AGENDA

FLOWER MOUND TOWN COUNCIL REGULAR MEETING

12/7/2020

VIA VIDEO CONFERENCE

6:00 P.M.

CLICK HERE FOR INSTRUCTIONS ON HOW TO PARTICIPATE IN THE MEETING

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An agenda information packet is available online at www.flower-mound.com/AgendaCenter

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Effective March 16, 2020, Texas Governor Abbott suspended certain Open Meeting rules to allow telephonic or video conference meetings of government bodies that are accessible to the public to decrease large groups of people from assembling. The suspension temporarily removes the requirement that government officials and members of the public be physically present at a meeting location. The Town of Flower Mound Town Council meetings will be temporarily held via video conference. A recording of the meeting will be available the following day at https://www.flower-mound.com/fmtv, look for the "Town Council Archive" menu.

A. CALL MEETING TO ORDER

B. INVOCATION

C. PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG AND TO THE TEXAS FLAG

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

D. GENERAL PUBLIC COMMENT

The purpose of this item is to allow the public an opportunity to address the Town Council on issues that are not indicated as a "Public Hearing" on this agenda. Issues regarding daily operational or administrative matters should first be dealt with by calling Town Hall at 972-874-6000 during business hours.

CLICK HERE to submit general public comments regarding issues or agenda items not indicated as a Public Hearing.

E. ANNOUNCEMENTS

1. Announcements from council members

F. TOWN MANAGER'S REPORT

Update and discussion on:

1. Capital Improvement projects
2. Economic Development projects

G. FUTURE AGENDA ITEMS

The purpose of this item is to allow the Mayor and members of Council an opportunity to bring forward items they wish to discuss at a future meeting, with the understanding a consensus of Council is needed in order for that item to be placed on a future agenda and in accordance with the Town Council Agenda Setting Policy (Ord. 65-15).

H. COORDINATION OF CALENDARS

1. A work session is scheduled for Thursday, December 17.
2. The next regular meeting is scheduled for Monday, January 4.

I. CONSENT ITEMS

This part of the agenda consists of non-controversial or "housekeeping" items required by law. Items may be removed from Consent by any Councilmember by making such request prior to a motion and vote.

1. Minutes 11/16 & 11/19- Consider approval of the minutes from a regular meeting of the Town Council held on November 16, 2020, and approval of the minutes from a work session held on November 19, 2020.
2. Stop Loss Insurance- Consider approval of a contract with Blue Cross and Blue Shield in the amount of $848,333.28 for reinsurance for the Town's Group Health Plan and authorization for the Mayor to execute same on behalf of the Town.
3. Employee Basic Life Insurance, ADD & LTD- Consider approval of the award of RFP No. 2021-3-A for Employee Basic Life Insurance & Accidental Death Insurance, Long Term Disability Insurance, Employee and Dependent Optional Life and Accidental Death Insurance to CIGNA Group Insurance in the estimated amount of $107,485.74 and authorization for the Mayor to execute same on behalf of the Town.
4. HUD CDBG 2019 CAPER- Consider approval of a resolution authorizing the adoption of the Program Year 2019 Consolidated Annual Performance & Evaluation Report for the Community Development Block Grant; and authorization for the Mayor to execute same on behalf of the Town and submit to the U.S. Department of Housing and Urban Development.
5. 4th FY 19-20 Budget Amendment- Consider approval of an ordinance amending the Town of Flower Mound's Annual Budget for the fiscal year beginning October 1, 2019, and ending on September 30, 2020, as adopted by Ordinance No. 50-19 and amended by Ordinance No. 64-19, No. 04-20 and No. 23-20 for adjustments to the General Fund, General Debt Service Fund and Grants Fund.
6. 1st Budget Amendment FY 20-21- Consider approval of an ordinance amending the Town of Flower Mound's Annual Budget for the fiscal year beginning October 1, 2020, and ending on September 30, 2021, as adopted by Ordinance No. 27-20 for adjustments to the General Fund, Utility Fund, Tree Preservation Fund, Flower Mound Log Cabin Fund, IRS Equitable Sharing Fund, Grants Fund, Neighborhood Improvement Fund and Vehicle & Equipment Replacement Fund.
7. 1st Crime District Budget Amendment- Town Council acting as the Board of Directors for the Town of Flower Mound Crime Control and Prevention District to consider approval of a resolution amending the Town of Flower Mound Crime Control and Prevention District budget for the fiscal year beginning on October 1, 2020, and ending on September 30, 2021, as adopted by Resolution No. 19-20.

8. 2020 DOJ Bulletproof Vest Grant- Consider approval of a resolution accepting grant funds from the Department of Justice's Office of Justice Programs for the purchase of bulletproof vests for the Police Department as part of the FY 2020 Bulletproof Vest Partnership.

9. Interlocal Agreement-Fire Protection- Consider approval of an Interlocal Cooperation Agreement with Denton County for the provision of fire protection services for the benefit of the citizens of Flower Mound and Denton County, and authorization for the Mayor to execute same on behalf of the Town.

10. Interlocal Agreement-EMS- Consider approval of an Interlocal Cooperation Agreement with Denton County for the provision of ambulance services for the benefit of the citizens of Flower Mound and Denton County, and authorization for the Mayor to execute same on behalf of the Town.

11. Street Name Change- Consider approval of an ordinance for a street name change for the cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas to Navajo Bluffs Court (9100 – 9200 block) (The Transportation Commission recommended to change the street name by a vote of 6 to 0 at its November 10, 2020, meeting)

12. High Road Water Line Change Order 1- Consider approval of Change Order No. 1 for the High Road Water Line Replacement Phase III project, amending the contract with Muniz Construction, Inc., in the amount of $28,400.00; and authorization for the Mayor to execute same on behalf of the Town.

13. FM2499 Water Line Change Order 2- Consider approval of Change Order No. 2 for the construction of the FM2499 12-Inch Water Line Phase I (Dixon to South of FM1171) project, amending the contract with GRod Construction, LLC, to provide for an increase to the contract in the amount of $36,230.00; and authorization for the Mayor to execute same on behalf of the Town.

14. WWTP Phase V Change Order 2- Consider approval of Change Order No. 2 to the construction agreement with Archer Western Construction, LLC, for the Wastewater Treatment Plant Rehabilitation Phase V, Solids Facility Improvements project, in the amount of $53,826.88; and authorization for the Mayor to execute same on behalf of the Town.

15. Kirkpatrick Water Line Change Order 3- Consider approval of Change Order No. 3 for the construction of the Kirkpatrick Lane 12-Inch Water Line Phase II project, amending the contract with A&M Construction and Utilities, Inc., to provide for an increase to the contract in the amount of $54,417.00; and authorization for the Mayor to execute same on behalf of the Town.

16. Waketon Rd Drainage Design Amend 1- Consider approval of First Amendment to Professional Services Agreement for the East Waketon Road Drainage Improvements project, amending the agreement with Halff Associates, Inc. for an increase of $55,000.00, and authorization for the Mayor to execute same on behalf of the Town.

17. Heritage Park Splash Pad Re-Surfacing- Consider approval of the purchase and installation of Life Floor splash pad safety surfacing by Inside Edge CIS LLC, for the Heritage Park Improvements project, in the amount of $64,984.53.

18. Canyon Falls Park Testing Award- Consider approval of a Professional Services Agreement with Alliance Geotechnical Group, Inc., to provide testing services in the amount of $44,206.50 for the Canyon Falls Park project.

19. Engineering Standards and Details Update- Consider approval of a Professional Services Agreement with Pacheco Koch Consulting Engineers, Inc., for the work associated with the Engineering Standards and Details Update project, in the amount of $170,990.00; and authorization for the Mayor to execute same on behalf of the Town.

20. Big City Concrete Purchase Increase- Consider approval of an increase to the annual purchase contract for flex base material from Big City Crushed Concrete, through a City of Lewisville contract (19-27-A) from an estimated total of $30,000.00 to an estimated total of $50,000.00.

21. TxDOT Advance Funding Agreement- Consider approval of a resolution to approve an Advance Funding Agreement, for Voluntary Local Government Contributions to Landscape Improvement Projects, with the Texas Department of Transportation (TxDOT) to pay for work associated with the construction of landscaping activities to include planting and irrigation along FM 1171 from Long Prairie Road to North Garden Ridge Boulevard within the limits of the Town of Flower Mound, in the amount of $90,000.00; and authorization for the Mayor to execute the same on behalf of the Town.

22. TxDOT Landscape Maintenance Agreement- Consider approval of a Landscape Maintenance Agreement with the State of Texas for the Town to maintain the Governor's Community Achievement Award grant project along FM 1171 between FM2499 and Garden Ridge Boulevard.

23. Youth Standards of Care- Consider approval of Standards of Care for Youth Recreation Programs operated by the Town, in accordance with the Texas Human Resources Code - Section 42.041 and to adopt an ordinance providing for said Standards.

24. PSA - Modern Geosciences- Consider approval of a Professional Services Agreement for monthly gas well pad site air monitoring by Modern Geosciences, LLC, in the amount of $120,000.00; and authorization for the Mayor to execute same on behalf of the Town.

25. TIRZ 2020 Annual Report- Consider approval of the 2020 Annual Report for the Flower Mound Tax Increment Reinvestment Zone #1 (TIRZ #1) in accordance with Chapter 311 of the Texas Tax Code.

26. Purchase Water Flow Meters- Consider approval of the purchase of wastewater flow meter data loggers and components from Hach Company, a sole source provider, associated with the Inflow-Infiltration/Evaluation and Repair project, in the amount of $96,609.40.

27. Lift Station Change Order 1- Consider approval of Change Order No. 1 for the Lift Station Improvements and Decommissioning Phase II project, amending the contract with Fort Worth Civil Constructors, LLC, in the amount of $32,282.00; and authorization for the Mayor to execute same on behalf of the Town.

J. REGULAR ITEMS

28. ZPD20-0005 - Niagara Conservation- Public Hearing to consider an ordinance amending the zoning (ZPD20-0005 - Niagara Conservation) from an Agricultural (A) Zoning district to Planned Development District No.179 (PD-179) with Campus Industrial uses, with certain waivers, exceptions and modifications to the Code of Ordinances. The property is generally located north of Enterprise Road and east of Old Gerault Road. (The Planning and Zoning Commission recommended approval of the rezoning request and denial of the exception request to Section 82-376 of the Town Code that requires overhead utilities to be placed underground, by a vote of 6 to 0 at its November 9, 2020, meeting.)

29. Tree Removal- Niagara Conservation- Public Hearing to consider an application for a tree removal permit for twenty-five (25) specimen trees on property proposed for development as Niagara Conservation. The property is generally located north of Enterprise Road and east of Old Gerault Road. (The Environmental Conservation Commission recommended approval by a vote of 4-3-0 at its November 4, 2020, meeting).

30. Reinvestment Zone-300 Old Gerault Rd.- Public Hearing to consider approval of an ordinance establishing a Tax Abatement Reinvestment Zone for commercial tax abatement at 300 Old Gerault Road (Niagara Conservation, Inc., aka Deus, LLC).

31. Niagara Conserv. Ch 380 & Tax Abatement- Public Hearing to consider approval of a Chapter 380 and Tax Abatement Agreement with Niagara Conservation, Inc. (aka Deus, LLC), for the economic development of Flower Mound, and authorization for the Mayor to execute same on behalf of Town.

32. DP20-0004 - Grace Park- Consider a request for a Development Plan (DP20-0004 – Grace Park) to develop a residential subdivision, with an exception to Section IV.C.5. of the Town's Engineering Design Criteria requirement to provide a wet retention pond, and an exception to the access management policy and criteria, regarding driveway spacing, contained in the Town's Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances. The property is generally located south of Cross Timbers Road and east of Regency Park Court. (The Planning and Zoning Commission recommended approval by a vote of 5 to 1 at its November 9, 2020, meeting.)

33. MPA20-0002 - Water Plan- Public Hearing to consider an ordinance amending Section 8.0 - Water Plan of the Master Plan (MPA20-0002 - Water Plan) to adopt amendments and additions to the 2009 Water Master Plan Update as a component of the Master Plan. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020, meeting.)

34. MPA20-0003 - Wastewater Plan- Public Hearing to consider an ordinance amending Section 9.0 - Wastewater Plan of the Master Plan (MPA20-0003 - Wastewater Plan) to adopt amendments to the 2009 Wastewater Master Plan Update as a component of the Master Plan. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020, meeting.)

35. Land Use Assumptions & Impact Fee Update- Public Hearing to consider the approval of an ordinance adopting updated land use assumptions and updated capital improvements plans, and to update and amend certain provisions of Chapter 42, "Impact Fees," regarding the imposition of impact fees and amending Appendix A, "Fee Schedule", accordingly. (The CIAC recommended approval by a vote of 9 to 0 at its November 9, 2020, meeting.)

K. CLOSED MEETING

The Town Council to convene into closed meeting pursuant to Texas Government Code Chapter 551, including, but not limited to, Sections 551.071, 551.072, 551.074, and 551.087 for consultation with attorney, and to discuss matters relating to real property, personnel, and economic development negotiations, as follows:

a. Consultation with Attorney.

    1. Consultation with Attorney regarding legal issues associated with municipal boundary adjustment/annexation and ESD service issues.

Pursuant to Section 551.071 of the Texas Government Code, the Town Council reserves the right to consult in a closed meeting with its attorney and to receive legal advice regarding any item listed on this agenda.

b. Discuss and consider the recruitment process for the Town Manager, and all matters incident and related thereto.

c. Discuss and consider purchase, exchange, lease or value of real property for parks, public rights-of-way, cultural arts center, and/or other municipal purposes and all matters incident and related thereto.

d. Discuss and consider economic development incentives, including retail centers, corporate relocation/expansion/retention, senior housing, hospitality projects, and performance related to certain incentive agreements.

L. RECONVENE TO REGULAR MEETING

The Town Council to reconvene into an open meeting to take any action deemed necessary as a result of the closed meeting.

M. ADJOURN MEETING

I do hereby certify that the Notice of Meeting was posted on the bulletin board at the Town Hall for the Town of Flower Mound, Texas, in a place convenient and readily accessible to the general public at all times and said Notice was also posted on the Town's website in accordance with GC Section 551.056 on the following date and time: December 4, 2020, at 5:00 p.m., at least 72 hours prior to the scheduled time of said meeting.

Theresa Scott, Town Secretary

The Flower Mound Town Hall and Jody Smith Hall are wheelchair accessible. Requests for accommodations or interpretive services must be made 48 hours prior to this meeting by contacting Theresa Scott, Town Secretary, at 972.874.6076.

TOWN COUNCIL AGENDA ITEM NO. 1

CONSENT ITEM

DATE: December 7, 2020

FROM: Theresa Scott, Town Secretary

ITEM: **Consider approval of the minutes from a regular meeting of the Town Council held on November 16, 2020, and approval of the minutes from a work session held on November 19, 2020.**

BACKGROUND INFORMATION: The Town Council held a regular meeting on November 16, 2020, and a work session on November 19, 2020.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

Proposed Expenditure/(Revenue):	Account Number(s):

Finance Review by: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Draft minutes 11.16
2. Draft minutes 11.19

DRAFT MOTION: Move to approve as presented in the agenda caption.

THE FLOWER MOUND TOWN COUNCIL REGULAR MEETING HELD ON THE 16TH DAY OF NOVEMBER, 2020, IN THE FLOWER MOUND TOWN HALL, LOCATED AT 2121 CROSS TIMBERS ROAD IN THE TOWN OF FLOWER MOUND, COUNTY OF DENTON, TEXAS AT 6:00 P.M.

Click here for meeting Video Link (subject to change)

The Town Council met in a regular meeting with the following members present:

Steve Dixon	Mayor
Sandeep Sharma	Mayor Pro Tem
Claudio Forest	Deputy Mayor Pro Tem *(attending up to item E(1)(a) and voting on election canvass item only)*
Jim Pierson	Councilmember Place 1
Ben Bumgarner	Councilmember Place 3
Jim Engel	Councilmember Place 4

And present after the Election Canvass:

Ann Martin	Councilmember Place 5

constituting a quorum with the following members of the Town Staff participating:

Theresa Scott	Town Secretary
Bryn Meredith	Town Attorney
Debra Wallace	Interim & Deputy Town Manager/CFO
Tommy Dalton	Assistant Town Manager
Chuck Jennings	Director of Parks and Recreation

A. CALL MEETING TO ORDER

Mayor Dixon called the regular meeting to order at 6:00 p.m.

B./C. INVOCATION/PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG AND THE TEXAS FLAG

Chaplain Russ McNamer gave the invocation and Mayor Dixon led the pledges.

D. PUBLIC COMMENT

Names listed below don't necessarily reflect the order in which each person spoke and all addresses are located in Flower Mound unless otherwise indicated.

	Speaker names and address	**Subject *(as written on the form or stated)***
1.	Doug Brown, 1721 Ingleside	Veterans Liaison committee report
2.	Riley Cannon, 2709 Lismore Dr	Item J
3.	Anurag Sharma, 4521 Delainia Dr With donated time from: Ashmish Puri, 3604 Saint Mark Dr	Diwali Festival of Lights
4.	Kent Johnson, 3808 Regency Park Ct	Hate Has No Home Here

Administrative Note: The following items were not heard in this order during the meeting.

DRAFT

E. ANNOUNCEMENTS

1. Announce recent and upcoming civic and social events

    a. Members of Council extended thanks and well wishes to Deputy Mayor Pro Tem Forest for his service to the Town.

    b. Members of Council later offered congratulations to newly reelected/elected Councilmembers Sharma and Martin.

    c. Mayor Dixon recited a Small Business Saturday (November 28, 2020) Proclamation.

F. CONSENT ITEMS

This part of the agenda consists of non-controversial or "housekeeping" items required by law. Items may be removed from Consent by any Councilmember by making such request prior to a motion and vote.

1. Minutes 11/2- Consider approval of the minutes from a regular meeting of the Town Council held on November 2, 2020.
2. Chapter 70 - Utilities- Consider approval of an ordinance amending Chapter 70 entitled "Utilities," of the Town's Code of Ordinances codifying requirements related to mandatory water and sanitary sewer utility connections.
3. Memorandum of Agreement - Dr. Fleming- Consider approval of a Memorandum of Agreement with Dr. Sean Fleming, MD in the amount of $55,375.00 for EMS Medical Direction and authorization for the Mayor to execute same on behalf of the Town.
4. Contract for Services with UTSW Medical- Consider approval of a Contract for Services with the University of Texas Southwestern Medical Center to provide continuing education services for the Department's licensed and certified EMS personnel, and authorization for the Mayor to execute same on behalf of the Town.
5. Annual Firefighter Physical Examinations- Consider approval of the annual firefighter physical examinations with Huguley Memorial Medical Center through contract No. 2018-2-A in the total amount of $64,760.00 and authorization for the Mayor to approve same on behalf of the Town.
6. Vehicle Purchases - Ford Interceptor- Consider approval of the purchase of two (2) 2021 Ford Interceptor Utility-Hybrid with Police Equipment Packages per Town of Flower Mound Specifications and Vendor Quote from Holiday Dodge of the Holiday Autogroup for Police Services in the amount of $121,964.00.
7. Vehicle Purchase - Police Dodge Durango- Consider approval of the purchase of one (1) 2021 Dodge Durango SSV with Police Equipment Packages per Town of Flower Mound Specifications and Vendor Quote from Hoiday Dodge of the Holiday Autogroup for Police Services in the amount of $36,123.00

DRAFT

8. 2499 @ Chaparral Traffic Signal- Consider approval of a Construction Agreement with Durable Specialties, Inc., for the FM 2499 at Chaparral Traffic Signal project and Partial Signal Rehabilitation at FM 2499/Churchill and Flower Mound Road/McKamy Creek, in the amount of $287,400.00; and authorization for the Mayor to execute same on behalf of the Town.

9. Fire Station 7 Purchase Radio Equipment- Consider approval of Crosspoint Communications proposal for providing and installing a Bi Directional Amplifier system to boost first responder radio equipment in the Fire Station No.7 Facility in the amount of $25,593.00.

10. Sentinel Oaks Waterline Design- Consider approval of a Professional Services Agreement with Pacheco Koch Consulting Engineers, Inc., for the design phase services associated with the Sentinel Oaks Water Line Replacement (Three Bridges to Simmons) project, in the amount of $39,700.00; and authorization for the Mayor to execute same on behalf of the Town.

11. Pecan Orchard Purchase Playground Equip.- Consider approval of the purchase and installation of the 2019-20 Playground Replacements project, for Pecan Orchard Playground, from Child's Play, Inc., through the Texas Local Government Purchasing Cooperative, in the amount of $212,221.00.

12. CIP Amendment No. 1- Consider approval of Amendment No. 1 to the Fiscal Year 2020-2021 Capital Improvement Program.

13. ITS PSA- Transportation Consultant- Consider approval of a Professional Services Agreement with Innovative Transportation Solutions, Inc., to provide professional transportation services in the amount of $75,000.00 annually, with a one year renewal option; and authorization for the Mayor to execute same on behalf of the Town.

Councilmember Sharma moved to approve by consent Items 1-13, as presented in the agenda caption. Deputy Mayor Pro Tem Bumgarner seconded the motion. Each item, as approved by consent, is restated above, and if applicable, the Ordinance or Resolution caption for each, for the record.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, SHARMA, BUMGARNER, ENGEL, MARTIN
NAYS: NONE

G. REGULAR ITEMS

14. Canyon Falls Park - Const Award- Consider approval of a Construction Agreement with MSB Constructors, Inc., for the Canyon Falls Park project, in the amount of $2,625,996.00; and authorization for the Mayor to execute same on behalf of the Town.

Staff presentation

Mr. Jennings gave a presentation identifying or noting:

- Background information
- Canyon Falls Park location
- Parks Master Plan
- Site map layout

- Major amenities within the park (restroom, splash pad, shade structures, playground equipment, pavilions, monument entry sign)
- Engineer's opinion of probable cost
- Responsive bidders
- MSB Constructors

and he responded to the following questions from Council:

- Was there additional parking slated on Willow Ridge
- How many total parking spaces are there
- Did the Town also receive park development funds
- Have the neighbors concerns regarding parking been addressed

Councilmember Sharma moved to approve as presented. Mayor Pro Tem Engel seconded the motion.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, SHARMA, BUMGARNER, ENGEL, MARTIN
NAYS: NONE

15. Election Canvass- Consider approval of an ordinance canvassing returns and declaring results of a General Election held November 3, 2020, for the purpose of electing Councilmember Places 2, and 5, of the Town of Flower Mound, Texas; and providing an effective date.

Staff Presentation

Ms. Scott gave a presentation identifying or noting:

- Background information
- Early voting locations
- Election day locations
- Voter turnout
- Unofficial results

Deputy Mayor Pro Tem Forest moved to approve as presented. Councilmember Bumgarner seconded the motion.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, ENGEL, SHARMA, FOREST, BUMGARNER
NAYS: NONE

H. RECOGNITION OF AND ANNOUNCEMENT FROM OUTGOING COUNCILMEMBER CLAUDIO FOREST

Deputy Mayor Pro Tem Forest offered remarks regarding his time of service on Council and Mayor Dixon presented him with a key to the Town and a street sign.

I. OATHS OF OFFICE FOR NEWLY ELECTED OFFICIALS

1. Administer Oaths of Office and issue Certificates of Election

DRAFT

Ms. Scott administered Oaths of Office to newly re-elected Councilmember Sandeep Sharma (Place 2) and elected Councilmember Ann Martin (Place 5) and she announced that each have signed a Statement of Office in accordance with state law.

Mayor Dixon presented each with a Certificate of Election in accordance with state law.

J. RECOGNITION OF AND ANNOUNCEMENTS FROM NEWLY ELECTED COUNCILMEMBERS, SANDEEP SHARMA AND ANN MARTIN

Councilmembers Sharma and Martin offered remarks regarding the election.

K. BOARDS/COMMISSIONS

16. Consider approval of a resolution of the Town Council of the Town of Flower Mound, Texas, creating an Outstanding Citizen Award Committee, and providing for the member appointment process.

Staff presentation

Ms. Scott recited the names of individuals as selected by Council to serve on the committee, and she

Ms. Scott noted that the Resolution simply formalizes a process that has been used since the program was created; however, with a change in the appointment process in that each member of Council would select someone to serve on the committee. She recited the names as selected by some members of Council. Mayor Dixon and Deputy Mayor Pro Tem Bumgarner recited the names of their individuals.

Councilmember Sharm moved to approve as presented. Deputy Mayor Pro Tem Bumgarner seconded the motion.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, SHARMA, BUMGARNER, ENGEL, MARTIN
NAYS: NONE

L./M. CLOSED MEETING/OPEN MEETING

The Town Council convened into closed meeting at 6:40 p.m. pursuant to Texas Government Code Chapter 551, including, but not limited to, Sections 551.074 to discuss matters relating to personnel as follows:

a. Discuss and consider election of Mayor Pro Tem and Deputy Mayor Pro Tem

and reconvened into an open meeting at 6:52 p.m. to take the following action as a result of the closed meeting:

Councilmember Bumgarner moved to elect Jim Engel as Mayor Pro Tem. Councilmember Sharma seconded the motion.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, SHARMA, BUMGARNER, ENGEL, MARTIN
NAYS: NONE

DRAFT

Councilmember Sharma moved to elect Ben Bumgarner as Deputy Mayor Pro Tem. Councilmember Engel seconded the motion.

VOTE ON MOTION: *Motion passed*
AYES: PIERSON, SHARMA, BUMGARNER, ENGEL, MARTIN
NAYS: NONE

N. COORDINATION OF CALENDARS

Mayor Dixon announced the following upcoming meetings:

1. The next Town Council work session will be held on Thursday, November 19.
2. The next Town Council regular meeting will be held on Monday, December 7.

O. ADJOURN MEETING

Mayor Dixon adjourned the meeting at 7:21 p.m. on November 16, 2020.

TOWN OF FLOWER MOUND, TEXAS

_____
STEVE DIXON, MAYOR

ATTEST:

_____
THERESA SCOTT, TOWN SECRETARY

DRAFT

THE FLOWER MOUND TOWN COUNCIL WORK SESSION MEETING HELD ON THE 19th DAY OF NOVEMBER, 2020, IN THE FLOWER MOUND TOWN HALL, LOCATED AT 2121 CROSS TIMBERS ROAD IN THE TOWN OF FLOWER MOUND, COUNTY OF DENTON, TEXAS AT 6:00 P.M.

Click here for meeting video link (subject to change)

The Town Council met in a work session with the following members present:

Steve Dixon	Mayor
Jim Engel	Mayor Pro Tem
Ben Bumgarner	Deputy Mayor Pro Tem
Jim Pierson	Councilmember Place 1
Sandeep Sharma	Councilmember Place 2
Ann Martin	Councilmember Place 5

constituting a quorum with the following members of the Town Staff participating:

Theresa Scott	Town Secretary
Debra Wallace	Interim & Deputy Town Manager/CFO
Tommy Dalton	Assistant Town Manager
Lexin Murphy	Director of Planning Services
John Chapman	Long Range Planner

A. CALL WORK SESSION TO ORDER

Mayor Dixon called the work session to order at 6:00 p.m.

B./C. INVOCATION/PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG AND THE TEXAS FLAG

Mayor Dixon gave the invocation and led the pledges.

D. PUBLIC COMMENT

No speakers.

E. WORK SESSION ITEM

1. Work session to discuss permitted uses under the Town's zoning regulations.

Ms. Murphy gave a presentation identifying or noting:

- Overview
- Open air market
- Alcoholic beverages
- Smoke shop
- Pawn Shop
- Personal services
- Birthing center
- Credit access business

DRAFT

- Energy plant definition
- Recycling drop off center
- Restaurants
- Food truck court
- Indoor recreation
- Other new uses
- Electric Vehicle charging
- Accessory Use ?'s
- Church or rectory
- Assisted living
- Riding arena
- General retail
- Veterinary uses
- Other updates
- Consider removing
- Guidance for undefined uses
- Undefined uses
- Recreation District

There was Council discussion and feedback provided on the above referenced uses.

F. ADJOURN WORK SESSION

Mayor Dixon adjourned the work session at 8:41 p.m. on Thursday, November 19, 2020, and all were in favor.

TOWN OF FLOWER MOUND, TEXAS

_____

STEVE DIXON, MAYOR

ATTEST:

_____

THERESA SCOTT, TOWN SECRETARY

DRAFT

TOWN COUNCIL AGENDA ITEM NO. 2

CONSENT ITEM

DATE: December 7, 2020

FROM: Lynda Bolitho, Director of Human Resources

ITEM: **Consider approval of a contract with Blue Cross and Blue Shield in the amount of $848,333.28 for reinsurance for the Town's Group Health Plan and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: The Town is self-insured for health, dental and vision benefits for employees and dependents covered on the Town's group health insurance plan. The Town purchases reinsurance to limit liability from any single participant's claims to $150,000 per year. The reinsurance also limits the total aggregate insurance claims for all employees during any calendar year.

The Human Resources Division, in conjunction with the Town's health insurance consulting firm, McGriff, Seibels & Williams of Texas, Inc. (MSW), requested bids from eighteen (18) carriers for the Town's specific and aggregate reinsurance coverages. Due to ongoing claims and uncompetitive rates, all carriers chose to decline to quote for Plan Year 2021. The current carrier, Blue Cross and Blue Shield of Texas provided a quote in the amount of $848,333 which represents an increase of 21% from Plan Year 2020. However, Blue Cross and Blue Shield of Texas also serves as the Town's healthcare administrator and has provided a 45% decrease in those administrative costs. This results in an overall total fixed cost decrease of .69%.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $848,333

Proposed Expenditure/(Revenue):	Account Number(s):
$848,333	840-710-17600-8510

Finance Review by: Debra Wallace, Interim Town Manager /CFO DW

LEGAL REVIEW: No alterations to application which was originally approved by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were made.

ATTACHMENTS:

1. 2021 Medical & Stop Loss Renewal Analysis
2. Application for Stop Loss Coverage

DRAFT MOTION: Move to approve as presented in the agenda caption.

Town of Flower Mound
Medical & Stop Loss Renewal Analysis
Effective Date: 1/1/2021

		CURRENT	RENEWAL	RENEWAL ALTERNATE	RENEWAL ALTERNATE
Third Party Administrator		**BCBS**	**BCBS**	**BCBS**	**BCBS**
Adminstration Fees		**Incl. BVA and Mem Rew**	**Incl. BVA and Mem Rew**	**Incl. BVA and Mem Rew**	**Incl. BVA and Mem Rew**
Medical Administration		$69.13	$70.19	$70.19	$70.19
Prescription Rebate		($41.90)	($56.95)	($56.95)	($56.95)
Rx Administration		Included	Included	Included	Included
Dental Administration		$3.84	$3.84	$3.84	$3.84
PPO Access Fee		Included	Included	Included	Included
Enable Wellbing Mngmt (prev. BCC)		Included	Included	Included	Included
Pre-Certification /Utilization Review		Included	Included	Included	Included
Wellness Fund		$10,000.00	$10,000.00	$10,000.00	$10,000.00
Composite Admin Fee	**557**	$31.07	$17.08	$17.08	$17.08
Total Monthly Admin Fee (546 Employees)		**$17,305.99**	**$9,513.56**	**$9,513.56**	**$9,513.56**
Annual Admin Fee		**$207,671.88**	**$114,162.72**	**$114,162.72**	**$114,162.72**
% Increase			-45.03%	-45.03%	-45.03%
			$10K wellness fund Enable WBM MD Behavioral Health Member rewards w/ BVA	Includes: Employer Plus MD Behavioral Health Rx Options: Step Therapy & P.A.	Includes: Employer Plus MD Behavioral Health Rx Options: Step Therapy & P.A.
Stop Loss Carrier		**BCBS**	**BCBS**	**BCBS**	**BCBS**
SPECIFIC RETENTION		**$150,000**	**$150,000**	**$160,000**	**$175,000**
Contract		24/12	24/12	24/12	24/12
Coverages		Medical & Rx	Medical & Rx	Medical & Rx	Medical & Rx
Specific Rates					
Employee	177	$101.99	$124.02	$115.95	$107.09
Family	380	$101.99	$124.02	$115.95	$107.09
Specific Monthly Premium		**$56,808.43**	**$69,079.14**	**$64,584.15**	**$59,649.13**
Specific Annual Premium	**557**	**$681,701.16**	**$828,949.68**	**$775,009.80**	**$715,789.56**
Aggregate Rate					
Employee		$2.90	$2.90	$3.28	$3.67
Aggregate Monthly Premium		**$1,615.30**	**$1,615.30**	**$1,826.96**	**$2,044.19**
Aggregate Annual Premium		**$19,383.60**	**$19,383.60**	**$21,923.52**	**$24,530.28**
TOTAL ANNUAL REINSURANCE COST		**$701,084.76**	**$848,333.28**	**$796,933.32**	**$740,319.84**
BCBS Premim Credit					
% Increase Compared to Current		**0.00%**	**21.00%**	**13.67%**	**5.60%**
AGGREGATE RETENTION					
Contract		24/12	24/12	24/12	24/12
Coverages		Medical & Rx	Medical & Rx	Medical & Rx	Medical & Rx
Maximum Reimbursement		$1,000,000	$1,000,000	$1,000,000	$1,000,000
Aggregate Factors Employee	**177**	$1,601.14	$1,686.76	$1,694.83	$1,740.29
Aggregate Factors Family	**380**	$1,601.14	$1,686.76	$1,694.83	$1,740.29
Monthly Attachment Factor		**$891,834.98**	**$939,525.32**	**$944,020.31**	**$969,341.53**
Annual Attachment Factor	**557**	**$10,702,019.76**	**$11,274,303.84**	**$11,328,243.72**	**$11,632,098.36**
Total Fixed Costs					
Monthly Fixed Costs		**$75,729.72**	**$80,208.00**	**$75,924.67**	**$71,206.88**
Annual Fixed Costs		**$908,756.64**	**$902,496.00**	**$851,096.04**	**$794,482.56**
% Increase		**--**	**-0.69%**	**-6.34%**	**-12.57%**

Disclaimer

The following summary of coverages is to be used only as an overview of each policy written and in no way should it be used, nor is intended to be used, as a substitute for the original policy provisions. It has been prepared as a guideline for your reference only.

The policy/policies contain conditions, limitations and exclusions which may affect or limit coverage to be provided and should be reviewed by the insured to verify that coverage has been written as requested.

All of the information contained in this proposal is subject to the terms, conditions and limitations contained in the policies. Values are based on information provided by the client.

THIS DOCUMENT IS PROPRIETARY, CONFIDENTIAL AND/OR PRIVILEGED AND IS INTENDED TO BE REVIEWED ONLY BY THE INDIVIDUAL AND/OR ENTITY TO WHICH IT IS ADDRESSED. IF YOU ARE NOT THE INTENDED RECIPIENT OR A REPRESENTATIVE OF THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY REVIEW, COPYING, DISCLOSURE AND/OR DISSEMINATION OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN IS PROHIBITED.

McGRIFF, SEIBELS & WILLIAMS, INC. COMPENSATION STATEMENT

Our principal remuneration for the placement and service of your insurance policy(ies) will be by commission (a proportion of the premium paid that is allowed to us by the insurance company(ies)) and/or a mutually agreed fee.

You should be aware that we may receive additional income from the following sources:

- **Interest or Investment Income earned on insurance premiums.**
- **Expense Allowances or Reimbursements from insurance companies and other vendors for (a) educational and professional development programs; (b) managing and administering certain binding authorities and other similar facilities, including claims which may arise; and (c) attendance at insurance company meetings and events; all of which we believe enable us to provide more efficient service and competitive terms to those clients for whom we consider the use of such facilities appropriate.**
- **Tier II Commission (sometimes referred to as "extra compensation") is exclusive to the placement of employee benefits insurance and is based on premium volume of new business and/or premium retention.**
- **Contingent Commission (sometimes referred to as "profit sharing") which can be based on profitability, premium volume, premium retention, and/or growth. If any part of your account is on a fee basis, we will not accept contingent commissions related to your account.**

If you have questions or desire additional information about remuneration and other income, please contact your Agent who will put you in touch with our Chief Risk Manager for assistance. If any part of your insurance program is placed through any BB&T-owned companies (including retail insurance brokers BB&T Insurance Services, Inc. and BB&T Insurance Services of California, Inc.; wholesale insurance brokers CRC Insurance Services, Inc. and Crump Life Insurance Services, Inc.; managing general underwriter AmRisc, LP; insurance premium finance company, Prime Rate Premium Finance Corporation, Inc. or affiliates; or BB&T Assurance Company, Ltd.) disclosure of that income will also be included.

McGRIFF, SEIBELS & WILLIAMS, INC. THIRD PARTY DISCLAIMER

From time to time, McGriff, Seibels & Williams, Inc. ("MSW") may share opinions or content regarding third party entities, third party providers of services, or make referrals to third party products and/or services ("Third Party Entities, Products and/or Services"). Any such opinions or content regarding Third Party Entities, Products and/or Services, or links to third party websites shared or posted on MSW's website or social media sites do not constitute an endorsement of any third party, individual, organization, service, or product by MSW, nor does such activity indicate an affiliation with or sponsorship by MSW.

Any third party representations regarding their products or services contained in their written materials or on their websites are those of the respective authors and do not reflect the affirmation, concurrence or agreement of MSW, its employees, directors, officers, parents, or affiliates that those claims are accurate.

MSW assumes no liability in connection with any Third Party Entities, Products and/or Services or for the storage or any related breach in connection with your confidential information by such third parties. Further, MSW does not accept any responsibility nor does it offer any warranty regarding the quality, accuracy, timeliness, reliability or any other aspect of such Third Party Entities, Products and/or Services. MSW expressly disclaims any warranty or liability for any acts, failure to act, errors or omissions by such third parties. Accordingly, you should conduct your own due diligence of any Third Party Entities, Products or Services prior to their engagement or use.

Attachment 2

BlueCross BlueShield of Texas

[redacted]

APPLICATION FOR STOP LOSS COVERAGE

Employer Group Name: Town of Flower Mound
Employer Group Address: 2121 Cross Timbers Road
City: Flower Mound **State of Situs:** Texas **Zip Code:** 75028
Account Number: 031462
Employer Group Number(s): 031462,099925, 037207
Current Effective Date of Policy 01/01/2021
Current Policy Period: These specifications are for the Policy Period commencing on 01/01/2021 and ending on 12/31/2020

The specifications below shall become effective on the first day of the Policy Period specified above and shall continue in full force and effect until the earliest of the following dates: (1) The last day of the Policy Period; (2) The date the Policy terminates; or (3) The date this Application is superseded in whole or in part by a later executed Application.

A. Aggregate Stop Loss Coverage: ☒ Yes ☐ No
If yes, complete items 1 through 9 below.

1. ☐ New Coverage ☒ Renewal of Existing Coverage
2. Stop Loss Coverage during the current Policy Period:

☐ New Coverage (Select one from below):

☐ Incurred and paid during the Policy Period: Claims incurred and paid from _____ to _____

☐ Incurred with Run-Out: Claims incurred from _____ to _____
and Claims paid from _____ to _____

☐ Run-in coverage: Claims incurred from _____ to _____
and Claims paid from _____ to _____

If coverage is for claims incurred prior to the effective date of the Policy and paid by Policyholder's prior claim administrator, then such claims must be reported by the Policyholder to the Company (Blue Cross and Blue Shield of Texas, a Division of Health Care Service Corporation, a Mutual Legal Reserve Company) and paid by the Policyholder's prior claim administrator by the end of the current Policy Period.

☒ Renewal of Existing Coverage:

☒ Claim Administrator's Claims: Claims incurred on or after the original Effective Date of Policy and paid during the Policy Period.

☐ Incurred with Run-Out: Claims incurred from _____ to _____
and Claims paid from _____ to _____

3. Aggregate Stop Loss Coverage shall apply to:

   ☒ Medical Claims

   ☒ Outpatient Prescription Drug Claims with Company's Pharmacy Benefit Manager

   ☐ Outpatient Prescription Drug Claims with Policyholder's Pharmacy Benefit Manager: _____

   ☐ Dental Claims

   ☐ Other (please specify): _____

4. Average Claim Value: 1,349.41 (per Employee per Month)

   Attachment Factor: 125% of the Average Claim Value

5. Aggregate Claim Liability and Run-Off Claim Liability Factors

   a. Employer's Claim Liability for each Policy Period shall be the sum of the Monthly amounts obtained by multiplying the number of Individual and Family Coverage Units for each Month by the following factors:

      $1,686.76 for each Coverage Unit

      $1,686.76 for each Family Coverage Unit

      Please use the continuous text field directly below for any other structure (leaving the fields above blank). Note: you can use the "return" key to create additional rows, if needed:

      _____

   b. Employer's Run-Off Claim Liability shall be calculated by multiplying the sum average of the total of all Coverage Units during each of the three calendar Months immediately preceding termination by the factors shown below. Settlement for the final accounting period will be described in the section of the Policy entitled SETTLEMENTS.

      $442.96 for each Coverage Unit

      $442.96 for each Family Coverage Unit

      Please use the continuous text field directly below for any other structure (leaving the fields above blank). Note: you can use the "return" key to create additional rows, if needed:

      _____

6. CAP Arrangement ☐ Yes ☒ No

7. Aggregate Stop Loss Claims

   a. The amount of Paid Claims during the current Policy Period, less:

      i. Individual (Specific) Stop Loss Claims

      ii. Any claims in excess of the Individual (Specific) Stop Loss Claims per Covered Person per Lifetime Maximum

      iii. Any claims in excess of the Individual (Specific) Stop Loss Claims maximum Point of Attachment

   that exceeds the Aggregate Point of Attachment. The Aggregate Point of Attachment shall equal the sum of the Employer's Claim Liability amounts calculated Monthly as described in item A.5.a. above for the current Policy Period.

   b. In the event of termination at the end of a Policy Period, the Final Settlement Aggregate Point of Attachment shall equal the sum of the Employer's Claim Liability amount for the Final Policy Period and the Employer's Run-Off Claim Liability calculated as described in item A.5.b. above. However, for the current Policy Period the minimum Aggregate Point of Attachment shall be $10,001,152.

8. Stop Loss Premium (Select one):

☐ Annual Premium (Due on the first day of the current Policy Period): $_____.

☒ Monthly Premium shall be equal to the amounts obtained by multiplying the number of Individual and Family Coverage Units for a particular Month by:

$2.90 for each Coverage Unit

$2.90 for each Family Coverage Unit

Please use the continuous text field directly below for any other structure (leaving the fields above blank). Note: you can use the "return" key to create additional rows, if needed:

_____

9. The premium is based upon a current membership of 167 Individual Coverage Units and 367 Family Coverage Units.

B. Individual (Specific) Stop Loss Coverage: ☒ Yes ☐ No

If yes, complete items 1 through 6 below.

1. ☐ New Coverage ☒ Renewal of Existing Coverage

2. Stop Loss Coverage Period:

☐ New Coverage (Select one from below):

☐ Incurred and paid during the Policy Period: Claims incurred and paid from _____ to _____

☐ Incurred with Run-Out: Claims incurred from _____ to _____
and Claims paid from _____ to _____

☐ Run-in coverage: Claims incurred from _____ to _____
and Claims paid from _____ to _____

If coverage is for claims incurred prior to the effective date of the Policy and paid by Policyholder's prior claim administrator, then such claims must be reported by the Policyholder to the Company (Blue Cross and Blue Shield of Texas, a Division of Health Care Service Corporation, a Mutual Legal Reserve Company) and paid by the Policyholder's prior claim administrator by the end of the current Policy Period.

☒ Renewal of Existing Coverage:

☒ Claim Administrator's Claims: Claims incurred on or after the original Effective Date of Policy and paid during the Policy Period.

☐ Incurred with Run-Out: Claims incurred from _____ to _____
and Claims paid from _____ to _____

3. Individual (Specific) Stop Loss Coverage shall apply to:

☒ Medical Claims

☒ Outpatient Prescription Drug Claims with Company's Pharmacy Benefit Manager

☐ Outpatient Prescription Drug Claims with Policyholder's Pharmacy Benefit Manager: _____

☐ Dental Claims

☐ Vision Claims

☐ Other (please specify): _____

4. Individual (Specific) Stop Loss Claims

   a. For NA who is identified by the health identification (ID) number NA, the amount of Paid Claims during the current Policy Period in excess of the Individual Point of Attachment of $NA. Such amount shall apply for the current Policy Period.

   b. For each other Covered Person:
   The amount of Paid Claims during the current Policy Period in excess of the Individual Point of Attachment of $150,000 per Covered Person but not to exceed a maximum Point of Attachment of $ UNLIMITED per Policy Period. Paid Claims in excess of the maximum point of attachment shall not be eligible to satisfy the Aggregate Point of Attachment. Such amount shall apply for the current Policy Period.

   c. Covered Person per Lifetime Maximum:

   The Individual (Specific) Stop Loss Claims shall not exceed UNLIMITED per Covered Person per Lifetime. Paid Claims in excess of the Covered Person per Lifetime Maximum shall not be eligible to satisfy the Aggregate Point of Attachment.

   Point of Attachment ☒ Includes Claim Administrator's Provider Access Fee
   ☐ Excludes Claim Administrator's Provider Access Fee

5. Stop Loss Premium (select one):

   ☐ Annual Premium (Due on the first day of the current Policy Period): $_____.

   ☒ Monthly Premium shall be equal to the amounts obtained by multiplying the number of Individual and Family Coverage Units for a particular Month by:

   $124.02 for each Coverage Unit

   $124.02 for each Family Coverage Unit

   Please use the continuous text field directly below for any other structure (leaving the fields above blank). Note: you can use the "return" key to create additional rows, if needed:

   _____

6. The premium is based upon a current membership of 167 Individual Coverage Units and 367 Family Coverage Units.

Additional Provisions:

_____

The undersigned person represents that he/she is authorized and responsible for purchasing stop loss coverage on behalf of the Employer. It is understood that the actual terms and conditions of coverage are those contained in Application the Stop Loss Coverage Policy into which this Application shall be incorporated at the time of acceptance by Blue Cross and Blue Shield of Texas, a Division of Health Care Service Corporation, a Mutual Legal Reserve Company (“HCSC”). Upon acceptance, HCSC shall issue a Stop Loss Coverage Policy to the Employer. Upon acceptance of this Application and issuance of the Stop Loss Coverage Policy, the Employer shall be referred to as the "Policyholder."

Amy Westendorf Sales Representative	Signature of Authorized Purchaser
Tayyaba Tariq Name of Underwriter	Title of Authorized Purchaser
Signature of Underwriter	Date

INTERNAL USE ONLY	Date Application approved by Underwriting:

TOWN COUNCIL AGENDA ITEM NO. 3

CONSENT ITEM

DATE: December 7, 2020

FROM: Lynda Bolitho, Director of Human Resources

ITEM: **Consider approval of the award of RFP No. 2021-3-A for Employee Basic Life Insurance & Accidental Death Insurance, Long Term Disability Insurance, Employee and Dependent Optional Life and Accidental Death Insurance to CIGNA Group Insurance in the estimated amount of $107,485.74 and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: A request for proposal was released in October 2020. Four proposals were received for Plan Year 2021. A summary of the proposals is attached as compared to the current coverage with Cigna Group Insurance.

The Human Resources Division recommends award of the request for proposal to Cigna Group Insurance in the amount of $107,485.74 for Calendar Year 2021. There is no renewal increase from Calendar Year 2020. This proposal provides a three-year rate guarantee.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $107,486

Proposed Expenditure/(Revenue):	Account Number(s):
$107,486	840-710-17600-8510

Finance Review by: Debra Wallace, Interim Town Manager /CFO DW

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Basic/Voluntary Life AD&D and Disability Marketing Analysis
2. Cigna Group Insurance Renewal Letter

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

Town of Flower Mound Basic/Voluntary Life AD&D and Disability Marketing Analysis
Effective Date: 1/1/2021

Vendor	AM Best	Notes
Basic Life, Voluntary Life, Dependent Voluntary Life & LTD		
Aflac	A+	*On the Spreadsheet*
BCBS	A	*If Life/LTD are added - 1.5% off stop loss, $1.50 off admin fees for medical. Remains in force and renews as long as coverage is in force. If Life/LTD/Supp Life added - $40k admin fee credit - rates based*
Cigna	A	*In force contract will stay in place with guarantee through 12/31/2021*
Hartford	A-	*Declined to Quote*
MetLife	A+	*Declined to Quote*
Mutual of Omaha	A+	*Declined to Quote*
Ochs	A+	*Has option to add Line of Duty benefit*
Standard	A	*Declined to Quote*
UNUM	A	*On the Spreadsheet*

This is not an insurance contract: This proposal is for comparison purposes only. Please refer to certificate booklet or proposal for additional details, including limitations and exclusions. Final rates and benefits will be determined by actual enrollment and plan selection.

Town of Flower Mound
Basic Life and AD&D Marketing Analysis
Effective Date: 1/1/2021

	CURRENT	RENEWAL	Proposed	Proposed	Proposed	Proposed
Benefits	**Cigna**	**Cigna**	**Aflac**	**BCBS**	**Ochs**	**UNUM**
Employee Life Amount	2X annual salary, not to exceed $100,000	2X annual salary, not to exceed $100,000	2X annual salary, not to exceed $100,000	2X annual salary, not to exceed $100,000	2X annual salary, not to exceed $100,000	2X annual salary, not to exceed $100,000
Employee AD&D Amount	Matches Life Benefit	Matches Life Benefit	Matches Life Benefit	Matches Life Benefit	Matches Life Benefit	Matches Life Benefit
Conversion Privilege	Included	Included	Included	Included	Included	Included
Accelerated Benefit	80% to $80,000	80% to $80,000	80% to $750,000	80% to $500,000	100% to $1,000,000	75% to $500,000
Waiver of Premium	Included	Included	Included	Included	Included	Included
Age Reduction Formula	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70
Rate Guarantee	-	1 year - until 12/31/2021	2 years - until 12/31/2022	3 years - until 12/31/2023	3 years - until 12/31/2023	3 years - until 12/31/2023
Rates	**Current Rates**	**Renewal Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**
Covered Volume	$50,339,100	$50,339,100	$50,339,100	$50,339,100	$50,339,100	$50,339,100
Life Rates (Per $1,000)	$0.060	$0.060	$0.090	$0.070	$0.050	$0.100
AD&D Rate (Per $1,000)	$0.025	$0.025	$0.025	$0.025	$0.025	$0.025
Monthly Total	**$4,278.82**	**$4,278.82**	**$5,789.00**	**$4,782.21**	**$3,775.43**	**$6,292.39**
Annual Total	**$51,345.88**	**$51,345.88**	**$69,467.96**	**$57,386.57**	**$45,305.19**	**$75,508.65**
$ Difference Over Current	**-**	**$0.00**	**$18,122.08**	**$6,040.69**	**($6,040.69)**	**$24,162.77**
% Difference Over Current	**-**	**0%**	**35%**	**12%**	**-12%**	**47%**

Notes:

Beneficiary Services

Dearborn Cares - advanced payment of life benefits up to $50k without death certificate for immediate death expenses

$.030 for Basic Active AD&D w/ line of duty benefit - pays an additional 100% of basic AD&D up to $100,000 for police, fire, emt, etc. for a loss suffered in the line of duty.

McGriff

Town of Flower Mound
Voluntary Life Insurance Marketing Analysis
Effective Date: 1/1/2021

	CURRENT	RENEWAL	Proposed	Proposed	Proposed	Proposed
Benefits	**Cigna**	**Cigna**	**Aflac**	**BCBS**	**Ochs**	**UNUM**
Employee Benefit	$10,000 Increments	$10,000 Increments	$10,000 Increments	$10,000 Increments	$10,000 Increments	$10,000 Increments
AD&D Benefit	Matches Life	Matches Life	Matches Life	N/A	Matches Life	Matches Life
Maximum Benefit	The lesser of 5 X annual earnings or $500,000	The lesser of 5 X annual earnings or $500,000	The lesser of 5 X annual earnings or $500,000	The lesser of 5 X annual earnings or $500,000	The lesser of 5 X annual earnings or $750,000	The lesser of 7 X annual earnings or $600,000
Guarantee Issue Amount	$200,000	$200,000	$200,000	$200,000	$250,000	$250,000
Accelerated Life	80% to $500,000	80% to $500,000	80% to $500,000	80% to $500,000	100% to $1,000,000	75% to $500,000
Portability	Included	Included	Included to age 70	Included to age 70	Included	Included
Waiver of Premium	Included	Included	Included	Included	Included	Included
Participation Requirement	20%	20%	25%	29%	None	greater of 25% or 15 insured
Age Reduction Formula	65% at age 65 70% at age 70	65% at age 65 70% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	None	65% at age 65 50% at age 70
Rate Guarantee	-	1 year - until 12/31/2021	2 years - until 12/31/2022	3 years - until 12/31/2023	3 years - until 12/31/2023	3 years - until 12/31/2023
Voluntary EE Life Rates (Per $1,000)	**Current Rates**	**Renewal Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**
<30	$0.086	$0.086	$0.086	$0.086	$0.086	$0.086
30-34	$0.093	$0.093	$0.093	$0.093	$0.093	$0.093
35-39	$0.121	$0.121	$0.121	$0.121	$0.121	$0.121
40-44	$0.175	$0.175	$0.175	$0.175	$0.175	$0.175
45-49	$0.259	$0.259	$0.259	$0.259	$0.259	$0.259
50-54	$0.423	$0.423	$0.423	$0.423	$0.423	$0.423
55-59	$0.171	$0.171	$0.717	$0.717	$0.717	$0.717
60-64	$1.108	$1.108	$1.108	$1.108	$1.108	$1.108
65-69	$1.871	$1.871	$1.871	$1.871	$1.871	$1.871
70-74	$3.118	$3.118	$3.118	$3.118	$3.118	$3.118
75+	$4.790	$4.790	$3.118	$4.790	$4.790	$4.790
AD&D	$0.030	$0.030	$0.030	-	$0.030	$0.030

Notes:

If currently enrolled, can increase coverage by 50k not to exceed 250k

Town of Flower Mound
Dependent Voluntary Life Insurance Marketing Analysis
Effective Date: 1/1/2021

	CURRENT	RENEWAL	Proposed	Proposed	Proposed	Proposed
Benefits	**Cigna**	**Cigna**	**Aflac**	**BCBS**	**Ochs**	**UNUM**
Spouse Benefit	$5,000 Increments	$5,000 Increments	$5,000 Increments	$5,000 Increments	$5,000 Increments	$5,000 Increments
Spouse Voluntary AD&D	N/A	N/A	Same as Life	N/A	N/A	Same as Life
Spouse Maximum	50% of employee amount to a max of $250,000	50% of employee amount to a max of $250,000	50% of employee amount to a max of $250,000	100% of employee amount to a max of $250,000	100% of employee amount to a max of $250,000	100% of employee amount to a max of $250,000
Spouse Guarantee Issue	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Child Benefit	Birth - 6 Months: $500 6 Months+: Increments of $2,000 to $10,000	Birth - 6 Months: $500 6 Months+: Increments of $2,000 to $10,000	Birth - 6 Months: $500 6 Months+: Increments of $2,000 to $10,000 not to exceed 50% of employee election	Birth - 6 Months: $500 6 Months+: $10,000	$10,000 or $15,000 not to exceed 100% of employee election	Birth - 6 Months: $500 6 Months+: Increments of $2,000 to $10,000
Child Voluntary AD&D	N/A	N/A	Same as Life	N/A	N/A	Same as Life
Child Maximum	$10,000	$10,000	$10,000	$10,000	$15,000	$10,000
Child Guaranteed Issue	$10,000	$10,000	$10,000	$10,000	$15,000	$10,000
Age Reduction Formula	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	65% at age 65 50% at age 70	None	65% at age 65 50% at age 70
Rate Guarantee	-	1 year - Until 12/31/2021	2 years - until 12/31/2022	3 years - until 12/31/2023	3 years - until 12/31/2023	3 years - until 12/31/2023
Voluntary Spouse Life Rates (Per $1,000)	**Current Rates**	**Renewal Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**	**Proposed Rates**
<30	$0.086	$0.086	$0.086	$0.086	$0.086	$0.086
30-34	$0.093	$0.093	$0.093	$0.093	$0.093	$0.093
35-39	$0.121	$0.121	$0.121	$0.121	$0.121	$0.121
40-44	$0.175	$0.175	$0.175	$0.175	$0.175	$0.175
45-49	$0.259	$0.259	$0.259	$0.259	$0.259	$0.259
50-54	$0.423	$0.423	$0.423	$0.423	$0.423	$0.423
55-59	$0.717	$0.717	$0.717	$0.717	$0.717	$0.717
60-64	$1.108	$1.108	$1.108	$1.108	$1.108	$1.108
65-69	$1.871	$1.871	$1.871	$1.871	$1.871	$1.871
70-74	$3.118	$3.118	$3.118	$3.118	$3.118	$3.118
75+	$4.790	$4.790	$3.118	$4.790	$4.790	$4.790
Spouse AD&D	-	-	$0.030	-	-	$0.030
Child Rate (per $1,000)	$0.076/ Life	$0.076/ Life	$0.076 / Life $0.030 / AD&D	$0.076 / Life	$0.076 / Life	$0.076 / Life $0.030 / AD&D

Notes:

Child life to age 26

Child life to age 26

McGriff

Town of Flower Mound
LTD Marketing Analysis
Effective Date: 1/1/2021

	CURRENT	RENEWAL	Proposed	Proposed	Proposed	Proposed -1	Proposed -2
Benefits	**Cigna**	**Cigna**	**Aflac**	**BCBS**	**Ochs**	**UNUM**	**UNUM**
Own Occupation	24 months	24 months	24 months	24 Months	24 Months	24 Months	24 Months
Benefit Percentage	60%	60%	60%	60%	60%	60%	60%
Maximum Monthly Benefit	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Elimination Period	120 Days	120 Days	120 Days*	120 Days	120 Days	120 days	120 days
Waiver of Premium	Included	Included	Included	Included	Included	Included	Included
Survivor Benefit	3 Months	3 Months	3 Months	3 Months	3 Months	3 Months	3 Months
Mental Illness	24 Months	24 Months	24 Months	24 Months	24 Months	24 Months	24 Months
Substance Abuse	24 Months	24 Months	24 Months	24 Months	24 Months	24 Months	24 Months
Pre-existing Conditions	3/12	3/12	3/12	3/12	3/12	3/12	3/12
Duration	SSNRA	SSNRA	SSNRA	SSNRA	SSNRA	SSNRA	SSNRA
Return to Work Benefit	Included	Included	Included	Included	Included	Included	Included
FICA Match	Included	Included	Included	Not Included	Included	Included	Included
Rate Guarantee	-	1 year - until 12/31/2021	2 years - until 12/31/2022	3 years - until 12/31/2023	3 years - until 12/31/2023	2 years - until 12/31/2022	2 years - until 12/31/2022
Covered Volume	**$2,923,951**	**$2,923,951**	**$2,923,951**	**$2,923,951**	**$2,923,951**	**$2,923,951**	**$2,923,951**
LTD Rates (Per $100 payroll)	**$0.160**	**$0.160**	**$0.260**	**$0.273**	**$0.209**	**$0.190**	**$0.220**
Monthly Total	**$4,678.32**	**$4,678.32**	**$7,602.27**	**$7,982.39**	**$6,111.06**	**$5,555.51**	**$6,432.69**
Annual	**$56,139.86**	**$56,139.86**	**$91,227.27**	**$95,788.63**	**$73,332.69**	**$66,666.08**	**$77,192.31**
$ Difference over Current	**-**	**$0.00**	**$35,087.41**	**$39,648.78**	**$17,192.83**	**$10,526.22**	**$21,052.45**
Percent over Current (Total)	**-**	**0%**	**63%**	**71%**	**31%**	**19%**	**38%**

Notes:

**or to the end of the accumulated sick leave, whichever is*

w/ 24 month WIB and 3 month LOA

Disclaimer

The following summary of coverages is to be used only as an overview of each policy written and in no way should it be used, nor is intended to be used, as a substitute for the original policy provisions. It has been prepared as a guideline for your reference only.
The policy/policies contain conditions, limitations and exclusions which may affect or limit coverage to be provided and should be reviewed by the insured to verify that coverage has been written as requested.

All of the information contained in this proposal is subject to the terms, conditions and limitations contained in the policies. Values are based on information provided by the client.

THIS DOCUMENT IS PROPRIETARY, CONFIDENTIAL AND/OR PRIVILEGED AND IS INTENDED TO BE REVIEWED ONLY BY THE INDIVIDUAL AND/OR ENTITY TO WHICH IT IS ADDRESSED. IF YOU ARE NOT THE INTENDED RECIPIENT OR A REPRESENTATIVE OF THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY REVIEW, COPYING, DISCLOSURE AND/OR DISSEMINATION OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN IS PROHIBITED.

McGRIFF, SEIBELS & WILLIAMS, INC. COMPENSATION STATEMENT

Our principal remuneration for the placement and service of your insurance policy(ies) will be by commission (a proportion of the premium paid that is allowed to us by the insurance company(ies)) and/or a mutually agreed fee.
You should be aware that we may receive additional income from the following sources:
-**Interest or Investment Income** earned on insurance premiums.

-**Expense Allowances or Reimbursements** from insurance companies and other vendors for (a) educational and professional development programs; (b) managing and administering certain binding authorities and other similar facilities, including claims which may arise; and (c) attendance at insurance company meetings and events; all of which we believe enable us to provide more efficient service and competitive terms to those clients for whom we consider the use of such facilities appropriate.

-**Tier II Commission** is exclusive to the placement of employee benefits insurance and is based on premium volume of new business and/or premium retention.
-**Contingent Commission** may be based on profitability, premium volume, premium retention, and/or growth. If any part of your account is on a fee basis, we will not accept contingent commissions related to your account.

If you have questions or desire additional information about remuneration and other income, please contact your Agent who will put you in touch with our Chief Risk Manager for assistance. If any part of your insurance program is placed through any BB&T-owned companies (including retail insurance brokers McGriff Insurance Services, Inc.; McGriff, Seibels & Williams, Inc.; wholesale insurance brokers CRC Insurance Services, Inc. and Crump Life Insurance Services, Inc.; managing general underwriter AmRisc, LLC; insurance premium finance company, Prime Rate Premium Finance Corporation, Inc. or affiliates; or MBT, Ltd.) disclosure of that income will also be included.

Brad Stuckey
Account Manager
Telephone: 804.904.6760
Email: Bradley.Stuckey@Cigna.com

Sandra Brown
McGriff

RE: Town of Flower Mound- January 1, 2020 – Group Insurance Renewal

Dear Sandra,

Thank you for allowing Cigna Group Insurance to provide the Life, Accident, Disability and FMLA benefits for the employees of City of Farmers Branch. We appreciate the opportunity to serve you both and assist in meeting your employee benefits needs.

Based on our analysis of the group's demographics, current plans, and rates, we are pleased to continue coverage at the current rates.

Please respond via email with your acceptance of the below rates. Thirty days prior to the above renewal date we will proceed with processing the amendments. Continued payment of premium constitutes active acceptance.

Below is an overview of our renewal position, effective January 1, 2020:

Plan	Policy	Current Rate	Rate Basis	Renewal Rate	Rate Guarantee
Voluntary LTD	LK0963104	$0.16	Per $100 Covered Payroll	$0.16	36 Months
Basic Life	FLX0964408	$0.06	Per $1,000	$0.06	36 Months
Voluntary Employee and Spouse Life	FLX0964408	Age Banded	Per $1,000	Age Banded	36 Months
Voluntary Dependent Child Life	FLX0962454	$0.076	Per $1,000	$0.076	36 Months
Basic AD&D	OK0960003	$0.025	Per $1,000	$0.025	36 Months
Voluntary AD&D	OK0966003	$0.03	Per $1,000	$0.03	36 Months

Voluntary Employee Life Insurance
Monthly Rates are based on units of $1,000

Uni-Smoker Rates

Under Age 20	$.086	Age 60 - 64	$1.108
Age 20 - 24	$.086	Age 65 - 69	$1.871
Age 25 - 29	$.086	Age 70 - 74	$3.118
Age 30 - 34	$.093	Age 75 - 79	$4.79
Age 35 - 39	$.121	Age 80 - 84	$4.79
Age 40 - 44	$.175	Age 85 - 89	$4.79
Age 45 - 49	$.259	Age 90 - 94	$4.79
Age 50 - 54	$.423	Age 95 and over	$4.79
Age 55 - 59	$.717		

Voluntary Spouse (and/or Domestic Partner) Life Insurance
Monthly Rates are based on units of $1,000

Uni-Smoker Rates

Under Age 20	$.086	Age 55 - 59	$.717
Age 20 - 24	$.086	Age 60 - 64	$1.108
Age 25 - 29	$.086	Age 65 - 69	$1.871
Age 30 – 34	$.093	Age 70 – 74	$3.118
Age 35 - 39	$.121	Age 75 - 79	$4.79
Age 40 - 44	$.175	Age 80 –84	$4.79
Age 45 - 49	$.259	Age 85 –89	$4.79
Age 50 - 54	$.423	Age 90 – 94	$4.79
		Age 95 and over	$4.79

Cigna reserves the right to change premium rates if any of the following occurs:

- The policy terms change
- A division, subsidiary, eligible company, or class is added/deleted
- There is a change of more than 10% in the number of employees

We value our relationship with you and look forward to continuing this partnership. Should you have any questions regarding this renewal position or any other matters, please do not hesitate to call me.

Thank you,

Brad Stuckey
Account Manager

TOWN COUNCIL AGENDA ITEM NO. 4

CONSENT ITEM

DATE: December 7, 2020

FROM: Brittni Barnett, Grants & Financial Analyst

ITEM: **Consider approval of a resolution authorizing the adoption of the Program Year 2019 Consolidated Annual Performance & Evaluation Report for the Community Development Block Grant; and authorization for the Mayor to execute same on behalf of the Town and submit to the U.S. Department of Housing and Urban Development.**

BACKGROUND INFORMATION: This item is to consider approval of a resolution adopting Flower Mound's Program Year 2019 Consolidated Annual Performance & Evaluation Report (CAPER). The CAPER is required under the Town's Community Development Block Grant (CDBG). It describes the Town's progress in carrying out the housing and community development strategies identified in the Program Year 2015-2019 Consolidated Plan, which was submitted to the U. S. Department of Housing and Urban Development (HUD) in August of 2015. In 2002, HUD recognized Flower Mound (the Town) as an Entitlement Community and awarded the Town a Community Development Block Grant (CDBG). Since that time, Flower Mound has received $3,932,684 in funding under this CDBG (this includes the total for the 2020 Program year).

Receipt of grant funding is conditioned upon Flower Mound implementing and adhering to the Consolidated Plan, which identifies long-term strategies and annual activities that assist the Town's low- and moderate-income residents. Flower Mound's Program Year 2019 Annual Plan was approved by the Town Council on August 5, 2019. During this period, the Council designated available CDBG funds to be used: (1) for planning and administration; (2) the Residential Rehabilitation Program; (3) the Minor Home Repair Program and (4) to subsidize a call-in transportation service for the Town's elderly and those with disabilities. The CAPER describes the ways in which the Town leveraged both federal and non-federal dollars to achieve these goals.

BOARD REVIEW/CITIZEN FEEDBACK: Grant staff held a public hearing on November 4, 2020 to discuss the CAPER. The CAPER was also available for public comment for 30 days. No comments were received.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

Finance Review by: N/A

LEGAL REVIEW: Stacie White, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the resolution and the proposed Program Year 2019 CAPER as to form and legality.

