last 10 years and more specifically on a regular basis since January 2015.

In order to normalize the Central WWTP capacity with respect to existing flow rates per connection and influent BOD concentration, the WWTP capacity is derated so that measured volumetric flows relate to a the rated capacity of the WWTP. Thus, the existing Central WWTP's derated capacity is 0.990 mgd. With a measured flow in 2018 of averaging 0.940 mgd, the WWTP is operating at 95% of it derated capacity. Per TCEQ regulations, at 75% plant capacity the City must begin design for expanding the WWTP and at 90% capacity the City must have begun construction. To meet this standard, the City must exercise one of several options which include: a) diverting one or more of three existing lift stations from the Central WWTP to the South WWTP; or b) begin a design, bid, build process to bring limiting factors of the existing 1.5 mgd

Figure No. 2.9 - Central WWTP BOD Loading



WWTP back to its 1.7 mgd capacity; or c) a combination of both to accommodate anticipated development for additional LUEs.

It should be noted here that during the time of this master plan, DCS was requested to perform an additional process analysis on the Central WWTP as a separate task so that a CIP project cost could be developed to bring the WWTP back to its permitted capacity of 1.7 mgd. This CIP cost is included in the list for this report. Upon initiation of this project, we recommend a full preliminary engineering report be performed to master plan the Central WWTP site for its ultimate capacity in coordination with the required improvements to reestablish the 1.7 mgd capacity.

2.5.4 SOUTH WWTP

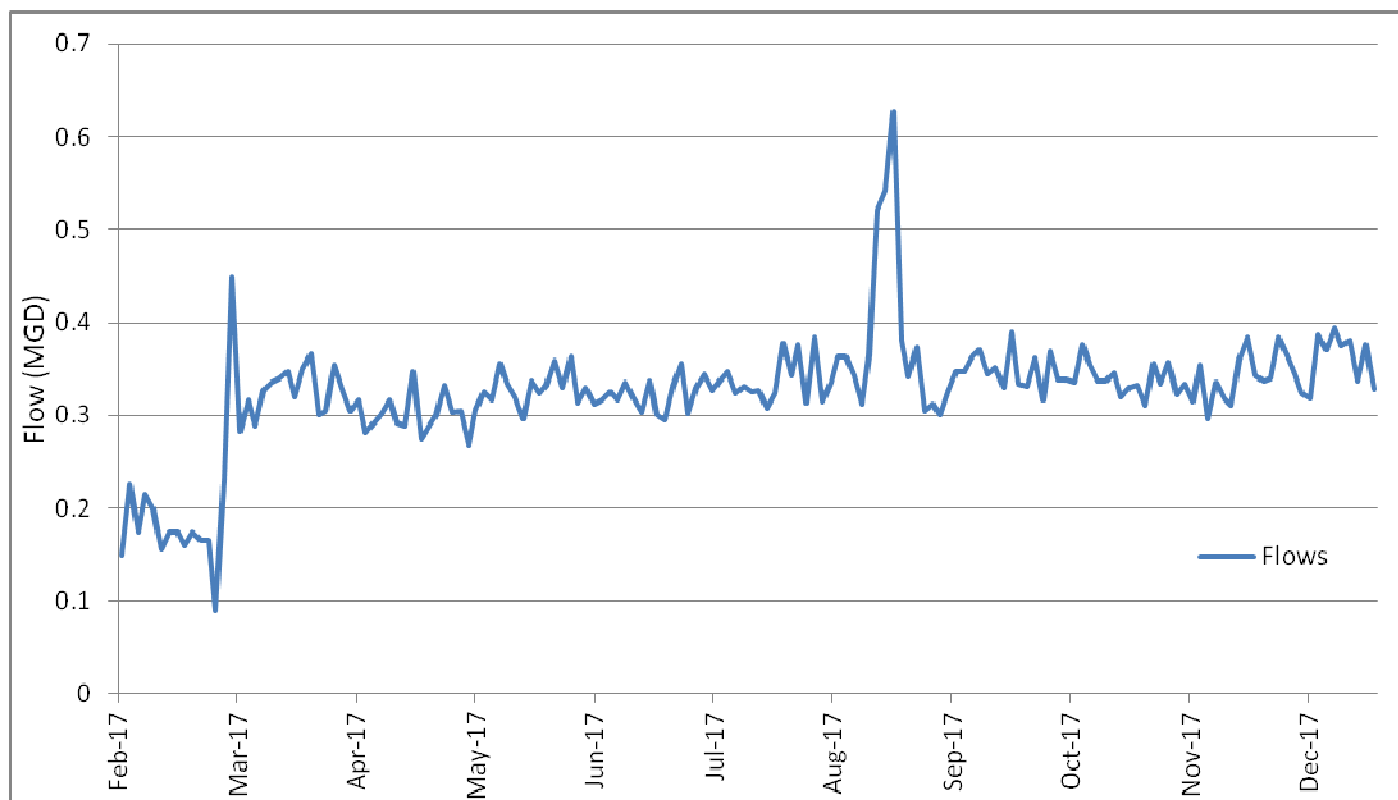
The South WWTP currently serves the southern and western portions of the City's wastewater flows by gravity flow from the Brushy Creek Interceptor to the Enclave LS. The Farley LS is tied into the Enclave forcemain on FM 1660. The Enclave LS and Farley LS pump directly to the headworks of the WWTP as shown in Figure No. 2.3 and these lift stations are the only influent sources to the WWTP at this time. The topography of the area naturally falls towards Brushy Creek south of Hwy 79. Thus, the WWTP is located near the eastern most and southern limits of the City's WW CCN. Flows from the three existing lift stations (Glenwood LS, Creekside LS, and Country Estates LS) will ultimately be redirected to the South WWTP

when a gravity interceptor is extended to them. The existing service area for the South WWTP is shown in Figure No. 2.2 and 2.3 along with the collection system and lift stations.

The South WWTP is built on approximately 155 acres, directly to the south of Brushy Creek, and went into operation in February 2017. The site is overlapped with 100-year floodway and/or 100-year flood plains on the north and south ends of the site leaving about 108 acres outside these limits. The existing WWTP service area includes large undeveloped areas throughout the City's WW CCN. This master plan defined the existing boundary between the existing Central WWTP and South WWTP service areas based on the City's GIS maps and/or record drawings as shown in Figure No. 2.2.

Presently, the WWTP is comprised of three treatment trains built at the same time to provide a total of 2.0 mgd of treatment capacity for an influent BOD concentration of 250 mg/L per the record drawings and record operation and maintenance manuals. There is one on-site lift station with two submersible pumps serving miscellaneous process waste streams and/or to facilitate periodic basin draining. The South WWTP is currently permitted for an average annual flow of 2.0 mgd in Phase I and 4.0 mgd in Phase II under Texas Pollutant Discharge Elimination System Permit (TPDES) No. WQ0011324002. The permit will expire on December 1, 2019. This WWTP has discharge limits that are typically seen for WWTPs in this area. Those limits are BOD = 10 mg/L, TSS = 15 mg/L, and NH₃ = 2.0 mg/L. The last one year of flows are shown in Figure No. 2.10 with an average of approximately 0.320 mgd. This WWTP is handling roughly 26% of the City's approximately 1.30 mgd total flow.

Figure No. 2.10 - South WWTP Flows



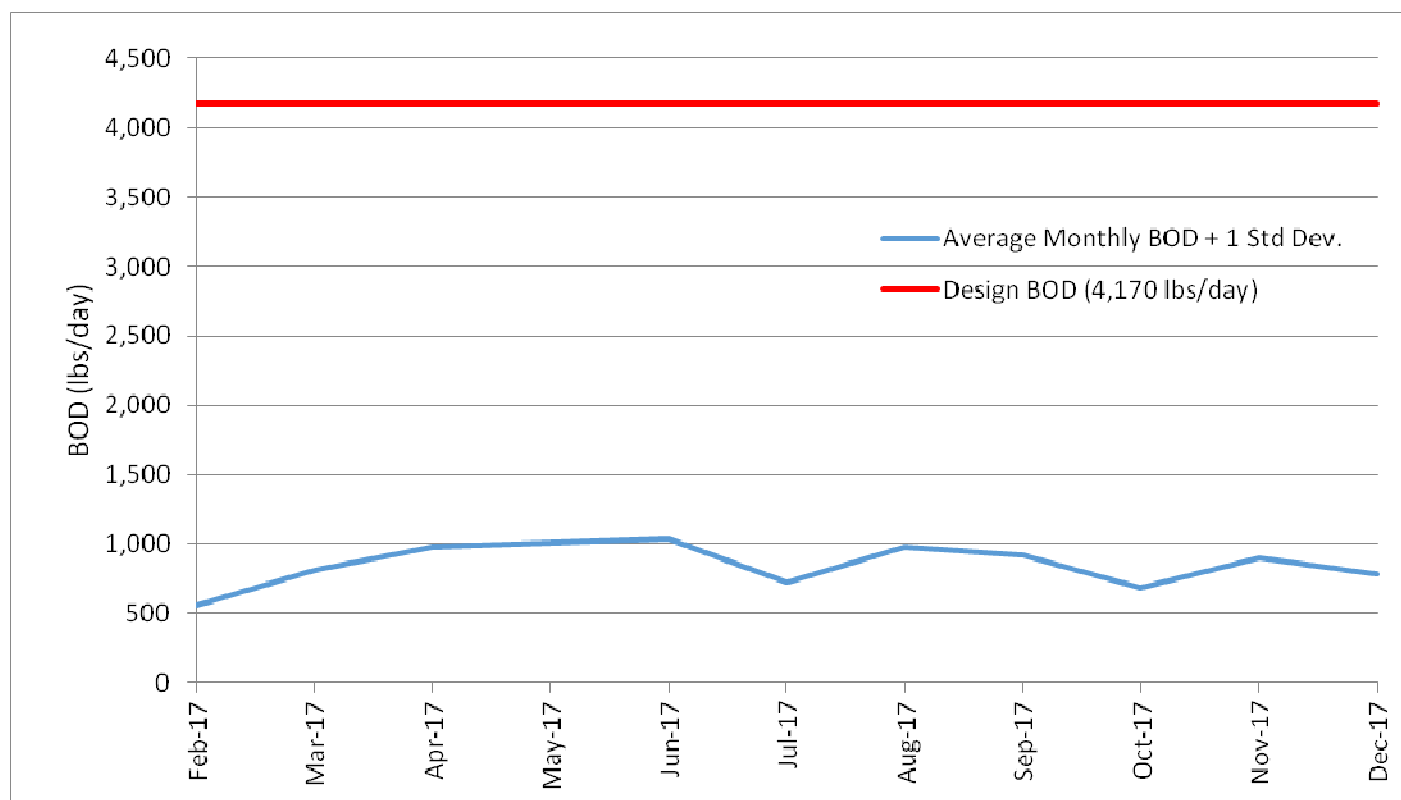
With respect to the influent wastewater strength, influent sample results from 2017 were analyzed. Samples were taken twice per week for BOD, TSS, and NH₃-N. This data was analyzed according to TCEQ regulations regarding WWTP design parameters for BOD which dictates the average plus one standard deviation is used as the design basis when field collected data is available. The data set is required to be three composite samples per week for one year. The sample results analyzed included two composite samples per week for each year. Thus, although this sample set doesn't strictly abide by TCEQ regulations, it is a detailed sample set with significant representation for the WWTP. The average BOD for the 11 months with one standard deviation was 326 mg/L. As described above for the Central WWTP, the South WWTP's 90th percentile BOD reading over this period of time was also nearly identical to the average plus one standard deviation. Thus, the value of 326 mg/L should be considered a more accurate design value given the long history in the City of influent BOD concentrations ranging from approximately 450 mg/L to about 250 mg/L over the last 10 years recorded at the Central WWTP as shown in Figure No. 2.8.

This represents a likely long term issue for the South WWTP with respect to its actual capacity versus its permitted capacity of 2.0 mgd due to a higher BOD. Thus, this data was converted into pounds of BOD entering the plant per day. The average plus one standard deviation for BOD per month and the average flow per month were used to calculate the average loading per month and graphed in Figure No. 2.11. The red line shown in the graph is BOD pounds per day that the plant was designed for using 250 mg/L and 2.0 mgd equaling 4,170 lbs/day. Figure No. 2.11 readily shows that the South WWTP is well below its BOD loading on a pounds per day basis over the last year at 24% loaded. However, the WWTP is loaded at 16% based on the volumetric flow. Thus, as the flow increases at this WWTP, it will experience a similar fate as the Central WWTP where it will become overloaded from a BOD perspective while remaining under loaded from a volumetric flow perspective. The result will be the same as the Central WWTP where it will not meet the permitted discharge limits for the treated water.

In order to normalize the South WWTP capacity with respect to existing flow rates per connection and influent BOD concentration, the WWTP capacity is derated so that measured volumetric flows relate to the rated capacity of the WWTP. Thus, the existing South WWTP's derated capacity is 1.50 mgd. With a measured flow in 2017 of averaging 0.320 mgd, the WWTP is operating at 21% of its derated capacity. Per TCEQ regulations, at 75% plant capacity the City must begin design for expanding the WWTP and at 90% capacity the City must have begun construction. Thus, no action is presently needed by the City. However, if the City elects to divert flows from the Central WWTP to the South WWTP, the percent loading of the South WWTP should be carefully monitored so as not to overload the South WWTP by diverting too much flow from the Central WWTP.

It should be noted here that during the time of this master plan, DCS didn't perform any additional detailed process analysis on the South WWTP. We recommend that a CIP project cost be developed under a future process analysis to bring this WWTP back to its permitted capacity of 2.0 mgd. However, for the

Figure No. 2.11 - South WWTP BOD Loading



purposes of this master plan, a typical new construction cost for additional treatment capacity of \$10 per gallon was used and included in the CIP list. Upon initiation of future process study, we recommend a full preliminary engineering report be performed to master plan the South WWTP site for its ultimate capacity in coordination with the required improvements to reestablish the 2.0 mgd capacity.

Section 3

Future Wastewater System

As the City continues growing and multiple planned developments implement their projects in the City's WW CCN, the City's wastewater interceptors and treatment capacity will be required to be expanded to accommodate these additional flows. Per City Development Services, there are approximately 8,024 LUEs in various stages of development activity within the City's WW CCN at the time of this master planning effort. This represents an additional 1.80 mgd of wastewater flow to the collection and treatment systems. Although these LUEs will be constructed over a period of time, these new LUEs double the current number of wastewater connections in the City's WW CCN.

3.1 POPULATION AND DEMAND PROJECTIONS

Continued development and population growth within the City will place higher demands on the existing wastewater system. The City's population began to skyrocket in the early 2000's, growing exponentially and earning the title of fastest-growing city in the U.S. Although the pace of growth decelerated with the 2007-2009 recession, it has picked back up in recent years. While future population estimates can vary greatly depending on the methodology used, population projections serve as the primary basis for determining future wastewater demands and evaluating how the future wastewater system can be planned and structured to meet these demands. Several different projections were evaluated for selection as the basis of this WWMP's projection methodology.

Population projections considered multiple sources of information including the 2012 Wastewater Master Plan, 2016 Water Master Plan, U.S. Census Bureau, Texas Water Development Board, and the Hutto 2040 Plan. The projections from each of these were compared, but could not be solely used due to the fact that they only projected growth within the City limits. Because this study's area is the City's recently expanded WW CCN, which does not coincide with the City limits, growth percentages per year were considered rather than using the actual population numbers to develop projections. The resulting growth percentages were then applied to wastewater connections/LUEs to obtain wastewater flow projections.

After lengthy conversations with City Staff, growth rates based on a percent basis were used for the next three years at which time the growth has been assumed to level off and be maintained at a fixed rate (i.e. LUEs per year). More specifically, over the next three years, growth rates of 8%, 10%, and 12% have been utilized to estimate the expected growth, respectively. In terms of wastewater connections, a total of 2,615 LUEs are added over the next three years. After these first three years, a market saturation rate has been assumed to be reached where the market cannot produce and absorb any additional LUEs due to availability of materials, labor, financing, agency review/approvals, etc. Based on growth rates and LUEs seen from the cities of Round Rock, City of Hutto, and City of Pflugerville in the 2006-2007 timeframe, this saturation point

is expected to be about 1,128 LUEs per year for the City of Hutto. Projections were begun with the existing number of connections/LUEs being served by the City as of December 2017 of 7,912. Projections for the next 10 years are shown below in Table No. 3.1 based on the above methodology.

Table No. 3.1 - Projected Wastewater LUEs

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
January	7,912	8,545	9,399	10,527	11,655	12,783	13,911	15,039	16,167	17,295	18,423
Growth (Jan-Jan)		633	854	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128
Percent Growth (Jan-Jan)		8.0%	10.0%	12.0%	10.7%	9.7%	8.8%	8.1%	7.5%	7.0%	6.5%

Moreover, the number of LUEs at ultimate build out is required within the WW CCN to complete the planning effort. In order to accomplish this, DCS performed an analysis of existing developments within the City's WW CCN for use in developing the estimated number of LUEs per acre based on the type of development which will be generated from undeveloped acreages. The LUEs per acre are based on the type of land use since the associated wastewater flow to be generated by that land use will vary depending on the activities to be conducted once developed. For example, a restaurant, gas station, and single family residence will all be viewed as one "connection" when monthly billing statements are totaled from the City's accounting system. However, their flow and/or BOD contribution to the wastewater system will not be identical.

To normalize each "connection" to a common unit of measure, an LUE value is assigned to each type of development. One LUE is defined as being equal to one single family residential wastewater service connection in terms of flow and/or wastewater strength. By doing this, the flow contribution from various land uses including but not limited to restaurants, offices buildings, parks, and houses can be estimated using the common LUE unit of measure. This LUE is then assigned a flow (measured in gallons per day) which also takes into consideration the wastewater strength (i.e. BOD) as discussed in Section 2. As part of this master planning effort, a table was developed specifically for the City using previously published industry standards titled "Living Unit Equivalent Table" and has been included in Appendix A. As seen in this table, flows are projected based on various units of measure including but not limited to square footage, occupancy of the building, etc., and normalized back to one LUE.

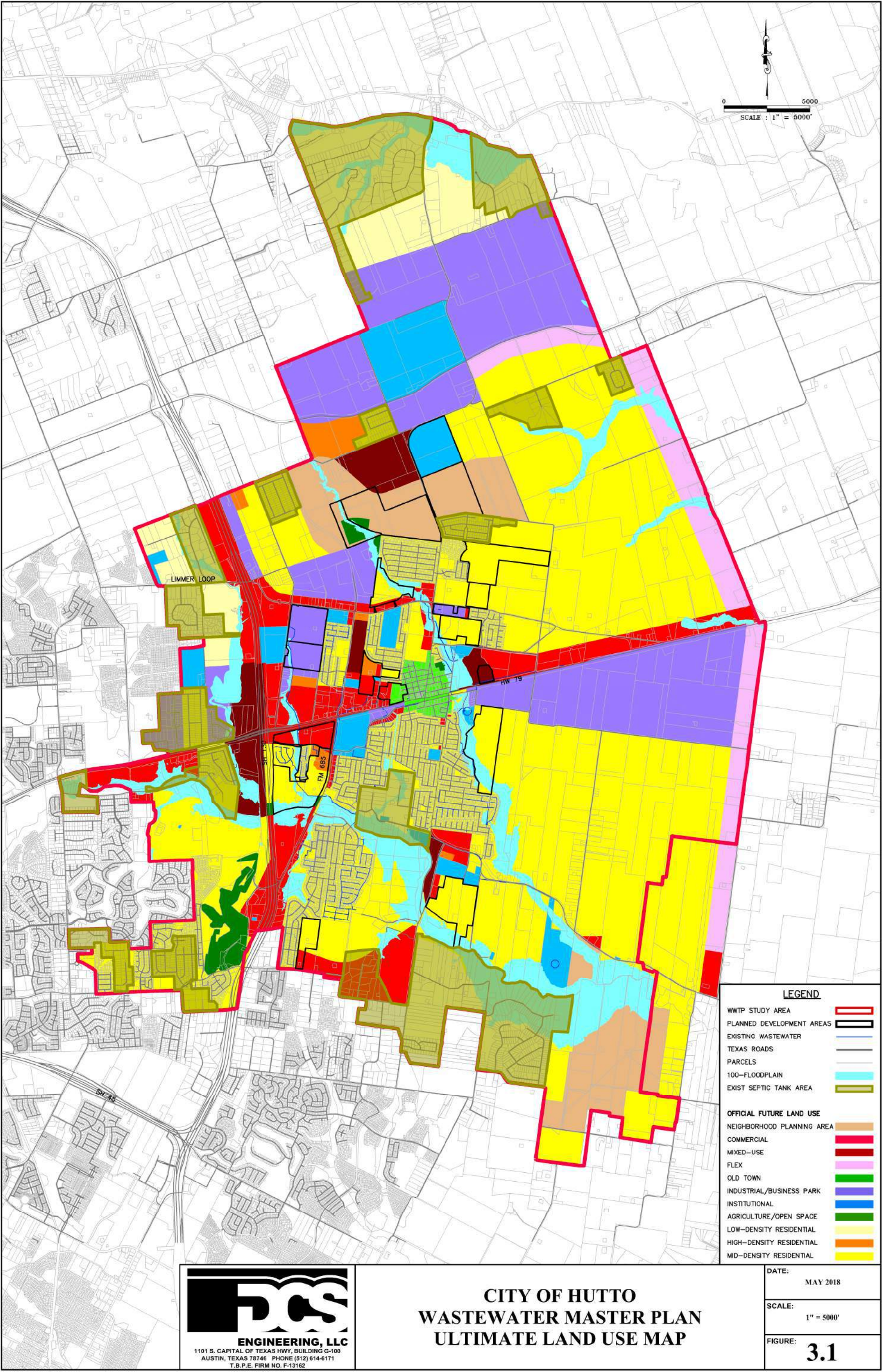
With the above established, the process followed to generate the estimates of the LUE's for all undeveloped acreages was completed in a two step process. The first step used the City's 2040 Future Land Use Map to identify the zoning classification/anticipated land use for each tract. The map is presently organized into eleven different land use types. These land uses were then evaluated against the anticipated ultimate land use at the time the City is built out. This evaluation captured land use changes which may occur over time (i.e. agricultural land converted to single family homes).