ATTACHMENTS:

1. CAPER 2019 Resolution

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, PROVIDING FOR THE ADOPTION OF FLOWER MOUND'S PROGRAM YEAR 2019 CONSOLIDATED ANNUAL PERFORMANCE AND EVALUATION REPORT UNDER THE COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM; PROVIDING AUTHORIZATION FOR THE MAYOR TO EXECUTE SAID REPORT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, a Consolidated Annual Performance and Evaluation Report must be adopted by the Town of Flower Mound in fulfillment of the requirements of the Housing and Community Development Act of 1974, as amended, the National Affordable Housing Act of 1990, as amended, the Stewart B. McKinney Act of 1987, as amended, and 24 Code of Federal Regulations Part 91.520; and

WHEREAS, the Consolidated Annual Performance and Evaluation Report has been made available for public review and comment for a period of 30 business days; and

WHEREAS, Flower Mound Community Development Block Grant staff held a public hearing to allow for public comments regarding the Consolidated Annual Performance and Evaluation Report; and

WHEREAS, the Town Council of the Town of Flower Mound has determined that it is in the best interest of the residents of the Town to adopt the Consolidated Annual Performance and Evaluation Report for 2019 in order to comply with the requirements of the Housing and Community Development Act of 1974, as amended, the National Affordable Housing Act of 1990, as amended, the Stewart B. McKinney Act of 1987, as amended, and 24 Code of Federal Regulations Part 91.520, and to authorize the Mayor to execute said report on behalf of the Town of Flower Mound.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct legislative and factual findings of the Town of Flower Mound, and they are hereby approved and incorporated into the body of this Resolution as if copied in their entirety.

SECTION 2

The Town of Flower Mound's Program Year 2019 Consolidated Annual Performance and Evaluation Report attached hereto as "Attachment 2" is hereby adopted.

RESOLUTION NO. _____

SECTION 3

The Mayor is authorized to execute the Program Year 2019 Consolidated Annual Performance and Evaluation Report on behalf of the Town and submit it to the U. S. Department of Housing and Urban Development prior to December 31, 2020.

SECTION 4

This Resolution shall become effective on and after its date of adoption.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, ON THIS THE 7TH DAY OF DECEMBER, 2020.

APPROVED:

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

Program Year 2019

Consolidated Annual Performance & Evaluation Report (CAPER)

For the period
October 1, 2019 – September 30, 2020

Prepared for the U. S. Dept. of Housing and Urban Development (HUD)

CR-05 - Goals and Outcomes

Progress the jurisdiction has made in carrying out its strategic plan and its action plan. 91.520(a)

This could be an overview that includes major initiatives and highlights that were proposed and executed throughout the program year.

The Consolidated Annual Performance and Evaluation Report contains information about the Town of Flower Mound's accomplishments during the fifth and final year of our community's five-year Consolidated Plan (2015-2019) for Housing and Community Development. The report reflects Flower Mound's implementation of outcome performance measurement requirements described in the Federal Register Notice dated March 7, 2006. It also provides a description of how our jurisdiction's program provided new or improved availability/accessibility, affordability, sustainability of decent housing; a suitable living environment; and economic opportunity for Flower Mound's low-and moderate-income residents.

The Town of Flower Mound is an entitlement community under the U.S. Department of Housing and Urban Development's (HUD) Community Development Block Grant (CDBG) Program. During the 2019 Program Year (PY), October 1, 2019 through September 30, 2020, $213,805.00 in CDBG funds were made available to the Town of Flower Mound to further the objectives of our Consolidated Plan, which started in Program Year 2015 and ended in Program Year 2019. Additionally, the Town received $347,556.00 in CARES Act funding to be utilized to prevent prepare for and respond to the COVID-19 pandemic.

Flower Mound expended $182,569.43 in CDBG funds and $35,814.00 in CDBG-CV funds, and leveraged Town General funds during the year to help address identified housing, homeless, community development, anti-poverty and other special needs. The investments were allocated based on citizen input; research and analysis to identify service level weaknesses and areas of need; and Town Council goals and priorities. The Town's Program Year 2019 Annual Action Plan identified three specific objectives that were to be achieved during the year, using CDBG funds, and are reaffirmed in this annual report:

- Preserve the Town's existing housing stock through the Residential Rehabilitation Program and the Minor Home Repair Program.
- Offer transportation services for the Town's elderly who are 65 years or older and adults with severe disabilities who are 18 years or older.
- Carry out planning and program administration activities.

Assess how the jurisdiction's use of funds, particularly CDBG, addresses the priorities and specific objectives identified in the plan, giving special attention to the highest priority activities identified.

Preserve the Town's Existing Housing Stock:

- Residential Rehabilitation Program: Successfully completed three projects to assist low-to moderate-income homeowners with interior and exterior home rehabilitation.
- Minor Home Repair Program: Successfully completed two projects to assist low-to moderate-income homeowners with minor interior and exterior home repairs.

Town-wide Transportation Service: Subsidized 1,185 one-way rides to 36 of the Town's elderly residents who are 65 or older or residents with severe disabilities who are 18 years or older.

Planning and Administration: Continued to fund the administration costs of the CDBG Program, including contract administration, publication of public notices, office equipment and supplies, planning, monitoring, and all other related expenses.

Assist Social Service and Cultural Arts Providers: Allocated $205,990 in Town General Funds to 18 agencies and organizations that are actively engaged in the provision of social services and cultural arts in Flower Mound.

CR-10 - Racial and Ethnic composition of families assisted

Describe the families assisted (including the racial and ethnic status of families assisted). 91.520(a)

	CDBG
White	34
Black or African American	4
Asian	2
American Indian or American Native	0
Native Hawaiian or Other Pacific Islander	0
Total	**40**
Hispanic	2
Not Hispanic	0

Table 1 – Table of assistance to racial and ethnic populations by source of funds

Narrative

The Town offers two housing rehabilitation programs, which accounted for about 80 percent of the total CDBG funding allocated to the Town in PY 2019. In PY 2019, five homes were rehabilitated using CDBG funds. Of the five households assisted, four were white (one of which was Hispanic) and one was African American.

Additionally, the Town's transportation service helped subsidize 1,185 one-way rides to 36 of the Town's elderly residents who are 65 or older and/or residents with severe disabilities who are 18 years or older with CDBG funds. Of these riders, 30 were White (one of which was Hispanic), three were African American, two were Asian, and one was classified as “Unknown” (this rider was not listed in the chart above, because this was not an option).

An additional 321 rides were subsidized using a grant received by SPAN, the Town’s contracted provider for the service. The additional funds allowed a total of 43 residents to be assisted through this program.

CR-15 - Resources and Investments 91.520(a)

Identify the resources made available

Source of Funds	Source	Resources Made Available	Amount Expended During Program Year
CDBG	public - federal	213,805	218,383

Table 2 - Resources Made Available

Narrative

In the 2015-2019 Consolidated Plan, the Town of Flower Mound identified the preservation of existing housing stock as a priority. The Town currently offers two housing rehabilitation programs that are funded by CDBG: the Minor Home Repair Program and the Residential Rehabilitation Program. These programs are not limited to a specific geographic area, but are only for low-to-moderate income homeowners that live within the Town of Flower Mound city limits. $171,805 or about 80 percent of the Town's total 2019 CDBG allocation was dedicated to housing rehabilitation projects for low-to-moderate income homeowners.

In PY 2019, the CDBG funding allocated for housing rehabilitation was:

- **66% for Residential Rehabilitation**

The Residential Rehabilitation Program is designed to assist low-and moderate-income homeowners in Flower Mound with the rehabilitation of their single-family, owner-occupied houses. The program pays for rehabilitation up to $60,000. In PY 2019, $141,805 was allocated for the program, and a total of three homes were completed.

- **14% for Minor Home Repair**

The Minor Home Repair Program is designed to assist low-and moderate-income homeowners in Flower Mound with minor repairs of their single-family, owner-occupied houses. The program pays for minor repairs up to $15,000. In PY 2019, $30,000 was allocated for the program, and two homes were repaired.

Additionally, in the 2015-2019 Consolidated Plan, the Town of Flower Mound identified Town-wide transportation as a priority. The Town-wide transportation program provides transportation to locations within the Town of Flower Mound, the City of Lewisville and the City of Highland Village and is only for Town of Flower Mound residents age 65 or older and/or residents who are 18 or older with a severe disability. In PY 2019, $32,000 or about 15 percent of the Town's total 2019 CDBG allocation was dedicated to the Town-wide Transportation Program. The Town contracts with Special Programs for Aging Needs (SPAN) to provide the service and, if needed, supplements the CDBG funds with Town General Funds.

Additionally, the Town received $347,556.00 in CARES Act funding durin PY 2019. These funds must be utilized to prevent prepare for and respond to the COVID-19 pandemic.The Town will put the funds toward its Residential Rehabiliation Program to assist low-to moderate-income homeowners, whose income has been affected by the COVID-19 pandemic, with necessary repairs to their homes.

Identify the geographic distribution and location of investments

Target Area	Planned Percentage of Allocation	Actual Percentage of Allocation	Narrative Description
Town of Flower Mound	100	100	

Table 3 – Identify the geographic distribution and location of investments

Narrative

Because of the limited size of the Town's allocation of CDBG funding, the Town's Community Development Block Grant Executive Advisory Committee decided not to target a certain area or region of the Town to focus its programming efforts. All of the activities implemented using CDBG funds are open to all qualified residents of Flower Mound and are intended to have a town-wide benefit.

Leveraging

Explain how federal funds leveraged additional resources (private, state and local funds), including a description of how matching requirements were satisfied, as well as how any publicly owned land or property located within the jurisdiction that were used to address the needs identified in the plan.

The Town of Flower Mound's Financial Services Division is the lead agency for the administration of CDBG funding. To effectively implement the Community Development Plan, Financial Services utilizes CDBG funds as well as resources allocated by the Town Council. The Town Council makes available more than $200,000 a year in General Fund resources to fund agencies that are actively engaged in the provision of social services and cultural arts in Flower Mound.

No publicly owned land or property was used to address the needs identified in the Town's plan.

There are no match requirements for CDBG funds.

CR-20 - Affordable Housing 91.520(b)

Evaluation of the jurisdiction's progress in providing affordable housing, including the number and types of families served, the number of extremely low-income, low-income, moderate-income, and middle-income persons served.

	One-Year Goal	Actual
Number of Homeless households to be provided affordable housing units	0	0
Number of Non-Homeless households to be provided affordable housing units	4	5
Number of Special-Needs households to be provided affordable housing units	0	0
Total	**4**	**5**

Table 4 – Number of Households

	One-Year Goal	Actual
Number of households supported through Rental Assistance	0	0
Number of households supported through The Production of New Units	0	0
Number of households supported through Rehab of Existing Units	4	5
Number of households supported through Acquisition of Existing Units	0	0
Total	**4**	**5**

Table 5 – Number of Households Supported

Discuss the difference between goals and outcomes and problems encountered in meeting these goals.

The Town of Flower Mound proposed to use 80 percent of its 2019 CDBG allocation to fund the rehabilitation of homes owned and occupied by low-to-moderate income households. It was anticipated that two households would be served through the Town's Residential Rehabilitation Program and two households would be served through its new Minor Home Repair Program.

Three households were assisted through the Residential Rehabilitation Program, and two households were assisted through the Minor Home Repair Program.

Discuss how these outcomes will impact future annual action plans.

The Town met all of the goals established in its 2015-2019 Consolidated Plan. This CAPER summarizes the accomplishments of the final year of that plan. Moving forward, the Town has established new goals as part of its 2020-2024 Consolidated Plan. The Town will make every effort to stay on track and meet those goals and does not anticipate any issues in doing so.

Include the number of extremely low-income, low-income, and moderate-income persons served by each activity where information on income by family size is required to determine the eligibility of the activity.

Number of Households Served	CDBG Actual	HOME Actual
Extremely Low-income	0	0
Low-income	0	0
Moderate-income	5	0
Total	**5**	**0**

Table 6 – Number of Households Served

Narrative Information

The Town of Flower Mound expanded its housing rehabilitation program in PY 2015. The Minor Home Repair Program was instituted to provide an additional outlet for accomplishing the Town's goal of supplying decent, safe, sanitary and affordable housing; correcting health and safety hazards in deteriorated housing; and expanding the useful life of existing housing units. The addition of the Minor Home Repair program continued to allow the Town the opportunity to assist more low-and moderate income homeowners during PY 2019.

One hundred percent of all CDBG funding for the housing rehabilitation programs was dedicated to persons of low-to-moderate income. Five homes were completed in PY 2019. Of the five homes completed, 100% were occupied by moderate-income homeowners. Two of the five homes (40%) were owned by female head of households.

CR-25 - Homeless and Other Special Needs 91.220(d, e); 91.320(d, e); 91.520(c)

Evaluate the jurisdiction's progress in meeting its specific objectives for reducing and ending homelessness through:

Reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

Outreach to persons experiencing homelessness continued to be carried out by the Town's partners, such as Journey to Dream. Flower Mound continued to allocate a portion of its General Funds to support Journey to Dream and its efforts to provide support to a growing population of homeless teens, including life skills training and access to community resources. Additionally, the organization runs Kyle's Place, which is a transitional living program for homeless and foster youth. Aside from giving teens a safe place to sleep and basic necessities, Kyle's Place offers programs and the support homeless youth need to get back on their feet and succeed. In PY 2019, the Town allocated $205,990 of general funds to fund agencies that are actively engaged in the provision of social services and cultural arts in Flower Mound.

The Town also continued its involvement with the Denton County Homeless Coalition (DCHC). DCHC conducts quarterly general body meetings and monthly steering committee meetings, both of which are attended by representatives from area cities, service providers and faith-based groups. The meetings provide a forum for problem solving, information sharing and referral services. Agencies that serve a wide variety of special needs in locations throughout the cities of Flower Mound, Lewisville and Denton regularly attend and participate. These meetings provide an opportunity for collaboration between the Town of Flower Mound and these organizations that work to assist the homeless and address their needs. The Town's Grants & Financial Analyst currently serves as the Coalition's Secretary.

Addressing the emergency shelter and transitional housing needs of homeless persons

The Town of Flower Mound does not receive Emergency Shelter Grant (ESG) funding. However, the Town continued to participate in the Denton County Homeless Coalition. This network of service providers and other relevant parties serves as a catalyst for developing and providing needed services to those individuals and families who are homeless or at risk of homelessness in the county, such as emergency shelter and transitional housing.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: likely to become homeless after being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); and, receiving assistance from public or private agencies that address housing, health, social services, employment, education, or youth needs

The Town of Flower Mound made available $205,990 in General Fund resources to fund agencies that are actively engaged in the provision of social services and cultural arts in, and for, the residents of Flower Mound. Some of these organizations included Journey to Dream, an organization that provides support to a growing population of homeless teens, including life skills training and access to community resources; PediPlace, an organization that provides primary care pediatric health services to children with limited access to care; and Denton County Friends of the Family, an organization that provides supportive services to those impacted by relationship violence and sexual assault.

Additionally, the Town of Flower Mound continued to participate in the Denton County Homeless Coalition. This network of service providers and other relevant parties serves as a catalyst for developing and providing needed services to those individuals and families who are homeless or at risk of homelessness in the county.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

The Town continued its support of helping homeless and potentially homeless individuals by allocating General Funds to local social service agencies that are working to address this challenge, such as Journey to Dream. The Town also continued its participation in the Denton County Homeless Coalition, which brings together those fighting to end homelessness in Denton County, such as local service providers, churches and governments.

The Town of Flower Mound also supplements the work of various Town-funded social service agencies to end chronic homelessness by promoting the preservation and maintenance of existing homes through its Minor Home Repair Program and Residential Rehabilitation Program.

The Town continues to carry out these programs and support these various organizations and agencies in order to address this challenge in a coordinated and proactive manner that reduces duplication of effort as much as possible.

CR-30 - Public Housing 91.220(h); 91.320(j)

Actions taken to address the needs of public housing

This section is not applicable, as the Town of Flower Mound does not have a public housing authority. The Town also does not receive or administer funds for assisted housing. There are no plans for public housing in Flower Mound at this time. However, surrounding communities do administer assisted housing programs to residents of Flower Mound, such as the Denton Housing Authority, which currently provides assistance to 15 clients in Flower Mound.

Actions taken to encourage public housing residents to become more involved in management and participate in homeownership

N/A

Actions taken to provide assistance to troubled PHAs

N/A

CR-35 - Other Actions 91.220(j)-(k); 91.320(i)-(j)

Actions taken to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment. 91.220 (j); 91.320 (i)

During the 2019 Program Year, the Town's SMARTGrowth Commission and Planning and Zoning Commission continued their periodic review of development criteria to help mitigate the ill effects of overcrowding and congestion, including overburdened infrastructure, facilities, schools and services. Examples of these efforts include:

- The Planning and Zoning Commission met regularly throughout the year. The members used Flower Mound's SMARTGrowth criteria to ensure growth does not occur at the expense of environmental quality, community character, or quality of life of the Town's residents. Commission members followed residential density criterion and the Town's Master Plan when reviewing residential development requests, which allowed for a wide range of housing opportunities.
- The SMARTGrowth Commission also met during the year, which provided an opportunity for members to discuss any potential issues with the SMARTGrowth criteria.

Additionally, The Fair Housing Committee continued its routine review of the Town's zoning and subdivision ordinances, building codes and impact fees; and when necessary, will bring any potential impediments to the attention of management and the Town Council. Examples of these efforts include:

- The Town's Planning Services Division is represented on the Town's Fair Housing Committee. This division reviews, administers and enforces Town codes and regulations pertaining to the development of commercial and residential property through the planning and zoning process. During the year, no impediments were identified that needed to be brought to the attention of management and the Town Council.
- The Town's Building and Inspections Division is represented on the Fair Housing Committee. This Division reviews building codes and enforces building, electrical, plumbing and mechanical code regulations within Flower Mound. Permits are required before performing any new construction or addition, alteration or repair of existing buildings, structures, plumbing, electrical or mechanical work. During the year, no impediments were identified that needed to be brought to the attention of management and the Town Council.
- The Developmental Services Department is represented on the Fair Housing Committee. This Department reviews impact fees and provides planning, design review, implementation, quality control and maintenance for the Town's infrastructure system and improvement projects. During the year, no impediments were identified that needed to be brought to the attention of management and the Town Council.

Actions taken to address obstacles to meeting underserved needs. 91.220(k); 91.320(j)

Limited funding and resources to address the most complicated situations are the primary obstacles to meeting underserved needs in Flower Mound. However, the Town did allocate more than $200,000 in General Fund dollars to its social service partners to help meet the basic unmet needs of residents, including food, medical care, clothing and emergency housing assistance.

Actions taken to reduce lead-based paint hazards. 91.220(k); 91.320(j)

During the 2019 Program Year, the Town of Flower Mound continued to demonstrate its commitment to the eradication of lead-based paint hazards in the community.

In 2003, the Town formed a Lead-based Paint Task Force to determine what activities needed to be taken to reduce any existing or potential lead-based paint hazards and ensure compliance with the Lead-based Paint Hazard Reduction Act of September 15, 2000. During the year, the Task Force (a) researched and analyzed Flower Mound's ordinances, laws, regulations, public polices, practices, procedures, records and reports for any references to lead-based paint; (b) identified the locations of the 859 homes in Flower Mound built before 1978; and (c) obtained and developed educational materials about the dangers of lead-based paint. These materials were made available for public access at Town Hall and posted on the Town's website.

Based on the Task Force recommendations, the Town's Environmental Services Division was identified as Flower Mound's point of contact for lead-based paint issues. This Division continued to maintain and update the supply of educational materials available at Town Hall, as well as information on the Town website.

The Town currently sponsors two housing activities (the Residential Rehabilitation Program and the Minor Home Repair Program) that are carried out through the Community Development Block Grant Program. For these two programs, occupants of units constructed prior to 1978 receive proper notification of Lead-Based Paint (LBP) hazards and all projects are subject to the implementation of the Federal Lead-Based Paint Regulations in accordance with the most recently published CDBG grant management manual chapter on Lead-Based Paint.

During the 2019 Program Year, one of the homes rehabilitated had a construction date prior to 1978. However, after testing, it was found that no lead was present. Therefore, none of the Town's housing activities required lead hazard remediation actions.

Actions taken to reduce the number of poverty-level families. 91.220(k); 91.320(j)

The Town of Flower Mound's actions to help reduce the number of poverty-level families during the 2019 Program Year included economic development activities, tax exemptions for the disabled and senior citizens, leveraging resources and serving as a referral source:

- Economic Development: 2.9% of Flower Mound families live below the poverty level (compared to 7.3% in Denton County, 13.6% in Texas and 10.5% in the United States) and the Town's unemployment rate of 2.9% is lower than Denton County's rate of 3.0%, the State's rate of 5.4%, and the Nation's rate of 5.9%, according to the American Community Survey 2018 5-Year Estimates. Flower Mound's lower rate can be attributed to the Town's proximity to numerous major employers and educational institutions throughout the Dallas-Fort Worth area. However, it is important to note that within Town limits, only 22.52% of the tax base is commercial. While Flower Mound's property, county and school taxes are among the lowest in the surrounding area, 74.81% of the Town's tax base is comprised of residential development, placing a disproportionate tax burden on homeowners. Community efforts during the past few years have resulted in an increase in commercial properties in Flower Mound. During the 2019 Program Year, Town staff continued its efforts, with the help of the local Chamber of Commerce, to provide business and retention development programs with incentives for economic development. As a result, in PY 2019, 59 new commercial permits were issued.
- Tax Exemptions: The Town maintained the exempted amount of the appraised value of residence homesteads for those with disabilities and individuals 65 years of age or older at $100,000. Additionally, the Town maintained its recently approved a 2.5% homestead exemption for all Flower Mound homeowners.
- Leveraging Resources: Town staff continued to liaison with community agencies established to provide the necessary resources for affordable housing and other needed services through outlets such as the Denton County Homeless Coalition. Some of these organizations include the Denton Housing Authority, which offers rental assistance and self-sufficiency training; the Denton Workforce Center/Texas Workforce Commission, which offers training and supportive services leading to employment; the Texas Department of Housing and Community Affairs; and the Denton County Housing Finance Corp., which offers homebuyer assistance.
- Referral Source: To help ensure that residents needing services are aware of available local providers, Town staff maintained established links to service providers on the Town website. In addition, the Town continued to post information about available job training, job search and financial management workshop opportunities on the Town's website, at the Town library and on the Town's cable television station.

These actions assisted in reducing the number of poverty-level families in Flower Mound by increasing local employment opportunities, reducing homeowner costs for senior citizens and those with disabilities and providing a referral network for those families seeking rental and other assistance.

Actions taken to develop institutional structure. 91.220(k); 91.320(j)

The Town continued to promote and emphasize the need for greater coordination between all social service agencies active in the Flower Mound area so as to minimize duplication of efforts. This was carried out through outlets such as the Denton County Homeless Coalition meetings and quarterly roundtables co-hosted with the City of Lewisville, which serve as an education and networking opportunity for local social service agencies. Efforts to enhance coordination between local agencies,

both public and private, will ensure that the information available is comprehensive, needs are being properly addressed and resources are being maximized.

Actions taken to enhance coordination between public and private housing and social service agencies. 91.220(k); 91.320(j)

The Town of Flower Mound continued to share information and leverage funds with area public and private housing, health and social service agencies. This helps ensure that access to needed services is available. The Town also continued to liaison with the Denton County Housing Authority, the Denton County Housing Finance Corporation and area lenders, through means such as the meetings of the Denton County Homeless Coalition, an organization that includes a network of public and private housing, health and social service representatives throughout Denton County.

The Town continues to make staff available as a referral source for families with low-to-moderate incomes to assist them in obtaining rental assistance or below-market interest rate mortgage loans and down payment assistance through local lenders. Additionally, the Town continued to maintain the links to housing rights, access groups and other service providers on the Flower Mound website.

Finally, the Town continued its participation in HUD-sponsored activities, which are informative and offer a ready network of Community Development Block Grant representatives and advisors.

Identify actions taken to overcome the effects of any impediments identified in the jurisdictions analysis of impediments to fair housing choice. 91.520(a)

The Town of Flower Mound continues to demonstrate its commitment to overcoming the effects of impediments to fair housing choice. This position was solidified in 2012 when the Town passed a Fair Housing Ordinance, which declared the Town's commitment to ensure fair housing opportunities for all citizens, regardless of race, color, religion, handicap, sex, familial status or national origin. This ordinance was unanimously approved by the Town Council.

During the 2019 Program Year, The Fair Housing Committee conducted its annual review of the Town's Analysis of Impediments to Fair Housing Choice. No overt barriers to fair housing were identified in the analysis. However, the Fair Housing Committee discussed a few items that the Town should do to ensure that unanticipated barriers do not develop in the future. These items and the efforts the Town took to address them in the 2019 Program Year are listed below.

- The SMARTGrowth Commission continued its periodic review of development criteria to help mitigate the ill effects of overcrowding and congestion, including overburdened infrastructure, facilities, and services.
- The Fair Housing Committee continued its routine review of the Town's zoning and subdivision ordinances, building codes and impact fees; and when necessary, commits to bringing any potential impediments to the attention of management and the Town Council.

- The Economic Development Department continued to work closely with the Chamber of Commerce to provide business and retention development programs with incentives for economic development. As a result, in PY 2019, 59 new commercial permits were issued.
- The Financial Services Department continued to foster partnerships with community agencies established to provide the necessary resources for affordable housing and identifying populations such as the elderly, youth, and female head-of-households living below the poverty level. This was done through the outlet of the Denton County Homeless Coalition, where the Town's Grants and Financial Analyst serves as the Town's representative and the Coalition's current Secretary. The Grants and Financial Analyst also sits on the Denton County Homeless Coalition Steering Committee. Flower Mound's Community Outreach Committee, chaired by Finance staff, includes members who represent church, private sector, banking and social service organizations. Many of these members provided services to Flower Mound residents during the year. For example, Journey to Dream assisted about 2,967 Flower Mound teens with various programs, including case management/assessment services, life skills training, counseling, and medical assistance.
- The Community Services Department continued to ensure that residents with poverty-level incomes are made aware of job training, financial management and job search workshop opportunities at the Town of Flower Mound Library. Additionally, the Library provides online databases related to the job search process and educational assistance. In Program Year 2019, 234 job views/job-related sessions were accessed through these databases. These databases were available both onsite and remotely, which allowed residents access any time of day. Finally, the Library continued to purchase new books that relate to resume writing, interviewing, testing and starting a small business.

CR-40 - Monitoring 91.220 and 91.230

Describe the standards and procedures used to monitor activities carried out in furtherance of the plan and used to ensure long-term compliance with requirements of the programs involved, including minority business outreach and the comprehensive planning requirements

The Town of Flower Mound continually monitors programs and projects to ensure compliance with all applicable laws and regulations.

Financial Services staff administers financial monitoring for all projects, programs and activities funded by CDBG. They ensure that all drawdowns are made after all ledgers and records have been reconciled and approved. Additionally, the financial operations and expenditures of the Town are audited on an annual basis by an independent accounting firm.

To ensure compliance with grant requirements, effectiveness in solving neighborhood and community problems, as well as adherence to the goals laid out in the Town's five-year Consolidated Plan and 2019 Annual Plan, Town staff conducted monitoring of all operational projects identified in the Annual Plan. Technical assistance is provided on a continuing basis.

During the 2019 Program Year, no problems or issues were identified in any of the three CDBG projects that needed to be corrected during the review.

Additionally, under the Town's Residential Rehabilitation Program and Minor Home Repair Program, Town staff administers and continuously monitors all projects implemented under these programs. Projects requested by residents are thoroughly evaluated for adherence to the program guidelines, including income eligibility. An environmental compliance checklist is completed for each project and the potential repairs are assessed for eligibility during an on-site evaluation by staff.

As a result of this careful management and monitoring, Flower Mound's CDBG-funded programs continue to have a positive effect on solving neighborhood and community problems, especially in regards to reducing the potential for homelessness. While progress is slow due to a lack of available funding, our community is meeting priority needs and specific objectives that will help to make Flower Mound's vision of the future a reality. By collaborating and leveraging funds, we were able to provide opportunities for our low-and moderate-income residents to have access to decent housing, a suitable living environment, and expanded economic opportunity.

Citizen Participation Plan 91.105(d); 91.115(d)

Describe the efforts to provide citizens with reasonable notice and an opportunity to comment on performance reports.

The Town's Citizen Participation Plan requires the Town to post public notices for performance reports in the newspaper and on the Town website to ensure that interested groups, agencies, organizations and individuals have an opportunity to provide comments regarding Flower Mound's use of federal grant funds under the Community Development Block Program. These requirements were designed especially to encourage participation by low- and moderate-income residents.

During the comment period, a copy of the report was posted on the Town website, www.flower-mound.com, at the Town Library, located at 3030 Broadmoor Lane, and at Town Hall, located at 2121 Cross Timbers Road. Additionally, on November 4, 2020, a public hearing was held at Flower Mound's Town Hall in the Council Chambers. This meeting place is easily accessible to all Town residents, including those with disabilities. All meeting notices and the Town website noted that translation services were available upon request, and that persons with disabilities would also be accommodated upon request. Public notices announcing the hearing were issued two weeks prior to the hearing date. Information about the public hearing was published in the Denton Record-Chronicle, displayed at Town Hall in an area easily visible to all who entered the building, and posted on the Town website.

CR-45 - CDBG 91.520(c)

Specify the nature of, and reasons for, any changes in the jurisdiction's program objectives and indications of how the jurisdiction would change its programs as a result of its experiences.

There were no changes to the Town of Flower Mound's program objectives. The Town of Flower Mound met all of the goals established in its 2015-2019 Consolidated Plan.

Does this Jurisdiction have any open Brownfields Economic Development Initiative (BEDI) grants?

No

[BEDI grantees] Describe accomplishments and program outcomes during the last year.

TOWN COUNCIL AGENDA ITEM NO. 5

CONSENT ITEM

DATE: December 7, 2020

FROM: Kay Wilkinson, Budget Officer

ITEM: **Consider approval of an ordinance amending the Town of Flower Mound's Annual Budget for the fiscal year beginning October 1, 2019, and ending on September 30, 2020, as adopted by Ordinance No. 50-19 and amended by Ordinance No. 64-19, No. 04-20 and No. 23-20 for adjustments to the General Fund, General Debt Service Fund and Grants Fund.**

BACKGROUND INFORMATION: The attached budget amendment represents the fourth proposed adjustment to the FY 2019-2020 Annual Budget. According to Section 9.14 of the Town Charter, "During the fiscal year, the Town Council shall have the power to transfer funds allocated by the budget from one department to another department, and to re-estimate revenues and expenditures." Transfers such as these are presented to the Town Council throughout the fiscal year in an effort to resolve variances from the Annual Budget and reallocate resources to cover unanticipated expenditures.

A discussion of the adjustments being requested in this budget amendment is provided below.

General Fund

General Fund revenues will increase by $5,000 from $70,528,203 to $70,533,203 due to a donation from Atmos Energy to the Fire and Emergency Services Department. General Fund expenditures will increase by $5,000 from $75,873,849 to $75,878,849. The Fire and Emergency Services department will use the $5,000 donation to purchase an inflatable rescue raft.

General Debt Service Fund

In the General Debt Service Fund, revenues will increase by $3,644,020, from $12,057,342 to $15,701,362 and expenditures will increase by $3,643,637, from $11,995,950 to $15,639,587. In June 2020, the Town issued general obligation refunding bonds for the current refunding of a portion of the Town's tax supported bond issues, lowering overall debt service requirements. The increase in revenue is due to the proceeds and the increase in expenditures is due to the refunding payment to escrow.

Grants Fund

In the Grants Fund, revenues will increase by $3,731,046 from $181,179 to $3,912,225 and expenditures will increase by $3,731,046 from $181,179 to $3,912,225. The 86th Legislature of Texas appropriated Texas Commission on the Arts (TCA) $3,731,046 in fiscal year 2020 to provide a grant to the Town of Flower Mound, Cultural Arts Commission to construct a community cultural and performing arts center.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $383

Proposed Revenue:	Account Number(s):
$ 5,000	100-4720 Contributions/memorials
3,644,020	110-4745 Bond Proceeds
3,731,046	370-4605 Intergovernmental Revenue
$ 7,380,066	

Proposed Expenditure:	Account Number(s):
$ 5,000	100-660-63000-2300 Other Equipment
3,643,637	110-280-00000-7030 Bond Payments to Escrow
3,731,046	370-719-34210-5110 Contractual/Fee Basis
$ 7,379,683	

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: No alteration to the legal content of this ordinance, which was originally approved by Taylor, Olson, Adkins, Sralla, & Elam L.L.P, was made.

ATTACHMENTS:

1. Proposed Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE TOWN'S BUDGET FOR THE FISCAL YEAR BEGINNING ON OCTOBER 1, 2019, AND ENDING ON SEPTEMBER 30, 2020, AS ADOPTED BY ORDINANCE NO. 50-19 AND AMENDED BY ORDIANACE NO. 64-19, NO. 04-20 and NO. 23-20, BY PROVIDING FOR ADJUSTMENTS TO THE GENERAL FUND, GENERAL DEBT SERVICE FUND AND GRANTS FUND; PROVIDING THAT EXPENDITURES FOR SAID FISCAL YEAR SHALL BE MADE IN ACCORDANCE WITH SAID BUDGET, AS AMENDED; REPEALING ALL CONFLICTING ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town Council of the Town of Flower Mound, Texas ("Town Council") has heretofore adopted its Annual Budget for the fiscal year beginning on October 1, 2019, and ending on September 30, 2020; and,

WHEREAS, said Annual Budget was adopted by Ordinance No. 50-19 on September 16, 2019 and amended by Ordinance No. 64-19 on December 16, 2019, Ordinance No. 04-20 on February 16, 2020 and Ordinance No. 23-20 on September 8,2020; and,

WHEREAS, after approval of said Annual Budget, unexpected needs have arisen which require amendment of the Annual Budget; and,

WHEREAS, Section 102.010 of the Local Government Code allows the Town to make changes to the budget for municipal reasons;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct factual and legislative determinations of the Town of Flower Mound and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

The Annual Budget of the Town of Flower Mound, Texas, for the fiscal year beginning on October 1, 2019, and ending on September 30, 2020, as heretofore adopted by Ordinance No. 50-19 and amended by Ordinance No. 64-19, No. 04-20 and No. 23-20, is hereby amended to provide for adjustments to the General Fund, General Debt Service Fund and Grants Fund, as shown in Exhibit "A," attached hereto and incorporated herein, and expenditures for said fiscal year shall be made in accordance with said Annual Budget, as amended.

SECTION 3

The expenditures and amendments authorized by this Ordinance are necessary to meet unusual and/or unforeseen conditions or circumstances that could not have been included in the original budget through the use of reasonably diligent thought and attention.

SECTION 4

A true and correct copy of this ordinance showing the approved budget amendments shall be filed with the Town Secretary and in the office of the County Clerk as required by Section 102.009 of the Local Government Code.

SECTION 5

All ordinances, orders or resolutions heretofore passed and adopted by the Town Council of the Town of Flower Mound, Texas, are hereby repealed to the extent that said ordinances, orders or resolutions, or parts thereof, are in conflict herewith.

SECTION 6

It is hereby declared to be the intention of the Town Council of the Town of Flower Mound that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance should be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this Ordinance, since the same would have been enacted by the Town Council of the Town of Flower Mound, Texas, without incorporation in this Ordinance of such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 7

This Ordinance shall take effect and be in full force from and after its passage and adoption.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____, ON THIS 7th DAY OF DECEMBER, 2020.

APPROVED:

_____

Steve Dixon, MAYOR

ATTEST:

_____

Theresa Scott, TOWN SECRETARY

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2019-2020

REASON FOR ADJUSTING THE GENERAL FUND APPROPRIATION:

General Fund revenues will increase by $5,000 from $70,528,203 to $70,533,203 due to a donation from Atmos Energy to the Fire and Emergency Services Department. General Fund expenditures will increase by $5,000 from $75,873,849 to $75,878,849. The Fire and Emergency Services department will use the $5,000 donation to purchase an inflatable rescue raft.

General Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Revenues:					
Taxes		$ 58,265,545	$ 58,265,545	$ 58,265,545	$ -
Charges for services		3,275,800	3,275,800	3,275,800	-
Licenses and permits		2,692,275	2,692,275	2,692,275	-
Fines and forfeits		1,090,807	1,090,807	1,090,807	-
Investment earnings		120,000	120,000	120,000	-
Intergovernmental revenue		604,615	544,615	544,615	-
Other revenue		4,520,161	4,539,161	4,544,161	5,000
	Total	**$ 70,569,203**	**$ 70,528,203**	**$ 70,533,203**	**$ 5,000**
Expenditures:					
Town Manager's Office		$ 2,002,424	$ 2,445,894	$ 2,445,894	$ -
Legislative Services		510,208	510,208	510,208	-
Development Services		2,112,727	2,144,550	2,144,550	-
Community Services		8,457,980	8,499,220	8,499,220	-
Library Services		1,822,733	1,820,233	1,820,233	-
Police Services		15,755,574	15,964,174	15,964,174	-
Financial Services		3,771,329	3,866,102	3,866,102	-
Administrative Services		6,223,719	6,305,321	6,305,321	-
Fire and Emergency Services		16,497,490	16,284,134	16,289,134	5,000
Community Relations		707,671	707,671	707,671	-
Non-Departmental Services		9,238,557	9,638,557	9,638,557	-
Public Works		5,649,560	6,123,475	6,123,475	-
Environmental Services		1,564,310	1,564,310	1,564,310	-
	Total	**$ 74,314,282**	**$ 75,873,849**	**$ 75,878,849**	**$ 5,000**

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2019-2020

REASON FOR ADJUSTING THE GENERAL DEBT SERVICE FUND APPROPRIATION:

In the General Debt Service Fund, revenues will increase by $3,644,020, from $12,057,342 to $15,701,362 and expenditures will increase by $3,643,637, from $11,995,950 to $15,639,587. In June 2020, the Town issued general obligation refunding bonds for the current refunding of a portion of the Town's tax supported bond issues, lowering overall debt service requirements. The increase in revenue is due to the proceeds and the increase in expenditures is due to the refunding payment to escrow.

General Debt Service Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Revenues:					
General Debt Service		$ 12,057,342	$ 12,057,342	$ 15,701,362	$ 3,644,020
	Total	**$ 12,057,342**	**$ 12,057,342**	**$ 15,701,362**	**$ 3,644,020**
Expenditures:					
General Debt Service		$ 11,955,950	$ 11,995,950	$ 15,639,587	$ 3,643,637
	Total	**$ 11,955,950**	**$ 11,995,950**	**$ 15,639,587**	**$ 3,643,637**

REASON FOR ADJUSTING THE GRANTS FUND APPROPRIATION:

In the Grants Fund, revenues will increase by $3,731,046 from $181,179 to $3,912,225 and expenditures will increase by $3,731,046 from $181,179 to $3,912,225. The 86th Legislature of Texas appropriated Texas Commission on the Arts (TCA) $3,731,046 in fiscal year 2020 to provide a grant to the Town of Flower Mound, Cultural Arts Commission to construct a community cultural and performing arts center.

Grants Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Revenues:					
Intergovernmental revenue		$ -	$ 181,179	$ 3,912,225	$ 3,731,046
Other revenue		-	-	-	-
	Total	**$ -**	**$ 181,179**	**$ 3,912,225**	**$ 3,731,046**
Expenditures:					
Community Services		$ -	$ -	$ 3,731,046	$ 3,731,046
Police Services		-	138,179	138,179	-
Public Works		-	43,000	43,000	-
	Total	**$ -**	**$ 181,179**	**$ 3,912,225**	**$ 3,731,046**

TOWN COUNCIL AGENDA ITEM NO. 6

CONSENT ITEM

DATE: December 7, 2020

FROM: Kay Wilkinson, Budget Officer

ITEM: **Consider approval of an ordinance amending the Town of Flower Mound's Annual Budget for the fiscal year beginning October 1, 2020, and ending on September 30, 2021, as adopted by Ordinance No. 27-20 for adjustments to the General Fund, Utility Fund, Tree Preservation Fund, Flower Mound Log Cabin Fund, IRS Equitable Sharing Fund, Grants Fund, Neighborhood Improvement Fund and Vehicle & Equipment Replacement Fund.**

BACKGROUND INFORMATION: The attached budget amendment represents the first proposed adjustment of the FY 2020-2021 Annual Budget. According to Section 9.14 of the Town Charter, "During the fiscal year, the Town Council shall have the power to transfer funds allocated by the budget from one department to another department, and to re-estimate revenues and expenditures." Transfers such as these are presented to the Town Council throughout the fiscal year in an effort to resolve variances from the Annual Budget and reallocate resources to cover unanticipated expenditures.

This budget amendment is to re-appropriate the balances of outstanding purchase orders for items or services ordered but not received by September 30, 2020 totaling $301,725 for the General Fund, $235,221 for the Utility Fund, $242,117 for the Flower Mound Log Cabin Fund, $55,062 for the IRS Equitable Sharing Fund, $15,375 for the Grants Fund, $30,856 for the Neighborhood Improvement Fund and $406,242 for the Vehicle and Equipment Replacement Fund.

Additional re-appropriations in the General Fund:

- Facilities Management – $176,727. Several projects budgeted in FY 19-20 were unable to be completed during the fiscal year; Police and Jury Room renovations for $66,727, Fire Station #2 underground fuel storage tank removal for $25,000, Fire Station #3 underground fuel storage tank removal for $25,000 and Animal Adoption Center HVAC units replacement for $60,000.

- Financial Services - $151,160. Home improvement incentive program that has previously committed but not paid out.

- Non-departmental - $800,000. Committed funds for FM 2499 Office project for the possible debt guarantee.

Other General Fund expenditure amendments:

- Development Services – 17,500. Increase due to an ordinance authorizing Town staff to make all public notice signs.

- Public Works-Street Services - $7,725. Increase due to a CoServ audit increasing the Town's streetlight inventory.

General Fund revenue amendment:

- Miscellaneous Revenue – $30,000. Increase due to ordinance authorizing Town staff to make all public notice signs.

Tree Preservation Fund expenditure amendment:

- Environmental Services – 8,750. Increase due to ordinance authorizing Town staff to make all public notice signs.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT:

Proposed Revenue:		**Account Number(s):**
$	30,000	Fund 100 General Fund
$	30,000	

Proposed Expenditure:		**Account Number(s):**
$	1,454,837	Fund 100 General Fund
	235,221	Fund 200 Utility Fund
	8,750	Fund 311 Tree Preservation Fund
	242,117	Fund 325 Flower Mound Log Cabin Fund
	55,062	Fund 331 IRS Equitable Sharing Fund
	15,375	Fund 370 Grants Fund
	30,856	Fund 375 Neighborhood Improvement Fund
	406,242	Fund 565 Vehicle & Equipment Replacement Fund
$	2,448,460	

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: No alteration to the legal content of this ordinance, which was originally approved by Taylor, Olson, Adkins, Sralla, & Elam L.L.P, was made.

ATTACHMENTS:

1. Proposed Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE TOWN'S BUDGET FOR THE FISCAL YEAR BEGINNING ON OCTOBER 1, 2020, AND ENDING ON SEPTEMBER 30, 2021, AS ADOPTED BY ORDINANCE NO. 27-20, BY PROVIDING FOR ADJUSTMENTS TO THE GENERAL FUND, UTILITY FUND, TREE PRESERVATION FUND, FLOWER MOUND LOG CABIN FUND, IRS EQUITABLE SHARING FUND, GRANTS FUND, NEIGHBORHOOD IMPROVEMENT FUND, AND VEHICLE AND EQUIPMENT REPLACEMENT FUND; PROVIDING THAT EXPENDITURES FOR SAID FISCAL YEAR SHALL BE MADE IN ACCORDANCE WITH SAID BUDGET, AS AMENDED; REPEALING ALL CONFLICTING ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town Council of the Town of Flower Mound, Texas ("Town Council") has heretofore adopted its Annual Budget for the fiscal year beginning on October 1, 2020, and ending on September 30, 2021; and,

WHEREAS, said Annual Budget was adopted by Ordinance No. 27-20 on September 21, 2020; and,

WHEREAS, after approval of said Annual Budget, unexpected needs have arisen which require amendment of the Annual Budget; and,

WHEREAS, Section 102.010 of the Local Government Code allows the Town to make changes to the budget for municipal reasons;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct factual and legislative determinations of the Town of Flower Mound and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

The Annual Budget of the Town of Flower Mound, Texas, for the fiscal year beginning on October 1, 2020, and ending on September 30, 2021, as heretofore adopted by Ordinance No. 27-20, is hereby amended to provide for adjustments to the General Fund, Utility Fund, Tree Preservation Fund, Flower Mound Log Cabin Fund, IRS Equitable Sharing Fund, Grants Fund, Neighborhood Improvement Fund, and Vehicle and Equipment Replacement Fund, as shown in Exhibit "A," attached hereto and incorporated herein, and expenditures for said fiscal year shall be made in accordance with said Annual Budget, as amended.

SECTION 3

The expenditures and amendments authorized by this Ordinance are necessary to meet unusual and/or unforeseen conditions or circumstances that could not have been included in the original budget through the use of reasonably diligent thought and attention.

SECTION 4

A true and correct copy of this ordinance showing the approved budget amendments shall be filed with the Town Secretary and in the office of the County Clerk as required by Section 102.009 of the Local Government Code.

SECTION 5

All ordinances, orders or resolutions heretofore passed and adopted by the Town Council of the Town of Flower Mound, Texas, are hereby repealed to the extent that said ordinances, orders or resolutions, or parts thereof, are in conflict herewith.

SECTION 6

It is hereby declared to be the intention of the Town Council of the Town of Flower Mound that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance should be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this Ordinance, since the same would have been enacted by the Town Council of the Town of Flower Mound, Texas, without incorporation in this Ordinance of such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 7

This Ordinance shall take effect and be in full force from and after its passage and adoption.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____, ON THIS 7th DAY OF DECEMBER, 2020.

APPROVED:

_____

Steve Dixon, MAYOR

ATTEST:

_____

Theresa Scott, TOWN SECRETARY

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2020-2021

REASON FOR ADJUSTING THE GENERAL FUND APPROPRIATION:

In the General Fund, revenues will increase by $30,000 from $71,847,700 to 71,877,700 and expenditures will increase by $1,454,837, from $68,500,031 to $69,954,868; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020. Included in the General Fund is $66,727 for Police and Jury room renovations, $25,000 for Fire Station #2 underground fuel storage tank removal, $25,000 for Fire Station #3 underground fuel storage tank removal, $60,000 for replacing HVAC units at the Animal Adoption Center that was originally budgeted for during FY 19-20, $151,160 for the home improvement incentive program, $800,000 for council committed funds, $17,500 for public notice signs and $7,725 for CoServ expenditures for additional costs related an increase number of streetlights.

General Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Revenues:					
Taxes		$ 59,653,239	$ 59,653,239	$ 59,653,239	$ -
Charges for services		3,116,965	3,116,965	3,116,965	-
Licenses and permits		2,629,375	2,629,375	2,629,375	-
Fines and forfeits		996,690	996,690	996,690	-
Investment earnings		180,000	180,000	180,000	-
Intergovernmental Revenue		528,825	528,825	528,825	-
Other revenue		4,742,606	4,742,606	4,772,606	30,000
	Total	**$ 71,847,700**	**$ 71,847,700**	**$ 71,877,700**	**$ 30,000**
Expenditures:					
Town Manager's Office		$ 2,276,335	$ 2,276,335	$ 2,293,568	$ 17,233
Legislative Services		507,083	507,083	507,083	-
Development Services		2,127,616	2,127,616	2,145,116	17,500
Parks & Recreation Services		8,416,848	8,416,848	8,425,408	8,560
Library Services		1,921,013	1,921,013	1,921,013	-
Police Services		15,932,146	15,932,146	15,945,554	13,408
Financial Services		3,791,407	3,791,407	3,942,567	151,160
Administrative Services		5,617,102	5,617,102	5,902,154	285,052
Fire and Emergency Services		15,484,160	15,484,160	15,532,607	48,447
Communications		702,573	702,573	702,573	-
Non-Departmental Services		4,360,507	4,360,507	5,160,507	800,000
Public Works		5,846,993	5,846,993	5,960,469	113,476
Environmental Services		1,516,248	1,516,248	1,516,248	-
	Total	**$ 68,500,031**	**$ 68,500,031**	**$ 69,954,868**	**$ 1,454,837**

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2020-2021

REASON FOR ADJUSTING THE UTILITY FUND APPROPRIATION:

In the Utility Fund, expenditures will increase by $235,221, from $49,807,151 to $50,042,372; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Utility Fund	Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:				
Financial Services	$ 1,777,228	$ 1,777,228	$ 1,777,228	$ -
Non-Departmental Services	13,896,790	13,896,790	13,921,790	25,000
Public Works	34,133,133	34,133,133	34,343,354	210,221
Total	**$ 49,807,151**	**$ 49,807,151**	**$ 50,042,372**	**$ 235,221**

REASON FOR ADJUSTING THE TREE PRESERVATION FUND APPROPRIATION:

In the Tree Preservation Fund, expenditures will increase by $8,750, from $314,415 to $323,165 for public notice signs.

Tree Preservation Fund	Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:				
Parks & Recreation Services	$ 54,335	$ 54,335	$ 54,335	$ -
Environmental Services	260,080	260,080	268,830	8,750
Total	**$ 314,415**	**$ 314,415**	**$ 323,165**	**$ 8,750**

REASON FOR ADJUSTING THE FLOWER MOUND LOG CABIN FUND APPROPRIATION:

In the Flower Mound Log Cabin Fund, expenditures will increase by $242,117, from $0 to $242,117; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Flower Mound Log Cabin Fund	Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:				
Parks & Recreation Services	$ -	$ -	$ 242,117	$ 242,117
Total	**$ -**	**$ -**	**$ 242,117**	**$ 242,117**

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2020-2021

REASON FOR ADJUSTING THE IRS EQUITABLE SHARING FUND APPROPRIATION:

In the IRS Equitable Sharing Fund, expenditures will increase by $55,062, from $347,807 to $402,869; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

IRS Equitable Sharing Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:					
Police Services		$ 347,807	$ 347,807	$ 402,869	$ 55,062
	Total	**$ 347,807**	**$ 347,807**	**$ 402,869**	**$ 55,062**

REASON FOR ADJUSTING THE GRANTS FUND APPROPRIATION:

In the Grants Fund, expenditures will increase by $15,375, from $0 to $15,375; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Grants Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:					
Parks & Recreation Services		$ -	$ -	$ 15,375	$ 15,375
	Total	**$ -**	**$ -**	**$ 15,375**	**$ 15,375**

REASON FOR ADJUSTING THE NEIGHBORHOOD IMPROVEMENT FUND APPROPRIATION:

In the Neighborhood Improvement Fund, expenditures will increase by $30,856, from $120,000 to $150,856; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Neighborhood Improvement Fund		Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:					
Public Works		$ 100,000	$ 100,000	$ 130,856	$ 30,856
Environmental Services		20,000	20,000	20,000	-
	Total	**$ 120,000**	**$ 120,000**	**$ 150,856**	**$ 30,856**

EXHIBIT "A"

Town of Flower Mound
Amended Budget
Fiscal Year 2020-2021

REASON FOR ADJUSTING THE VEHICLE AND EQUIPMENT REPLACEMENT FUND APPROPRIATION:

In the Vehicle and Equipment Replacement Fund, expenditures will increase by $406,242, from $2,150,000 to $2,556,242; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Vehicle & Equipment Replacement Fund	Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:				
Vehicles & Equipment	$ 2,150,000	$ 2,150,000	$ 2,556,242	$ 406,242
Total	**$ 2,150,000**	**$ 2,150,000**	**$ 2,556,242**	**$ 406,242**

TOWN COUNCIL AGENDA ITEM NO. 7

CONSENT ITEM

DATE: December 7, 2020

FROM: Kay Wilkinson, Budget Officer

ITEM: **Town Council acting as the Board of Directors for the Town of Flower Mound Crime Control and Prevention District to consider approval of a resolution amending the Town of Flower Mound Crime Control and Prevention District budget for the fiscal year beginning on October 1, 2020, and ending on September 30, 2021, as adopted by Resolution No. 19-20.**

BACKGROUND INFORMATION: At the March 3, 2008, Town Council meeting, the Town Council acting as the Board of Directors for the Crime District, adopted alternative budget procedures for the Crime District to follow similar procedures and dates to the Town's annual budget.

The attached budget amendment represents an adjustment of the FY 2020-2021 Crime District Budget. According to Section 12 of Resolution No. 06-08, "During the fiscal year, the Town Council shall have the power to transfer funds allocated by the budget from one department to another department, and to re-estimate revenues and expenditures."

The Crime District Fund budget will increase by $14,906. This budget amendment is to re-appropriate the balances of outstanding purchase orders for items or services ordered but not received by September 30, 2020.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $ 14,906

Proposed Expenditure/ (Revenue):		Account Number(s):
$	14,906	Fund 318 Crime District Fund
$	14,906	

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: No alteration to the legal content of this resolution, which was originally approved by Taylor, Olson, Adkins, Sralla, & Elam L.L.P, was made.

ATTACHMENTS:

1. Proposed Resolution

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, ACTING AS THE BOARD OF DIRECTORS OF THE TOWN OF FLOWER MOUND CRIME CONTROL AND PREVENTION DISTRICT, AMENDING THE BUDGET FOR THE TOWN OF FLOWER MOUND CRIME CONTROL AND PREVENTION DISTRICT FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2020, AND ENDING SEPTEMBER 30, 2021, AS ADOPTED BY RESOLUTION NO. 19-20; PROVIDING A SEVERABILITY CLAUSE; AND DECLARING AN EFFECTIVE DATE.

WHEREAS, the Town Council acting as the Board of Directors of the Town of Flower Mound Crime Control and Prevention District (Crime District) has adopted procedures for adopting and amending a budget that are different from the procedures outlined in Texas Local Government Code Section 363.204, as permitted by such section; and

WHEREAS, the Town Council acting as the Board of Directors of the Crime District caused to be filed with the Town Secretary, in accordance with the procedures adopted therefore, a budget to cover all proposed expenditures of the Crime District for the fiscal year beginning October 1, 2020, and ending September 30, 2021; and

WHEREAS, said Crime District Budget was adopted by Resolution No. 19-20 on September 21, 2020; and

WHEREAS, after approval of said Resolution, unexpected needs have arisen which require amendment of the Crime District Budget adopted thereby.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, ACTING AS THE BOARD OF DIRECTORS OF THE TOWN OF FLOWER MOUND CRIME CONTROL AND PREVENTION DISTRICT, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct legislative and factual determinations of the Town of Flower Mound and they are hereby approved and incorporated into the body of this Resolution as if copied in their entirety.

SECTION 2

The Crime District Budget, for the fiscal year beginning on October 1, 2020, and ending on September 30, 2021, as heretofore adopted by Resolution No. 19-20, is hereby amended to provide for adjustments as shown in Exhibit “A”, attached hereto and incorporated herein.

SECTION 3

The expenditures and amendments authorized by this Resolution are necessary to meet unusual and/or unforeseen conditions or circumstances that could not have been included in the original budget through the use of reasonably diligent thought and attention.

SECTION 4

The Town Manager shall file or cause to be filed three (3) true and correct copies of said amended budget, along with this Resolution, with the Town Secretary, who shall file or cause to be filed one (1) true and correct copy of same in the office of the County Clerk of Denton County, Texas and one (1) true and correct copy of same in the office of the County Clerk of Tarrant County, Texas.

SECTION 5

If any section, paragraph, sentence, clause, phrase, or word in this Resolution, or application thereof by any persons or circumstances is held invalid in any Court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of this Resolution; and the Town Council acting as the Board of Directors of the Crime District hereby declares it would have passed such remaining portions of the resolution despite such invalidity, which remaining portions shall remain in full force and effect.

SECTION 6

This Resolution shall take effect and be in full force from and after its passage and adoption.

DULY PASSED, APPROVED AND ADOPTED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____ ON THIS 7th DAY OF DECEMBER, 2020.

APPROVED:

_____

Steve Dixon, MAYOR

ATTEST:

_____

Theresa Scott, TOWN SECRETARY

EXHIBIT "A"

Town of Flower Mound
Crime Control and Prevention District
Amended Budget
Fiscal Year 2020-2021

REASON FOR ADJUSTING THE CRIME DISTRICT FUND APPROPRIATION:

The Crime District Fund, expenditures will increase by $14,906 from $3,208,899 to $3,223,805; to re-appropriate funds budgeted in prior years for outstanding purchase orders at September 30, 2020.

Crime District Fund	Original Budget	Current Budget	Amended Budget	Increase / (Decrease)
Expenditures:				
Police Services	$ 3,208,899	$ 3,208,899	$ 3,223,805	$ 14,906
Total	**$ 3,208,899**	**$ 3,208,899**	**$ 3,223,805**	**$ 14,906**

TOWN COUNCIL AGENDA ITEM NO. 8

CONSENT ITEM

DATE: December 7, 2020

FROM: Brittni Barnett, Grants and Financial Analyst

ITEM: **Consider approval of a resolution accepting grant funds from the Department of Justice's Office of Justice Programs for the purchase of bulletproof vests for the Police Department as part of the FY 2020 Bulletproof Vest Partnership.**

BACKGROUND INFORMATION: The Town applied for and was awarded a grant in the amount of $12,437.25 from the Department of Justice Office of Justice Programs for the FY 2020 Bulletproof Vest Partnership Program. The Bulletproof Vest Partnership Program reimburses municipalities up to 50% of the cost of body armor vests purchased for law enforcement officers, and the remaining 50% will come out of the General Fund Police Services budget.

If approved, this grant, along with the Town's match, will allow the Town to purchase at least 25 bulletproof vests for the Police Department.

This grant does not have a formal agreement the Mayor must sign. The Town received email notification that we were awarded a grant under the FY 2020 Bulletproof Vest Partnership solicitation. The funds are already posted to the Town's Bulletproof Vest Partnership System, and are ready to spend after Council's approval.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $0

Proposed Expenditure:	**Account Number(s):**
$24,874.50	Grant Fund
Proposed Revenue:	**Account Number(s):**
($24,874.50)	Grant Fund

Finance Review by: Debra Wallace, Interim Town Manager/CFO DW

LEGAL REVIEW: Alicia Kreh of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the attachments as to form and legality.

ATTACHMENTS:

1. Resolution
2. Award Notification

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS FROM THE DEPARTMENT OF JUSTICE'S OFFICE OF JUSTICE PROGRAMS FOR THE FISCAL YEAR 2020 BULLETPROOF VEST PARTNERSHIP PROGRAM; APPROVING THE PURCHASE OF BULLETPROOF VESTS FOR THE TOWN USING AWARDED GRANT FUNDS; PLEDGING THAT THE TOWN OF FLOWER MOUND WILL COMPLY WITH ALL PROGRAM REQUIREMENTS OF THE BULLETPROOF VEST PARTNERSHIP PROGRAM.

WHEREAS, the Town of Flower Mound applied for and has been awarded a grant in the amount of $12,437.25 from the FY 2020 Department of Justice's Office of Justice Programs for the Bulletproof Vest Partnership Program to provide funding for purchase of bulletproof vests for the Town of Flower Mound Police Department; and,

WHEREAS, the Town Council of the Town of Flower Mound finds that it is in the best interest of the health, safety, and general welfare of the citizens of the Town to accept the awarded grant funds and authorize the purchase of bulletproof vests for the Town of Flower Mound Police Department with said funds.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN OF FLOWER MOUND IN FLOWER MOUND, TEXAS THAT:

SECTION 1

That all of the above recitations are true and correct and adopted as if fully set out herein.

SECTION 2

The Town of Flower Mound approves and accepts the awarded grant amount of $12,437.25 from the FY 2020 Department of Justice's Office of Justice Programs for the Bulletproof Vest Partnership Program.

SECTION 3

The grant funds are hereby authorized to be used to fund equipment in accordance with the grant award and will be used only for the purposes for which they are intended under the program.

SECTION 4

This Resolution shall be effective upon its adoption.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____ ON THIS 7TH DAY OF DECEMBER, 2020.

RESOLUTION NO._____

APPROVED:

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

Attachment 2

Brittni Barnett

From: Colin Sullivan
Sent: Monday, October 19, 2020 8:55 AM
To: Brittni Barnett
Subject: FW: Bulletproof Vest Partnership 2020 Award Announcement

From: BVP Email Account <ojp@public.govdelivery.com>
Sent: Monday, October 19, 2020 8:50 AM
To: Colin Sullivan <colin.sullivan@flower-mound.com>
Subject: Bulletproof Vest Partnership 2020 Award Announcement

Dear BVP Applicant,

The Bureau of Justice Assistance (BJA) is pleased to inform you that your agency will receive an award under the Fiscal Year (FY) 2020 Patrick Leahy Bulletproof Vest Partnership (BVP) solicitation. These funds have been posted to your account in the BVP System. A complete list of FY 2020 BVP awards is available at: https://www.ojp.gov/program/bulletproof-vest- partnership/overview.

Important: Jurisdictions must be registered in the SAM system (https://www.sam.gov/SAM/) in order to be paid for any 2020 BVP funds. For more information about renewing and updating your existing SAM registration, or registering in SAM as a new entity, please visit https://fsd.gov/fsd-gov/answer.do?sysparm_number=KB0011081. The SAM Helpdesk can be reached at 866-606-8220.

The FY 2020 award may be used for National Institute of Justice (NIJ) compliant armored vests which were ordered after April 1, 2020. The deadline to request payments from the FY 2020 award is August 31, 2022, or until all available funds have been requested. Awards will not be extended past that date, and any unused funds will be forfeited.

Please see the following websites for a list of NIJ compliant vests: https://cjtec.org/compliance- testing-program/compliant-product-lists/

As a reminder, all jurisdictions that applied for FY 2020 BVP funding certified that a mandatory wear policy was in place for their jurisdiction. BJA will be conducting reviews of the mandatory wear policies as funds are requested from the BVP System. For more information on the BVP mandatory wear policy, please see the BVP Frequently Asked Questions document: https://www.ojp.gov/sites/g/files/xyckuh241/files/media/document/FAQsBVPMandatoryWear Policy_0.pdf

Finally, please visit the following page for checklists and guides for each step of the BVP process: https://www.ojp.gov/program/bulletproof-vest-partnership/program-resources

For questions regarding the BVP Program or your award, please do not hesitate to contact the BVP Help Desk at vests@usdoj.gov or 1-877-758-3787.
Thank you

BVP Program Support Team
Bureau of Justice Assistance

This email was sent to colin.sullivan@flower-mound.com using GovDelivery Communications Cloud on behalf of: Department of Justice · Washington, DC

TOWN COUNCIL AGENDA ITEM NO. 9

CONSENT ITEM

DATE: December 7, 2020

FROM: Eric Greaser, Fire Chief

ITEM: **Consider approval of an Interlocal Cooperation Agreement with Denton County for the provision of fire protection services for the benefit of the citizens of Flower Mound and Denton County, and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: This item is to consider the approval of an Interlocal Cooperation Agreement between Denton County and the Town to provide Flower Mound fire protection services to an unincorporated area of Denton County for the benefit of the citizens of Denton County. Since 1982, the Town has received annual funding for the provision of fire protection to a small area of unincorporated Denton County. The contract area consists of mainly low-density housing and tracts of undeveloped land with an estimated service population of less than 100 residents.

FISCAL IMPACT: $11,200.00

Proposed Expenditure/(Revenue):	Account Number(s):
Payment from Denton County of $10,000.00 up front annual flat fee, plus $600.00 per fire call. The number of calls varies but is estimated to be two for a total funding of $1,200.00.	100-4605

Finance Review by: Debra Wallace, Interim Town Manager /CFO

LEGAL REVIEW: No alteration to the legal content of this agreement, which was originally approved by Cara White, of Taylor, Olson, Adkins, Sralla, Elam, LLP, was made.

ATTACHMENTS:

1. Interlocal Cooperation Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

THE COUNTY OF DENTON §
§ **TOWN OF FLOWER MOUND**
§ **FIRE DEPARTMENT**
STATE OF TEXAS §

INTERLOCAL COOPERATION AGREEMENT
FIRE PROTECTION SERVICES

THIS AGREEMENT, which has an effective date of October 1, 2020, is made and entered into by and between Denton County, a political subdivision of the State of Texas, hereinafter referred to as "the **COUNTY,**" and the Town of Flower Mound Fire Department, a municipal corporation, located in Denton County, Texas, hereinafter referred to as "the **AGENCY".**

WHEREAS, the **COUNTY** is a duly organized political subdivision of the State of Texas engaged in the administration of county government and related services for the benefit of the citizens of Denton County; and

WHEREAS, the **AGENCY** is a municipal corporation, duly organized and operating under the laws of the State of Texas and engaged in the provision of fire protection services and related services for the benefit of the citizens of the Town of Flower Mound; and

WHEREAS, the **AGENCY** is the owner and operator of certain fire protection vehicles and other equipment designed for the extinguishing of fire and prevention of damage to property and injury to persons from fire and has in its employ trained personnel whose duties are related to the use of such vehicles and equipment; and

WHEREAS, the **COUNTY** and the **AGENCY** mutually desire to be subject to and contract pursuant to provisions of the Texas Government Code, Chapter 791 and the Texas Local Government Code, Chapter 352, and

NOW, THEREFORE, the **COUNTY** and the **AGENCY**, for the mutual promises, covenants, Agreements and consideration stated herein, agree as follows:

I.
TERM

The term of this Agreement shall be for the period beginning of October 1, 2020, and ending September 30, 2021.

II.
SERVICES

The services to be rendered in accordance with this Agreement by the **AGENCY** are the fire protection services normally rendered by the **AGENCY** to citizens of the Town of Flower Mound in circumstances of emergency, but which services will now be extended to all citizens of the **COUNTY** residing in the unincorporated areas of the **COUNTY** within the operating territory or jurisdiction of the **AGENCY,** as agreed to by the **AGENCY** and the **COUNTY** in this Agreement and as set forth in "Exhibit A," attached hereto and incorporated herein by reference. These services are rendered in consideration of the basic funding and the separate per call fee set forth in this Agreement for the common good and benefit and to serve the public convenience and necessity of the citizens of the **COUNTY** who are not otherwise protected with respect to fire prevention, extinguishment, safety and rescue services. The services to be rendered are as follows:

A. The **AGENCY** shall make available and provide emergency fire prevention, extinguishment, safety and rescue services within the agreed or specified territory or jurisdiction of the **AGENCY**.

B. The **AGENCY** shall respond to requests for fire protection services made within the portion of the **COUNTY** designated as *"**Flower Mound**"* as set out in Exhibit "A".

C. The **COUNTY** agrees that, in the event a fire in the **AGENCY**'s unincorporated designated area which the **AGENCY** considers to be of an incendiary nature and upon request by the **AGENCY**, the County Fire Marshal will dispatch investigation personnel to the fire scene within a response time sufficient to legally maintain and protect all evidence of said fire and will conduct all appropriate investigation and assist in the prosecution of any case of arson. The **AGENCY** shall not be responsible for investigations of suspected incendiary fires in the unincorporated areas, but shall cooperate with the County Fire Marshal in immediately relating all pertinent information possible to the investigator(s).

D. The **COUNTY** agrees that the County Fire Marshal may assist in the conduct of appropriate investigations of a fire which the **AGENCY** considers to be of incendiary nature in the **AGENCY**'s incorporated area upon request of the **AGENCY**.

E. The **AGENCY** shall submit monthly statements on the Texas Fire Incident Reporting System's standardized forms to the Denton County Fire Marshal, 3900 Morse St., 2nd Floor, Denton, Texas 76208. This form will serve as the billing statement to the **COUNTY** for reimbursement of calls made in the unincorporated area. The Denton County Fire Marshal shall provide the forms upon request from the **AGENCY**.

F. The **AGENCY,** in the performance of its duties and responsibilities under this Agreement, shall have the responsibility, within the sole discretion of the officers and employees of the **AGENCY,** except as otherwise determined by the Denton County Fire Marshal, to determine priorities in the dispatching and use of the **AGENCY's** equipment and personnel, and the judgment of any such officer or employee as to such matters shall be the final determination.

The **COUNTY** shall designate the County Judge to act on behalf of the **COUNTY** and to serve as "Liaison Officer" between the **COUNTY** and the **AGENCY**. The County Judge, or his designated substitute, shall devote sufficient time and attention to insure the performance of all duties and obligations of the **COUNTY** under this Agreement and shall provide immediate and direct supervision of employees, agents, contractors, sub-contractors and/or laborers of the **COUNTY** engaged in the performance of this Agreement for the mutual benefit of the **COUNTY** and the **AGENCY**.

III.
PERFORMANCE OF SERVICE

The **AGENCY** shall devote sufficient time and attention to insure the performance of all duties and obligations of the **AGENCY** under this Agreement and shall provide immediate and direct supervision of the **AGENCY's** employees, agents, contractors, sub-contractors and/or laborers engaged in the performance of this Agreement for the mutual benefit of the **AGENCY** and the **COUNTY**.

IV.
COMPENSATION

The **COUNTY** agrees to pay to the **AGENCY** for the full performance of services as provided in this Agreement the sum of **$10,000.00,** payable upon execution of this Agreement, and further agrees to pay the sum of **$600.00** per fire call in the designated unincorporated areas of the **COUNTY** from October 1, 2020, to September 30, 2020. The **COUNTY** anticipates the **AGENCY** to run approximately **2** fire call for a total funding of **$1,200.00** for fire calls. The total payments by the **COUNTY** to the **AGENCY** pursuant to this Agreement are estimated to be **$11,200.00**. The **COUNTY** will make no payment to the **AGENCY** for service provided outside the agreed service district whether by Mutual Aid Agreement or otherwise. The **AGENCY** understands and agrees that payment by the **COUNTY** to the **AGENCY** shall be made in accordance with the normal and customary processes and business procedures of the **COUNTY** and in conformance with applicable state law.

V.
FINANCIAL RECORDS

The **AGENCY** agrees to make its financial records available for audit and/or review by the **COUNTY**, upon request by the **COUNTY**.

VI.
RESPONSIBILITY OF THE COUNTY

The **COUNTY**, to the extent permitted by law, shall be responsible for the acts, negligence and omissions of all officers, employees and agents of the **COUNTY** who are engaged in the performance of this Agreement.

VII.
RESPONSIBILITY OF THE AGENCY

The **AGENCY,** to the extent permitted by law, shall be responsible for the acts, negligence and omissions of all officers, employees and agents of the **AGENCY** who are engaged in the performance of this Agreement.

VIII.
APPLICABLE LAW

The **COUNTY** and the **AGENCY** understand and agree that liability under this contract is governed by the Texas Government Code, Chapter 791 and the Texas Local Government Code, Chapter 352. This Agreement is made in contemplation of the applicability of these laws to the Agreement. Insofar as legally possible the **COUNTY** and the **AGENCY** agree to be bound by the above mentioned statutes as they exist as of the date of this Agreement.

IX.
DEFAULT

In the event of default of any of the covenants herein contained, this Agreement may be terminated at the discretion of the non-defaulting party if such default continues for a period of ten (10) days after notice to the other party in writing of such default and the intent to terminate this Agreement due to the default. Unless the default is cured, this Agreement shall terminate.

X.
TERMINATION

This Agreement may be terminated any time, by either the **COUNTY** or the **AGENCY** by giving sixty (60) days advance written notice to the other party. In the event of termination by either party, the **AGENCY** shall be compensated pro rata for all services performed to the termination date together with reimbursable expenses then due as authorized by this Agreement.

In the event of such termination, should the **AGENCY** be overcompensated on a pro rata basis for all services performed to the termination date and/or be overcompensated reimbursable expenses, the **COUNTY** shall be reimbursed pro rata for all such overcompensation. Acceptance of such reimbursement shall not constitute a waiver of any claim that may otherwise arise out of this Agreement.

XI.
GOVERNMENTAL IMMUNITY

The fact that the **COUNTY** and the **AGENCY** accept certain responsibilities relating to the rendition of fire protection services under this Agreement as part of their responsibility for providing protection for the public health makes it imperative that the performance of these vital services be recognized as a governmental function and that the doctrine of governmental immunity shall be, and it is hereby, invoked to the extent permitted by law. Neither the **AGENCY,** nor the **COUNTY** waive, nor shall be deemed to have hereby waived, any immunity or defense that would otherwise be available to it against claims arising from the exercise of government powers and functions.

XII.
ENTIRE AGREEMENT

This Agreement represents the entire Agreement between the **COUNTY** and the **AGENCY** and supersedes all prior negotiations representations and Agreements, either written or oral. This Agreement may be amended only by written instrument signed by both parties.

XIII.
LAW OF CONTRACT

This Agreement and any of its terms or provisions, as well as the rights and duties of the parties hereto, shall be governed by the laws of the State of Texas. The venue for any dispute, or matter, arising under this Agreement shall lie in Denton County, Texas.

XIV.
SEVERABILITY

In the event that any portion of this Agreement shall be found to be contrary to law, it is the intent of the parties hereto that the remaining portions shall remain valid and in full force and effect to the fullest extent possible.

XV.
AUTHORITY

The undersigned officer or agents of the parties hereto are the properly authorized officials and have the necessary authority to execute this Agreement on behalf of the parties.

XVI.
SERVICE AREA

Acceptance of this Agreement constitutes approval of the service area set out in attached Exhibit "A".

EXECUTED this _____ day of _____, 20____.

Denton County, Texas
110 West Hickory Street, 2nd Floor
Denton, Texas 76201

By _____
Andy Eads
Denton County Judge

Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028

By _____
Name Steve Dixon
Title Mayor, Town of Flower Mound

ATTEST:

By: _____
Denton County Clerk

ATTEST:

By: _____
Town Secretary

APPROVED AS TO CONTENT:

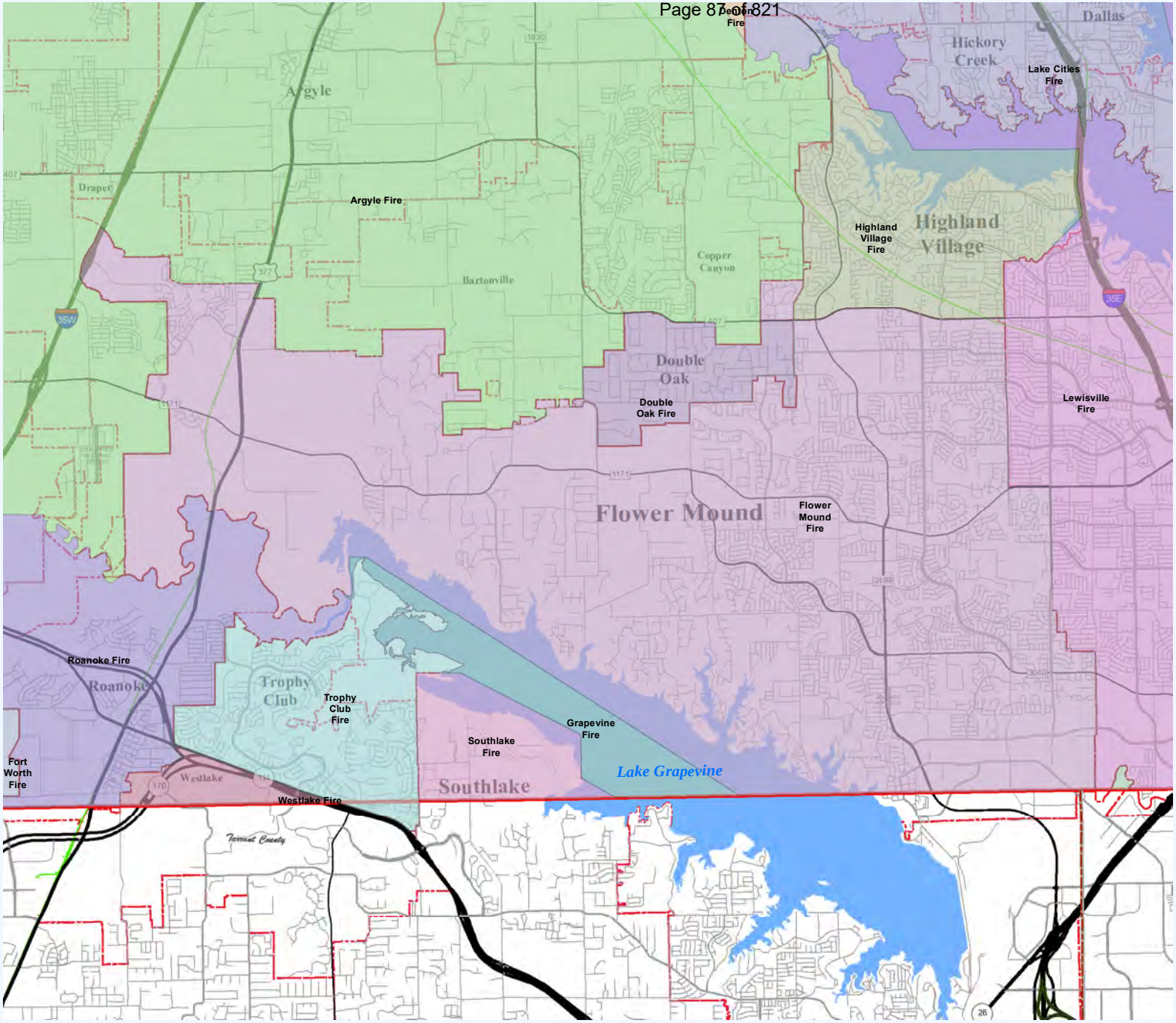
By: _____
Denton County Fire Marshal

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of $_____ to accomplish and pay the obligation of Denton County under this Contract/Agreement.

_____
Denton County Auditor

Attachment 1



Andy Eads - County Judge
Hugh Coleman - Commissioner Precinct 1
Ron Marchant - Commissioner Precinct 2
Bobbie J. Mitchell - Commissioner Precinct 3
Dianne Edmondson - Commissioner Precinct 4

INTERSTATE
U.S. HIGHWAY
STATE HIGHWAY
FARM TO MARKET
MAJOR THOROUGHFARES
MINOR ROADS
CEMETERY
RAILROADS
AIRPORTS
STREAMS
LAKES & PONDS

City Population

Denton > 100,000
Lewisville 40,000- 100,000
Corinth 10,000- 39,999
Sanger 2,000- 9,999
Ponder < 2,000

NAD 1983 StatePlane (Zone 5351)
Texas North Central Lambert Conformal Conic

N
W E
S

1 inch = 1.7 miles
October 22, 2020

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Denton County does not guarantee the correctness or accuracy of any features on this product and assumes no responsibility in connection therewith. This product may be revised at any time without notification to any user.

CONTACT INFORMATION
LANDMARK MAP: gis.dentoncounty.gov
E-MAIL: gis@dentoncounty.gov

Overview Map

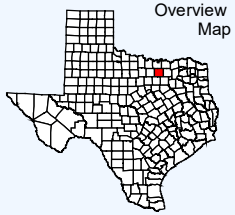


EXHIBIT A - FIRE

Flower Mound

TOWN COUNCIL AGENDA ITEM NO. 10

CONSENT ITEM

DATE: December 7, 2020

FROM: Eric Greaser, Fire Chief

ITEM: **Consider approval of an Interlocal Cooperation Agreement with Denton County for the provision of ambulance services for the benefit of the citizens of Flower Mound and Denton County, and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: This item is to consider the approval of an Interlocal Cooperation Agreement between Denton County and the Town to provide emergency medical services to an unincorporated area of Denton County for the benefit of the citizens of Denton County. Since 1982, the Town has received annual funding for the provision of fire protection to a small area of unincorporated Denton County. The contract area consists of mainly low-density housing and tracts of undeveloped land with an estimated service population of less than 100 residents.

FISCAL IMPACT: $37,286.00

Proposed Expenditure/(Revenue):	Account Number(s):
Payment from Denton County of $37,286.00 (rounded) which includes a fixed sum of $36,245.51 based on population and $1,040.45 based on rural mileage. In addition, a fee of $275.99 per EMS call will be paid. The number of calls varies, but EMS call fee is estimated to be zero for FY 20-21.	100-4605

Finance Review by: Debra Wallace, Interim Town Manager /CFO

LEGAL REVIEW: No alteration to the legal content of this agreement, which was originally approved by Cara White, of Taylor, Olson, Adkins, Sralla, Elam, LLP, was made.

ATTACHMENTS:

1. Interlocal Cooperation Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

THE COUNTY OF DENTON §
§ **TOWN OF FLOWER MOUND**
§ **AMBULANCE SERVICES**
STATE OF TEXAS §

INTERLOCAL COOPERATION AGREEMENT AMBULANCE SERVICE

THIS AGREEMENT, which has an effective date of October 1, 2020, is made and entered into by and between Denton County a political subdivision of the State of Texas, hereinafter referred to as **"**the **COUNTY,"** and the Town of Flower Mound, a municipal corporation, located in Denton County, Texas, hereinafter referred to as **"**the **AGENCY".**

WHEREAS, the **COUNTY** is a duly organized political subdivision of the State of Texas engaged in the administration of county government and related services for the benefit of the citizens of Denton County; and

WHEREAS, the **AGENCY** is a municipal corporation, duly organized and operating under the laws of the State of Texas and engaged in the provision of ambulance services and related services for the benefit of the citizens of the Town of Flower Mound; and

WHEREAS, the **AGENCY** is an owner and operator of certain ambulance vehicles and other equipment designed for the transportation of persons who are sick, infirmed or injured and has in its employ trained personnel whose duties are related to the treatment of said individuals and the use of such vehicles and equipment; and

WHEREAS, the **COUNTY** desires to obtain emergency ambulance and related services for the benefit of residents of the **COUNTY** living in unincorporated areas of the **COUNTY** which the **AGENCY** is capable of providing; and

WHEREAS, the provision of emergency ambulance and related services is a governmental function that serves the public health and welfare and is of mutual concern to both the **COUNTY** and the **AGENCY;** and

WHEREAS, the **COUNTY** desires to expend County funds to defray the expense of establishing, operating and maintaining emergency ambulance services in the County; and

WHEREAS, the **COUNTY** and the **AGENCY** mutually desire to be subject to and contract pursuant to the provisions of Texas Government Code, Chapter 791 and Texas Health and Safety Code, Section 774.003, and

NOW THEREFORE, the **COUNTY** and the **AGENCY,** in consideration of the mutual promises, covenants, and Agreements stated herein, agree as follows:

I.
TERM

The term of this Agreement shall be for the period beginning of October 1, 2020, and ending on September 30, 2021.

II.
DEFINITIONS

As used herein, the words and phrases hereinafter set forth shall have the meanings as follows:

A. "Emergency" shall mean any circumstance that calls for immediate action and in which the element of time in transporting the sick, wounded or injured for medical treatment is essential to the health or life of a person or persons. Whether an emergency, in fact, exists is solely up to the discretion of the **AGENCY**. For dispatch purposes only, "emergency" shall include, but not be limited to:

1. The representation by the individual requesting ambulance service that an immediate need exists for the transportation of a person from any location within the agreed operating area of the **AGENCY** to a place where emergency medical treatment may be obtained; or

2. The representation by the individual requesting ambulance service that an immediate need exists for the transportation of a person from any location within the agreed operating area of the **AGENCY** to the closest medical facility.

B. “Rural area” means any area within the boundaries of the **COUNTY,** but outside the corporate limits of all incorporated cities, towns and villages within the **COUNTY**.

C. “Urban area” means any area within the corporate limits of an incorporated city, town or village within the **COUNTY.**

D. “Emergency ambulance call” means a response to a request for ambulance service by the personnel of the **AGENCY** in a situation involving an emergency, as defined above, by an ambulance vehicle. A single response to a call may involve the transportation of more than one person at a time, but shall be considered as only one call.

III.
SERVICES

The services to be rendered under this Agreement by the **AGENCY** are the ambulance services normally rendered by the **AGENCY** to citizens of Town of Flower Mound in circumstances of emergency, but which services will now be extended to all citizens of the **COUNTY** residing in the unincorporated areas of the **COUNTY** within the operating territory or jurisdiction of the **AGENCY,** as agreed to by the **AGENCY** and the **COUNTY** in this Agreement and as set forth in "Exhibit A," attached hereto and incorporated herein by reference.

It is recognized that the officers and employees of the **AGENCY** have the duty and responsibility of rendering ambulance services to citizens of the **AGENCY** and the **COUNTY**. In the performance of these duties and responsibilities, it shall be within the sole responsibility and discretion of the officers and employees of the **AGENCY** to determine priorities in the dispatching and use of such equipment and personnel and the judgment of the officer or employee shall be final.

The **COUNTY** shall designate the County Judge to act on behalf of the **COUNTY** and to serve as "Liaison Officer" between the **COUNTY** and the **AGENCY**. The County Judge, or her designated substitute, shall devote sufficient time and attention to insure the performance of all duties and obligations of the **COUNTY** under this Agreement and shall provide for the immediate and direct supervision of employees, agents, contractors, sub-contractors and/or laborers of the **COUNTY** engaged in the performance of this Agreement.

IV.
PERFORMANCE OF SERVICES

The **AGENCY** shall devote sufficient time and attention to insure the performance of all duties and obligations of the **AGENCY** under this Agreement and shall provide immediate and direct supervision of the **AGENCY's** employees, agents, contractors, sub-contractors and/or laborers engaged in the performance of this Agreement for the mutual benefit of the **AGENCY** and the **COUNTY.**

V.
COMPENSATION

COUNTY agrees to pay to the **AGENCY** an estimated fee of $37,286.00 (amount rounded to the nearest dollar) based on a funding formula as follows:

1. A fixed sum based on a population percentage .4702 per capita; said sum computes to $36,245.51.

2. A fixed sum of $275.9890 per ambulance transport for an estimated maximum amount of $0.00. Said sum is based upon 0 transports made by **AGENCY** in fiscal year 2020.

3. A fixed sum based on 1.50 rural miles in the agreed operating territory; said sum computes to $1,040.45.

The first and third sums are based upon population and mileage figures obtained from the North Central Texas Council of Governments. The second sum is based upon the definition of an "ambulance call" for purposes of this Agreement. Payment shall not be allowed for any instance in which a patient is not transported. Consistent with the reporting procedures described below, the **AGENCY** shall receive payment for transporting the patient regardless of the service delivery area in which the call originated.

Requests for payment shall be submitted on the standardized ambulance transportation reporting form approved and provided by the **COUNTY.** It shall be the responsibility of the **AGENCY** to fully complete the forms and to provide complete and accurate patient information. Requests for payment shall be submitted within five (5) days of the performance of service by the **AGENCY**. Requests not timely submitted shall not be considered for payment. Requests for payment may be submitted by personal delivery, U.S. Mail, facsimile or computer telephone link to the office of the Denton County Fire Marshal. The date of submission shall be the date the fully documented request is received in said office.

VI.
FINANCIAL RECORDS

The **AGENCY** agrees to make its financial records available for audit and/or review by the **COUNTY,** upon request by the **COUNTY**.

VII.
RESPONSIBILITY OF THE COUNTY

The **COUNTY,** to the extent permitted by law, shall be responsible for the acts, omissions and negligence of all officers, employees and agents of the **COUNTY** who are engaged in the performance of this Agreement.

VIII.
RESPONSIBILITY OF THE AGENCY

The **AGENCY,** to the extent permitted by law, shall be responsible for the acts, omissions and negligence of all officers, employees and agents of the **AGENCY** who are engaged in the performance of this Agreement.

IX.
APPLICABLE LAW

The **COUNTY** and the **AGENCY** understand and agree that liability under this contract is governed by Texas Government Code, Chapter 791 and Texas Health and Safety Code, Section 774.003. This Agreement is made in contemplation of the applicability of these laws to the Agreement. Insofar as legally possible the **COUNTY** and the **AGENCY** agree to be bound by the above mentioned statutes as they exist as of the date of this Agreement.

X.
DEFAULT

In the event of default of any of the covenants herein contained, this Agreement may be terminated at the discretion of the non-defaulting party if such default continues for a period of ten (10) days after notice to the other party in writing of such default and the intent to terminate this Agreement due to the default. Unless the default is cured, this Agreement shall terminate.

XI.
TERMINATION

This Agreement may be terminated at any time by either the **COUNTY** or the **AGENCY** by giving sixty (60) days advance written notice to the other party. In the event of termination by either party, the **AGENCY** shall be compensated pro rata for all services performed to termination date together with reimbursable expenses then due as authorized by this Agreement. In the event of such termination, should the **AGENCY** be overcompensated on a pro rata basis for all services performed to the termination date and/or be overcompensated for reimbursable expenses, the **COUNTY** shall be reimbursed pro rata for all such overcompensation.

Acceptance of such reimbursement shall not constitute a waiver of any claim that may otherwise arise out of this Agreement.

XII.
GOVERNMENTAL IMMUNITY

The fact that the **COUNTY** and the **AGENCY** accept certain responsibilities relating to the rendering of ambulance services under this Agreement as a part of their responsibility for providing protection for the public health makes it imperative that the performance of these vital services be recognized as a governmental function and that the doctrine of governmental immunity shall be, and is hereby, invoked to the extent permitted under the law. Neither the **AGENCY**, nor the **COUNTY** waive, nor shall be deemed to have hereby waived any immunity or defense that would otherwise be available to it against claims arising from the exercise of governmental powers and functions.

XIII.
ENTIRE AGREEMENT

This Agreement represents the entire Agreement between the **COUNTY** and the **AGENCY** and supersedes all prior negotiations, representations and Agreements, either written or oral. This Agreement may be amended only by written instrument signed by both parties.

XIV.
LAW OF CONTRACT

This Agreement and any of its terms or provisions, as well as the rights and duties of the parties hereto, shall be governed by the laws of the State of Texas. The venue for any dispute, or matter, arising under this Agreement shall lie in Denton County, Texas.

XV.
SEVERABILITY

In the event that any portion of this Agreement shall be found to be contrary to law, it is the intent of the parties hereto that the remaining portions of this Agreement shall remain valid and in full force and effect to the fullest extent possible.

XVI.
AUTHORITY

The undersigned officer or agents of the parties are the properly authorized officials and have the necessary authority to execute this Agreement on behalf of the Parties**.**

XVII.
SERVICE AREA

Acceptance of this Agreement constitutes approval of the service area set out in attached Exhibit "A".

EXECUTED this _____ day of _____, 20____.

COUNTY:

Denton County, Texas
110 West Hickory Street, 2nd Floor
Denton, Texas 76201

By: _____
Andy Eads
Denton County Judge

ATTEST:

By: _____
Denton County Clerk

AGENCY:

Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028

By: _____
Name Steve Dixon
Title Mayor, Town of Flower Mound

ATTEST:

By: _____
Town Secretary

APPROVED AS TO CONTENT:

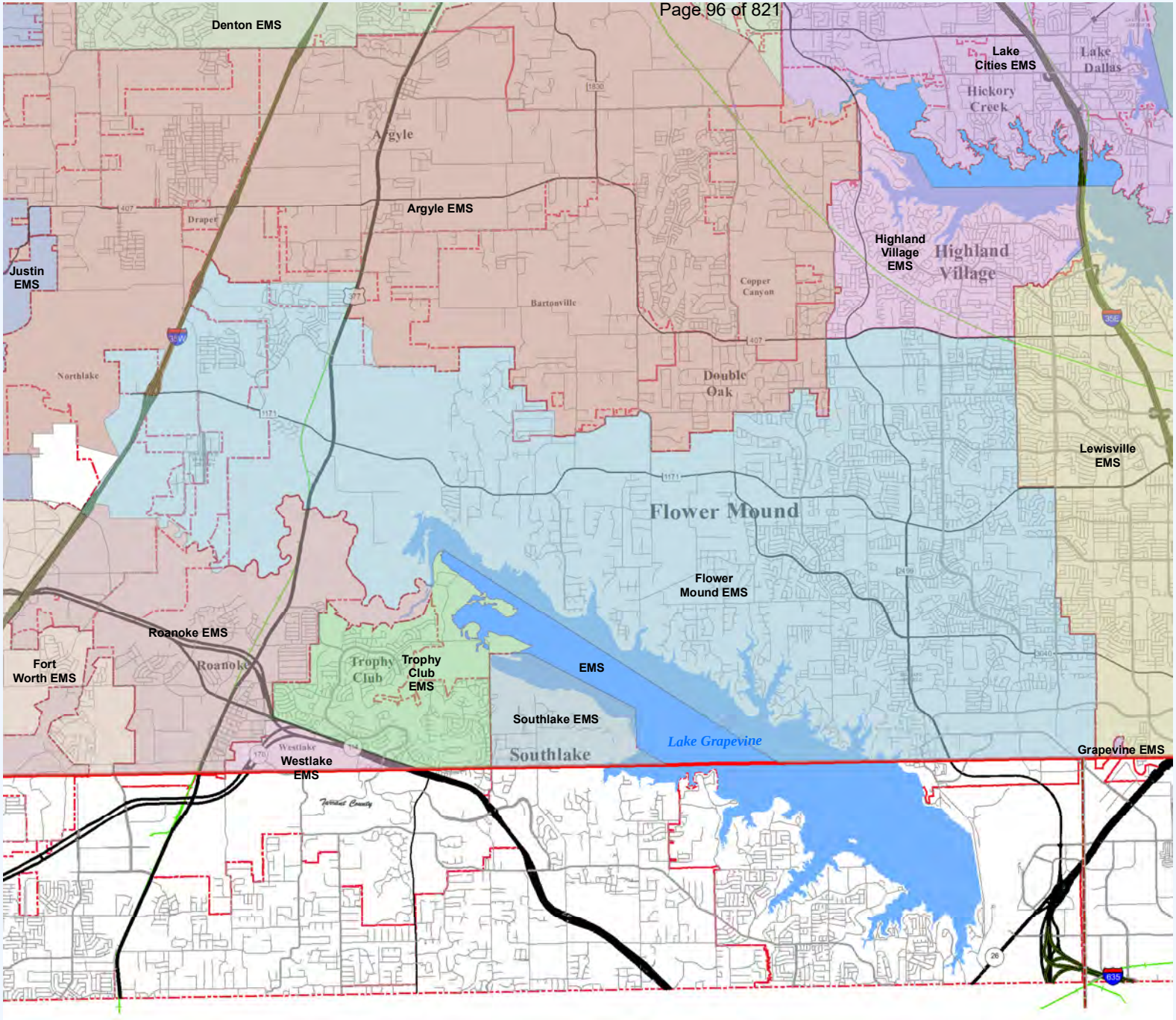
By: _____
Denton County Fire Marshal

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of $_____ to accomplish and pay the obligation of Denton County under this Agreement.

_____
Denton County Auditor

Attachment 1



DENTON COUNTY, TEXAS 1846

Andy Eads - County Judge
Hugh Coleman - Commissioner Precinct 1
Ron Marchant - Commissioner Precinct 2
Bobbie J. Mitchell - Commissioner Precinct 3
Dianne Edmondson - Commissioner Precinct 4

INTERSTATE
U.S. HIGHWAY
STATE HIGHWAY
FARM TO MARKET
MAJOR THOROUGHFARES
MINOR ROADS
CEMETERY
RAILROADS
AIRPORTS
STREAMS
LAKES & PONDS

City Population

Denton > 100,000
Lewisville 40,000- 100,000
Corinth 10,000- 39,999
Sanger 2,000- 9,999
Ponder < 2,000

NAD 1983 StatePlane (Zone 5351)
Texas North Central Lambert Conformal Conic

N W E S

1 inch = 1.9 miles

October 22, 2020

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Denton County does not guarantee the correctness or accuracy of any features on this product and assumes no responsibility in connection therewith. This product may be revised at any time without notification to any user.

CONTACT INFORMATION
LANDMARK MAP: gis.dentoncounty.gov
E-MAIL: gis@dentoncounty.gov

Overview Map

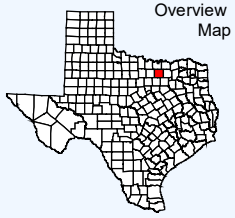


EXHIBIT A - EMS/AMBULANCE

Flower Mound

TOWN COUNCIL AGENDA ITEM NO. 11

CONSENT ITEM

DATE: December 7, 2020

FROM: Matthew J. Hotelling, P.E., PTOE, ADAC, Traffic Engineer

ITEM: **Consider approval of an ordinance for a street name change for the cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas to Navajo Bluffs Court (9100 – 9200 block) (*The Transportation Commission recommended to change the street name by a vote of 6 to 0 at its November 10, 2020, meeting*)**

BACKGROUND INFORMATION: Attached is the Transportation Commission report and backup for this item. Letters were sent out to all property owners notifying them of the proposed street name change and of the Council date and time in accordance with the Code of Ordinances Section 92-320. The Transportation Commission received 0 returned correspondence out of the 5 mailed letters. The request that was received from the neighborhood was signed by 4 out of the 5 homes that are currently addressed along this cul-de-sac.

The Transportation Commission discussion can be viewed under the Other Meetings Archive link at the following hyperlink: https://flowermoundtx.swagit.com/play/11102020-2101 under the November 10 Transportation Commission archive, Item F2.

BOARD REVIEW/CITIZEN FEEDBACK: Discussion was held with the Transportation Commission how this cul-de-sac was unnamed when the Texas Department of Transportation shifted the alignment of Cross Timbers (FM 1171) and thus the cul-de-sac was created. Discussion was held about how these homes remained addressed off of Cross Timbers Rd even though they no longer have frontage on Cross Timbers Rd. Additional discussion was held regarding 9205 Cross Timbers, which does not have a driveway connected to the cul-de-sac; however, it does have a driveway connected to Old Cross Timbers. Staff informed the Transportation Commission regarding the Town's desire to readdress this one home to Old Cross Timbers instead of Navajo Bluffs Court, if this item is approved. One citizen spoke in favor of the street name change.

ALTERNATIVES/OPTIONS: Option is to leave the cul-de-sac unnamed and keep the 5 homes addressed off of Cross Timbers Road.

FISCAL IMPACT: The cost of the two ground mounted sign blades would be covered with Town operation funds.

LEGAL REVIEW: Ben Gibbs of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the ordinance as to form and legality.

ATTACHMENTS:

1. Agenda Item 2 from the 11/10/2020 Transportation Commission meeting
2. Draft Ordinance
3. Vicinity Map

DRAFT MOTION: Move to approve as presented in the agenda caption.

TRANSPORTATION COMMISSION AGENDA ITEM NO. 2

REGULAR ITEM

DATE: November 10, 2020

FROM: Matthew J. Hotelling, P.E., PTOE, ADAC, Traffic Engineer

ITEM: **Consider a recommendation for a proposed street name change for the Cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas to Navajo Bluffs Court for the 9100 – 9200 block to the Town Council.**

BACKGROUND INFORMATION: This item is to consider a proposed street name change for the cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas to Navajo Bluffs Court for the 9100 – 9200 block. This stretch of roadway is currently addressed as Cross Timbers Road. Cross Timbers Road is commonly known in Flower Mound as Farm to Market (FM) 1171.

The cul-de-sac in question was created when FM 1171 was expanded from 2 lanes to 6 lanes. FM 1171 previously was immediately adjacent to these properties and they were truly addressed off of FM 1171. When FM 1171 was being expanded through this area, the roadway was shifted to its current location approximately 40-120 feet away from the original alignment. This created an unnamed cul-de-sac, however, the addresses of the homes remained Cross Timbers Road.

The Town received a request from the neighborhood signed by 4 out of the 5 homes addressed as Cross Timbers Road. This request can be found in Attachment 1. One reason the neighborhood cites for the reason for the request is to reduce confusion concerning their location. It is only reasonable to assume that deliveries to these homes, outside of the US Postal office, could be problematic. The neighborhood chose Navajo Bluff as a proposed name. The Town is proposing Navajo Bluffs Court.

Since the addresses are currently named Cross Timbers, it is important to point out that this is NOT a renaming of Cross Timbers Road. Cross Timbers Road would remain and the 9100-9200 block of Cross Timbers Road will remain. This request will change the addresses of those living along the cul-de-sac and provide a specific name to the cul-de-sac. One additional proposal for this street name change is to change the address of the 5th house west of Pocahontas from Cross Timbers Rd/Navajo Bluffs Court to Old Cross Timbers. The 5th house does not have a driveway that connects to the unnamed cul-de-sac. The driveway, however, does connect to Old Cross Timbers. This change will make the travel to this house more intuitive than to a street on which the house does not have a driveway. As the letters were sent to notify of this street name change, the 5th house was provided additional information regarding the change to Old Cross Timbers for this particular residence. A vicinity map showing the cul-de-sac in question and the location of the 5th residence is provided as attachment 2.

The following is the street name procedure for changing an existing street name.

Name Change Procedure

Procedures for existing street name changes are set forth in Chapter 90-320 of the Town's Code of Ordinances. This has been provided as Attachment 3.

The first step in a street name change request is the filing of the request with the Planning Department. This request is included as Attachment 4. This request includes such information as street proposed to be renamed, affected block numbers, the reason for the name change, and proposed name for roadway segment. The proposed name of these segments is:

- Navajo Bluffs Court

As part of the proposed street name change process, the proposed names must be provided to, but not limited to, the following departments:

- Engineering
- Public Works
- Police Department
- Fire Department

The official request was initiated by Public Works and routed to Police Department, Fire Department, Planning Department and Geographical Information System (GIS) staff. Even though not required by Chapter 90-320, the Town notified each property owner adjacent to, abutting, and/or having an address on the street that is subject to the street name change based on the most recent approved Town of Flower Mound Tax Roll for the Transportation Commission meeting. In total, 5 letters were sent out providing notification.

Next Steps

After consideration of the Transportation Commission's recommendation, the Town may schedule the consideration of the proposed street name change on the next available Town Council agenda. Notification of the Town Council meeting is required by Chapter 90-320 to be sent to the same property owners that were notified of the Transportation Commission meeting for the date, time and place of the Town Council meeting. This information was included in the original letter sent to the 5 recipients of the Transportation Commission notification mailing. An example of this letter is included as Attachment 4. As part of this mail out, the Transportation Commission general email was included. At the time of the posting of the agenda, no responses were received via the TRC@flower-mound.com email which the Transportation Commissioners have received.

FISCAL IMPACT: All street name signs located within the limits of this request would be handled as part of the Town's operating budget. This does not include fiscal impacts to properties because of the name change.

ATTACHMENTS:

1. Neighborhood request
2. Vicinity Map
3. Chapter 90-320. "Procedure to be followed by persons seeking street name change of an existing street"
4. Filed street name change request
5. Neighborhood Notification Letter

RECOMMENDATION: Move to recommend as presented in the agenda caption.

To Whom It Concerns,

We the undersigned wish to change the street name of our current residence from Cross Timbers to Navaho Bluff.

Recent construction and routing of road has resulted in the street being a separate entity and no longer an integral part of Cross Timbers.

Changing of name will result in decreased confusion concerning our location.

Thank You.

Names and signatures of current residents.

Jeff Douglas

Anthony Meo

Sherry Krawiec

Betty Webb

Vicinity Map for Navajo Bluffs Court Street Name change.

North is up. Star represents the 5th house west of Pocahontas with the driveway off of Old Cross Timbers.

"Sec. 90-320. Procedure to be followed by persons seeking street name change of an existing street.

(a) Any person may request a street name change by filing a request for a street name change with the Planning Department. The request shall identify the street proposed to be renamed by its current name and the block numbers thereof, state the reason for the requested street name change, and state the proposed name for such roadway segment.

(b) The proposed name change will be considered by various Town departments interested in the naming of streets and roadways within the Town's corporate limits possibly including, but not limited to, Engineering, Public Works, the Police Department and the Fire Department. Following such consideration the Town Manager or designee may, but is not required to, schedule consideration of the proposed street name change on the next available agenda for the Transportation Commission.

(a) Following receipt of the Transportation Commission's recommendation regarding the proposed street name change, the Town may schedule consideration of the proposed street name change on the next available agenda for the Town Council.

(d) The Town will notify each owner of property adjacent to, abutting and/or having an address on the street that is the subject of the requested name change regarding the proposed street name change and the time, date and location of the Town Council meeting at which the proposed street name change will be considered. Said notification will be sent by regular U.S. mail, postage prepaid, to the owners of real property adjacent to, abutting, and/or having an address on the subject street as their names and addresses appear on the most recently approved Town of Flower Mound Tax Roll."

Public Works
Administration

Memorandum

Date: October 26, 2020

To: Planning Department

From: Matthew J. Hotelling, P.E., PTOE, ADAC, Traffic Engineer

Subject: Street Name Change request for cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas

This request is for the renaming of the cul-de-sac immediately south of Cross Timbers Rd (FM 1171) and west of Pocahontas.

Below is the list of information as required by Section 90-320 of the Town's Code of Ordinances.

- **Street to be renamed:** unnamed cul-de-sac (addresses are Cross Timbers Rd)
- **Block range:** 9100 – 9200
- **Reason for Change:** To provide a street name to the currently unnamed cul-de-sac and to reduce confusion of the addressing of houses along this cul-de-sac.
- **Proposed Names:** Navajo Bluffs Court.

Please provide this information to the Development Review Committee, GIS, Public Works, and Police Department at a minimum, for their review.

THE TOWN OF FLOWER MOUND TEXAS

Public Works/Administration

October 27, 2020

Betty Webb or Current resident
9201 Cross Timbers Rd
Flower Mound, TX 75022

RE: Street Name Change of cul-de-sac immediately south of FM 1171 and west of Pocahontas to Navajo Bluffs Court

Dear Stakeholder:

The letter is to advise you that a request to change the street name for the cul-de-sac immediately south of FM 1171 (Cross Timbers Rd) and west of Pocahontas. As you are aware, the address of these houses are Cross Timbers Road. The new proposed name for this cul-de-sac is Navajo Bluffs Court. Cross Timbers Road will remain, however, it will only be for FM 1171 and not this cul-de-sac. Address numbers will remain the same. See attached map for location. As a result of the expansion and relocation of FM 1171 to the north, it created this cul-de-sac without a new name. This new street being addressed the same as FM 1171, may cause confusion with services and navigation to these homes. This request was originated from within the Roanoke Hills community. The street name change item is currently scheduled for the November 10, 2020, Transportation Commission meeting at 6:30 PM at 2121 Cross Timbers Road, Town Hall Council Chambers.

The proposed street name is Navajo Bluffs Court.

A recommendation will be provided by the Transportation Commission to the Town Council. That recommendation will be brought forward to the next available Town Council meeting. A recommendation from the Transportation Commission on November 10th would result in the item being brought forward to the Town Council meeting on December 7, 2020, at 6:00 PM, at 2121 Cross Timbers Road in the Town Hall Council Chambers.

If you have any questions, additional input or suggestions, please provide it to me at transportation@flower-mound.com or handwritten to 2121 Cross Timbers, Flower Mound, TX 75028. If you would like to send an email correspondence directly to the Transportation Commissioners, please use the following email address: TRC@flower-mound.com. Each commissioner will receive this information up to 2 hours before the meeting. Please note that this is only a one way communication and the commissioners would not be able to return any correspondence. Please indicate on this correspondence if you would like for it to be forwarded to the Town Council as well. Any handwritten correspondence received after noon on November 10, 2020, will be handed out at the Transportation Commission meeting. If you have any questions regarding this letter, please send me an email or give me a call at (972) 874-6303. Thank you.

Sincerely,

Matthew J. Hotelling, P.E., PTOE, ADAC
Traffic Engineer

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO.

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AUTHORIZING A STREET NAME CHANGE OF THE UNNAMED CUL-DE-SAC IMMEDIATEDLY SOUTH OF CROSS TIMBERS ROAD (FM 1171) AND WEST OF POCAHONTAS (PREVIOUSLY KNOWN AS THE 9100-9200 BLOCK OF CROSS TIMBERS ROAD) TO "NAVAJO BLUFFS COURT"; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, as part of the Cross Timbers Road (FM 1171) improvement project (the "Project"), several residential properties that currently bear a Cross Timbers Road address in the 9100-9200 block, no longer directly connect to Cross Timbers Road, but now connect to an unnamed cul-de-sac constructed as part of the Project; and

WHEREAS, the Town staff and Town Manager have determined that it is in the best interests of the public and the Town to rename the Unnamed cul-de-sac immediately south of Cross Timbers Road (FM 1171) and west of Pocahontas which terminates at its eastern end at approximately the 4300 block of Pocahontas (previously known and addressed as the 9100-9200 blocks of Cross Timbers Road) to be the 9100-9200 blocks of "Navajo Bluffs Court"; and

WHEREAS, each owner of property adjacent to, abutting and/or having an address on the street being considered for a name change has been notified of the proposed street name change and of the date, time and location of the Town Council meeting at which the proposed street name change will be considered, as required by Section 90-320 of the Town Code of Ordinances; and

WHEREAS, the proposed street name change was considered by the Town's Transportation Commission on November 10, 2020, and the Transportation Commission recommended approval of the proposed street name change; and

WHEREAS, the Town Manager or designee shall direct the replacement of street signs reflecting the street name change; and

WHEREAS, the Denton County Central Appraisal District, Post Office and other service providers shall be notified at the direction of the Town Manager or designee of the street name change; and

WHEREAS, the Town Council deems it necessary and in the best interests of the public to rename the 9100-9200 blocks of the "unnamed cul-de-sac immediately south of Cross Timbers Road and west of Pocahontas" (previously known as the 9100-9200 block of Cross Timbers Road) to be the 9100-9200 blocks of "Navajo Bluffs Court".

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct legislative and factual determinations of the Town of Flower Mound and they are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

The entirety of the unnamed cul-de-sac immediately south of Cross Timbers Road and west of Pocahontas (previously known as the 9100-9200 block of Cross Timbers Road) within the Town limits are hereby officially renamed to be the 9100-9200 blocks of “Navajo Bluffs Court”.

SECTION 3

This Ordinance shall be cumulative of all provisions of ordinances of the Town of Flower Mound, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 4

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 5

The Town Secretary of the Town of Flower Mound is hereby directed to publish the caption of this Ordinance in the official newspaper of the Town of Flower Mound as required by Section 3.07 of the Charter of the Town of Flower Mound.

SECTION 6

This Ordinance shall take effect and be in full force from and after its passage and publication, as required by law, and it is so ordained.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____, ON THIS THE 7TH DAY OF DECEMBER, 2020.

APPROVED:

Steve Dixon, MAYOR

ATTEST:

Theresa Scott, TOWN SECRETARY

Vicinity Map for Navajo Bluffs Court Street Name change.

North is up. Star represents the 5th house west of Pocahontas with the driveway off of Old Cross Timbers.

TOWN COUNCIL AGENDA ITEM NO. 12

CONSENT ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Consider approval of Change Order No. 1 for the High Road Water Line Replacement Phase III project, amending the contract with Muniz Construction, Inc., in the amount of $28,400.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On June 15, 2020, a construction award was approved for the High Road Water Line Replacement Phase III project (Bid # 2020-67-B). Muniz Construction Inc., submitted the lowest qualified bid of the ten responding bidders at a base bid of $1,233,964.00 with bid alternates decreasing the project amount by $8,558.00 for a total of $1,225,406.00

The High Road Water Line Replacement Phase III project includes water line replacements in the Lake Ridge Road, Hickory Springs, and Lost Creek neighborhoods. These water line replacements are necessary due to their size, age, and condition.

Change Order 1 includes additional trenchless water line length that was required during construction to minimize resident impact and keep the residential roads open. The change order also addresses the water service lengths and types that were not identified correctly on the plans. Change Order 1 would increase the total contract by $28,400 for a total contact amount of $1,253,806.00.

ALTERNATIVES/OPTIONS: Water service to the project area is provided by substandard infrastructure installed prior to the Towns incorporation, a significant portion of the project area is served by undersized water mains providing insufficient fire flows, and the lines are prone to breaking and interrupting service in the area. A decision not to approve the change order, will stop the project and cause these issues to remain until such time the additional funding is approved.

FISCAL IMPACT: $28,400.00

Proposed Expenditure/(Revenue):	Account Number(s):
$28,400.00	630-960-98851

Finance Review by: Debra Wallace, Interim Town Manager/CFO

Total project cost is $ 1,500,000. Funding source (s) are:

- Utility Debt $ 1,500,000

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Change Order No. 1

DRAFT MOTION: Move to approve as presented in the agenda caption.

CHANGE ORDER No. 1

Effective Date: Upon execution by the Mayor

Owner: Town of Flower Mound
Contractor: Muniz Construction, Inc.
Project: High Road Water Line Replacement Phase III

CHANGE ORDER NO. 1

The compensation agreed upon in this Change Order is a full, complete, and final payment for all costs the Contractor incurs as a result of or relating to the change, whether said costs are known, unknown, foreseen, or unforeseen at this time, including without limitation, any costs for delay, extended overhead, ripple or impact costs, or any other effect on changed or unchanged work as a result of this change.

You are directed to make the following changes in the Contract Documents:

Item No.	Description	Unit	Add/ Deduct	Qty.	Unit Price	Extended Amount
8	1" Water Service (short)	EA	Deduct	21	1,200.00	$ (25,200.00)
9	1" Bullhead Water Service (short)	EA	Deduct	9	1,500.00	$ (13,500.00)
10	1" Water Service (long)	EA	Add	18	1,400.00	$ 25,200.00
37A	8" PVC DR-18 Water Line (Trenchless Drive Crossings)	LF	Add	200	150.00	$ 30,000.00
CO1-A	1" Bullhead Water Service (long)	EA	Add	7	$ 1,700.00	$ 11,900.00
SUBTOTAL						**$ 28,400.00**

JUSTIFICATION

Change Order No. 1 provides for the following:

Items 8,9,10 and CO1-A allow for water service lengths and types that were not identified on the plans correctly.

Items 37A allows for additional trenchless driveway crossings that were required during construction to minimize resident impact and keep one lane roads.

REVISED CONTRACT AMOUNTS

Original Contract	$ 1,225,406.00
Change Order #1	**$ 28,400.00**
Revised Contract Price	**$ 1,253,806.00**

Recommended for Approval

Brian Waltenburg, P.E. — 11/2/20
Assistant Director of Engineering — Date

Contractor — 11/2/20
President
Contractor Title — Date

Approved

Steve Dixon — Date
Mayor

TOWN COUNCIL AGENDA ITEM NO. 13

CONSENT ITEM

DATE: December 7, 2020

FROM: Blake Hummel, Senior Project Engineer

ITEM: **Consider approval of Change Order No. 2 for the construction of the FM2499 12-Inch Water Line Phase I (Dixon to South of FM1171) project, amending the contract with GRod Construction, LLC, to provide for an increase to the contract in the amount of $36,230.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On September 16, 2019, GRod Construction, LLC, was awarded the FM2499 12-Inch Water Line Phase I (Dixon to South of FM1171) project, in the amount of $859,092.30.

On September 30, 2020, Change Order No. 1 was approved via managers communication and provided an increase to the contract in the amount of $12,400.00 and an updated total contract amount of $871,492.30.

During construction the Town's Public Works department notified CIP of a recent break in the existing 12-inch water main along FM2499 near the bridge crossing Timber Creek. Due to the nature of the break and the vicinity of the current project, it was requested that this repair be incorporated into the FM2499 12-Inch Water Line Phase I (Dixon to South of FM1171) project. The fix repairs a broken 12-inch water main and reconnects the existing water system between Pecan Drive and Rippy Road on the west side of FM2499. The proposed change order also allows for the extension of a water line bore to provide additional clearance from the tree on the south west corner of the FM2499 and Waketon Road intersection.

If approved, Change Order No. 2 will increase the contract in the amount of $36,230.00, for a revised contract amount of $907,722.30.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: If the proposed change order is not approved the Town would not be able to proceed with fixing the existing broken water main and reconnect the current gap between Pecan Drive and Rippy Road on the west side of FM2499.

FISCAL IMPACT: $36,230.00

Proposed Expenditure/(Revenue):	Account Number(s):
$36,230.00	601-900-98838

Finance Review by: Debra Wallace, Interim Town Manager/CFO

Total project cost is $3,200,000. Funding sources are:

- Impact Fees $ 600,000
- TIRZ $ 1,700,000
- Utility Debt $ 900,000

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Change Order No. 2

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

CHANGE ORDER No. 2

Effective Date: Upon execution by the Mayor

Owner: Town of Flower Mound
Contractor: Grod Construction, LLC
Project: **FM2499 12-Inch Water Line Phase I (Dixon to South of FM1171)**

CHANGE ORDER NO. 2

The compensation agreed upon in this Change Order is a full, complete, and final payment for all costs the Contractor incurs as a result of or relating to the change, whether said costs are known, unknown, foreseen, or unforeseen at this time, including without limitation, any costs for delay, extended overhead, ripple or impact costs, or any other effect on changed or unchanged work as a result of this change.

You are directed to make the following changes in the Contract Documents:

Item No.	Description	Unit	Add/ Deduct	Qty.	Unit Price	Extended Amount
4	12" AWWA C900 DR 18 RESTRAINED JOINT PVC WATER LINE WITH CASING SPACERS	LF	Add	18	$110.00	$ 1,980.00
10	BORE WITH 20" I.D. STEEL CASING PIPE	LF	Add	18	$475.00	$ 8,550.00
CO2-A	WATER MAIN REPAIR - MOBILIZATION	LS	Add	1	$1,500.00	$ 1,500.00
CO2-B	WATER MAIN REPAIR - BARRICADES	LS	Add	1	$3,200.00	$ 3,200.00
CO2-C	WATER MAIN REPAIR - 12" WATER LINE REPLACEMENT	LS	Add	1	$9,500.00	$ 9,500.00
CO2-D	WATER MAIN REPAIR - TRENCH SAFETY	LS	Add	1	$1,500.00	$ 1,500.00
CO2-E	WATER MAIN REPAIR - CONNECT TO EXISTING WATER LINE	EA	Add	2	$3,500.00	$ 7,000.00
CO2-F	WATER MAIN REPAIR - SILT FENCE	LS	Add	1	$1,000.00	$ 1,000.00
CO2-G	WATER MAIN REPAIR - RE-VEGETATION	LS	Add	1	$2,000.00	$ 2,000.00
TOTAL						**$ 36,230.00**

JUSTIFICATION

Change Order No. 2 provides for the following:

Item 4 (12” AWWA C900 DR 18 RESTRAINED JOINT PVC WATER LINE WITH CASING SPACERS) allows for additional payment to be made for the extension of proposed restrained water main piping to obtain more distance from the drip line of the existing tree to be saved on the south west corner of the FM2499 and Waketon Road intersection.

Item 10 (BORE WITH 20” I.D. STEEL CASING PIPE) allows for additional payment to be made for the extension of the proposed bore to obtain more distance from the drip line of the existing tree to be saved on the south west corner of the FM2499 and Waketon Road intersection.

Item CO2-A (WATER MAIN REPAIR – MOBILIZATION) allows additional payment to be made for mobilizing equipment to a new area along FM2499 associated with the 12” water main repair.

Item CO2-B (WATER MAIN REPAIR – BARRICADES) allows additional payment to be made for the traffic control associated with the 12” water main repair.

Item CO2-C (WATER MAIN REPAIR – 12” WATER LINE REPLACEMENT) allows additional payment to be made for the work associated with installing new water main piping to fix the existing break in the 12” water main.

Item CO2-D (WATER MAIN REPAIR – TRENCH SAFETY) allows additional payment to be made for the installation of trench safety required for the 12” water main repair.

Item CO2-E (WATER MAIN REPAIR – CONNECT TO EXISTING WATER LINE) allows additional payment to be made for the connections to the existing water mains between Pecan Drive and Rippy Road associated with the 12" water main repair.

Item CO2-F (WATER MAIN REPAIR – SILT FENCE) allows additional payment to be made for the installation of silt fencing erosion control during the work required for the 12” water main repair.

Item CO2-G (WATER MAIN REPAIR – RE-VEGETATION) allows additional payment to be made for re-establishing the disturbed areas required for the 12” water main repair.

Attachment 1

Original Contract	**$ 859,092.30**
Change Order #1	$ 12,400.00
Change Order #2	$ 36,230.00
Revised Contract Price	**$ 907,722.30**

Original Substantial Completion Days	**120**
Change Order No. 1 Additional Days	5
Change Order No. 2 Additional Days	20
Revised Substantial Completion Days	**145**

Original Final Completion Days	**150**
Change Order No. 1 Additional Days	5
Change Order No. 2 Additional Days	20
Revised Final Completion Days	**175**

Recommended for Approval

Blake Hummel, P.E.
Senior Project Engineer

11/10/2020
Date

Contractor

11/11/2020
Date

Managing Member
Contractor Title

Approved

Steve Dixon
Mayor

Date

TOWN COUNCIL AGENDA ITEM NO. 9

CONSENT ITEM

DATE: December 7, 2020

FROM: Clay Riggs, PE, CFM, Assistant Director of Public Works

ITEM: **Consider approval of Change Order No. 2 to the Construction Agreement with Archer Western Construction, LLC, for the Wastewater Treatment Plant Rehabilitation Phase V, Solids Facility Improvements project, in the amount of $53,826.88; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On August 15, 2019, bids were received and opened for the Wastewater Treatment Plant Rehabilitation Phase V, Solids Facility Improvements project (Bid No. 2019-155-B). Archer Western Construction, LLC submitted the lowest qualified bid of the four responding bidders at a base bid of $9,199,060.00.

On August 3, 2019, Change Order No. 1 was approved and provided an increase to the contract in the amount of $146,162.98.

Change Order No. 2 provides rerouting existing fiber optic cables not identified in the plan set, upgrading door hardware, replacement of pressure reducing valves, installing hydrant gate valves, and a credit for work removed at the Sequence Batch Reactors (SBR) for an increase to the contract in the amount of $53,826.88 and a revised contract amount of $9,399,049.86. Fifty percent (50%) of the cost for rerouting the additional fiber lines will be reimbursed by the engineering consultant.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: A decision not to approve the change order would result in the inability to construct the solids facility building and complete the project, as the fiber lines are in direct conflict with the building foundation piers. The other items in the change order would need to be moved to a future project.

FISCAL IMPACT: $53,826.88

Proposed Expenditure (Revenue):	Account Number(s):
$53,826.88	630-970-98472

Finance Review by: Debra Wallace, Interim Town Manager/CFO

Total project cost is $ 11,800,000. Funding sources are:

- Utility Debt $ 11,800,000

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Change Order No. 2

DRAFT MOTION: Move to approve as presented in the agenda caption.

Wastewater Treatment Plant Rehabilitation Phase V-Solids Facility Improvements

Effective Date: Upon execution by the Mayor

Owner: Town of Flower Mound
Contractor: Archer Western Construction, LLC
Project: Wastewater Treatment Plant Rehabilitation Phase V-Solids Facility Improvements

CHANGE ORDER NO. 2

The compensation agreed upon in this Change Order is a full, complete, and final payment for all costs the Contractor incurs as a result of or relating to the change, whether said costs are known, unknown, foreseen, or unforeseen at this time, including without limitation, any costs for delay, extended overhead, ripple or impact costs, or any other effect on changed or unchanged work as a result of this change.

You are directed to make the following changes in the Contract Documents:

Item No.	Description	Unit	Add/ Deduct	Qty.	Unit Price	Extended Amount
CO2A	Upgrade Door Hardware	LS	Add	1	$ 571.03	$ 571.03
CO2B	Additional Fiber Rerouting	LS	Add	1	$ 36,673.37	$ 36,673.37
CO2C	Credit for SBR work Modification	LS	Deduct	1	$ 11,660.00	$ (11,660.00)
CO2D	Pressure Reducing Valve Replacement	LS	Add	1	$ 25,339.53	$ 25,339.53
CO2E	Install Hydrant Gate Valves	LS	Add	1	$ 2,902.95	$ 2,902.95
SUBTOTAL						**$ 53,826.88**

JUSTIFICATION

CO2A provides for upgrading new door hardware from Sargent to Schlage locks to match existing buildings at the plant.
CO2B provides for rerouting two existing fiber lines not shown on the plan set. The existing fiber line locations are in conflict with the new building foundation piers.
CO2C provides a credit work modiffication of the work at the Sequence Batch Reactors (SBR).
CO2D provides for replacing 32 existing 4-inch pressure reducing valves at the nitrification and aeration basins that were omitted from the plan set.
CO2E provides for installing gate valves on the hydrant leads to facilitate isolation of the hydrant for future maintenance.

REVISED CONTRACT AMOUNTS

Original Contract	$ 9,199,060.00
Change Order No. 1	$ 146,162.98
Change Order No. 2	$ 53,826.88
Revised Contract Price	**$ 9,399,049.86**

Substantial Completion Days	540
Change Order No. 1 Additional Days	87
Change Order No. 2 Additional Days	86
Revised Substantial Completion Days	**713**

Final Completion Days	600
Change Order No. 1 Additional Days	87
Change Order No. 2 Additional Days	86
Revised Final Completion Days	**773**

Recommended for Approval

Clay Riggs, PE, CFM — 10/23/20
Clay Riggs — Date
Assistant Director of Public Works

Jeff Kendall — **10/23/20**
Contractor — Date
Project Manager
Contractor Title

Approved

Steve Dixon — Date
Mayor, Town of Flower Mound

TOWN COUNCIL AGENDA ITEM NO. 15

CONSENT ITEM

DATE: December 7, 2020

FROM: Blake Hummel, Senior Project Engineer

ITEM: **Consider approval of Change Order No. 3 for the construction of the Kirkpatrick Lane 12-Inch Water Line Phase II project, amending the contract with A&M Construction and Utilities, Inc., to provide for an increase to the contract in the amount of $54,417.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On September 16, 2019, A&M Construction and Utilities, Inc. was awarded the construction contract for the Kirkpatrick Lane 12-Inch Water Line Phase II project. The original contract was awarded in the amount of $867,140.80.

On April 6, 2020, Change Order No. 1 was approved via managers communication and provided an increase to the contract in the amount of $11,640.00 and an updated total contract amount of $878,780.80.

On September 16, 2020, Change Order No. 2 was approved via managers communication and provided an increase to the contract in the amount of $14,011.10 and an updated total contract amount of $892,791.90.

Change Order No. 3 proposes to increase the contract to provide for additional work. During construction it was found that the existing 8-inch water main had been damaged and partially removed leaving a 500-foot gap in the existing water distribution system along Kirkpatrick Lane. This proposed change order allows the Town to fix this issue and connect the current dead-end water mains between College Parkway and Homestead.

If approved, Change Order No. 3 will increase the contract in the amount of $54,417.00, for a revised contract amount of $947,208.90.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: If the proposed change order is not approved the Town would not be able to proceed with fixing the existing broken water main and connect the gap between two dead end water mains.

FISCAL IMPACT: $54,417.00

Proposed Expenditure/(Revenue):	Account Number(s):
$54,417.00	630-960-96020

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Change Order No. 3

DRAFT MOTION: Move to approve as presented in the agenda caption.

CHANGE ORDER No. 3

Effective Date: Upon execution by the Mayor

Owner: Town of Flower Mound
Contractor: A&M Construction and Utilities, Inc.
Project: **Kirkpatrick Lane 12-Inch Water Line Phase II**

CHANGE ORDER NO. 3

The compensation agreed upon in this Change Order is a full, complete, and final payment for all costs the Contractor incurs as a result of or relating to the change, whether said costs are known, unknown, foreseen, or unforeseen at this time, including without limitation, any costs for delay, extended overhead, ripple or impact costs, or any other effect on changed or unchanged work as a result of this change.

You are directed to make the following changes in the Contract Documents:

Item No.	Description	Unit	Add/ Deduct	Qty.	Unit Price	Extended Amount
CO3-A	WATER MAIN REPAIR/CONNECTION - 8" PVC PIPE	LF	Add	500	$71.45	$ 35,725.00
CO3-B	WATER MAIN REPAIR/CONNECTION - FITTINGS	LS	Add	1	$3,700.00	$ 3,700.00
CO3-C	WATER MAIN REPAIR/CONNECTION - CONNECT TO EXISTING WATER LINE	EA	Add	2	$1,871.00	$ 3,742.00
CO3-D	WATER MAIN REPAIR/CONNECTION - TESTING & DISINFECTION	LS	Add	1	$1,500.00	$ 1,500.00
CO3-E	WATER MAIN REPAIR/CONNECTION - SEEDING/SODDING	SY	Add	800	$7.50	$ 6,000.00
CO3-F	WATER MAIN REPAIR/CONNECTION - EROSION CONTROL	LF	Add	500	$2.50	$ 1,250.00
CO3-G	WATER MAIN REPAIR/CONNECTION - MOBILIZATION & BONDS	LS	Add	1	$2,500.00	$ 2,500.00
TOTAL						**$ 54,417.00**

JUSTIFICATION

Change Order No. 3 provides for the following:

Item CO3-A (WATER MAIN REPAIR/CONNECTION – 8” PVC PIPE) allows for additional payment to be made for the installation of an 8" water main that was discovered to have been broken previously and left unfixed. This created two dead end water mains along Kirkpatrick Lane between College Parkway and Homestead Street.

Item CO3-B (WATER MAIN REPAIR/CONNECTION – FITTINGS) allows additional payment to be made for the water main fittings associated with the water main repair/connection between College Parkway and Homestead Street.

Item CO3-C (WATER MAIN REPAIR/CONNECTION – CONNECT TO EXISTING WATER LINE) allows additional payment to be made for the connections to the existing water mains between College Parkway and Homestead Street.

Item CO3-D (WATER MAIN REPAIR/CONNECTION – TESTING & DISINFECTION) allows additional payment to be made for the proper testing and chlorination associated with the water main connection between College Parkway and Homestead Street.

Item CO3-E (WATER MAIN REPAIR/CONNECTION – SEEDING/SODDING) allows additional payment to be made for re-establishing the disturbed areas associated with the water main repair/connection between College Parkway and Homestead Street.

Item CO3-F (WATER MAIN REPAIR/CONNECTION – EROSION CONTROL) allows additional payment to be made for the installation of silt fencing erosion control during the work associated with the water main repair/connection between College Parkway and Homestead Street.

Item CO3-G (WATER MAIN REPAIR/CONNECTION – MOBILIZATION & BONDS) allows additional payment to be made for mobilizing equipment to a new area along Kirkpatrick Lane associated with the water main repair/connection between College Parkway and Homestead Street.

Attachment 1

Original Contract	**$ 867,140.80**
Change Order #1	$ 11,640.00
Change Order #2	$ 14,011.10
Change Order #3	$ 54,417.00
Revised Contract Price	**$ 947,208.90**

Original Substantial Completion Days	**120**
Change Order No. 1 Additional Days	0
Change Order No. 2 Additional Days	10
Change Order No. 3 Additional Days	20
Revised Substantial Completion Days	**150**

Original Final Completion Days	**150**
Change Order No. 1 Additional Days	0
Change Order No. 2 Additional Days	10
Change Order No. 3 Additional Days	20
Revised Final Completion Days	**180**

Recommended for Approval

Blake Hummel, P.E. — 11/10/2020
Senior Project Engineer — Date

Contractor — 11/11/20
Date

Project Manager
Contractor Title

Approved

Steve Dixon — Date
Mayor

TOWN COUNCIL AGENDA ITEM NO. 16

CONSENT ITEM

DATE: December 7, 2020

FROM: Blake Hummel, Senior Project Engineer

ITEM: **Consider approval of the First Amendment to Professional Services Agreement for the East Waketon Road Drainage Improvements project, amending the agreement with Halff Associates, Inc. for an increase of $55,000.00, and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On January 7, 2019, a Professional Services Agreement for design of the Waketon Road at Timber Creek Drainage Improvements project (currently East Waketon Road Drainage Improvements on the Capital Improvements Project list) with Halff Associates, Inc. was approved for $212,790.00.

The design included approximately 1,500 linear feet of channel improvements from FM 2499 to Waketon Road and replacing the existing culverts under Waketon with 8-10'x4' culverts to alleviate closing Waketon Road during rain events. The project also assumed impacts to approximately 8.25 acres of wetland habitat and 770 linear feet of waters of the US requiring 404 permitting through the US Army Corps of Engineers.

During design it was determined that additional task items were required to re-assess the upstream hydrology in order to better model the true as-built conditions. The current model illustrates areas in the Town that should be flooding within the 100-year storm, however, have not historically flooded. The updated design phase services will look at the possibility of minimizing the project limits to reduce the impacts to trees and residential properties. The additional services propose to increase the Scope of Services in the amount of $55,000.00 and increase the total amount to $267,790.00.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: A decision to not approve the design amendment with Halff Associates, Inc. would cause the existing hydraulic model to remain as it is currently presented which illustrates areas in the Town flooding that have not historically seen flooding. Revising the hydrology and re-assessing the hydraulics will provide a more detailed model that may reduce the overall scope and cost for total drainage improvements to protect Waketon Road from flooding.

FISCAL IMPACT: $55,000.00

Proposed Expenditure (Revenue):	Account Number(s):
$55,000.00	308-103-98912

Finance Review by: Debra Wallace, Interim Town Manager/CFO

Total project cost is $ 3,080,000. Funding sources are:

- Decision Package (Cash from General Fund) $ 590,000
- TIRZ $ 470,000
- Stormwater Fund $ 350,000
- Utility Debt $ 1,670,000

LEGAL REVIEW: The Town's standard Amendment to Professional Services Agreement form documents prepared by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were used to draft this agreement. No alteration to the legal content of this form document was made in preparation of this Amendment to Professional Services Agreement.

ATTACHMENTS:

1. First Amendment to Professional Services Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

THE STATE OF TEXAS §
COUNTY OF DENTON §

FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH HALFF ASSOCIATES, INC.

This First Amendment to Professional Services Agreement ("First Amendment") is entered into on this 7th day of December, 2020, by and between the **TOWN OF FLOWER MOUND, TEXAS,** a municipal corporation located in Denton County, Texas, (hereinafter referred to as "Town"), acting by and through its Mayor, and **HALFF ASSOCIATES, INC.,** ("hereinafter referred to as "Consultant") regarding the following project:

WAKETON ROAD AT TIMBER CREEK DRAINAGE IMPROVEMENTS

I. RECITALS

WHEREAS, Town entered into a professional engineering design and related construction services from Consultant for the Waketon Road at Timber Creek Drainage Improvements project ("Services") on or about the 7th day of January, 2019 (the "Contract"); and

WHEREAS, Town and Consultant both desire to amend the Contract and Consultant is willing to undertake the performance of such additional services and agrees to the increased cost for such services as expressed herein;

II. TERMS OF AMENDMENT

NOW, THEREFORE, in consideration of the covenants and agreements hereinafter contained and subject to the terms and conditions hereinafter stated, the parties hereto do mutually agree as follows:

A.
Recitals Incorporated

The foregoing recitals are found to be true and correct, are fully incorporated into the body of this First Amendment, and made a part hereof by reference just as though they are set out in their entirety.

B.
Amendment of Paragraph No. II

From and after the approval of this First Amendment, Section II of the Contract, entitled "Scope of Services" is hereby deleted in its entirety and replaced with a new Paragraph No. II to read as follows:

> "CONSULTANT shall perform such professional engineering services, not necessarily limited to, the tasks enumerated more fully in Attachment "A-1" entitled "Scope of

Services", as are necessary to complete the Waketon Road at Timber Creek Drainage Improvements (hereafter referred to collectively as the "Project"). Attachment "A-1" is hereby incorporated herein by reference and made a part hereof as if written word for word. However, in case of conflict in the language of Attachment "A-1" and this Contract, the terms and conditions of this Contract shall be final and binding upon both parties hereto."

C.
Amendment of Paragraph No. III

From and after the approval of this First Amendment, Section III of the Contract entitled "Payment for Services" is amended in part by deleting the first paragraph of said Section III and replacing it with a new paragraph reading as follows and leaving all other provisions of Section III intact and unchanged:

"Total payment for services described herein for the Services for the Project shall be a sum not to exceed Two Hundred Sixty-Seven Thousand Seven Hundred Ninety Dollars and No/100 ($267,790.00) as specified in Attachment "B-1"."

D.
Revisions of the Scope of Services

From and after the approval of this First Amendment, Attachment "A", is replaced by the document attached hereto and incorporated herein by reference as Attachment "A-1" to the Contract. In case of conflict in the language of Attachment "A-1" and any other provision of the Contract, as amended by this First Amendment, the terms and conditions of the Contract, as amended by the First Amendment, shall control, and shall be final and binding upon both parties hereto.

From and after the approval of this First Amendment, Attachment "B", is replaced by the document attached hereto and incorporated herein by reference as Attachment "B-1" to the Contract. In case of conflict in the language of Attachment "B-1" and any other provision of the Contract, as amended by this First Amendment, the terms and conditions of the Contract, as amended by the First Amendment, shall control, and be final and binding upon both parties hereto.

E.
Contract Controls

All other provisions of the Contract remain in full force and effect. In the event of a conflict or an inconsistency between the Contract and/or the First Amendment, the terms of the First Amendment shall control.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first written above.