Based on this analysis, the below changes were made in coordination with City Staff during the master planning effort. Areas zoned as Agricultural use were changed to Mid-Density Residential. The two major areas where this occurred were both on the eastern half of the WW CCN. Also the tracts of land currently on septic systems, as discussed in Section 2, are ultimately planned to remain on septic systems. Thus, a land use type has been added to the ultimate land use map to clearly demark these areas as having no long term contribution to the wastewater system as shown in Figure No. 3.1.

The second step in the process of projecting LUEs is assigning an LUE density to each land use type that was utilized in the Ultimate Land Use Map and summarized Table No. 3.2. The LUE density is based on how many LUE's per acre will be built according to the specified zoning type and in coordination with Appendix A. The City does not state the precise density for each land use type in either their Unified Development Code (UDC), or Engineering and Design Manuals. However, in the Comprehensive Plan 2040 Report, there are descriptions and estimated ranges for some of the land uses on the Ultimate Land Use map including low, mid, and high-density residential and mixed-use retail, but not all the land uses.

Table No. 3.2 - Land Use Densities

COH Future Land Use	Density (LUE/Ac)	Notes
Commercial	7.04	Actual - Hansons Corner, Townwest Commons
Mixed-Use	8	Developed for Water Master Plan (50% High Density Residential, 50% Commercial)
Flex	5.4	Developed- mix of 50% commercial and 50% mid-density residential
Old Town	3.5	Downtown Hutto
Industrial/Business Park	1.8	Actual - Tradesmens Industrial Park, 79 Business Park
Institutional	1.6	Actual - Howard Norman Elementary, Veterans Hill Elementary
Agricultural/Open Space	0.1	Defined as Floodplain and Parkland
Low-Density Residential	1.5	Actual - Carmel Creek Est, Country View Est, Green Haven
Mid-Density Residential	3.84	Actual - Enclave, Riverwalk, Park at Brushy Creek
High-Density Residential	17	COH Definition from Unified Development Code
Neighborhood Planning Area	3.84	Developed to match Mid-Density Residential



For the undefined land use densities, an analysis was performed on existing developments in the City for that land use type to determine the density to be used based on the average of the comparable developments. This analysis was completed and ultimately used for commercial, industrial/business park, institutional, and old town land use types. Moreover, this method was used to refine the range of densities defined by the City for low, mid, and high-density residential and mixed-use retail into a specific density for each land use type. The specific LUE densities generated by this analysis are shown in Table No. 3.2 including the name of the area and/or existing development(s) that were used in determining the density.

These densities were then applied to the individual tracts of land based on the planned land use type to generate the projected LUEs for all undeveloped tracts of land. The projected LUEs are calculated based on the developable acreage for each tract. Developable acreage is defined here as the acreage outside the 100-yr floodplain limits for each tract of land. Existing right-of-ways were excluded from the developable acreage prior to the calculating of LUE's; and septic sewer areas were excluded from the totals as well as shown in Table No. 3.3. This table summarizes the land uses comprising the City's WW CCN's 32,207 acres including developed tracts of land and the remaining undeveloped tracts of land with their associated wastewater flows.

Table No. 3.3 – Summary of Ultimate Land Use and Associated Wastewater Flows

Land Use	Acreage	Ultimate LUEs	Ultimate Flow Contribution (MGD)	Percentage of Flow
Commercial	1,461	10,285	2.31	11.9%
Mixed Use	548	4,386	0.99	5.1%
Flex	974	5,260	1.18	6.1%
Old Town	63	230	0.05	0.3%
Industrial/Business Park	4,237	7,627	1.72	8.9%
Institutional	754	1,206	0.27	1.4%
Agricultural/Open Space	52	5	0.00	0.0%
Low-Density Residential	822	1,232	0.28	1.4%
Mid-Density Residential	9,055	34,770	7.82	40.4%
High-Density Residential	246	4,183	0.94	4.9%
Neighborhood Planning Area	1,515	5,818	1.31	6.8%
Existing Developed	4,452	11,129	2.50	12.9%
Septic	4,557	0	0.00	0.0%
Undevelopable (Floodplain/Right of Way)	3,471	0	0.00	0.0%
Total	32,207	86,132	19.38	100%

It should be noted here that the flow per LUE used in Table 3.3 is based on 225 gpd/LUE per the analysis in Section 2 of the City's existing flow and connection data; and the long term/ultimate anticipated flow per LUE. Based on growth rates outlined above, the City's WW CCN will reach its projected ultimate build-out of about 86,000 LUEs by 2088. Using the City's 3.04 people per LUE, the WW CCN service area population is projected to reach about 56,000 people by 2028, more than doubling the City-limit 2017 population of 26,950. At ultimate build out, the WW CCN service area's total population will be approximately 262,000. For clarity, this population projection is for the WW CCN limit (i.e. master plan study area) which is significantly larger than the City's existing City Limits and ETJ.

3.2 ULTIMATE COLLECTION SYSTEM

As part of this master planning effort, the City's ultimate wastewater collection system was planned. The location and size of future trunk line interceptors, permanent lift stations, and force mains were determined that are required to serve the ultimate needs of the WW CCN. Analysis of the existing wastewater collection system was used to establish how much additional development could be served by existing infrastructure to maximize the benefits to the City and its customers. When circumstances dictated, additional infrastructure was added throughout the service area to build the network for the ultimate collection system.

3.2.1 SUB BASIN DELINEATION

The City has experienced rapid growth over the last twenty years. New subdivisions, commercial properties, restaurants, schools, and multifamily developments are contributing an increasing amount of wastewater flow to the City's wastewater collection system and treatment facilities. The associated wastewater collection system including smaller diameter sewers, larger diameter sewers (interceptors), lift stations, and force mains are being extended to collect and convey flows to existing wastewater treatment plants. As this system becomes larger, the definition of where and how much flow is contributed from various areas becomes difficult to manage. Therefore, it is a common practice to subdivide wastewater service areas into smaller components (sub-basins) which can be assigned their unique flow contribution with associated injection point to an adjacent interceptor. This facilitates overall system design and evaluation of proposed changes and/or flow diversions.

The City's Wastewater GIS was collected and compiled showing existing sanitary sewers, lift stations, and force mains. This map was subsequently analyzed to understand how individual areas contribute flow as it travels to either the Central WWTP or South WWTP. The existing sub-basins were initially delineated based on this infrastructure. For the ultimate condition, the topographic map was overlaid on the existing collection system and the natural topography analyzed to determine the likely down gradient location for future interceptors. For existing interceptors, undeveloped acreages were analyzed for addition to these lines; and were added where capacity existed. Moreover, where possible, the sub-basin limits were expanded

to include the maximum amount of undeveloped areas. In some cases, parcels were required to be subdivided when a portion of it would likely obtain wastewater service from two or more separate interceptors due to topographic limitations of service.

In the City's WW CCN there are a total of three existing WWTP service areas with large undeveloped areas of land. In the locations where collection systems were not present, undeveloped land was divided into approximately 500 acre sub-basins. These sub-basins limits will likely be adjusted over time to accommodate actual development patterns; however, the sub-basins were delineated for planned interceptor sizes based on the wastewater flow projections. Naturally, the pipe sizes and slopes will need to be adjusted if significant changes occur in the LUE densities discussed above.

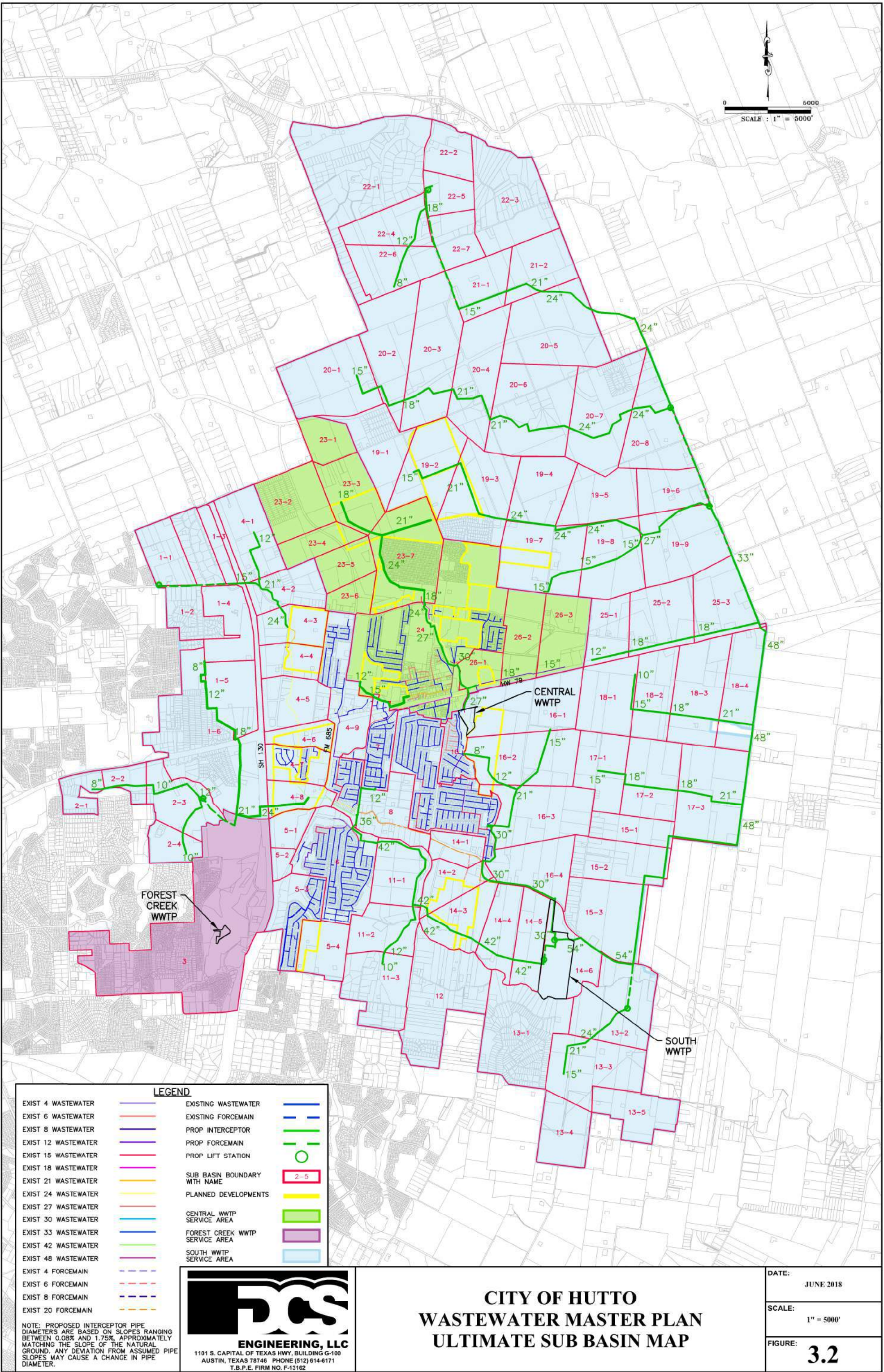
Upon completion of the sub-basins delineation, developed and undeveloped land within the three ultimate WWTP service areas was populated using GIS software by sub-basin to provide the requisite data including sub-basin ID, total acreage, acres within the 100-yr floodplain, developable acreage by land use type, LUEs by land use type, total LUEs, and ultimate service area location. Figure No. 3.2 shows the sub-basin boundaries, sub-basin name, and ultimate WWTP service area limits produced from this sub-basin delineation effort.

3.2.2 INTERCEPTORS AND LIFT STATIONS

After the sub-basin delineation effort had been completed, the ultimate interceptor alignments were developed to ensure each area within the limits of the WW CCN could be served. As noted in Section 2, the Forest Creek WWTP service area has its own privately owned collection system and WWTP. Thus, service by the City to this WWTP service area was specifically excluded.

The proposed collection system in the Central WWTP and South WWTP service areas were sized using the design criteria outlined in Section 2. Existing interceptor alignments were incorporated into the ultimate collection systems with models developed including existing interceptor branches. Record drawings were used to obtain the existing pipe size, slope, and alignment. The flows generated from upstream sub-basins were incrementally added at manholes/nodes to the interceptor as wastewater was conveyed downstream to the WWTP. Figure No. 3.2 shows the ultimate collection system of interceptors, future permanent lift stations with force mains, sub-basin boundaries, and ultimate WWTP service areas. It should be noted here that the City's six existing lift stations located in the collection system will all ultimately be decommissioned by extending interceptors to them. However, five new permanent lift stations will be constructed at some point in the future to be located in the ultimate collection system. This excludes the on-site lift stations which will ultimately exist at the two WWTPs.

Parameters calculated in the models included flow contributed at manholes/nodes, percent of pipe capacity used, average dry weather flow, peak dry weather flow, and peak wet weather flow. The slope used to conceptually size interceptors can generate a significant change in capacity for the same pipe diameter with



a relatively minor change in slope. Therefore, the average slope based on existing topography in the sub-basins was used for proposed interceptor alignments in the models. It should be noted here that final pipe diameters and slopes will be established in the final design phases for these proposed interceptors. In the future design phases, potential vertical conflicts will be more precisely examined. Due to the future interceptor depths being 15 ft or greater, vertical conflicts were not analyzed for impact to the collection system layout. However, creek crossings were analyzed so that a minimum of 6 ft of cover from the future top of pipe to creek flow line was achieved.

The naturally occurring slopes in the sub basins were calculated and ranged from 0.12% to 1.22% slope. The City design criterion requires that the minimum slope be set to maintain 2 feet per second (fps). The City's two interceptors were analyzed to determine the average slope used in those designs. The average slope was calculated by taking a weighted average, based on pipe length. The Cottonwood Creek and Brushy Creek Interceptors were constructed with an average slope of 0.20% and 0.53%, respectively. Finally, TCEQ Chapter 217.53(1)(2)(B) requires minimum and maximum slopes to conform to State regulations. For establishing the maximum slope, the design must include provisions to protect against pipe and bedding displacement due to shock when pipe velocities are 10 fps or greater. In order to avoid adding cost to the projects and extend the service life of the proposed interceptors, the maximum pipe velocity is recommended to remain below six feet per second.

Interceptor alignments shown in this master plan generally follow the creeks and associated 100-year flood plain limits. This allows the largest extent of the adjacent acreages to be served by gravity while minimizing the use of developable land toward interceptor construction which results in easements primarily being within the 100-year floodplain limits. Interceptor alignment also took into consideration the City's 2011 Thoroughfare Plan which includes the locations of proposed minor or major arterials as well as roads that will one day be widened. As projects move into conceptual design, coordination with all City CIP project lists is recommended so the coordination with planned roadway, waterline, storm sewer, and/or drainage improvements are economically completed. This also achieves efficient infrastructure alignments/layouts within existing right of ways. Wherever possible, we recommend that the interceptors be placed within the right of ways to avoid the additional cost of easements. However, for CIP project costs, easements were assumed to be needed and included in the overall project cost.

Within the existing Central WWTP service area, the Cottonwood Creek Interceptor serves the existing development north of Hwy 79 per the service area shown in Figure No. 2.2. There are three primary branches off of the trunk line of this interceptor including a 21" to the west serving Hutto Downtown, a 12" to the east serving the Covert Car Dealership, and an 18" serving businesses along Front Street along with the discharge from the Country Estates LS. The area north of Hwy 79 in this WWTP service area is the primary location where planned growth and development is occurring.

As discussed in Section 2, the existing Cottonwood Creek Interceptor can serve the planned additional 1,800 LUEs from 500 acres if all the flow is injected into the current northern most manhole on the 15" interceptor line. However, to serve the ultimate build-out of the basin, another interceptor will be required to provide additional capacity. After this development is constructed, the most restrictive pipe segment will be the 18" reach in proximity to Limmer Loop which will be at 80% capacity with the addition of the above mentioned 1,800 LUEs. The wastewater study completed for R.S.I. Hutto in December 2017, proposed upsizing the sections of Cottonwood Creek Interceptor north of Hwy 79 from the existing diameters of 15", 18", 24", 27", and 33" to the proposed diameters of 27", 30", 36", 41", and 41", respectively. However, a discussion of how this would be physically accomplished (i.e. pipe bursting or a second parallel interceptor) was not discussed in the above mentioned report. With respect to pipe bursting, this method is not feasible due to constructability issues since it exceeds a 6" diameter increase for all the segments (i.e. 6 inches is the upper limit of pipe bursting diameter increase). Therefore, a new parallel interceptor is the remaining option and is the proposed solution in this master planning effort. The proposed route with pipe diameters for the required parallel interceptor is shown in Figure No. 3.2. This parallel interceptor will convey the ultimate flows to the Central WWTP in conjunction with the existing interceptor so that the ultimate treatment capacity of 3.25 mgd can be obtained from this service area. A CIP cost has been included for this project in Section 4.

Lastly, two of the three branches off of this interceptor will need to be extended or improved. The 12" line to Covert Ford going east will need to be pipe burst to increase it to a 15" and 18" along its entire length north of Hwy 79 where it will tie into the proposed Cottonwood Creek parallel interceptor. Additionally, going west, the 21" line in proximity to the CO-OP and The Landing developments will need to be extended to the west as a 12" and 15" line to serve the remaining western sections of the Ultimate Central WWTP service area. Per coordination with City Staff, only the extension to the west is included in the next 10 years of CIP projects but both are shown as part of the ultimate collection system.

For the South WWTP service area, there are presently no gravity lines feeding this WWTP and the majority of its ultimate service area is undeveloped as shown in Figure No. 3.2. This service area will ultimately be served by three interceptors which will converge at the location of the on-site lift station(s) at build-out. Two of these interceptors will decommission the existing Enclave LS, Glenwood LS, and Country Estates LS. For the Country Estates LS, a 2,500 ft interceptor branch is recommended to be built from the Country Estates LS to the Enclave LS to allow this lift station to be decommissioned via the Brushy Creek Interceptor. This will transfer about 0.10 mgd of flow from the Central WWTP to the South WWTP.

The Brushy Creek Interceptor will also decommission the Enclave LS and be sized to ultimately handle the entire western half of the WW CCN through extension of the other interceptors that currently flow to the Enclave LS. This interceptor is shown in Figure No. 3.2 to cross Brushy Creek to the south of the Enclave LS via an inverted siphon and then run along the south and north sides of Brushy Creek until it

reaches the South WWTP. As the Brushy Creek interceptor enters the west side of the South WWTP site, the flow line is about 29 ft deep. Thus, an on-site lift station consisting of four (4) 100 HP pumps is anticipated to pump flows to the existing headworks location from the Brushy Creek Interceptor.

This alignment avoids the construction challenges and increased costs associated with an alignment along CR 135 thence to FM 1660 and thence to CR 137 until it is able to follow Brushy Creek. The inverted siphon for this interceptor will allow crossing the creek without using an aerial pipe bridge which will likely raise the 100-year floodplain elevation due to the 54" diameter (min) obstruction it would create across the creek. The siphon will also allow the interceptor flow line to be brought back to a shallower depth after the creek crossing since the upstream hydraulic grade can be used to drive the flows through the inverted siphon. Moreover, we recommend design elements be included in the final design to address odor control and periodic cleaning/flushing. We also recommend that a more detailed analysis be performed regarding the costs/benefits of an inverted siphon as part of the preliminary design for this interceptor due the inherent maintenance required for an inverted siphon.

It should be noted here that the Brushy Creek Interceptor's service area contains Sub Basin 11-1. This sub basin has approximately 67% of its acreage within the 100-year floodplain including some areas almost 6 ft below the 100-yr floodplain elevation. However, because it is a large tract of land in a somewhat centrally located in the City, the owner will likely regrade this tract to recover usable acreage from the 100-year flood plain. Thus, the usable acreage for this tract increases to an estimated 129 acres and developed as mid-density single family housing.

The second interceptor serving the South WWTP will be the Glenwood Interceptor sized for the flows generated from Sub-Basin 9, 10, and 16-1 to 16-4. This interceptor will decommission the Glenwood and Creekside Lift Stations. This interceptor will also require a lift station to be constructed to pump the flows from it into the existing headworks on-site at the South WWTP. Depending on which interceptor is built first (i.e. Brushy Creek Interceptor, Glenwood Interceptor, or CR 3349 Interceptor), the flows may be served by a single lift station wet well, if it is economically viable to do so, without building one lift station on the north end of the site (to serve the Glenwood Interceptor and CR 3349 Interceptor) and a second lift station on the south end of the site serving only the Brushy Creek Interceptor. Nonetheless, the Glenwood Interceptor flow line will be about 20 ft deep and is anticipated to be served by the same lift station wet well which serves the CR 3349 Interceptor.

When developed, the ultimate wastewater system will include infrastructure within a currently undeveloped area just past the north side of Chandler Road. At this location, a break in topography occurs where the land falls north towards the San Gabriel River. Because this region is isolated from the rest of the City, a centralized wastewater collection system has not been started. Several large-lot houses are already developed in the area but are currently, and will remain, on septic. Additionally, there is a 239 acre site that is being used for cement mixing materials. The remainder of the undeveloped areas can be served through one

interceptor with a dedicated lift station and associated forcemain as shown in Figure No. 3.2. This flow will enter the northern most reach of the CR 3349 Interceptor to be served by the South WWTP.

The third interceptor serving the South WWTP will be the CR 3349 Interceptor sized for flows generated from the eastern areas south of Hwy 79 and the remaining areas to the north of Hwy 79 as shown in Figure No. 3.2. The CR 3349 Interceptor will ultimately have multiple interceptor branches directed westward off the interceptor along CR 3349. This interceptor system is anticipated to be constructed incrementally as development and demand dictates due to the lengths, depths, and diameters required for the implementation of this project. The interceptor is anticipated to be installed on the eastern most edge of the WW CCN to accommodate the natural fall of the land from west to east. However, the rolling hills and resulting topography in three areas north of Hwy 79 will require the installation of three permanent lift stations. While permanent lift stations have been rigorously avoided in this master plan, these lift stations allow the upper reaches of the South WWTP service area to be served while keeping the depth of the interceptor trunk line as shallow as possible and without requiring the construction of a third City operated WWTP. With this, the north/south running CR 3349 Interceptor depths are anticipated to range between 15 ft and 30 ft of depth. Once the interceptor turns west towards the South WWTP at FM 1660, the interceptor will pick up some depth due to going up grade slightly and enter the plant site at about 44 ft of depth at the lift station wet well on the north side of the WWTP. This lift station is anticipated to ultimately have eight (8) 150 HP pumps for a total capacity of about 21,000 gpm.