THE TOWN OF FLOWER MOUND, TEXAS

By:_____
The Honorable Steve Dixon
Mayor, Town of Flower Mound

Date Signed: _____

Attest:

_____
Town Secretary

HALFF ASSOCIATES, INC.

By: _____
Name LEIGH A. HOLLIS
Title Public Works Team Leader

Date Signed: 11/20/2020

State of Texas §
§
County of Denton §

This instrument was acknowledged before me on the 20th day of November, 2020, by Leigh Hollis., in her capacity as Public Works Team Leader of **Halff Associates, Inc.**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that she executed the same on behalf of and as the act of **Halff Associates, Inc.**

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 20th DAY OF November, 2020.

Lindsey Hutson
Notary Public, State of Texas

My Commission Expires:

05/26/2023

LINDSEY HUTSON
Notary Public
State of Texas
ID # 13023818-9
My Comm. Expires 05-26-2023

ATTACHMENT A-1

SCOPE OF SERVICES

PROJECT NAME: Waketon Road at Timber Creek Drainage Improvements

PROJECT UNDERSTANDING

The objective of this project is to design and construct the Alternative 4 drainage improvements recommended in Halff's Waketon Road at Timber Creek Tributary 16 Drainage Study completed in September 2017. Improvements include excavating a channel of approximately 1,500 linear feet from FM 2499 to Waketon Road, placing fill in the area between the channel and Waketon Road for potential development (approx. 8 acres), replacing the existing four (10'x4') culverts with eight (10'x4') culverts, and excavating approximately 720 linear feet of channel downstream of Waketon Road. These proposed improvements are intended to prevent water surface elevations (WSELs) under the 2-, 5-, and 10-year ultimate flows from overtopping Waketon Road.

This project will impact approximately 8.25 acres of wetland habitat and 770 linear feet of the waters of the US and will require 404 permitting.

The Town of Flower Mound intends to construct these improvements in two phases. Phase 1 includes all channel improvements and reclamation and Phase 2 includes replacing the box culverts across Waketon Road.

SCOPE OF PROFESSIONAL SERVICES

TASK 1: SECTION 404 INDIVIDUAL PERMIT

The U.S. Army Corps of Engineers (USACE), under Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404) regulates the placement of fill in navigable waters and other waters of the United States, respectively. Regulated activities are authorized through the issuance of general or standard individual permits, each of which consist of the following common components: Pre-construction notification or permit application; delineation of waters of the United States; threatened and endangered species assessment; cultural resources assessment; and compensatory mitigation plan, if needed.

Projects that are permitted by a federal authority also require a determination of effect on threatened and endangered species and cultural resources; these are also presented as required tasks. Based on preliminary assessment of the project, it is assumed that an individual permit and mitigation are going to be required and are included in the scope of work.

A. Section 404 Standard Individual Permit Application: Activities that do not qualify for authorization under the nationwide permit program may qualify for authorization by standard individual permit (IP). This task will include preparation of all permit components as outlined in ENG Form 4345, outlined as follows:

- Name, address, and telephone numbers of the prospective permittee;
- Location of the proposed project;
- A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the activity, in acres, linear feet, or other appropriate unit of measure;
- Project schedule;
- Names and addresses of adjoining property owners;
- List of authorizations required by other federal, interstate, state, or local agencies for the work, including approvals or denials already received;
- Delineation of waters of the United States (see description);
- Section 404(b)(1) alternatives analysis (see description);
- Compensatory mitigation plan (see description);
- Threatened and endangered species assessment (see description);
- Cultural resources assessment (see description).

B. Jurisdictional Determination/Delineation: An on-the-ground jurisdictional determination will be performed to identify the limits of waters of the United States, including wetlands. The delineated limits will be staked in the field; Halff will employ the use of GPS surveying techniques to delineate the limits of potential waters of the United States and/or wetlands. Halff will complete necessary wetland data forms, consistent with the 1987 Wetland Delineation Manual and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)," and take on-site photography for representative sites. A summary report will be prepared describing the methodology and results of the investigation, so that the report may satisfy the jurisdictional determination requirement for the anticipated permit.

C. Alternatives Analysis: This document presents an analysis of the potential alternatives considered and should demonstrate that the proposed project is the least environmentally damaging practicable alternative (LEDPA). This analysis of alternatives will be patterned after regulatory guidance from the Fort Worth District, USACE – Preparing an Alternatives Analysis under Section 404 of the Clean Water Act (November 2014). This document will utilize the drainage study to support the project need and discuss design alternatives.

- This task assumes at least two meetings at the USACE office with the project team to review and discuss the alternatives analysis.

D. Compensatory Mitigation Plan: Compensatory mitigation may be required to mitigate project impacts. Halff will conduct a functional assessment consistent with the USACE Fort Worth District assessment methods, which will be instrumental in developing the compensatory mitigation plan and determining the required mitigation credits that would need to be purchased. Because of the duration of the individual permit process, this task will require regular communications with potential mitigation banks to ensure that adequate credits are available. Upon completion of the permitting process, Halff will assist with bank purchase agreements and documenting purchase of credits with the USACE.

- This task assumes the preparation of both stream and wetland assessment data forms. If all mitigation can be achieved through a regional wetland bank (i.e. non-stream bank), then the debit ratio system may be used at a reduced fee.
- This task does not assume the preparation of a permittee responsible mitigation plan.

E. Threatened and Endangered Species Assessment: Halff will conduct a literature review of federal-listed threatened and endangered species for Denton County. This investigation will include a review of species information sheets to establish the likely range of these species. The investigation will also include a search request from the Texas Natural Diversity Database (TXNDD). The TXNDD data is to support determinations of potential species occurrence for the site and provide specific information where available. Supplemented by general observations during the jurisdictional determination task, the literature review and document search will conclude with a determination: a) whether preferred habitat or designated critical habitat for any listed species is likely to be present within the project area; b) whether any listed species is likely to occur; and c) whether the project will affect or has the potential to affect federal-listed species.

F. Cultural Resources Assessment: As the Town of Flower Mound is a political entity of the State of Texas, it is required to comply with the Antiquities Code of Texas. Upon notice-to-proceed, applications to conduct field work will be prepared and forwarded to the Town for review, and for signature as landowner and/or project sponsor. Upon issuance of the antiquities permit by the THC, the fieldwork can begin.

Prior to conducting field work, this task includes a cultural resources desktop review/archival research of the proposed project area including performing preliminary research into previously recorded archaeological or historical sites and previous cultural resources surveys in or adjacent to the area to determine the potential for encountering significant cultural resources within the project area. Resources reviewed will include the Texas Archeological Sites Atlas (TASA), the Texas Archaeological Research Laboratory (TARL); the General Land Office (GLO); the National Park Service's (NPS) online National Register Information System (NRIS); the Texas Historic Overlay (THO), as well as, historic and recent aerial photography and other relevant information. This review will be included in the final report and will be used in the consultation process with the THC during the permitting process.

In areas with potential for archeological materials, shovel tests will be excavated to 80 centimeters (cm) or the bottom of culturally sterile deposits, whichever is encountered first. In addition, the physical properties of each arbitrary level will be recorded. All tests will be recorded on maps and plotted using hand-help global positioning system (GPS) units. Investigators will document the results of each test on standardized shovel test forms.

As the project will require compliance with Section 106, an assessment of indirect effects will be required per the NHPA Section 106 regulations. Indirect effects for any above ground element to any standing structure of historic age will be considered within 300 feet of the project at each potential USACE jurisdictional crossing. Any structure encountered in these areas will be photographed and assessed for their potential eligibility for listing on the NRHP.

G. Section 401 Water Quality Certification: One of the requirements for obtaining a USACE Section 404 permit is certification from the Texas Commission on Environmental Quality (TCEQ) that the discharge to be permitted will comply with state water quality standards. Projects with a combination of impacts that exceed three acres of waters of the United States or 1,500 linear feet of stream are subject to an individual certification review by TCEQ. This is referred to as a Tier II Section 401 certification and is submitted as a separate report with the permit application.

- This scope assumes that the project will exceed this threshold.
- The Section 404 (b)(1) alternatives analysis will be completed first and used to prepare the Section 401 certification document.

TASK 2: GEOTECHNICAL ENGINEERING STUDY

Halff will retain the services of CMJ Engineering, Inc. to provide geotechnical engineering support. A geotechnical engineering report will be prepared to address general soil and groundwater conditions and recommendations for construction/requirements.

TASK 3: SUPPLEMENTAL DESIGN SURVEYS

Halff shall provide additional surveying services, which, in general, may be defined as normal services applicable to a project of this type. The following particulars apply.

A. Vertical benchmarks shall be established such that all points of construction shall be within 500 feet of a benchmark. Benchmarks should not be subject to loss during construction. Fire hydrants and similar appurtenances are not to be used for benchmarks. The surveyor shall establish temporary benchmarks throughout the length of the project.

B. Topographic features will be surveyed along with any other features needed for design, review, permitting, construction, and inspection of the project. Coverage will extend beyond the proposed improvements far enough to integrate the design with the adjacent properties. This scope of work includes a complete topographic survey approximately 1,000 LF downstream of Waketon Road. Areas between FM 2499 and Waketon Road were surveyed under a previous contract and will be utilized for this project.

C. Existing property corners, iron pins, etc. shall be tied to establish existing property boundaries and rights-of-way. Prior to surveying on private property, the surveyor shall secure written permission from the property owners and/or tenant and shall provide the Town a copy of said written permission. Should only oral permission be granted, the surveyor shall document the permission granted by letter to the property owner/tenant, with a copy to the Town. If permission cannot be obtained, the Town may assist, or other arrangements will be worked out.

TASK 4: BOUNDARY SURVEY & EASEMENTS:

The Town is currently obtaining the necessary right-of-way and easements from the primary property owner affected, Kenneth G. Whyburn. Additionally, and if required, easement documents will be prepared for a maximum of one (1) permanent and one (1) temporary construction easement from a second property owner, Ivest Services, LLC., that could be affect by the project. Upon approval of channel and culvert alignments,

Halff shall survey, render field notes, and prepare individual exhibits for all easement parcels.

A. Individual Exhibits for each parcel shall be prepared to contain the following:

- Area required
- Parcel number
- Property owner name, mailing address, and volume and page of deed
- Existing easements
- Exhibits will be drawn to scale
- All of the above shall be placed on one page of 8-1/2" x 14" paper, labeled as Exhibit "B" and signed and sealed by a Texas Registered Professional Land Surveyor.

B. Legal descriptions for each parcel shall reference the volume, page, and owner of the parent tract and shall be incorporated into a standard Town of Flower Mound conveyance document as Exhibit "A". Individual parcels will be cross-referenced on the plans.

C. Submit easement documents to the Town and make necessary corrections.

D. Upon approval of the easements by the Town, and if required, Halff shall stake and flag the easement for inspection by the appraiser and property owner. The documents, including legal description, shall be furnished to the Town in Microsoft Word and PDF format.

TASK 5: HYDRAULIC ANALYSIS

Halff will model the proposed hydraulic conditions and evaluate the results. Specific tasks related to the hydraulic analysis include:

A. Determine existing 100-year flows at proposed culvert improvements at Waketon Road.

B. Evaluate hydraulic impacts of proposed culvert improvements at Waketon Road.

C. Evaluate proposed grading improvements along the channel.

D. Summarize tabular hydraulic model results.

E. This scope of work does not include preparation of a CLOMR or LOMR.

TASK 6: DESIGN PHASE SERVICES

A. Project Management and Coordination

Halff's project management activities shall include task leadership and direction, telephone and written communication, project update meetings, presentation of process and findings, and personnel and data management among other general project management activities. Specific project management and coordination tasks are detailed below:

- Conduct one (1) project kick-off meeting with the Town of Flower Mound to confirm and clarify project scope, schedule, Town objectives, and expected project delivery.
- Conduct one (1) pre-application meeting with the USACE to discuss permit application and alternatives.
- Communicate regularly with the Town regarding project progress.
- Attend project update meetings, as needed, with the Town's Project Manager.
- Attend review meetings with the Town at the end of each design phase.
- Ensure Quality Control/Quality Assurance (QA/QC) is practiced in performance of the work.

B. Data Collection and Field Reconnaissance

- Perform field assessment of the proposed corridor and prepare a photographic record of major features.
- Obtain master plans, record drawings and other records from the Town.

C. Preparation of Contract Documents

Halff shall develop construction plans for review, permitting, bidding, construction, inspection and record keeping. In general, construction plans shall be consistent with normal practice for projects of this nature. The construction plans will consist of sheets generally ordered as follows:

- Title Sheet – The title sheet shall include a location map. It shall also include a sheet index with drawings numbered consecutively and without subscripts. Additionally, the title sheet shall show the project name, project number, date, Town logo, Consultant's name, address, and telephone number and other items as may be specified.

- Project General Notes and Legend – These sheets will include a listing of abbreviations, legend, and general notes.
- Project Layout Sheet – The purpose of the project layout is to depict the project in a simplified view. Major items of work will be shown without excessive detail. This sheet(s) will include a listing of abbreviations, legend, general notes, and key map.
- Typical Sections – At a minimum, typical sections will be drawn showing the relationship of the existing creek and grading. Additionally, typical section(s) for the repair of Waketon Road will be provided. Typical sections will include right-of-way lines, fences, utilities, and all proposed improvements.
- Plan and Profile Sheets – Plan-profile sheets will be arranged from south to north and from west to east, with the north arrow up or to the right on the sheet. Plan-profile sheets will be drawn to scales of 1" = 20' h and 1" = 4' v. Stationing will be from south to north or west to east with the beginning station being set at approximately 1+00. Each plan-profile sheet will include no more than 500 feet of culvert or water line; thus, leaving ample margins both left and right. The plan and profile station will align vertically on the sheet with the proposed centerline drawn parallel to the profile grid. When there is a centerline curvature, the plan-profile should be drawn so that as much of the plan view is in alignment as possible. Plan-profile sheets shall depict all existing and proposed items pertinent to the project.
- Grading Plan Sheets – Halff will prepare grading plans for proposed channel improvements on sheets having a scale of 1" = 20'. One-foot contours and adequate spot elevations will be provided to allow a contractor to grade the site.
- Cross-Section Sheets – The cross-section sheets will show cross-section views of the channel and proposed and existing grades at various station locations along the length of the project.
- Detail Sheets – The Town's standard drawings will be used as a beginning point in developing standard details for this project. They will be reviewed and modified as necessary for this project. Where other agency standards are used, they shall be reduced as necessary to fit on the Town's standard sheet format with complete title block.
- Miscellaneous – Construction plans will address temporary and permanent erosion control, traffic control and demolition.
- Generic Sheet List – Following is a general list of plan sheets required for each construction package.

    - Cover Sheet
    - Sheet Index and Legend
    - Project General Notes

- Project Layout Sheets
- Channel Typical Sections
- Waketon Road Typical Section
- Demolition Plan
- Grading Plans
- Drainage Area Map
- Hydraulic Calculations
- Culvert Plan & Profile
- Culvert Details
- Headwall Details
- Special Headwall Details
- Waketon Road Paving & Grading Plan
- Paving Details
- Pavement Marking Plan
- Pavement Marking Details
- 16-Inch Water Line Plan & Profile
- Water Line Details
- Erosion Control Plans
- Erosion Control Details
- Traffic Control Plans
- Traffic Control Details

- Submittals – Plans shall be prepared and submitted at the 30%, 60% and 90% milestones, respectively. Final plans shall then be prepared and submitted at the 100% milestone. Also, Halff may submit plan sheets or working drawings to the Town for review and comment to reduce the number of revisions that otherwise would be required. During development of the plans, Halff shall attend meetings as needed. Halff shall, in company with the Town, perform at least one plans-in-hand review.
- Design – The design of the project shall be in general accordance with the Town of Flower Mound ordinances, standard details, and good engineering practices. During the design phase, Halff shall contact various utility companies and obtain information relating to existing utility lines. The design should avoid major utility relocations, where practical. When required, proposed relocations or replacements will be shown in plan and profile.
- Specifications – Halff shall prepare a project manual and technical specifications required for bidding and constructing the project. The project manual will be provided in the Town's standard format. Only specifications amending or supplementing North Central Texas Council of Governments (NCTCOG)

specifications need be furnished. Project manual, specifications, bid items and quantities shall be furnished on hard copy and by electronic file.

- Estimates – An opinion of probable construction cost (OPCC) will be developed at each milestone submittal.
- Prints – Electronic files in PDF format and up to five (5) sets of half-size (11”x17”) plans will be submitted to the Town at each milestone.

TASK 7: BIDDING PHASE SERVICES

Bidding Phase: The project will be bid in two phases. Phase 1 will include the channelization and reclamation. Phase 2 will include the culvert and road repairs to Waketon Road.

A. Bid Contract Documents and Specifications – Five (5) sets of final construction plans (11”x17”) and specifications will be provided for bidding purposes.

B. Issue Addenda – Prepare addendums for clarifications to the contract documents and answer Contractors’ questions.

C. Prebid Meeting – Attend and prepare for prebid meeting.

D. Construction Contract Documents and Specifications – Prepare final construction contract documents for selected Contractor. Provide five (5) half-size (11”x17”) sets of conformed plans, one (1) full-size (22”x34”) set of conformed plans and a PDF file.

TASK 8: RECORD DRAWINGS

A. Prepare record drawings from contractor’s marks showing changes made during construction. Transfer contractor’s marks to digital format. Halff will be provided the contractor’s revisions and shall not be responsible for verifying their completeness or accuracy.

B. Provide to the Town one (1) CD containing AutoCAD (*.DWG), PDF (entire set), and an individual TIFF files of each sheet.

TASK 9: HYDROLOGIC ANALYSIS

The initial 2017 scope to prepare hydraulic improvement alternatives for Waketon Road did not include hydrologic updates. Per direction from the City, the computed runoff from the City’s ultimate conditions hydrologic model was utilized. The 2019 scope

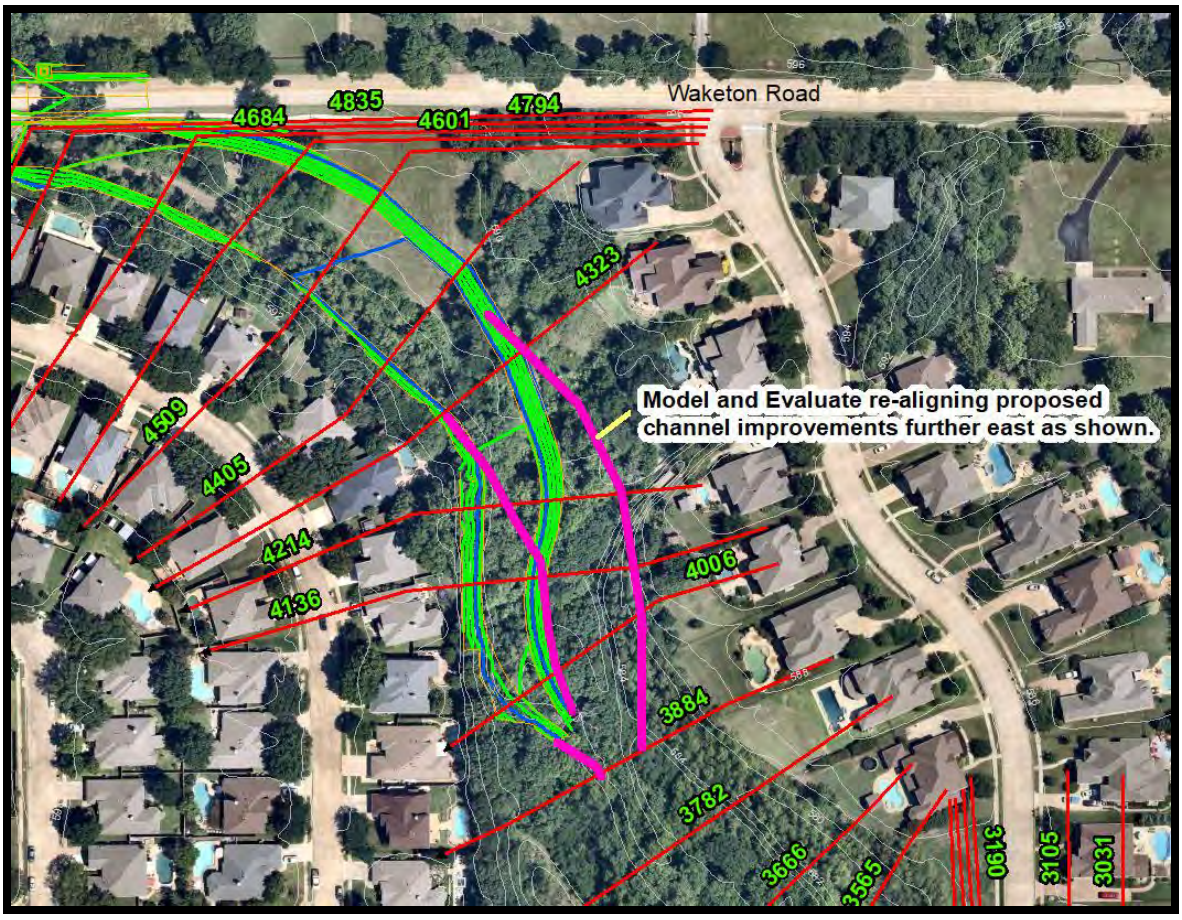
consisted of minor revisions to the City's ultimate conditions hydrologic model for the Tributary 16 watershed. Percent impervious and times of concentration values were re-calculated to represent existing instead of ultimate conditions. All other assumptions, methods, and basin delineations were not changed from the City's model. This additional services scope will update any necessary aspects of the City's model including basin delineation for Tributary 16 watershed and assumptions.

A. Use the existing conditions hydrologic model prepared for 2019 scope which was based on the City's ultimate conditions hydrologic model.
B. Utilize the plan sets provided by City.
C. Obtain and utilize the best available topographic data, plan sets, storm drain layers, pond modeling and plans.
D. Obtain any available gauge, stream flow, or historical data to potentially calibrate the hydrologic model.
E. Update basin delineations to follow contours, storm drains, and detention ponds as needed. Additional basins will not be added unless necessary to represent recent construction or detention ponds.
F. Compute existing conditions curve numbers based on soils only. Update the existing conditions percent impervious prepared in 2019 as necessary. Perform a sensitivity analysis to consider using the SCS Curve Number method instead of the Initial and Constant Loss method.
G. Update times of concentration values prepared for the 2019 study as necessary. Perform a sensitivity analysis to consider using the SCS Unit Hydrograph method instead of the Snyder Unit Hydrograph method.
H. If the modeling continues to be based on Snyder Unit Hydrograph method, confirm the peaking coefficient is appropriate for the watershed.
I. Confirm the chosen control step is appropriate for the times of concentration in the model.
J. Compute 1-, 5-, 10-, 25-, 50-, 100-, and 500-year existing land use conditions peak flood discharges.
K. Compare resulting discharges to any gauge or historical data provided. Calibrate if enough data provided.

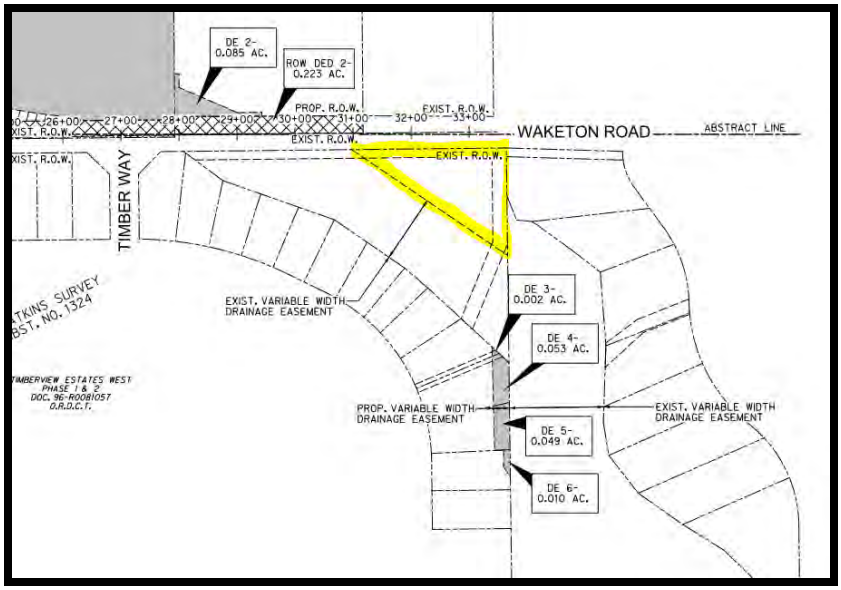
TASK 10: UPDATE HYDRAULIC ANALYSIS

Halff will update the modeling from the 2019 study with new alternative analyses and evaluate the results. Specific tasks related to the hydraulic analysis include:

A. Model and evaluate the feasibility of realigning the proposed channel improvements downstream of Waketon Road between sections 4405 and 3884 to be further east as shown below.



B. Model and evaluate the feasibility of widening the channel improvements immediately downstream of Waketon Road to utilize the City property shown below and to potentially minimize the channel improvements downstream of this property.



C. Summarize tabular hydraulic model results.

D. This scope of work does not include preparation of a CLOMR or LOMR.

TASK 11: DESIGN PHASE SERVICES

The grading model will be updated to evaluate the practicability of shifting the location of the proposed channel further to the east to avoid disturbing the existing channel directly adjacent to the back fences on Timber Park Drive. Additionally, the grading model will be adjusted to evaluate the feasibility of widening the channel immediately downstream of Waketon Road as highlighted in Task 2, Paragraph B contained herein. This scope includes preparation of an exhibit showing the required clearing and ultimate footprint to construct the proposed channel alignment suitable for a meeting with HOA personnel and/or property owners. Additionally, this scope includes all plan updates required to implement the revised channel location including, but not limited to, grading plans, channel cross-sections, erosion control plans, horizontal control, and earthwork quantities.

ADDITIONAL SERVICES

Any services not specifically provided for in the above scope will be considered additional services and can be performed at our then current hourly rates. Additional services Halff can provide include, but are not limited to, the following:

- Construction staking
- Platting or other surveying services not identified in the above Scope of Services
- Easement acquisition services
- Subsurface utility engineering services (SUE)
- Attending public meetings
- Professional services associated with the construction phase of the project
- Attending the bid opening
- Preparation of bid tabulation or recommendation letter
- Reviewing contractor references
- Any services not listed in the Scope of Services

ATTACHMENT B-1

COMPENSATION

Halff Associates, Inc. will provide the Scope of Services for a lump sum fee.

TASK 1 – Section 404 Individual Permit	$54,800
TASK 2 – Geotechnical Engineering Study	$13,090
TASK 3 – Supplemental Design Surveys	$8,300
TASK 4 – Boundary Survey and Easements (if required)	$9,400
TASK 5 – Hydraulic Analysis	$25,000
TASK 6 – Design Phase Services	$92,800
TASK 7 – Bidding Phase Services (Phase I & II)	$5,600
TASK 8 – Record Drawings (Phase I & II)	$3,800
TASK 9 – Hydrologic Analysis	$30,000
TASK 10 – Update Hydraulic Analysis	$15,000
TASK 11 – Design Phase Services	$10,000
TOTAL	**$267,790**

Additional services will be negotiated at the time they are identified.

TOWN COUNCIL AGENDA ITEM NO. 17

CONSENT ITEM

DATE: December 7, 2020

FROM: Chuck Jennings, Director of Parks and Recreation

ITEM: **Consider approval of the purchase and installation of Life Floor splash pad safety surfacing by Inside Edge CIS LLC, for the Heritage Park Improvements project, in the amount of $64,984.53.**

BACKGROUND INFORMATION: The Parks Board, Community Development Corporation, and Town Council approved the Capital Improvement Program Heritage Park Improvements, which includes the addition of safety surfacing at the Heritage Springs splash pad for fiscal year 2020-2021. This Capital Improvement Program project will be funded through the 4B fund utilizing sales tax revenue.

The proposed Life Floor product is the only product on the market that meets the NSF/ANSI Standard 50. Inside Edge is Life Floor's Certified Installer and is required to be used to secure the full warranty. With Life Floor meeting the NSF/ANSI 50 certification, the product is certified to provide slip resistance, impact attenuation, water permeability, flammability, chemical resistance, is UV stable, and does not support the growth of microbes.

Staff requests to install this product to provide for a safer experience for the children utilizing the splash pad, as we have had complaints related to slips and falls in the past. Staff visited sites where this product has been installed and called many other locations for references.

ALTERNATIVES/OPTIONS: The Town Council can deny approval of the purchase and direct staff to continue operating the splashpad with the concrete surface.

FISCAL IMPACT: $64,984.53

Proposed Expenditure/(Revenue):	Account Number(s):
$64,984.53	317-110-90704

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: N/A

ATTACHMENTS:
1. Inside Edge Quote
2. Sole Source Letter

DRAFT MOTION: Move to approve as presented in the agenda caption.

LIFE FLOOR + SAFETY SURACES

PARTNERS IN SAFETY + DESIGN

PEACE OF MIND

is right around the corner.

Thank you for your interest in the premier aquatic flooring solution for safety and comfort and **the only NSF-50 certified flooring solution** for aquatic spaces.

Safety Surfaces and **Life Floor** are partnering to make aquatic areas safer.

As the only Preferred Installation Partner in North America, **Safety Surfaces** provides an industry leading warranty on both installation and product.
And our expertise in site assessment, project management, experienced installation, and post installation care, ensures a worry-free solution.

We appreciate the opportunity to partner with you on this project and to assist in creating a safer more enjoyable environment for your visitors.

Enclosed, please find our proposal outlining the scope of work, our services, and pricing required to complete the project to your satisfaction.

THANK YOU!

INSIDE EDGE
SAFETY SURFACES

November16th, 2020

Account: City of Flower Mound, TX
Location: 600 Spinks Rd., Flower Mound, TX 75028
Project: Heritage Park Splash Pad

PROJECT OVERVIEW

Scope:

Inside Edge will provide "Preferred" certified labor and materials to install Life Floor at the existing outdoor splash pad as per the attached design as shown. Includes removal of existing PIP play area. Transitions are provided at the perimeter and floor drains as required.

***NOTE: City to provide access to dumpster for PIP & waste disposal, no additional dumpster provided.**

Demo/Prep Work:

- Inside Edge will demo the existing PIP area to expose the original concrete substrate.
- Inside Edge will diamond grind the existing concrete substrate to prepare it to receive new Life Floor.
- Inside Edge will fill expansion joints as needed prior to Life Floor installation. Additionally, the transition from the concrete to the current PIP area will be ramped to account for the height variance.
- Inside Edge will properly clean the surface prior to application of Life Floor and adhesive.

Installation:

- Inside Edge will lay, cut, and adhere 3/8" Life Floor (2,388 SF with cutting allowance) per the design shown below.

  ***NOTE: Concrete repairs are NOT included; if required, a Change Work Order will be issued.**

Finishing:

- Inside Edge will wipe down new Life Floor to remove any residual adhesive left on the surface or seams of the tiles.
- Inside Edge will roll the Life Floor tiles down to ensure proper tile adhesion.
- Inside Edge will complete a final quality control check of tile installation and do walk through with Site Supervisor before leaving the project.
- Inside Edge will provide a complimentary Cleaning Starter Kit valued at $150.00 (see cleaning products description below).

Base Project (includes labor, materials, and shipping)	**$ 64,984.53****

***Note: Assumed tax exempt status; sales tax NOT included**

QUOTE VALID FOR 60 DAYS*

*****LIFE FLOOR TILES REQUIRE AN 8-WEEK LEAD TIME UPON RECEIPT OF ORDER*****

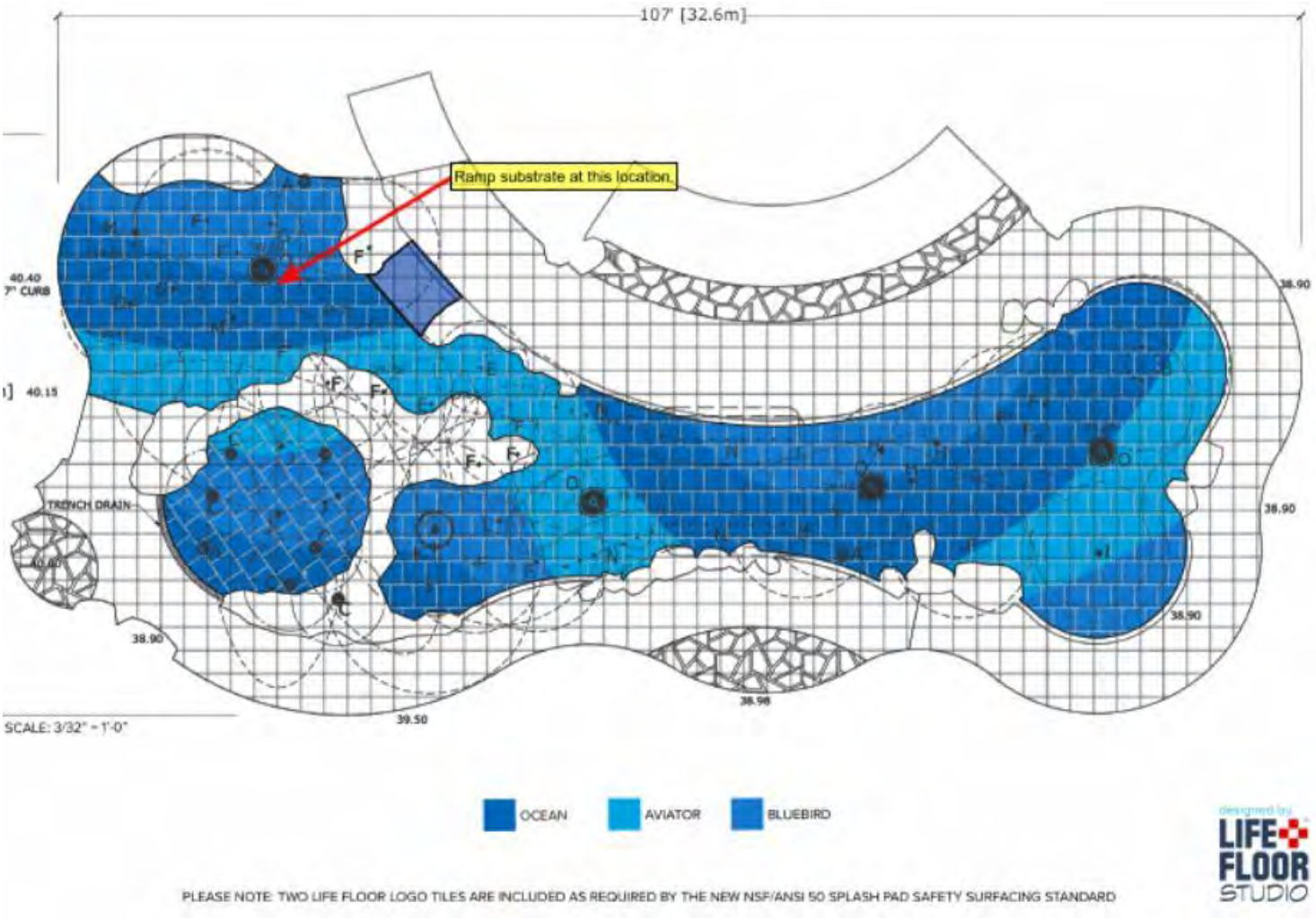
Items Specifically NOT included:

- Bid or Performance Bonds
- Substrate repairs
- Dumpster/Offsite Disposal

Payment Terms:

- **100% Final payment (Due upon substantial completion)**

PROPOSED AREA/DESIGN



PROTECT YOUR INVESTMENT

Protect your investment and keep it looking as good as the day it was installed by using our proprietary line of cleaners, developed specifically to work with Life Floor tiles.

LIFE FLOOR CLEANING PRODUCTS

Degreaser Cleaner: Removes oil and grease stains from food, feet and sunscreen. Sold by the case. (4 bottles) **$140**

Peroxide Cleaner: A multi-purpose cleaner. Effectively removes grime and organic matter. Sold by the case. (4 bottles) **$120**

Mineral Deposit Remover: Effectively removes calcium, rust stains, lime, magnesium, & aluminum oxide. Sold by the case. (4 bottles) **$140**

Foamer Filler: An applicator that allows maintenance staff the ability to control the concentration of the Cleaner. Sold individually. **$40**

Degreaser & Peroxide Combination: Includes 2 bottles of Degreaser Cleaner and 2 bottles of Peroxide Cleaner. **$130**

Starter Combination: Includes 1 bottle of Degreaser Cleaner, 1 bottle of Peroxide Cleaner, 1 bottle of Mineral Deposit Remover and 1 Foamer Filler. **$150**

3 STEPS TO A SUCCESSFUL CLEANING

1. Apply the Cleaner **2. Agitate** the Cleaner **3. Recover** the Cleaner

RECOMMENDED CLEANING SCHEDULE

Week 1: Degreaser Cleaner **Week 2:** Degreaser Cleaner **Week 3:** Peroxide Cleaner*
REPEAT

*Recommend using Peroxide Cleaner in showers, bathrooms, and locker rooms once per week.

** Use Mineral Deposit Remover wherever deposits can be seen on the tile.

To **ORDER** or learn more about how to clean & maintain your Installation: **www.safetysurfaces.com/SHOP**

Warranty Terms

1. EXPRESS LIMITED WARRANTY. Inside Edge does NOT warranty the product or adhesive provided by Life Floor. See Manufacturer's warranty. Life Floor® warrants all ⅞" and ⅜" thick Life Floor® tiles to be free of defect in workmanship or materials for a term of five (5) years from the date of delivery of the Products (the "Warranty Period"). Life Floor® warrants all 3/16" thick Life Floor® tile orders for a term of two (2) years from the date of delivery of the Products (the "Warranty Period"). Warranty does not cover color changes of any kind. Life Floor® requires Preferred Installation Partners to warrant all installation services they provide to be free of defects in workmanship and adhesion for a term of two (2) years from the date of completion of the installation of the Products (the "Warranty Period"). Life Floor® requires Certified Installers to warrant all installation services they provide to be free of defects in workmanship and adhesion for a term of one (1) year from the date of completion of the installation of the Products (the "Warranty Period"). If an installation warranty occurs during the Warranty Period it will be the responsibility of the Installer to repair or replace the tiles. Life Floor® does not warranty installation services.

Limitations to the warranty period include areas of extreme traffic, extreme UV exposure, and extreme chemical exposure. Extreme traffic defined by areas with annual traffic of 250,000 users or greater. Extreme UV exposure is defined by more than 90 days of daytime in the "Very High" or "Extreme" category UV index of 10 or higher as defined by the World Health Organization UV index within a 365 day period. If customer purchases a Life Floor product with additional UV additive, then the Extreme UV condition does not apply. Extreme chemical exposure defined as water chemistry used on the product with more than 28 days cumulative time in a 365 day period outside of the "ideal" set in APSP Water Quality Standards.

Life Floor® warrants all Products in areas of extreme traffic, extreme UV exposure, and extreme chemical exposure for a term of two (2) years from the date of delivery of the Products if installed by a Certified or Preferred Installation Partner and one (1) year from the date of delivery of the Products otherwise. Life Floor® does not warranty any purchases if the Customer knowingly purchases factory second (defective) quality material.

The Customer shall notify Life Floor® in writing within thirty (30) days of the discovery of a defect causing the Products to be noncompliant with this express warranty. Any such notice must be received during the Warranty Period in order to be valid. If Life Floor®, after testing (or performing an on-site audit), determines that there is a defect causing the Products to be noncompliant with this express warranty during the Warranty Period, Life Floor®'s sole responsibility under this express warranty shall be either to repair or replace, at Life Floor®'s option and expense, any such defective Product. Life Floor®'s express warranty herein set forth is expressly conditioned upon the proper maintenance, care, and use of the Products. Improper maintenance, care, and/or use of the Products will invalidate the warranty including failure to follow the Life Floor® Recommended Cleaning Process. See Life Floor® owner's manual for further limitations on use.

2. Life Floor's express warranty herein set forth is expressly conditioned upon the proper maintenance, care, and use of the Products. Improper maintenance, care, and/or use (Continued from previous page) of the Products will invalidate the warranty including failure to follow the Life Floor® Recommended Cleaning Process. See Life Floor® owner's manual for further limitations on use.

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TOWN COUNCIL AGENDA ITEM NO. 18

CONSENT ITEM

DATE: December 7, 2020

FROM: Kari Biddix, Park Development Manager

ITEM: **Consider approval of a Professional Services Agreement with Alliance Geotechnical Group, Inc., to provide testing services in the amount of $44,206.50 for the Canyon Falls Park project.**

BACKGROUND INFORMATION: On November 16, 2020, the construction agreement for the Canyon Falls Park project, in the amount of $2,625,996.00, was awarded to MSB Constructors, Inc. The attached Professional Services Agreement provides for material testing associated with the installation of the project.

BOARD REVIEW/CITIZEN FEEDBACK: The Master Plan was recommended by the Parks Board at the February 7, 2017, meeting and approved by Town Council on March 6, 2017. The Professional Services Agreement (PSA) with Mesa Design Associates, Inc., to implement the Master Plan for the dedicated park land of 10.756 acres within the Canyon Falls development was approved at the October 1, 2018, Town Council meeting.

ALTERNATIVES/OPTIONS: Materials Testing is required as a part of the recently awarded construction project.

FISCAL IMPACT: $44,206.50

Proposed Expenditure (Revenue):	Account Number(s):
$44,206.50	310-320-90701

Finance Review by: Debra Wallace, Interim Town Manager /CFO DW

Total project cost is $ 3,150,000. Funding sources are:

- Dedicated Sales Tax $ 150,000
- Park Development $ 3,000,000

LEGAL REVIEW: The Town's standard contract agreement form documents, prepared by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were used to draft this agreement. No alteration to the legal content of this form document was made in preparation of this Contract Agreement.

ATTACHMENTS:

1. Professional Services Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

THE STATE OF TEXAS §
COUNTY OF DENTON §

PROFESSIONAL SERVICES AGREEMENT WITH ALLIANCE GEOTECHNICAL GROUP

This contract is entered into on this 7th day of December, 2020, by and between the **TOWN OF FLOWER MOUND, TEXAS,** a municipal corporation located in Denton County, Texas, (hereinafter referred to as "TOWN"), acting by and through its Mayor, and **ALLIANCE GEOTECHNICAL GROUP** ("hereinafter referred to as "CONSULTANT") whose address is 3328 Halifax Street, Dallas, Texas 75247.

RECITALS

WHEREAS, TOWN desires to obtain professional services from CONSULTANT relative to construction materials engineering and testing and other services for the Canyon Falls Park project; and

WHEREAS, CONSULTANT is a construction materials engineering and testing firm qualified to provide such services and is willing to undertake the performance of such services for TOWN in exchange for fees hereinafter specified;

TERMS OF AGREEMENT

NOW, THEREFORE, in consideration of the covenants and agreements hereinafter contained and subject to the terms and conditions hereinafter stated, the parties hereto do mutually agree as follows:

I.
Employment of Consultant

CONSULTANT will perform as an independent contractor all services under this Contract to the prevailing professional standards consistent with the level of care and skill ordinarily exercised by members of the architectural, engineering and planning professions, both public and private, currently practicing in the same locality under similar conditions including but not limited to the exercise of reasonable, informed judgments and prompt, timely action. If CONSULTANT is representing that it has special expertise in one or more areas to be utilized in this Contract, then CONSULTANT agrees to perform those special expertise services to the appropriate local, regional and national professional standards.

II.
Scope of Services

CONSULTANT shall perform such services as are necessary to provide the Canyon Falls Park project Construction Materials Engineering and Testing specifically including, but not necessarily limited to, the tasks enumerated more fully in Attachment

"A" hereto entitled "Scope of Work" (hereafter referred to as the "Project"). Attachment "A" is hereby incorporated herein by reference and made a part hereof as if written word for word. However, in case of conflict in the language of Attachment "A" and this Contract, the terms and conditions of this Contract shall be final and binding upon both parties hereto.

III.
Payment for Services

Total payment for services described herein shall be a sum not to exceed Forty Four Thousand Two Hundred Six and 50/100 Dollars ($44,206.50). This total payment for services includes CONSULTANT's ordinary expenses. Additional expenses and charges, which are extraordinary in nature, must be approved in advance by TOWN in writing signed by the parties. Such extraordinary expenses may be paid as incurred and billed to the TOWN pursuant to this Contract over and above the total payment amount identified in this provision. Any extraordinary expenses or charges not approved in writing in advance by the TOWN shall remain the sole responsibility of the CONSULTANT.

CONSULTANT will bill TOWN on an hourly basis for certain services provided combined with a flat fee for specific tests performed in accordance with Attachment "A"; provided however that this Contract shall control in the event of any conflict between the language in Attachment "A" and the language in this Contract. If additional services, trips or expenses are requested, CONSULTANT will not provide such additional services until authorized by TOWN in writing to proceed. The scope of services shall be strictly limited. TOWN shall not be required to pay any amount in excess of the amount identified in the preceding paragraph unless TOWN shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

Each month CONSULTANT will submit to TOWN an invoice for actual services performed and reimbursable expenses incurred by CONSULTANT during the previous month for which payment is sought. Each invoice shall be itemized to show the amount of work performed that month broken down by the identity of the person(s) performing such work, the amount of time expended by such person(s) in performing that work, the billing rate for each such person, and a brief summary of the work or testing performed by each such person. Each invoice shall also state the percentage of work completed on the Project, the total of the current invoice amount and a running total balance for the Project to date.

Assuming that TOWN agrees with the invoice, that TOWN has not determined any of the work to be unsatisfactory, or that TOWN otherwise does not dispute any of the amounts billed, within thirty (30) days of receipt of each such monthly invoice TOWN shall make monthly payments in the amount shown by CONSULTANT's approved monthly statements and other documentation submitted.

Nothing contained in this Contract shall require TOWN to pay for any work that TOWN has determined has not been successfully completed or is unsatisfactory as determined by TOWN, or which is not otherwise submitted in compliance with the terms of this Contract, nor shall failure to withhold payment pursuant to the provisions of this section constitute a waiver of any right, at law or in equity, which TOWN may have if CONSULTANT is in default, including the right to bring legal action for damages or for specific performance of this Contract. Waiver of any default under this Contract shall not be deemed a waiver of any subsequent default.

IV.
Revisions of the Scope of Services

TOWN reserves the right to revise or expand the scope of services after due approval by TOWN as TOWN may deem necessary, but in such event TOWN shall pay CONSULTANT equitable compensation for such services. In any event, when CONSULTANT is directed to revise or expand the scope of services under this Section of the Contract, CONSULTANT shall provide TOWN a written proposal for the entire costs involved in performing such additional services. Prior to CONSULTANT undertaking any revised or expanded services as directed by TOWN under this Contract, TOWN must authorize in writing the nature and scope of the services and accept the method and amount of compensation and the time involved in all phases of the Project.

It is expressly understood and agreed by CONSULTANT that any compensation not specified in Paragraph III herein above may require Flower Mound Town Council approval and is subject to the current budget year limitations.

V.
Term

This Contract shall begin on the date first written above, and shall terminate when TOWN has approved the Project as being final or otherwise terminates this Contract as provided herein.

VI.
Contract Termination Provision

Notwithstanding any other provision of this Contract, this Contract may be terminated at any time by TOWN for any reason, with or without cause, by providing CONSULTANT thirty (30) days written notice of such termination. Upon receipt of such notice, CONSULTANT shall immediately terminate working on, placing orders or entering into contracts for supplies, assistance, facilities or materials in connection with this Contract and shall proceed to promptly cancel all existing contracts insofar as they are related to this Contract.

VII.
Ownership of Documents

All materials and documents prepared or assembled by CONSULTANT under this Contract shall become the sole property of TOWN and shall be delivered to TOWN without restriction on future use. CONSULTANT may retain in its files copies of all drawings, specifications and all other pertinent information for the work. CONSULTANT shall have no liability for changes made to any materials or other documents by others subsequent to the completion of the Contract.

VIII.
Insurance

A. CONSULTANT shall, at its own expense, purchase, maintain and keep in force during the term of this Contract such insurance as set forth below. CONSULTANT shall not commence work under this Contract until CONSULTANT has obtained all the insurance required under this Contract and such insurance has been approved by TOWN, nor shall CONSULTANT allow any subcontractor to commence work on its own subcontract until all similar insurance of the subcontractor has been obtained and approved. All insurance policies provided under this Contract shall be written on an "occurrence" basis save and except the Professional Liability Insurance which may be written on a "claims-made" basis, provided that "tail coverage" or continuation coverage is provided. The insurance requirements shall remain in effect throughout the term of this Contract.

The CONSULTANT shall furnish to TOWN certificates of insurance executed by the insurer or its authorized agent stating coverages, limits, expiration dates and compliance with all applicable required provisions. Certificates shall reference the Project and be addressed as follows:

Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028
Email: purchasing@flower-mound.com

The following policies and coverage shall be required:

1. Worker's Compensation Insurance (as required by law) with the policy endorsed to provide a waiver of subrogation as to TOWN; such policy to provide for Employers' Liability Insurance of not less than $100,000.00 for each accident, $100,000.00 disease-each employee, $500,000.00 disease-policy limit;

2. Commercial General Liability Insurance including, but not limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractor's and Contractual Liability, including but not limited to coverage for all of the indemnification obligations of

CONSULTANT under this Contract, and fully insuring CONSULTANT's liability for injury to or death of employees of TOWN and of third parties, extended to include personal injury liability coverage and for damage to property of third parties, with minimum combined single limits of $1,000,000 per occurrence, $1,000,000 Products/Completed Operations Aggregate and $1,000,000 general aggregate per occurrence. Coverage must be written on an occurrence form. The General Aggregate shall apply on a per project basis;

3. Business Automobile Liability Insurance, covering owned, hired and non-owned vehicles, with a minimum combined bodily injury and property damage limit of $1,000,000.00 per occurrence; and

4. Professional Liability Insurance: CONSULTANT shall obtain and maintain at all times during the prosecution of the work under this Contract professional liability insurance, which may be written on a claims made form provided that "tail coverage" or continuation coverage is provided. Limits of liability shall be $1,000,000.00 per claim, $1,000,000.00 annual aggregate. The coverage under this policy shall include a contractual liability endorsement.

If any of the foregoing insurance is written on a claims-made form, coverage shall be continuous (by renewal or extended reporting period) for not less than thirty-six (36) months following completion of the Contract and acceptance by the TOWN. All such insurance shall be purchased from an insurance company that meets a financial rating of B+VI or better as assigned by A.M. Best Company or equivalent.

B. Each insurance policy to be furnished by CONSULTANT shall include the following conditions by endorsement to the policy:

1. The TOWN shall be named as an additional insured on the Commercial General Liability policy, by using endorsement CG2026 or broader;

2. The TOWN shall also be named as an additional insured as to all other applicable coverage save and except the Worker's Compensation Insurance and Professional Liability Insurance;

3. Each policy will require that thirty (30) days prior to the expiration, cancellation, nonrenewal or any material change in coverage, a notice thereof shall be given to TOWN by certified mail to:

Kari Biddix
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6278 Telephone

However, if the policy is canceled for nonpayment of premium, only ten (10) days advance written notice to TOWN is required. CONSULTANT shall also notify TOWN within twenty-four (24) hours after receipt of any notices of expiration, cancellation, nonrenewal or any material change in coverage it receives from its insurer(s);

4. The term "Owner" or "TOWN" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of TOWN and the individual members, employees and agents thereof in their official capacities, and/or while acting on behalf of TOWN;

5. The policy phrase "Other Insurance" shall not apply to TOWN where TOWN is an additional insured on the policy; and

6. All provisions of the Contract concerning liability, duty and standards of care together with the indemnification provision shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.

C. Concerning insurance to be furnished by CONSULTANT, it is a condition precedent to acceptability thereof that:

1. Any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by CONSULTANT. The TOWN's decision(s) thereon shall be final;

2. All policies are to be written through companies duly approved to transact that class of insurance in the State of Texas; and

3. All liability policies required herein, save and except Professional Liability Insurance, shall be written with an "occurrence" basis coverage trigger.

D. CONSULTANT agrees to the following:

1. CONSULTANT hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against TOWN, it being the intention that the insurance policies shall protect all parties to this Contract and be primary coverage for all losses covered by the policies;

2. Companies issuing the insurance policies and CONSULTANT shall have no recourse against TOWN for payment of any premiums, or assessments for any deductible, as all such premiums are the sole responsibility and risk of CONSULTANT;

3. Approval, disapproval or failure to act by TOWN regarding any insurance supplied by CONSULTANT (or any subcontractors) shall not relieve CONSULTANT of full responsibility or liability for damages and accidents as set forth in the Contract documents. Neither shall the insolvency or denial of liability by the insurance company exonerate CONSULTANT from liability; and

4. No special payments shall be made for any insurance that the CONSULTANT and subcontractors are required to carry; all are included in the contract price and the contract unit prices.

Any of the insurance policies required under this section may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

IX.
Right to Inspect Records

CONSULTANT agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of CONSULTANT involving transactions relating to this Contract. CONSULTANT agrees that TOWN shall have access during normal working hours to all necessary CONSULTANT facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. TOWN shall give CONSULTANT reasonable advance notice of intended audits.

CONSULTANT further agrees to include in subcontract(s), if any, a provision that any subcontractor or engineer agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of such engineer or sub-contractor involving transactions to the subcontract, and further, that TOWN shall have access during normal working hours to all such engineer or sub-contractor facilities and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of the paragraph. TOWN shall give any such engineer or sub-contractor reasonable advance notice of intended audits.

X.
Successors and Assigns

TOWN and CONSULTANT each bind themselves and their successors, executors, administrators and assigns to the other party to this Contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. Neither TOWN nor CONSULTANT shall assign or transfer its interest herein without the prior written consent of the other.

XI.
CONSULTANT's Liability

Acceptance of the final plans by the TOWN shall not constitute nor be deemed a release of the responsibility and liability of CONSULTANT, its employees, associates, agents or consultants for the accuracy and competency of their designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work prepared by said CONSULTANT, its employees, associates, agents or sub-consultants. In this regard, CONSULTANT acknowledges that TOWN is retaining CONSULTANT to provide the services described herein, in reliance upon CONSULTANT's specialized expertise and experience, and in reliance thereon.

XII.
Indemnification

THE PROVISIONS OF THIS SECTION ARE SUBJECT TO THE LIMITATIONS OF TEXAS LOCAL GOVERNMENT CODE SECTION 271.904 AND SHALL BE CONSTRUED TO THAT EFFECT. THE CONSULTANT AS ALLOWED BY TEXAS LOCAL GOVERNMENT CODE SECTION 271.904 WILL STILL NAME TOWN AS ADDITIONAL INSURED IN ITS GENERAL LIABILITY POLICY AND PROVIDE ANY DEFENSE AS ALLOWED BY THE POLICY. CONSULTANT DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY AND HOLD HARMLESS TOWN AND ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM ANY AND ALL LIABILITY, CLAIMS, SUITS, DEMANDS OR CAUSES OF ACTION, INCLUDING ALL EXPENSES OF LITIGATION AND/OR SETTLEMENT, THAT MAY ARISE BY REASON OF DEATH OR INJURY TO PERSONS OR DAMAGE TO OR LOSS OF USE OF PROPERTY OCCASIONED BY ANY WRONGFUL INTENTIONAL ACT OR OMISSION OF CONSULTANT AS WELL AS ANY NEGLIGENT OMISSION, ACT OR ERROR OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, OR OTHER PERSONS FOR WHOM CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS CONTRACT, REGARDLESS OF WHETHER SUCH LIABILITY, CLAIMS, SUITS, DEMANDS OR CAUSES OF ACTION IS THE RESULT IN PART OF TOWN'S NEGLIGENCE OR FAULT, AND CONSULTANT WILL, AT ITS OWN COST AND EXPENSE, DEFEND AND PROTECT TOWN AGAINST ANY AND ALL SUCH CLAIMS AND DEMANDS.

XIII.
Independent Contractor

CONSULTANT's status shall be that of an Independent Contractor and not an agent, servant, employee or representative of TOWN in the performance of this Contract. No term or provision of or act of CONSULTANT or TOWN under this Contract shall be construed as changing that status. CONSULTANT will have exclusive control of and the exclusive right to control the details of the work performed hereunder, and shall be liable for the acts and omissions of its officers, agents, employees, contractors, subcontractors and engineers and the doctrine of respondeat superior shall not apply as between TOWN and CONSULTANT, its officers, agents, employees, contractors, subcontractors and engineers, and nothing herein shall be construed as creating a partnership or joint enterprise between TOWN and CONSULTANT.

XIV.
Default

If at any time during the term of this Contract, CONSULTANT shall fail to commence the work in accordance with the provisions of this Contract, or fail to diligently provide services in an efficient, timely and careful manner and in strict accordance with the provisions of this Contract, or fail to use an adequate number or quality of personnel to complete the work or fail to perform any of its obligations under this Contract, then TOWN shall have the right, if CONSULTANT shall not cure any such default after thirty (30) days written notice thereof, to terminate this Contract for cause. Any such act by TOWN shall not be deemed a waiver of any other right or remedy of TOWN. If after exercising any such remedy due to CONSULTANT's nonperformance under this Contract, the cost to TOWN to complete the work to be performed under this Contract is in excess of that part of the Contract sum which has not theretofore been paid to CONSULTANT hereunder, CONSULTANT shall be liable for and shall reimburse TOWN for such excess. CONSULTANT'S liability under this provision shall be limited to the total dollar amount of this Contract, except to the extent that such liability is covered by CONSULTANT's insurance, whether maintained as a requirement of this Contract or otherwise.

TOWN's remedies for CONSULTANT's default or breach under this Contract shall be limited to one or more of the following remedies which may be exercised separately or in combination at TOWN's sole exclusive choice:

(a) Specific performance of the Contract;

(b) Re-performance of this Contract at no extra charge to TOWN; or

(c) Monetary damages in an amount not to exceed:

(1) The amount of any applicable insurance coverage CONSULTANT is required to purchase and maintain under this Contract plus any deductible amount to be paid by CONSULTANT in conjunction with said coverage regardless of whether CONSULTANT has actually purchased and maintained said coverage, plus any additional insurance maintained by CONSULTANT in excess or in addition to the coverage required under this Contract; plus

(2) The total dollar amount of this Contract.

XV.
Provisions Surviving Termination

The terms of Sections XII entitled Indemnification, and XVIII entitled Confidential Information shall survive termination of this Contract.

XVI.
Changes

TOWN may, from time to time, require changes in the scope of services to be performed under this Contract. Such changes as are mutually agreed upon by and between TOWN and CONSULTANT shall be incorporated by written modification to this Contract.

XVII.
Conflicts of Interest

CONSULTANT covenants and agrees that CONSULTANT and its associates and employees will have no interest, and will acquire no interest, either direct or indirect, which will conflict in any manner with the performance of the services called for under this Contract. All activities, investigations and other efforts made by CONSULTANT pursuant to this Contract will be conducted by employees, associates or subcontractors of CONSULTANT.

No officer or employee of TOWN shall have any personal, financial interest, direct or indirect, in this Contract nor have any direct financial interest in the sale to TOWN of any land, materials, supplies, or services under this Contract, except on behalf of TOWN as a TOWN officer or employee. Any violation of this prohibition with knowledge, expressed or implied, of the person or corporation contracting with TOWN shall render the Contract voidable by the Director or the Town Council.

XVIII.
Confidential Information

CONSULTANT hereby acknowledges and agrees that its representatives may have access to or otherwise receive information during the furtherance of its obligations in

accordance with this Contract, which is of a confidential, non-public or proprietary nature. CONSULTANT shall treat any such information received in full confidence and will not disclose or appropriate such Confidential Information for its own use or the use of any third party at any time during or subsequent to this Contract. As used herein, "Confidential Information" means all oral and written information concerning TOWN, its affiliates and subsidiaries, and all oral and written information concerning TOWN or its activities, that is of a non-public, proprietary or confidential nature including, without limitation, information pertaining to customer lists, services, methods, processes and operating procedures, together with all analyses, compilation, studies or other documents, whether prepared by CONSULTANT or others, which contain or otherwise reflect such information. The term "Confidential Information" shall not include such materials that are or become generally available to the public other than as a result of disclosure of CONSULTANT, or are required to be disclosed by a governmental authority or by law, as determined by TOWN's attorney.

XIX.
Notice Information

All notices and communications under this CONTRACT to be mailed to TOWN shall be sent to the address of TOWN's agent as follows, unless and until CONSULTANT is otherwise notified:

Kari Biddix
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6278 Telephone

Notices and communications to be mailed or delivered to CONSULTANT shall be sent to the address of CONSULTANT as follows, unless and until TOWN is otherwise notified:

J.K. Marthers, Project Manager
Alliance Geotechnical Group
7970 West Main Street
Frisco, TX 75033
214-618-4100 Telephone

Any notices and communications required to be given in writing by one party to the other shall be considered as having been given to the addressee on the date the notice or communication is posted, faxed or personally delivered by the sending party.

XX.

Applicable Law

The Contract is entered into subject to the Flower Mound Town Charter and ordinances of TOWN, as same may be amended from time to time, and is subject to and is to be construed, governed and enforced under all applicable State of Texas and federal laws. CONSULTANT will make any and all reports required per federal, state or local law including, but not limited to, proper reporting to the Internal Revenue Service, as required in accordance with CONSULTANT's income. Situs of this Contract is agreed to be Denton County, Texas, for all purposes, including performance and execution.

XXI.
Non-Discrimination

CONSULTANT shall not discriminate against any employee, applicant for employment, contractor, or sub-contractor because of the race, age, color, religion, sex, or national origin of such person. Engineer shall take affirmative action to insure that all such persons are treated equally during their employment without regard to their race, age, color, religion, sex, or national origin. If CONSULTANT fails to comply with the federal or state laws relating to Equal Employment Opportunity, it is agreed that TOWN, at its option, may do either or both of the following:

(a) Cancel, terminate, or suspend the Contract in whole or in part; or

(b) Declare CONSULTANT ineligible for future TOWN contracts until it is determined to be in compliance.

XXII.
Arbitration

CONSULTANT agrees not to enter into any agreement to arbitrate arising out of, or relating to, this Contract which would subject TOWN to being a party to any arbitration without TOWN's prior written consent.

XXIII.
No Waiver of Governmental Immunity

Nothing in this Contract shall be construed as a waiver of TOWN'S governmental immunity, or of any applicable limitation on damages, or any other legal protection or defense or privilege of TOWN, except to the extent expressly provided otherwise herein.

XXIV.
Severability

If any of the terms, provisions, covenants, conditions or any other part of this Contract are for any reason held to be invalid, void or unenforceable, the remainder of

the terms, provisions, covenants, conditions or any other part of this Contract shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

XXV.
Remedies

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted; but each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this Contract may be waived without written consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this Contract.

XXVI.
Entire Agreement

This Contract embodies the entire agreement of the parties hereto, superseding all oral or written previous and contemporaneous agreements between the parties relating to matters herein, and except as otherwise provided herein cannot be modified without written agreement of the parties.

XXVII.
Non-Waiver

It is further agreed that one (1) or more instances of forbearance by TOWN in the exercise of its rights herein shall in no way constitute a waiver thereof.

XXVIII.
Headings

The headings of this Contract are for the convenience of reference only and shall not affect any of the terms and conditions hereof in any manner.

XXIX.
Venue

This Contract is fully performable in Denton County, Texas, and the parties to this Contract agree and covenant that this Contract will be enforceable in Flower Mound, Texas; and that if legal action is necessary to enforce this Contract, exclusive venue will lie in Denton County, Texas.

XXX.
No Third Party Beneficiary

For purposes of this Contract, including its intended operation and effect, the parties (TOWN and CONSULTANT) specifically agree and contract that: (1) the Contract

only affects matters/disputes between the parties to this Contract, and is in no way intended by the parties to benefit or otherwise affect any third person or entity notwithstanding the fact that such third person or entity may be in contractual relationship with TOWN or CONSULTANT or both; and (2) the terms of this Contract are not intended to release, either by contract or operation of law, any third person or entity from obligations owing by them to either TOWN or CONSULTANT.

[The remainder of this page left blank intentionally]

IN WITNESS WHEREOF, the parties hereto have caused this document to be executed as of the date first above written.

THE TOWN OF FLOWER MOUND, TEXAS

By:_____
The Honorable Steve Dixon
Mayor, Town of Flower Mound

Date Signed: _____

Attest:

_____
Town Secretary

CONSULTANT:
ALLIANCE GEOTECHNICAL GROUP

By: _____
Name: Robert P. Nance
Title: President
Date Signed: _____

State of Texas §
§
County of Dallas §

This instrument was acknowledged before me on the 10th day of November, 2020, by Robert P. Nance in his capacity as President of Alliance Geotechnical Group, Inc., a Texas Corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the same on behalf of and as the act of President of Alliance Geotechnical Group, Inc.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 10th DAY OF November, 2020.

_____
Notary Public, State of Texas

My Commission Expires:
11-18-2023

TINA MORRIS
Notary Public, State of Texas
Comm. Expires 11-18-2023
Notary ID 130444312

ATTACHMENT A

ALLIANCE GEOTECHNICAL GROUP

GEOTECHNICAL ENGINEERING
ENVIRONMENTAL CONSULTING
CONSTRUCTION MATERIALS ENGINEERING AND TESTING

October 2, 2020

Town of Flower Mound
Attn: Ms. Kari Biddix
2121 Cross Timbers Rd.
Flower Mound, Texas 75028

Email: kari.biddix@flower-mound.com

Re: Canyon Falls Park
Flower Mound, Texas
Engineering Inspection & Testing Services
AGG Proposal No: P20-0950C

Dear Ms. Biddix,

Alliance Geotechnical Group (AGG) is pleased to confirm our firm's interest in providing materials inspection and testing services for the proposed project noted above. A schedule of unit fees for this project is attached. Actual charges will be based on the contractors/client scheduling.

After reviewing our fee schedule if you have any questions, please contact the undersigned at (214) 618-4100. If acceptable, please sign below and return to our office as our Authorization to Proceed. We look forward to the opportunity of working with you on this project.

Respectfully submitted,

ALLIANCE GEOTECHNICAL GROUP

J.K. Marthers
Project Manager

Douglas S. Land, P.E.
Branch Manager

Approved by:_____ Date:_____
Signature

SCHEDULE OF FEES

FOR

CONSTRUCTION MATERIALS ENGINEERING & TESTING

CANYON FALLS PARK FLOWER MOUND, TEXAS AGG PROPOSAL NO.: P20-0950C

DESCRIPTION OF SERVICES	QUANTITY		UNIT FEE	UNIT	FEE
A. DRILLED PIER INSPECTION & TESTING					
• Sr. Engineering Tech to perform testing	16	@	$47.50	hour	$760.00
• Engineering Tech Overtime	4	@	$71.25	hour	$285.00
• Concrete Cylinder Test	8	@	$18.00	each	$144.00
• Geotechnical Project Manager	5	@	$125.00	hour	$625.00
• Project Manager	2	@	$75.00	hour	$150.00
• Vehicle Charge	3	@	$40.00	trip	$120.00
				Sub-Total	**$2,084.00**
B. EARTHWORK MASS GRADING & TESTING					
• Moisture/Density Relationship of Soils (ASTM D-698)	5	@	$165.00	each	$825.00
• Atterberg Limits	5	@	$55.00	each	$275.00
• Percent finer than #200 sieve	5	@	$35.00	each	$175.00
• Soluble Sulfates		@	$85.00	each	$0.00
• Select fill PI verifications (1/5000 sf/lift)	24	@	$55.00	each	$1,320.00
• Field Density Testing	250	@	$15.00	each	$3,750.00
• Sr. Engineering Tech to perform testing	150	@	$47.50	hour	$7,125.00
• Sr. Engineering Tech to perform testing-Overtime	24	@	$71.25	hour	$1,710.00
• Project Manager	22	@	$75.00	hour	$1,650.00
• Geotechnical Project Manager	32	@	$125.00	hour	$4,000.00
• Vehicle Charge	31	@	$40.00	trip	$1,240.00
				Sub-Total	**$22,070.00**
C. MASONRY INSPECTION & TESTING					
• Technician for Masonry Observations	10	@	$47.50	hour	$475.00
• Technician Overtime for Masonry Observations		@	$71.25	hour	$0.00
• Mortar Test Cubes (6 per set)	12	@	$18.00	each	$216.00
• Grout Prizms (6 per set)	12		$18.00	each	$216.00
• Project Manager	1	@	$75.00	hour	$75.00
• Vehicle Charge	2	@	$40.00	trip	$80.00
				Sub-Total	**$1,062.00**
D. POST TENSIONING INSPECTION & TESTING					
• Technician for Post Tension Observations	16	@	$47.50	hour	$760.00
• Technician Overtime for Post Tension Observations		@	$71.25	hour	$0.00
• Project Manager	1	@	$75.00	hour	$75.00
• Vehicle Charge	2	@	$40.00	trip	$80.00
				Sub-Total	**$915.00**

SCHEDULE OF FEES

FOR

CONSTRUCTION MATERIALS ENGINEERING & TESTING

CANYON FALLS PARK FLOWER MOUND, TEXAS AGG PROPOSAL NO.: P20-0950C

DESCRIPTION OF SERVICES	QUANTITY		UNIT FEE	UNIT	FEE
E. STRUCTURAL CONCRETE INSPECTION & TESTING					
• Sr. Engineering Tech to perform testing	50	@	$47.50	hour	$2,375.00
• Engineering Tech Overtime		@	$71.25	hour	$0.00
• Concrete Cylinder Test- Structural (3 per 100 cyd)	40	@	$18.00	each	$720.00
• Concrete Cylinder Pick Up	5	@	$160.00	each	$800.00
• Project Manager	4	@	$75.00	hour	$300.00
• Vehicle Charge	10	@	$40.00	trip	$400.00
				Sub-Total	**$4,595.00**
F. CONCRETE PAVING/SIDEWALK INSPECTION & TESTING					
• Sr. Engineering Tech to perform testing	113	@	$47.50	hour	$5,367.50
• Engineering Tech Overtime	2	@	$71.25	hour	$142.50
• Concrete Cylinder Test	96	@	$18.00	each	$1,728.00
• Concrete Cylinder Pick Up	12	@	$160.00	each	$1,920.00
• Project Manager	8	@	$75.00	hour	$600.00
• Vehicle Charge	22	@	$40.00	trip	$880.00
				Sub-Total	**$10,638.00**
G. UTILITY BACKFILL TESTING & INSPECTION					
• Field Density Testing	56	@	$15.00	each	$840.00
• Concrete Test Cylinders		@	$18.00	each	$0.00
• Sr. Engineering Tech to perform testing	25	@	$47.50	hour	$1,187.50
• Project Manager	3	@	$75.00	hour	$225.00
• Vehicle Charge	6	@	$40.00	trip	$240.00
				Sub-Total	**$2,842.50**
				ESTIMATED TOTAL	**$44,206.50**

SCHEDULE OF FEES

FOR

CONSTRUCTION MATERIALS ENGINEERING & TESTING

CANYON FALLS PARK FLOWER MOUND, TEXAS AGG PROPOSAL NO.: P20-0950C

DESCRIPTION OF SERVICES	QUANTITY	UNIT FEE	UNIT	FEE

NOTES:

1. Overtime rates of 1.5 times the regular hourly rate will be charged for hours worked over eight (8) hours per day Monday thru Friday or any time **before 7:00 a.m. or after 5:00 p.m.** Service performed on Saturdays and Sundays will be billed at 1.5 times the regular hourly rate. Services performed on recognized holidays will be billed at 2.0 times the regular hourly rate.
2. All laboratory test fees are F.O.B. our laboratory; additional charge for sample pickup may apply.
3. Any additional tests will be billed on a hourly rate and charged at the applicable rate, portal-to-portal.
4. Additional test not specified in this proposal will be quoted upon request.
5. This proposal does not include any technician stand-by, non-readiness charges, and/or trips or re-tests of the previous failing tests.
6. This proposal was prepared based on the following schedule ASSUMPTIONS:

   * Moisture conditioning beneath five structure pad's - 12 estimated full-time site visits (10 hrs/day)
   * Building pad excavation limits - 3 estimated site visits
   * Building pad footing inspections by geotechnical engineer - 5 estimated site visits
   * Pier observation & testing - 3 estimated site visits
   * Structural concrete testing - 10 estimated site visits
   * Post tensioning observations - 2 estimated site visits
   * Utility backfill testing - 5 estimated site visits
   * Sub grade paving testing - 2 estimated site visits
   * Sub grade sidewalk testing - 10 estimated site visits
   * Concrete testing for pavement/sidewalks - 22 estimated site visits
   * Masonry testing on park sign - 2 estimated site visits
   * Concrete cylinder pick-up - estimated site visits

NOTE: The above fees are estimates only. Actual charges will be based on contractor scheduling and actual construction quantities. The above amount will not be exceeded without prior approval.

TOWN COUNCIL AGENDA ITEM NO. 19

CONSENT ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Consider approval of a Professional Services Agreement with Pacheco Koch Consulting Engineers, Inc., for the work associated with the Engineering Standards and Details Update project, in the amount of $170,990.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: The current engineering standards were last updated in 2010. Since that time, changes in engineering best practices and referenced materials (TxDOT, NCTCOG, etc..) have made the standards as written out of date and inconsistent. The current standards as written are also difficult to navigate and locate specific information. Due to these issues, staff spends a significant amount of time answering questions and providing plan comments on engineering standards. An update will also provide staff the ability moving forward to ensure the Town's infrastructure is designed and installed based on the latest industry standards.

The scope of the Professional Services Agreement includes reviewing the current Town Design Criteria and Construction Standards, reorganizing and restructuring the content of the design criteria, revising the construction standards, and updating the content of the design criteria and construction standards to meet current local and federal guidelines.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: The decision to not approve the proposed Professional Services Agreement for and engineering standards updates would prevent staff from ensuring the Town's infrastructure is designed and installed based on the latest industry standards.

FISCAL IMPACT: $170,990.00

Proposed Expenditure/(Revenue):	Account Number(s):
$20,999.00	505-220-25340
$50,000.00	610-960-25340
$50,000.00	610-590-25340
$50,000.00	610-970-25340

Finance Review by: Debra Wallace, Interim Town Manager/CFO DW

Total project cost is $ 200,000. Funding sources are:

- Decision package (cash from General Fund) $ 50,000
- Decision package (cash from Utility Funds) $ 150,000 $

LEGAL REVIEW: The Town's standard Professional Services Agreement form documents prepared by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were used to draft this agreement. No alteration to the legal content of this form document was made in preparation of this Professional Services Agreement.

ATTACHMENTS:

1. Professional Service Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

THE STATE OF TEXAS §
COUNTY OF DENTON §

PROFESSIONAL SERVICES AGREEMENT WITH PACHECO KOCH CONSULTING ENGINEERS, INC.

This contract is entered into on this 7th day of December, 2020, by and between the **TOWN OF FLOWER MOUND, TEXAS,** a municipal corporation located in Denton County, Texas, (hereinafter referred to as "TOWN"), acting by and through its Mayor, and **Pacheco Koch Consulting Engineers, Inc.,** ("hereinafter referred to as "CONSULTANT") whose address is 4060 Bryant Irvin Rd., Fort Worth, TX 76109.

RECITALS

WHEREAS, TOWN desires to obtain professional services from CONSULTANT relative to updating the Town's Engineering Standards and Details; and

WHEREAS, CONSULTANT is an engineering firm qualified to provide such services and is willing to undertake the performance of such services for the TOWN in exchange for fees hereinafter specified;

TERMS OF AGREEMENT

NOW, THEREFORE, in consideration of the covenants and agreements hereinafter contained and subject to the terms and conditions hereinafter stated, the parties hereto do mutually agree as follows:

I.
Employment of Consultant

CONSULTANT will perform as an independent contractor all services under this Contract to the prevailing professional standards consistent with the level of care and skill ordinarily exercised by members of the architectural, engineering and planning professions, both public and private, currently practicing in the same locality under similar conditions including but not limited to the exercise of reasonable, informed judgments and prompt, timely action. If CONSULTANT has represented or is representing that it has special expertise in one or more areas to be utilized in this Contract, then CONSULTANT agrees to perform those special expertise services to the appropriate local, regional and national professional standards.

II.
Scope of Services

CONSULTANT shall perform such services as are necessary to provide services for the Engineering Standards and Details Update project specifically including, but not necessarily limited to, the tasks enumerated more fully in Attachment "A" hereto entitled "Scope of Work" (hereafter referred to as the "Project"). Attachment "A" is hereby incorporated herein by reference and made a part hereof as if written word for word. However, in case of conflict in the language of Attachment "A" and this Contract, the terms and conditions of this Contract shall be final and binding upon both parties hereto.

III.
Payment for Services

Total payment for services described herein shall be a sum not to exceed One Hundred Seventy Thousand Nine Hundred Ninety No/100 Dollars ($170,990.00). This total payment for services includes CONSULTANT's ordinary expenses. Additional expenses and charges, which are extraordinary in nature, must be approved in advance by TOWN in writing signed by the parties. Such extraordinary expenses may be paid as incurred and billed to the TOWN pursuant to this Contract over and above the total payment amount identified in this provision. Any extraordinary expenses or charges not approved in writing in advance by the TOWN shall remain the sole responsibility of the CONSULTANT. If CONSULTANT retains any subcontractors to perform any of the work, CONSULTANT acknowledges that payments to such subcontractors are due and payable in accordance with the provisions of Texas Government Code Section 2251.022, and that interest on unpaid and overdue amounts shall accrue in accordance with Texas Government Code Section 2251.025.

CONSULTANT will bill TOWN on an hourly basis for work performed in accordance with Attachment "B"; provided however that this Contract shall control in the event of any conflict between the language in Attachment "B" and the language in this Contract. If additional services, trips or expenses are requested, CONSULTANT will not provide such additional services until authorized by TOWN in writing to proceed. The scope of services shall be strictly limited. TOWN shall not be required to pay any amount in excess of the amount identified in the preceding paragraph unless TOWN shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

Each month CONSULTANT will submit to TOWN an invoice for actual services performed and reimbursable expenses incurred by CONSULTANT during the previous month for which payment is sought. Each invoice shall be itemized to show the amount of work performed that month broken down by the identity of the person(s) performing such work, the amount of time expended by such person(s) in performing that work, the billing rate for each such person, and a brief summary of the work or testing performed by each such person and a running total balance for the Project to date.

Assuming that TOWN agrees with the invoice, that TOWN has not determined any of the work to be unsatisfactory, or that TOWN otherwise does not dispute any of the amounts billed, TOWN shall make payments in the amount shown by CONSULTANT's approved monthly statements and other documentation submitted in compliance with the Texas Prompt Payment Act, Texas Government Code Chapter 2251.

Nothing contained in this Contract shall require TOWN to pay for any work that TOWN has determined has not been successfully completed or is unsatisfactory as determined by TOWN, or which is not otherwise submitted in compliance with the terms of this Contract, nor shall failure to withhold payment pursuant to the provisions of this section constitute a waiver of any right, at law or in equity, which TOWN may have if CONSULTANT is in default, including the right to bring legal action for damages or for specific performance of this Contract. Waiver of any default under this Contract shall not be deemed a waiver of any subsequent default.

IV.
Revisions of the Scope of Services

TOWN reserves the right to revise or expand the scope of services after due approval by TOWN as TOWN may deem necessary, but in such event TOWN shall pay CONSULTANT equitable compensation for such services. In any event, when CONSULTANT is directed to revise or expand the scope of services under this Section of the Contract, CONSULTANT shall provide TOWN a written proposal for the entire costs involved in performing such additional services. Prior to CONSULTANT undertaking any revised or expanded services as directed by TOWN under this Contract, TOWN must authorize in writing the nature and scope of the services and accept the method and amount of compensation and the time involved in all phases of the Project.

It is expressly understood and agreed by CONSULTANT that any compensation not specified in Paragraph III herein above may require Flower Mound Town Council approval and is subject to the current budget year limitations.

V.
Term

This Contract shall begin on the date first written above, and shall terminate when TOWN has approved the Project as being final or otherwise terminates this Contract as provided herein.

VI.
Contract Termination Provision

Notwithstanding any other provision of this Contract, this Contract may be terminated at any time by TOWN for any reason, with or without cause, by providing CONSULTANT thirty (30) days written notice of such termination. Upon receipt of such notice, CONSULTANT shall immediately terminate working on, placing orders or

entering into contracts for supplies, assistance, facilities or materials in connection with this Contract and shall proceed to promptly cancel all existing contracts insofar as they are related to this Contract.

VII.
Ownership of Documents

All materials and documents prepared or assembled by CONSULTANT under this Contract shall become the sole property of TOWN and shall be delivered to TOWN without restriction on future use. CONSULTANT shall provide documents in any commonly-used electronic file format as requested by TOWN. CONSULTANT may retain in its files copies of all drawings, specifications and all other pertinent information for the work. CONSULTANT shall have no liability for changes made to any materials or other documents by others subsequent to the completion of the Contract.

VIII.
Insurance

A. CONSULTANT shall, at its own expense, purchase, maintain and keep in force during the term of this Contract such insurance as set forth below. CONSULTANT shall not commence work under this Contract until CONSULTANT has obtained all the insurance required under this Contract and such insurance has been approved by TOWN, nor shall CONSULTANT allow any subcontractor to commence work on its own subcontract until all similar insurance of the subcontractor has been obtained and approved. All insurance policies provided under this Contract shall be written on an "occurrence" basis save and except the Professional Liability Insurance which may be written on a "claims-made" basis, provided that "tail coverage" or continuation coverage is provided. The insurance requirements shall remain in effect throughout the term of this Contract.

The CONSULTANT shall furnish to TOWN certificates of insurance executed by the insurer or its authorized agent stating coverages, limits, expiration dates and compliance with all applicable required provisions. Certificates shall reference the Project and be addressed as follows:

Town of Flower Mound
2121Cross Timbers Road
Flower Mound, TX 75028
Email: purchasing@flower-mound.com

The following policies and coverage shall be required:

1. Worker's Compensation Insurance (as required by law) with the policy endorsed to provide a waiver of subrogation as to TOWN; such policy to provide for Employers' Liability Insurance of not less than $100,000.00 for each accident, $100,000.00 disease-each employee, $500,000.00 disease-policy limit;

2. Commercial General Liability Insurance including, but not limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractor's and Contractual Liability, including but not limited to coverage for all of the indemnification obligations of CONSULTANT under this Contract, and fully insuring CONSULTANT's liability for injury to or death of employees of TOWN and of third parties, extended to include personal injury liability coverage and for damage to property of third parties, with minimum combined single limits of $1,000,000 per occurrence, $1,000,000 Products/Completed Operations Aggregate and $1,000,000 general aggregate per occurrence. Coverage must be written on an occurrence form. The General Aggregate shall apply on a per project basis;

3. Business Automobile Liability Insurance, covering owned, hired and non-owned vehicles, with a minimum combined bodily injury and property damage limit of $1,000,000.00 per occurrence; and

4. Professional Liability Insurance: CONSULTANT shall obtain and maintain at all times during the prosecution of the work under this Contract professional liability insurance, which may be written on a claims made form provided that "tail coverage" or continuation coverage is provided. Limits of liability shall be $1,000,000.00 per claim, $1,000,000.00 annual aggregate. The coverage under this policy shall include a contractual liability endorsement.

If any of the foregoing insurance is written on a claims-made form, coverage shall be continuous (by renewal or extended reporting period) for not less than thirty-six (36) months following completion of the Contract and acceptance by the TOWN. All such insurance shall be purchased from an insurance company that meets a financial rating of B+VI or better as assigned by A.M. Best Company or equivalent.

B. Each insurance policy to be furnished by CONSULTANT shall include the following conditions by endorsement to the policy

1. The TOWN shall be named as an additional insured on the Commercial General Liability policy, by using endorsement CG2026 or broader;

2. The TOWN shall also be named as an additional insured as to all other applicable coverage save and except the Worker's Compensation Insurance and Professional Liability Insurance;

3. Each policy will require that thirty (30) days prior to the expiration, cancellation, nonrenewal or any material change in coverage, a notice thereof shall be given to TOWN by certified mail to:

Brian Waltenburg, P.E.,
Assistant Director of Engineering
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6234 Telephone

However, if the policy is canceled for nonpayment of premium, only ten (10) days advance written notice to TOWN is required. CONSULTANT shall also notify TOWN within twenty-four (24) hours after receipt of any notices of expiration, cancellation, nonrenewal or any material change in coverage it receives from its insurer(s);

4. The term "Owner" or "TOWN" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of TOWN and the individual members, employees and agents thereof in their official capacities, and/or while acting on behalf of TOWN;

5. The policy phrase "Other Insurance" shall not apply to TOWN where TOWN is an additional insured on the policy; and

6. All provisions of the Contract concerning liability, duty and standards of care together with the indemnification provision shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.

C. Concerning insurance to be furnished by CONSULTANT, it is a condition precedent to acceptability thereof that:

1. Any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by CONSULTANT. The TOWN's decision(s) thereon shall be final;

2. All policies are to be written through companies duly approved to transact that class of insurance in the State of Texas; and
3. All liability policies required herein, save and except Professional Liability Insurance, shall be written with an "occurrence" basis coverage trigger.

D. CONSULTANT agrees to the following:

1. CONSULTANT hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of

recovery or subrogation against TOWN, it being the intention that the insurance policies shall protect all parties to this Contract and be primary coverage for all losses covered by the policies;

2. Companies issuing the insurance policies and CONSULTANT shall have no recourse against TOWN for payment of any premiums, or assessments for any deductible, as all such premiums are the sole responsibility and risk of CONSULTANT;

3. Approval, disapproval or failure to act by TOWN regarding any insurance supplied by CONSULTANT (or any subcontractors) shall not relieve CONSULTANT of full responsibility or liability for damages and accidents as set forth in the Contract documents. Neither shall the insolvency or denial of liability by the insurance company exonerate CONSULTANT from liability; and

4. No special payments shall be made for any insurance that the CONSULTANT and subcontractors are required to carry; all are included in the contract price and the contract unit prices.

Any of the insurance policies required under this section may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

IX.
Right to Inspect Records

CONSULTANT agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of CONSULTANT involving transactions relating to this Contract. CONSULTANT agrees that TOWN shall have access during normal working hours to all necessary CONSULTANT facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. TOWN shall give CONSULTANT reasonable advance notice of intended audits.

If TOWN agrees that CONSULTANT may retain any subcontractors, CONSULTANT further agrees to include in subcontract(s), if any, a provision that any subcontractor or engineer agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of such engineer or sub-contractor involving transactions to the subcontract, and further, that TOWN shall have access during normal working hours to all such engineer or sub-contractor facilities and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of the paragraph. TOWN shall give any such engineer or sub-contractor reasonable advance notice of intended audits.

X.
Successors and Assigns

TOWN and CONSULTANT each bind themselves and their successors, executors, administrators and assigns to the other party to this Contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. Neither TOWN nor CONSULTANT shall assign or transfer its interest herein without the prior written consent of the other.

XI.
CONSULTANT's Liability

Acceptance of the final plans by the TOWN shall not constitute nor be deemed a release of the responsibility and liability of CONSULTANT, its employees, associates, agents or consultants for the accuracy and competency of their designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work prepared by said CONSULTANT, its employees, associates, agents or sub-consultants. In this regard, CONSULTANT acknowledges that TOWN is retaining CONSULTANT to provide the services described herein, in reliance upon CONSULTANT's specialized expertise and experience, and in reliance thereon.

XII.
Indemnification

THE PROVISIONS OF THIS SECTION ARE SUBJECT TO THE LIMITATIONS OF TEXAS LOCAL GOVERNMENT CODE SECTION 271.904 AND SHALL BE CONSTRUED TO THAT EFFECT. THE CONSULTANT AS ALLOWED BY TEXAS LOCAL GOVERNMENT CODE SECTION 271.904 WILL STILL NAME TOWN AS ADDITIONAL INSURED IN ITS GENERAL LIABILITY POLICY AND PROVIDE ANY DEFENSE AS ALLOWED BY THE POLICY. CONSULTANT DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY AND HOLD HARMLESS TOWN AND ALL OF ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM ANY AND ALL LIABILITY, CLAIMS, SUITS, DEMANDS OR CAUSES OF ACTION, INCLUDING ALL EXPENSES OF LITIGATION AND/OR SETTLEMENT, THAT MAY ARISE BY REASON OF DEATH OR INJURY TO PERSONS OR DAMAGE TO OR LOSS OF USE OF PROPERTY OCCASIONED BY ANY WRONGFUL INTENTIONAL ACT OR OMISSION OF CONSULTANT AS WELL AS ANY NEGLIGENT OMISSION, ACT OR ERROR OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, OR OTHER PERSONS FOR WHOM

CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS CONTRACT, REGARDLESS OF WHETHER SUCH LIABILITY, CLAIMS, SUITS, DEMANDS OR CAUSES OF ACTION IS THE RESULT IN PART OF TOWN'S NEGLIGENCE OR FAULT, AND CONSULTANT WILL, AT ITS OWN COST AND EXPENSE, DEFEND AND PROTECT TOWN AGAINST ANY AND ALL SUCH CLAIMS AND DEMANDS, INCLUDING PAYMENT OF TOWN'S REASONABLE ATTORNEYS' FEES. IN THE EVENT OF A CLAIM IS BROUGHT AGAINST TOWN, TOWN SHALL HAVE THE RIGHT TO RETAIN LEGAL COUNSEL OF ITS CHOOSING IN DEFENSE OF SUCH A CLAIM, AND SUCH ELECTION SHALL NOT RELIEVE CONTRACTOR OF ITS OBLIGATIONS UNDER THIS SECTION.

XIII.
Independent Contractor

CONSULTANT's status shall be that of an Independent Contractor and not an agent, servant, employee or representative of TOWN in the performance of this Contract. No term or provision of or act of CONSULTANT or TOWN under this Contract shall be construed as changing that status. CONSULTANT will have exclusive control of and the exclusive right to control the details of the work performed hereunder, and shall be liable for the acts and omissions of its officers, agents, employees, contractors, subcontractors and engineers and the doctrine of respondeat superior shall not apply as between TOWN and CONSULTANT, its officers, agents, employees, contractors, subcontractors and engineers, and nothing herein shall be construed as creating a partnership or joint enterprise between TOWN and CONSULTANT.

XIV.
Default

If at any time during the term of this Contract, CONSULTANT shall fail to commence the work in accordance with the provisions of this Contract, or fail to diligently provide services in an efficient, timely and careful manner and in strict accordance with the provisions of this Contract, or fail to use an adequate number or quality of personnel to complete the work or fail to perform any of its obligations under this Contract, then TOWN shall have the right, if CONSULTANT shall not cure any such default after thirty (30) days written notice thereof, to terminate this Contract for cause. Any such act by TOWN shall not be deemed a waiver of any other right or remedy of TOWN. If after exercising any such remedy due to CONSULTANT's nonperformance under this Contract, the cost to TOWN to complete the work to be performed under this Contract is in excess of that part of the Contract sum which has not theretofore been paid to CONSULTANT hereunder, CONSULTANT shall be liable for and shall reimburse TOWN for such excess.

TOWN's remedies for CONSULTANT's default or breach under this Contract shall be limited to one or more of the following remedies which may be exercised separately or in combination at TOWN's sole exclusive choice:

(a) Specific performance of the Contract;

(b) Re-performance of this Contract at no extra charge to TOWN; or

(c) Monetary damages.

XV.
Provisions Surviving Termination

The terms of Sections XII entitled Indemnification, and XVIII entitled Confidential Information shall survive termination of this Contract.

XVI.
Changes

TOWN may, from time to time, require changes in the scope of services to be performed under this Contract. Such changes as are mutually agreed upon by and between TOWN and CONSULTANT shall be incorporated by written modification to this Contract.

XVII.
Conflicts of Interest

CONSULTANT covenants and agrees that CONSULTANT and its associates and employees will have no interest, and will acquire no interest, either direct or indirect, which will conflict in any manner with the performance of the services called for under this Contract. All activities, investigations and other efforts made by CONSULTANT pursuant to this Contract will be conducted by employees, associates or subcontractors of CONSULTANT.

No officer or employee of TOWN shall have any personal, financial interest, direct or indirect, in this Contract nor have any direct financial interest in the sale to TOWN of any land, materials, supplies, or services under this Contract, except on behalf of TOWN as a TOWN officer or employee. Any violation of this prohibition with knowledge, expressed or implied, of the person or corporation contracting with TOWN shall render the Contract voidable by the Director or the Town Council.

XVIII.
Confidential Information

CONSULTANT hereby acknowledges and agrees that its representatives may have access to or otherwise receive information during the furtherance of its obligations in accordance with this Contract, which is of a confidential, non-public or proprietary nature. CONSULTANT shall treat any such information received in full confidence and will not disclose or appropriate such Confidential Information for its own use or the use

of any third party at any time during or subsequent to this Contract. As used herein, "Confidential Information" means all oral and written information concerning TOWN, its affiliates and subsidiaries, and all oral and written information concerning TOWN or its activities, that is of a non-public, proprietary or confidential nature including, without limitation, information pertaining to customer lists, services, methods, processes and operating procedures, together with all analyses, compilation, studies or other documents, whether prepared by CONSULTANT or others, which contain or otherwise reflect such information. The term "Confidential Information" shall not include such materials that are or become generally available to the public other than as a result of disclosure of CONSULTANT, or are required to be disclosed by a governmental authority or by law, as determined by TOWN's attorney.

XIX.
Notice Information

All notices and communications under this CONTRACT to be mailed to TOWN shall be sent to the address of TOWN's agent as follows, unless and until CONSULTANT is otherwise notified:

Brian Waltenburg, P.E.,
Assistant Director of Engineering
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6234 Telephone

Notices and communications to be mailed or delivered to CONSULTANT shall be sent to the address of CONSULTANT as follows, unless and until TOWN is otherwise notified:

Mark A. Pacheco, P.E., R.P.L.S.
President
Pacheco Koch Consulting Engineers, Inc.
7557 Rambler Road, Suite 1400
Dallas, Texas 75231
972-235-3031 Telephone

Any notices and communications required to be given in writing by one party to the other shall be considered as having been given to the addressee on the date the notice or communication is posted, faxed or personally delivered by the sending party.

XX.
Applicable Law

The Contract is entered into subject to the Flower Mound Town Charter and ordinances of TOWN, as same may be amended from time to time, and is subject to and

is to be construed, governed and enforced under all applicable State of Texas and federal laws. CONSULTANT will make any and all reports required per federal, state or local law including, but not limited to, proper reporting to the Internal Revenue Service, as required in accordance with CONSULTANT's income.

XXI.
Non-Discrimination

CONSULTANT shall not discriminate against any employee, applicant for employment, contractor, or sub-contractor because of the race, age, color, religion, sex, or national origin of such person. Engineer shall take affirmative action to insure that all such persons are treated equally during their employment without regard to their race, age, color, religion, sex, or national origin. If CONSULTANT fails to comply with the federal or state laws relating to Equal Employment Opportunity, it is agreed that TOWN, at its option, may do either or both of the following:

(a) Cancel, terminate, or suspend the Contract in whole or in part; or

(b) Declare CONSULTANT ineligible for future TOWN contracts until it is determined to be in compliance.

XXII.
Arbitration

CONSULTANT agrees not to enter into any agreement to arbitrate arising out of, or relating to, this Contract which would subject TOWN to being a party to any arbitration without TOWN's prior written consent.

XXIII.
No Waiver of Governmental Immunity

Nothing in this Contract shall be construed as a waiver of TOWN'S governmental immunity, or of any applicable limitation on damages, or any other legal protection or defense or privilege of TOWN, except to the extent expressly provided otherwise herein.

XXIV.
Severability

If any of the terms, provisions, covenants, conditions or any other part of this Contract are for any reason held to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants, conditions or any other part of this Contract shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

XXV.
Remedies

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted; but each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this Contract may be waived without written consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this Contract.

XXVI.
Entire Agreement

This Contract embodies the entire agreement of the parties hereto, superseding all oral or written previous and contemporaneous agreements between the parties relating to matters herein, and except as otherwise provided herein cannot be modified without written agreement of the parties.

XXVII.
Non-Waiver

It is further agreed that one (1) or more instances of forbearance by TOWN in the exercise of its rights herein shall in no way constitute a waiver thereof.

XXVIII.
Headings

The headings of this Contract are for the convenience of reference only and shall not affect any of the terms and conditions hereof in any manner.

XXIX.
Venue

Situs of this Contract is agreed to be Denton County, Texas, for all purposes, including performance and execution, and the parties to this Contract agree and covenant that this Contract will be enforceable in Flower Mound, Texas; and that if legal action is necessary to enforce this Contract, exclusive venue will lie in Denton County, Texas.

XXX.
No Third Party Beneficiary

For purposes of this Contract, including its intended operation and effect, the parties (TOWN and CONSULTANT) specifically agree and contract that: (1) the Contract only affects matters/disputes between the parties to this Contract, and is in no way intended by the parties to benefit or otherwise affect any third person or entity notwithstanding the fact that such third person or entity may be in contractual relationship

with TOWN or CONSULTANT or both; and (2) the terms of this Contract are not intended to release, either by contract or operation of law, any third person or entity from obligations owing by them to either TOWN or CONSULTANT.

[The remainder of this page is left blank intentionally]

IN WITNESS WHEREOF, the parties hereto have caused this document to be executed as of the date first above written.

THE TOWN OF FLOWER MOUND, TEXAS

By:_____
The Honorable Steve Dixon
Mayor, Town of Flower Mound

Date Signed: _____

Attest:

_____
Town Secretary

CONSULTANT:
Pacheco Koch Consulting Engineers, Inc.

By: _____
Name: Mark A. Pacheco, P.E., R.P.L.S.
Title: President

Date Signed: 11/09/2020

State of Texas §
§
County of Dallas §

This instrument was acknowledged before me on the 9 day of November, 2020, by Mark A. Pacheco, P.E., R.P.L.S. in his capacity as President of Pacheco Koch Consulting Engineers, Inc., a Texas Corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the same on behalf of and as the act of Pacheco Koch Consulting Engineers, Inc.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 9 DAY OF NOVEMBER, 2020.

_____
Notary Public, State of Texas

My Commission Expires:

October 19, 2023

KRYSTA-MARIE RODRIGUEZ
Notary Public, State of Texas
Comm. Expires 10-19-2023
Notary ID 128231180

EXHIBIT A to Agreement between the Town of Flower Mound, Texas (OWNER) and Pacheco Koch Consulting Engineers, Inc., (CONSULTANT) for Consulting Services

EXHIBIT 'A' – SCOPE OF SERVICES

TOWN OF FLOWER MOUND STANDARDS AND DETAILS UPDATE

PROJECT DESCRIPTION:

The project consists of reviewing the current Town Design Criteria and Construction Standards, reorganizing and restructuring the content of the design criteria, revising the construction standards, and updating the content of the design criteria and construction standards to current local and federal guidelines. (PROJECT)

BASIC SERVICES:

A. Project Management and Coordination

1. Manage the Team:
   - Lead, manage and direct design team activities
   - Ensure quality control is practiced in performance of the work
   - Communicate internally among team members
   - Allocate team resources

2. Communications and Reporting:
   - Attend a project kickoff meeting with OWNER staff to confirm and clarify scope, understand OWNER objectives.
   - Conduct review meetings with the OWNER at the end of each milestone.
   - Prepare and submit monthly invoices in the format acceptable to the OWNER.

B. Initial Outline and Organization

CONSULTANT shall propose an updated table of contents for the Design Criteria and Construction Standards.

1. Work with OWNER to create a table of contents for the Design Criteria manual.
2. Work with OWNER to create a table of contents for the Construction Standards.
3. Propose new sections to the design criteria, as necessary.
4. Submit one (1) pdf copy of the Design Criteria – Table of Contents and one (1) pdf copy of the Construction Standards – Table of Contents.
5. Conduct a review meeting with the OWNER to discuss changes and feedback on the table of contents.

C. Reorganization of Design Criteria

CONSULTANT shall rearrange the current design criteria material to match the revised table of contents. This does not include updating the content or information in the sections.

1. Incorporate changes to the table of contents from the Initial Outline and Organization review meeting.
2. Propose a consistent format of the design criteria.
3. Propose methods to improve clarity of the current design information.
4. Submit three (3) 8.5”x11” and one (1) pdf copy of the Design Criteria (Volume I)
5. Conduct a review meeting with the OWNER to discuss changes and any feedback.

D. Update Design Criteria (Volume I)

1. Incorporate changes to the Design Criteria from the review meeting.
2. Review content of the current design criteria and compare criteria to local and federal guidelines and requirements.
3. Update design criteria based on Town direction and applications.
4. Incorporate NCTCOG’s iSWM manual and work with Town staff to dictate exceptions to the iSWM manual.
5. Create a design example for detention facilities.
6. Create a section for grading and site work.
7. Create a table for concrete mix designs of different pavement classifications.
8. Create a concise utility crossing matrix in accordance with current TCEQ rules and guidelines.
9. Create a changelog for the design criteria for use by Town staff.
10. Submit three (3) 8.5”x11” and one (1) pdf copy of the Preliminary Design Criteria (Volume I)
11. Conduct a review meeting with the OWNER to discuss changes and feedback.
12. Incorporate changes from the review meeting and submit one (1) final pdf that is searchable, bookmarked, and includes hyperlinks where applicable.
13. Submit fifty (50) 8.5”x11” copies of the approved Design Criteria (Volume I).

E. Update Construction Standards (Volume II)

1. Incorporate changes to the standards from the previous review meetings and Town staff comments.
2. Review and propose organizational changes to the current standards. This includes but not limited to moving standards to other divisions and creating new divisions (e.g. ADA Details).

3. Create up to **6** new construction standards, as needed and directed by the OWNER.
4. Revise the construction standards with consistent drafting standards, verbiage, and layout of information.
5. Create a changelog for the construction standards for use by Town staff.
6. Submit three (3) 8.5”x11” and one (1) pdf copy of the updated and revised Construction Standards (Volume II)
7. Conduct a review meeting with the OWNER to discuss changes and any feedback.
8. Incorporate changes from the review meeting and submit individual and combined pdfs of the Construction Standards for upload to the Town’s Engineering webpage.
9. Submit fifty (50) 8.5”x11” copies of the approved Construction Standards (Volume II).
10. Submit individual CAD files for each Construction Standard.

F. Standard Product List Creation (Volume III)

1. Create a clear format to present standard products.
2. Research other potential acceptable products to be included in the approved products list.
3. Conduct a review meeting with the OWNER to discuss changes and any feedback.
4. Incorporate changes from the review meeting and submit one (1) final pdf of the standard products list.

G. Implementation of Ordinance

CONSULTANT shall attend public meetings, prepare outline changes and updates, and provide update to address amending of standard products list, standards and specifications. It is anticipated approximately 4 Town Council meetings are required to adopt updated documents.

1. Assist with Town Council meeting preparation.
2. Limit to 4 public meetings (work session and council).
3. Assist with update within body of Ordinance to address future changes such as using different standard products on the standard products list.

H. Direct Expenses

1. Included in this item are usual and customary expenses normally incurred during performance of the services described. These expenses could include courier delivery charges, printing and reproduction (either in-house or by reproduction company) and mileage.

EXHIBIT A to Agreement between the Town of Flower Mound, Texas (OWNER) and Pacheco Koch Consulting Engineers, Inc., (CONSULTANT) for Consulting Services

Services not included in this contract:

- *Review of construction plans or specifications.*
- *Update to construction documents and specifications.*
- *Create review processes and practices.*
- *Training staff on new design guidelines and criteria.*
- *Populating and updating of standard products list.*

END OF EXHIBIT 'A'

EXHIBIT B to Agreement between the Town of Flower Mound, Texas (OWNER) and Pacheco Koch Consulting Engineers, Inc. (CONSULTANT) for Consulting Services

EXHIBIT 'B' – COMPENSATION AND METHOD OF PAYMENT

TOWN OF FLOWER MOUND STANDARDS AND DETAILS UPDATE

COMPENSATION:

For all professional services included in EXHIBIT 'A', Scope of Services, the CONSULTANT shall be compensated an hourly basis with a not to exceed fee of $170,990.00 as summarized below. The total not to exceed fee shall be considered full compensation for the services described in EXHIBIT A, including all labor materials, supplies, and equipment necessary to deliver the services.

Basic Services		
A.	Project Management and Coordination	$ 8,970.00
B.	Initial Outline and Organization	4,150.00
C.	Reorganization of Design Criteria	7,390.00
D.	Update Design Criteria (Vol. I)	50,935.00
E.	Update Construction Standards (Vol. II)	62,280.00
F.	Standard Product List Creation (Vol. III)	8,060.00
G.	Assist With Implementation	25,670.00
H.	Direct Expense (Not to Exceed)	3,535.00
		$ 170,990.00
GRAND TOTAL		**$ 170,990.00**

METHOD OF PAYMENT:

The CONSULTANT shall be paid monthly payments as described in the AGREEMENT. The cumulative sum of such monthly partial fee payments shall not exceed the total current project budget including all approved Amendments. Each invoice shall be verified as to its accuracy and compliance with the terms of this Agreement by an officer of the CONSULTANT.

Monthly statements for reimbursable services performed by sub consultants will be based upon the actual cost to the CONSULTANT plus ten percent (10%). Direct expenses for services such as printing, express mail, fees, mileage and other direct expenses that are incurred during the progress of the project will be billed at 1.1 times the CONSULTANT'S cost.

END OF EXHIBIT 'B'

PACHECO KOCH CONSULTING ENGINEERS, Inc

Project No.: 0100
Client: Town of Flower Mound
Project Title: Town of Flower Mound Standards and Details Update

FEE BUDGET ESTIMATE
BASIC DESIGN & CONSTRUCTION SERVICES

November 2, 2020

DESCRIPTION OF WORK TASK	LEVEL OF EFFORT ESTIMATE		LEVEL OF EFFORT BY CLASSIFICATION								TOTAL HOURS PER TASK	TOTAL FEE PER TASK
	QNTY	UNIT	PRINCIPAL $245.00	ASSOC. PRINCIPAL $210.00	SENIOR MANAGER $170.00	PROJECT MANAGER $125.00	DESIGN TECH/EIT $115.00	TECH. CADD $80.00	QA/QC REVIEW $170.00	SENIOR ADMIN ASST $90.00		
PROJECT MANAGEMENT	12	MTH			16.0						16.0	$ 2,720.00
PROJECT START-UP AND COORDINATION												
PRELIMINARY CONFERENCE WITH CLIENT	1	N/A	2.0	2.0	2.0						6.0	$ 1,250.00
CLIENT COORDINATION AND TEAM MANAGEMENT	1	N/A			16.0						16.0	$ 2,720.00
COLLECT & REVIEW EXISTING DATA	1	N/A			8.0		8.0				16.0	$ 2,280.00
											SUB-TOTAL =	**$ 8,970.00**
INITIAL OUTLINE AND ORGANIZATION												
DRAFT TABLE OF CONTENTS OF CRITERIA	1	N/A		0.5	4.0					12.0	16.5	$ 1,865.00
DRAFT TABLE OF CONTENTES OF DETAILS	1	N/A		0.5	4.0					4.0	8.5	$ 1,145.00
CLIENT CONFERENCE / REVIEW MEETING	1	N/A		3.0	3.0						6.0	$ 1,140.00
											SUB-TOTAL =	**$ 4,150.00**
REORGANIZATION OF DESIGN CRITERIA												
REORGANIZE WORD DOCUMENT AND PDF	1	N/A			4.0					60.0	64.0	$ 6,080.00
CLIENT CONFERENCE / REVIEW MEETING	1	N/A		3.0	4.0						7.0	$ 1,310.00
											SUB-TOTAL =	**$ 7,390.00**
UPDATE DESIGN CRITERIA (VOLUME I)												
GENERAL STANDARDS	1	EACH		2.0	9.0				2.0	20.0	33.0	$ 4,090.00
TECHNICAL STANDARDS	1	EACH			9.0				1.0	20.0	30.0	$ 3,500.00
I - GRADING AND SITE PREPARATION	1	EACH		2.0	9.0				2.0	20.0	33.0	$ 4,090.00
II - STREET IMPROVEMENTS	1	EACH			9.0				1.0	20.0	30.0	$ 3,500.00
III - WATER SYSTEM IMPROVEMENTS	1	EACH			9.0				1.0	20.0	30.0	$ 3,500.00
IV - WASTEWATER SYSTEM IMPROVEMENTS	1	EACH			9.0				1.0	20.0	30.0	$ 3,500.00
V - STORM WATER SYSTEM IMPROVEMENTS	1	EACH		9.0	60.0		50.0	16.0	2.0	32.0	169.0	$ 22,340.00
VI - PARK AND TRAILS IMPROVEMENTS	1	EACH			9.0				0.5	20.0	29.5	$ 3,415.00
BOOKMARK AND HYPERLINK FINAL PDF	1	EACH								8.0	8.0	$ 720.00
CLIENT CONFERENCE / REVIEW MEETING	2	N/A		6.0	6.0						12.0	$ 2,280.00
											SUB-TOTAL =	**$ 50,935.00**
UPDATE CONSTRUCTION STANDARDS (VOLUME II)												
STREET CONSTRUCTION STANDARDS	46	EACH		1.0	27.0		18.0	120.0	3.0		169.0	$ 16,980.00
WATER CONSTRUCTION STANDARDS	21	EACH		0.5	18.0		9.0	100.0	2.0		129.5	$ 12,540.00
WASTEWATER CONSTRUCTION STANDARDS	13	EACH		0.5	18.0		9.0	100.0	2.0		129.5	$ 12,540.00
STORM WATER CONSTRUCTION STANDARDS	17	EACH		1.0	18.0		9.0	100.0	1.0		129.0	$ 12,475.00
PARKS AND TRAILS CONSTRUCTION STANDARDS	6	EACH		0.5	9.0		4.0	40.0	1.0		54.5	$ 5,465.00
CLIENT CONFERENCE / REVIEW MEETING	3	N/A		6.0	6.0						12.0	$ 2,280.00
											SUB-TOTAL =	**$ 62,280.00**
STANDARD PRODUCT LIST CREATION (VOLUME III)												
CREATE FORMAT	1	N/A			24.0					40.0	64.0	$ 7,680.00
CLIENT CONFERENCE / REVIEW MEETING	1	N/A		1.0	1.0						2.0	$ 380.00
											SUB-TOTAL =	**$ 8,060.00**

PACHECO KOCH CONSULTING ENGINEERS, Inc

Project No.: 0100
Client: Town of Flower Mound
Project Title: Town of Flower Mound Standards and Details Update

FEE BUDGET ESTIMATE
BASIC DESIGN & CONSTRUCTION SERVICES

November 2, 2020

DESCRIPTION OF WORK TASK	LEVEL OF EFFORT ESTIMATE		LEVEL OF EFFORT BY CLASSIFICATION								TOTAL HOURS PER TASK	TOTAL FEE PER TASK
	QNTY	UNIT	PRINCIPAL $245.00	ASSOC. PRINCIPAL $210.00	SENIOR MANAGER $170.00	PROJECT MANAGER $125.00	DESIGN TECH/EIT $115.00	TECH. CADD $80.00	QA/QC REVIEW $170.00	SENIOR ADMIN ASST $90.00		
IMPLEMENTATION OF ORDINANCE												
PUBLIC HEARINGS	1	N/A	54.0							20.0	74.0	$ 15,030.00
ORDINANCE UPDATE ASSISTANCE	1	N/A	2.0	16.0			10.0			4.0	32.0	$ 5,360.00
PRESENTATION	1	N/A	8.0	8.0			8.0			8.0	32.0	$ 5,280.00
											SUB-TOTAL =	**$ 25,670.00**
HOURS SUB-TOTALS			66.0	62.5	311.0	0.0	125.0	476.0	19.5	328.0	1,388.0	**$ 167,455.00**
TOTAL LABOR COSTS			16,170.00	13,125.00	52,870.00	-	14,375.00	38,080.00	3,315.00	29,520.00	**$ 167,455.00**	
% OF TOTAL HOURS			4.8%	4.5%	22.4%	0.0%	9.0%	34.3%	1.4%	23.6%	100.0%	

PRINTING & REPRODUCTION EXPENSES					QUANTITY	UNIT PRICE	AMOUNT
PRINTING - 11 X 17 PLANS (REVIEW SETS)	0	SETS	0	PLOTS/SET	0	1.00	-
PRINTING - 22 X 34 PLANS (REVIEW SETS)	0	SETS	0	PLOTS/SET	0	1.50	-
PRINTING - 22 X 34 PLANS (UTILITY CLEARANCE SETS)	0	SETS	0	PLOTS/SET	0	1.50	-
PLOTTING - 22 X 34 PAPER PLOTS	0	SETS	0	PLOTS/SET	0	3.00	-
PRINTING - 22 X 34 PLANS (BID SETS)	0	SETS	0	PLOTS/SET	0	1.50	-
PRINTING - 11 X 17 PLANS (BID SETS)	0	SETS	0	PLOTS/SET	0	1.00	-
PRINTING - 22 X 34 PLANS (AS-BUILT SETS)	0	SETS	0	PLOTS/SET	0	3.00	-
PRINTING - 11 X 17 PLANS (AS-BUILT SETS)	0	SETS	0	PLOTS/SET	0	1.00	-
MYLAR PREPARATION	0	SETS	0	PLOTS/SET	0	4.00	-
PDF PREPARATION	5	SETS	0	PLOTS/SET	5	8.00	40.00
8.5 X 11 PAPER COPIES	60	SETS	450	COPIES/SET	27,000	0.10	2,700.00
TOTAL PRINTING & REPRODUCTION EXPENSES							**$ 2,740.00**
DIRECT EXPENSES							
PLOTTING - 11 X 17 PAPER PLOTS	0	SETS	0	PLOTS/SET	0	1.00	-
REPRODUCTION - 8.5 X 11 PAPER COPIES	450	COPIES			450	0.10	45.00
DELIVERY SERVICE	3	PKGS			3	30.00	90.00
AUTO EXPENSE	15	TRIPS	80	MI /TRIP	1,200	0.55	660.00
TOTAL PER PHASE DIRECT EXPENSES							**$ 795.00**

ENGINEERING	
LABOR COSTS:	$ 167,455.00
DIRECT EXPENSES	3,535.00
TOTAL ENGINEERING (Basic Services)	**$ 170,990.00**

Pacheco Koch

SCHEDULE OF STANDARD HOURLY BILLING RATES

(*Our hourly rates are subject to change at any time.*)

ENGINEERING

Principal	$245.00/Hr.
Associate Principal	$210.00/Hr.
Director	$210.00/Hr.
Senior Project Manager	$170.00/Hr.
Senior Project Coordinator	$170.00/Hr.
Project Manager	$125.00/Hr.
Project Coordinator	$125.00/Hr.
Project Engineer	$100.00/Hr.
Senior Technician	$115.00/Hr.
Technician	$85.00/Hr.
Drafter	$80.00/Hr.
Research Manager	$100.00/Hr.
Research Coordinator	$65.00/Hr.
Research Assistant	$55.00/Hr.
Executive Assistant	$100.00/Hr.
Senior Administrative Assistant	$90.00/Hr.
Administrative Assistant	$75.00/Hr.
Expert Witness Testimony	$350.00/Hr.

LANDSCAPE ARCHITECTURE

Principal	$245.00/Hr.
Associate Principal	$210.00/Hr.
Director	$210.00/Hr.
Senior Project Manager	$160.00/Hr.
Project Manager	$120.00/Hr.
Project Landscape Architect	$100.00/Hr.
Landscape Task Lead	$95.00/Hr.
Technician	$85.00/Hr.
Landscape Designer	$80.00/Hr.
Drafter	$80.00/Hr.
Executive Assistant	$100.00/Hr.
Senior Administrative Assistant	$90.00/Hr.
Administrative Assistant	$75.00/Hr.
Expert Witness Testimony	$350.00/Hr.

SURVEYING

Principal	$245.00/Hr.
Associate Principal	$210.00/Hr.
Director	$210.00/Hr.
Senior Project Manager	$165.00/Hr.
Senior Project Coordinator	$165.00/Hr.
Project Manager	$120.00/Hr.
Project Coordinator	$120.00/Hr.
Project Surveyor	$100.00/Hr.
Survey Intern	$95.00/Hr.
Senior Technician	$95.00/Hr.
Technician	$85.00/Hr.
Drafter	$80.00/Hr.
Research Manager	$100.00/Hr.
Research Coordinator	$65.00/Hr.
Research Assistant	$55.00/Hr.
Executive Assistant	$100.00/Hr.
Senior Administrative Assistant	$90.00/Hr.
Administrative Assistant	$75.00/Hr.
Expert Witness Testimony	$350.00/Hr.
Survey Field Crew (1-person)	$100.00/Hr.
Survey Field Crew (2-person)	$150.00/Hr.
Survey Field Crew (3-person)	$210.00/Hr.
Survey Field Crew (4-person)	$270.00/Hr.
Survey Scanner Crew (1-person)	$180.00/Hr.
Survey Scanner Crew (2-person)	$225.00/Hr.
Survey Scanner Crew (3-person)	$310.00/Hr.

rev. 01/2019

TOWN COUNCIL AGENDA ITEM NO. 20

CONSENT ITEM

DATE: December 7, 2020

FROM: Clay Riggs, PE, CFM, Assistant Director of Public Works

ITEM: **Consider approval of an increase to the annual purchase contract for flex base material from Big City Crushed Concrete, through a City of Lewisville contract (19-27-A) from an estimated total of $30,000.00 to an estimated total of $50,000.00.**

BACKGROUND INFORMATION: On May 12, 2020, the Town began using a City of Lewisville's contract to purchase flex base material from Big City Crushed Concrete with an estimated annual expenditure of $30,000.00. The current contract term expires on 4/21/2021 and there is one (1) one-year renewal option that could extend the contract through 4/21/2022. We intend to continue utilizing the contract into 2022 if renewed by the City of Lewisville.

On September 21, 2020, Town Council approved increased street maintenance funding as part of the FY 2020-2021 budget. The increase in estimated annual purchase amount will allow the Public Works Street Services division to purchase the estimated amount of flex base material needed for street repair and street reconstruction.

Local governments are authorized by the Interlocal Cooperation Act, V.T.C.A. Government Code, Chapter 791, to enter into joint contracts and agreements for the performance of governmental functions and services, including administrative functions normally associated with the operation of government (such as purchasing necessary materials and equipment). The Town of Flower Mound and the City of Lewisville entered into an interlocal agreement effective May 15, 2000, and the agreement remains in effect until terminated by either party with thirty (30) days written notice to the other party.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: $20,000.00

Proposed Expenditure/(Revenue):	Account Number(s):
$20,000.00	100-690-92240-4303

Finance Review by: Debra Wallace, Interim Town Manager/CFO

ATTACHMENTS:

1. City of Lewisville Flex Base Material Contract #19-27-A

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

Big City Crushed Concrete
Po Box 29816
Dallas, TX 75229

City of Lewisville
Purchasing Division
Po Box 299002
Lewisville, TX 75029-9002

Big City Crushed Concrete
Po Box 29816
Dallas, TX 75229
Bid No 19-27-A
Type D, Grade 1 Flex Base
April 18, 2019 @ 5:30 p.m.

RECEIVED
APR 18 2019
FINANCE
@ 11:48
T.B

Original

Solicitation 19-27-A

Type D, Grade 1 Flex Base Material

Bid Designation: Regional

City of Lewisville, Texas

Bid 19-27-A
Type D, Grade 1 Flex Base Material

Bid Number	19-27-A
Bid Title	Type D, Grade 1 Flex Base Material
Bid Start Date	Apr 9, 2019 9:15:08 AM CDT
Bid End Date	Apr 18, 2019 5:30:00 PM CDT
Question & Answer End Date	Apr 15, 2019 5:30:00 PM CDT
Bid Contact	Tracey Ogurek Buyer Finance
Bid Contact	Joshua Hudgin
Contract Duration	**365 days**
Contract Renewal	2 annual renewals
Prices Good for	**Not Applicable**
Standard Disclaimer	**All goods and services provided to the City must be compliant with the Americans with Disabilities Act ("ADA") and all regulations promulgated pursuant to the ADA. The successful bidder will be required to certify compliance, if applicable.**
Bid Comments	**The City of Lewisville is accepting sealed bids for an Annual Contract for Type D, Grade 1 Flex Base Material. The term of the contract will be twelve (12) months with an option to extend up to two (2) additional twelve (12) month periods, subject to the approval of the supplier and the City.** **Bids are due Thursday, April 18, 2019, 5;30 pm.** **Questions are due by Monday, April 15, 2019, 5:30 pm. All questions are to be posted on BidSync.com.** **Award will be based on best value as defined in Local Government Code, Chapter 252, Section 042.**

Item Response Form

Item	**19-27-A--01-01** - Type D, Grade 1 Flex Base: F.O.B. Kealy (City Yard)
Lot Description	Type D, Grade 1 Flex Base Material
Quantity	**25 ton**
Unit Price	13.25 per ton delivered
Delivery Location	**City of Lewisville, Texas** Public Works/Administration 1100 "D" N. Kealy Lewisville TX 75057 **Qty** 25

Can deliver in 1 day after order is submitted

Description
Type D, Grade 1 Flex Base *Delivered by vendor to City of Lewisville

Item	**19-27-A--01-02** - Type D, Grade 1 Flex Base: F.O.B. Plant
Lot Description	Type D, Grade 1 Flex Base Material
Quantity	**3000 ton**
Unit Price	9.00 per ton
Delivery Location	**City of Lewisville, Texas** FOB - Origin (Plant) tba Lewisville TX 75057 **Qty** 3000

Description

Type D, Grade 1 Flex Base *Picked up at vendor's plant by City of Lewisville

LEWISVILLE

Deep Roots. Broad Wings. Bright Future.

Type D, Grade 1 Flex Base Material
Specifications & Evaluation Criteria
19-27-A

General:
It is the intent of the specifications for the vendors to provide to the City of Lewisville Type D, Grade 1 Flex Base material on an annual bid basis as needed. The Type D, Grade 1 Flex Base material will be required to meet all TXDOT Item 247 Flexible Base Specifications for this type of material. The vendor should expect the material to be tested for compliance. Material found in violation of specifications shall be removed and replaced with the appropriate material at the vendor's expense. It is also to be understood that these quantities are estimated and may be higher or lower.

The location listed as "F.O.B. Kealy" should be interpreted as the City of Lewisville shop located at 1100 N. Kealy. The location listed as "F.O.B. Plant" should be interpreted as picked up by the city at the vendor's location. The following formula will be used to calculate the total F.O.B. Plant cost based on the City's cost to pick up the product. It should be noted that this formula is for evaluation purposes only. The City will pay only the actual bid prices. Bid prices are to remain firm for the term of the contract.

The following time/distance formula is used to determine the actual cost to the City for picking up materials at the vendor's plant:

$$C = \frac{(D \times M) + (T \times L)}{12}$$

C = Effective Cost Per Ton
D = Travel Distance from service Center (round trip)
M = Maintenance and Fuel Cost ($.69)
T = Turn Around Time
L = Driver Cost Per Hour ($29.16)

CITY OF LEWISVILLE
PURCHASING DIVISION

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS: These instructions apply to all bids and become a part of the terms and conditions of any bid submitted.

BIDS must not be faxed but are to be submitted to the City in **one** of the following manners:

A. **Electronic Receipt:** Bidders are encouraged to submit bids to the City through Bidsync.com. The City is a member of this internet service and the submittal of bids to the City is at no cost to the bidder. The internet site is www.bidsync.com.

or

B. **Paper Bid Receipt:** Paper bids may be submitted to the City. Bidders are to submit the original and one copy of their bid in a sealed envelope to the Purchasing Division prior to response due date/time. The sealed envelope is to be marked on the outside with the Bidder's name, address, the bid invitation number and closing date recorded on the bottom left corner of the envelope.

Address to:

City of Lewisville
Purchasing Division
P.O. Box 299002
Lewisville, Texas 75029-9002

Sealed bids may be delivered in person or by courier to the Purchasing Division on the First Floor of City Hall, 151 Church Street, Lewisville, Texas 75057.
Sealed bids must be returned in sufficient time as to be received and time stamped at the above location on or before the published bid date and time shown on the bid invitation. Bids received after submission deadline shall be returned unopened and will be considered void and unacceptable. The City of Lewisville is not responsible for lateness of mail carrier, etc.

BID: The bidder should quote its lowest and best price, F.O.B. destination on each item bid. If delivery and shipping quantities affect unit bid price, multiple bids may be made so as to indicate "price break" quantities in order for the City to determine maximum economic benefits. Pricing for paper bids shall be entered on the Bid Sheet in ink or typewritten. Totals shall be entered in the "Total Price" column of the Bid Sheet. In all cases of discrepancy between unit price and extended price, the unit price will be presumed to be correct.

MAKE-MODEL Items must be the best and latest model available of the type specified. If the bid invitation indicates a specific brand of product, the brand listed is deemed to be descriptive and not restrictive, and is used to indicate the type and quality level desired for comparison purposes. Bidders may offer an approved equal to the brand listed, unless otherwise noted. The City shall make the final determination as to the brand offered being an approved equal to the brand listed. A Complete catalog or brochure showing in detail the item offered must accompany the bid.

SPLIT-AWARD: Bidders may furnish pricing for all or any portion of the bid invitation. Unless the bidder specifies otherwise in his bid, the City may award the contract for any item or group of items shown on the bid invitation.

BID FORMS: Bids submitted on other than City forms, whether electronic or paper, or with different terms or provisions may not be considered as responsive bids.

Bids must be held firm for ninety (90) days to allow for evaluation unless otherwise noted in the bid document.

F.O.B./DAMAGE: Quotations shall be bid F.O.B. Inside Delivery, Municipal Facility, Lewisville, Texas, and shall include all delivery and packaging costs. The City of Lewisville assumes no liability for goods delivered in damaged or unacceptable condition. The successful bidder shall handle all claims with carriers, and in case of damaged goods, shall ship replacement goods immediately upon notification by the City of damage.

INVOICES: Invoices must be submitted by the successful bidder in duplicate to the City of Lewisville Accounts Payable, P O Box 299002, Lewisville, TX 75029-9002.

TAXES: The City of Lewisville is exempt from Federal Manufacturer's Excise, and State Sales taxes. TAX MUST NOT BE INCLUDED IN BID. Tax exemption certificates will be executed by the City and furnished upon request.

PRICING: Bids should be firm. If the bidder, however, believes it necessary to base its price on price adjustment, such a bid may be considered, but only as an alternate bid.

PAYMENT TERMS: Payment terms are net 30 days after the goods are provided or services are completed, as required, or a correct invoice is received, whichever is later.

DELIVERY PROMISE - PENALTIES: Bids MUST show the number of calendar days required to place the materials in the possession of the City. DO NOT quote shipping dates. Consistent failure of a bidder to meet his delivery promises without valid reason may be cause for removal from the Bidder's List. When Delivery delays can be foreseen, the bidder shall give prior notice to the Purchasing Division which shall have the right to extend the delivery due date if reasons for delay appear acceptable. Default in promised delivery, without acceptable reasons, or failure to meet specifications, authorizes the Purchasing Division to purchase the goods elsewhere, and charge any increase in cost and handling to the defaulting bidder.

PACKAGING: Unless otherwise indicated, items will be new, unused, and in first class condition in containers suitable for damage-free delivery and storage.

CORRESPONDENCE: The bid number must appear on ALL correspondence, inquiries, etc. pertaining to the bid.

DELIVERY TIMES: Deliveries will be acceptable only during normal working hours at the designated City Municipal Facility.

PATENT RIGHTS: The Vendor agrees to indemnify and hold the City harmless from any and all claims involving patent right infringement or copyrights on goods supplied.

EVALUATION: Response to the specification in this bid is of primary importance in determining the lowest responsible bid.

BID AWARD: Bids will be awarded either on Lowest Responsible Bid or Best Value. The Criteria used to determine Best Value is as follows:

Purchase Price
The reputation of the bidder and of the bidder's goods and service
The quality of the bidder's goods or services
The extent to which the goods or services meet the municipality's needs.
The bidder's past relationship with the municipality.
The impact on the ability of the city to comply with laws and rules relating to contracting with historically underutilized businesses and non-profit organizations employing persons with disabilities.

The total long-term cost to the city to acquire the bidders good or services (Life Cycle Costing).

Any other relevant factors that a private business would consider in selecting a bidder.

FUNDING: The City of Lewisville is a home-rule municipal government operated and funded on an October 1 to September 30 Fiscal Year; accordingly, the City reserves the right to terminate, without liability to the City any contract for which funding is not available.

RESERVATIONS: The City expressly reserves the right to:

A. Waive as an informality, minor deviations from specifications.
B. Waive any defect, irregularity or informality in any bid or bidding procedure.
C. Reject or cancel any or all bids.
D. Reissue a bid invitation.
E. Extend the bid opening time and date.
F. Procure any item by other means.
G. Increase or decrease the quantity specified in the bid invitation, unless the Bidder specifies otherwise.
H. Consider and accept an alternate bid as provided herein when most advantageous to the City.

ASSIGNMENT: The successful bidder shall not sell, assign, transfer or convey this contract in whole or in part, without the prior written consent of the City.

AUDIT: The City of Lewisville reserves the right to audit the records and performance of the successful bidder during the term of the contract and for three years after the contract is completed.

PROTESTS: All protests regarding the bid solicitation process must be submitted in writing to the City Purchasing Manager within five (5) working days following the opening of bids. This includes all protests relating to advertising of bid notices, deadlines, bid opening, and all other related procedures under the Local Government Code, as well as any protests relating to alleged improprieties with the bidding process. This limitation does not include protests relating to staff recommendations as to award of this bid. Protests relating to staff recommendations may be directed to the City Council by contacting the City Secretary.
Failure to Protest within the time allotted shall constitute a waiver of any protest.

ALTERING BIDS: Bid cannot be altered or amended after submission deadline. Any interlineation, or alteration made before opening time for sealed bids must be initialed by the signer of the bid, guaranteeing authenticity.

CHANGE ORDERS: No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change orders to the contract will be made in writing by the City of Lewisville.

ADDENDA: Any interpretations, corrections or changes to this Invitation for Bid and Specifications will be made by ADDENDA. Sole authority to issue addenda shall be vested in the City of Lewisville. Bidders shall acknowledge receipt of all addenda on bid form.

MINIMUM STANDARDS FOR RESPONSIBLE PROSPECTIVE BIDDERS: A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder must meet the following requirements:
Have adequate financial resources, or the ability to obtain such resources as required;
Be able to comply with the required or proposed delivery schedule;
Have a satisfactory record of performance;
Have a satisfactory record of integrity and ethics;
Be otherwise qualified and eligible to receive an award; and
The City of Lewisville may request representation and other information sufficient to determine bidder's ability to meet these minimum standards listed above.

BIDDER SHALL PROVIDE with this bid response, all documentation required. Failure to provide this information may result in rejection of bid.

SUCCESSFUL BIDDER SHALL defend, indemnify and save harmless the City of Lewisville and all its officers, agents and employees and all entities, their officers, agents and employees who are participating in this contract from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful bidder, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award. Successful bidder shall pay any judgment with cost which may be obtained against the City of Lewisville and participating entities growing out of such injury or damages.

TERMINATION FOR DEFAULT: The City of Lewisville reserves the right to enforce the performance of this contract in any manner prescribed by law or deemed to be in the best interest of the City in the event of breach or default of this contract. The City reserves the right to terminate the contract immediately in the event the successful bidder fails to 1) meet delivery schedules, or 2) otherwise perform in accordance with these specifications. Breach of contract or default authorizes the City to award to another bidder. Purchase elsewhere and charge the full increase in cost and handling to the defaulting successful bidder.

TESTING: Testing may be performed at the request of the City without expense to the City.

REMEDIES: The successful bidder and City of Lewisville agree that each party have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

VENUE: This agreement will be governed and construed according to the laws of the State of Texas. This agreement is performable in Denton County, Texas.

SILENCE OF SPECIFICATION: The apparent silence of these specifications as to any detail or to the omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial products and practices are to prevail. All interpretations of the specifications in this bid shall be made on the basis of this statement.

DEVIATIONS from specifications and alternate bids must be clearly shown on the bid form with complete information attached to form. They may or may not be considered.

NO EMPLOYEE of the City of Lewisville who has a financial interest in a prospective vendor shall participate in submitting a bid or proposal to conduct work for the City.

NO EMPLOYEE of the City of Lewisville shall receive any compensation for or as a result of a contract for goods or services purchased by the City if that employee was in a position to influence the City with respect to the contract.

ELIGIBLE BIDDER: Bidders are limited to those persons or firms who are qualified and engaged in a full-time business and can assume liabilities for any performance or warranty service required.

REJECTED ITEM(S): Item(s) that are rejected for failure to meet prescribed minimum specifications shall be returned to the supplier at no cost to the City of Lewisville.

INDEMNITY: The City of Lewisville will not accept a contract that contains any provision causing the City of Lewisville to indemnify the vendor for any reason.

VENDOR AGREEMENT: Any vendor agreements (service, maintenance, etc.) to be signed by the City of Lewisville **must** be submitted with your bid.

CITY OF LEWISVILLE PURCHASING DIVISION
ADDITIONAL TERMS

ANTI-LOBBYING PROVISION

During the period between proposal / sealed bid submission date and the contract award, proposers, including their agents and representatives, shall not directly discuss or promote their proposal with any member of the City of Lewisville City Council or City staff except in the course of City-Sponsored inquiries, briefings, interviews, or presentations, unless requested by the City.

This provision is not meant to preclude offerors from discussing other matters with City Council members or City staff. This policy is intended to create a level playing field for all potential offerors, assure that contract decisions are made in public, and to protect the integrity of the RFP / Bid Evaluation process. Violation of this provision may result in rejection of the offeror's proposal.

LAWS AND ORDINANCES

Laws and Ordinances: The Contractor shall at all times observe and comply with all Federal, State and local laws, ordinances and regulations which in any manner affect the Contract or the work, and shall indemnify and save harmless the City against any claim arising from the violation of any such laws, ordinances and regulations whether by the Contractor or his employees.

PROTECTION OF RESIDENT WORKERS

Protection of Resident Workers: The City of Lewisville actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Contractor and its Subcontractors shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment. The City reserves the right to audit Contractor's or Subcontractor's employment records to verify the existence of a completed Employment Eligibility Verification Form (I-9) for every worker performing services or manufacturing products under the Contract Documents. The audit will be at the City's expense.

IMMIGRATION REFORM AND CONTROL ACT

Immigration Reform and Control Act (8 U.S.C. §1324a): The City of Lewisville supports the Immigration Reform and Control Act (IRCA) which is a comprehensive scheme prohibiting the employment of unauthorized aliens in the United States. The Contractor shall submit a declaration signed under penalty of perjury of the laws of the State of Texas stating that it has not been found in violation of IRCA by the United States Attorney General or Secretary of Homeland Security in the preceding five (5) years. The Contractor shall ensure that its Subcontractors submit a declaration signed under penalty of perjury of the

laws of the State of Texas stating that they have not been found in violation of IRCA by the United States Attorney General or Secretary of Homeland Security in the preceding five (5) years. The Contractor and its Subcontractors shall at all times during the term of the contract with the City comply with the requirements of IRCA and shall notify the City within fifteen (15) working days of receiving notice of a violation of IRCA. The City may terminate a contract with the Contractor if the City determines that (a) the Contractor or its Subcontractors have been untruthful regarding IRCA violations in the preceding five (5) years; (b) if the Contractor fails to ensure that its Subcontractors submit the aforementioned declaration; or (c) the Contractor or its Subcontractors fail to timely notify the City of an IRCA violation.

Big City Crushed Concrete / Josh Hylkema
Contractor Name

Authorized Signature

04/11/19
Date

CITY OF LEWISVILLE
PURCHASING DIVISION
ANNUAL CONTRACT STANDARD PROVISIONS

Contractor and the City of Lewisville agree as follows:

1. **TERM:** The term of this annual contract is twelve-months, with the option to extend for up to two (2) additional twelve-month periods, subject to the approval of the Contractor and the City Manager, or his designee.