The total on-site lift station capacity required to serve the above three described interceptors will total 32,041 gpm. Because of the size this lift station(s), we recommend that a preliminary design be included in the next interceptor project to the South WWTP site; or South WWTP expansion project to master plan the interceptor routes on the site including the phasing of the lift station(s) as coordinated with the ultimate South WWTP layout.

Lastly, additional infrastructure in the South WWTP service area will include a combination of smaller diameter interceptors, lift stations, and force mains. These projects include but are not limited to:

1. To bring flow from the Veterans Hill Elementary School into the City system, a lift station and force main will be constructed to pump this flow along Limmer Loop and under SH 130 before continuing as a collection line on the west side of SH 130. This project will also include an extension of the Brushy Creek Interceptor from its existing termination point which will open up additional areas near Limmer Loop and SH-130 for development.
2. The Lakeside Estates LS Decommissioning involves bringing the flow currently being taken to Pflugerville into the City's collection system.
3. West of SH-130, the Avery Lake Interceptor serving the western SH-130 corridor and the existing sub divisions and business parks currently on septic.

3.3 ULTIMATE WASTEWATER TREATMENT PLANTS

The development of the ultimate service areas weighed numerous variables to determine the boundaries as outlined in Section 2 and Section 3. These variables included but are not limited to the

decommissioning of as many lift stations as possible, evaluation of existing WWTP capacities, evaluation of low pressure collection systems (i.e. force mains for temporary service), installation of ultimate interceptors, and utilizing existing interceptor, lift station, or force main capacities. In order to efficiently utilize existing constructed WWTP capacity, flows generated from one of the ultimate service areas may be temporarily diverted to the City's other WWTP service area as an interim condition.

The existing wastewater service areas are shown in Figure No. 2.2 and represent the contributions to each WWTP as they exist today with additional undeveloped areas which will ultimately be part of that service area. The ultimate wastewater services areas shown in Figure No. 3.2 show the existing and proposed collection systems under their final configuration that will be dedicated to the Central WWTP and the South WWTP, respectively. The ultimate service area flows are summarized in Table 3.4. The Central WWTP will ultimately be expanded to treat 3.25 mgd and the South WWTP will ultimately be expanded to treat 15.38 mgd.

Table No. 3.4 - Ultimate Wastewater Flows by Service Area

Basin (WWTP)	Existing Service Area	Existing Permit Capacity	Ultimate Service Area	Ultimate Permit Capacity
Forest Creek	1,494 acres	0.5 mgd	1,494 acres	0.990 mgd ¹
Central	5,838 acres	1.7 mgd	3,665 acres	3.250 mgd
South	22,392 acres	2.0 mgd	27,049 acres	15.380 mgd
Totals	32,208 acres²	4.2 mgd	32,208 acres	19.620 mgd
1. Determined by value outlined in existing permit and confirmed through WWMP flow projections.				
2. Accounts for entire WW CCN area.				

3.3.1 FOREST CREEK WWTP

The Forest Creek WWTP is located on the Star Ranch Golf Course just west of SH 130 and provides service solely to the area within Williamson County Municipal Utility District 22 and Water Sewer and Irrigation District 3. With the Cities of Hutto, Pflugerville and Round Rock controlling the adjacent WW CCNs, this WWTP's service area is expected to remain unchanged in the future as shown in Figure No. 3.2. Additionally, aerial photos show concrete basins which indicate the WWTP was likely intended to be a permanent facility. Approximately 69% of the acreage in this service area is developed at this time with a total of about 2,456 LUEs based on information discernible from aerial photos. The estimated build-out LUEs total 3,467 with a resulting flow of 0.78 mgd using 225

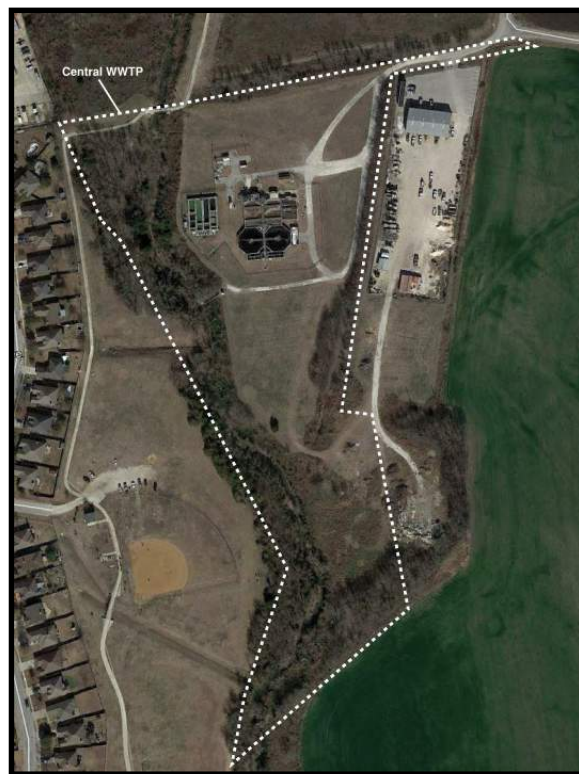


gpd/LUE. This projected total flow was calculated as part of this master plan and approximately aligns with the existing discharge permit's ultimate capacity of 0.990 mgd.

The site is operating under TPDES Permit and currently has two phases of 0.500 mgd and 0.990 mgd. We conclude from this that the likely ultimate planned capacity for this facility will not exceed 0.990 mgd. It should be noted here that DCS didn't perform any assimilative capacity analysis for this WWTP and was not able to validate the above information with the WWTP Owner/Operator.

3.3.2 CENTRAL WWTP

The Central WWTP is located south of Hwy 79 along Cottonwood Creek and serves most of the developed acreage in the wastewater system as shown in Figure No. 2.2. This WWTP's service area is expected to be reduced in the future, as shown in Figure No. 3.2, with the decommissioning of Country Estates, Creekside, and Glenwood Lift Stations which currently flow to the Central WWTP. These lift stations serve 3,244 existing LUEs which generate approximately 0.606 mgd of actual flow (i.e. 187 gpd/LUE per Section 2). The actual flow is calculated here using 187 gpd/LUE so that when flows are discussed for diversion to the South WWTP later in this section, an accurate volume is reflected in the flow projection graphs. However, for long term planning of interceptor sizes and WWTP capacities, 225 gpd/LUE is still be used for planning and discussion purposes. The current flow to this WWTP is averaging 0.940 mgd.



The existing service area is bounded by the areas to the north that naturally flows to the WWTP via collection lines. Land within the Central WWTP service area is primarily single family residential houses. The exceptions are areas of Hutto Downtown, businesses along Front Street, and some proposed retail, multifamily, and office spaces in the planned Hutto CO-OP and Landing developments. These existing developments represent approximately 22% of the land in the ultimate service area as shown in Figure No. 3.2. The estimated ultimate service area build-out LUEs totals 14,444 with a resulting flow of 3.25 mgd using 225 gpd/LUE.

Prior to proceeding forward in the master planning effort, DCS performed assimilative creek modeling for additional discharges from the Central WWTP into Cottonwood Creek to confirm sufficient capacity existed to accommodate a WWTP expansion at the Central WWTP site. TCEQ Qual-Tex models were obtained from TCEQ and various scenarios were modeled which confirmed that Cottonwood Creek can

accommodate a flow of 3.25 mgd without prohibitive effluent limits being imposed by TCEQ. Table No. 3.5 summarizes the ultimate permit effluent limits generated from DCS's modeling efforts. These results will ultimately be confirmed by TCEQ as part of a permit application to be submitted to TCEQ at the time of the permit submittal. Due to numerous uncontrollable variables with respect to discharge permitting, we typically recommend to our Clients that ultimate WWTP capacities be obtained when they become known and are supported by a master planning effort. In order to reduce risks and potential additional infrastructure costs to the City's long term plans, we recommend that a permit application to obtain the 3.25 mgd capacity be submitted at the next time the permit is renewed; or when permit application preparation funds becomes available.

Table No. 3.5 - Ultimate WWTP Permit Limits

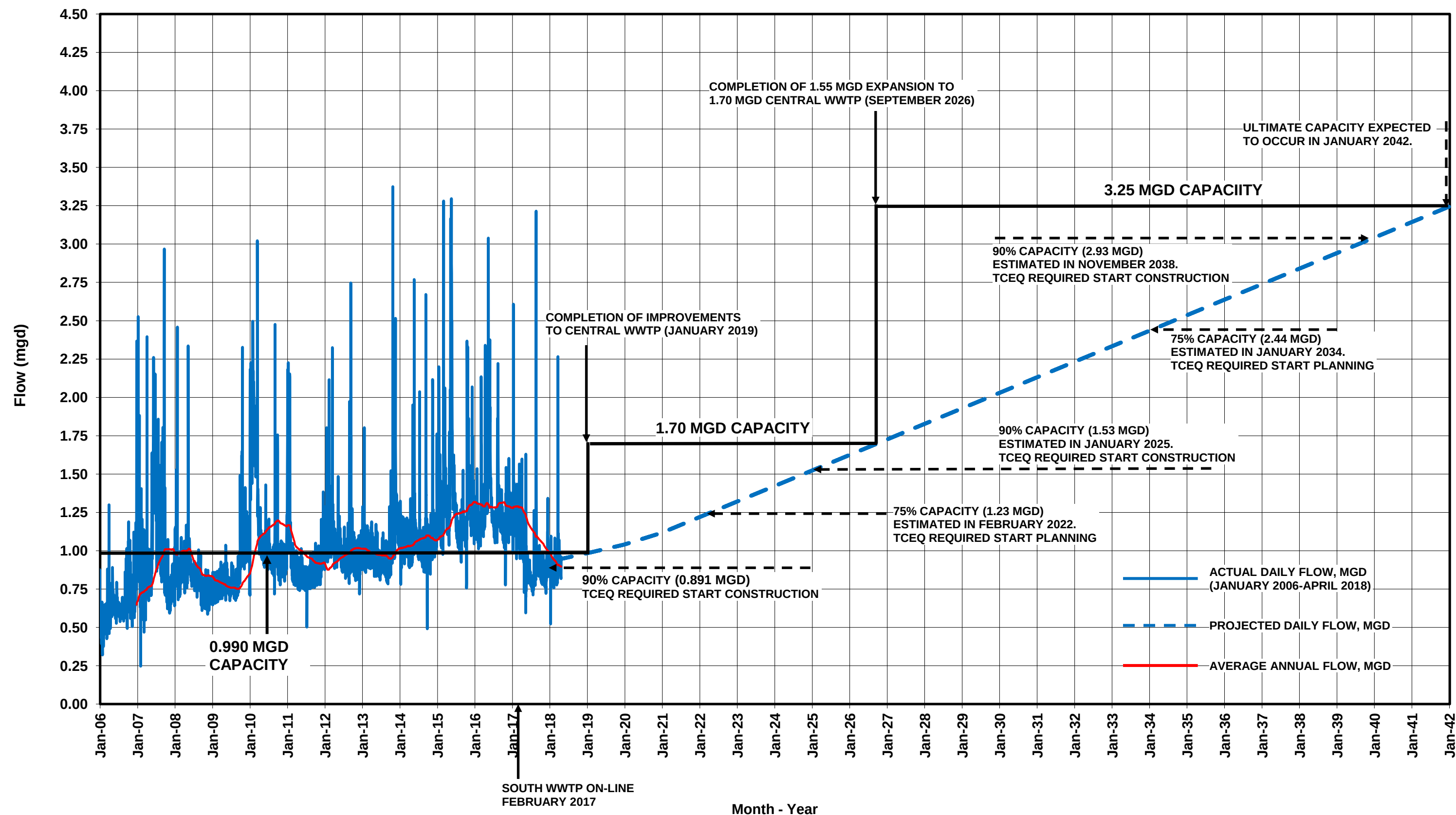
WWTP	Flow	Dissolved Oxygen Limit	BOD Limit	NH3 Limit	Receiving Stream
Forest Creek	0.990 mgd ¹	6.0 mg/L ¹	10 mg/L ¹	2.0 mg/L ¹	Brushy Creek
Central	3.25 mgd	6.0 mg/L	5 mg/L	1.7 mg/L	Cottonwood Creek
South	15.38 mgd	6.0 mg/L	7 mg/L	2.0 mg/L	Brushy Creek
1. Limits as stated in TCEQ Forest Creek WWTP permit. No additional assimilative modeling performed.					

As discussed in Section 2 with respect to BOD loading, the existing Central WWTP's derated capacity is 0.990 mgd. With a measured flow in 2018 averaging 0.940 mgd, the WWTP is operating at 95% of its derated capacity. Moreover, approximately 8,000 LUEs currently are actively being pursued for development in the City's WW CCN and are planned to be added in the near future. Approximately 52% of these geographically fall within the ultimate service area limits of the Central WWTP. This results in an additional 4,160 LUEs or 0.936 mgd being added to the Central WWTP. Based on this, a flow projection graph has been generated as shown in Figure No. 3.3.

This graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 0.990 mgd derated capacity line, 1.70 mgd permitted capacity line, 3.25 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached in 2042 at 3.25 mgd, if the Glenwood, Creekside, and Country Estates Lift Stations are not diverted to the South WWTP.
2. The WWTP has 50,000 gpd of capacity left in it (i.e. 222 additional LUEs).
3. 0.990 mgd capacity is projected to be reached in January 2019 (7 months from today) and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 1.7 mgd. Approximately 24 months would be required to design, bid, and build these improvements. Thus, sufficient time to implement this doesn't exist.
4. A WWTP capacity of 1.70 mgd would be fully utilized by September 2026. At this date, construction to expand capacity to 3.25 mgd would need to be completed.
5. Alternatives to divert one or more lift station flows coming from Glenwood, Creekside, and/or Country Estates Lift Stations to the South WWTP would defer the above required construction at Central WWTP.

Figure No. 3.3
Central WWTP Flow Projection Graph



3.3.3 SOUTH WWTP

The South WWTP is located adjacent to FM 1660 along Brushy Creek and serves the developed acreage in the wastewater system as shown in Figure No. 2.2. This WWTP's service area is expected to be expanded in the future, as shown in Figure No. 3.2, with the decommissioning of Country Estates, Creekside, and Glenwood Lift Stations which currently flow to the Central WWTP. These lift stations serve 3,244 existing LUEs which generate approximately 0.606 mgd of actual flow (i.e. 187 gpd/LUE per Section 2). The current flow to the South WWTP is averaging 0.320 mgd.

Land within the South WWTP service area is primarily single family residential houses. While the service area is largely undeveloped, when complete, three interceptors will bring flow to the plant via the Brushy Creek, Glenwood, and CR 3349 Interceptors as shown in Figure No. 3.2. Two on-site lift stations will pump the flow into the headworks of the plant. The estimated ultimate service area build-out LUEs totals 68,356 with a resulting flow of 15.38 mgd using 225 gpd/LUE. These LUEs represent 83% of the total WW CCN LUEs which will ultimately be served by the City.



Prior to proceeding forward in the master planning effort, DCS performed assimilative creek modeling for additional discharges from the South WWTP into Brushy Creek to confirm sufficient capacity existed to accommodate a WWTP expansion at this site. TCEQ Qual-Tex models were obtained from TCEQ and various scenarios were modeled which confirmed that Brushy Creek can accommodate a flow of 15.38 mgd without prohibitive effluent limits being imposed by TCEQ. Table No. 3.5 summarizes the ultimate permit effluent limits generated from DCS's modeling efforts. These results will ultimately be confirmed by TCEQ as part of a permit application to be submitted to TCEQ at the time of the permit submittal. Due to numerous uncontrollable variables with respect to discharge permitting, we typically recommend to our Clients that ultimate WWTP capacities be obtained when they become known and are supported by a master planning effort. In order to reduce risks and potential additional infrastructure costs to the City's long term plans, we recommend that a permit application to obtain the 15.38 mgd capacity be submitted at the next time the permit is renewed; or when permit application preparation funds becomes available.

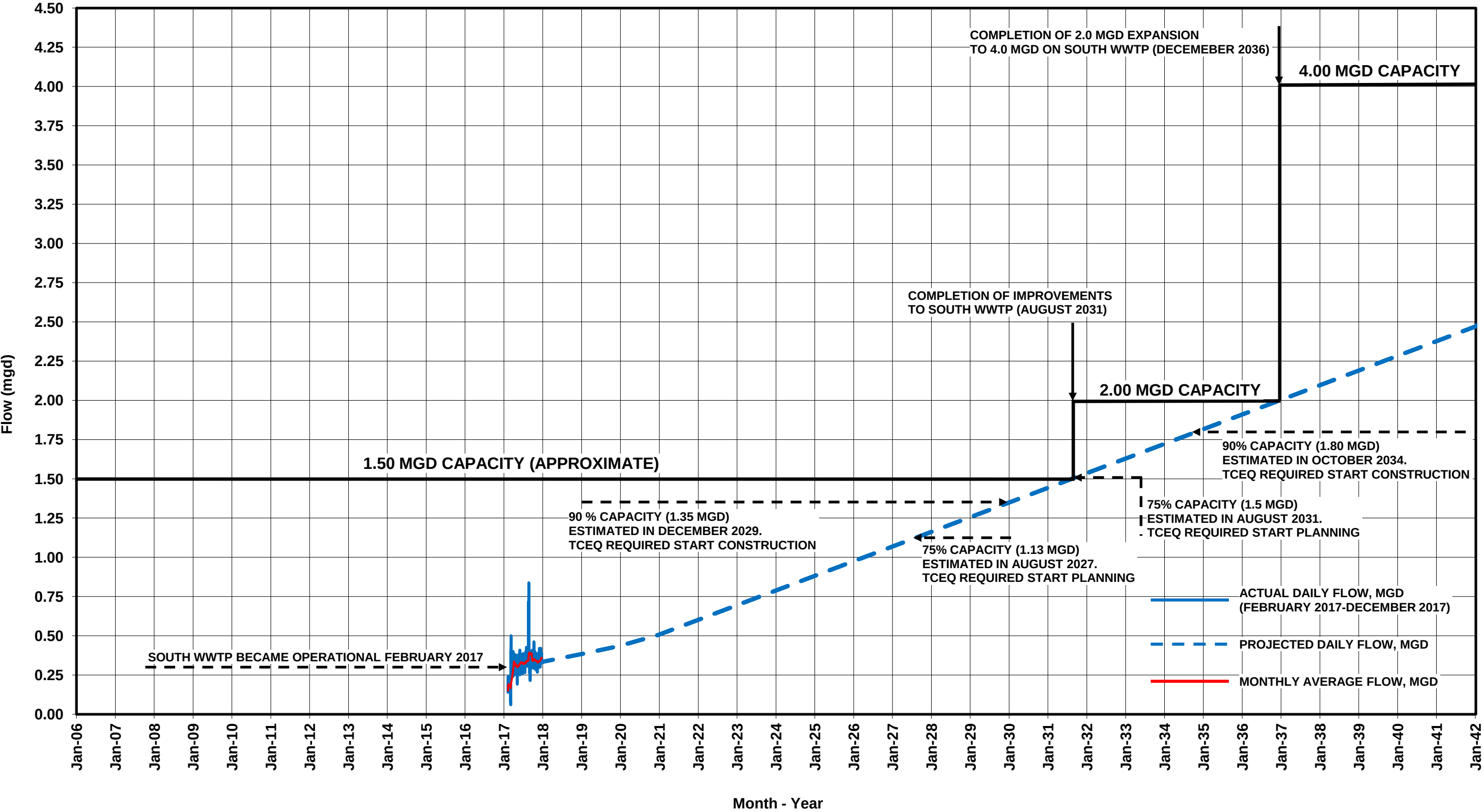
As discussed in Section 2 with respect to BOD loading, the existing South WWTP's derated capacity is 1.50 mgd. With a measured flow in 2018 averaging 0.320 mgd, the WWTP is operating at 21% of its derated capacity. Moreover, approximately 8,000 LUEs currently are actively being pursued for development in the City's WW CCN and are planned to be added in the near future. Approximately 48% of these

geographically fall within the ultimate service area limits of the South WWTP. This results in an additional 3,840 LUEs or 0.864 mgd being added to the South WWTP. Based on this, a flow projection graph has been generated as shown in Figure No. 3.4.

This graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 1.50 mgd derated capacity line, 2.0 mgd permitted capacity line, 4.0 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. Although not shown on the graph, the projected build out year for the service area is reached in 2089 at 15.38 mgd, if the Glenwood, Creekside, and Country Estates Lift Stations are not diverted to the South WWTP.
2. The WWTP has 1.18 mgd of capacity left in it (i.e. 5,244 additional LUEs).
3. 1.50 mgd capacity is projected to be reached in August 2031 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 2.0 mgd. Thus, sufficient time to implement this project exists.
4. A WWTP capacity of 2.0 mgd would be fully utilized by December 2036. At this date, construction to expand capacity to 4.0 mgd would need to be completed.
5. Alternatives to divert one or more lift station flows coming from Glenwood, Creekside, and/or Country Estates Lift Stations to the South WWTP would move up the dates required to achieve the above milestones.

Figure No. 3.4
South WWTP Flow Projection Graph



3.3.4 BIOSOLIDS MANAGEMENT

Biosolids management is a rapidly evolving industry. Regulatory trends and the need to reduce solids disposal costs have spurred the development of many innovative technologies to produce biosolids, especially Class A biosolids. Because of these rapid changes in the industry, it would be premature to definitively select the exact type of biosolids processing facility. However, initiation of the discussion for an overall biosolids management strategy is prudent with this master planning effort although it should be clearly noted that development of a plan was outside this scope of work. Due to demand in the Central Texas, the City may develop a Class A solids processing program centered on composting. Even so, the management strategy presented here retains enough flexibility so as not to negate it or select it.

The City's two WWTPs will each produce a waste activated sludge stream from the treatment process. Currently, the sludge generated from the Central WWTP is wet hauled to the South WWTP for processing via a belt press. The waste activated sludge generated at the South WWTP is processed through this same belt press with all the cake produced disposed of in a sanitary landfill. While the South WWTP presently has the capacity to treat the sludge from both WWTPs, the cost of wet hauling the sludge from the Central WWTP is becoming measureable, if not prohibitive. This will only increase as the flows grow beyond the current 0.940 mgd being treated at the Central WWTP.