2. **DESCRIPTION – SALE OF GOODS AND SERVICES:** Contractor will transfer and deliver to the City, and the City will pay for and accept the City's requirements during this agreement. It is understood that quantities shown on the Bid Sheets are estimates and do not obligate the City to order or accept more than the City's actual requirements during the Agreement, nor do the estimates limit the City to ordering less than it's actual needs during the Agreement, subject to availability of appropriate funds.

3. **PURCHASE ORDER:** The City will exercise its right to specify time, place, and quantity to be delivered through the use of a purchase order.

4. **PRICE ADJUSTMENT:** All goods and services to be delivered pursuant to this Agreement, including any extensions thereof, will be purchased at the prices stated on the Contractor's Bid Sheet; provided that, at renewal or extension of the Agreement for an additional twelve-months, the prices for goods and services to be delivered during the ensuing twelve-month period may be increased or decreased to the extent of changes in the cost of material to Contractor, as reflected in written documentation provided by the Contractor to the City. The written documentation must allow the City the ability to verify all requested price adjustments.

CITY OF LEWISVILLE

COOPERATIVE PURCHASING AGREEMENT

Several Governmental entities around the City of Lewisville have indicated an interest in being included in this contract. Should these Governmental Entities decide to participate in this contract, would you, (the vendor) agree that all terms conditions, specifications, and pricing would apply?

☑ YES ☐ NO

(a) If you (the Vendor) checked yes, the following will apply.

(b) Governmental Entities utilizing Internal-Governmental contracts with the City of Lewisville will be eligible, but not obligated, to purchase materials/services under the contract(s) awarded as a result of this solicitation. All purchases by Governmental Entities other than the City of Lewisville will be billed directly to that Governmental Entity and paid by that Governmental Entity. City of Lewisville will not be responsible for another Governmental Entity's debts. Each Governmental Entity will order their own material/service as needed.

BID INVITATION NO:	19-27-01-02
COMMODITY:	Type D Grade 1 Flex Base pickod up at plant

FIRM NAME: Big City Crushed Concrete

SIGNATURE OF PERSON AUTHORIZED TO SIGN BID:

DATE: 04/11/19

SIGNER'S NAME AND TITLE:

Josh Hylkema Manager

STATE RECIPROCAL REQUIREMENT

The City of Lewisville, as a governmental agency of the State of Texas, may not award a contract for general construction, improvements, services or public works projects or purchases of supplies, materials, or equipment to a non-resident bidder unless the non-resident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a non-resident bidder to obtain a comparable contract in the state in which the non-resident's principal place of business is located (Section 2252.002 of the Government Code). Bidder shall answer all the following questions by encircling the appropriate response or completing the blank provided.

1. Where is your principal place of business? Dallas, Texas

2. Only if your principal place of business is not in the state of Texas, please indicate:

   A. In which state is your principal place of business located? _____

   B. Does that state favor resident bidders (bidders in your state) by some dollar increment or percentage? ☐ YES ☐ NO

   C. If "YES", what is that dollar increment or percentage? _____

NON-COLLUSION STATEMENT

The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firms, partnership or individual has not prepared this bid in collusion with any other Bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employer or agent to any other person engaged in this type of business prior to the official opening of this bid.

Vendor:	Big City Crushed Concrete
Address:	Po Box 29816
City, State, Zip:	Dallas, TX 75229
Phone	972-243-5820
Email Address:	josh@bccclp.com
Bidder (Print name)	Josh Hylkema
Bidder Signature	
Position with Company	Manager
Signature of company official authorizing this bid:	
Company Official (Print name):	Josh Hylkema
Position with company:	Manager

CITY OF LEWISVILLE
DISCLOSURE OF INTEREST

Pursuant to Chapter 176 of the Texas Local Government Code, a person or agent of a person who contracts or seeks to contract with the City of Lewisville must complete a conflict of interest questionnaire if the person or agent has an affiliation or business relationship that might cause a conflict of interest with the City. The conflict of interest questionnaire, which is available online at ethics.state.tx.us, must be filed with the City Secretary of the City of Lewisville no later than the seventh (7^{th}) business day after the person or agent begins contract discussions or negotiations with the City of Lewisville or submits to the City of Lewisville an application, response to a request for proposal or bid, correspondence, or another writing related to a potential agreement with the City of Lewisville. An updated Conflict of Interest Questionnaire must be filed in accordance with Chapter 176 of the Local Government Code.

Seller should consult with legal counsel if they have questions regarding its compliance with the requirements of Chapter 176. It is the responsibility of each person or agent who is contracting or seeking to contract with the City of Lewisville to comply with the filing requirements of Chapter 176.

EXHIBIT B

INSURANCE REQUIREMENTS
GENERAL CONTRACTS FOR SERVICES

Service work, supplies requiring installation, Janitorial Services, Welding, Surveyors, Plumbing Contractors, Maintenance Agreements, Concessionaires, Tire Repairs, Tow Service, Painting, Electrical, Movers, Major street repairs and Waterline projects, etc.

Vendor shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the vendor's bid.

A. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage "occurrence" form CG 00 01 (10 01). **"Claims Made" form is unacceptable.**

2. Workers' Compensation insurance as required by the Labor Code of the State of Texas, including Employers' Liability Insurance.

3. Automobile Liability – as required by the State of Texas, covering all owned, hired, or non-owned vehicles. Automobile Liability is only required if vehicle(s) will be used under this contract. Coverage not required for delivery services.

B. MINIMUM LIMITS OF INSURANCE

Vendor shall maintain limits throughout contract not less than:

1. Commercial General Liability: $500,000 per occurrence/$1,000,000 aggregate for bodily injury, personal injury and property damage. Policy will include coverage for:

   a. Premises – Operations

   b. Broad Form Contractual Liability

   c. Products and Completed Operations

   d. Personal Injury

   e. Broad Form Property Damage

   f. If applicable, Explosion Collapse and Underground (XCU) Coverage, Fire Damage, and Medical Expense.

NOTE: The aggregate loss limit applies to each project.

2. Workers' Compensation and Employer's Liability: Workers' Compensation Statutory limits as required by the Labor Code of the State of Texas and Employer's Liability minimum limits of $500,000 per injury, $500,000 per occurrence, and $500,000 per occupational disease.

3. Automobile Liability - $500,000 Combined Single Limit. Limits can only be reduced if approved by the HR Director or designee.

C. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductible or self-insured retentions must be declared to and approved by the City.

D. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain the following provisions:

1. General Liability and Automobile Liability Coverages

   a. The City, its officers, officials, employees, Boards and Commissions and volunteers are to be added as "Additional Insured" as respects liability arising out of activities performed by or on behalf of the vendor, products and completed operations of the vendor, premises owned, occupied or used by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officers, officials, employees or volunteers. It is understood that the business auto policy under "Who is an Insured" automatically provides liability coverage in favor of the City. The coverage shall include defense of claims against the City as additional insured.

   b. The vendor's insurance coverage shall be primary and non-contributory insurance as respects the City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be excess of the vendor's insurance and shall not contribute with it.

   c. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the City, its officers, officials, and employees, Boards and Commissions or volunteers.

   d. The vendor's insurance shall apply separately to each insured against whose claim is made or suit is brought, except to the limits of the insured's liability.

2. Waiver of Subrogation – All Coverages
   Each insurance policy required by this exhibit shall waive all rights of subrogation against the City, its officers, officials, employees, and volunteers for losses arising from work performed by the vendor for the City.

3. Notice of Cancellation - All Coverages
   Each insurance policy required by this exhibit shall be endorsed to state that coverage shall not be suspended, voided, canceled or non-renewed by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given the City, or ten (10) days prior written notice for non-payment of premium.

E. ACCEPTABILITY OF INSURERS

The City prefers that insurance be placed with insurers with an A.M. Best's rating of no less than **A-:VI, or, A or better** by Standard and Poors.

F. VERIFICATION OF COVERAGE

Contractor shall furnish the City with certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be provided on forms approved by the Texas Department of Insurance. City will not accept Memorandums of Insurance or Binders as proof of insurance. The City reserves the right to require complete, certified copies of all required insurance policies at any time.

G. HOLD HARMLESS AND INDEMNIFICATION

THE CONSULTANT/CONTRACTOR AGREES TO DEFEND, INDEMNIFY AND HOLD THE CITY, ITS OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGMENTS, COSTS AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE OR OTHER HARM FOR WHICH RECOVERY OF DAMAGES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY CONSULTANT'S/CONTRACTOR'S BREACH OF ANY OF THESE TERMS AND CONDITIONS OR BY ANY NEGLIGENT OR STRICTLY LIABLE ACT OR OMISSION OR INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY, CONSULTANT/CONTRACTOR, ITS OFFICERS, AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THIS AGREEMENT; EXCEPT THAT THE INDEMNITY PROVIDED FOR IN THE PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OR FAULT OF THE CITY, ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE CONTRACTORS, AND IN THE EVENT OF JOINT AND CONCURRING NEGLIGENCE OR FAULT OF THE CONSULTANT/CONTRACTOR AND THE CITY, RESPONSIBILITY AND INDEMNITY, IF ANY, SHALL BE APPORTIONED IN ACCORDANCE WITH THE LAW OF THE STATE OF TEXAS, WITHOUT WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW AND THE CITY'S REASONABLE ATTORNEY'S FEES SHALL BE REIMBURSED IN PROPORTION TO THE CONSULTANT'S LIABILITY. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

LEWISVILLE
Deep Roots. Broad Wings. Bright Future.

Lewisville 2025 - Sustainability

Lewisville City Council unanimously adopted the Lewisville 2025 plan on July 14, 2014. The plan was developed after more than a year of public input and discussion that garnered hundreds of ideas and suggestions. That input was studied extensively by the Lewisville 2025 Steering Committee, City staff and professional consultants and formulated into the Lewisville 2025 plan. The plan provides a clear shared vision for the kind of community Lewisville wants to be when it turns 100 years old in 2025: a place that people choose to live, work and visit.

Lewisville 2025 identifies nine "Big Moves" to guide the community's efforts toward being a thriving, desirable community. One of these Big Moves is sustainability. Lewisville defines sustainability in this way:

> *Limited resources, such as land, water, energy, clean air, natural assets, and public funds are used efficiently to provide a desirable quality of life and business climate today without reducing Lewisville's ability to provide the desired quality of life and business climate for success of future generations.*

The Purchasing Division's goal is to support and encourage sustainable management practices through the purchase and use of materials, products and services that demonstrate environmental stewardship as well as fiscal and social responsibility. To that end, Lewisville will consider environmental factors such as but not limited to, recycled content, product life cycle, waste reduction, energy efficiency, toxicity, water consumption, and human health impacts when making purchasing recommendations. To assist City staff with evaluating these factors, prospective vendors may be required to provide specific information about their products and services that addresses environmental impacts.

Does Product or Service?	Yes	No	Details
Reduce energy consumption	✓		Closest rock quarry is 60 miles away - less driving/fuel spent
Reduce toxicity, including emissions	✓		Same as above - reduced truck emissions by having a plant within 10 miles
Reduce waste	✓		Because we recycle concrete - it does not go into the landfill
Contain recyclable materials	✓		Concrete is recyclable
Reduce water consumption		✓	
List other environmental impacts			

Attach supporting documentation if needed

PURCHASE ORDER
TERMS & CONDITIONS

Seller and Buyer agree to comply with the following terms and conditions. These Terms and Conditions along with the purchase order shall constitute a contract between the Seller and Buyer upon the Seller issuing an invoice and/or providing any of the goods and services described in the purchase order. In the event of a conflict between these Terms and Conditions and a separate written agreement between the Seller and Buyer, the terms of the separate written agreement shall prevail.

1. SELLER TO PACKAGE GOODS: Seller will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently packed as follows: (a) Seller's name and address; (b) Consignee's name, address and purchase order or purchase order release number and the supply agreement number if applicable; (c) Container number and total number of containers, e.g. box 1 of 4 boxes; and (d) the number of the container bearing the packing slip. Seller shall bear cost of packaging unless otherwise provided. Goods shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. Buyer's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

2. SHIPMENT UNDER RESERVATION PROHIBITED: Seller is not authorized to ship the goods under reservation and no tender of a bill of lading will operate as a tender of goods.

3. TITLE AND RISK OF LOSS: The title and risk of loss of the goods shall not pass to Buyer until Buyer actually receives and takes possession of the goods at the point or points of delivery.

4. DELIVERY TERMS AND TRANSPORTATION CHARGES: F.O.B. Inside Delivery, Municipal Facility, Lewisville, Texas, and shall include all delivery and packaging costs. The Buyer assumes no liability for goods delivered in damaged or unacceptable condition. The Seller shall handle all claims with carriers, and in case of damaged goods, shall ship replacement goods immediately upon notification by Seller of damage.

5. NO REPLACEMENT OF DEFECTIVE TENDER: Every tender or delivery of goods must fully comply with all provisions of this contract as to time of delivery, quality and the like. If a tender is made which does not fully conform, this shall constitute a breach and Seller shall not have the right to substitute a conforming tender provided, where the time for performance has not yet expired, the Seller may notify Buyer of his intention to cure and may then make a conforming tender within the contract time but not afterward.

6. PLACE OF DELIVERY: The place of delivery shall be that set forth on the purchase order. Any change thereto shall be effected by modification as provided for in Clause 20, "Modifications", hereof. The terms of this contract are "no arrival, no sale".

7. INVOICES AND PAYMENTS: (a) Seller shall submit separate invoices on each purchase order after each delivery. Invoices shall indicate the purchase order number, shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading, and the freight weigh bill when applicable, should be attached to the invoice. Mail to: City of Lewisville Accounts Payable, PO Box 299002 Lewisville, Texas 75029-9002. Payments shall be made thirty days after the goods are delivered to the Buyer, or a correct invoice is received, whichever is later. Suppliers should keep the Accounts Payable Office advised of any changes in remittance addresses. (b) Buyer's obligation is payable only and solely from funds available for the purpose of the purchase. Lack of funds shall render this contract null and void to the extent funds are not available and any delivered but unpaid for goods will be returned to Seller by Buyer. (c) Do not include Federal Excise, State or City Sales Tax. Buyer shall furnish tax exemption certificate, if required.

8. GRATUITIES: The Buyer may, by written notice to the Seller, cancel this contract without liability to Seller if it is determined by Buyer that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the Seller, or any agent, or representative of the Seller, to any officer or employee of the City of Lewisville with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending or the making or any determinations with respect to the performing of such a contract. In the event this contract is cancelled by Buyer pursuant to this provision, Buyer shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by Seller in providing such gratuities.

9. SPECIAL TOOLS AND TEST EQUIPMENT: If the price stated on the face hereof includes the cost of any special tooling or special test equipment fabricated or required by Seller for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the Buyer and to the extent feasible shall be identified by the Seller as such.

10. WARRANTY PRICE: (a) The price to be paid by the Buyer shall be that contained in Seller's bid which Seller warrants to be no higher than Seller's current prices on orders by others for products of the kind and specification covered by this contract for similar quantities under similar or like conditions and methods of purchase. In the event Seller breaches this warranty, the prices of the items shall be reduced to the Seller's current prices on orders by others, or in the alternative, Buyer may cancel this contract without liability to Seller for breach or Seller's actual expense. (b) The Seller warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for commission, percentage, brokerage, or contingent fee excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Seller for the purpose of securing business. For breach of violation of this warranty, the Buyer shall have the right in addition to any other right or rights to cancel this contract without liability and to deduct from the contract price, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.

11. WARRANTY PRODUCTS: Seller shall not limit or exclude any implied warranties and any attempt to do so shall render this contract voidable at the option of the Buyer. Seller warrants that the goods furnished will conform to the specifications, drawings and descriptions listed in the bid invitation and to the sample(s) furnished by Seller, if any. In the event of a conflict between the specifications, drawings and descriptions, the specifications shall govern.

12. SAFETY WARRANTY: Seller warrants that the product sold to Buyer shall conform to the standards promulgated by the U. S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event the product does not conform to OSHA standards, Buyer may return the product for correction or replacement at the Seller's expense. In the event Seller fails to make the appropriate correction within a reasonable time, correction made by Buyer will be at Seller's expense.

13. NO WARRANTY BY BUYER AGAINST INFRINGEMENTS: As part of this contract for sale Seller agrees to ascertain whether goods manufactured in accordance with the specifications attached to this contract will give rise to the rightful claim of any third person by way of infringement or the like. Buyer makes no warranty that the production of goods according to the specification will not give rise to such a claim, and in no event shall Buyer be liable to Seller for indemnification in the event that Seller is sued on the grounds of infringement or the like. If seller is of the opinion that an infringement or the like will result, he will notify Buyer to this effect in writing within two weeks after the signing of this contract. If Buyer does not receive notice and is subsequently held liable for the infringement of the like, Seller will save Buyer harmless. If Seller in good faith ascertains that production of the goods in accordance with the specifications will result in infringement or the like, this contract shall be null and void except that Buyer will pay Seller the reasonable cost of his search as to infringements.

14. RIGHT OF INSPECTION: Buyer shall have the right to inspect the goods at delivery before accepting them.

15. CANCELLATION: Buyer shall have the right to cancel for default all or any part of the undelivered portion of this order if Seller breaches any of the terms hereof including warranties of Seller or if the Seller becomes insolvent or commits acts of bankruptcy. Such right of cancellation is in addition to and not in lieu of any other remedies which Buyer may have in law or equity.

16. TERMINATION: The performance of work under this order may be terminated in whole or in part by the Buyer in accordance with this provision. Termination of work hereunder shall be effected by the delivery to the Seller of a "Notice of Termination" specifying the extent to which performance of work under the order is terminated and the date upon which such termination becomes effective. Such right of termination is in addition to and not in lieu of rights of Buyer set forth in Clause 15, herein.

17. FORCE MAJEURE: If by reason of Force Majeure, either party hereto shall be rendered unable wholly or in part to carry out its obligations under this contract then such party shall give notice and full particulars of Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, except as hereinafter provided, but for no longer period, and such party shall endeavor to remove or overcome such inability with all reasonable dispatch. The term Force Majeure as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, act of public enemy, orders of any kind of government of the United States or the State of Texas or any civil military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, droughts, arrests, restraint of government and people, civil disturbances, explosions, breakage or accidents to machinery, pipelines or canals, or other causes not reasonably within the control of the party claiming such inability.

18. ASSIGNMENT DELEGATION: No right or interest in this contract shall be assigned or delegation of any obligation made by Seller without the written permission of the Buyer. Any attempted assignment or delegation by Seller shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

19. WAIVER: No claim or right arising out of a breach of this contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved.

20. MODIFICATIONS: This contract may be modified or rescinded only by a writing signed by both of the parties or their duly authorized agents. This shall include any change orders.

21. INTERPRETATION PAROLE EVIDENCE: This writing is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of their agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this contract. Acceptance or acquiescence in a course of performance rendered under this contract shall not be relevant to determine the meaning of this contract even though the accepting or acquiescing party has knowledge of the performance and opportunity for objection. Whenever a term defined by the Uniform Commercial Code is used in this contract, the definition contained in the Code is to control.

22. APPLICABLE LAW: This contract shall be governed by the Uniform Commercial Code. Wherever the term "Uniform Commercial Code" is used, it shall be construed as meaning the Uniform Commercial Code as adopted in the State of Texas as effective and in force on the date of this contract.

23. ADVERTISING: Seller shall not advertise or publish, without Buyer's prior consent, the fact that Buyer has entered into this contract, except to the extent necessary to comply with proper requests for information from an authorized representative of the federal, state or local government.

24. RIGHT TO ASSURANCE: Whenever one party to this contract in good faith has reason to question the other party's intent to perform he may demand that the other party give written assurance of his intent to perform. In the event that a demand is made and no assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the contract.

25. VENUE: Both parties agree that venue for any litigation arising from this contract shall lie in Denton County, Texas.

26. DISCLOSURE: Pursuant to Chapter 176 of the Texas Local Government Code, a person or agent of a person who contracts or seeks to contract with the City of Lewisville must complete a conflict of interest questionnaire if the person or agent has an affiliation or business relationship that might cause a conflict of interest with the City. The conflict of interest questionnaire, which is available online at ethics.state.tx.us, must be filed with the City Secretary of the City of Lewisville no later than the seventh business day after the person or agent begins contract discussions or negotiations with the City of Lewisville or submits to the City of Lewisville an application, response to a request for proposal or bid, correspondence, or another writing related to a potential agreement with the City of Lewisville. An updated conflict of interest questionnaire must be filed in accordance with Chapter 176 of the Local Government Code

Seller should consult with legal counsel if you have questions regarding its compliance with the requirements of Chapter 176. It is the responsibility of each person or agent who is contracting or seeking to contract with the City of Lewisville to comply with the filing requirements of Chapter 176.

27. INDEPENDENT CONTRACTOR: Seller shall be considered an independent contractor and not an agent, servant, employee, or representative of Buyer in the performance of the work. No term or provision herein or act of the Seller shall be construed as changing that status.

28. TERMINATION FOR DEFAULT: Buyer reserves the right to enforce the performance of any Purchase Order in any manner prescribed by law or deemed to be in the best interest of Buyer in the event of breach or default. The Buyer reserves the right to terminate any purchase order and/or agreement with the Seller in the event the Seller fails to: (a) meet delivery schedules, or (b) otherwise perform in accordance with these terms and conditions.

29. PROTESTS: All protests regarding the solicitation process must be submitted in written form to the Purchasing Manager within five (5) working days following the opening of bids/proposals. This includes all protests relating to legal advertisements, deadlines, bid/proposal openings, and all other related procedures under the Local Government Code

Post-award protests must be submitted in written form to the City Manager within five (5) working days after award. The protest must include, at a minimum, the name of protester, bid/proposal number or description of goods or services, and a statement of grounds for protest.

30. INDEMNIFICATION: SELLER AGREES TO DEFEND, INDEMNIFY AND HOLD BUYER, ITS OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGMENTS, COSTS AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE OR OTHER HARM FOR WHICH RECOVERY OF DAMAGES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY SELLER'S BREACH OF ANY OF THESE TERMS AND CONDITIONS OR BY ANY NEGLIGENT OR STRICTLY LIABLE ACT OR OMISSION, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY SELLER, ITS OFFICERS, AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THIS CONTRACT; EXCEPT THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OR FAULT OF BUYER, ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE CONTRACTORS, AND IN THE EVENT OF JOINT AND CONCURRING NEGLIGENCE OR FAULT OF THE SELLER AND BUYER, RESPONSIBILITY AND INDEMNITY, IF ANY, SHALL BE APPORTIONED IN ACCORDANCE WITH THE LAW OF THE STATE OF TEXAS, WITHOUT WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO BUYER UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

31. SEVERABILITY: In case any one or more of the provisions contained in these Terms and Conditions shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof, and these Terms and Conditions shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

32. IMMIGRATION REFORM AND CONTROL ACT (8 U.S.C 1324a): The Buyer supports the Immigration Reform and Control Act (IRCA), which is a comprehensive scheme prohibiting the employment of unauthorized aliens in the United States. The Seller and its subcontractors shall at all times during the term of the contract with the Buyer comply with the requirements of IRCA and shall notify the Buyer within fifteen (15) working days of receiving notice of a violation of IRCA. The Seller also warrants that it has not had an IRCA violation within the last five (5) years. The Buyer may terminate a contract with the Seller if the Buyer determines that (a) the Seller or its subcontractors have been untruthful regarding IRCA violations in the preceding five (5) years or (b) the Seller or its subcontractors fail to timely notify the Buyer of an IRCA violation.

33. ADA COMPLIANCE: All goods and services provided to the Buyer must be compliant with the Americans with Disabilities Act and any amendments thereto (the "ADA") and all regulations promulgated pursuant to the ADA. Seller will be required to certify compliance, if required under the law or otherwise required by the Buyer.

34. PROTECTION OF RESIDENT WORKERS: The Buyer actively supports the Immigration and Nationality Act (INA), which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Seller shall establish appropriate procedures and controls so no services under the contract will be performed by any worker who is not legally eligible to perform such services or employment. The Buyer reserves the right to audit Seller's employment records to verify the existence of a completed Employment Eligibility Verification Form (I-9) for every worker performing services under the contract. The audit will be at the Buyer's expense.

35. NO BOYCOTT OF ISRAEL: Pursuant to Texas Government Code Chapter 2270, the Seller agrees that acceptance of these Terms & Conditions serves as written verification that Contractor: (1) does not boycott Israel, as defined by Texas Government Code Section 808.001, and (2) will not boycott Israel during the term of the contract.

36. COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION: Pursuant to Texas Government Code Chapter 2252, Subchapter F, Seller affirms that is it not identified on a list created by the Texas Comptroller of Public Accounts as a company known to have contracts with or provide supplies or services to a foreign terrorist organization.

CITY OF LEWISVILLE
PURCHASING DIVISION

Exceptions

Bid [ ] None

On the lines below, please list any exceptions taken to this bid invitation.

Item#	Description

Signature [ ]
Company [Big City Crushed Concrete]
Date [04/11/19]

No Exceptions taken to this bid invitation.

Signature [ ]
Company [Big City Crushed Concrete]
Date [04/11/19]

TOWN COUNCIL AGENDA ITEM NO. 21

CONSENT ITEM

DATE: December 7, 2020

FROM: Chuck Jennings, Director of Parks and Recreation

ITEM: **Consider approval of a resolution to approve an Advance Funding Agreement, for Voluntary Local Government Contributions to Landscape Improvement Projects, with the Texas Department of Transportation (TxDOT) to pay for work associated with the construction of landscaping activities, to include planting and irrigation, along FM 1171 from Long Prairie Road to North Garden Ridge Boulevard within the limits of the Town of Flower Mound, in the amount of $90,000.00; and authorization for the Mayor to execute the same on behalf of the Town.**

BACKGROUND INFORMATION: In 2017, Keep Flower Mound Beautiful submitted and received the Governor's Community Achievement Award grant for $250,000 to be used toward landscape improvements. The improvement of the FM1171 landscaped medians between FM2499 and Garden Ridge Boulevard was selected to be updated to match the style and design of the landscaping recently installed from Shiloh Road to the western Town limits. The current landscaping was put in many years ago and is overgrown, showing major signs of distress, and is a completely different look from the remainder of the roadway.

TxDOT is overseeing the design and construction of the project and is ready to move forward with putting the project out to bid. The total cost of the project is $389,368 and the Town is responsible for $90,000. With the scheduled improvement of this section, TxDOT is requesting the Advance Funding Agreement be approved before the project can move forward to the bidding phase. Any excess costs above the project total will be funded by the State.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: A decision not to approve the Advance Funding Agreement would leave the project short of the necessary funds to fully complete the project as designed. Portions of the project would have to be eliminated from the proposed scope of work in the plans and specifications before going out to bid.

FISCAL IMPACT: $90,000

Proposed Expenditure/(Revenue):	Account Number(s):
$90,000	311-460-36000-5110

Total project cost is $389,368.00 Funding sources are:

- Decision Package (Cash from Tree Preservation Fund) $90,000
- Federal Participation $200,000
- State Participation $99,368

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: Ben Gibbs of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the resolution, as to form and legality.

ATTACHMENTS:

1. Resolution (Exhibit A - Advance Funding Agreement)

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AUTHORIZING THE MAYOR TO ENTER INTO AN ADVANCED FUNDING AGREEMENT WITH THE TEXAS DEPARTMENT OF TRANSPORTATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound is a home rule municipality acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, it is the intent of the Town Council to protect the public health, safety and welfare; and,

WHEREAS, the Town and Texas Department of Transportation (TxDOT) are authorized by the laws of the State of Texas to enter into and do intend to enter into an Advance Funding Agreement (AFA) for the project which is briefly described as the construction of landscaping activities to include planting and irrigation along FM 1171 from Long Prairie Road to North Garden Ridge within the limits of the Town of Flower Mound (the "Project"); and,

WHEREAS, TxDOT and the Town have entered into a Municipal Maintenance Agreement dated March 2, 2009, and the parties wish to incorporate landscape maintenance terms into the AFA; and,

WHEREAS, the Texas Transportation Commission passed Minute Order Numbers 115550 authorizing the State to undertake and complete a highway improvement or other transportation project; and,

WHEREAS, the AFA is attached hereto as Exhibit "A"; and

WHEREAS, the Town of Flower Mound has dedicated funds for this project from its Tree Preservation Fund; and,

WHEREAS, TxDOT will use funds from the Governor's Community Achievement Award grant for the Town; and,

WHEREAS, it is considered to be in the public interest to expedite the planning and construction of the Project;

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

ORDER. The Town Council hereby authorizes the Mayor to enter into an Advance Funding Agreement (AFA) with the Texas Department of Transportation (TxDOT) described in Texas Transportation Commission Minute Order Numbers 115550 to provide for the development and construction of the Project.

SECTION 2

NOTICE. Upon adoption of this Resolution, the Town Secretary is directed to give notice of this resolution as may be required by law.

SECTION 3

AUTHORIZATION OF NECESSARY ACTIONS. The Mayor, Town Administrator, and the Town Secretary, in consultation with the Town Attorney, are authorized and directed to take all actions necessary to effectuate this Resolution.

SECTION 4

EFFECTIVE DATE. This Resolution shall be effective upon its adoption.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF __ TO __, ON THIS 7TH DAY OF DECEMBER, 2020.

APPROVED:

_____

Steve Dixon, MAYOR

ATTEST:

_____

Theresa Scott, TOWN SECRETARY

TxDOT:			Federal Highway Administration:	
CSJ #	1311-01-058		CFDA No.	20.205
District #	18-Dallas		CFDA Title	Highway Planning and Construction
Code Chart 64 #	14670			
Project Name	FM 1171 Landscaping Development		*AFA Not Used For Research & Development*	
Limits	From 1171 Long Prairie Road to North Garden Ridge Boulevard			

STATE OF TEXAS §

COUNTY OF TRAVIS §

ADVANCE FUNDING AGREEMENT
For A
Governor's Community Achievement Award Project
On-System

THIS AGREEMENT (Agreement) is made by and between the State of Texas, acting by and through the **Texas Department of Transportation** called the "State", and the **Town of Flower Mound**, acting by and through its duly authorized officials, called the "Local Government". The State and Local Government shall be collectively referred to as "the parties" hereinafter.

WITNESSETH

WHEREAS, federal law establishes federally funded programs for transportation improvements to implement its public purposes, and

WHEREAS, the Texas Transportation Code, Section 201.103 establishes that the State shall design, construct and operate a system of highways in cooperation with local governments, and Section 222.052 authorizes the Texas Transportation Commission to accept contributions from political subdivisions for development and construction of public roads and the state highway system within the political subdivision, and

WHEREAS, federal and state laws require local governments to meet certain contract standards relating to the management and administration of State and federal funds, and

WHEREAS, the Texas Transportation Commission has codified 43 TAC, Rules 15.50-15.56 that describe federal, state, and local responsibilitier cost participation in highway improvement and other transportation projects, and

WHEREAS, the Texas Transportation Commission passed Minute Order Numbers **115550 & 115814** authorizing the State to undertake and complete a highway improvement or other transportation project generally described as **landscaping development.** The portion of the project work covered by this Agreement is identified in the Agreement, Article 3, Scope of Work (Project), and

WHEREAS, the Governing Body of the Local Government has approved entering into this Agreement by resolution, dated **_____20_____**, which is attached to and made a part of this Agreement as (Attachment A), Resolution, Ordinance, or Commissioners Court Order. A map showing the Project location appears in (Attachment B), Location Map Showing Project, which is attached to and made a part of this Agreement.

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NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements of the parties, to be by them respectively kept and performed as set forth in this Agreement, it is agreed as follows:

AGREEMENT

1. Responsible Parties

For the Project covered by this Agreement, the parties shall be responsible for the following work as stated in the article of the Agreement referenced in the table below:

1	**N/A**	Utilities	Article 8
2.	**N/A**	Environmental Assessment and Mitigation	Article 9
3.	**N/A**	Architectural and Engineering Services	Article 11
4.	**State**	Construction Responsibilities	Article 12
5.	**N/A**	Right of Way and Real Property	Article 14

2. Period of the Agreement

This Agreement becomes effective when signed by the last party whose signing makes the Agreement fully executed. This Agreement shall remain in effect until the Project is completed or unless terminated as provided below.

3. Scope of Work

The scope of work for the Project consists of the construction of landscaping activities to include planting and irrigation along FM 1171 from Long Prairie Road to North Garden Ridge Boulevard within the limits of the Town of Flower Mound as shown on Attachment B.

4. Project Sources and Uses of Funds

The total estimated cost of the Project is shown in Attachment C, Project Budget (Attachment C) which is attached to and made a part of this Agreement.

A. If the Local Government will perform any work under this Agreement for which reimbursement will be provided by or through the State, the Local Government must complete training. If federal funds are being used, the training must be completed before federal spending authority is obligated. Training is complete when at least one individual who is working actively and directly on the Project successfully completes and receives a certificate for the course entitled "Local Government Project Procedures and Qualification for the Texas Department of Transportation" and retains qualification in accordance with applicable TxDOT procedures. Upon request, the Local Government shall provide the certificate of qualification to the State. The individual who receives the training certificate may be an employee of the Local Government or an employee of a firm that has been contracted by the Local Government to perform oversight of the Project. The State in its discretion may deny reimbursement if the Local Government has not continuously designated in writing a qualified individual to work actively on or to directly oversee the Project.

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B. The expected cash contributions from the federal government, the State, the Local Government, or other parties are shown in Attachment C. The State will pay for only those Project costs that have been approved by the Texas Transportation Commission. For projects with federal funds, the State and the federal government will not reimburse the Local Government for any work performed before the federal spending authority is formally obligated to the Project by the Federal Highway Administration (FHWA). After federal funds have been obligated, the State will send to the Local Government a copy of the formal documentation showing the obligation of funds including federal award information. The Local Government is responsible for 100% of the cost of any work performed under its direction or control before the federal spending authority is formally obligated.

C. Attachment C shows, by major cost categories, the cost estimates and the party responsible for performing the work for each category. These categories may include but are not limited to: (1) costs of real property; (2) costs of utility work; (3) costs of environmental assessment and remediation; (4) cost of preliminary engineering and design; (5) cost of construction and construction management; and (6) any other local project costs.

D. The State will be responsible for securing the federal and State share of the funding required for the development and construction of the local Project. If the Local Government is due funds for expenses incurred, these funds will be reimbursed to the Local Government on a cost basis.

E. The Local Government will be responsible for all non-federal or non-State participation costs associated with the Project, unless otherwise provided for in this Agreement or approved otherwise in an amendment to this Agreement. For items of work subject to specified percentage funding, the Local Government shall only in those instances be responsible for all Project costs that are greater than the maximum State and federal participation specified in Attachment C and for overruns in excess of the amount specified in Attachment C to be paid by the Local Government.

F. The budget in Attachment C will clearly state all items subject to fixed price funding, specified percentage funding, and the periodic payment schedule, when periodic payments have been approved by the State.

G. When the Local Government bears the responsibility for paying cost overruns, the Local Government shall make payment to the State within thirty (30) days from the receipt of the State's written notification of additional funds being due.

H. When fixed price funding is used, the Local Government is responsible for the fixed price amount specified in Attachment C. Fixed prices are not subject to adjustment unless (1) differing site conditions are encountered; (2) further definition of the Local Government's requested scope of work identifies greatly differing costs from those estimated; (3) work requested by the Local Government is determined to be ineligible for federal participation; or (4) the adjustment is mutually agreed to by the State and the Local Government.

I. Prior to the performance of any engineering review work by the State, the Local Government will pay to the State the amount specified in Attachment C. At a minimum, this amount shall equal the Local Government's funding share for the estimated cost of

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preliminary engineering performed or reviewed by the State for the Project. At least sixty (60) days prior to the date set for receipt of the construction bids, the Local Government shall remit its remaining financial share for the State's estimated construction oversight and construction cost.

J. The State will not execute the contract for the construction of the Project until the required funding has been made available by the Local Government in accordance with this Agreement.

K. Whenever funds are paid by the Local Government to the State under this Agreement, the Local Government shall remit a check or warrant made payable to the "Texas Department of Transportation" or may use the State's Automated Clearing House (ACH) system for electronic transfer of funds in accordance with instructions provided by TxDOT's Finance Division. The funds shall be deposited and managed by the State and may only be applied by the State to the Project.

L. The State will not pay interest on any funds provided by the Local Government.

M. If a waiver for the collection of indirect costs for a service project has been granted under 43 TAC §15.56, the State will not charge the Local Government for the indirect costs the State incurs on the Project, unless this Agreement is terminated at the request of the Local Government prior to completion of the Project.

N. If the Local Government is an Economically Disadvantaged County (EDC) and if the State has approved adjustments to the standard financing arrangement, this Agreement reflects those adjustments.

O. Where the Local Government is authorized to perform services under this Agreement and be reimbursed by the State, the Local Government is authorized to submit requests for reimbursement by submitting the original of an itemized invoice, in a form and containing all items required by the State, no more frequently than monthly and no later than ninety (90) days after costs are incurred. If the Local Government submits invoices more than ninety (90) days after the costs are incurred and if federal funding is reduced as a result, the State shall have no responsibility to reimburse the Local Government for those costs.

P. Upon completion of the Project, the State will perform a final accounting of the Project costs for all items of work with specified percentage funding. Any funds due by the Local Government, the State, or the federal government for these work items will be promptly paid by the owing party.

Q. The state auditor may conduct an audit or investigation of any entity receiving funds from the State directly under this Agreement or indirectly through a subcontract under this Agreement. Acceptance of funds directly under this Agreement or indirectly through a subcontract under this Agreement acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit.

R. Payment under this Agreement beyond the end of the current fiscal biennium is subject to availability of appropriated funds. If funds are not appropriated, this Agreement shall be terminated immediately with no liability to either party.

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5. Termination of This Agreement

This Agreement shall remain in effect until the Project is completed and accepted by all parties, unless:

A. The Agreement is terminated in writing with the mutual consent of the parties;

B. The Agreement is terminated by one party because of a breach, in which case any costs incurred because of the breach shall be paid by the breaching party;

C. The Local Government elects not to provide funding after the completion of preliminary engineering, specifications, and estimates (PS&E) and the Project does not proceed because of insufficient funds, in which case the Local Government agrees to reimburse the State for its reasonable actual costs incurred during the Project; or

D. The Agreement is terminated by the State because the parties are not able to execute a mutually agreeable amendment when the costs for Local Government requested items increase significantly due to differing site conditions, determination that Local government requested work is ineligible for federal or state cost participation, or a more thorough definition of the Local Government's proposed work scope identifies greatly differing costs from those estimated. The State will reimburse Local Government remaining funds to the Local Government within ninety (90) days of termination; or

E. The Project is inactive for thirty-six (36) consecutive months or longer and no expenditures have been charged against federal funds, in which case the State may in its discretion terminate this Agreement.

6. Amendments

Amendments to this Agreement due to changes in the character of the work, terms of the Agreement, or responsibilities of the parties relating to the Project may be enacted through a mutually agreed upon, written amendment.

7. Remedies

This Agreement shall not be considered as specifying the exclusive remedy for any agreement default, but all remedies existing at law and in equity may be availed of by either party to this Agreement and shall be cumulative.

8. Utilities

The party named in Article 1, Responsible Parties, under AGREEMENT shall be responsible for the adjustment, removal, or relocation of utility facilities in accordance with applicable state laws, regulations, rules, policies, and procedures, including any cost to the State of a delay resulting from the Local Government's failure to ensure that utility facilities are adjusted, removed, or relocated before the scheduled beginning of construction. The Local Government will not be reimbursed with federal or State funds for the cost of required utility work. The Local Government must obtain advance approval for any variance from established procedures. Before a construction contract is let, the Local Government shall provide, at the State's request, a certification stating that the Local Government has completed the adjustment of all utilities that must be adjusted before construction is commenced.

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9. Environmental Assessment and Mitigation

Development of a transportation project must comply with the National Environmental Policy Act and the National Historic Preservation Act of 1966, which require environmental clearance of federal-aid projects. The party named in Article 1, Responsible Parties, under AGREEMENT is responsible for the following:

A. The identification and assessment of any environmental problems associated with the development of a local project governed by this Agreement.
B. The cost of any environmental problem's mitigation and remediation.
C. Providing any public meetings or public hearings required for the environmental assessment process. Public hearings will not be held prior to the approval of the Project schematic.
D. The preparation of the NEPA documents required for the environmental clearance of this Project.

If the Local Government is responsible for the environmental assessment and mitigation, before the advertisement for bids, the Local Government shall provide to the State written documentation from the appropriate regulatory agency or agencies that all environmental clearances have been obtained.

10. Compliance with Accessibility Standards

All parties to this Agreement shall ensure that the plans for and the construction of all projects subject to this Agreement are in compliance with standards issued or approved by the Texas Department of Licensing and Regulation (TDLR) as meeting or consistent with minimum accessibility requirements of the Americans with Disabilities Act (P.L. 101-336) (ADA).

11. Architectural and Engineering Services

The party named in Article 1, Responsible Parties, under AGREEMENT has responsibility for the performance of architectural and engineering services. The engineering plans shall be developed in accordance with the applicable State's *Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges* and the special specifications and special provisions related to it. For projects on the State highway system, the design shall, at a minimum conform to applicable State manuals. For projects not on the State highway system, the design shall, at a minimum, conform to applicable American Association of State Highway and Transportation Officials (AASHTO) design standards.

In procuring professional services, the parties to this Agreement must comply with federal requirements cited in 23 CFR Part 172 if the Project is federally funded and with Texas Government Code 2254, Subchapter A, in all cases. Professional contracts for federally funded projects must conform to federal requirements, specifically including the provision for participation by Disadvantaged Business Enterprises (DBEs), ADA, and environmental matters. If the Local Government is the responsible party, the Local Government shall submit its procurement selection process for prior approval by the State. All professional services contracts must be reviewed and approved by the State prior to execution by the Local Government.

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12. Construction Responsibilities

The party named in Article 1, Responsible Parties, under AGREEMENT is responsible for the following:

A. Advertise for construction bids, issue bid proposals, receive and tabulate the bids, and award and administer the contract for construction of the Project. Administration of the contract includes the responsibility for construction engineering and for issuance of any change orders, supplemental agreements, amendments, or additional work orders that may become necessary subsequent to the award of the construction contract. In order to ensure federal funding eligibility, projects must be authorized by the State prior to advertising for construction.

B. If the State is the responsible party, the State will use its approved contract letting and award procedures to let and award the construction contract.

C. If the Local Government is the responsible party, the Local Government shall submit its contract letting and award procedures to the State for review and approval prior to letting.

D. If the Local Government is the responsible party, the State must concur with the low bidder selection before the Local Government can enter into a contract with the vendor.

E. If the Local Government is the responsible party, the State must review and approve change orders.

F. Upon completion of the Project, the party responsible for constructing the Project will issue and sign a “Notification of Completion” acknowledging the Project’s construction completion and submit certification(s) sealed by a professional engineer(s) licensed in the State of Texas.

G. For federally funded contracts, the parties to this Agreement will comply with federal construction requirements cited in 23 CFR Part 635 and with requirements cited in 23 CFR Part 633, and shall include the latest version of Form “FHWA-1273” in the contract bidding documents. If force account work will be performed, a finding of cost effectiveness shall be made in compliance with 23 CFR 635, Subpart B.

13. Project Maintenance

Project maintenance shall be undertaken as provided for in the existing Landscape Maintenance Agreement with the Local Government.

14. Right of Way and Real Property

The party named in Article 1, Responsible Parties, under AGREEMENT is responsible for the provision and acquisition of any needed right of way or real property.

15. Insurance

If this Agreement authorizes the Local Government or its contractor to perform any work on State right of way, before beginning work, the entity performing the work shall provide the State with a fully executed copy of the State's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on State right of way. This coverage shall be maintained until all work on the State right of way is complete. If coverage is not maintained, all work on State right

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of way shall cease immediately, and the State may recover damages and all costs of completing the work.

16. Notices

All notices to either party shall be delivered personally or sent by certified or U.S. mail, postage prepaid, addressed to that party at the following address:

Local Government:	**State:**
Town of Flower Mound ATTN: City Manager 2121 Cross Timbers Road Flower Mound, Texas 75028	Texas Department of Transportation ATTN: Director of Contract Services 125 E. 11th Street Austin, TX 78701

All notices shall be deemed given on the date delivered in person or deposited in the mail, unless otherwise provided by this Agreement. Either party may change the above address by sending written notice of the change to the other party. Either party may request in writing that notices shall be delivered personally or by certified U.S. mail, and that request shall be carried out by the other party.

17. Legal Construction

If one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions and this Agreement shall be construed as if it did not contain the invalid, illegal, or unenforceable provision.

18. Responsibilities of the Parties

The State and the Local Government agree that neither party is an agent, servant, or employee of the other party, and each party agrees it is responsible for its individual acts and deeds as well as the acts and deeds of its contractors, employees, representatives, and agents.

19. Ownership of Documents

Upon completion or termination of this Agreement, all documents prepared by the State shall remain the property of the State. All data and information prepared under this Agreement shall be made available to the State without restriction or limitation on their further use. All documents produced or approved or otherwise created by the Local Government shall be transmitted to the State, in the format directed by the State, on a monthly basis or as required by the State. The originals shall remain the property of the Local Government.

20. Compliance with Laws

The parties to this Agreement shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this Agreement. When required, the Local Government shall furnish the State with satisfactory proof of this compliance.

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21. Sole Agreement

This Agreement constitutes the sole and only agreement between the parties and supersedes any prior understandings or written or oral agreements respecting the Agreement's subject matter.

22. Cost Principles

In order to be reimbursed with federal funds, the parties shall comply with the cost principles established in 2 CFR 200 that specify that all reimbursed costs are allowable, reasonable, and allocable to the Project.

23. Procurement and Property Management Standards

The parties to this Agreement shall adhere to the procurement and property management standards established in 2 CFR 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and to the Texas Uniform Grant Management Standards. The State must pre-approve the Local Government's procurement procedures for purchases to be eligible for state or federal funds.

24. Inspection of Books and Records

The parties to this Agreement shall maintain all books, documents, papers, accounting records, and other documentation relating to costs incurred under this Agreement and shall make such materials available to the State, the Local Government, and, if federally funded, the FHWA and the U.S. Office of the Inspector General or their duly authorized representatives for review and inspection at its office during the Agreement period and for seven (7) years from the date of final reimbursement by FHWA under this Agreement or until any impending litigation or claims are resolved. Additionally, the State, the Local Government, and the FHWA and their duly authorized representatives shall have access to all the governmental records that are directly applicable to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

25. Civil Rights Compliance

The parties to this Agreement are responsible for the following:

A. Compliance with Regulations: Both parties will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made part of this Agreement.

B. Nondiscrimination: The Local Government, with regard to the work performed by it during the Agreement, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Local Government will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the Agreement covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

C. Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Local Government

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for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier will be notified by the Local Government of the Local Government's obligations under this Agreement and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

D. Information and Reports: The Local Government will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the State or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of the Local Government is in the exclusive possession of another who fails or refuses to furnish this information, the Local Government will so certify to the State or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.

E. Sanctions for Noncompliance: In the event of the Local Government's noncompliance with the Nondiscrimination provisions of this Agreement, the State will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
   1. withholding of payments to the Local Government under the Agreement until the Local Government complies and/or
   2. cancelling, terminating, or suspending of the Agreement, in whole or in part.

F. Incorporation of Provisions: The Local Government will include the provisions of paragraphs (A) through (F) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Local Government will take such action with respect to any subcontract or procurement as the State or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Local Government becomes involved in, or is threatened with, litigation with a subcontractor or supplier because of such direction, the Local Government may request the State to enter into such litigation to protect the interests of the State. In addition, the Local Government may request the United States to enter into such litigation to protect the interests of the United States.

26. Pertinent Non-Discrimination Authorities

During the performance of this Agreement, each party, for itself, its assignees, and successors in interest agree to comply with the following nondiscrimination statutes and authorities; including but not limited to:

A. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

B. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of federal or federal-aid programs and projects).

C. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), as amended, (prohibits discrimination on the basis of sex).

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D. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.) as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27.

E. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age).

F. Airport and Airway Improvement Act of 1982, (49 U.S.C. Chapter 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex).

G. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the federal-aid recipients, subrecipients and contractors, whether such programs or activities are federally funded or not).

H. Titles II and III of the Americans with Disabilities Act, which prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38.

I. The Federal Aviation Administration’s Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex).

J. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations.

K. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, the parties must take reasonable steps to ensure that LEP persons have meaningful access to the programs (70 Fed. Reg. at 74087 to 74100).

L. Title IX of the Education Amendments of 1972, as amended, which prohibits the parties from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

27. Disadvantaged Business Enterprise (DBE) Program Requirements

If federal funds are used:

A. The parties shall comply with the Disadvantaged Business Enterprise Program requirements established in 49 CFR Part 26.

B. The Local Government shall adopt, in its totality, the State’s federally approved DBE program.

C. The Local Government shall incorporate into its contracts with subproviders an appropriate DBE goal consistent with the State’s DBE guidelines and in consideration of the local market, project size, and nature of the goods or services to be acquired. The Local Government shall submit its proposed scope of services and quantity estimates to

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the State to allow the State to establish a DBE goal for each Local Government contract with a subprovider. The Local Government shall be responsible for documenting its actions.

D. The Local Government shall follow all other parts of the State's DBE program referenced in TxDOT Form 2395, Memorandum of Understanding Regarding the Adoption of the Texas Department of Transportation's Federally-Approved Disadvantaged Business Enterprise by Entity, and attachments found at web address http://ftp.dot.state.tx.us/pub/txdot-info/bop/dbe/mou/mou_attachments.pdf.

E. The Local Government shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any U.S. Department of Transportation (DOT)-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The Local Government shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non-discrimination in award and administration of DOT-assisted contracts. The State's DBE program, as required by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this Agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this Agreement. Upon notification to the Local Government of its failure to carry out its approved program, the State may impose sanctions as provided for under 49 CFR Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

F. Each contract the Local Government signs with a contractor (and each subcontract the prime contractor signs with a sub-contractor) must include the following assurance: *The contractor, sub-recipient, or sub-contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate*.

28. Debarment Certifications

If federal funds are used, the parties are prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension." By executing this Agreement, the Local Government certifies that it and its principals are not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549 and further certifies that it will not do business with any party, to include principals, that is currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this Agreement shall require any party to a subcontract or purchase order awarded under this Agreement to certify its eligibility to receive federal funds and, when requested by the State, to furnish a copy of the certification.

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If state funds are used, the parties are prohibited from making any award to any party that is debarred under the Texas Administrative Code, Title 34, Part 1, Chapter 20, Subchapter G, Rule §20.585 and the Texas Administrative Code, Title 43, Part 1, Chapter 9, Subchapter G.

29. Lobbying Certification

If federal funds are used, in executing this Agreement, each signatory certifies to the best of that signatory's knowledge and belief, that:

A. No federal appropriated funds have been paid or will be paid by or on behalf of the parties to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

B. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with federal contracts, grants, loans, or cooperative agreements, the signatory for the Local Government shall complete and submit the Federal Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

C. The parties shall require that the language of this certification shall be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and all sub-recipients shall certify and disclose accordingly. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Title 31 U.S.C. §1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

30. Federal Funding Accountability and Transparency Act Requirements

If federal funds are used, the following requirements apply:

A. Any recipient of funds under this Agreement agrees to comply with the Federal Funding Accountability and Transparency Act (FFATA) and implementing regulations at 2 CFR Part 170, including Appendix A. This Agreement is subject to the following award terms: http://www.gpo.gov/fdsys/pkg/FR-2010-09-14/pdf/2010-22705.pdf and http://www.gpo.gov/fdsys/pkg/FR-2010-09-14/pdf/2010-22706.pdf.

B. The Local Government agrees that it shall:

1. Obtain and provide to the State a System for Award Management (SAM) number (Federal Acquisition Regulation, Part 4, Sub-part 4.11) if this award provides more than $25,000 in federal funding. The SAM number may be obtained by visiting the SAM website whose address is: https://www.sam.gov/portal/public/SAM/
2. Obtain and provide to the State a Data Universal Numbering System (DUNS) number, a unique nine-character number that allows federal government to track the

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distribution of federal money. The DUNS may be requested free of charge for all businesses and entities required to do so by visiting the Dun & Bradstreet (D&B) on-line registration website http://fedgov.dnb.com/webform; and

3. Report the total compensation and names of its top five executives to the State if:
   i. More than 80% of annual gross revenues are from the federal government, and those revenues are greater than $25,000,000; and
   ii. The compensation information is not already available through reporting to the U.S. Securities and Exchange Commission.

31. Single Audit Report

If federal funds are used:

A. The parties shall comply with the single audit report requirements stipulated in 2 CFR 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

B. If threshold expenditures of $750,000 or more are met during the fiscal year, the Local Government must submit a Single Audit Report and Management Letter (if applicable) to TxDOT's Compliance Division, 125 East 11th Street, Austin, TX 78701 or contact TxDOT's Compliance Division by email at singleaudits@txdot.gov.

C. If expenditures are less than the threshold during the Local Government's fiscal year, the Local Government must submit a statement to TxDOT's Compliance Division as follows: "We did not meet the $_____ expenditure threshold and therefore, are not required to have a single audit performed for FY _____."

D. For each year the Project remains open for federal funding expenditures, the Local Government will be responsible for filing a report or statement as described above. The required annual filing shall extend throughout the life of the Agreement, unless otherwise amended or the Project has been formally closed out and no charges have been incurred within the current fiscal year.

32. Signatory Warranty

Each signatory warrants that the signatory has necessary authority to execute this Agreement on behalf of the entity represented.

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Each party is signing this Agreement on the date stated under that party's signature.

THE STATE OF TEXAS

By: _____

Kenneth Stewart
Director of Contract Services
Texas Department of Transportation

Date: _____

THE LOCAL GOVERNMENT

By: _____

Steve Dixon
Mayor
Town of Flower Mound

Date: _____

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ATTACHMENT A

RESOLUTION

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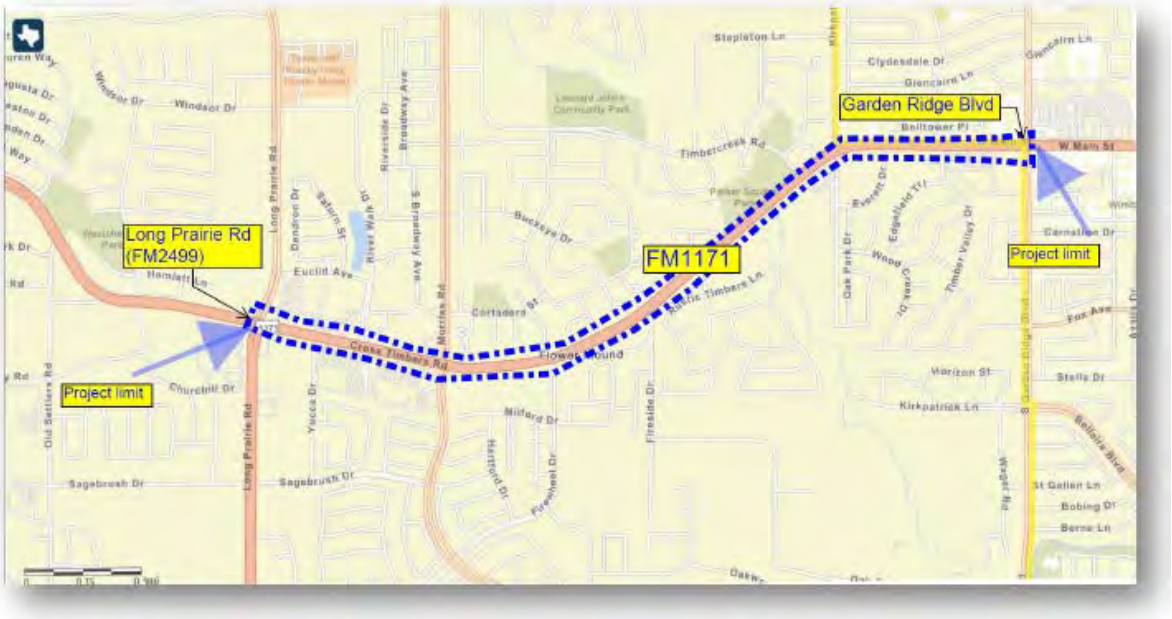
ATTACHMENT B
LOCATION MAP SHOWING PROJECT

PROJECT LOCATION MAP- TOWN OF FLOWER MOUND



CSJ 1311-01-058

PROJECT LIMITS:
ON FM 1171
BEGINNING AT LONG PRAIRIE ROAD (FM2499)
ENDING AT NORTH GARDEN RIDGE BOULEVARD

TxDOT:			Federal Highway Administration:	
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Limits	From 1171 Long Prairie Road to North Garden Ridge Boulevard			

ATTACHMENT C
PROJECT BUDGET

Costs will be allocated based on applicable Federal/State funding and a fixed amount of Local Government funding until Local Government funding reaches the maximum obligated amount. The State will then be responsible for 100% of the costs.

Description	Total Estimated Cost	Federal Participation Cost	State Participation Cost	Local Participation Cost
Construction (by State)	$250,000	$200,000	$50,000	$0
Construction (by State)	$90,000	$0.00	$0.00	$90,000
Subtotal	$340,000	$200,000	$50,000	$90,000
Environmental Direct State Costs	$4,250	$0	$4,250	$0
Right of Way Direct State Costs	$4,250	$0	$4,250	$0
Engineering Direct State Costs	$4,250	$0	$4,250	$0
Utility Direct State Costs	$4,250	$0	$4,250	$0
Construction Direct State Costs	$17,000	$0	$17,000	$0
Indirect State Costs	$15,368	$0	$15,368	$0
TOTAL	$389,368	$0	$99,368	$90,000

Initial payment by the Local Government to the State: $90,000
Payment by the Local Government to the State before construction: $0
Total payment by the Local Government to the State: $90,000
The total amount of Local Government participation shall not exceed the amount appearing above.

TOWN COUNCIL AGENDA ITEM NO. 22

CONSENT ITEM

DATE: December 7, 2020

FROM: Chuck Jennings, Director of Parks and Recreation

ITEM: **Consider approval of a Landscape Maintenance Agreement with the State of Texas for the Town to maintain the Governor's Community Achievement Award grant project along FM1171 between FM2499 and Garden Ridge Boulevard.**

BACKGROUND INFORMATION: In 2017, Keep Flower Mound Beautiful submitted and received the Governor's Community Achievement Award grant for $250,000 to be used toward landscape improvements. The improvement of the FM1171 landscaped medians between FM2499 and Garden Ridge Boulevard was selected to be updated to match the style and design of the landscaping recently installed from Shiloh Road to the western Town limits. The current landscaping was put in many years ago and is overgrown, showing major signs of distress, and is a completely different look from the remainder of the roadway. With the scheduled improvement of this section, the State of Texas is requesting the Landscaping Maintenance Agreement be updated.

As proposed, the State shall install landscape elements including but not limited to trees, shrubs grasses, sidewalks, irrigation systems, and hardscape features through its employees or duly appointed agents. The Town may install landscape elements including but not limited to trees, shrubs, grasses, sidewalks, irrigation systems, and hardscape features through its employees or duly appointed agents. Any installations shall be performed in accordance with Texas Department of Transportation specifications and standards and must be approved by the State in writing prior to any work being performed.

The Town shall maintain and operate all landscape elements, within the limits of the right-of-way, including all median and island areas, but excluding paved areas intended for vehicular travel. Landscape maintenance shall include, but not be limited to, plant maintenance, plant replacement, mowing and trimming, hardscape element maintenance, and irrigation system operation and maintenance. All landscape elements must be maintained in a functional and aesthetically pleasing condition.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: Ben Gibbs of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the agreement, as to form and legality.

ATTACHMENTS:

1. Landscape Maintenance Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

Texas Department of Transportation

LANDSCAPE MAINTENANCE AGREEMENT

THE STATE OF TEXAS

THE COUNTY OF TRAVIS

This AGREEMENT made this_____day of_____, 20___ , by and between the Texas Department of Transportation, hereinafter referred to as the "State," and the City of **Flower Mound**, **Denton** County, Texas, acting by and through its duly authorized officers, hereinafter called the "City".

WITNESSETH

WHEREAS, Chapter 311 of the Transportation Code gives the City exclusive dominion, control, and jurisdiction over and under the public streets within its corporate limits and authorizes the City to enter into agreements with the State to fix responsibilities for maintenance, control, supervision, and regulation of State highways within and through its corporate limits; and

WHEREAS, Section 221.002 of the Transportation Code authorizes the State, at its discretion, to enter into agreements with cities to fix responsibilities for maintenance, control, supervision, and regulation of State highways within and through the corporate limits of such cities; and

WHEREAS, the State and the City have entered into a Municipal Maintenance Agreement dated **March 2, 2009**, **the provisions of which are incorporated herein by reference**, and wherein the City has agreed to retain all functions and responsibilities for maintenance and operations which are not specifically described as the responsibility of the department; and

WHEREAS, the State has existing and proposed landscape improvements, such as, but not limited to, the installation of tree, shrub, and turf plantings, irrigation systems, and other aesthetic elements for areas within the right of way of state highway routes within the City as shown on Attachment “A”; and

WHEREAS, the State will provide such landscape improvements, provided that the City agrees to be responsible for all required maintenance of the landscape improvements.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements of the parties hereto to be by them respectively kept and performed, it is agreed as follows:

Contract Period

This Agreement becomes effective upon the date of final execution by the State, and shall remain in effect until terminated or modified as hereinafter provided.

Coverage

This agreement prescribes the responsibilities of the State and the City relating to the maintenance of the **landscape and irrigation improvements** project which is located on **FM 1171** non-controlled access state highway, as defined in the Municipal Maintenance Agreement. The maintenance is further described in Attachment A, the location map for this project, and limited to the portions along **FM 1171** from **Long Prairie Road (FM 2499))** to **North Garden Ridge Boulevard**.

Amendment

The parties agree that this agreement may be amended. Such amendments, to be effective, must be in writing and signed by both parties.

State's Responsibilities

The State shall install landscape elements including but not limited to trees, shrubs, grasses, sidewalks, irrigation systems, and hardscape features through its employees or duly appointed agents.

City's Responsibilities

The City may install landscape elements including but not limited to trees, shrubs, grasses, sidewalks, irrigation systems, and hardscape features through its employees or duly appointed agents. Any installations shall be performed in accordance with Texas Department of Transportation specifications and standards, and must be approved by the State in writing prior to any work being performed.

The City shall maintain all landscape elements within the limits of the right of way including all median and island areas but excluding paved areas intended for vehicular travel. Landscape maintenance shall include but not be limited to plant maintenance, plant replacement, mowing and trimming, hardscape element maintenance, and irrigation system operation and maintenance. The City will be responsible for all utility costs associated with maintaining landscape elements. All landscape elements must be maintained in a functional and aesthetically pleasing condition.

TERMINATION

It is understood and agreed between the parties hereto that should either party fail to properly fulfill its obligations as herein outlined, the other party may terminate this agreement upon thirty days written notice. Additionally, this agreement may be terminated by mutual agreement and consent of both parties.

Should the City terminate this agreement, as prescribed here above, the City shall, at the option of the State, reimburse any reasonable costs incurred by the State.

IN WITNESS WHEREOF, the parties have hereunto affixed their signatures, the City of_____on the_____day of _____, year_____, and the Texas Department of Transportation, on the_____day of_____, year_____.

ATTEST:

_____

Town of Flower Mound

By _____

THE STATE OF TEXAS

Executed for the Executive Director and approved for the Texas Transportation Commission for the purpose and effect of activating and/or carrying out the orders, and the established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

By _____
District Engineer

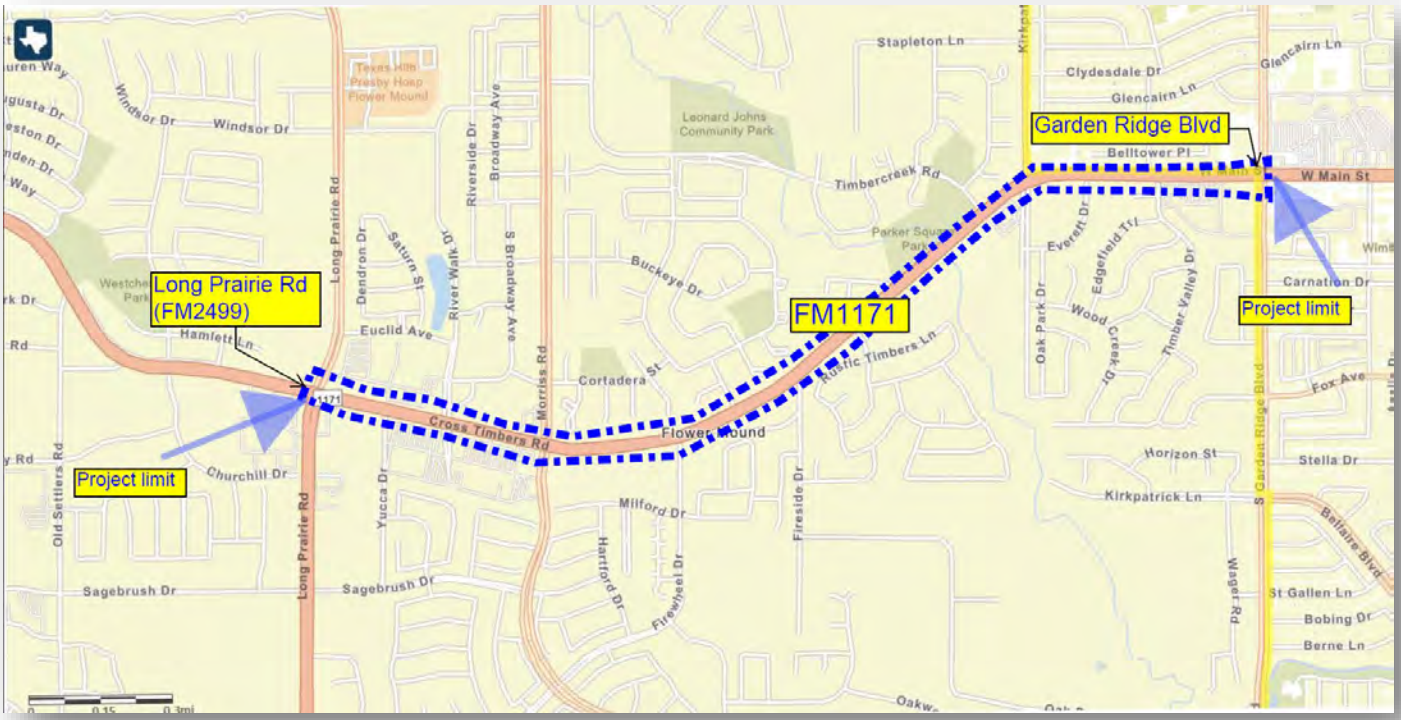
_____

Contact/Help

Attachments

Attachment 'A':

PROJECT LOCATION MAP- TOWN OF FLOWER MOUND



CSJ 1311-01-058

PROJECT LIMITS:

ON FM 1171
BEGINNING AT LONG PRAIRIE ROAD (FM2499)
ENDING AT NORTH GARDEN RIDGE BOULEVARD

TOWN COUNCIL AGENDA ITEM NO. 23

CONSENT ITEM

DATE: December 7, 2020

FROM: Mark Long, Assistant Director of Parks and Recreation

ITEM: **Consider approval of Standards of Care for Youth Recreation Programs operated by the Town, in accordance with the Texas Human Resources Code-Section 42.041 and to adopt an Ordinance providing for said Standards.**

BACKGROUND INFORMATION: The State of Texas Department of Family and Protective Services administer state regulations and general licensing procedures for all child-care facilities. Municipalities are exempted from the licensing requirement for programs provided for elementary age youth provided the Town Council annually adopts standards of care by ordinance after a public hearing. The required public hearing took place at the October 1, 2020, Parks Board meeting and the Board unanimously approved recommending the proposed ordinance for Town Council consideration. Additionally, the following criteria must be met in order to receive the exemption:

- Standards of care are provided to the parents of each program participant.
- Ordinance includes at a minimum: staffing ratios; staff qualifications; facility, health, and safety standards; and mechanisms for monitoring and enforcing the adopted local standards.
- Parents are informed that the program is not operated or advertised as a licensed day care.