The proposed management strategy includes a single regional biosolids processing facility located at the South WWTP on the 155 acre site. This offers the benefits achieved from economy-of-scale operations and no separate sludge processing facilities would be required. Sludge generated from the City's Central WWTP and potentially other non-city plants will be conveyed to the South WWTP. For the Central WWTP, waste activated sludge could be pumped to the Creekside LS wet well where it would begin to gravity flow to the South WWTP's influent lift station upon completion of the future interceptor extensions to decommission the Glenwood and Creekside Lift Stations. This would remove the wet hauling costs the City is currently incurring via the installation of a small sludge pumping station at the Central WWTP site and utilization of the abandoned forcemain coming from the Creekside LS.

At the South WWTP, the waste activate sludge from the Central WWTP will be removed by either future primary clarifiers or the existing secondary clarification phase used in the existing sequencing batch reactors (SBR). At full build out of the Central WWTP to 3.25 mgd, approximately 65,000 gpd of waste activated sludge will need to be conveyed and processed by the South WWTP. Additionally, the south WWTP will generate about 320,000 gpd of waste activated sludge at its ultimate capacity. The costs/benefits of a phased regional sludge processing facility is recommended to be included as part of the preliminary engineering phase for the next South WWTP expansion or Central WWTP improvements, whichever occurs first, so that the City may realize cost savings through more efficient sludge disposal operations as soon as possible.

3.4 RECLAIMED WATER SYSTEM

While the ultimate collection system will be made up of primarily gravity infrastructure, future lift stations and force mains will likely be constructed during intermediate phases prior to reaching ultimate build out. The practice of constructing a temporary lift station and force main is often economically more beneficial for providing temporary wastewater service to less than fully developed areas, and is a common occurrence in growing cities. Alternatively, the City would be required to construct interceptors and/or multiple small localized wastewater treatment plants to serve the developments which are both typically more expensive options. Therefore, the City has the opportunity to implement an overall practice whereby temporary force mains are incorporated into a future reclaimed water distribution system, where applicable, once the forcemain is decommissioned for use to convey wastewater.

The primary financial driver for a reclaimed water system resides in the fact that the water being discharged to the creek is owned by the City until it enters the creek. Prior to this discharge, the water can be sold as a water supply when local demands are present and the ability to deliver the water coincide to generate another revenue source for the City. Abandoned force mains with no future use designated can be converted to reclaimed waterlines per TCEQ and can form the framework of a future reclaimed water distribution system since significant demands from potential reclaimed water users are typically in proximity to these very same abandoned forcemains. In addition to these converted pipelines, the City would need to construct a reclaimed water storage tank and pumping facilities to be connected to these pipelines. Naturally, other future reclaimed water customers can be served by extending new pipelines from these abandoned force mains in future phases. This strategy will maximize the service life of the force mains yielding the greatest return on capital costs versus abandoning thousands of linear feet of infrastructure.

Typically, larger users of reclaimed water include golf courses, agricultural uses, parks/athletic fields, and industrial applications. While multiple customers in the City currently exist that could potentially become users of reclaimed water, the infrastructure to be re-purposed as reclaimed water lines is not yet available. Moreover, the large areas that are undeveloped on the eastern half of the WW CCN have a possibility of utilizing lift stations and force mains as the collection system grows as a whole. If future developments are planned to become large users of reclaimed water (i.e. along boulevards, parks, etc.), the opportunity could provide benefit to both the City and the users as the City's infrastructure evolves. We recommend that the City proactively obtain a Reclaimed Water Authorization from TCEQ for its Central WWTP and South WWTP with a service area matching the City's WW CCN. We also recommend the City actively pursue reclaimed water customers as new developments are initiated in the City.

3.5 RECOMMENDED IMPROVEMENTS

Section 3 has outlined the method of how growth rates were determined and how flow projections were analyzed and implemented within each WWTP service area. While projections have been based on the

best available data at this time, it is likely that real world situations will cause fluctuations in how this actually occurs over time. As identified in flow projection graphs shown in Figure No. 3.3 and 3.4, the City is at a point in time that action is required to be taken to address capacity issues for the Central WWTP service area. Thus, DCS generated the following flow projection graphs for a potential solution that reflects a project to divert the Glenwood and Creekside Lift Stations to the South WWTP; and divert the Lakeside Lift Station to the South WWTP within about 18 months from today (i.e. by March 2020). This opportunity identifies an incremental way to implement a solution set so the capital expenditures by the City may be deferred as long as possible including but not limited to the phased transfer of flow from the Central WWTP to the South WWTP. The large transition of flows from one plant to the other is seen as sudden increases in the graphed data.

For the Central WWTP Flow Projection graph shown in Figure 3.5, the graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 0.990 mgd derated capacity line, 1.70 mgd permitted capacity line, 3.25 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached 5 years later in 2047 for 3.25 mgd, if the Glenwood and Creekside Lift Stations (i.e. 0.484 mgd) are diverted to the South WWTP.
2. 0.484 mgd of capacity is freed up at the Central WWTP to accommodate about 2,588 LUEs.
3. 0.990 mgd capacity is projected to be reached 5.75 years later in August 2024 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 1.7 mgd. Thus, sufficient time to implement this project exists.
4. A WWTP capacity of 1.70 mgd would be fully utilized by August 2031. At this date, construction to expand capacity to 3.25 mgd would need to be completed.
5. In 2047, flows from the Megasite development would be required to be diverted to the South WWTP for permanent treatment.

For the South WWTP Flow Projection graph shown in Figure 3.6, the graph includes the daily flow measured at the WWTP, average annual flow measured at the WWTP, 1.50 mgd derated capacity line, 2.0 mgd permitted capacity line, 4.0 mgd permitted capacity line, 6.0 mgd permitted capacity line, and the flow projected out over time using 225 gpd/LUE. The key conclusions from this graph include the below:

1. The projected build out year for the service area is reached 5 years earlier in 2084 for 15.38 mgd, if the Glenwood and Creekside Lift Stations (i.e. 0.484 mgd) are diverted to the South WWTP.
2. 0.484 mgd of capacity is used at the South WWTP for about 2,588 LUEs leaving 2,656 LUEs of capacity at this WWTP.
3. 1.50 mgd capacity is projected to be reached 6.75 years earlier in January 2025 and would be the date that improvements have to be completed at the WWTP to bring its capacity back to 2.0 mgd. Thus, sufficient time to implement this project exists.
4. A WWTP capacity of 2.0 mgd would be fully utilized by July 2030. At this date, construction to expand capacity to 4.0 mgd would need to be completed.
5. In 2046, flows from the Megasite development would be required to be diverted to the South WWTP for permanent treatment which would require the South WWTP to be expanded to 6.0 mgd by this date.

It has also been recognized in this master plan that the higher costs of permanent interceptors constructed by the City or developers is not always feasible which requires the utilization of temporary lift stations and force mains; or other infrastructure for temporary conditions. However, once permanent infrastructure is in place through the coordinated efforts outlined in this master plan, flows can be diverted seamlessly from the Central WWTP to the South WWTP to obtain permanent service. This will allow the City to utilize existing capacities and incrementally increase the flows to the South WWTP where ultimately the majority of the wastewater treatment will occur.

Improvements to the wastewater collection and treatment system include additional interceptors, lift stations with force mains, lift station decommissioning, improvements at the existing WWTPs, and expansion of existing WWTPs. Improvements were designed to meet the projected system growth (population and demands) over time by planning for adequate infrastructure to collect and treat the flow. These recommendations include implementing the improvements at the Central WWTP to restore the actual capacity back to the permitted capacity of 1.7 mgd and are summarized in more detail in the Figures and Tables included in Section 4.

Figure No. 3.5
Central WWTP Flow Projection Graph with Phased Diversions

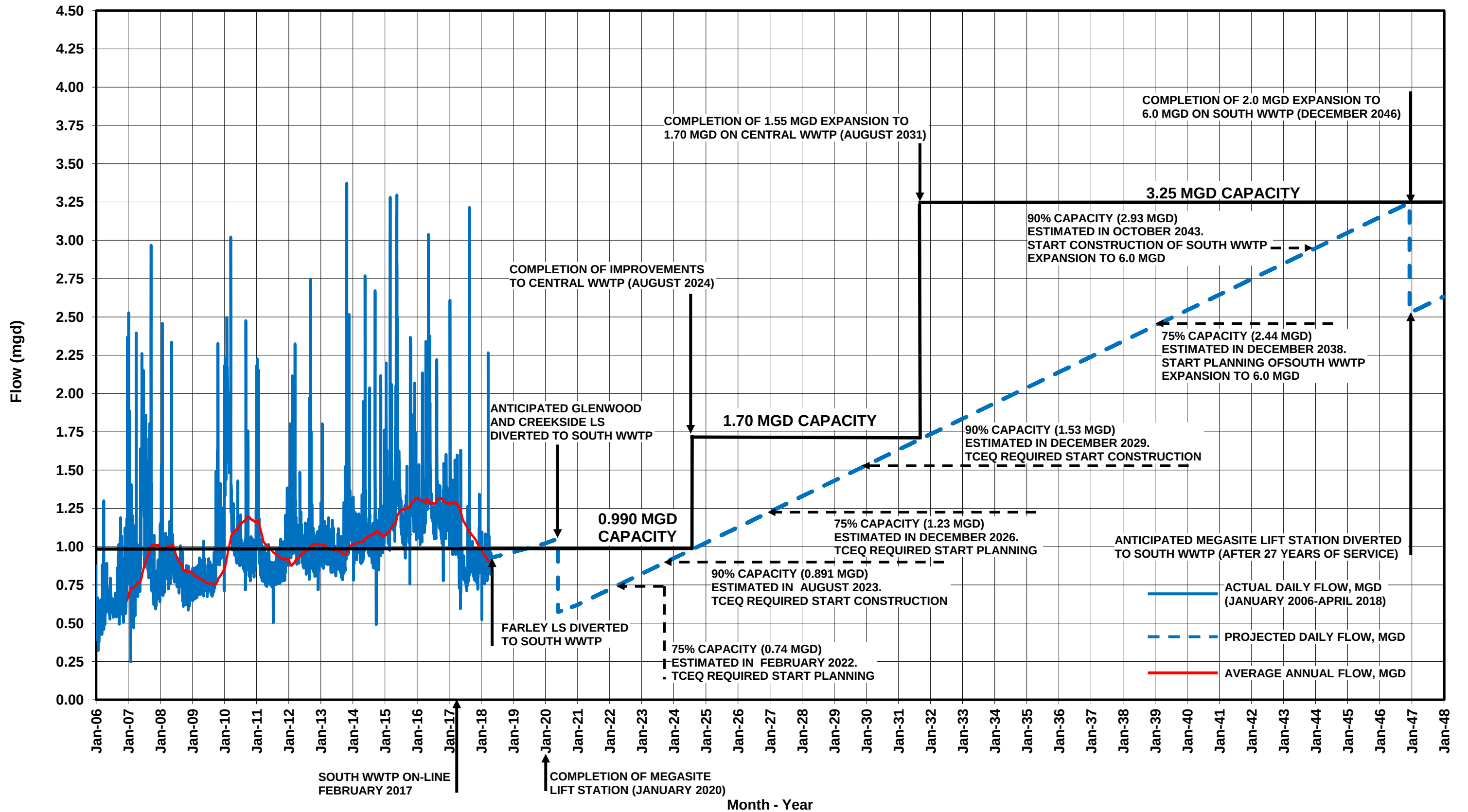
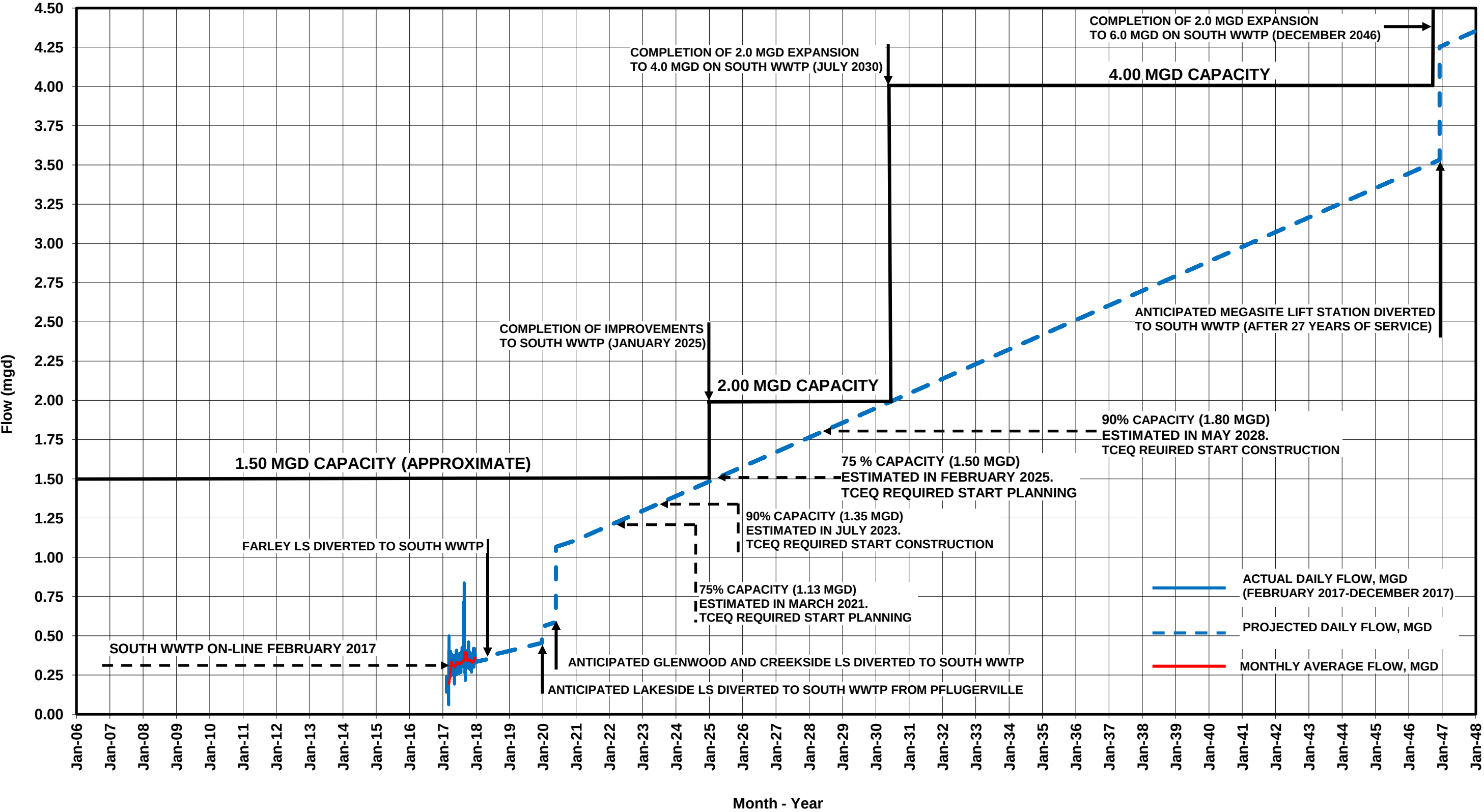


Figure No. 3.6
South WWTP Flow Projection Graph with Phased Diversions



Section 4

Summary and Capital Improvement Program

This WWMP provides an evaluation of the City's existing public wastewater system as well as the City's future public wastewater system as defined by active development, population projections, and estimated wastewater demands associated with 5-year, 10-year, and Ultimate (build-out) planning periods. The findings and recommendations contained within the WWMP will help ensure that the City's current wastewater demands, future demands, and regulatory requirements are satisfied. The WWMP, concurrent with the City's CIP and Growth Guidance Plan, will provide guidance for the City to effectively construct its wastewater collection and treatment system serving its citizens. The ultimate wastewater collection system including WWTP service areas, lift stations, force mains, and WWTP locations are shown in Figure No. 4.1. CIP project identifiers are also included in this figure and correspond to the CIP Table in this section.

4.1 COST EVALUATION

Each project in the five year and ten year CIP list is anticipated to be required to serve the planned growth. Within the next 10 years, the order of these projects may need to be adjusted based on actual development patterns within the City. An engineer's opinion of most probable construction cost was developed for each project. Unit costs were developed based on information from suppliers and bid tabulations for recent projects and include contractor overhead and profit. The total project costs include additional costs for contingency (25%), professional services (15%), and inflation (4% per year). Moreover, each project has been assumed to require a permanent and temporary wastewater easement regardless of it is adjacent to an existing road or future road since the interceptors will likely not be constructed when the roadways are improved.

Projects identified for implementation within the next 10 years were compiled into a Capital Improvement Plan as shown in Table No. 4.1. Additional projects which will be required beyond this time frame are shown in Figure No. 4.1; however, development of costs for these projects was beyond this master plan's scope of work.

4.2 CAPITAL IMPROVEMENT PLAN

The City is projected to continue to experience rapid growth in its wastewater service areas resulting in the need for construction of new wastewater system facilities and expansion of existing facilities. The City cannot afford to implement these improvements all at one time; therefore, a phased approach is planned to correlate facility improvements with projected increases in wastewater flow. Development of a CIP for the City's wastewater system for the next 10 years is an important part of the City's planning process. A 10-yr CIP is critical for financial forecasting for the City as it is needed to program future bond sales to finance the

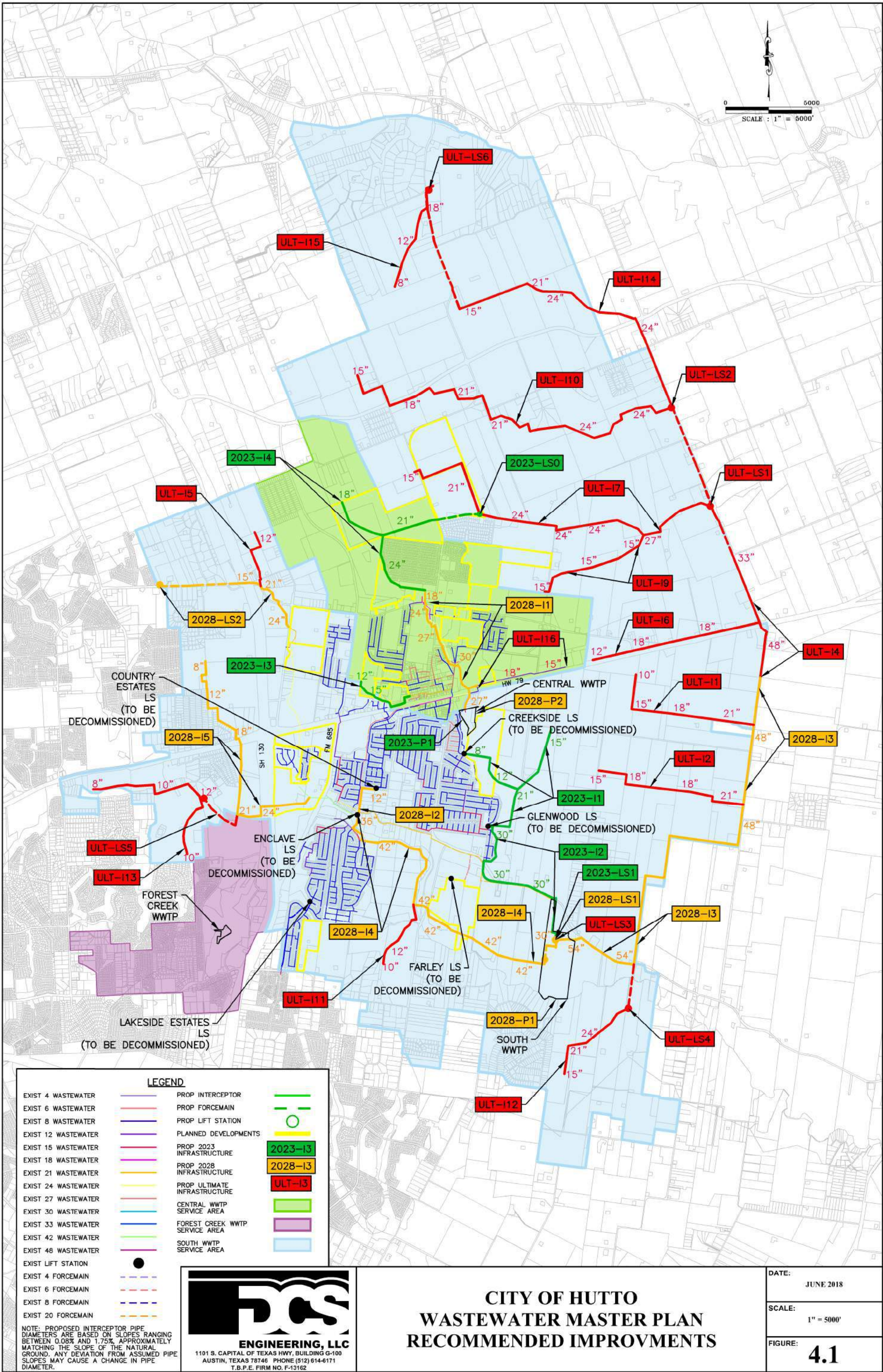


Table 4.1 - CIP List

Project Date	Project ID	Project Name	Project Location	Project Type	Project Description	Pipeline Classification	Engineer's Opinion of Most Probable Cost
FY 2019 thru FY 2023	2023-P1	Central WWTP Improvements from 0.990 mgd to 1.7 mgd	Central WWTP	WWTP	Increase plant capacity by adding more aeration to treatment process.		\$4,600,000
FY 2019	2023-P2	Central WWTP Discharge Permit Ammendment	Central WWTP	WWTP	Major ammendment to Central WWTP discharge permit.		\$100,000
FY 2019	2023-P3	South WWTP Discharge Permit Ammendment	South WWTP	WWTP	Major ammendment to South WWTP discharge permit.		\$100,000
FY 2019 thru FY 2023	2023-I4	Cottonwood Creek Interceptor Extension (by others)	Intersection of Limmer Loop and FM 1660	Interceptor	Extension of Cottonwood Creek Interceptor to serve ongoing development to the north currently being constructed by others.	Urban	Funded by Others
FY 2019 thru FY 2023	2023-LS0	Packsaddle Temporary Lift Station (by others)	Southeast corner of Packsaddle Subdivision	Lift Station	Lift station and force main to serve proposed Packsaddle subdivision proposed to be constructed by others.	Urban	Funded by Others
FY 2019 thru FY 2023	2023-I1	Glenwood Collection Interceptors	East of Central WWTP and Cottonwood Creek	Interceptor	1,500 LF of 8", 2,800 LF of 12", 4,100 LF of 15" and 3,500 LF of 21" interceptor to decommission Creekside LS and bring flow from future subdisions east of Creekside LS to Glenwood LS. Decommissioning of Creekside LS is included in this project.	Rural	\$3,615,000
FY 2019 thru FY 2023	2023-LS1	South WWTP On-Site Lift Station Phase I	South WWTP	Lift Station	First Phase of joint Glenwood & CR-3349 Interceptor LS for 2,300 gpm firm capacity to serve 3,680 LUEs. This LS will be required with either Glenwood or CR 3349 interceptor construction, depending on which is built first.		\$1,100,000
FY 2019 thru FY 2023	2023-I2	Glenwood Interceptor	Glenwood LS to South WWTP	Interceptor	11,000 LF of 30" interceptor to take Glenwood lift station offline and transfer flows to the South WWTP. Decommissioning of Glenwood LS is included in this project.	Urban	\$6,209,000
FY 2019 thru FY 2023	2023-I3	Landing Interceptor	North of Hwy 79 between Ed Schmidt Blvd and West St	Interceptor	2,100 LF of 12" and 1,800 LF of 15" Interceptor to provide service to the future Landing subdivision and the tracts directly northwest of the Landing.	Urban	\$1,373,000
FY 2024 thru FY 2028	2028-P1	South WWTP Improvements from 1.5 mgd to 2.0 mgd	South WWTP	WWTP	Improve plant capacity to permitted level due to increased BOD loading.		\$5,000,000
FY 2024 thru FY 2028	2028-I1	Cottonwood Creek Parallel Interceptor	Cottonwood Creek	Interceptor	700 LF of 18", 1,700 LF of 24", 3,900 LF of 27", and 2,100 LF of 30" Interceptor along east side of Cottonwood Creek to increase capacity of current Cottonwood Creek interceptor to ultimate conditions. Includes second on-site lift station with forcemain to the headworks required for additional flow at Central WWTP site.	Urban	\$6,362,000
FY 2024 thru FY 2028	2028-I2	Country Estates LS Decommissioning	Country Estates	Interceptor	2,600 LF of 12" interceptor to take Country Estates LS offline and transfer flows to Enclave LS/future Brushy Creek Interceptor. Decommissioning of Contry Estates LS is included in this project.	Urban	\$1,149,000
FY 2024 thru FY 2028	2028-I3	CR 3349 Interceptor Phase I	CR-3349 between Soouth WWTP and HWY 79	Interceptor	23,400 LF of 48" and 4,500 LF of 54" interceptor along CR-3349 to serve southeast region of Hutto WW CCN.	Rural	\$25,218,000
FY 2024 thru FY 2028	2028-LS1	South WWTP On-Site Lift Station Phase II	South WWTP	Lift Station	Expansion of joint Glenwood & CR-3349 Interceptor LS from 2,300 gpm to 11,500 gpm.		\$5,000,000
FY 2024 thru FY 2028	2028-P2	Central WWTP Expansion from 1.70 mgd to 3.25 mgd	Central WWTP	WWTP	Expansion to plant ultimate capacity with solids processing facilities. Design and construction of plant triggered when 75% and 90% of capacity reached, respectively.		\$29,419,000
FY 2024 thru FY 2028	2028-I4	Brushy Creek Interceptor & LS	Brushy Creek between Enclave LS and South WWTP	Interceptor	2,800 LF of 36" and 15,100 LF of 42" interceptor to take Enclave LS offline and transfer flows to the South WWTP. Includes inverted siphon with two access vaults and on-site LS at WWTP. Decommissioning of Enclave LS is included in this project.	Rural	\$14,238,000
FY 2024 thru FY 2028	2028-I5	Avery Lake Interceptor	Avery Lake to Brushy Creek West of FM 685	Interceptor	2,200 LF of 8", 3,600 LF of 12", 5,200 LF of 18", 1,900 LF of 21", and 3,000 LF of 24" interceptor to transfer flows west of SH 130 including future elementary school #7 to the Brushy Creek interceptor.	Urban	\$4,736,000
FY 2024 thru FY 2028	2028-LS2	Limmer Loop LS and Forcemain	Limmer Loop and Veterans Hill Elementary School	Lift Station	4,600 LF of 6" force main and 1,000 LF of 15", 2,700 LF of 21", and 800 LF of 24" interceptor to transfer flow from Veterans Hill Elementary School to Brushy Creek Interceptor.	Rural	\$3,559,000

Notes:

Inflation is included at a rate of 4% per year
Each interceptor is assumed to require easements along its full length. These easement costs are included in the above estimate.
Project ID's match that shown on Figure 4.1. ID's represent the following:
I - Interceptor
P - Project on WWTP site
LS - Lift Station and/or Force Main

Total = \$111,778,000

program. A ten year CIP is also required in the planning horizon for development of wastewater impact fees which are charged to new customers to help pay for the costs to provide service for the projected growth.

The following criteria serve as the City's basis for prioritization of CIP projects, listed in order of highest to lowest influence:

- a. **Public Health and Safety** – Projects that improve the public health and safety of the community. Projects must demonstrate the benefit provided to the community and possible risks from not completing the project.
- b. **Mandates** - Compliance with state and federal mandates that require the City to invest in a project.
- c. **Funding** – Grants and funding partnerships are considered first followed by operating revenues and debt. Financing sources must follow guidelines established by Section XIII of the Fiscal and Budgetary Policy. Fund balance may be used to fund capital projects if the use of reserves will delay or eliminate a proposed bond issue and sufficient fund balance exists to provide necessary contingency reserves.
- d. **Service and Operational Impact** – The service category prioritizes projects that will improve service delivery or reduce increasing maintenance costs including rehabilitating aging infrastructure. A cost-benefit analysis shall be done to weigh the impact of project rehabilitation to determine if the project will reduce future ongoing maintenance costs. Performance data will also be analyzed when considering projects related to improved service delivery. Future operation and maintenance expenses will be considered as part of this analysis.
- e. **Strategic Alignment** – Projects will align with strategic priorities identified by the City Council and with strategic planning documents such as the Comprehensive Plan; Parks, Trails and Open Spaces Master Plan; Downtown Plan; Infrastructure Master Plans and Unified Development Code.
- f. **Quality of Life** – Projects that promote recreational or aesthetic improvement opportunities for Hutto citizens.

The proposed projects in the five year CIP have been identified as priority due to the ongoing activity in the City. Two of the most immediate projects address compliance with WWTP compliance with TCEQ; and an expiring contract for flows being treated by City of Pflugerville. First, the improvements at the Central WWTP site are critical to ensure effluent is being treated to the required levels per the TCEQ discharge permit; and capacity for growth in this service area is provided. Second, the Lakeside Estates LS is pumping 557 LUEs to Pflugerville for which the City must pay for them to treat. This contract expires in January 2020 and is an opportunity for the City to treat this flow and gain revenue from existing Hutto WW CCN customers.

Projects in the five year CIP list include interceptors and WWTP improvements totaling \$17.1 million. The ten year CIP list includes interceptors that will flow to the South WWTP as well as on-site lift stations totaling \$94.7 million. This yields a total CIP List cost of \$111.8. The Brushy Creek Interceptor will serve areas currently already contributing to the system but will also allow the decommissioning of City lift stations. The other major interceptor, CR 3349, will set up ultimate service along the eastern half of the WW CCN. The two South WWTP on-site lift stations will serve these interceptors to bring their flow into the

headworks at the plant. Similar to the Central WWTP, the South WWTP must make improvements to upgrade its actual capacity to the permitted 2.0 mgd due to the higher BOD concentrations.

Appendix A

City of Hutto

Engineering Department

Living Unit Equivalent Table

Notes: This table is for water and wastewater system demands in LUEs. Flow per LUE shall be defined by City Utility Criteria Manual

Line No.	Type of Development	LUE	Service Unit Equivalent
1	Barber Shop or Beauty Salon	1.0	1.65 Chairs
2	Bowling Alley (Dining Additional Charge)	1.0	1.25 Lanes
3	Carwash, Tunnel, Self-Service	1.0	10 Carwashes in a Day
4	Carwash, Tunnel, Full Service	1.0	15 Carwashes in a day
5	Carwash, Self Serve	1.0	0.75 Carwash Bays
6	Church or Fellowship Hall	1.0	70 Seats
7	Club, Concert Hall, Tavern, or Lounge	1.0	25 Occupants
8	County Club	1.0	3 Members
9	Dance School or Dance Studio	1.0	25 Occupants
10	Day Care Center	1.0	25 Occupants
11	Fire Station	1.0	3 Occupants
12	Fitness Center/Club	1.0	667 Square Feet
13	Gas Station (No Carwash)	2.0	1 Station
14	Gas Station with Carwash	12.00	1 Station
15	Grocery Store	1.0	2000 Square Feet
16	Hospital	1.0	1 Bed
17	Hotel or Motel	1.0	2 Rooms
18	Laundromat	1.0	1.75 Machines
19	Manufacturing	1.0	5000 Square Feet
20	Mobile Home Park	1.0	1.5 Space
21	Movie Theater	1.0	50 Seats
22	Movie Theater - With Dining	1.0	25 Seats
23	Nursing Home	1.0	2 Beds
24	Office	1.0	3000 Square Feet
25	Park	1.0	50 Occupants
26	Post Office	1.0	3125 Square Feet
27	Recreational Vehicle Park	1.0	3.33 Vehicles
28	Residence, Apartment or Condominium	1.0	1.25 Units
29	Residence, Single Family or Townhouse	1.0	1 Unit
30	Restaurant	1.0	200 Square Feet
31	Retail	1.0	1660 Square Feet
32	High School	1.0	13 Students & Staff
33	Middle and Elementary School	1.0	15 Students & Staff
34	Stadium	1.0	80 Seats
35	Swimming Pool	1.0	50 Swimmers
36	Warehouse	1.0	4000 Square Feet

Appendix B

MINUTES

PROJECT KICKOFF MEETING CITY OF HUTTO – WASTEWATER MASTER PLAN

December 20, 2017

I. Project Team

- Owner: City of Hutto
- Engineer: DCS Engineering, LLC
 - Principal: Darren Strozewski, P.E.
 - Project Manager: Wade Morgan, P.E.
 - Asst. Project Manager: Kim Brown
 - Project Engineer: Jamie Hora, E.I.T.
 - Design Engineer: Alicia Solis, E.I.T.
 - Design Engineer: Jordan Hurta, E.I.T.
 - CAD Manager: Melody Strozewski

II. General Scope

- See Attached

III. Study Area

- Hutto ETJ, WW CCN, Jonah CCN
- Constrained by extents of Pflugerville, Round Rock, Georgetown, and Taylor ETJ's. City of Hutto is pursuing some of Taylor's ETJ.

IV. Current Status

- 80% Complete Data Collection
- 40% Complete of Parcel Analysis & LUE Projections
- 75% of GIS WW Infrastructure Reviewed

V. Information Needed

- Proposed HISD schools or other new developments with locations
 - Pursuing some of Taylor's ETJ
 - 10-Story High Density at SH 130 & Hwy 79
 - Star Ranch
 - 1. City of Hutto council to consider for annexation in 2036
 - Brooklands
 - 1. Phases 1 -2 has 2-year build-out
 - 2. Has 7 phases total
 - 3. Engineer is Halff
 - Neal Tract
 - 1. Glenwood Lift Station
 - 2. Engineer is Halff
 - Co-Op Development
 - 1. Commercial/Residential/civic development
 - 2. Movie theater, Apartment complex
 - 3. Developer is MA Partners
 - 4. Engineer is LAN

- The Bridge at Lakeside Estates
 1. 2-yr build out
- RSI
- The Landing
 1. High density residential some commercial
 2. Has 7 phases
 3. Phase 1 -3 under design
- Meager Meadows
 1. Residential development
 2. UNDER CONSTRUCTION
- Carol Meadows 2
 1. Residential development
 2. UNDER CONSTRUCTION
- Hutto Highlands
- North Town Commons
 1. Commercial
- Innovation 1
 1. Industrial Park
 2. 3 large boxes: 120k SF, 250k SF & 320k SF
- Innovation 2
 1. Industrial park
- Hutto Crossing
 1. UNDER CONSTRUCTION
 2. Residential South of Carl Stern
 3. Commercial North of Carl Stern
 4. Multi family
- DMR's for both WWTP's for the last three years
 - DCS to coordinate with Sam Pearson
- Wastewater system connection data for past three years
- Pump run times
 - DCS to coordinate with Sam Pearson
- Spreadsheet model by others from 2012 WW Master Plan
 - Matt working on obtaining spreadsheet
- WW CCN status
 - City working with PUC on application; City wanted it complete by end of November 2017

VI. Schedule

- See Attached

VII. Questions/Comments

EXHIBIT A SCOPE OF WORK

In accordance with the Professional Services Agreement for the Wastewater Master Plan Project between City and Engineer ("Agreement"), City and Engineer agree as follows:

Title: Wastewater Master Plan

PROJECT UNDERSTANDING

The City of Hutto is experiencing rapid growth with developers requesting new wastewater service on a daily basis. In addition, the City is considering a Certificate of Convenience and Necessity (CCN) swap with Jonah Water Special Utility District (SUD) where Hutto would gain additional wastewater service area. Since the Hutto Regional Wastewater Study was completed in 2012, the new Hutto South Wastewater Treatment Plant (WWTP) has been constructed and is now in service, while a number of conveyance projects have been planned, designed, and built.

Due to these changes, the Wastewater Master Plan for the City is in need of an update to properly plan for continued growth and expansion of the collection system and treatment facilities. DCS will update the existing Wastewater Master Plan and develop a 10-year Capital Improvements Projects (CIP) list per the following scope.

SCOPE OF SERVICES

1. **Project Management**
This task includes routine communication with the City; managing manpower budgets and schedules; monthly invoicing and status reports; implementing and monitoring of QA/QC efforts; and other efforts associated with managing the project.
2. **Meetings and Presentations**
Schedule; prepare materials, agendas, and minutes; track action items and decisions made; for the following anticipated meetings:
 - a. Project Kick-Off with City staff will include a discussion with Operations staff about the existing system such as problems, lift station operations, and inflow & infiltration (I/I) issues.
 - b. Two coordination meetings with staff during the development of the population projections and land use map.
 - c. One coordination meeting with staff to review the design criteria.
 - d. Three meetings to review the technical memorandums documenting specific tasks identified below.
 - e. Presentation of Wastewater Master Plan and CIP List to Council
3. **Data Collection**
DCS will create an initial data request and work with City of Hutto Engineering and Operations staff to obtain the information. Requested information may include:
 - Parcel data;
 - Land use mapping data;
 - As-built information on infrastructure constructed since the last Master Plan in 2012;
 - Information on large wastewater producers;
 - Proposed schools or other new developments;
 - Information on the Industrial Park or Innovation Center customers;
 - Expected wastewater characteristics from proposed development;
 - Historical wastewater characteristics and plant flows to be provided by Brazos River Authority;
 - Wastewater system connection data for past two years;
 - Pump run times; and

- Access to City's SCADA system.
4. **Population Projections**
Population projections will be prepared from historical growth rates, TWDB projections, CAMPO projections, and input from the planning department. DCS will rely on the City and previous planning efforts for existing and projected land use within the study area. Non-residential development will be a critical factor for the development of projections. Large users can have a significant impact on the system, especially in areas where the pipes are smaller. Therefore, DCS will work with City staff to determine likely growth and development patterns, then use this information to create both 5-year and 10-year land use maps. The projections will be prepared on a yearly basis from 2018 to 2028. A technical memorandum documenting the study area, land use maps, and population projections will be written.
 5. **Design Criteria**
Unit flow rates, peaking factors, and I/I rates established in the 2012 Master Plan will be used. DCS will confirm this criterion are reasonable by reviewing lift station pump run times and wastewater treatment plant flow data correlated with rainfall amounts and connections. The recommended design criteria will be summarized in a technical memorandum.
 6. **Wastewater Flow Projections**
Once finalized and agreed to by the City of Hutto, the population projections, land use, and design criteria will be used to determine projected future wastewater flows. The wastewater piping system, proposed service area, and basin delineations from the 2012 Master Plan will be reviewed and the drainage basins adjusted as appropriate. Wastewater flow projections will be developed for each of the delineated basins for the years 2018, 2023 and 2028. Projected flows will include average day, peak dry-weather flows, and peak wet weather flows.
 7. **Wastewater Conveyance Model and Treatment Improvements**
The City will convey the static spreadsheet model developed by other to DCS. DCS will update the static spreadsheet model of the wastewater system from the 2012 Master Plan and compare infrastructure capacities with the flow projections. Deficiencies in capacities will be summarized and improvements recommended. Future interceptors required to serve new development will be identified and sized considering the 10-year flow projections and ultimate land use. In addition, DCS will identify future treatment capacity needed to meet the projected future average day and peak two hour flows considering the 75/90 rule. A technical memorandum will be written describing the model, the proposed improvements, and the treatment evaluation.
 8. **Wastewater System CIP List**
From the improvements identified in Task 7, DCS will develop a recommended 10- year CIP list. For each recommended project, the following will be provided:
 - Location map;
 - Description of the project;
 - Year needed or other project trigger; and
 - Cost of the project including anticipated engineering and land acquisition costs.
 9. **Report**
A report incorporating the three technical memorandums and CIP list information will be written. The report will also contain maps showing the service area, land use, existing facilities, and proposed improvements. DCS will issue a draft for final City review, address comments, and then issue a final report. Five (5) hard copies of the draft and final reports, along with an electronic (PDF) file will be provided to the City.

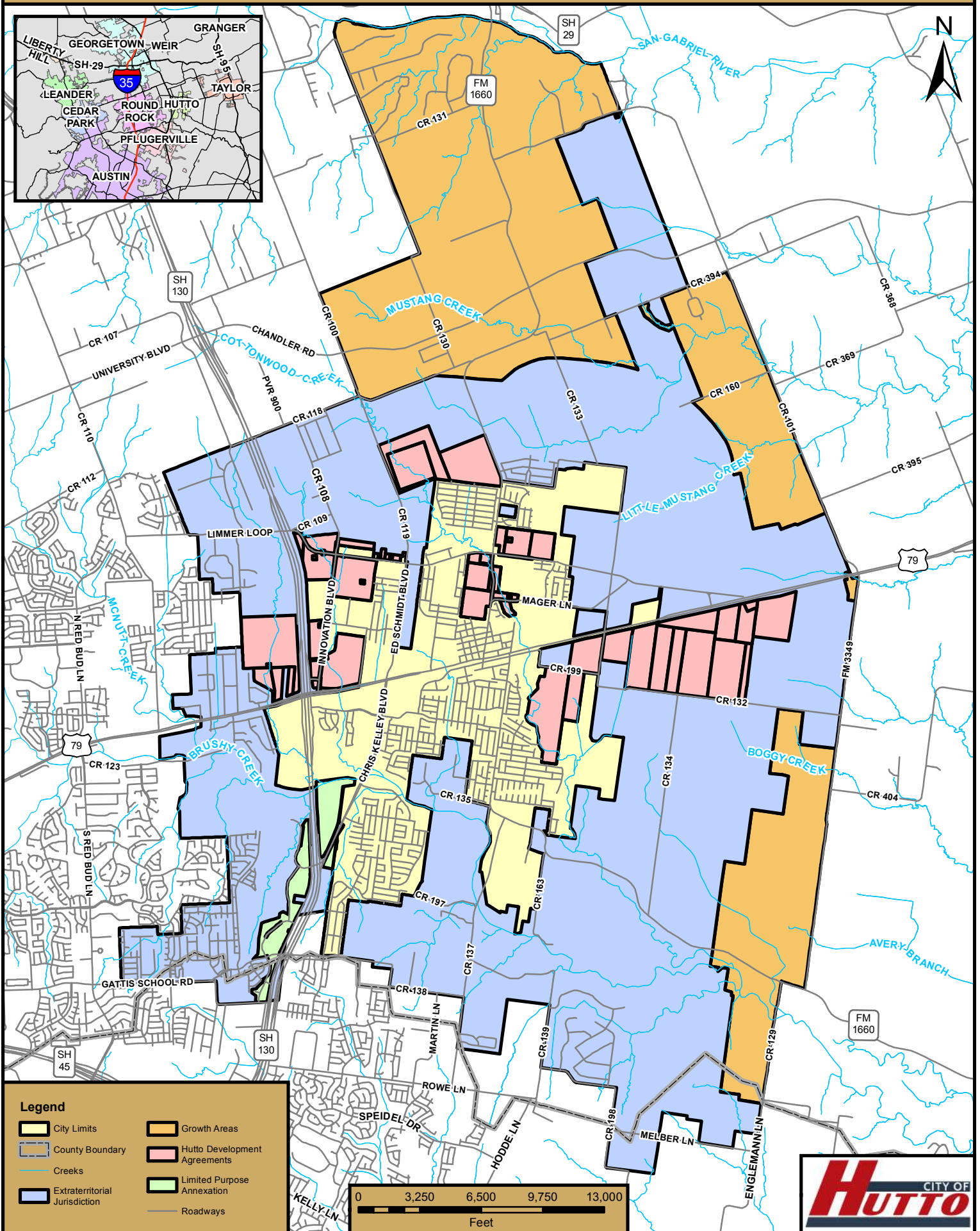
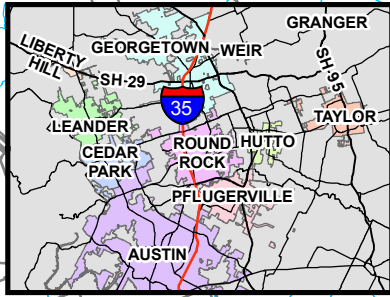
PROJECT ASSUMPTIONS AND ADDITIONAL SERVICES

1. The study area generally will be the Hutto CCN area with the addition of the proposed CCN transfer from Jonah Water SUD to Hutto consisting of approximately 1,500 acres immediately north of Limmer

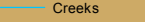
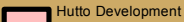
Loop.