The request for the exemption is necessary as the Town currently offers different day camps and programs throughout the year for youth ages 5 – 14 years. The Town officially received its exempt status from the State in 2011. On December 2, 2019, the Town Council enacted Ordinance No. 62-19, which adopted Standards of Care for the Town's Parks and Recreation youth recreation programs.

Staff is recommending no changes be made to the proposed Standards of Care adopted on December 2, 2019, in accordance with Section 42.041(b) (14) of the Texas Human Resources Code and Section 54-206 of the Code of Ordinances, Town of Flower Mound, Texas.

BOARD REVIEW/CITIZEN FEEDBACK: The Parks Board recommended approval of the Standards of Care by a vote of 6 to 0 at its October 1, 2020 regular meeting.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: No alterations to the legal content of this ordinance, which was originally approved by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were made.

ATTACHMENT:

1. Proposed Ordinance (Standards of Care- Exhibit "A")

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE CODE OF ORDINANCES, TOWN OF FLOWER MOUND, TEXAS; AMENDING CHAPTER 54, "PARKS AND RECREATION," SECTION 54-202, "ADOPTION;" ADOPTING UPDATED STANDARDS OF CARE FOR YOUTH RECREATION PROGRAMS; REPEALING ALL CONFLICTING ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound, Texas ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Home Rule Charter, adopted November 3, 1981; and

WHEREAS, the Town operates a recreation program for elementary age children as a service to residents of the Town, and surrounding communities; and

WHEREAS, the State of Texas has adopted licensing requirements and regulations under Chapter 42 of the Texas Human Resources Code for facilities providing care to children, with which all facilities must comply, unless an exemption under Section 42.041(b) applies; and

WHEREAS, Section 42.041(b)(14) of the Texas Human Resources Code provides an exemption from the requirements of Chapter 42 to a municipality operating a recreation program for elementary age children (5-13 years); and

WHEREAS, on February 11, 2011, the Town received an exemption from the requirements of Chapter 42 of the Texas Human Resources Code from the Texas Department of Family and Protective Services ("TDFPS"); and

WHEREAS, the TDFPS will not monitor the Town's Parks and Recreation's youth recreation programs because the exempt status has been granted, and the TDFPS will not be responsible for investigating complaints regarding the Town's Parks and Recreation's youth recreation programs, so that any complaints shall be made to the Town Parks and Recreation Department; and

WHEREAS, the Town adopted Ordinance No. 62-19 on December 2, 2019 setting forth the standards of care for the Town Parks and Recreation's youth recreation programs; and

WHEREAS, the Town's standards of care for the Town Parks and Recreation's youth recreation programs must be adopted annually by the Town of Flower Mound Town Council, after public hearing, in order to maintain the exemption under Section 42.041(b)(14) of the Texas Human Resources Code; and

WHEREAS, the Director of the Town Parks and Recreation Services Department has recommended no changes be made to the standards of care adopted on December 2, 2019, in accordance with Section 42.041(b)(14) of the Texas Human Resources Code and Section 54-206 of the Code of Ordinances, Town of Flower Mound, Texas; and

WHEREAS, a public hearing was held on October 1, 2020, by the Parks Board regarding the revised standards of care, and the adoption of such revised standards of care by

the Town Council of the Town of Flower Mound ("Town Council") has been recommended by the Parks Board; and

WHEREAS, the Town Council finds that it is in the best interest of the Town of Flower Mound and will promote the health, safety and general welfare of the citizens of the Town of Flower Mound and the general public to adopt the revised standards of care as recommended by the Parks Board.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All the above premises are found to be true and correct legislative and factual determinations of the Town of Flower Mound, and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

The Town Council hereby adopts local standards of care for the Parks and Recreation Services Department ("Department") youth recreation programs in compliance with the requirements of Texas Human Resources Code Section 42.041(b)(14) and pursuant to Section 54-206 of the Code of Ordinances of the Town of Flower Mound. The standards of care adopted by this Ordinance are available for inspection in the office of the Town Secretary and in the Town Parks and Recreation Services Department office.

SECTION 3

That Section 54-202, "Adoption," of the Code of Ordinances, Town of Flower Mound, Texas, is hereby amended to read as follows:

"**Sec. 54-202. Adoption.**

The local standards of care ("Standards of Care"), as set forth in Exhibit "A" which is attached to the ordinance adopting the Standards of Care are incorporated by reference for all purposes as if written word for word herein, and are hereby adopted by the Town Council as the Standards of Care for the Parks and Recreation Services Department of the Town of Flower Mound. The Standards of Care are available for inspection in the office of the Town Secretary and in the Town Parks and Recreation Services Department office."

SECTION 4

This Ordinance shall be cumulative of all provisions of ordinances of the Town of Flower Mound, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 5

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause,

sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section, and said remaining portions shall remain in full force and effect.

SECTION 6

This Ordinance shall take effect and be in full force on and after its passage.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____ TO _____, ON THIS THE 7th DAY OF DECEMBER, 2020.

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

Exhibit A

Parks & Recreation Department

Standards of Care For Youth Programs

Parks and Recreation Department
1200 Gerault Road
Flower Mound, TX 75028
972.874.6300
972.874.6471 (Fax)
www.flower-mound.com

Exhibit A

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Exhibit A

FLOWER MOUND YOUTH PROGRAMS

STANDARDS OF CARE

The following Standards of Care have been adopted by the Town Council of the Town of Flower Mound, Texas, to comply with Chapter 42 of the Texas Human Resources Code, specifically Section 42.014(b)(14) regarding an exemption for the Town of Flower Mound's Youth Programs, as defined herein. These Standards of Care are intended to be minimum standards by which the Town of Flower Mound Parks and Recreation Department will operate the Town's youth programs. The Youth Programs are recreational in nature and are not child-care facilities or day care programs.

General Administration

1. Organization

   A. The governing body of the Town of Flower Mound youth programs is the Town of Flower Mound Town Council.

   B. Implementation of the Youth Programs Standards of Care ("Standards of Care") is the responsibility of the Director of Parks and Recreation and departmental employees.

   C. These Standards of Care apply to all Youth Programs operated by the Department, including but not limited to: the Day Camp Program, Holiday Day Camp Program, and Spring Break Day Camp Program.

   D. Each Program Site will have available for public and staff review a current copy of the Standards of Care.

   E. Parents of participants may obtain a copy of the Standards of Care from the Town during the registration process or the Standards of Care can be accessed on the Town's website at: www.flower-mound.com/cac.

   F. Criminal background checks are conducted on all prospective Program Employees. If the results of a criminal background check indicate that a prospective Program Employee has been convicted of any of the following offenses, he or she will not be considered for employment:

      (1) A felony or a misdemeanor classified as an offense against a person or family member.
      (2) A felony or misdemeanor classified as public indecency.
      (3) Any offense involving moral turpitude.
      (4) Any offense that, in the Director's sole opinion, would place the participants of the Youth Programs at risk.

2. Definitions

A. Camp Director: A temporary Department employee who is assigned responsibility to implement and direct a Youth Program, and oversee the Program Employees that are assigned to the corresponding Youth Program.

B. Community Activity Center or CAC: Town of Flower Mound Community Activity Center located at 1200 Gerault Road, Flower Mound, TX, 75028, 972.874.7275.

C. Department: Parks and Recreation Department of the Town of Flower Mound.

D. Employee(s): Term used to describe people who have been hired to work for the Town of Flower Mound and have been assigned responsibility for managing, administering, or implementing some portions of the Youth Programs.

E. Parent(s): This term will be used to represent one or both parent(s) or legal guardian(s) who have legal custody and authority to enroll their child(ren) in the Youth Programs.

F. Participant: A Youth whose parent(s) or legal guardian(s) have completed all required registration procedures and determined to be eligible for the Youth Programs.

G. Program Coordinator or Coordinator: A full-time Department employee who has been assigned administrative responsibility for the Youth Programs and oversees the Camp Directors.

H. Program Employee: A temporary Department employee who is assigned to work with participants of a Youth Program at a Program Site.

I. Program Manual: Notebook of policies, procedures, required forms, and organizational and programming information relevant to Youth Programs.

J. Program Site: The facilities and surrounding property where Youth Programs are held, consisting of, but not limited to, the Community Activity Center and Gerault Park.

K. Program Supervisor: A full-time Department employee who oversees the Program Coordinator and operations of all Youth Programs.

L. Director: Town of Flower Mound Parks and Recreation Director, or his or her designee.

M. Town: Town of Flower Mound, Texas.

N. Town Council: Town Council of the Town of Flower Mound.

O. Youth: A school aged person between the ages of 6 and 13 as of the enrollment date of the Youth Program.

P. Youth Programs: The Town of Flower Mound youth programs consisting of the Summer Day Camp Programs, Holiday Day Camp Programs, and Spring Break Day Camp Program. A single camp may be referred to as a Youth Program.

3. Objectives of Youth Programs

A. To provide Youth with the opportunity of recreational activities, which may include sports, games, arts and crafts, education, dance, drama, special events, field trips, tournaments, etc.

B. To provide an encouraging atmosphere by emphasizing the positive development of physical skills, emotional development and growth of self-confidence.

C. To provide a safe environment by promoting good health and welfare for all participants.

D. To teach Youth how to spend their leisure time wisely in an effort to meet the emotional, physical and social needs of the Youth.

4. Inspections/Monitoring/Enforcement

A. The Town has established these Standards of Care in order to obtain an exemption from the State regarding the Youth Programs. Once the exemption is established, the State will not monitor the Youth Programs. These Standards of Care will be reviewed annually and brought before the Town Council for consideration, regarding any amendments recommended by the Director, and approval after a public hearing regarding the Standards of Care is held, pursuant to Texas Human Resources Code § 42.041(b)(14).

B. A monthly inspection report will be prepared and submitted to the Program Supervisor by the Coordinator to confirm the Standards of Care are being adhered to.

(1) Monthly inspection reports will be sent to the Director or his/her designee for review and maintained by the Town in accordance with applicable record retention policies.

(2) The Director or his/her designee will review the monthly inspection report and shall establish deadlines and criteria for compliance with the Standards of Care where failure to comply is noted.

C. The Director or his/her designee will make visual inspections of the Youth Programs based on the following schedule.

1. Youth Programs operating during the summer will be inspected no less than twice during the Youth Program's summer schedule.

2. Youth Programs, which operate during the regular Lewisville Independent School District school year, for two (2) weeks or less, will be inspected at least once during the Youth Program's schedule.

D. Complaints regarding enforcement of the Standards of Care will be directed to the Coordinator. The Coordinator will be responsible to take the necessary steps to address the complaint and resolve the problem, if any. Complaints regarding enforcement of the Standards of Care and resolution of complaints arising under the Standards of Care will be recorded by the Coordinator. All complaints regarding enforcement of the Standards of Care where a deficiency is noted will be forwarded to the Director with the complaint and the resolution noted.

5. Enrollment

Before a child may be enrolled in a Youth Program, the parents must sign registration forms that contain the following information about the child:

(1) Name, home address, home telephone number;

(2) Name and address of parent(s) and contact telephone number(s) during Youth Program hours;

(3) The names and telephone numbers of people to whom the child can be released;

(4) If requested, a statement of the child's physical health, including a physician's signed statement detailing any special needs the child may have;

(5) Emergency medical authorization, current shot records, and valid health insurance information;

(6) Proof of CAC Membership or Non-Membership, when appropriate; and

(7) A signed liability waiver.

6. Suspected Abuse

Program Employees will report suspected child abuse or neglect in accordance with the Texas Family Code. In a situation where an Employee is involved in an incident with a child that could be considered to be child abuse, the incident shall be immediately reported to the Program Supervisor. The Program Supervisor will immediately notify the Police Department and any other agency, as may be appropriate.

Texas State law requires the Employees of Youth Programs to report any suspected abuse or neglect of a child to the Texas Department of Family and Protective Services or a law enforcement agency. Failure to report suspected abuse is punishable by fines up to $1000 and/or confinement up to one hundred eighty (180) days. Confidential reports may be made by calling 1.800.252.5400.

A complete copy of the Texas Family Code regulations regarding child abuse can be found at www.statutes.legis.state.tx.us/docs/FA/htm/FA.261.htm.

Staffing - Responsibilities and Training

1. Camp Director

A. Qualifications. A Camp Director must:

(1) Consistently exhibit competency, good judgment, and self-control when working with Youth and other Town employees.

(2) Interact with Youth with courtesy, respect, tolerance, and patience.

(3) Successfully complete a course in first aid, CPR, and AED, in compliance with American Red Cross standards.

(4) Pass a background investigation and testing for illegal substances.

(5) Be mature, responsible, and able to complete duties with minimal supervision.

(6) Communicate effectively with the public.

(7) Possess a valid Texas driver's license.

(8) Have previous experience in supervising Youth of varying age levels in a group setting and possess knowledge of recreational games, crafts, and activities.

(9) Complete Town-mandated training.

(10) Be at least eighteen (18) years of age.

B. Job Functions. A Camp Director shall endeavor to:

(1) Direct and supervise Program Employees. Hiring and training of staff shall be the responsibility of the Coordinator with assistance from the Camp Director.

(2) Complete and submit proper records, including Youth Program schedules, Program Employee schedules, accident/incident reports, and Participant attendance.

(3) Schedule appropriate activities in accordance with the philosophy of the Youth Program and coordinate with the Coordinator to ensure appropriate reservations and transportation are secured in order to complete activities.

(4) Maintain an orderly, clean and safe environment for the Youth while promoting a non-competitive program directed toward accentuating positive behaviors, physical development, and emotional growth.

(5) Maintain supplies, equipment and all necessary documentation for the operation of the Youth Program.

(6) Communicate with Parent(s) as necessary.

(7) Conduct on-going evaluations regarding the Youth Program and implement approved recommendations as needed.

(8) Provide reports to Coordinator on a weekly basis regarding Youth Program activities.

(9) Know and follow all Town, Department, and Program Manual standards, policies, and procedures that apply to Youth Programs.

(10) Ensure that Participants are released only to a Parent or an adult designated by the Parent. All Program Sites will have a copy of the Department approved plan to verify the identity of a person authorized to pick-up a Participant if that person is not known to the Camp Director.

2. Program Employees

A. Qualifications. A Program Employee must:

(1) Consistently exhibit competency, good judgment, and self-control when working with Youth.

(2) Interact with Youth with courtesy, respect, tolerance, and patience.

(3) Successfully complete a course in first aid, CPR, and AED, in compliance with American Red Cross standards.

(4) Pass a background investigation and testing for illegal substances.

(5) Be mature, responsible, and able to complete duties with minimal supervision.

(6) Possess a valid Texas driver's license.

(7) Have previous experience in working with Youth of varying age levels in a group setting and possess knowledge of recreational games, crafts, and activities.

(8) Complete Town-mandated training.

(9) Be at least sixteen (16) years of age.

B. Essential Job Functions. A Program Employee shall endeavor to:

(1) Promote a non-competitive, positive, image-enhancing environment for each Participant through the direction of fun, varied, and well-organized activities.

(2) Directly lead activities using a method that will provide opportunities for the involvement of all Participants on an equal basis.

(3) Exhibit enthusiasm for the activity to impart a feeling of excitement in the Participants.

(4) Follow procedures for Youth Programs drop-off and pick-up, and preparation of accident/incident reports.

(5) Follow guidelines for safety and storage of equipment and notify Camp Director regarding supply inventories.

(6) Ensure safety of Youth at Program Site and on field trips.

(7) Provide and adhere to Standards of Care.

3. Personnel Restriction

A person will not be employed as an Employee in a Youth Program if:

(1) The person would be permanently barred from being present at a child care operation while children are in care under the Texas Administrative Code Title 40, Part 19, Chapter 745 (Licensing); or

(2) The Director determines that, based on the criminal history and other relevant and credible information, the person poses a risk to the safety or health of participants.

4. Training/Orientation

A. The Department is responsible to provide training and orientation to all Youth Program employees who work with children regarding their specific job responsibilities. Coordinator will provide each Camp Director with a staff program manual specific to each Youth Program.

B. Employees must be familiar with these Standards of Care for Youth Programs.

C. Employees will be trained in appropriate procedures to handle emergencies.

D. Employees will be trained in Town, Department, and Program Manual policies and procedures applicable to Youth Programs.

E. Employees will be required to sign an acknowledgment that they received the required training.

<u>Service Standards</u>

1. Appearance

A. Youth Program shirts and name badges will be worn and clearly visible.

B. The Town's dress code policy shall be adhered to at all times. Failure to comply with the dress code will result in an Employee being sent home.

2. Interaction with Parents and Participants

A. Participants and Parents will be treated with respect at all times.

B. Program Employees and Camp Directors will keep Parents continuously informed of activities and schedules. A weekly schedule will be distributed and copies will be kept with the daily sign in sheets.

C. Staff will note details of behavior of Participants (accomplishments, discipline problems, general activities, etc.) and update Parents as much as possible.

D. The Camp Director will listen to complaints and forward to Coordinator as appropriate. All complaints will be followed up within 24-hours if they are not resolved on site. All complaints must be recorded, including resolution, and forwarded to Coordinator.

3. Additional Staff Responsibilities

A. Program Employees will monitor the sign in/out log at all times.

B. Program Employees will spend 100% of their time actively involved with Participants and/or Parents.

C. Program Employees will pick up the area used by their group after each activity.

D. Prior to beginning work each day, all staff will check in at the appointed location for any messages, instructions, or information.

Operations

1. Staff/Participant Ratio

A. Pursuant to Texas mandated standards, the maximum ratio of Participants to Program Employees will be 12 to 1. In the event an employee is unable to report to the Program Site, a replacement will be assigned.

B. Each Participant shall have a Program Employee who is responsible for him or her and who is aware of the Participant's habits, interests, and any special needs, as identified by the Participant's Parent(s) during the registration process.

2. Discipline

A. Program Employees will implement discipline and guidance in a consistent manner based on the best interests of the program participants.

B. There must be no cruel, harsh or corporal punishment used as a method of discipline.

C. Program Employees may use brief, supervised separation from the group if necessary. Participants will be informed of Youth Program rules.

D. As necessary, Program Employees will initiate discipline reports to the Parent(s) of Participants. Parents will be asked to sign discipline reports to indicate they have been advised about specific problems or incidents.

E. A sufficient number and/or severe nature of discipline reports as detailed in the program manual may result in a Participant being suspended or removed from the Youth Programs. Parents will be contacted to pick up their Youth immediately.

F. In instances where there is a danger to Participants or Employees, offending Participants will be removed from the Program Site immediately.

G. Any person(s) creating a nuisance, causing a disturbance, or creating an unsafe environment at any Program Site will be subject to ejection from the site and possible arrest and legal action.

3. Programming

A. Program Employees will attempt to provide activities for each group according to the Participant's age, interests, and abilities. The activities must be appropriate to Participants' health, safety, and well-being. The activities also must be flexible and promote the Participants' emotional, social, and mental growth.

B. Program Employees will attempt to provide indoor and outdoor time periods, weather permitting, that include:

(1) Alternating active and passive activities; and

(2) Opportunity for individual and group activities.

C. Program Employees will be attentive and considerate of the Participants' safety on field trips and during any transportation provided by the Youth Programs. Participants must be counted before leaving the Program Site and before boarding the transportation to return to the Program Site.

(1) During trips, Program Employees supervising Participants must have immediate access to Participant forms and emergency contact information for each Participant;

(2) Program Employees must have a written list of the Participants in the group and must check the attendance frequently; and

(3) Program Employees must have First Aid supplies, a guide to First Aid and emergency care available on field trips.

4. Communication

The Program Site will have a telephone to allow the Program Employees to be contacted by Parks and Recreation personnel or for making emergency calls.

5. Transportation

A. First Aid supplies and a First Aid and emergency care guide will be available in all Youth Program vehicles that transport Youth.

B. All Program vehicles used for transporting Participants must have available a 6-BC portable fire extinguisher in the vehicle, which must be accessible to the adult occupants.

Facility Standards

1. Safety

A. Program Employees will inspect the Program Site daily to detect sanitation and safety concerns that might affect the health and safety of the Participants. A daily inspection report will be completed by Camp Director and kept on file by the Program Coordinator.

B. Buildings, grounds, and equipment on the Program Site will be inspected, cleaned, repaired, and maintained to protect the health of the Participants.

C. Program equipment and supplies must be safe for Participants use.

D. Program Employees must have First Aid supplies available at the Program Site, during transportation, and for the duration of any off-site activity.

E. Program Employees must have First Aid supplies and a guide to First Aid and emergency care readily available in a designated location.

2. Fire

A. In case of fire, danger of fire, explosion, or other emergency, Program Employee's first priority is to evacuate the Participants to a designated safe area. Emergency evacuation and relocation plans will be posted within the Program Site.

B. The Program Site will have an annual fire inspection by the local Fire Marshal, and the resulting report will detail any safety concerns observed. The report will be forwarded to the Director or his/her designee who will review and establish deadlines and criteria for compliance.

C. Each Program Site must have at least one (1) fire extinguisher approved by the Fire Marshal readily available to all Program Employees. The fire extinguisher is to be inspected monthly by the Program Coordinator, and a monthly report will be forwarded to the Program Supervisor who will keep the report on file for a minimum of two (2) years. All Employees will be trained in the proper use of a fire extinguisher.

D. Fire drills shall be conducted monthly.

3. Health

A. Illness or Injury

(1) Participants shall have and maintain immunizations in accordance with those required by the Texas Department of Health for public school attendance according to age.

(2) Illnesses and injuries will be handled in a manner to protect the health of all Participants and employees. Parents will be notified in cases of illness or injury. Paramedics will be notified in the event of an injury that cannot be remedied through basic first aid. An accident report shall be completed for all injuries and forwarded to the Camp Director.

(3) An ill Youth will not be allowed to attend or participate if the Youth is suspected of having a temperature and/or accompanied by behavior changes or other signs or symptoms until a medical evaluation indicating that the Youth can return to the Youth Program.

(4) Employees will follow the recommendation of the Texas Department of Health concerning the admission or readmission of any Participant after a communicable disease.

B. Program Employees will administer medication only if:

(1) Parent(s) complete and sign a Medicine Dispensation Form that provides authorization for Employees to dispense medication with details as to time(s) and dosage(s).

(2) Prescription medications are in original containers labeled with the Youth's name, a date, directions, and the prescribing physician's name. Employees will administer the medication only as stated on the label. Employees will not administer medication after the expiration date.

(3) Non-prescription medications are labeled with the Youth's name and the date the medication was brought to the Youth Program. Non-prescription medication must be in the original container. The Employees will administer non-prescription medications only according to label direction.

(4) Medications dispensed will be limited to routine oral ingestion not requiring special knowledge or skills on the part of Program Employees.

(5) Program Employees must ensure medications are inaccessible to Participants.

C. Toilet Facilities

(1) The Program Site will have adequate indoor toilets and lavatories located and equipped so Youth can use them independently and Program Employees can supervise as needed.

(2) There must be one (1) flush toilet for every thirty (30) Participants. Urinals may be counted in the ratio of toilets to Participants but must not exceed fifty percent (50%) of the total number of toilets.

D. Sanitation

(1) The Program Site must have adequate light, ventilation, and heat.

(2) The Program Site must have an adequate supply of water meeting the standards of the Texas Department of Health for drinking water and ensure that it will be supplied to the Participants in a safe and sanitary manner.

(3) Program Employees must see that garbage is removed from buildings daily.

Participants

1. General

A. Participants must wear tennis shoes daily. Sandals or thongs are not permitted unless approved by Program Employees on certain occasions.

B. Shoes must be worn at all times, unless the Youth is in the swimming pool or participating in an activity that requires shoes to not be worn.

C. Youth must respect the Employees, the Program Site, Program Rules, and each other.

D. Youth may not use the Youth Programs telephone unless it is an emergency with the permission of a Program Employee.

TOWN COUNCIL AGENDA ITEM NO. 24

CONSENT ITEM

DATE: December 7, 2020

FROM: Matthew Woods, Director of Environmental Services

ITEM: **Consider approval of a Professional Services Agreement for monthly gas well pad site air monitoring by Modern Geosciences, LLC, in the amount of $120,000.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: The Town began conducting air monitoring in 2010 on a quarterly basis to assess the ambient air conditions adjacent to gas well operations and other areas in the Town. In 2011, the Town Council directed staff to implement monthly air monitoring at designated sampling points in the Town which has continued through 2018. The reports from the 2010 through 2020 air sampling and pad site monitoring activities have been provided to the Town and are posted on the Town's webpage.

Beginning with the 2016-2017 program proposal, a more detailed gas well pad site monitoring approach was initiated to more effectively assess the conditions on the pad site and identify potential air quality-related issues. For the proposed 2021 program, Modern Geosciences will continue to conduct upwind and downwind monitoring consistent with EPA methodology, near-equipment inspections to evaluate the operational conditions on the pad sites, associated subgrade piping monitoring, and conduct an assessment of the pad site conditions associated with gas well plugging and abandonment processes.

Modern Geosciences has provided an acceptable scope of services for the air sampling and pad site monitoring program, and Modern Geosciences has the necessary experience to perform the requested sampling and analysis. The cost for the monthly monitoring program for 2021 is estimated at $120,000 which includes contingency costs in the event an additional monitoring event is needed. The costs associated with the pad site monitoring program are covered by gas well pad site monitoring and inspection fees which are assessed to the pad site operators. The Town Council approved the amended gas well pad site inspection fees in September 2010 to cover certain expenses associated with the gas well inspection and monitoring program which includes the air monitoring evaluations. The current Professional Services Agreement for the Town's monitoring and inspection program expires in December 2020.

FISCAL IMPACT: $120,000.00

Proposed Expenditure/(Revenue):	Account Number(s):
$ 90,000.00	100-695-96050-5110 (FY 20-21)
$ 30,000.00	100-695-96050-5110 (FY 21-22)

Finance Review by: Tammy Wilson, Executive Director of Financial Services tw

LEGAL REVIEW: The Town's standard professional services agreement form documents, prepared by Taylor, Olson, Adkins, Sralla, & Elam L.L.P., were used to draft this agreement. No alteration to the legal content of this form document was made in preparation of this Professional Services Agreement.

ATTACHMENTS:

1. Professional Services Agreement

DRAFT MOTION: Move to approve as presented in the agenda caption.

THE STATE OF TEXAS §
COUNTY OF DENTON §

PROFESSIONAL SERVICES AGREEMENT WITH MODERN GEOSCIENCES, LLC.

This contract is entered into on this 7th day of December, 2020, by and between the **TOWN OF FLOWER MOUND, TEXAS,** a municipal corporation located in Denton County, Texas, (hereinafter referred to as "TOWN"), acting by and through its Mayor, and Modern Geosciences, LLC. ("hereinafter referred to as "CONSULTANT") whose address is 5100 Thompson Terrace, Colleyville, Texas 76034.

RECITALS

WHEREAS, TOWN desires to obtain professional services from CONSULTANT relative to conducting monthly gas well pad site air monitoring inspections and post-production inspections in 2021, and provide a final report for each monthly monitoring event to the TOWN; and

WHEREAS, CONSULTANT is an engineering and professional geosciences firm qualified to provide such services and is willing to undertake the performance of such services for the TOWN in exchange for fees hereinafter specified;

TERMS OF AGREEMENT

NOW, THEREFORE, in consideration of the covenants and agreements hereinafter contained and subject to the terms and conditions hereinafter stated, the parties hereto do mutually agree as follows:

I.
Employment of Consultant

CONSULTANT will perform as an independent contractor all services under this Contract to the prevailing professional standards consistent with the level of care and skill ordinarily exercised by members of the engineering and professional geosciences professions, both public and private, currently practicing in the same locality under similar conditions including but not limited to the exercise of reasonable, informed judgments and prompt, timely action. If CONSULTANT has represented or is representing that it has special expertise in one or more areas to be utilized in this Contract, then CONSULTANT agrees to perform those special expertise services to the appropriate local, regional and national professional standards.

II.
Scope of Services

CONSULTANT shall perform such services as are necessary to provide pad site monitoring and inspection services for the project specifically including, but not necessarily limited to, the tasks enumerated more fully in Attachment "A" hereto entitled "Scope of Work" (hereafter referred to as the "Project"). Attachment "A" is hereby incorporated herein by reference and made a part hereof as if written word for word. However, in case of conflict in the language of Attachment "A" and this Contract, the terms and conditions of this Contract shall be final and binding upon both parties hereto.

III.
Payment for Services

Total payment for services described herein shall be a sum not to exceed One Hundred and Twenty Thousand and no/100 Dollars ($120,000.00). This total payment for services includes CONSULTANT's ordinary expenses. Additional expenses and charges, which are extraordinary in nature, must be approved in advance by TOWN in writing signed by the parties. Such extraordinary expenses may be paid as incurred and billed to the TOWN pursuant to this Contract over and above the total payment amount identified in this provision. Any extraordinary expenses or charges not approved in writing in advance by the TOWN shall remain the sole responsibility of the CONSULTANT. If CONSULTANT retains any subcontractors to perform any of the work, CONSULTANT acknowledges that payments to such subcontractors are due and payable in accordance with the provisions of Texas Government Code Section 2251.022, and that interest on unpaid and overdue amounts shall accrue in accordance with Texas Government Code Section 2251.025.

Each month CONSULTANT will submit to TOWN an invoice for actual services performed and reimbursable expenses incurred by CONSULTANT during the previous month. Each invoice shall be itemized to show the amount of work performed during that month broken down by the identity of the person(s) performing such work, the amount of time expended by such person(s) in performing that work, the billing rate for each such person, and a brief summary of the work performed by each such person. Each invoice shall also state the percentage of work completed on the Project, the total of the current invoice amount and a running total balance for the Project to date. TOWN shall not be required to pay any amount in excess of the amount identified in the preceding paragraph unless TOWN shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

Assuming that TOWN agrees with the invoice, that TOWN has not determined any of the work to be unsatisfactory, or that TOWN otherwise does not dispute any of the amounts billed, TOWN shall make payments in the amount shown by CONSULTANT's approved monthly statements and other documentation submitted in compliance with the Texas Prompt Payment Act, Texas Government Code Chapter 2251.

Nothing contained in this Contract shall require TOWN to pay for any work that TOWN has determined has not been successfully completed or is unsatisfactory as determined by TOWN, or which is not otherwise submitted in compliance with the terms of this Contract, nor shall failure to withhold payment pursuant to the provisions of this section constitute a waiver of any right, at law or in equity, which TOWN may have if CONSULTANT is in default, including the right to bring legal action for damages or for specific performance of this Contract. Waiver of any default under this Contract shall not be deemed a waiver of any subsequent default.

IV.
Revisions of the Scope of Services

TOWN reserves the right to revise or expand the scope of services after due approval by TOWN as TOWN may deem necessary, but in such event TOWN shall pay CONSULTANT equitable compensation for such services. In any event, when CONSULTANT is directed to revise or expand the scope of services under this Section of the Contract, CONSULTANT shall provide TOWN a written proposal for the entire costs involved in performing such additional services. Prior to CONSULTANT undertaking any revised or expanded services as directed by TOWN under this Contract, TOWN must authorize in writing the nature and scope of the services and accept the method and amount of compensation and the time involved in all phases of the Project.

It is expressly understood and agreed by CONSULTANT that any compensation not specified in Paragraph III herein above may require Flower Mound Town Council approval and is subject to the current budget year limitations.

V.
Term

This Contract shall begin on the date first written above, and shall terminate when TOWN has approved the Project as being final or otherwise terminates this Contract as provided herein.

VI.
Contract Termination Provision

Notwithstanding any other provision of this Contract, this Contract may be terminated at any time by TOWN for any reason, with or without cause, by providing CONSULTANT thirty (30) days written notice of such termination. Upon receipt of such notice, CONSULTANT shall immediately terminate working on, placing orders or entering into contracts for supplies, assistance, facilities or materials in connection with this Contract and shall proceed to promptly cancel all existing contracts insofar as they are related to this Contract.

VII.

Ownership of Documents

All materials and documents prepared or assembled by CONSULTANT under this Contract shall become the sole property of TOWN and shall be delivered to TOWN without restriction on future use. CONSULTANT shall provide documents in any commonly-used electronic file format as requested by TOWN. CONSULTANT may retain in its files copies of all drawings, specifications and all other pertinent information for the work. CONSULTANT shall have no liability for changes made to any materials or other documents by others subsequent to the completion of the Contract.

VIII.
Insurance

A. CONSULTANT shall, at its own expense, purchase, maintain and keep in force during the term of this Contract such insurance as set forth below. CONSULTANT shall not commence work under this Contract until CONSULTANT has obtained all the insurance required under this Contract and such insurance has been approved by TOWN, nor shall CONSULTANT allow any subcontractor to commence work on its own subcontract until all similar insurance of the subcontractor has been obtained and approved. All insurance policies provided under this Contract shall be written on an "occurrence" basis save and except the Professional Liability Insurance which may be written on a "claims-made" basis, provided that "tail coverage" or continuation coverage is provided. The insurance requirements shall remain in effect throughout the term of this Contract.

The CONSULTANT shall furnish to TOWN certificates of insurance executed by the insurer or its authorized agent stating coverages, limits, expiration dates and compliance with all applicable required provisions. Certificates shall reference the Project and be addressed as follows:

Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028
Email: purchasing@flower-mound.com

The following policies and coverage shall be required:

1. Worker's Compensation Insurance (as required by law) with the policy endorsed to provide a waiver of subrogation as to TOWN; such policy to provide for Employers' Liability Insurance of not less than $100,000.00 for each accident, $100,000.00 disease-each employee, $500,000.00 disease-policy limit;

2. Commercial General Liability Insurance including, but not limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractor's and Contractual Liability, including

but not limited to coverage for all of the indemnification obligations of CONSULTANT under this Contract to the extent covered by policy form CG0001 or equivalent, and fully insuring CONSULTANT's liability for injury to or death of employees of TOWN and of third parties, extended to include personal injury liability coverage and for damage to property of third parties, with minimum combined single limits of $1,000,000 per occurrence, $1,000,000 Products/Completed Operations Aggregate and $1,000,000 general aggregate per occurrence. Coverage must be written on an occurrence form.

3. Business Automobile Liability Insurance, covering owned, hired and non-owned vehicles, with a minimum combined bodily injury and property damage limit of $1,000,000.00 per occurrence; and

4. Professional Liability Insurance: CONSULTANT shall obtain and maintain at all times during the prosecution of the work under this Contract professional liability insurance, which may be written on a claims made form provided that "tail coverage" or continuation coverage is provided. Limits of liability shall be $1,000,000.00 per claim, $1,000,000.00 annual aggregate.

If any of the foregoing insurance is written on a claims-made form, coverage shall be continuous (by renewal or extended reporting period) for not less than thirty-six (36) months following completion of the Contract and acceptance by the TOWN. All such insurance shall be purchased from an insurance company that meets a financial rating of B+VI or better as assigned by A.M. Best Company or equivalent.

B. Each insurance policy to be furnished by CONSULTANT shall include the following conditions by endorsement to the policy:

1. The TOWN shall be named as an additional insured on the Commercial General Liability policy, by using endorsement CG2026 or equivalent or broader;

2. The TOWN shall also be named as an additional insured as to all other applicable coverage save and except the Worker's Compensation Insurance and Professional Liability Insurance;

3. Each policy will require that thirty (30) days prior to the expiration, cancellation, or nonrenewal, a notice thereof shall be given to TOWN by certified mail to:

Matthew Woods, Director of Environmental Services
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6348 Telephone

972-874-6473 Facsimile

However, if the policy is canceled for nonpayment of premium, only ten (10) days advance written notice to TOWN is required. CONSULTANT shall also notify TOWN within twenty-four (24) hours after receipt of any notices of expiration, cancellation, nonrenewal or any reduction in coverage or in limits it receives from its insurer(s);

4. The term "Owner" or "TOWN" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of TOWN and the individual members, employees and agents thereof in their official capacities, and/or while acting on behalf of TOWN;

5. The policy phrase "Other Insurance" shall not apply to TOWN where TOWN is an additional insured on the policy; and

6. All provisions of the Contract concerning liability, duty and standards of care together with the indemnification provision (with the exception of professional liability coverage) shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.

C. Concerning insurance to be furnished by CONSULTANT, it is a condition precedent to acceptability thereof that:

1. Any policy submitted shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by CONSULTANT. The TOWN's decision(s) thereon shall be final;

2. All policies are to be written through companies duly approved to transact that class of insurance in the State of Texas; and

3. All liability policies required herein, save and except Professional Liability Insurance, shall be written with an "occurrence" basis coverage trigger.

D. CONSULTANT agrees to the following:

1. CONSULTANT hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against TOWN, it being the intention that the insurance policies shall protect all parties to this Contract and be primary coverage for all losses covered by the policies;

2. Companies issuing the insurance policies and CONSULTANT shall have no recourse against TOWN for payment of any premiums, or assessments for any deductible, as all such premiums are the sole responsibility and

risk of CONSULTANT;

3. Approval, disapproval or failure to act by TOWN regarding any insurance supplied by CONSULTANT (or any subcontractors) shall not relieve CONSULTANT of full responsibility or liability for damages and accidents as set forth in the Contract documents. Neither shall the insolvency or denial of liability by the insurance company exonerate CONSULTANT from liability; and

4. No special payments shall be made for any insurance that the CONSULTANT and subcontractors are required to carry; all are included in the contract price and the contract unit prices.

Any of the insurance policies required under this section may be written in combination with any of the others, where legally permitted, but none of the specified limits may be lowered thereby.

IX.
Right to Inspect Records

CONSULTANT agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of CONSULTANT involving transactions relating to this Contract. CONSULTANT agrees that TOWN shall have access during normal working hours to all necessary CONSULTANT facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. TOWN shall give CONSULTANT reasonable advance notice of intended audits.

If TOWN agrees that CONSULTANT may retain any subcontractors, CONSULTANT further agrees to include in subcontract(s), if any, a provision that any subcontractor or engineer agrees that TOWN shall have access to and the right to examine any directly pertinent books, documents, papers and records of such engineer or sub-contractor involving transactions to the subcontract, and further, that TOWN shall have access during normal working hours to all such engineer or sub-contractor facilities and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of the paragraph. TOWN shall give any such engineer or sub-contractor reasonable advance notice of intended audits.

X.
Successors and Assigns

TOWN and CONSULTANT each bind themselves and their successors, executors, administrators and assigns to the other party to this Contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. Neither TOWN nor CONSULTANT shall assign or transfer its interest herein without the prior written consent of the other.

XI.
CONSULTANT's Liability

Acceptance of the final plans by the TOWN shall not constitute nor be deemed a release of the responsibility and liability of CONSULTANT, its employees, associates, agents or consultants for the accuracy and competency of their designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by TOWN for any defect in the designs, working drawings, specifications or other documents and work prepared by said CONSULTANT, its employees, associates, agents or sub-consultants. In this regard, CONSULTANT acknowledges that TOWN is retaining CONSULTANT to provide the services described herein, in reliance upon CONSULTANT's specialized expertise and experience, and in reliance thereon.

XII.
Indemnification

CONSULTANT DOES HEREBY COVENANT AND CONTRACT TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY AND HOLD HARMLESS TOWN AND ALL OF ITS OFFICIALS, OFFICERS, AGENTS, AND EMPLOYEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM ANY AND ALL LIABILITY, CLAIMS, SUITS, DEMANDS OR CAUSES OF ACTION, INCLUDING ALL EXPENSES OF LITIGATION AND/OR SETTLEMENT, THAT MAY ARISE BY REASON OF DEATH OR INJURY TO PERSONS OR DAMAGE TO OR LOSS OF USE OF PROPERTY OCCASIONED BY ANY WRONGFUL INTENTIONAL ACT OR OMISSION OF CONSULTANT AS WELL AS ANY NEGLIGENT OMISSION, ACT OR ERROR OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES, OR OTHER PERSONS FOR WHOM CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS CONTRACT, AND CONSULTANT WILL, AT ITS OWN COST AND EXPENSE, DEFEND AND PROTECT TOWN AGAINST ANY AND ALL SUCH CLAIMS AND DEMANDS, INCLUDING PAYMENT OF TOWN'S REASONABLE ATTORNEYS' FEES. IN THE EVENT OF A CLAIM IS BROUGHT AGAINST TOWN, TOWN SHALL HAVE THE RIGHT TO RETAIN LEGAL COUNSEL OF ITS CHOOSING IN DEFENSE OF SUCH A CLAIM, AND SUCH ELECTION SHALL NOT RELIEVE CONTRACTOR OF ITS OBLIGATIONS UNDER THIS SECTION.

XIII.
Independent Contractor

CONSULTANT's status shall be that of an Independent Contractor and not an agent, servant, employee or representative of TOWN in the performance of this

Contract. No term or provision of or act of CONSULTANT or TOWN under this Contract shall be construed as changing that status. CONSULTANT will have exclusive control of and the exclusive right to control the details of the work performed hereunder, and shall be liable for the acts and omissions of its officers, agents, employees, contractors, subcontractors and engineers and the doctrine of respondent superior shall not apply as between TOWN and CONSULTANT, its officers, agents, employees, contractors, subcontractors and engineers, and nothing herein shall be construed as creating a partnership or joint enterprise between TOWN and CONSULTANT.

XIV.
Default

If at any time during the term of this Contract, CONSULTANT shall fail to commence the work in accordance with the provisions of this Contract, or fail to diligently provide services in an efficient, timely and careful manner and in strict accordance with the provisions of this Contract, or fail to use an adequate number or quality of personnel to complete the work or fail to perform any of its obligations under this Contract, then TOWN shall have the right, if CONSULTANT shall not cure any such default after thirty (30) days written notice thereof, to terminate this Contract for cause. Any such act by TOWN shall not be deemed a waiver of any other right or remedy of TOWN. If after exercising any such remedy due to CONSULTANT's nonperformance under this Contract, the cost to TOWN to complete the work to be performed under this Contract is in excess of that part of the Contract sum which has not theretofore been paid to CONSULTANT hereunder, CONSULTANT shall be liable for and shall reimburse TOWN for such excess.

TOWN's remedies for CONSULTANT's default or breach under this Contract shall be limited to one or more of the following remedies which may be exercised separately or in combination at TOWN's sole exclusive choice:

(a) Specific performance of the Contract;

(b) Re-performance of this Contract at no extra charge to TOWN; or

(c) Monetary damages.

XV.
Provisions Surviving Termination

The terms of Sections XII entitled Indemnification, and XVII entitled Confidential Information shall survive termination of this Contract.

XVI.

Changes

TOWN may, from time to time, require changes in the scope of services to be performed under this Contract. Such changes as are mutually agreed upon by and between TOWN and CONSULTANT shall be incorporated by written modification to this Contract.

XVII.
Conflicts of Interest

CONSULTANT covenants and agrees that CONSULTANT and its associates and employees will have no interest, and will acquire no interest, either direct or indirect, which will conflict in any manner with the performance of the services called for under this Contract. All activities, investigations and other efforts made by CONSULTANT pursuant to this Contract will be conducted by employees, associates or subcontractors of CONSULTANT.

No officer or employee of TOWN shall have any personal, financial interest, direct or indirect, in this Contract nor have any direct financial interest in the sale to TOWN of any land, materials, supplies, or services under this Contract, except on behalf of TOWN as a TOWN officer or employee. Any violation of this prohibition with knowledge, expressed or implied, of the person or corporation contracting with TOWN shall render the Contract voidable by the Director or the Town Council.

XVIII.
Confidential Information

CONSULTANT hereby acknowledges and agrees that its representatives may have access to or otherwise receive information during the furtherance of its obligations in accordance with this Contract, which is of a confidential, non-public or proprietary nature. CONSULTANT shall treat any such information received in full confidence and will not disclose or appropriate such Confidential Information for its own use or the use of any third party at any time during or subsequent to this Contract. As used herein, "Confidential Information" means all oral and written information concerning TOWN, its affiliates and subsidiaries, and all oral and written information concerning TOWN or its activities, that is of a non-public, proprietary or confidential nature including, without limitation, information pertaining to customer lists, services, methods, processes and operating procedures, together with all analyses, compilation, studies or other documents, whether prepared by CONSULTANT or others, which contain or otherwise reflect such information. The term "Confidential Information" shall not include such materials that are or become generally available to the public other than as a result of disclosure of CONSULTANT, or are required to be disclosed by a governmental authority or by law, as determined by TOWN's attorney.

XIX.

Notice Information

All notices and communications under this CONTRACT to be mailed to TOWN shall be sent to the address of TOWN's agent as follows, unless and until CONSULTANT is otherwise notified:

Matthew Woods, Director of Environmental Services
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75028
972-874-6348 Telephone
972-874- 6473 Facsimile

Notices and communications to be mailed or delivered to CONSULTANT shall be sent to the address of CONSULTANT as follows, unless and until TOWN is otherwise notified:

Kenneth S. Tramm, PhD, PG, CHMM
Modern Geosciences, LLC.
5100 Thompson Terrace
Colleyville, TX 76034
682-223-1322 Telephone

Any notices and communications required to be given in writing by one party to the other shall be considered as having been given to the addressee on the date the notice or communication is posted, faxed or personally delivered by the sending party.

XX.
Applicable Law

The Contract is entered into subject to the Flower Mound Town Charter and ordinances of TOWN, as same may be amended from time to time, and is subject to and is to be construed, governed and enforced under all applicable State of Texas and federal laws. CONSULTANT will make any and all reports required per federal, state or local law including, but not limited to, proper reporting to the Internal Revenue Service, as required in accordance with CONSULTANT's income.

XXI.
Non-Discrimination

CONSULTANT shall not discriminate against any employee, applicant for employment, contractor, or sub-contractor because of the race, age, color, religion, sex, or national origin of such person. Engineer shall take affirmative action to insure that all such persons are treated equally during their employment without regard to their race, age, color, religion, sex, or national origin. If CONSULTANT fails to comply with the federal or state laws relating to Equal Employment Opportunity, it is agreed that TOWN, at its option, may do either or both of the following:

(a) Cancel, terminate, or suspend the Contract in whole or in part; or

(b) Declare CONSULTANT ineligible for future TOWN contracts until it is determined to be in compliance.

XXII
Arbitration

CONSULTANT agrees not to enter into any agreement to arbitrate arising out of, or relating to, this Contract which would subject TOWN to being a party to any arbitration without TOWN's prior written consent.

XXIII.
No Waiver of Governmental Immunity

Nothing in this Contract shall be construed as a waiver of TOWN'S governmental immunity, or of any applicable limitation on damages, or any other legal protection or defense or privilege of TOWN, except to the extent expressly provided otherwise herein.

XXIV.
Severability

If any of the terms, provisions, covenants, conditions or any other part of this Contract are for any reason held to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants, conditions or any other part of this Contract shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

XXV.
Remedies

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted; but each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this Contract may be waived without written consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this Contract.

XXVI.
Entire Agreement

This Contract embodies the entire agreement of the parties hereto, superseding all oral or written previous and contemporaneous agreements between the parties relating to matters herein, and except as otherwise provided herein cannot be modified without written agreement of the parties.

XXVII.

Non-Waiver

It is further agreed that one (1) or more instances of forbearance by TOWN in the exercise of its rights herein shall in no way constitute a waiver thereof.

XXVIII.
Headings

The headings of this Contract are for the convenience of reference only and shall not affect any of the terms and conditions hereof in any manner.

XXIX.
Venue

Situs of this Contract is agreed to be Denton County, Texas, for all purposes, including performance and execution, and the parties to this Contract agree and covenant that this Contract will be enforceable in Flower Mound, Texas; and that if legal action is necessary to enforce this Contract, exclusive venue will lie in Denton County, Texas.

XXX.
No Third Party Beneficiary

For purposes of this Contract, including its intended operation and effect, the parties (TOWN and CONSULTANT) specifically agree and contract that: (1) the Contract only affects matters/disputes between the parties to this Contract, and is in no way intended by the parties to benefit or otherwise affect any third person or entity notwithstanding the fact that such third person or entity may be in contractual relationship with TOWN or CONSULTANT or both; and (2) the terms of this Contract are not intended to release, either by contract or operation of law, any third person or entity from obligations owing by them to either TOWN or CONSULTANT.

[The remainder of this page is left blank intentionally]

IN WITNESS WHEREOF, the parties hereto have caused this document to be executed as of the date first above written.

THE TOWN OF FLOWER MOUND, TEXAS

By:_____
The Honorable Steve Dixon
Mayor, Town of Flower Mound

Date Signed: _____

Attest:

_____
Town Secretary

Approved:

CONSULTANT:
Modern Geosciences, LLC.

By: _____
Name: Kenneth S. Tramm, PhD, PG
Title: General Manager

Date Signed: 11-30-20

State of Texas §
§
County of Tarrant §

This instrument was acknowledged before me on the 30th day of November, 2020, by Kenneth S. Tramm, PhD, PG, in his capacity as _____ of Modern Geosciences, LLC., a Texas Corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the same on behalf of and as the act of Modern Geosciences, LLC.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 30th DAY OF Nov, 2020.

MARY E. BEECHNER
My Notary ID # 3840856
Expires June 28, 2021

Mary E. Beechner
Notary Public, State of Texas

My Commission Expires:

6-28-21

MODERN GEOSCIENCES
TRUSTED ENVIRONMENTAL ADVISORS

DATE November 25, 2020
PROPOSAL P20312

ATTN **Mr. Matthew Woods**
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, Texas 75208

SUBJECT **Padsite Inspection and Air Monitoring Program - 2021**
Flower Mound, Texas

Dear Mr. Woods:

Modern Geosciences, LLC (Modern) is pleased to submit this this proposal to the Town of Flower Mound (Town) to perform Monthly Padsite Inspection and Air Monitoring in 2021.

The following sections provide our understanding of the proposed project, scope of work, fee and schedule. Modern's consulting services will be conducted in accordance with the scope of services detailed below and Professional Services Agreement (PSA) as provided by the Town.

BACKGROUND AND PROJECT UNDERSTANDING

Modern understands the Town would like to continue detailed padsite inspection and air monitoring in 2021. Prior sampling and monitoring have been completed by the Town since 2010 with individual padsite inspection following in 2013. Since padsite inspections have been implemented, hundreds of leaks have been identified and addressed by operators, which in turn minimize impact to off-site properties. Dr. Kenneth Tramm with Modern has been the Program Manager since 2010 for the Town and will continue in this capacity.

Our padsite inspection and air monitoring approach includes two distinct steps that will occur simultaneously and produce padsite-specific data to aid in the identification of concerns before significant releases or emissions become a greater concern off the padsite. Modern has worked with the Town to tailor our approach and expand our inspection parameters each year monitoring has been performed. Additionally, Modern will perform Post-Production Inspection efforts to address possible legacy concerns that may impact future redevelopment of prior padsites after well plugging and equipment decommissioning.

Additional detail on the Fenceline Monitoring and Near-Equipment Inspection is presented below.

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Fenceline Monitoring

Modern will continue to perform up and downwind air sampling for each padsite. This will utilize our Gas Chromatograph/Mass Spectrometer (GC/MS) to analyze samples collected upwind and downwind of each padsite for volatile organic compounds (VOCs). Additionally, Modern will deploy high-resolution particulate matter (PM) monitors to evaluate up and downwind levels of $PM_{2.5}$ (fine particles) and PM_{10} (coarse particles) in addition to a high-resolution hydrogen sulfide meter (3 ppbv detection limit).

GC/MS System

The GC/MS will allow collection of discrete samples analyzed using a modified EPA Method TO-15 or TO-17 for broad range of volatile organic compounds (VOCs). This is consistent with the ambient monitoring approach described below, but will be processed within 12 hours of collection to allow us the ability to respond to concerns in an expedited manner. This approach will yield high resolution data in the low parts per billion.

Particulate Matter

Modern will collect PM data within 60 second intervals to allow multiple observations both up and downwind of padsites. The samples will be analyzed using light-scattering methods to allow differentiation of specific mass sizes. This allows estimation of both coarse and fine particle contribution to ambient air from multiple emission sources that may be present at a padsite (compressor exhaust, diesel engine exhaust, elevated SVOCs). Temperature and humidity will be recorded to allow adjustment to observations as appropriate.

Discrete Meters

Handheld meters (further detailed below) monitoring hydrogen sulfide, VOCs, methane, and radiation will also be utilized at the fenceline locations. Additionally, Modern will record meteorological data such as wind speed, direction, and barometric pressure.

Near-Equipment Inspection

During the monitoring event, Modern will perform an Audio, Visual, and Olfactory (AVO) field inspection as well as record monitoring results with the use of optical gas imaging systems (e.g., FLIR cameras) and handheld meters. The goal of near-equipment inspection activities is to visually evaluate operational conditions of well heads, well connections, flanges, valves, pumps, well head fluids (i.e., corrosion inhibitors), production piping, visible system pressure gauges, separator systems, above-ground storage tanks (i.e., thief hatch, ventilation), fluid disposal transfer points, compressor system connections, chemical storage areas, and identify obvious signs of staining, spills, or releases.

Modern uses a FLIR GF320 Optical Gas Imaging (OGI) system to determine if a potential leak is indicated. When emissions are identified, handheld equipment is used to quantify the emissions for leak determination at the point of release. Our instrumentation includes optical methane sensors (ppmv resolution), radiological survey meters (uR/hr resolution), photo-ionization detectors (ppbv resolution), and hydrogen sulfide monitors (ppbv resolution).

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Our proposed leak definitions are set at either positive visual observation with the OGI equipment, or if accessible, direct measurement for quantification. An example of typical leak definition thresholds is outlined below.

Measured Compound	On-Site Criteria	Fenceline Criteria
Methane	10,000 ppmv [1]	500 ppmv[2]
Hydrogen Sulfide (H_2S)	5 ppmv [3]	0.08 ppmv [4]
Total VOCs (tVOCs)	500 ppmv [2,5]	5 ppmv [6]
Radiation (NORM)	50 µR/hr [7]	20 µR/hr [7]
Individual VOCs, Ozone, others	OSHA, NIOSH, ACGIH levels	TCEQ Short-term AMCV or ESL, NAAQS
Particulates	$PM_{2.5}$- 5,000 ug/m^3 [8] PM_{10}- 15,000 ug/m^3	$PM_{2.5}$- 35 ug/m^3 [3, 9] PM_{10}- 150 ug/m^3 [3, 9]

1. *Utilizes the Interstate Natural Gas Association of America (INGAA) recommended leak definition within their December 4, 2015 response to EPA Docket No. EPA-HQ-OAR-2010-0505 – "Oil and Natural Gas Sector: Emission Standards for New and Modified Sources," dated September 18, 2015 (80 FR 56593). Also represents 20% of the Lower Explosive Limit. A lower leak definition and additional inspection and reporting may be required at facilities subject to 40 CFR §60 Subpart OOOOa*
2. *NSPS; 40 CFR Part 40 Subpart OOOOa; Represent half of the American Conference of Governmental Industrial Hygienists (ACGIH) 8-hour threshold limit value (TLV) of 1,000 ppmv (0.1% by volume) set for potential cardiac sensitization and central nervous system depression.*
3. *50% NIOSH 10-minute IDLH ceiling (29 CFR 1910.1000 Table Z-2)*
4. *30-minute criteria set at 30 TAC §112.31*
5. *EPA 20102; 40 CFR Part 63 (EPA-HQ-OAR-2010-0505; FRL-RIN 2060-AP76)*
6. *Used as an indicator elevated VOCs may approach or exceed ambient air quality criteria*
7. *16 TAC §4; Environmental Protection, Subchapter F, Oil and Gas NORM; EPA average background criteria established under Document No. 402-R-08-005; April 2008. Reported background ranged from 10 µR/hr to 85 µR/hr.*
8. *Utilizes OSHA Total and Respirable Limits*
9. *Utilizes the 24-hour Average Criteria set under NAAQS*

The above references represent non-ambient conditions that would typically indicate a significant contribution of COC emissions from production equipment. If "new, modified, or reconstructed" equipment as defined within NSPS OOOOa is present on a padsite, the methane (as a part of the VOC definition) leak criteria will be adjusted to match NSPS requirements of 500 ppmv.

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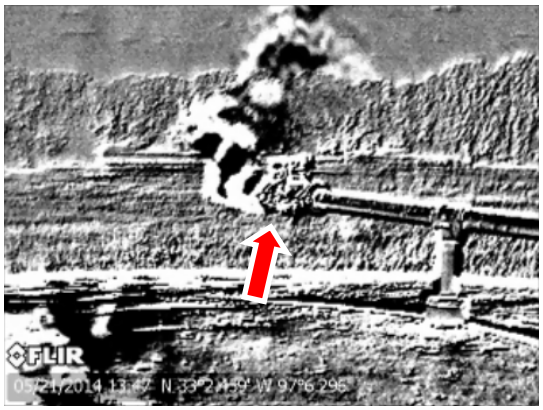
Near-Equipment Inspection efforts during a padsite inspection event using an Optical Gas Imaging (OGI) Camera to record a leak.



Example image for a leaking pressure control valve from a tank battery system. The leak is video recorded for the operator to repair.

Example of infrared methane monitoring after a leak has been identified with the OGI equipment.

Example of tagged equipment in need of repair or replacement. Modern can tag each accessible component noted above monitoring goals.

SCOPE OF SERVICES

TASK 1: PADSITE INSPECTION AND FENCELINE AIR MONITORING

Modern will coordinate with Town staff and padsite representatives to obtain access to each of the padsites. Flame Resistant clothing will be worn during access to areas where flammable environments are anticipated. It is anticipated that the services will be performed under Level D safety requirements and no other protective gear is required.

Modern will perform upwind and downwind monitoring by collecting discrete samples for VOC analysis as well as particulate matter evaluation. During the fenceline monitoring events, Modern will also complete Near-Equipment Inspection activities as detailed earlier.

Inspection Schedule

Modern will coordinate with Town staff to inspect each of the padsites every six months (twice annually). We understand Town staff will continue to verify the identified leaks are addressed by the operator, but have anticipated periodic assistance and re-inspections as directed by Town staff. Modern will coordinate with Town staff on the final schedule for inspections and monitoring.

TASK 2: MONTHLY REPORTING

The preliminary results of our assessment will be verbally reported during the course of the project. Modern's scope of services for this assessment is based on the production of brief reports issued after each sampling and inspection period. Streamlined reports are proposed and will padsite specific.

The reports will include:

- Results of Near-Equipment inspections and notation of changing conditions identified;
- Results of Fenceline Monitoring and notation of changing conditions identified;
- Subgrade piping inspection results; and
- Findings and Conclusions

The ambient air sampling and monitoring results will be compared to the current Texas Commission on Environmental Quality (TCEQ) Short Term Air Monitoring Comparison Values (AMCVs) and if warranted, additional related risk criteria developed by the TCEQ Toxicology Division and/or other appropriate regulatory entities.

TASK 3: POST-PRODUCTION INSPECTION REPORTING

As padsites are decommissioned and future development contemplated, it is important that final site conditions be confirmed since there is a possibility for subgrade leaks, elevated radiation from NORM-containing scale, and/or other non-compliance items to be identified. Modern has developed a streamlined process and reporting format to help document if final site conditions suggest a concern for future development. To ensure the final location of all major infrastructure is captured, Modern will bring GPS equipment with sub-meter capability to verify all separators, tanks systems, wells, and other equipment locations.

A contingency cost for the Interim Post-Production Inspection (PPI) (equipment still present) and/or Final PPI (all equipment and planned grading completed and RRC plugging documents submitted). If elevated radiation is noted during the interim effort, this will be communicated to the operator to confirm if removal is still planned

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or confirmatory sampling pending. If the inspection event follows the completion of all planned padsite activities by the operator, and evidence of a release or elevated radiation (2x background) remains, Modern's inspection will include soil sampling and laboratory analysis for determination of regulatory compliance. A contingency budget was added for these purposes. Additionally, a Final PPI will include all available close out documents as submitted to the City and RRC.

ESTIMATED BUDGET

Modern will perform the above described scope of services on a unit rate cost (per below) with an annual not-to-exceed budget of **$120,000**. Additional costs might be incurred if the assumptions presented earlier are not correct or further monitoring assistance is needed outside the above scope. In the event that additional costs and services are required, Modern will notify the town immediately and prepare an estimate of the additional cost. Modern will not exceed the authorized amount until written approval from town has been received. The estimated project budget is summarized in the table below.

PROJECT BUDGET	
TASK 1-2: INSPECTION/REPORTING	
Consulting Labor and Expenses ($1,400/well x 37 wells x 2 events)	$103,600
Subtotal:	*$103,600*
TASK 3: POST-PRODUCTION INSPECTION	
Interim Field Inspection/Report ($1,500/ea x 3 estimated)	$ 4,500
Final Field Inspection/Report ($2,300/ea x 3 estimated)	$ 6,900
Program Contingency Costs (if sampling required)	*$ 5,000*
Subtotal:	*$ 16,400*
ANNUAL TOTAL BUDGET:	**$120,000**

PROJECT SCHEDULE

Modern is ready to begin project activities within 10 days of authorization. Each monthly sampling event will include coordination with Town staff and padsite operators (as authorized by Town) so all active padsites are evaluated twice annually. Post-production inspections will be coordinated with Town staff when each location is ready.

ASSUMPTIONS AND LIMITATIONS

- Our client will coordinate all access and site personnel/equipment requirements to allow the above scope of services to be executed;

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- Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of our profession practicing in the same locality, under similar conditions and at the time the services are performed;
- Our findings and conclusions will be based on the information available for review. This will only include a limited number of observations and data points. It is likely that conditions will vary between or beyond the specific points evaluated. Modern makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided. The final report will be submitted electronically. Hard copies can be provided for an additional fee;
- The samples collected as part of these services will represent conditions at the time of sampling only as future conditions can vary based on changing conditions, such as: work schedules of oil and gas exploration, production, and transmission, temperature, weather factors and other industrial activities within the Town; and
- This proposal is valid for a period of 60 days from the date of issuance.

AUTHORIZATION

If this proposal meets your needs please submit provide us written authorization and the PSA as required by the Town. If there is a need for any change in the scope of services described in this proposal, please contact us immediately. Any requested changes may require revision of the proposed fee and schedule. All terms and conditions indicated in this proposal will be considered by both parties to be in effect from the effective date of the executed contract through completion of the project.

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CLOSING

We thank you for the opportunity to provide this proposal for environmental services and look forward to working with you on this project. If you have any comments or questions concerning this proposal please contact us at your earliest convenience.

Respectfully submitted,

Kenneth S. Tramm, PhD, PG, CHMM
PROGRAM MANAGER
MODERN GEOSCIENCES
TEXAS REGISTERED GEOSCIENCE FIRM 50411
TEXAS REGISTERED ENGINEERING FIRM F-16201

TOWN COUNCIL AGENDA ITEM NO. 25

CONSENT ITEM

DATE: December 7, 2020

FROM: Melody Eby, Economic Development Specialist

ITEM: **Consider approval of the 2020 Annual Report for the Flower Mound Tax Increment Reinvestment Zone #1 (TIRZ #1) in accordance with Chapter 311 of the Texas Tax Code.**

BACKGROUND INFORMATION: On September 19, 2005, the Flower Mound Town Council established the TIRZ #1 by creating the zone, a Board of Directors, and a TIRZ fund. The TIRZ #1 Board will be voting on the 2020 Annual Report at their December 7, 2020, (4:30 p.m.) meeting. The Annual Report provides a summary of the action steps taken by the Board of Directors and the Town Council for fiscal year 2019-2020. It also outlines the net taxable value and captured appraised value within the zone as well as the increment for fiscal year 2019-2020, which is $6,606,311. The Annual Report is required by law to be filed annually with Denton County and the Comptroller of Public Accounts in Austin before the 90th day following the end of the fiscal year, which would be on or before December 31, 2020.

BOARD REVIEW/CITIZEN FEEDBACK: The TIRZ #1 Board of Directors will be voting on the 2020 Annual Report at their December 7, 2020, (4:30 p.m.) meeting.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

Finance Review by: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. 2020 Annual Report

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment #1

Town of Flower Mound, Texas

Tax Increment Reinvestment Zone #1
(TIRZ #1)

ANNUAL REPORT

2020

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

INDEX

1) **Cover**

2) **Index**

3) **Year End Summary of Meetings/Town Council/Board Actions**

4) **Public Infrastructure/Building Projects**

5) **Capital Improvement Plan Budget**

6) **Budget vs. Expenditures**

7) **TIRZ Fund**

8) **Annual Report**

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

YEAR END SUMMARY OF MEETINGS/TOWN COUNCIL/BOARD ACTIONS

During the period from October 1, 2019, through September 30, 2020, the Town of Flower Mound Tax Increment Reinvestment Zone #1 (TIRZ) Board of Directors met once. The meeting was held on December 16, 2019 to approve the minutes from the December 3, 2018 TIRZ board meeting and the 2019 Annual Report.

Town of Flower Mound Economic Development Director, Andrea Roy, provided a brief overview of the 2019 Annual Report of the Flower Mound Tax Increment Reinvestment Zone #1 (TIRZ #1), including information that had changed since the previous annual report.

Deputy Town Manager/CFO, Debra Wallace, presented the revisions to the TIRZ #1 Project Plan, which included reallocating the $400,000 out of the Hike and Bike Trails to the Pink Evening Primrose Trail Connection (Bridge & Trail) project. The total amount for the project is $650,000, with a request of $400,000 coming from the TIRZ Fund and $250,000 coming from the Park Development Fund for fees that were paid in by NEM.

Board members appointed and serving at the time of the December 16, 2019 meeting: Town—Paul Stone, Bill Collins, Jim Engel and County—Larry Lipscomb and Lori Fickling. Ex-Officio members were Mayor Steve Dixon and Town Manager Jimmy Stathatos.

During the period from October 1, 2019, through September 30, 2020, the Flower Mound Town Council took the following action:

- At a meeting on December 16, 2019, the Town Council approved the 2019 Annual Report for the Flower Mound Tax Increment Reinvestment Zone #1 (TIRZ) in accordance with Chapter 311 of the Texas Tax Code.

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

PUBLIC INFRASTRUCTURE/BUILDING PROJECTS

2019-2020

River Walk Parking Structure

On October 20, 2014, a Chapter 380 Partnership Agreement was executed between the Town of Flower Mound and RMI River Walk Investors, LP, which included the use of TIRZ funding for up to $1 million for a public parking structure on the site of a nationally-branded hotel; later named the Courtyard by Marriott Dallas Flower Mound. Section 7 of the Agreement specifies that this financial assistance provided by the TIRZ may not exceed $1 million and will be paid as reimbursement for infrastructure costs following the issuance of a Certificate of Occupancy for the parking structure. A First Amendment to the Chapter 380 Agreement was approved by Town Council on May 4, 2015, placing additional requirements on the acceptance of these TIRZ funds, in exchange for an extension to the parking structure's building permit deadline. On September 18, 2017, the Town Council approved a Second Amendment to the Chapter 380 Agreement, extending the required completion date of the parking structure. Since approval of the Second Amendment, RMI River Walk Investors, LP, completed the parking structure and received a Building Final on March 23, 2018. RMI River Walk Investors, LP submitted a Payment Request to the Town, and $1 million was reimbursed for the parking structure on January 3, 2020.

Town of Flower Mound Public Library Project

On June 19, 2017, the TIRZ Board recommended the use of TIRZ #1 Funds to pay the annual debt service on the issuance of $10,900,000 for the Town of Flower Mound Public Library Renovation and Expansion Project. The project consists of a renovation of the existing 25,000 sq. ft. Library and an expansion of approximately 15,000 sq. ft., as well as associated site improvements. The expansion of the Library will create additional adult program rooms, quiet reading rooms, study rooms, additional collection space, a multi-purpose room, and more meeting spaces. On November 6, 2017, the Town Council approved a reimbursement resolution for an amount not to exceed $10,900,000 to fund improvements in accordance with the FY 17-18 Capital Improvement Plan. On December 4, 2017, the Town Council then authorized the publication of notice to issue Certificates of Obligation, Series 2018, in the principal amount not to exceed $10,900,000 to fund the project. This same evening, Town Council approved a professional services agreement for Library design services with Komatsu Architecture. Komatsu Architecture was the architect for the Library when originally built. Later, the Construction Manager at Risk (CMAR) contract with Steele & Freeman, Inc. was approved by the Town Council on June 18, 2018. The site plan was approved on

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

March 20, 2019, and the construction award and testing award were both approved at the May 6, 2019, Town Council meeting. The approved Guaranteed Maximum Price (GMP) with Steele & Freeman, Inc. for the construction of the Library Expansion Project was in the amount of $10,399,482.11. The Library reopened on November 1, 2020 with normal hours of operation, and the ribbon cutting/grand opening was held on November 5, 2020.