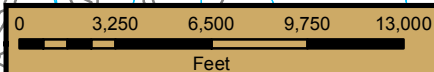
2. DCS will utilize the wastewater basins delineated in the 2012 regional study.
3. It has been assumed that unit flows are the same as established in the 2012 Master Plan effort. If data shows reasons to believe the unit flows are significantly different than previously established, additional services will be required for unit flow development.
4. No surveying of existing infrastructure is included. Flow capacities from the 2012 regional study will be used unless the infrastructure has been improved in the intervening years.
5. Quality Assurance/Quality Control review has been included for the work at various stages of progress as well as review of all deliverables.
6. City of Hutto Engineering and Planning staff will provide data and input on future land use, patterns, and timing.
7. It has been assumed that the City will convey the electronic copy of the static spreadsheet model developed by others to DCS. DCS will update this static spreadsheet model of the wastewater system from the 2012 Master Plan and compare infrastructure capacities with the flow projections. If this spreadsheet can't be obtained, additional services will be required for recreating it.

City of Hutto Boundaries Map

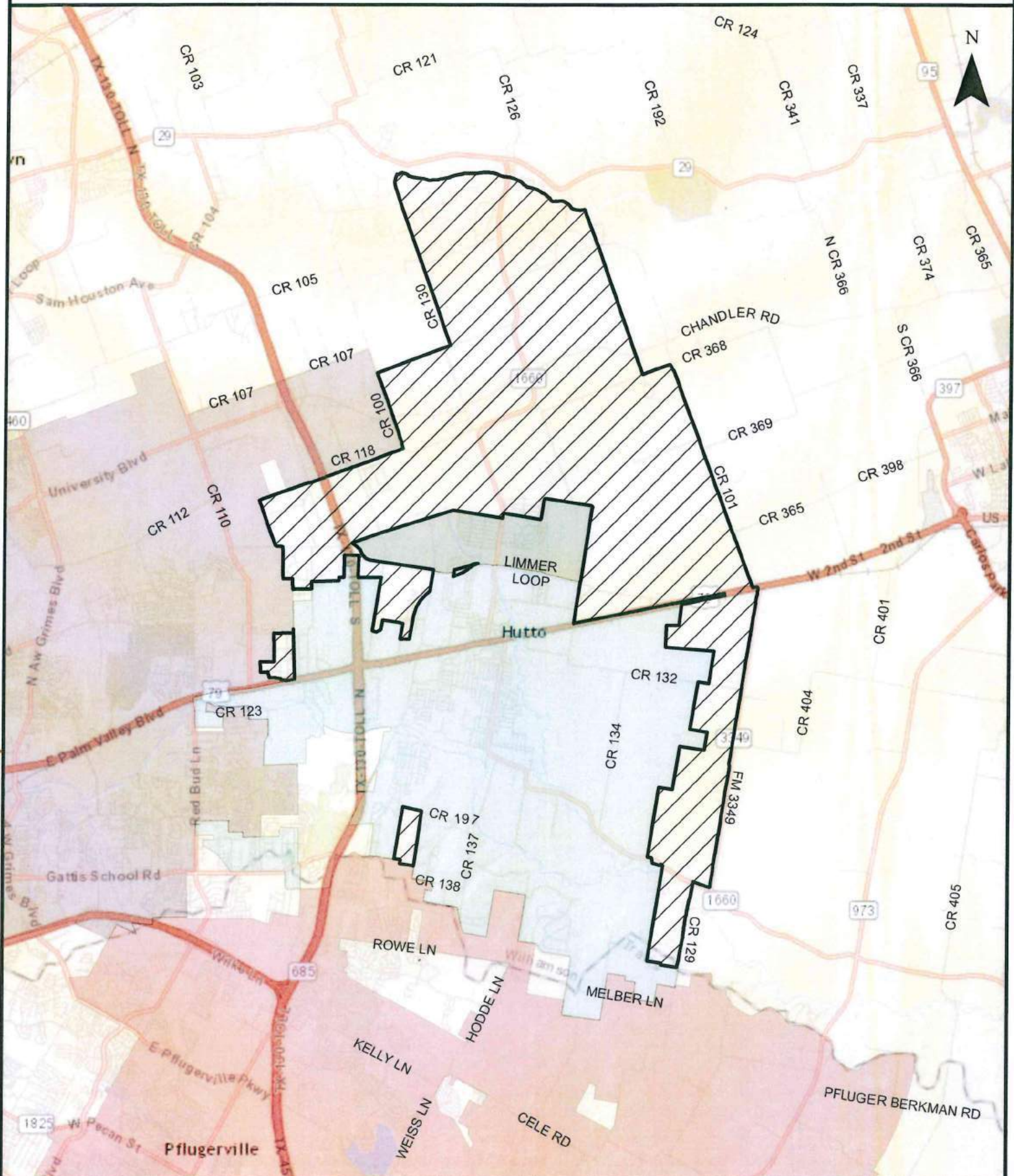


Legend

-  City Limits
-  County Boundary
-  Extraterritorial Jurisdiction
-  Growth Areas
-  Hutto Development Agreements
-  Limited Purpose Annexation
-  Roadways
-  Creeks



Application Exhibit (Attachment 3A-1)



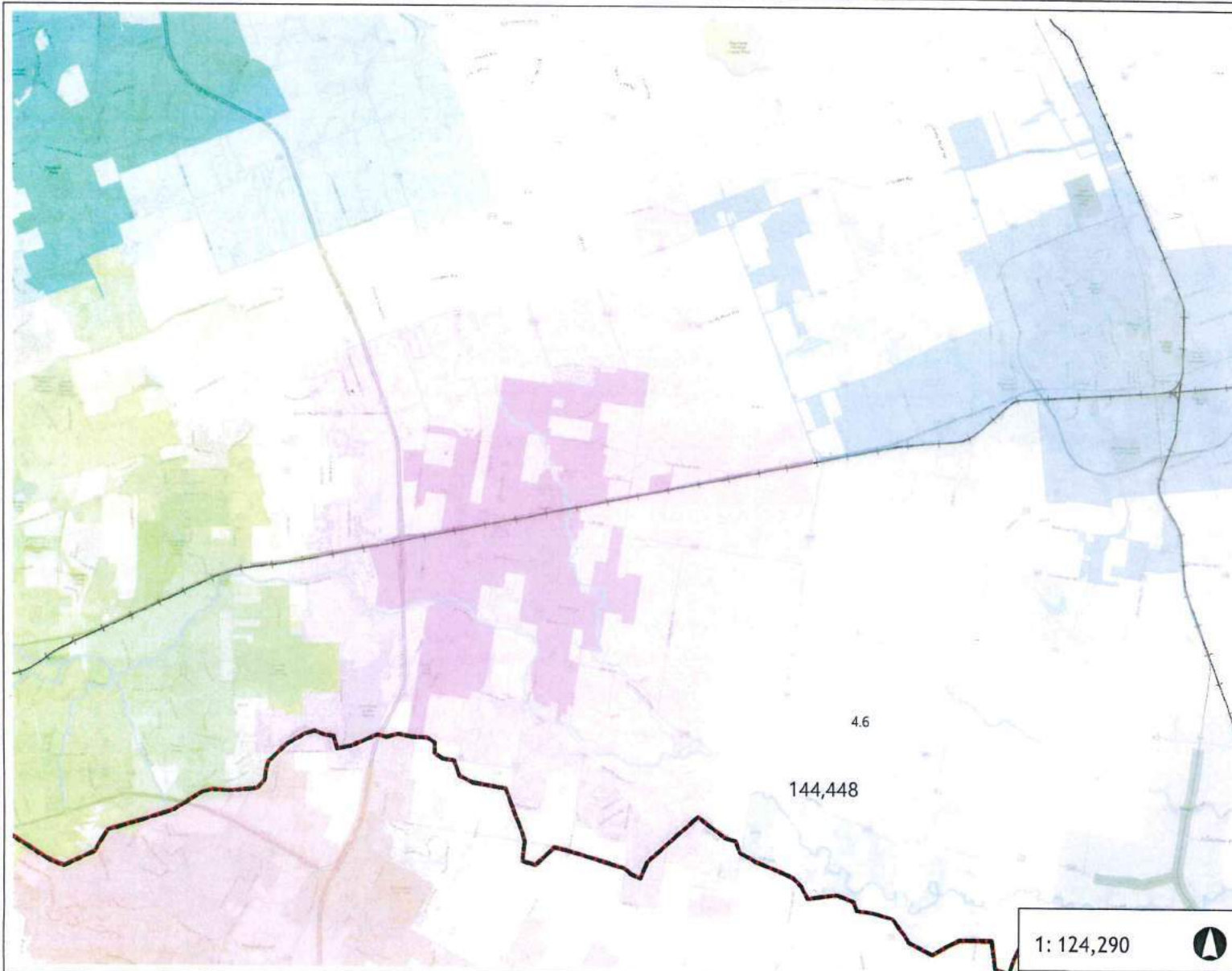
City of Hutto Sewer CCN No. 20122
Amendment - Requested Service Areas

Legend

- City of Hutto
- City of Pflugerville
- City of Round Rock
- Jonah Water S.U.D.
- Requested Area

11/9/2017

City of Hutto/401 West Front Street, Hutto, TX 78634/(512) 759-4033



Legend

□ County Boundary

Incorporated Cities

- AUSTIN
- BARTLETT
- CEDAR PARK
- COUPLAND
- FLORENCE
- GEORGETOWN
- GRANGER
- HUTTO
- JARRELL
- LEANDER
- LIBERTY HILL
- PFLUGERVILLE
- ROUND ROCK
- TAYLOR
- THRALL
- WEIR

Extra Territorial Jurisdiction

- AUSTIN
- BARTLETT
- CEDAR PARK
- COUPLAND
- FLORENCE
- GEORGETOWN
- GRANGER
- HUTTO
- JARRELL
- KILLEEN
- LEANDER
- LIBERTY HILL
- PFLUGERVILLE
- ROUND ROCK
- TAYLOR
- THRALL
- WEIR

4.6

144,448

1: 124,290



3.9 0 1.96 3.9 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Latitude Geographics Group Ltd.; Williamson County, Texas 2015

Layout: 8.5 X 11 inches

This map and data are for general planning purposes only. The basemap conforms to National Map Accuracy Standards in unobstructed areas. Williamson County makes no warranty, representation or guarantee as to the context, sequence, accuracy, timeliness or completeness of any of the database information or spatial locations depicted. Furthermore, all warranties on merchantability and fitness for a particular purpose are hereby disclaimed. In no event shall Williamson County be liable to the recipient or any other party for damages of any type, including but not limited to incidental, consequential or exemplary damages arising out of the use or inability to use these materials.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Created: 12/19/2017

Notes

Appendix C

MEETING MINUTES

PROJECT STATUS MEETING CITY OF HUTTO – WASTEWATER MASTER PLAN

February 13, 2018

I. Growth Projections

- Census, TWDB, and water master plan population projections
- Wastewater Connection growth history
DCS to request connection data from City (water and wastewater) from 2004 – 2014 to evaluate historical growth patterns and impact of 2008 economic crash on growth.
- City projection of future growth
*For projections, City stated to use 6% growth per year (approximately 600 connections/yr.) with a base population of 26,950 residents in 2017. Growth to be compounded annually.
DCS to acquire the revised wastewater CCN submitted to the PUC and the Economic Development report from City.*

II. Data Analysis

- Existing Hutto developments
- Conceptual/Future planned developments
*DCS to coordinate with City to get a full working list of developments that are anticipated in the next few years.
DCS will process these developments for representation on a map shaded with planned use (Multi-Family, Residential, Commercial, etc.).
Per City, most of the new development will take place in the northern and western areas of the City.*

III. Infrastructure Analysis

- Central WWTP flows
Currently flow is about 0.85 mgd, permitted capacity is 1.7 mgd. To identify maximum capacity of plant, a process analysis of the plant may be recommended to maximize existing plant infrastructure.
- South WWTP flows
Permitted at 2 mgd, existing flow is about 0.30 mgd.
- Combined WWTP flows
Per DCS' efforts on gathering City wastewater flow data, City averages approximately 170 gpd/connection. As a point of reference, the lowest flow approved by TCEQ in permitting applications is 185 gpd/connection. City design criteria states to use 280 gpd/connection, however DCS will utilize 225 gpd/connection for design to avoid over-sizing infrastructure.

- Influent BOD Analysis
Based on the last 5 years of data, DCS determined that current City WWTP average BOD loading is approximately 230 mg/L. Both the flow and biological loading are used to determine true capacity of plants.
- Brushy Creek discharge limits
Per DCS model analysis, Brushy Creek can accept significant additional flow from exist WWTP's while still adhering to TCEQ discharge requirements. Based on current master plan findings, a potential permit amendment may be recommended for either or both WWTP's.
- Enclave Forcemain
DCS analysis on the 20" forcemain showed a capacity to convey 2 mgd of wastewater flow to the South WWTP. Due to existing hydraulic configuration, the parallel forcemains (6" and 10") do not provide additional capacity.

IV. Schedule

- Next Status Meeting – March 6, 2018
Tentative meeting date of March 6. DCS to send out meeting invite with confirmed day and time.
- DCS will schedule meeting on February 21, 2018 with City to coordinate on upcoming/ongoing development.

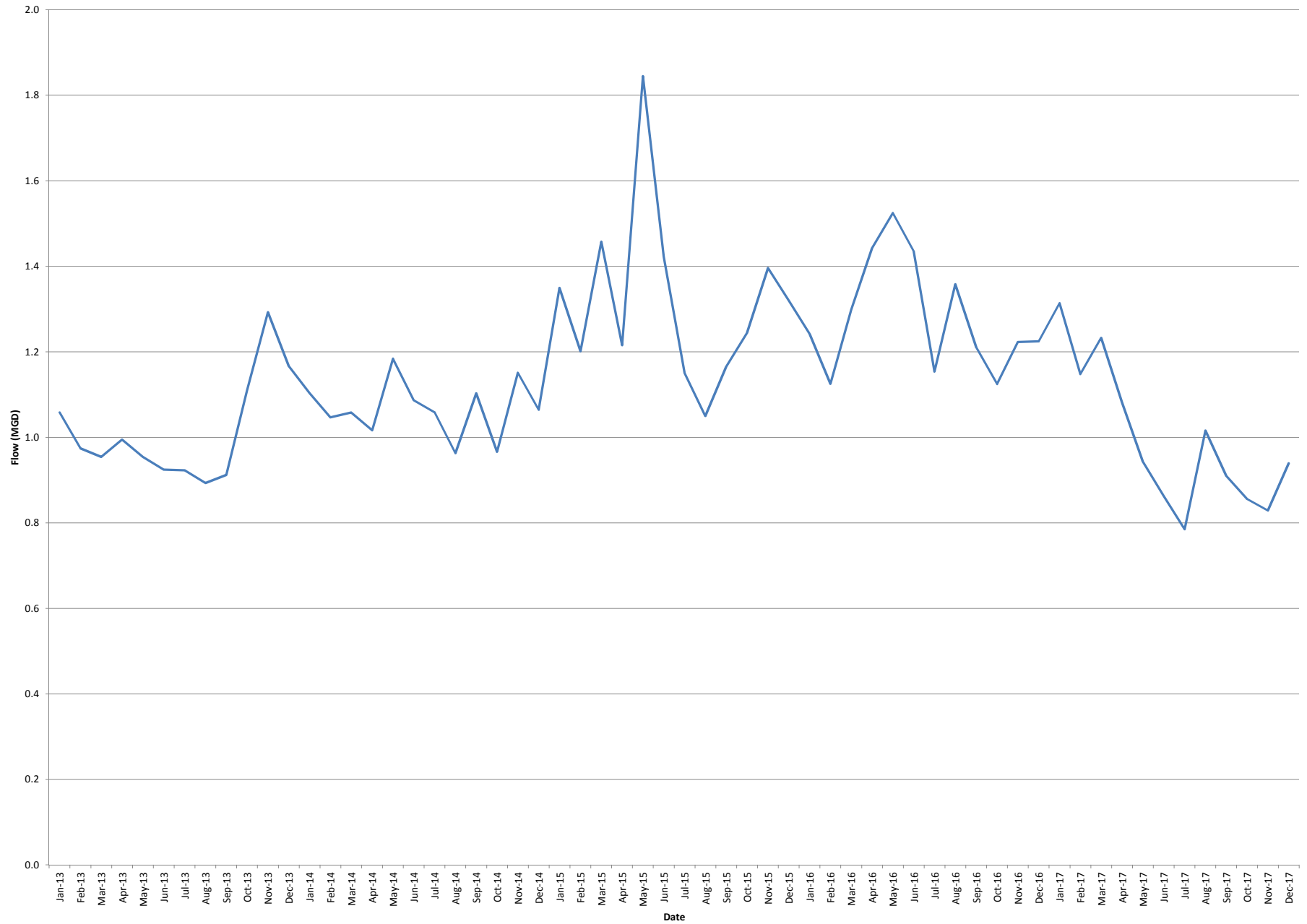
V. Questions/Comments

- DCS and City discussed contract deliverables such as Population Projection Tech Memo and Design Criteria Tech Memo. It was agreed that DCS will not deliver separate tech memos on these topics. All work will continue being performed, discussed in status meetings, and fully documented in the Final Report delivered to the City.

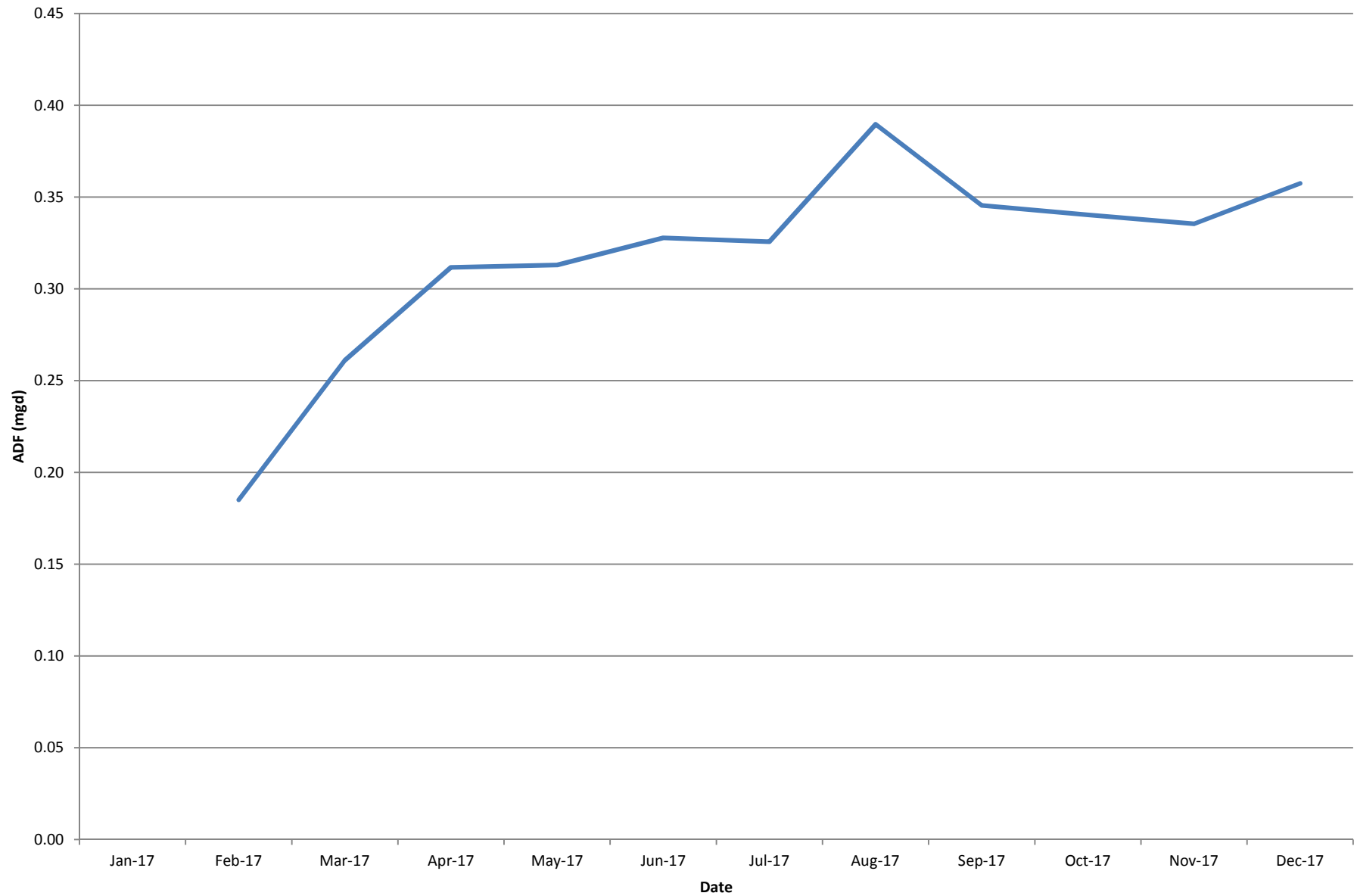
City of Hutto												
Population Growth Projections												
*NOTE: All projections are based on growth inside Hutto ETJ												
YEAR	Census		TWDB		Hutto Projections (per Hutto 2040 Report)						DCS Water Masterplan	
2010	16720				16756 200/yr		16756 400/yr		16756 800/yr			
2011	17802	6.5%			17364	3.6%	17972	7.3%	19188	14.5%		
2012	18776	5.5%			17972	3.5%	19188	6.8%	21620	12.7%		
2013	19711	5.0%			18580	3.4%	20404	6.3%	24052	11.2%		
2014	21139	7.2%			19188	3.3%	21620	6.0%	26484	10.1%	21170	
2015	22692	7.3%			19796	3.2%	22836	5.6%	28916	9.2%	22082	4.3%
2016	23832	5.0%			20404	3.1%	24052	5.3%	31348	8.4%	22994	4.1%
2017					21012	3.0%	25268	5.1%	33780	7.8%	23906	4.0%
2018					21620	2.9%	26484	4.8%	36212	7.2%	24818	3.8%
2019					22228	2.8%	27700	4.6%	38644	6.7%	25730	3.7%
2020			31492		22836	2.7%	28916	4.4%	41076	6.3%	26642	3.5%
2021					23444	2.7%	30132	4.2%	43508	5.9%	27554	3.4%
2022					24052	2.6%	31348	4.0%	45940	5.6%	28466	3.3%
2023					24660	2.5%	32564	3.9%	48372	5.3%	30290	6.4%
2024					25268	2.5%	33780	3.7%	50804	5.0%	32114	6.0%
2025					25876	2.4%	34996	3.6%	53236	4.8%	33938	5.7%
2026					26484	2.3%	36212	3.5%	55668	4.6%	35762	5.4%
2027					27092	2.3%	37428	3.4%	58100	4.4%	37586	5.1%
2028					27700	2.2%	38644	3.2%	60532	4.2%		
2029					28308	2.2%	39860	3.1%	62964	4.0%		
2030			43919	39%	28916	2.1%	41076	3.1%	65396	3.9%		
2031					29524	2.1%	42292	3.0%	67828	3.7%		
2032					30132	2.1%	43508	2.9%	70260	3.6%		
2033					30740	2.0%	44724	2.8%	72692	3.5%		
2034					31348	2.0%	45940	2.7%	75124	3.3%		
2035					31956	1.9%	47156	2.6%	77556	3.2%		
2036					32564	1.9%	48372	2.6%	79988	3.1%		
2037					33172	1.9%	49588	2.5%	82420	3.0%		
2038					33780	1.8%	50804	2.5%	84852	3.0%		
2039					34388	1.8%	52020	2.4%	87284	2.9%		
2040			59394	35%	34996	1.8%	53236	2.3%	89716	2.8%		
2041					35604	1.7%	54452	2.3%	92148	2.7%		
2042					36212	1.7%	55668	2.2%	94580	2.6%		
2043					36820	1.7%	56884	2.2%	97012	2.6%		
2044					37428	1.7%	58100	2.1%	99444	2.5%		
2045					38036	1.6%	59316	2.1%	101876	2.4%		
2046					38644	1.6%	60532	2.1%	104308	2.4%		
2047					39252	1.6%	61748	2.0%	106740	2.3%		
2048					39860	1.5%	62964	2.0%	109172	2.3%		
2049					40468	1.5%	64180	1.9%	111604	2.2%		
2050			76060	28%	41076	1.5%	65396	1.9%	114036	2.2%		
2051					41684	1.5%	66612	1.9%	116468	2.1%		
2052					42292	1.5%	67828	1.8%	118900	2.1%		
2053					42900	1.4%	69044	1.8%	121332	2.0%		
2054					43508	1.4%	70260	1.8%	123764	2.0%		
2055					44116	1.4%	71476	1.7%	126196	2.0%		
2056					44724	1.4%	72692	1.7%	128628	1.9%		
2057					45332	1.4%	73908	1.7%	131060	1.9%		
2058					45940	1.3%	75124	1.6%	133492	1.9%		
2059					46548	1.3%	76340	1.6%	135924	1.8%		
2060			94959	25%	47156	1.3%	77556	1.6%	138356	1.8%		
2061					47764	1.3%	78772	1.6%	140788	1.8%		
2062					48372	1.3%	79988	1.5%	143220	1.7%		
2063					48980	1.3%	81204	1.5%	145652	1.7%		
2064					49588	1.2%	82420	1.5%	148084	1.7%		
2065					50196	1.2%	83636	1.5%	150516	1.6%		
2066					50804	1.2%	84852	1.5%	152948	1.6%		
2067					51412	1.2%	86068	1.4%	155380	1.6%		
2068					52020	1.2%	87284	1.4%	157812	1.6%		
2069					52628	1.2%	88500	1.4%	160244	1.5%		
2070			114500	21%	53236	1.2%	89716	1.4%	162676	1.5%		

City of Hutto Wastewater Connection Growth History				
	2014	2015	2016	2017
Jan	6,442	7,009	7,233	7,644
Feb	6492	7038	7289	7701
Mar	6506	7028	7313	7739
Apr	6676	7167	7378	7771
May	6585	7073	7473	7808
Jun	6651	7075	7585	7828
Jul	6729	7125	7595	7876
Aug	6766	7279	7632	7873
Sep	6807	7241	7575	7865
Oct	6808	7815	7632	7910
Nov	6876	6739	7649	7896
Dec	6915	7628	7660	7912
Growth (Jan-Jan)		Estimated Flow (mgd) 1 Conn = 225 gpd		
14-'15	567	0.128		
15-'16	224	0.050		
16-'17	411	0.092		
17 (Jan-Dec)	268	0.060		

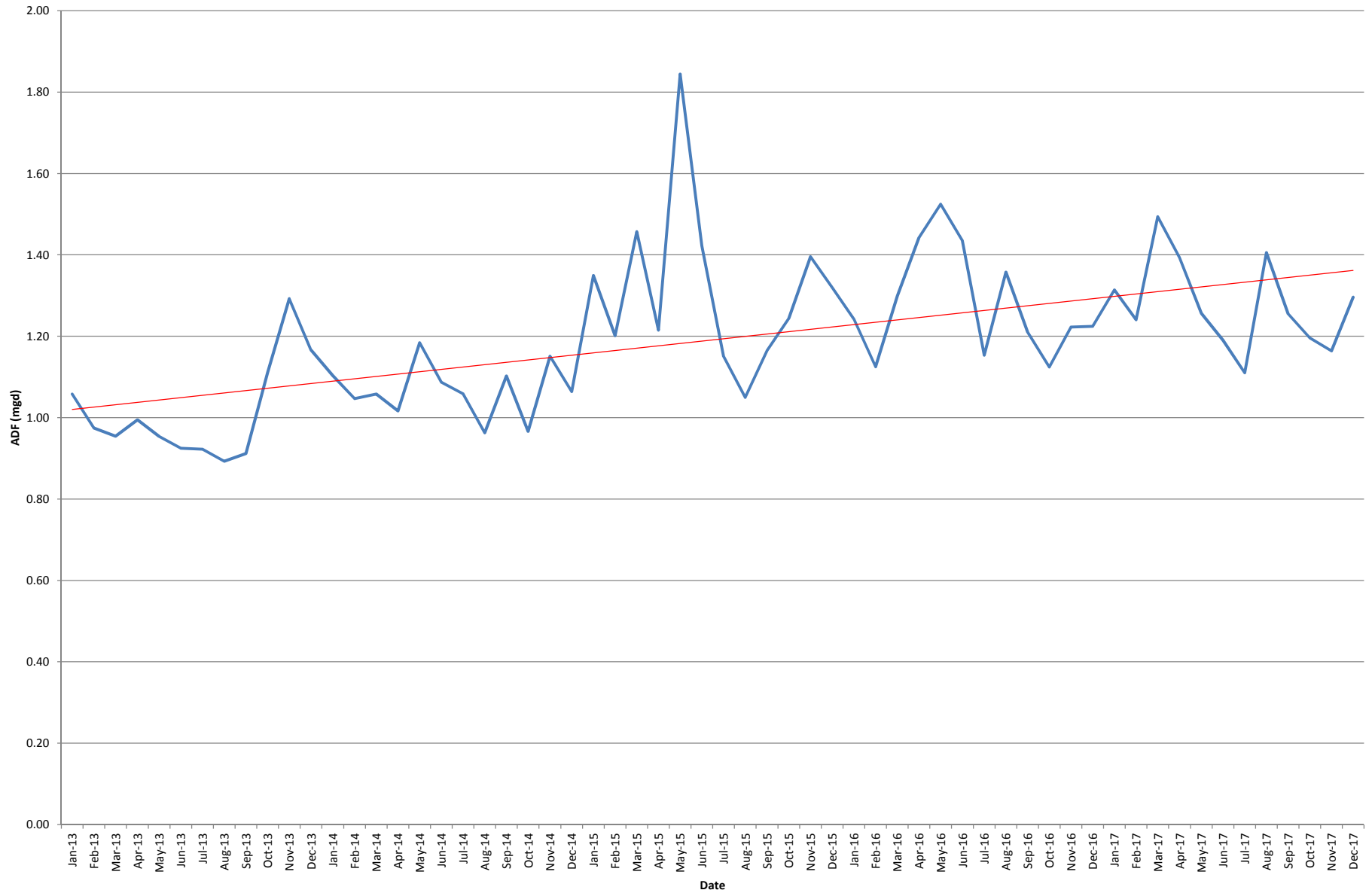
**City of Hutto
Central WWTP Monthly ADF
2/13/2018**



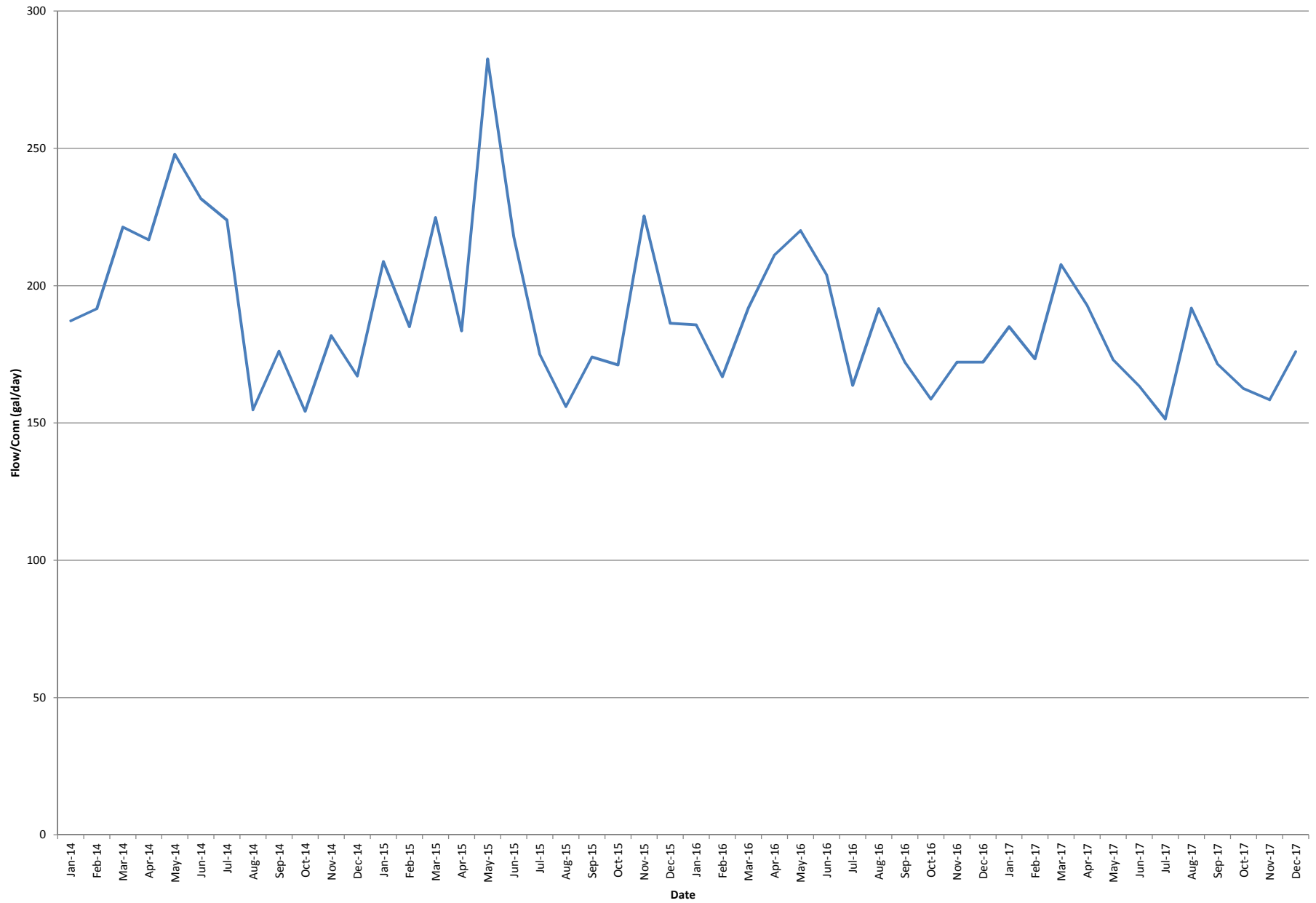
City of Hutto
South WWTP Monthly ADF
2/13/2018



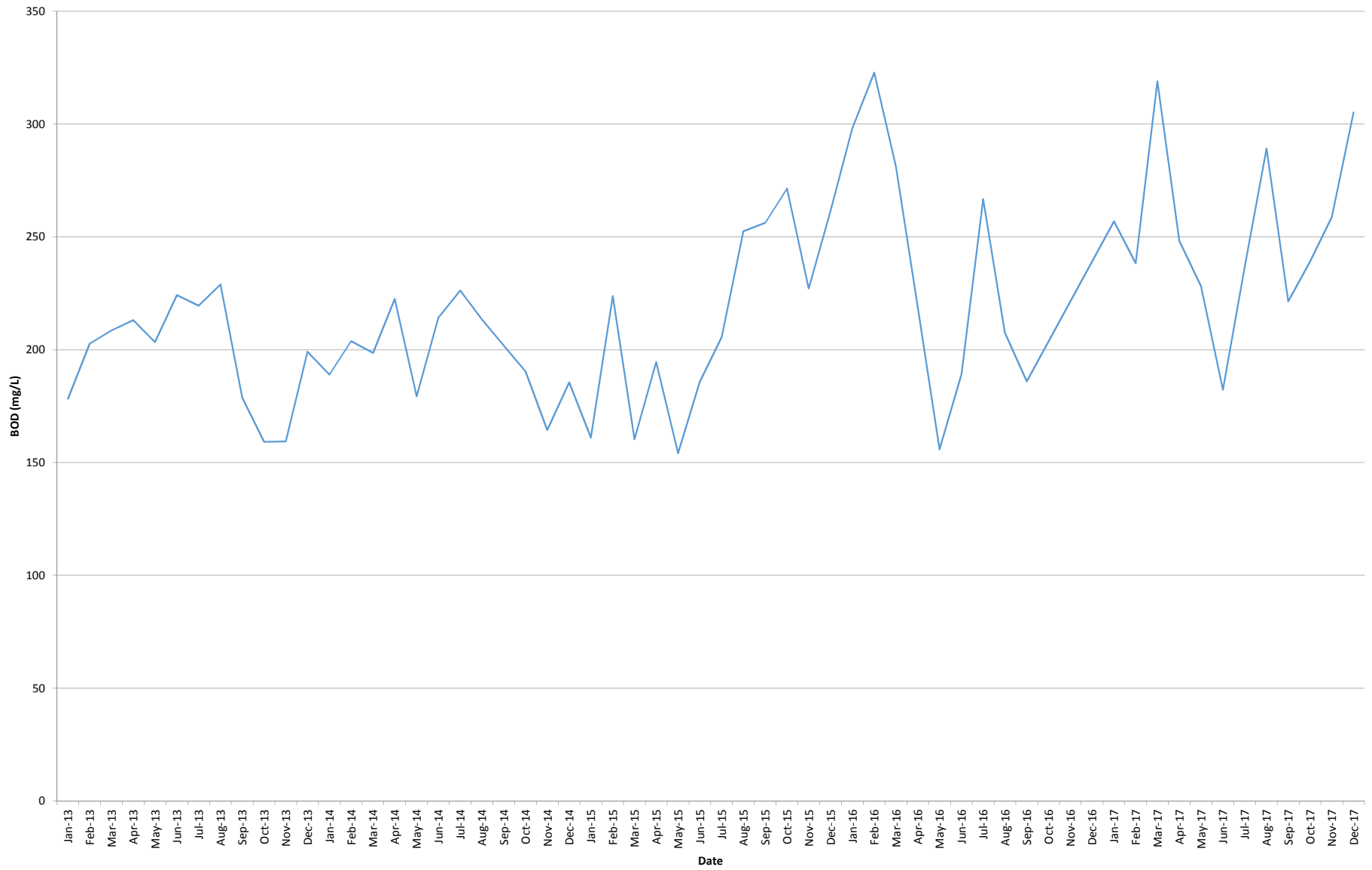
City of Hutto
Combined Monthly WW Flow (both WWTP's)
2/13/2018



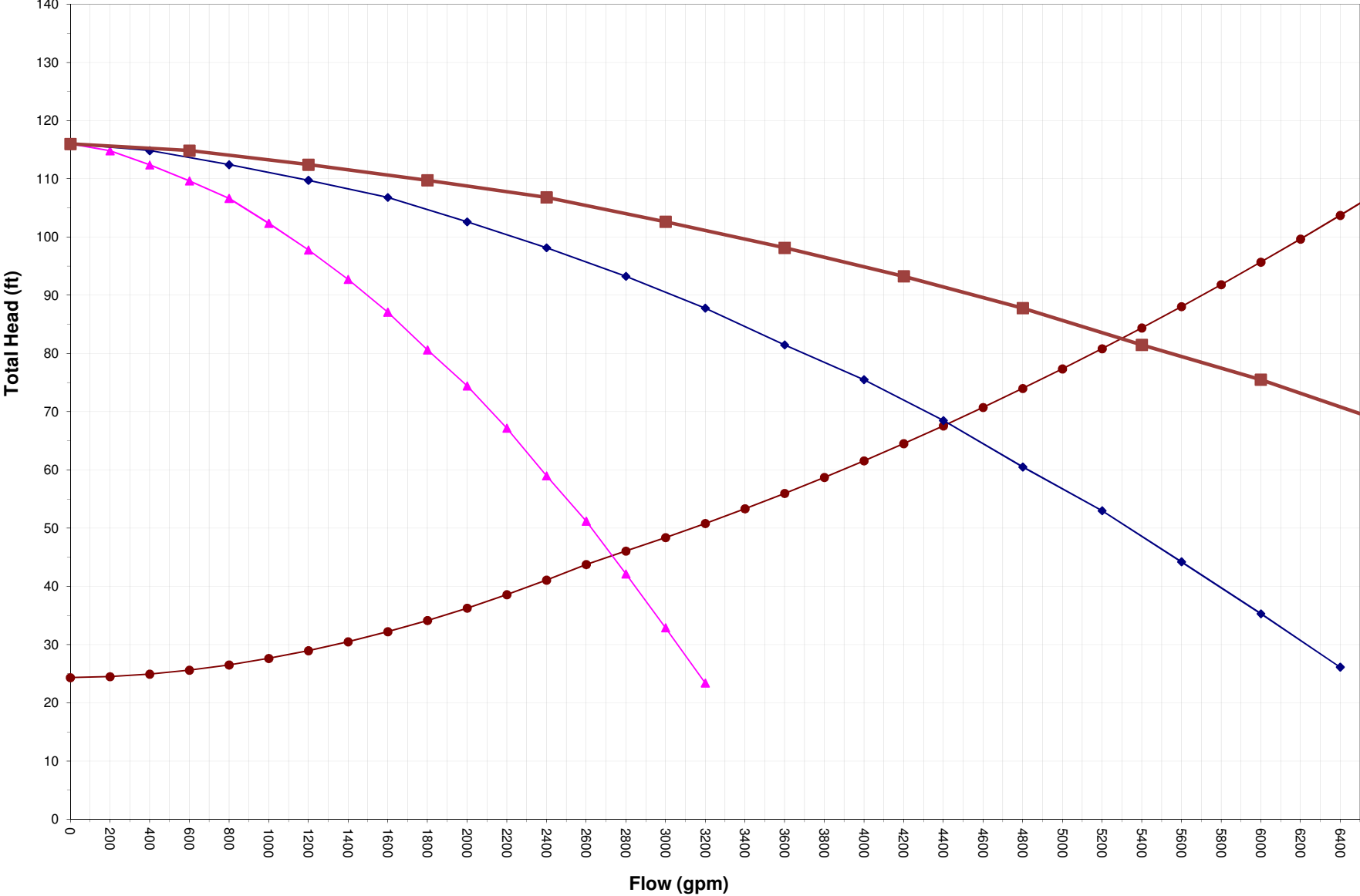
City of Hutto
Average Flow/Connection
2/13/2018



**City of Hutto
Central WWTP Influent BOD
2/13/2018**



Enclave Lift Station
Proposed Pumps: Ultimate Condition



**SIGN IN SHEET
CITY OF HUTTO
WASTEWATER MASTER PLAN
February 13, 2018**

NAME	COMPANY	PHONE	EMAIL
JAMIS HORA	DCS	512 614 6171	jhora@des-engineering.com
Tony Host	CO H	512-344-2338	
Bonnye Brewington	COH	512 755 4024	bonnye.brewington@hutto.tx.gov
Darren Strowski	DCS	512 614-6171	dstrowski@des-engineering.com
WADE MORGAN	DCS	512-614-6171	wadegan@des-engineering.com
Carolyn Horner	Hutto	512 759 5960	Carolyn.horner@hutto.tx.gov
Scott Stromsness	Hutto	512 759-4050	Scott.Stromsness@hutto.tx.gov

Appendix D

MEETING MINUTES

DEVELOPMENT PROJECTION MEETING CITY OF HUTTO – WASTEWATER MASTER PLAN

February 21, 2018

1. Planned Developments

- Review all conceptual development data previously provided to DCS to discuss status of development, any updates on size of development, and anticipated timeframe for build out. DCS will incorporate data to develop CIP list.

A. The Bridge Subdivision

- *Highly tentative; cannot come to agreement with City on density. More than 1 year away from a development agreement.*
- *If this subdivision does not occur, it is likely other development will come in this lot. Plan for commercial off of Gattis School Road and Single Family Residential behind that in the 10 year window.*

B. Brooklands Subdivision

- *Plan for Phases 1-4 to occur in 5-yr window and Phases 5-7 in 10-yr window.*

C. Neal Tract Subdivision

- *Zoning is in 2nd review; Annexation is anticipated to be complete by end of April.*
- *City provided DCS an engineer's site plan to use for count of LUE's.*

D. RSI Subdivision

- *Annexation is underway and anticipated to be complete by end of April; Zoning to be completed by end of May.*
- *City stated to use 1,300 LUE's as the ultimate build out. Plan for Phase 1-3 to occur in 5-yr window.*

E. Packsaddle Subdivision

- *Annexation underway and anticipated to be complete by end of April.*
- *West side of plat will include 7 acres for a church and daycare. Southeast corner of plat likely to develop higher density residential.*
- *Subdivision is dependent on RSI for utilities, but plan for half of development in next 5-yr window.*

F. HISD Complex

- *City to ask HISD for anticipated build-out schedule and provide to DCS.*

G. Hutto Crossing

- *Senior Living Apartments completed.*
- *Phase 2 and Phase 3 residential to be done by end of year. Phase 4 single family residential will be completed within next 5 years.*
- *Commercial against US 79 and FM 685 is beginning to be developed and likely to continue the next 5 years.*
- *Amending PUD due to parking constraints.*

H. Titan Innovation

- *Phase 1 Building 1 under review. Plan for 6 buildings in Phase 1 to be completed in 5-year window.*
- *Phase 2 has not annexed or platted. Do not plan this development to happen within the next 5 yrs.*

I. The Landing

- *City stated utility improvements to be funded via PID or TIRZ. Note funding source when developing CIP list.*
- *Predevelopment meetings underway; plan to develop in next 5-yrs.*

J. Co-Op

- *Multifamily housing, Movie Theater, and restaurants all to occur within 5-yr window. Retail maybe within 5-yr window*

K. Mager Meadows Subdivision

- *City to send DCS the plat for total count of houses. Plan for development to occur in next 5 years.*

L. Northtown Commons

- *Original plat revised to only include light industrial and some retail (no houses). Plan to be developed within 5-yr window.*

M. Carol Meadows Subdivision

- *City to send DCS plat for total count of houses.*
- *May expand to east creating more lots but outside next 5 years.*

N. Hutto Highlands Subdivision

- *Section II underway and to be completed in the next 5 years. Land owner may get more land to double in size – not within 5-yr window.*

O. Residences of Bell Tract

- *Planned 140-units of apartments, to occur within 5-yr window*

P. Megasite

- *City provided email to DCS to include development within the next 5 years. City will fund utility improvements via TIRZ or other source and will not be included in determining Impact Fees.*

Q. Multistory Building off SH 130

- *Nothing currently planned within 5-year window. DCS to use City zoning as best approximation for development along SH-130 corridor.*

2. Additional Developments

D. Hutto Square Subdivision

- *Located off of Limmer Loop across from Cottonwood Creek Elementary school. Plan for all 104 lots in Section 5A and 5B within 5-yr window.*

E. Pollard Park

- *Development located south of Brooklands Subdivision on the south side of Brushy Creek. Currently is on septic and will be until Brooklands develops. Plan to occur in the 10 year window.*

3. Questions/Comments

- Attendees:
 - i. City: Carolyn Horner, Bonnye Brewington, Scot Stromsness
 - ii. DCS: Wade Morgan, Jamie Hora

Appendix E

Meeting Minutes

PROJECT STATUS MEETING CITY OF HUTTO – WASTEWATER MASTER PLAN

March 29, 2018

I. Background

- *The last wastewater master plan was completed in 2012.*
- Surrounding City WW CCN's and ETJ's
City of Hutto is boxed in by other political boundaries; Application for expanded WW CCN will likely reflect the ultimate condition.
- WWTP Data (attached)
 - Flow at Central and South WWTP
Total city wastewater flow is approximately 1.3 MGD.
 - Flow/connection
Based on exist plant flow data, there is a decreasing trend in flow per connection. The current city flows are approximately 185 gpd/connection.
 - i. DCS to use 225 gpd/connection for planning and infrastructure sizing as opposed to City recommended design criteria of 280 gpd/connection.
 - Influent BOD
Actual flow data shows average +1 standard deviation value compared to 90th percentile are nearly identical (Approximately 340mg/L in 2017). Both are acceptable to use for design criteria, however, the trend is showing increasing BOD, which means flow is becoming more concentrated. Each plant has separate hydraulic and BOD capacities which can limit the plants actual capacity.
- Historical growth since 2004 (attached)
Average annual growth from 2009 to 2017 was 4.9% measured by total wastewater connections.

II. Flow Projections

- LUE growth per year at 6% compounded (attached)
 - 475, 503, 533 connections added in the next 3 years, respectively.
 - Projected growth of 0.6 MGD added in the next 5-years (@ 225 gpd/conn).

- Projected growth of 1.4 MGD added in the next 10-years (@ 225 gpd/conn).
- Planned Developments
 - 3,643 LUE's within Central WWTP service area (0.67 MGD) (@ 185 gpd/conn).
 - 4,381 LUE's within South WWTP service area (0.81 MGD) (@ 185 gpd/conn).
- Ultimate Build-Out
 - Approximately 21 MGD within study area

III. WWTP Service Areas

DCS noted that the wastewater service area is much larger than the water service area. 550 LUEs from the Lakeside Estates Lift Station are serviced by the City of Pflugerville.

- Septic sewer
 - 4,500 acres within study area to permanently stay on septic
Per the City's instructions, DCS will graphically show these septic systems as never coming to the City's system in the final report. DCS will determine where and how many LUEs are within septic areas.
- Effluent Limits
Per City, BRA is currently working on permit renewal of Central WWTP.

Basin (WWTP)	Ultimate Service Area	Ultimate Demand	Permitted Capacity	Actual Plant Capacity ¹	Creek Capacity	Actual Flow	% Capacity
North	2,620 acres	0.92 mgd	n/a	n/a	n/a	n/a	n/a
Forest Creek	1,500 acres	0.99 mgd ²	0.5 mgd ²	0.5 mgd ²	n/a	n/a	n/a
Central	4,531 acres	2.5 mgd	1.7 mgd	+/- 1.1 mgd ³	5.2 mgd ⁴	0.95 mgd	86%
South	23,580 acres	16.5 mgd	2.0 mgd	+/- 1.5 mgd ³	18 mgd ⁴	0.32 mgd	22%
Totals	32,231 acres	+/- 21 mgd	3.7 mgd ⁵	+/- 2.6 mgd ⁵	n/a	1.27 mgd ⁵	49% ⁵
1. As limited by hydraulic or biological processes through existing plant infrastructure. 2. As stated in Forest Creek WWTP TCEQ permit. 3. Approximate capacity based on rough calculation of BOD increase. Process analysis required to precisely determine actual capacity today. 4. Assimilative modeling shows creek can accept this flow. 5. Totals from Hutto Operated WWTPs only (Central and South).							

IV. Existing Interceptors

- Brushy Creek
 - Service area of interceptor currently largely undeveloped.
- Cottonwood Creek
 - 2,000 LUE's from RSI can be added at upstream using existing capacity in the pipes.
 - 24" along Front Street max capacity ~1.5 MGD and approximately 2.5 MGD is the ultimate requirement. Thus, a parallel interceptor to the WWTP will be needed.

The City is unsure if section of 18" pipe on Front Street is still in use or not. DCS confirmed improvements were made in 2014; the 18" was abandoned in place and the 24" was installed.

V. Ultimate Collection System

- Future Interceptors, Forcemains and Lift Stations
- Forest Creek WWTP
 - Plant infrastructure to permanently serve regions to the southwest of Hutto WW CCN, within Hutto ETJ.
Forest Creek WWTP is operated by Southwest Water Company. DCS reached out to SWWC to obtain the service area of the plant, but was not provided with information. The service area was deduced from MUD boundaries, Round Rock & Pflugerville Boundaries and GIS.
- North WWTP
 - Need for plant will be determined by growth in the northern third of Hutto WW CCN.
An alternative option for serving this area would be via lift station & force main back to an existing city WWTP.
- Central WWTP
 - Ultimately to handle sub basins from the north via gravity infrastructure.
Country Estates, Creekside, and Glennwood Lift Stations are all flowing to Central WWTP. Ultimate scenario takes all flow from these lift stations to the South WWTP. TCEQ permit expires December 1, 2018.
- South WWTP
 - Future infrastructure to take existing (3) lift stations offline and relieve Central WWTP of ~0.5 MGD of flow.
Interim lift stations are likely to be utilized to fully maximize the Central WWTP and limit infrastructure costs until City builds out to the east.
 - Ultimate interceptors will dictate (2) major onsite lift stations.
First phase of plant is 2MGD, second phase is 4MGD. The TCEQ permit will expire Dec. 2019. The two proposed lift stations will be placed along the east boundary of the plant site. In the ultimate condition, these lift stations will serve approximately 36 MGD at 3Q peak flows.

VI. CIP Project Lists

- Potential 5-year CIP list
 1. Glenwood Interceptor to South WWTP with onsite LS (includes forcemain reversal at Creekside LS)

Another potential option is to redirect the Glenwood FM to the Enclave FM to reverse flow at a lower cost than building an interceptor.

2. Parallel Interceptor to 24" Cottonwood Interceptor
3. Central WWTP improvements to 1.7 MGD
4. South WWTP improvements to 2.0 MGD
5. CR-3349 Interceptor from South WWTP to US-79

Lift station cost on South WWTP site will be considered separately from the CR-3349 Interceptor costs.

City stated that the development of the Megasite has the possibility to move forward. This may alter priorities in the 5-year CIP if progress continues.

- Potential 10-year CIP list
 6. Central WWTP Expansion to ultimate capacity
This project is approximately \$8/gallon of capacity.
 7. Brushy Creek Interceptor to South WWTP with onsite LS
(includes Country Estates LS decommissioning)
 8. Avery Lake Phase I
 9. Lakeside Estates Interceptor
 10. Limmer Loop LS and FM

City asked if DCS will include maintenance costs or cost comparisons as part of the master plan. A Cost/Benefit study is not within DCS scope. DCS will only perform construction cost estimates for CIP projects with estimated timeframes for implementation.

City agreed with list of potential projects presented. Adjustments in order may be made once construction estimates have been generated

VII. Next Steps

- DCS will begin generating cost estimates for CIP projects
- DCS will prioritize the estimates for CR-3349 Interceptor to US-79 and the on-site lift station at the South WWTP.

VIII. Recommendations

- Recommend Central WWTP process analysis to establish CIP scope and cost for improvements.
City stated Central WWTP is using fine bubble aeration according to BRA. DCS recommends the city proceed with this analysis as soon as possible. This work effort is expected to cost approximately \$14,000-\$15,000. City asked DCS to generate an IPO to complete this work.
- Recommend renewal and major amendment of Central WWTP discharge permit (expires Dec 1, 2018).
BRA is actively working on the permit renewal. City will discuss internally whether to continue with only the renewal or engage DCS for a major amendment. This work effort is expected to cost approximately \$40,000

- Recommend budgeting renewal and major amendment for South WWTP discharge permit in FY 2019 (permit expires Dec 1, 2019).
This work effort is expected to cost approximately \$40,000
- Recommend budgeting Reclaimed Water Authorizations for Central WWTP and a second one for the South WWTP in FY 2019.
This work effort is expected to cost approximately \$12,000.
- Recommend updating City Impact Fee based on cost of 10-yr CIP list.

IX. Schedule

- Next Status Meeting

DCS will send the original 2 meeting maps; Attention David Magaña.

DCS will have the Wastewater Master Plan report prepared by the first or third council meeting in June, in concurrence with the project schedule.

City of Hutto
Wastewater Masterplan - Summary Tables

Central WWTP Flows (mgd)					
	2013	2014	2015	2016	2017
Max (day)	3.374	2.769	3.296	3.039	3.215
Min	0.784	0.491	0.756	0.777	0.595
Avg	1.0132	1.0666	1.319	1.2804	0.9457
Median	0.954	1.035	1.238	1.223	0.8805
St. Dev.	0.2179	0.1986	0.3385	0.2387	0.2232

South WWTP Flows (mgd)	
	2017
Max (day)	0.8373
Min	0.06
Avg	0.3244
Median	0.3282
St. Dev.	0.0743

Combined WWTP Flows (mgd)					
	2013	2014	2015	2016	2017
Max (day)	3.374	2.769	3.296	3.039	3.9343
Min	0.784	0.491	0.756	0.777	0.8957
Avg	1.0132	1.0666	1.319	1.2804	1.277
Median	0.954	1.035	1.238	1.223	1.22
St. Dev.	0.2179	0.1986	0.3385	0.2387	0.2395

Flow/Conn Summary (gpd)				
	2014	2015	2016	2017
Max(month)	248	283	220	208
Min	154	156	159	151
Avg	196	199	184	176
Median	189	186	179	173
St Dev	31	35	20	16

BOD Central WWTP (mg/L)					
	2013	2014	2015	2016	2017
Max (sample)	339.2	281.5	502	615	624
Min	60	50.1	74.1	92.1	88.5
Avg	198	199.2	218.7	238.6	251.8
Median	200.3	204.3	202	224	236.4
St. Dev.	40.5	46.1	75	93.5	89.7
Avg + 1 St. Dev.	238.5	245.3	293.7	332.1	341.5
90th Percentile	239.42	249.95	327.9	343.13	352.1

BOD South WWTP (mg/L)	
	2017
Max (sample)	508
Min	60
Avg	237.7
Median	238.5
St. Dev.	88.2
Avg + 1 St. Dev.	325.9
90th Percentile	329.7

City of Hutto														
Wastewater Connection Growth History														
	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Jan	2068	2645	3294	4120	4846	5056	5419	5638	5915	6173	6,442	7,009	7,233	7,644
Feb	2107	2706	3326	4179	4860	5209	5420	5676	5943	6192	6492	7038	7289	7701
Mar	2114	2749	3403	4232	4896	5243	5432	5691	5952	6239	6506	7028	7313	7739
Apr	2157	2801	3473	4266	4932	5234	5455	5722	5968	6279	6676	7167	7378	7771
May	2214	2854	3496	4349	4977	5272	5470	5741	6017	6331	6585	7073	7473	7808
Jun	2271	2918	3642	4433	5007	5304	5485	5769	6045	6372	6651	7075	7585	7828
Jul	2298	2937	3702	4497	5100	5348	5527	5821	6043	6377	6729	7125	7595	7876
Aug	2353	3006	3780	4535	5101	5332	5470	5828	6077	6414	6766	7279	7632	7873
Sep	2448	3037	3881	4645	5140	5367	5571	5841	6062	6457	6807	7241	7575	7865
Oct	2524	3153	3961	4674	5145	5376	5489	5825	6081	6448	6808	7815	7632	7910
Nov	2570	3199	3994	4696	5177	5379	5536	6571	6163	6478	6876	6739	7649	7896
Dec	2621	3173	4063	4806	5203	5406	5619	5878	6174	6469	6915	7628	7660	7912
LUE Growth (Jan-Jan)		577	649	826	726	210	363	219	277	258	269	567	224	411
Percent Growth (Jan-Jan)		21.8%	19.7%	20.0%	15.0%	4.2%	6.7%	3.9%	4.7%	4.2%	4.2%	8.1%	3.1%	5.4%

City of Hutto											
Projected Wastewater Connection Growth											
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Jan	7912	8387	8890	9423	9989	10588	11223	11897	12611	13367	14169
Feb	7952	8429	8934	9470	10039	10641	11279	11956	12674	13434	14240
Mar	7991	8471	8979	9518	10089	10694	11336	12016	12737	13501	14311
Apr	8031	8513	9023	9565	10139	10747	11392	12075	12800	13568	14382
May	8070	8554	9068	9612	10188	10800	11448	12135	12863	13635	14453
Jun	8110	8596	9112	9659	10238	10853	11504	12194	12926	13701	14523
Jul	8149	8638	9157	9706	10288	10906	11560	12254	12989	13768	14594
Aug	8189	8680	9201	9753	10338	10959	11616	12313	13052	13835	14665
Sep	8228	8722	9246	9800	10388	11012	11672	12373	13115	13902	14736
Oct	8268	8764	9290	9847	10438	11065	11728	12432	13178	13969	14807
Nov	8308	8806	9334	9894	10488	11117	11784	12492	13241	14036	14878
Dec	8347	8848	9379	9942	10538	11170	11841	12551	13304	14102	14948
Growth (Jan-Jan)		475	503	533	565	599	635	673	714	757	802
Percent Growth (Jan-Jan)		6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%

City of Hutto		
Annual Estimated Wastewater Flow Growth		
Growth (Jan-Jan)		Estimated Flow Added (mgd) 1 Conn = 225 gpd
2018	475	0.107
2019	503	0.113
2020	533	0.120
2021	565	0.127
2022	599	0.135
2023	635	0.143
2024	673	0.152
2025	714	0.161
2026	757	0.170
2027	802	0.180

City of Hutto		
Total Estimated Wastewater Flow Growth		
Total (Jan.)		Estimated Total Flow (mgd) 1 Conn = 225 gpd
2018	7912	1.780
2019	8387	1.887
2020	8890	2.000
2021	9423	2.120
2022	9989	2.247
2023	10588	2.382
2024	11223	2.525
2025	11897	2.677
2026	12611	2.837
2027	13367	3.008

Central Plant - Cottonwood Creek

Original Permit Limits: BOD = 7 mg/L, NH3 = 1.5 mg/L				
Flow (mgd)	Minimum DO in Creek from Model (mg/L)	BOD Limit (mg/L)	NH3 Limit (mg/L)	Meeting Effluent Limits
1.7	4.93	7	1.5	Yes
2.0	4.87	7	1.5	Yes
2.4	4.80	7	1.5	Yes
2.5	4.79	7	1.5	No
3.0	4.73	7	1.5	No
3.5	4.67	7	1.5	No

Notes: Minimum DO concentration in Cottonwood Creek is 5.0 mg/L, with +/- 0.2 mg/L the absolute minimum DO for Cottonwood Creek is 4.80 mg/L. Max Flow out of Central Plant at Original Permit Limits is 2.4 MGD; limiting factor is DO in Cottonwood Creek must be 4.80 mg/L or greater.

Change Permit Limits of BOD = 7 mg/L to BOD = 5 mg/L				
Flow (mgd)	Minimum DO in Creek from Model (mg/L)	BOD Limit (mg/L)	NH3 Limit (mg/L)	Meeting Effluent Limits
1.7	5.13	5	1.5	Yes
2.0	5.08	5	1.5	Yes
2.5	5.01	5	1.5	Yes
3.0	4.96	5	1.5	Yes
3.5	4.91	5	1.5	Yes
5.2	4.80	5	1.5	Yes

Notes: Max Flow out of Central Plant at New Permit Limits is 5.2 MGD; limiting factor is DO in Cottonwood Creek must be 4.80 mg/L or greater.

Flow out of South Plant at New Permit Limits continues to meet limits beyond 18.0 MGD of flow.

South Plant - Brushy Creek

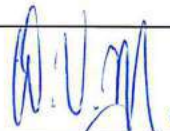
Original Permit Limits: BOD = 10 mg/L, NH3 = 2 mg/L				
Flow (mgd)	Minimum DO in Creek from Model (mg/L)	BOD Limit (mg/L)	NH3 Limit (mg/L)	Meeting Effluent Limits
2.0	4.84	10	2	Yes
4.0	4.82	10	2	Yes
6.0	4.81	10	2	Yes
8.0	4.80	10	2	Yes
8.5	4.80	10	2	Yes
10.0	4.79	10	2	No

Notes: Minimum DO concentration in Brushy Creek is 5.0 mg/L, with +/- 0.2 mg/L the absolute minimum DO for Cottonwood Creek is 4.80 mg/L. Max Flow out of South Plant at Original Permit Limits is 8.5 MGD; limiting factor is DO in Brushy Creek must be 4.80 mg/L or greater.

Change Permit Limits of BOD = 10 mg/L to BOD = 7 mg/L				
Flow (mgd)	Minimum DO in Creek from Model (mg/L)	BOD Limit (mg/L)	NH3 Limit (mg/L)	Meeting Effluent Limits
2.0	4.87	7	2	Yes
4.0	4.87	7	2	Yes
6.0	4.87	7	2	Yes
8.0	4.87	7	2	Yes
10.0	4.88	7	2	Yes
12.0	4.88	7	2	Yes
14.0	4.89	7	2	Yes
16.0	4.90	7	2	Yes
18.0	4.91	7	2	Yes

Notes: Flow out of South Plant at New Permit Limits continues to meet limits beyond 18.0 MGD of flow.

SIGN IN SHEET
CITY OF HUTTO
WASTEWATER MASTER PLAN
March 29, 2018

NAME	COMPANY	PHONE	EMAIL
Tony Host ← In attendance (JH)	City of Hutto	512-759-4025	Anthony.Host@HuttoTx.gov
David Magaña 	City of Hutto	(512) 759-4022	David.Magana@HuttoTX.gov
Scot Stromsness 	City of Hutto	(512) 759-4051	Scot.Stromsness@HuttoTx.gov
Robert Sims 	City of Hutto	(512) 759-4016	Robert.Sims@HuttoTx.gov
Bonnye Brewington 	City of Hutto	512-759-4024	Bonnye.Brewington@HuttoTx.gov
Darren Strozewski ← In Attendance (JH)	DCS Engineering, LLC	512-614-6171	dstrozewski@DCS-engineering.com
Wade Morgan 	DCS Engineering, LLC	512-614-6171	wmorgan@DCS-engineering.com
Jamie Hora 	DCS Engineering, LLC	512-614-6171	jhora@DCS-engineering.com
Sam Pearson	City of Hutto	512-738-6666	samuel.pearson@hutto.tx.gov
ELIAS BUSUECO	CITY OF HUTTO	(512)-759-5989	ELIAS.BUSUECO@HUTTOTX.GOV

RESOLUTION NO. R

A RESOLUTION ADOPTING THE HUTTO WASTEWATER MASTER PLAN.

WHEREAS, the City Council of the City of Hutto, Texas, recognizes the need to provide a safe and reliable wastewater services for the citizens of Hutto, Texas, and;

WHEREAS, the City recognizes the need for long term wastewater master planning that aims to serve Hutto, and;

WHEREAS, The City recognizes the need for the infrastructure to mitigate continued growth and wastewater treatment concerns, and;

WHEREAS, the Wastewater Master Plan addresses and is tailored to meet Hutto's needs has been prepared.

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

That the City Council hereby adopts on behalf of the City the Hutto Wastewater Master Plan.

CONSIDERED and RESOLVED by the City Council of the City of Hutto on this the **19th** day of **July, 2018**.

THE CITY OF HUTTO, TEXAS

Doug Gaul, Mayor

ATTEST:

Lisa L. Brown, City Secretary

**CITY OF HUTTO
CITY COUNCIL AGENDA**

AGENDA ITEM NO.: 12A.

AGENDA DATE: July 19, 2018

PRESENTED BY:

ITEM:

Executive Session, as authorized by Texas Government Code Section 551.074, deliberations regarding contract negotiations pertaining to the City Manager.

STRATEGIC GUIDE POLICY:

ITEM BACKGROUND:

BUDGETARY AND FINANCIAL SUMMARY:

RELATED COUNCIL COMMITTEE OR ADVISORY BOARD RECOMMENDATIONS:

CITY ATTORNEY REVIEW:

STAFF RECOMMENDATION:

SUPPORTING MATERIAL:

There are no supporting documents.