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

Street Projects

FM 1171 Westbound Turn Lane at FM 2499 Intersection

The project includes the installation of a FM 1171 westbound turn lane at the FM 1171/FM 2499 intersection, providing for approximately 410 feet of paving, hike/bike trails, utility relocations and traffic signal upgrades. The design contract in the amount of $55,000 was awarded to Kimley-Horn and Associates, Inc. on October 3, 2016. Since that time, project design and right-of-way acquisition have been completed. Franchise utility relocations are currently ongoing. Construction is anticipated to begin summer 2021.

FM 2499 and Waketon Intersection Improvements

The project initially included the addition of westbound and eastbound right turn lanes, however, during design and with coordination of adjacent property owners, the project will also include the northbound and southbound right turn lanes. The design contract was awarded to Halff Associates, Inc. in the amount of $173,450.00 at the March 4, 2019, Town Council meeting. Design has been completed and Town Council approved the construction award on August 17, 2020. Overhead power poles in conflict have been approved/permitted to be relocated and are scheduled to be completed in December 2020. Contractor is potholing additional underground utilities to verify no other franchise will conflict with the new improvements prior to beginning construction. Construction is anticipated to begin January 2021.

Rippy Road

Rippy Road will be completed in two phases. Phase 1 (Waketon Road to Pecan Meadows) included improvements of Rippy Road to its thoroughfare plan designated section, a two-lane concrete urban collector. On May 15, 2017, the Town Council approved a development agreement with CalAtlantic Homes, for construction of the improvements, providing reimbursement of the Town's share of the construction costs associated with the infrastructure improvements. Phase I of the project has been completed and the developer has received reimbursement for the construction costs associated with Phase 1.

Phase 2 (Pecan Meadows to FM 2499) includes improvements to approximately 2,500 linear feet of existing two-lane open section asphalt roadway to its thoroughfare plan designated section, a two-lane concrete urban collector. The project also includes an enclosed storm water collection system to improve storm water collection in the area. The design contract was awarded to CP&Y, Inc. at the March 4, 2019, Town Council meeting in the amount of $298,645.75. During design, additional design services were required. On September 21, 2000 a design amendment was approved by Town Council for the additional work,

increasing the not-to-exceed amount by $38,140.00. Design plans are 100% complete. Right-of-way acquisition and franchise utility coordination is ongoing. Phase 2 construction is expected to begin in Summer 2021.

Waketon Road

Waketon Road will be completed in two phases. Phase 1 (FM 2499 to the western limits of the proposed Bradford Park Subdivision, approximately 1,450' east of Chinn Chapel Road) included improvements of Waketon Road to its thoroughfare plan designated section, a two-lane concrete urban collector. On May 15, 2017, the Town Council approved a development agreement with CalAtlantic Homes, for construction of the improvements, providing reimbursement of the Town's share of the construction costs associated with the infrastructure improvements. Phase I of the project has been completed and the developer has received reimbursement in the amount of $2,259,020.90 for the construction costs associated with Waketon Road Phase 1.

Phase 2 (Chinn Chapel Road to the western limits of the Bradford Parks Subdivision) includes improvements to approximately 1,650 linear feet of existing two-lane open section asphalt roadway to its thoroughfare plan designated section, a two-lane concrete urban collector. The project also includes a roundabout at Chinn Chapel. This is a joint project with the Town of Double Oak as they improve Waketon Road from Chinn Chapel west. The professional services agreement for the design phase services, with Halff Associates, Inc., in the amount of $243,225, was approved on November 21, 2016. The plans are 100% complete and all ROW has been acquired. On August 18, 2020 Bids were received for the project. The Town of Double Oak requested a redesign of portions of their portion of the project due to funding issues. Rebid for Phase 2 will occur Spring 2021 with construction anticipated to begin Summer 2021. Franchise utility relocation is ongoing.

Churchill Drive

The project consists of extending Churchill Drive approximately 400 feet east to connect to Yucca Drive. Churchill Drive will be built during the reconstruction of Yucca Drive from Sagebrush to approximately 700 feet south of Cross Timbers. On June 20, 2016, the professional services agreement with Criado and Associates, Inc. to provide professional engineering services for the Yucca and Churchill projects in the amount of $181,249 was approved. On June 5, 2017, Amendment No. 2 was approved in the amount of $17,937 to the professional services contract to provide additional design services associated with the relocation and replacement of approximately 1,150 linear feet of waterline along Yucca Drive. Town

Council awarded the construction of both projects on August 20, 2018. Notice to proceed was provided to the contractor on November 5, 2018, and the project was recently completed.

East Waketon Rd Drainage Improvements

The project consists of channel excavation from FM 2499 to Waketon Road and culvert replacement under Waketon Road to alleviate the recurring flooding and traffic disruption of Waketon Road, east of FM 2499. The project will be constructed in two phases. Phase 1 provides for the channel excavation and Phase 2 provides for culvert replacement. In 2017, a drainage study was completed which provided hydraulic modeling of existing conditions, analysis of alternatives and a final report. The design was awarded on January 7, 2019, and plans are holding at 60% complete. During design it was determined that a reassessment of the upstream hydrology was needed to better model the existing conditions. The reassessment will explore the possibility of minimizing the project limits to reduce the impacts on trees and residential properties. Construction is currently scheduled for FY 21-22.

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

CAPITAL IMPROVEMENT PLAN BUDGET

Project		Estimated Cost
STREETS		
Dixon Lane (Chinn Chapel to Crestside)		$2,685,267
Chinn Chapel (FM 407 to Dixon)		1,387,500
Chinn Chapel (Dixon to Waketon)		941,305
Waketon Road (Rippy to Chinn Chapel)		5,270,000
Rippy Road (FM 2499 to Waketon)		2,115,000
Churchill (East end to Yucca)		400,000
FM 1171 at FM 2499 Westbound Right Turn Lane		998,000
FM 1171 at FM 2499 Eastbound Right Turn Lane		785,000
FM 2499 at Waketon Intersection		1,000,000
East Waketon Rd Drainage Improvements		470,000
	Subtotal	**$16,052,072**
SIGNALS		
College Parkway at FM 2499		$115,000
	Subtotal	**$115,000**
WATER		
FM 2499 west side from FM 1171 to Dixon		$1,700,000
FM 407 from FM 2499 to Country Meadows Addition		438,039
Morriss Waterline Project PH III		1,800,000
	Subtotal	**$3,938,039**
FACILITIES		
Town Hall		$10,000,000
Senior Citizen Activity Center		4,869,638
Library renovation/expansion		10,900,000
	Subtotal	**$25,769,638**
PARKS		
Pink Evening Primrose Trail Connection (Bridge & Trail)		$400,000
	Subtotal	**$400,000**
Improvements in Forum (Riverwalk) Area		$730,000
Parking Structure		1,000,000
	Subtotal	**$1,730,000**
Other Projects		**$464,566**
Town Center Master Plan		50,685
Retail Developments Shared Drive (FM 407 & Chinn Chapel)		180,000
	Subtotal	**$695,251**
	TOTAL	**$48,700,000**

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

BUDGET VS EXPENDITURES

Project	Current Budget	Expended Costs to Date	Remaining Balance
STREETS			
Dixon Lane (Chinn Chapel to Crestside)	$2,685,267	$2,685,267	$0
Chinn Chapel (FM 407 to Dixon)	1,387,500	1,387,500	0
Chinn Chapel (Dixon to Waketon)	941,305	941,305	0
Waketon Road	5,270,000	2,697,992	2,572,008
Rippy Road (FM 2499 to Waketon)	2,115,000	983,614	1,131,386
Churchill (East end to Yucca)	400,000	400,000	0
FM 1171 at FM 2499 Westbound Right Turn Lane	998,000	201,437	796,563
FM 1171 at FM 2499 Eastbound Right Turn Lane	785,000	432,752	352,248
FM 2499 at Waketon Intersection	1,000,000	298,898	701,102
East Waketon Rd Drainage Improvements	470,000	139,414	330,586
Subtotal	**$16,052,072**	**$10,168,179**	**$5,883,893**
SIGNALS			
College Parkway at FM 2499	$115,000	$115,000	$0
Subtotal	**$115,000**	**$115,000**	**$0**
WATER			
FM 2499 west side from FM 1171 to Dixon	$1,700,000	$600,773	$1,099,227
FM 407 from FM 2499 to Country Meadows Addition	438,039	438,039	0
Morriss Waterline Project PH III	1,800,000	0	1,800,000
Subtotal	**$3,938,039**	**$1,083,812**	**$2,899,227**
FACILITIES			
Town Hall	$10,000,000	$3,360,000	$6,640,000
Senior Citizen Activity Center	4,869,638	4,869,638	0
Library Renovation/Expansion	10,900,000	3,355,000	7,545,000
Subtotal	**$25,769,638**	**$11,584,638**	**$14,185,000**
PARKS			
Pink Evening Primrose Trail Connection (Bridge & Trail)	$400,000	$0	$400,000
Subtotal	**$400,000**	**$0**	**$400,000**
Improvements in Forum (Riverwalk) area	$730,000	$0	$730,000
Parking Structure	1,000,000	1,000,000	0
Subtotal	**$1,730,000**	**$1,000,000**	**$730,000**
Other Projects	$464,566	$0	$464,566
Town Center Master Plan	50,685	50,685	0
Retail Developments Shared Drive (FM 407 & Chinn Chapel)	180,000	180,000	0
Subtotal	**$695,251**	**$230,685**	**$464,566**
TOTAL	**$48,700,000**	**$24,137,314**	**$24,562,686**

Highlighted values indicate changes from 2019

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

TIRZ FUND

Beginning Balance:	
October 1, 2019	**$13,245,032**
Revenues:	
Property Tax	$6,606,311
Interest	$142,196
TOTAL REVENUES	**$6,748,507**
Expenditures:	
Land Purchases	$0
Professional Services	$0
Construction/Improvements	$2,434,546
Debt Service	$2,635,475
TOTAL EXPENDITURES	**$5,070,021**
Ending Balance:	
September 30, 2020 (unaudited)	**$14,923,518**

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

ANNUAL REPORT

Chapter 311.016 of V.C.T.A. requires the following information as part of the annual report on the status of the TIRZ District. Information is contained in detail on the attached financial statements.

1. **Amount and source of revenue in the tax increment fund established for the zone:**
   $6,748,507 Total Revenue
2. **Amount and purpose of expenditures from the fund:**
   $5,070,021 Total Expenditures
3. **Amount of Principal and Interest due on outstanding indebtedness is as follows:**
   $2,635,475 Total Principal and Interest

I. Contributions /Advances from developers— none.
II. Bonds issued and payment schedule to retire bonds—

2017COTIRZ:	Fiscal Year	Principal	Interest	Total
	2021	1,045,000	196,025	1,241,025
	2022	1,065,000	175,125	1,240,125
	2023	1,085,000	153,825	1,238,825
	2024	1,110,000	126,700	1,236,700
	2025	1,145,000	93,400	1,238,400
	2026	1,190,000	47,600	1,237,600
		$ 6,640,000	$ 792,675	$ 7,432,675

2018COTIRZ:	Fiscal Year	Principal	Interest	Total
	2021	1,185,000	215,850	1,400,850
	2022	1,210,000	192,150	1,402,150
	2023	1,230,000	167,950	1,397,950
	2024	1,270,000	131,050	1,401,050
	2025	1,305,000	92,950	1,397,950
	2026	1,345,000	53,800	1,398,800
		$ 7,545,000	$ 853,750	$ 8,398,750

4. **Tax Increment base and current captured appraised value retained by the zone:**

Taxing Jurisdiction	Net Taxable Fiscal Year Value 2019 - 2020	Base Year* Value Jan 1, 2005	Captured App. Value Fiscal Year 2019 - 2020
Town of Flower Mound	$1,265,401,078	$228,290,889	$1,037,110,189
Denton County	$1,315,269,604	$229,382,705	$1,085,886,899

5. **Captured appraised value by the municipality and other taxing units, the total amount of the tax increment received, and any additional information necessary to demonstrate compliance with the tax increment financing plan adopted by the governing body of the municipality.**

Town of Flower Mound, Texas
Tax Increment Reinvestment Zone #1
As of September 30, 2020

A. Captured appraised value shared by the municipality and other participating taxing jurisdictions received in Fiscal Year 2018-2019:

Taxing Jurisdiction	Participation Per $100/Value	Amount of 2019-2020 Increment
Town of Flower Mound (100%)	$0.436500	$4,526,985.97
Denton County (85%)	$0.191490	$2,079,324.65
Total	**$0.627990**	**$6,606,311**

B. Amount of tax increment received in 2019 from the municipality and the other taxing jurisdictions based on 2018 valuations: $6,606,311

C. Other information: None

* Base Year Value as of January 1, 2005 is for Fiscal Year 2005-2006.

TOWN COUNCIL AGENDA ITEM NO. 26

CONSENT ITEM

DATE: December 7, 2020

FROM: Clay Riggs, PE, CFM, Assistant Director of Public Works

ITEM: **Consider approval of the purchase of wastewater flow meter data loggers and components from Hach Company, a sole source provider, associated with the Inflow-Infiltration/Evaluation and Repair project, in the amount of $96,609.40**

BACKGROUND INFORMATION: On October 15, 2012, the Town entered into an agreement with TCEQ to address inflow and infiltration and power and equipment failures in the Town's wastewater collection system. A component of the agreement with TCEQ is the Town's Sanitary Sewer Overflow Initiative (SSOI) that seeks to identify and repair sources of inflow and infiltration. Inflow and infiltration are when groundwater or storm water enter the sanitary sewer system. This excess flow can overwhelm the sanitary sewer network leading to potential sanitary sewer overflows and overloading at the wastewater treatment plant.

The Town has thirteen flow metering locations throughout the Long Prairie and Lakeside sanitary sewer service areas. These service areas flow to the wastewater treatment plant. The flow meters provide flow data that is used to identify locations of potential inflow and infiltration in the system. The data loggers that communicate the flow data have become obsolete and require replacement.

Approval of this purchase authorization provides for the replacement of the obsolete data loggers needed for staff to identify locations of inflow and infiltration.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: A decision not to approve would limit staff's ability to identify and address potential locations of inflow and infiltration. This could lead to the Town being in breach of the TCEQ agreement.

FISCAL IMPACT: $96,609.40

Proposed Expenditure/(Revenue):	Account Number(s):
$96,609.40	630-970-98030

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: Rob Allibon of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the negotiated modifications to the Town of Flower Mound Standard Terms & Conditions for Purchase Orders as to form and legality.

ATTACHMENTS:

1. Hach Company Quote
2. Sole Source Letter

DRAFT MOTION: Move to approve as presented in the agenda caption.

Quotation

Hach Company-Flow Products & Services
PO Box 608
Loveland, CO 80539
Phone: (800) 368-2723
Email: HachFlowSales@hach.com
Website: www.hachflow.com
Tax Reg/ID:

Quote Number: 100491589v11
Use quote number at time of order to ensure that you receive prices quoted

Quote Date: 06-Oct-2020

Quote Expiration: 18-Dec-2020

TOWN OF FLOWER MOUND
2121 CROSS TIMBERS RD
FLOWER MOUND, TX 75028-2699

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2121 CROSS TIMBERS RD
FLOWER MOUND, TX 75028-2699

Name: Clayton Riggs
Phone: 972-874-6400
Email: Clayton.riggs@flower-mound.com

Customer Account Number : 086609
Customer Quote Reference: Quote One: Modified Systems:

Sales Contact: Shawna Allen Email: shawna@hbsystemsinc.com Phone: 214-500-1769

PRICING QUOTATION

Line	Part Number	Description	Qty	Net Unit Price	Extended Price
1	FL902.97.VR	FL902 LOGGER, VERIZON ACTV, RAIN	13	5,136.30	66,771.90
		Reference Promo Code 9M232MS to allow upfront credit of $1500 per logger as the wireless Flow logger upgrade promotion. Above price reflects the promo price.			
2	8528700	CABLE ASSY, EXTERNAL POWER, 9FT	12	124.80	1,497.60
3	FD9000CBL-030	34FT FLODAR CABLE + HUB FL90X	13	452.40	5,881.20
4	600006203	SVS SENSOR WITH 30FT CABLE, WITH CONNECTOR*NRD 6963700	13	1,211.92	15,754.96
5	FS-DATAXFR	FSDATA Wireless Service Plan Fee	13	334.42	4,347.46
				Est Freight Charges	$ 2,356.28
				Grand Total	$ 96,609.40

TERMS OF SALE

Freight: Ground Prepay and Add

FCA: Hach's facility

All purchases of Hach Company products and/or services are expressly and without limitation subject to Hach Company's Terms & Conditions of Sale ("Hach TCS"), incorporated herein by reference and published on Hach Company's website at www.hach.com/terms. Hach TCS are contained directly and/or by reference in Hach's offer, order acknowledgment, and invoice documents. The first of the following acts constitutes an acceptance of Hach's offer and not a counteroffer and creates a contract of sale "Contract" in accordance with the Hach TCS: (i) Buyer's issuance of a purchase order document against Hach's offer; (ii) acknowledgement of Buyer's order by Hach; or (iii) commencement of any performance by Hach pursuant to Buyer's order. Provisions contained in Buyer's purchase documents (including electronic commerce interfaces) that materially alter, add to or subtract from the provisions of the Hach TCS are not part of the Contract.

Due to International regulations, a U.S. Department of Commerce Export License may be required. Hach reserves the right to approve specific shipping agents. Wooden boxes suitable for ocean shipment are extra. Specify final destination to ensure proper documentation and packing suitable for International transport. In addition, Hach may require : 1). A statement of intended end-use; 2).Certification that the intended end-use does not relate to proliferation of weapons of mass destruction (prohibited nuclear end use, chemical / biological weapons, missile technology); and 3). Certification that the goods will not be diverted contrary to U.S. and/or applicable laws in force in Buyer's jurisdiction.

ORDER TERMS:
Terms are Subject to Credit Review
In order for Hach to process the order as quickly as possible, please provide the following information.
• Complete Billing address.
• Complete Shipping address.
• Part numbers and quantities of items being ordered.

• Please reference the quotation number on your purchase order

If the order is over $25,000 Hach will also require the following additional information.
• Pricing
• Purchase Order Number
• Freight terms and INCO term FOB Origin or FCA Shipping Point
• Required delivery date
• Vendor name should specify “Hach Company” with the Loveland address:
    o Hach, PO Box 389, Loveland, CO 80539
• Credit terms of payment. Default payment terms are Net 30.
• Indicate if order needs to ship complete or if it can ship partial.
• Tax status
• Special invoicing instructions

Sales tax is not included on quote. Applicable sales tax will be added to the invoice based on the U.S. destination, if applicable provide a resale/exemption certificate.
Shipments will be prepaid and added to invoices unless otherwise specified.
Equipment quoted operates with standard U.S. supply voltage.
Hach standard terms and conditions apply to all sales.
Additional terms and conditions apply to orders for service partnerships.
Prices do not include delivery of product. Reference attached Freight Charge Schedule and Collect Handling Fees.
Standard lead time is 30 days.
This Quote is good for a one time purchase

Sales Contact:

Name:	Shawna Allen
Title:	Manufacturer's Rep
Phone:	214-500-1769
Email:	shawna@hbsystemsinc.com

HACH COMPANY

Headquarters
P.O. Box 389
5600 Lindbergh Drive
Loveland, CO 80539-0389

Purchase Orders
PO Box 608
Loveland, CO 80539-0608

WebSite: www.hach.com

U.S.A.
Phone: 800-227-4224
Fax: 970-669-2932
E-Mail: orders@hach.com
quotes@hach.com
techhelp@hach.com

Export
Phone: 970-669-3050
Fax: 970-461-3939
Email: intl@hach.com

Remittance
2207 Collections Center Drive
Chicago, IL 60693

Wire Transfers
Bank of America
231 S. LaSalle St.
Chicago, IL 60604
Account: 8765602385
Routing (ABA): 071000039

Be Right™

Quotation Addendum

ADVANTAGES OF WORKING WITH HACH

Hach Service

Protect your investment & peace of mind
- ✓ A global partner who understands your needs
- ✓ Delivers timely, high-quality service you can trust
- ✓ Provides team of unique experts to help you maximize instrument uptime
- ✓ Ensure data integrity
- ✓ Maintain operational stability
- ✓ Reduce compliance risk

www.hach.com/service-contracts

Pick&Ship™

Pick&Ship™ Program offers a better way to keep your supplies in stock
- ✓ **Convenience** of one purchase order for the entire year
- ✓ **Flexibility** to change, cancel or create new orders
- ✓ **Savings** from locking in prices & thus avoiding price surges and rush charges
- ✓ **Peace of mind** with automatic, reliable shipments just as you need them

www.Hach.com/pickandship

Technical Support

Provides post-sale instrumentation and application support
- ✓ Hach's highly skilled Technical Support staff is dedicated to helping you resolve technical issues before, during and after the sale.
- ✓ Available via phone, e-mail, or live online chat at Hach.com!
- ✓ Fast access to answers at https://support.hach.com
- ✓ Toll-free phone: 800-227-4224
- ✓ E-mail: techhelp@hach.com

www.Hach.com

ADVANTAGES OF SIMPLIFIED SHIPPING AND HANDLING

Safe & Fast Delivery
- ✓ Receive tracking numbers on your order acknowledgement
- ✓ Hach will assist with claims if an order is lost or damaged in shipment

Save Time – Less Hassle
- ✓ No need to set up deliveries for orders or to schedule pickup
- ✓ Hach ships order as product is available, at no additional charge, when simplified shipping and handling is used.

Save Money
- ✓ No additional invoice to process – save on time and administrative costs
- ✓ Only pay shipping once, even if multiple shipments are required

STANDARD SIMPLIFIED SHIPPING AND HANDLING CHARGES [1, 2, 3, 4] *Pricing Effective 4/11/2020*

Total Price of Merchandise Ordered	Standard Surface (Mainland USA)	Second Day Delivery (Mainland USA)	Next Day Delivery (Mainland USA)	Second Day Delivery (Alaska & Hawaii)	Next Day Delivery (Alaska & Hawaii)	**Collect** [4] Handling Fee *Effective 4/11/2020*
$0.00 - $49.99	$17.99	$44.99	$83.90	$72.21	$137.27	$13.47
$50.00 - $149.99	$28.59	$84.27	$159.00	$120.84	$229.73	$13.85
$150.00 - $349.99	$50.22	$133.98	$272.91	$169.07	$329.04	$14.72
$350.00 - $649.99	$69.95	$182.91	$363.75	$228.65	$442.76	$15.48
$650.00 - $949.99	$88.16	$191.13	$399.98	$236.66	$446.10	$16.04
$950.00 - $1,999.99	$110.91	$235.85	$498.69	$280.67	$543.06	$17.52
$2,000.00 - $3,999.99	$128.04	$250.64	$513.44	$291.54	$554.54	$20.22
$4,000.00 - $5,999.99	$148.44	$260.33	$538.23	$292.89	$570.53	$24.90
$6,000.00 - $7,999.99	$175.40	$296.40	$612.84	$323.07	$622.86	$29.04
$8,000.00 - $9,999.99	$200.15	$336.83	$658.19	$360.41	$683.52	$33.51
Over $10,000	2.5% of Net Order Value	4.5% of Net Order Value	7% of Net Order Value	4.5% of Net Order Value	7% of Net Order Value	$51.84

1 Shipping & Handling charges shown are only applicable to orders billing and shipping to U.S. destinations. Shipping & Handling charges will be prepaid and added to invoice. Shipping & Handling for the Pick&Ship Program is charged on each shipment release and is based on the total price of each shipment release. Shipping & Handling charges are subject to change without notice.

2 Additional Shipping & Handling charges will be applied to orders containing bulky and/or especially heavy orders. Refrigerated and all weather Samplers do not qualify for simplified Shipping & Handling charges, and are considered heavy products. Dissolved Oxygen Sensors can be damaged if exposed to temps below freezing, causing sensor failure. Must be shipped over night or 2nd day air during the cold weather months.

3 Orders shipping to Alaska or Hawaii: Additional Shipping & Handling charges may be applied at time of order processing. Second Day and Next Day delivery is not available to all destinations.

4 Hach Company will assess a collect handling fee on orders with collect shipping terms. This handling fee covers the additional costs that Hach Company incurs from processing and managing collect shipments.

Due to variations in component characteristics, regulatory transportation requirements and/or associated shipping and handling costs, individual kit components may or may not be packaged together in a single carton at time of final packaging and shipping.

SALES TAX

Sales Tax is not included in the attached quotation. Applicable sales and usage taxes will be added to your invoice, at the time of order, based on U.S. destination of goods, unless a valid resale/exemption certificate for destination state is provided to the above address or fax number, attention of the Tax Dept.

HACH COMPANY | 5600 Lindbergh Drive | PO Box 389 | Loveland, Colorado 80539 | P 970.669.3050 | F 970.669.2932 | hach.com

TERMS & CONDITIONS OF SALE FOR HACH COMPANY PRODUCTS AND SERVICES

This document sets forth the Terms & Conditions of Sale for goods manufactured and/or supplied, and services provided, by Hach Company of Loveland, Colorado ("Hach") and sold to the original purchaser thereof ("Buyer"). Unless otherwise specifically stated herein, the term "Hach" includes only Hach Company and none of its affiliates. Unless otherwise specifically stated in a previously-executed written purchase agreement signed by authorized representatives of Hach and Buyer, these Terms & Conditions of Sale establish the rights, obligations and remedies of Hach and Buyer which apply to this offer and any resulting order or contract for the sale of Hach's goods and/or services ("Products").

1. APPLICABLE TERMS & CONDITIONS: These Terms & Conditions of Sale are contained directly and/or by reference in Hach's offer, order acknowledgment, and invoice documents. The first of the following acts constitutes an acceptance of Hach's offer and not a counteroffer and creates a contract of sale ("Contract") in accordance with these Terms & Conditions: (i) Buyer's issuance of a purchase order document against Hach's offer; (ii) acknowledgement of Buyer's order by Hach; or (iii) commencement of any performance by Hach pursuant to Buyer's order. Provisions contained in Buyer's purchase documents (including electronic commerce interfaces) that materially alter, add to or subtract from the provisions of these Terms & Conditions of Sale are not a part of the Contract.

2. CANCELLATION: Buyer may cancel goods orders subject to fair charges for Hach's expenses including handling, inspection, restocking, freight and invoicing charges as applicable, provided that Buyer returns such goods to Hach at Buyer's expense within 30 days of delivery and in the same condition as received. Buyer may cancel service orders on ninety (90) day's prior written notice and refunds will be prorated based on the duration of the service plan. Inspections and re-instatement fees may apply upon cancellation or expiration of service programs. Seller may cancel all or part of any order prior to delivery without liability if the order includes any Products that Seller determines may not comply with export, safety, local certification, or other applicable compliance requirements.

3. DELIVERY: Delivery will be accomplished FCA Hach's facility located in Ames, Iowa or Loveland, Colorado, United States (Incoterms 2010). Legal title and risk of loss or damage pass to Buyer upon transfer to the first carrier. Hach will use commercially reasonable efforts to deliver the Products ordered herein within the time specified on the face of this Contract or, if no time is specified, within Hach's normal lead-time necessary for Hach to deliver the Products sold hereunder. Upon prior agreement with Buyer and for an additional charge, Hach will deliver the Products on an expedited basis. Standard service delivery hours are 8 am – 5 pm Monday through Friday, excluding holidays.

4. INSPECTION: Buyer will promptly inspect and accept any Products delivered pursuant to this Contract after receipt of such Products. In the event the Products do not conform to any applicable specifications, Buyer will promptly notify Hach of such nonconformance in writing. Hach will have a reasonable opportunity to repair or replace the nonconforming product at its option. Buyer will be deemed to have accepted any Products delivered hereunder and to have waived any such nonconformance in the event such a written notification is not received by Hach within thirty (30) days of delivery.

5. PRICES & ORDER SIZES: All prices are in U.S. dollars and are based on delivery as stated above. Prices do not include any charges for services such as insurance; brokerage fees; sales, use, inventory or excise taxes; import or export duties; special financing fees; VAT, income or royalty taxes imposed outside the U.S.; consular fees; special permits or licenses; or other charges imposed upon the production, sale, distribution, or delivery of Products. Buyer will either pay any and all such charges or provide Hach with acceptable exemption certificates, which obligation survives performance under this Contract. Hach reserves the right to establish minimum order sizes and will advise Buyer accordingly.

6. PAYMENTS: All payments must be made in U.S. dollars. For Internet orders, the purchase price is due at the time and manner set forth at www.hach.com. Invoices for all other orders are due and payable NET 30 DAYS from date of the invoice without regard to delays for inspection or transportation, with payments to be made by check to Hach at the above address or by wire transfer to the account stated on the front of Hach's invoice, or for customers with no established credit, Hach may require cash or credit card payment in advance of delivery. In the event payments are not made or not made in a timely manner, Hach may, in addition to all other remedies provided at law, either: (a) declare Buyer's performance in breach and terminate this Contract for default; (b) withhold future shipments until delinquent payments are made; (c) deliver future shipments on a cash-with-order or cash-in-advance basis even after the delinquency is cured; (d) charge interest on the delinquency at a rate of 1-1/2% per month or the maximum rate permitted by law, if lower, for each month or part thereof of delinquency in payment plus applicable storage charges and/or inventory carrying charges; (e) repossess the Products for which payment has not been made; (f) recover all costs of collection including reasonable attorney's fees; or (g) combine any of the above rights and remedies as is practicable and permitted by law. Buyer is prohibited from setting off any and all monies owed under this from any other sums, whether liquidated or not, that are or may be due Buyer, which arise out of a different transaction with Hach or any of its affiliates. Should Buyer's financial responsibility become unsatisfactory to Hach in its reasonable discretion, Hach may require cash payment or other security. If Buyer fails to meet these requirements, Hach may treat such failure as reasonable grounds for repudiation of this Contract, in which case reasonable cancellation charges shall be due Hach. Buyer grants Hach a security interest in the Products to secure payment in full, which payment releases the security interest but only if such payments could not be considered an avoidable transfer under the U.S. Bankruptcy Code or other applicable laws. Buyer's insolvency, bankruptcy, assignment for the benefit of creditors, or dissolution or termination of the existence of Buyer, constitutes a default under this Contract and affords Hach all the remedies of a secured party under the U.C.C., as well as the remedies stated above for late payment or non-payment. See ¶20 for further wire transfer requirements.

7. LIMITED WARRANTY: Hach warrants that Products sold hereunder will be free from defects in material and workmanship and will, when used in accordance with the manufacturer's operating and maintenance instructions, conform to any express written warranty pertaining to the specific goods purchased, which for most Hach instruments is for a period of twelve (12) months from delivery. Hach warrants that services furnished hereunder will be free from defects in workmanship for a period of ninety (90) days from the completion of the services. Parts provided by Hach in the performance of services may be new or refurbished parts functioning equivalent to new parts. Any non-functioning parts that are repaired by Hach shall become the property of Hach. No warranties are extended to consumable items such as, without limitation, reagents, batteries, mercury cells, and light bulbs. **All other guarantees, warranties, conditions and representations, either express or implied, whether arising under any statute, law, commercial usage or otherwise, including implied warranties of merchantability and fitness for a particular purpose, are hereby excluded.** The sole remedy for Products not meeting this Limited Warranty is replacement, credit or refund of the purchase price. This remedy will not be deemed to have failed of its essential purpose so long as Hach is willing to provide such replacement, credit or refund.

8. INDEMNIFICATION: Indemnification applies to a party and to such party's successors-in-interest, assignees, affiliates, directors, officers, and employees ("Indemnified Parties"). Hach is responsible for and will defend, indemnify and hold harmless the Buyer Indemnified Parties against all losses, claims, expenses or damages which may result from accident, injury, damage, or death due to Hach's breach of the Limited Warranty. Buyer is responsible for and will defend, indemnify and hold harmless the Hach Indemnified Parties against all losses, claims, expenses or damages which may result from accident, injury, damage, or death due to negligence, misuse or misapplication of any goods or services, violations of law, or the breach of any provision of this Contract by the Buyer, its affiliates, or those employed by, controlled by or in privity with them. Buyer's workers' compensation immunity, if any, does not preclude or limit its indemnification obligations.

9. PATENT PROTECTION: Subject to all limitations of liability provided herein, Hach will, with respect to any Products of Hach's design or manufacture, indemnify Buyer from any and all damages and costs as finally determined by a court of competent jurisdiction in any suit for infringement of any U.S. patent (or European patent for Products that Hach sells to Buyer for end use in a member state of the E.U.) that has issued as of the delivery date, solely by reason of the sale or normal use of any Products sold to Buyer hereunder and from reasonable expenses incurred by Buyer in defense of such suit if Hach does not undertake the defense thereof, provided that Buyer promptly notifies

TERMS AND CONDITIONS OF SALE FOR HACH® PRODUCTS

Hach of such suit and offers Hach either (i) full and exclusive control of the defense of such suit when Products of Hach only are involved, or (ii) the right to participate in the defense of such suit when products other than those of Hach are also involved. Hach's warranty as to use patents only applies to infringement arising solely out of the inherent operation of the Products according to their applications as envisioned by Hach's specifications. In case the Products are in such suit held to constitute infringement and the use of the Products is enjoined, Hach will, at its own expense and at its option, either procure for Buyer the right to continue using such Products or replace them with non-infringing products, or modify them so they become non-infringing, or remove the Products and refund the purchase price (prorated for depreciation) and the transportation costs thereof. The foregoing states the entire liability of Hach for patent infringement by the Products. Further, to the same extent as set forth in Hach's above obligation to Buyer, Buyer agrees to defend, indemnify and hold harmless Hach for patent infringement related to (x) any goods manufactured to the Buyer's design, (y) services provided in accordance with the Buyer's instructions, or (z) Hach's Products when used in combination with any other devices, parts or software not provided by Hach hereunder.

10. TRADEMARKS AND OTHER LABELS: Buyer agrees not to remove or alter any indicia of manufacturing origin or patent numbers contained on or within the Products, including without limitation the serial numbers or trademarks on nameplates or cast, molded or machined components.

11. SOFTWARE AND DATA. All licenses to Hach's separately-provided software products are subject to the separate software license agreement(s) accompanying the software media and/or included as an Appendix to these Terms & Conditions of Sale. Except to the extent such express licenses conflict with the remainder of this paragraph, the following also applies relative to Hach's software: Hach grants Buyer only a personal, non-exclusive license to access and use the software provided by Hach with Products purchased hereunder solely as necessary for Buyer to enjoy the benefit of the Products. A portion of the software may contain or consist of open source software, which Buyer may use under the terms and conditions of the specific license under which the open source software is distributed. Buyer agrees that it will be bound by all such license agreements. Title to software remains with the applicable licensor(s). In connection with Buyer's use of Products, Hach may obtain, receive, or collect data or information, including data produced by the Products. In such cases, Buyer grants Hach a non-exclusive, worldwide, royalty-free, perpetual, non-revocable license to use, compile, distribute, display, store, process, reproduce, or create derivative works of such data, or to aggregate such data for use in an anonymous manner, solely to facilitate marketing, sales and R&D activities of Hach and its affiliates.

12. PROPRIETARY INFORMATION; PRIVACY: "Proprietary Information" means any information, technical data or know-how in whatever form, whether documented, contained in machine readable or physical components, mask works or artwork, or otherwise, which Hach considers proprietary, including but not limited to service and maintenance manuals. Buyer and its customers, employees and agents will keep confidential all such Proprietary Information obtained directly or indirectly from Hach and will not transfer or disclose it without Hach's prior written consent, or use it for the manufacture, procurement, servicing or calibration of Products or any similar products, or cause such products to be manufactured, serviced or calibrated by or procured from any other source, or reproduce or otherwise appropriate it. All such Proprietary Information remains Hach's property. No right or license is granted to Buyer or its customers, employees or agents, expressly or by implication, with respect to the Proprietary Information or any patent right or other proprietary right of Hach, except for the limited use licenses implied by law. Hach will manage Customer's information and personal data in accordance with its Privacy Policy, located at http://www.hach.com/privacypolicy.

13. CHANGES AND ADDITIONAL CHARGES: Hach reserves the right to make design changes or improvements to any products of the same general class as Products being delivered hereunder without liability or obligation to incorporate such changes or improvements to Products ordered by Buyer unless agreed upon in writing before the Products' delivery date. Services which must be performed as a result of any of the following conditions are subject to additional charges for labor, travel and parts: (a) equipment alterations not authorized in writing by Hach; (b) damage resulting from improper use or handling, accident, neglect, power surge, or operation in an environment or manner in which the instrument is not designed to operate or is not in accordance with Hach's operating manuals; (c) the use of parts or accessories not provided by Hach; (d) damage resulting from acts of war, terrorism or nature; (e) services outside standard business hours; (f) site prework not complete per proposal; or (g) any repairs required to ensure equipment meets manufacturer's specifications upon activation of a service agreement.

14. SITE ACCESS / PREPARATION / WORKER SAFETY / ENVIRONMENTAL COMPLIANCE: In connection with services provided by Hach, Buyer agrees to permit prompt access to equipment. Buyer assumes full responsibility to back-up or otherwise protect its data against loss, damage or destruction before services are performed. Buyer is the operator and in full control of its premises, including those areas where Hach employees or contractors are performing service, repair and maintenance activities. Buyer will ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of services. Buyer is the generator of any resulting wastes, including without limitation hazardous wastes. Buyer is solely responsible to arrange for the disposal of any wastes at its own expense. Buyer will, at its own expense, provide Hach employees and contractors working on Buyer's premises with all information and training required under applicable safety compliance regulations and Buyer's policies. If the instrument to be serviced is in a Confined Space, as that term is defined under OSHA regulations, Buyer is solely responsible to make it available to be serviced in an unconfined space. Hach service technicians will not work in Confined Spaces. In the event that a Buyer requires Hach employees or contractors to attend safety or compliance training programs provided by Buyer, Buyer will pay Hach the standard hourly rate and expense reimbursement for such training attended. The attendance at or completion of such training does not create or expand any warranty or obligation of Hach and does not serve to alter, amend, limit or supersede any part of this Contract.

15. LIMITATIONS ON USE: Buyer will not use any Products for any purpose other than those identified in Hach's catalogs and literature as intended uses. Unless Hach has advised the Buyer in writing, in no event will Buyer use any Products in drugs, food additives, food or cosmetics, or medical applications for humans or animals. In no event will Buyer use in any application any Product that requires FDA 510(k) clearance unless and only to the extent the Product has such clearance. Buyer will not sell, transfer, export or re-export any Hach Products or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor use Hach Products or technology in any facility which engages in activities relating to such weapons. Unless the "ship-to" address is in California, U.S.A., the Products are not intended for sale in California and may lack markings required by California Proposition 65; accordingly, unless Buyer has ordered Products specifying a California ship-to address, Buyer will not sell or deliver any Hach Products for use in California. Any warranty granted by Hach is void if any goods covered by such warranty are used for any purpose not permitted hereunder.

16. EXPORT AND IMPORT LICENSES AND COMPLIANCE WITH LAWS: Unless otherwise specified in this Contract, Buyer is responsible for obtaining any required export or import licenses. Buyer will comply with all laws and regulations applicable to the installation or use of all Products, including applicable import and export control laws and regulations of the U.S., E.U. and any other country having proper jurisdiction, and will obtain all necessary export licenses in connection with any subsequent export, re-export, transfer and use of all Products and technology delivered hereunder. Buyer will comply with all local, national, and other laws of all jurisdictions globally relating to anti-corruption, bribery, extortion, kickbacks, or similar matters which are applicable to Buyer's business activities in connection with this Contract, including but not limited to the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"). Buyer agrees that no payment of money or provision of anything of value will be offered, promised, paid or transferred, directly or indirectly, by any person or entity, to any government official, government employee, or employee of any company owned in part by a government, political party, political party official, or candidate for any government office or political party office to induce such organizations or persons to use their authority or influence to obtain or retain an improper business advantage for Buyer or for Hach, or which otherwise constitute or have the purpose or effect of public or commercial bribery, acceptance of or acquiescence in extortion, kickbacks or other unlawful or improper means of obtaining business or any improper advantage, with respect to any of Buyer's activities related to this Contract. Hach asks Buyer to "*Speak Up*!" if aware of any violation of law, regulation or our Standards of Conduct ("SOC") in relation to this Contract. See http://danaher.com/integrity-and-compliance and www.danaherintegrity.com for a copy of the SOC and for access to our Helpline portal.

17. RELATIONSHIP OF PARTIES: Buyer is not an agent or representative of Hach and will not present itself as such under any circumstances unless and to

TERMS AND CONDITIONS OF SALE FOR HACH® PRODUCTS

the extent it has been formally screened by Hach's compliance department and received a separate duly-authorized letter from Hach setting forth the scope and limitations of such authorization.

18. FORCE MAJEURE: Hach is excused from performance of its obligations under this Contract to the extent caused by acts or omissions that are beyond its control of, including but not limited to Government embargoes, blockages, seizures or freeze of assets, delays or refusals to grant an export or import license or the suspension or revocation thereof, or any other acts of any Government; fires, floods, severe weather conditions, or any other acts of God; quarantines; labor strikes or lockouts; riots; strife; insurrections; civil disobedience or acts of criminals or terrorists; war; material shortages or delays in deliveries to Hach by third parties. In the event of the existence of any force majeure circumstances, the period of time for delivery, payment terms and payments under any letters of credit will be extended for a period of time equal to the period of delay. If the force majeure circumstances extend for six months, Hach may, at its option, terminate this Contract without penalty and without being deemed in default or in breach thereof.

19. NON ASSIGNMENT AND WAIVER: Buyer will not transfer or assign this Contract or any rights or interests hereunder without Hach's prior written consent. Failure of either party to insist upon strict performance of any provision of this Contract, or to exercise any right or privilege contained herein, or the waiver of any breach of the terms or conditions of this Contract will not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same will continue and remain in force and effect as if no waiver had occurred.

20. FUNDS TRANSFERS (PAYMENTS): Buyer and Hach both recognize that there is a risk of banking fraud when individuals impersonating a business demand payment under new banking or mailing instructions. To avoid this risk, Buyer must verbally confirm any new or changed bank transfer or mailing instructions by calling Hach at +1-970-663-1377 and speaking with Hach's Credit Manager before mailing or transferring any monies using the new instructions. Both parties agree that they will not institute mailing or bank transfer instruction changes and require immediate payment under the new instructions but will instead provide a ten (10) day grace period to verify any payment instruction changes before any new or outstanding payments are due using the new instructions.

21. LIMITATION OF LIABILITY: None of the Hach Indemnified Parties will be liable to Buyer under any circumstances for any special, treble, incidental or consequential damages, including without limitation, damage to or loss of property other than for the Products purchased hereunder; damages incurred in installation, repair or replacement; lost profits, revenue or opportunity; loss of use; losses resulting from or related to downtime of the products or inaccurate measurements or reporting; the cost of substitute products; or claims of Buyer's customers for such damages, howsoever caused, and whether based on warranty, contract, and/or tort (including negligence, strict liability or otherwise). The total liability of the Hach Indemnified Parties arising out of the performance or nonperformance hereunder or Hach's obligations in connection with the design, manufacture, sale, delivery, and/or use of Products will in no circumstance exceed in the aggregate a sum equal to twice the amount actually paid to Hach for Products delivered hereunder.

22. APPLICABLE LAW AND DISPUTE RESOLUTION: The construction, interpretation and performance hereof and all transactions hereunder shall be governed by the laws of the State of Colorado, without regard to its principles or laws regarding conflicts of laws. If any provision of this Contract violates any Federal, State or local statutes or regulations of any countries having jurisdiction of this transaction, or is illegal for any reason, said provision shall be self-deleting without affecting the validity of the remaining provisions. Unless otherwise specifically agreed upon in writing between Hach and Buyer, any dispute relating to this Contract which is not resolved by the parties shall be adjudicated in order of preference by a court of competent jurisdiction (i) in the State of Colorado, U.S.A. if Buyer has minimum contacts with Colorado and the U.S., (ii) elsewhere in the U.S. if Buyer has minimum contacts with the U.S. but not Colorado, or (iii) in a neutral location if Buyer does not have minimum contacts with the United States.

23. ENTIRE AGREEMENT & MODIFICATION: These Terms & Conditions of Sale constitute the entire agreement between the parties and supersede any prior agreements or representations, whether oral or written. No change to or modification of these Terms & Conditions shall be binding upon Hach unless in a written instrument specifically referencing that it is amending these Terms & Conditions of Sale and signed by an authorized representative of Hach. Hach rejects any additional or inconsistent Terms & Conditions of Sale offered by Buyer at any time, whether or not such terms or conditions materially alter the Terms & Conditions herein and irrespective of Hach's acceptance of Buyer's order for the described goods and services.

24. APPENDICES: If checked, the following Appendices are attached hereto and incorporated by reference into these Terms & Conditions of Sale:

☐ CLAROS SOFTWARE AS A SERVICE SUBSCRIPTION AGREEMENT

* * *

TOWN OF FLOWER MOUND
STANDARD TERMS & CONDITIONS FOR PURCHASE ORDERS
AS NEGOTIATED BETWEEN THE CITY OF FLOWER MOUND AND HACH COMPANY
Oct 14, 2020

These terms and conditions apply to both goods and services except where limited to one or the other. The term "Seller" shall be deemed to include both a seller of goods or a contractor providing services. Unless otherwise specified in the contract, sections 1, 2, 3, 4, 5, 6, and 7 shall apply only to a solicitation to purchase goods and sections 13, 16, and 19 shall apply to a solicitation to purchase services.

1. SELLER TO PACKAGE GOODS: Seller will package goods in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price. Each shipping container shall be clearly and permanently packed as follows: (a) Seller's name and address; (b) Town's name, address and purchase order or purchase order release number and the supply agreement number if applicable; (c) Container number and total number of containers, e.g. box 1 of 4 boxes; and (d) the number of the container bearing the packing slip. Seller shall bear cost of packaging unless otherwise provided. Goods shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. The Town's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

2. SHIPMENT UNDER RESERVATION PROHIBITED: Seller is not authorized to ship the goods under reservation and no tender of a bill of lading will operate as a tender of goods.

3. TITLE AND RISK OF LOSS: The title and risk of loss of the goods shall not pass to the Town until the Town actually receives and takes possession of the goods at the point or points of delivery.

4. DELIVERY TERMS AND TRANSPORTATION CHARGES: F.O.B. Destination, Town of Flower Mound, Texas with all delivery charges to be pre-paid by Seller, unless delivery terms are specified otherwise in bid. The Town assumes no liability for goods delivered in damaged or unacceptable conditions. The Seller shall handle all claims with carriers, and in case of damaged goods, shall ship replacement good immediately upon notification by Seller of damage. Town agrees to reimburse Seller for transportation costs in the amount specified in Seller's bid, or actual costs, whichever is lower, if the quoted delivery terms do not include transportation costs, provided Town shall have the right to designate what method of transportation shall be used to ship the goods.

5. RIGHT OF INSPECTION AND REJECTION: The Town expressly reserves all rights under law, including, but not limited to Uniform Commercial Code, to inspect the deliverables at delivery before accepting them, and to reject defective or non-conforming deliverables. If the Town has the right to inspect the Seller's or the Seller's subcontractors, facilities, or the deliverables at the Seller's, or the Subcontractor's premises, the Seller shall furnish, or cause to be furnished, without additional charge, all reasonable facilities and assistance to the Town to facilitate such inspection.

6. NO REPLACEMENT OF DEFECTIVE TENDER: Every tender or delivery of goods must fully comply with all provisions of this contract as to time of delivery, quality and quantity. If a tender is made which does not fully conform, this shall constitute a breach and Seller shall not have the right to substitute a conforming tender provided, where the time for performance has not yet expired, the Seller may notify Town of his intention to cure and may then make a conforming tender within the contract time but not afterward.

7. PLACE OF DELIVERY: The place of delivery shall be that set forth on the purchase order. Any change thereto shall be effected by modification as provided for in Clause 24, "Modifications", hereof. The terms of this agreement are "no arrival, no sale".

8. INVOICES AND PAYMENTS: (a) Seller shall submit separate invoices on each purchase order, hereafter referred to as "contract", after each delivery. Invoices shall indicate the purchase order number, shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading, and the freight weigh bill when applicable, should be attached to the invoice. Mail to: Town of Flower Mound, Attn: Accounts Payable, 2121 Cross Timbers Road, Flower Mound, TX 75028 or email to accountspayable@flower-mound.com. Payment shall not be due until the above instruments are submitted after delivery. Payment terms are Net 30 per the Texas Prompt Payment Act. Suppliers should keep the Accounts Payable Office advised of any changes in remittance addresses. (b) Town's obligation is payable only and solely from funds available for the purpose of the purchase. Failure of the Town to appropriate funds shall render this contract null and void to the extent funds are not available and any delivered but unpaid for goods will be returned to Seller by Town. (c) Do not include Federal Excise, State or City Sales Tax. Town shall furnish tax exemption certificate upon request

9. GRATUITIES: The Town may, by written notice to the Seller, cancel this contract without liability to Seller if it is determined by Town that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the Seller, or any agent, or representative of the Seller, to any officer or employee of the Town of Flower Mound with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending or the making or any determinations with respect to the performing of such a

contract. In the event this contract is cancelled by Town pursuant to this provision, Town shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by Seller in providing such gratuities.

10. SPECIAL TOOLS AND TEST EQUIPMENT: If the price stated on the face hereof includes the cost of any special tooling or special test equipment fabricated or required by Seller for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the Town and to the extent feasible shall be identified by the Seller as such.

~~11. WARRANTY PRICE: (a) The price to be paid by the Town shall be that contained in Seller's bid which Seller warrants to be no higher than Seller's current prices on orders by others for products of the kind and specification covered by this contract for similar quantities under similar or like conditions and methods of purchase. In the event Seller breaches this warranty, the prices of the items shall be reduced to the Seller's current prices on orders by others, or in the alternative, Town may cancel this contract without liability to Seller for breach or Seller's actual expense. (b) The Seller warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for commission, percentage, brokerage, or contingent fee excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Seller for the purpose of securing business. For breach of violation of this warranty, the Town shall have the right, in addition to any other right or rights, to cancel this contract without liability and to deduct from the contract price, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.~~

12. WARRANTY PRODUCTS: Seller shall not limit or exclude any implied warranties and any attempt to do so shall render this contract voidable at the option of the Town. Seller warrants that the goods furnished will conform to the specifications, drawings and descriptions listed in the bid invitation and to the sample(s) furnished by Seller, if any. In the event of a conflict between the specifications, drawings and descriptions, the specifications shall govern.

13. WARRANTY SERVICES: Seller warrants and represents that all services to be provided to the Town under the Contract will be fully and timely performed in a good and workmanlike manner in accordance with general accepted industry standards and practices, the terms, conditions, and covenants of the Contract, and all applicable Federal, State and local laws, rules or regulations. (a) Seller may not limit, exclude, or disclaim the foregoing warranty or any warranty implied by law, and any attempt to do so shall be without force or effect. (b) Unless otherwise specified in the Contract, the warranty period shall be at least one year from the Acceptance Date. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt or demand perform the services again in accordance with above standard at no additional cost to the Town. All costs incidental to such additional performance shall be borne by the Seller. The Town shall endeavor to give the Setter written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach warranty, but failure to give timely notice shall not impair the Town's rights under this section. (c) If the Seller is unable or unwilling to perform its services in accordance with the above standard as required by the Town, then in addition to any other available remedy, the Town may reduce the amount of services it may be required to purchase under the Contract from the Seller, and purchase conforming services from other sources. In such event, the Seller shall pay the Town upon demand the increased cost, if any, incurred by the Town to procure such services from another source.

14. SAFETY WARRANTY: Seller warrants that the product sold to Town shall conform to the standards promulgated by the U. S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event the product does not conform to OSHA standards, Town may return the product for correction or replacement at the Seller's expense. In the event Seller fails to make the appropriate correction within a reasonable time, correction made by Town will be at Seller's expense.

15. NO WARRANTY BY TOWN AGAINST INFRINGEMENTS: As part of this contract for sale Seller agrees to ascertain whether goods manufactured in accordance with the specifications attached to this contract will give rise to the rightful claim of any third person by way of infringement or the like. Town makes no warranty that the production of goods according to the specification will not give rise to such a claim, and in no event shall Town be liable to Seller for indemnification in the event that Seller is sued on the grounds of infringement or the like. If seller is of the opinion that an infringement or the like will result, he will notify Town to this effect in writing within two weeks after the signing of this agreement. If Town does not receive notice and is subsequently held liable for the infringement of the like, Seller will save Town harmless. If Seller, in good faith, ascertains that production of the goods in accordance with the specifications will result in infringement or the like, this contract shall be null and void except that Town will pay Seller the reasonable cost of his search as to infringements.

16. STOP WORK NOTICE: The Town may issue an immediate Stop Work Notice in the event the Seller is observed performing in a manner that is in violation of Federal, State, or Local guideline, or in a manner determined by the Town to be unsafe to either life or property. Upon notification, the Seller will cease all work until notified by the Town that the violation or unsafe condition has been corrected. The Seller shall be liable for all costs incurred by the Town as a result of the issuance of such Stop Work Notice.

17. DEFAULT: The Seller shall be in default under the Contract if the Contractor (a) fails to fully, timely and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance, or (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States.

18. CANCELLATION: Town shall have the right to cancel for default all or any part of the undelivered portion of this order if Seller breaches any of the terms hereof including warranties of Seller or if the Seller becomes insolvent or commits acts of bankruptcy. Such right of cancellation is in addition to and not in lieu of any other remedies which Town may have in law or equity.

19. TERMINATION: The performance of work under this order may be terminated in whole or in part by the Town in accordance with this provision. Termination of work hereunder shall be effected by the delivery to the Seller of a "Notice of Termination" specifying the extent to which performance of work under the order is terminated and the date upon which such termination becomes effective. Such right of termination is in addition to and not in lieu of rights of Town set forth in Clause 15, herein.

20. FRAUD: Fraudulent statements by the Seller on any offer or in any report or deliverable required to be submitted by the Seller to the Town shall be grounds for termination of the Contract for cause by the Town and may result in legal action.

21. FORCE MAJEURE: If by reason of Force Majeure, either party hereto shall be rendered unable wholly or in part to carry out its obligations under this contract then such party shall give notice and full particulars of Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, except as hereinafter provided, but for no longer period, and such party shall endeavor to remove or overcome such inability with all reasonable dispatch. The term Force Majeure as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, act of public enemy, orders of any kind of government of the United States or the State of Texas or any civil military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, droughts, arrests, restraint of government and people, civil disturbances, explosions, breakage or accidents to machinery, pipelines or canals, or other causes not reasonably within the control of the party claiming such inability.

22. ASSIGNMENT DELEGATION: No right or interest in this contract shall be assigned or delegation of any obligation made by Seller without the written permission of the Town. Any attempted assignment or delegation by Seller shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

23. WAIVER: No claim or right arising out of a breach of this contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved.

24. MODIFICATIONS: This contract may be modified or rescinded only by a writing signed by both of the parties or their duly authorized agents. This shall include change orders.

25. INTERPRETATION PAROLE EVIDENCE: This writing is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of their agreement. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this agreement. Acceptance or acquiescence in a course of performance rendered under this contract shall not be relevant to determine the meaning of this contract even though the accepting or acquiescing party has knowledge of the performance and opportunity for objection. Whenever a term defined by the Uniform Commercial Code is used in the agreement, the definition contained in the Code is to control.

26. APPLICABLE LAW: This agreement shall be governed by the Uniform Commercial Code. Wherever the term "Uniform Commercial Code" is used, it shall be construed as meaning the Uniform Commercial Code as adopted in the State of Texas as effective and in force on the date of this contract.

27. ADVERTISING: Seller shall not advertise or publish, without Town's prior consent, the fact that Town has entered into this contract, except to the extent necessary to comply with proper requests for information from an authorized representative of the federal, state or local government.

28. RIGHT TO ASSURANCE: Whenever one party to this contract in good faith has reason to question the other party's intent to perform he may demand that the other party give written assurance of his intent to perform. In the event that a demand is made and no assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the contract.

29. VENUE: Both parties agree that venue for any litigation arising from this contract shall lie in Denton County, Texas.

30. DISCLOSURE: Pursuant to Chapter 176 of the Texas Local Government Code, a person or agent of a person who contracts or seeks to contract with the Town of Flower Mound must complete a conflict of interest questionnaire if the person or agent has an affiliation or business relationship that might cause a conflict of interest with the Town. The conflict of interest questionnaire, which is available online at ethics.state.tx.us, must be filed with the Purchasing Division of the Town of Flower Mound no later than the 7th business day after the person or agent begins contract discussions or negotiations with the Town of Flower Mound or submits to the Town of Flower Mound, an application, response to a request for proposal or bid, correspondence, or another writing related to a potential agreement with the Town of Flower Mound. An updated conflict of interest questionnaire must be filed in accordance with Chapter 176 of the Local Government Code.

Seller should consult with legal counsel if there are questions regarding its compliance with the requirements of Chapter 176. It is the responsibility of each person or agent who is contracting or seeking to contract with the Town of Flower Mound to comply with the filing requirement of Chapter 176.

31. PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS: Any elected or appointed official which has any substantial interest, either direct or indirect, in any business entity seeking to contract with the Town, shall, before any vote or decision on any matter involving the business entity, file an affidavit stating the nature and extent of interest and shall abstain from any participation in the matter. This is not required if the vote or decision will not have any special effect on the entity other than its effect on the public. However, if a majority of the governing body are also required to file, and do file similar affidavits, then the member is not required to abstain from further participation. Vernon's Texas Codes Annotated, Local Government Code, Chapter 171.

32. ACCEPTANCE: These General Terms and Conditions ("Terms and Conditions") govern all orders issued by the Town to the Seller identified on the order. Fulfillment of any part of an order, or any other conduct by Seller which recognizes the existence of an agreement pertaining to the subject matter of such order, shall constitute acceptance by the Seller of such order and all of the Terms and Conditions. The Terms and Conditions constitute the complete and exclusive statement of the terms and conditions between Seller and the Town. No revisions to this order of to the Terms and Conditions shall be valid unless made in writing and signed by an authorized representative of the Town.

33. INSURANCE: The Town of Flower Mound requires vendor(s) to carry the minimum insurance as required by the greater of the requirements contained in state laws or the insurance requirements contained in the contract documents.

34. INDEMNITY: The seller shall defend, indemnify and hold the Town of Flower Mound, its officers, agents and employees harmless from any and all costs, expenses, suits, demands, claims, liabilities, liens, encumbrances or damages, including attorneys' fees and costs of suit, of any character, name and description, incurred or resulting from any injuries or damages received or sustained by any person, persons or property on account of any intentional wrongful conduct or negligent act or fault of the successful bidder, or of any agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from bid award and the seller so agrees upon the submission of the bid. The seller shall deliver, if so requested by the Town of Flower Mound, a written release of all liens or other proper evidence of same, to the satisfaction of the Town prior to the issuance of final payment by the Town. Any and all indemnification obligations imposed upon Seller and limited to the extent of those damages proportionately caused by Seller's breach of the Agreement, negligence, wrongful conduct, or violations of law. In no case is Seller liable for any damages caused by negligence, misuse or misapplication of goods by others.

35. LIMITATION ON LIABILITY: The total liability of Seller and its subsidiaries, affiliates, employees, directors, officers and agents arising out of performance, nonperformance, or obligations in connection with the design, manufacture, sale, delivery, and/or use of goods and/or services in no circumstance includes any liquidated, penalty, incidental or consequential damages of any kind.

36. PATENT RIGHTS: Seller agrees to indemnify and hold harmless the Town of Flower Mound from any claim involving patent right infringement or copyright infringement on goods or services supplied to the Town.

37. DISPUTE RESOLUTION: If a dispute arises between the Town and a Seller, the parties will attempt to negotiate prior to prosecuting a suit for damages unless a suit is required to toll a statute of limitations. Such negotiations shall be instituted by either party sending the other a written statement stating the nature of the dispute and, if applicable, the amount of damages sought and a request for negotiation. Unless the parties are able to resolve their differences within thirty (30) days of the request for negotiation the matter may proceed to litigation. The parties may voluntarily agree to mediation, but such is not a condition precedent to litigation.

38. SEVERABILITY: In case any one or more of the provisions contained in these Terms and Conditions shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof, and these Terms and Conditions shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

39. IMMIGRATION REFORM AND CONTROL ACT (8 U.S.C 1324a): The Town supports the Immigration Reform and Control Act (IRCA), which is a comprehensive scheme prohibiting the employment of unauthorized aliens in the United States. The Seller and its subcontractors shall at all times during the term of the contract with the Town comply with the requirement of IRCA and shall notify the Town within fifteen (15) working days of receiving notice of a violation of IRCA. The Seller also warrants that it has not had an IRCA violation within the last five (5) years. The Town may terminate a contract with the Seller if the Town determines that (a) the Seller or its subcontractors have been untruthful regarding IRCA violations in the preceding five (5) years or (b) the Seller or its subcontractors fail to timely notify the Town of an IRCA violation.

40. ADA COMPLIANCE: All goods and services provided to the Town must be compliant with the Americans with Disabilities Act and any amendments thereto (the "ADA") and all regulations promulgated pursuant to the ADA. Seller will be required to certify compliance, if required under the law or otherwise required by the Town.

41. PROTECTION OF RESIDENT WORKERS: The Town actively supports the Immigrations and Nationality Act (INA), which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only person who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Seller shall establish appropriate procedures and controls so no services under the contract will be performed by any worker who is not legally eligible to perform such services or employment. The Town reserves the right to audit Seller's employment records to verify the existence of a completed Employment Eligibility Verification Form (I-9) for every worker performing services under the contract. The audit will be at the Town's expense.

42. NO BOYCOTT OF ISRAEL: Pursuant to Texas Government Code Chapter 2270, the Seller agrees that acceptance of these Terms & Conditions serves as written verification that 1) Seller does not boycott Israel, as defined by Texas Government Code Section 808.001 and 2) Seller will not boycott Israel during the term of the contract.

43. COMPANIES ENGAGED IN BUSINESS WITH IRAN, SUDAN, OR FOREIGN TERRORIST ORGANIZATION: Pursuant to Texas Government Code Chapter 2252, Subchapter F. Seller affirms that it is not identified on a list created by the Texas Comptroller of Public Accounts as a company known to have contracts with or provide supplies or services to a foreign terrorist organization.

HACH
Be Right™

October 6, 2020

Clayton Riggs
Town of Flower Mound
2121 Cross Timbers Rd
Flower Mound, TX 75028-2699
Phone: 972-874-6400
Email: Clayton.riggs@flower-mound.com

Subject: Hach Flow Products & Services

Dear Clayton:

This letter designates that Hach Company is the sole manufacturer of the Hach/Marsh McBirney/Sigma line of flow monitoring equipment. This letter also designates HB Systems Inc. as the sole source representative in the States of Texas and Oklahoma for the Hach open channel flow monitoring line of products including FH950, series FL900, FL1500, and Flo-Dar. The Hach brands include Sigma, Marsh McBirney, and GLI product lines and the Data Delivery Service (DDS) program.

Thank you and if you have any questions, they can be directed to me or to the company headquarters in Loveland, Colorado.

Respectfully,

Richard Delgadillo
Division Sales Manager Flow- Western U.S.
13242 Edina Way
Poway, CA 92064
Cell-970-443-8821
Email – rdelgadi@hach.com

CC: Ann Lippert, HB Systems
Shawna Allen, HB Systems
Jim Caruso, Hach

TOWN COUNCIL AGENDA ITEM NO. 27

CONSENT ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Consider approval of Change Order No. 1 for the Lift Station Improvements and Decommissioning Phase II project, amending the contract with Fort Worth Civil Constructors, LLC, in the amount of $32,282.00; and authorization for the Mayor to execute same on behalf of the Town.**

BACKGROUND INFORMATION: On September 21, 2020, a construction award was approved for the Lift Station Improvements and Decommissioning Phase II, (Bid No. 2020-114-B). Fort Worth Civil Constructors, LLC, submitted the lowest qualified bid of the three responding bidders at a base bid of $1,293,798.00.

Change Order 1 includes check valve replacement at the Kipling Lift Station to ensure the lift station remains compliant until it is replaced during the Phase III project scheduled in FY 21/22. The check valves that are currently installed have failed and the Town has modified the operation of the lift station to compensate for the failed check valves. The operation is not a long-term solution. If approved, Change Order 1 would increase the total contract by $32,282.00 for a total contact amount of $1,326,080.00.

ALTERNATIVES/OPTIONS: The contractor for the Lift Station Improvements and Decommissioning Phase II has visited the site and can complete the work with the approval of the change order. Should the change order not be approved, the lift station will continue to operate until an emergency replacement is required. The emergency replacement would be significantly more expensive than the work that is currently proposed due to the short notice that a contractor will be provided to complete the work. In addition, a TCEQ violation would be likely if the check valves were not replaced.

FISCAL IMPACT: $32,282.00

Proposed Expenditure/(Revenue):	Account Number(s):
$32,282.00	630-970-98581

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Change Order No. 1

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

CHANGE ORDER No. 1

Effective Date: Upon execution by the Mayor

Owner: Town of Flower Mound
Contractor: Fort Worth Civil Constructors, LLC
Project: Lift Station Improvements and Decommissioning Phase II

CHANGE ORDER NO. 1

The compensation agreed upon in this Change Order is a full, complete, and final payment for all costs the Contractor incurs as a result of or relating to the change, whether said costs are known, unknown, foreseen, or unforeseen at this time, including without limitation, any costs for delay, extended overhead, ripple or impact costs, or any other effect on changed or unchanged work as a result of this change.

You are directed to make the following changes in the Contract Documents:

Item No.	Description	Unit	Add/ Deduct	Qty.	Unit Price	Extended Amount
CO1-A	Kipling Lift Station Check Valve Replacements	LS	Add	1	$ 26,837.00	$ 26,837.00
CO1-B	Kipling Lift Station Bypass System	LS	Add	1	$ 5,445.00	$ 5,445.00
SUBTOTAL						**$ 32,282.00**

JUSTIFICATION

Change Order No. 1 provides for the following:
Item CO1-A allows for the replacemnt of the checkvalves at the Kipling Lift Station. The work includes new valves and fittings as required, replacing all gaskets and SS bolts, 48" diameter manhole riser with a 7" thick concrete flat top with 32" cast iron ring & cover.

Item CO1-B allows for bypass system operation for work associated with the check valve replacment at the Kipling Lift Station. Bypass system incliudes hydrovac and transport tankers.

REVISED CONTRACT AMOUNTS

Original Contract	$ 1,293,798.00
Change Order #1	**$ 32,282.00**
Revised Contract Price	**$ 1,326,080.00**

Recommended for Approval

Brian Waltenburg, P.E. — 11/20/20
Assistant Director of Engineering — Date

Contractor — 11/20/20
President
Contractor Title — Date

Approved

Steve Dixon — Date
Mayor, Town of Flower Mound

TOWN COUNCIL AGENDA ITEM NO. 28

REGULAR ITEM

DATE: December 7, 2020

FROM: Chuck Russell, Principal Planner

ITEM: **Public Hearing to consider an ordinance amending the zoning (ZPD20-0005 - Niagara Conservation) from an Agricultural (A) Zoning district to Planned Development District No.179 (PD-179) with Campus Industrial uses, with certain waivers, exceptions and modifications to the Code of Ordinances. The property is generally located north of Enterprise Road and east of Old Gerault Road. (The Planning and Zoning Commission recommended approval of the rezoning request and denial of the exception request to Section 82-376 of the Town Code that requires overhead utilities to be placed underground by a vote of 6 to 0 at its November 9, 2020, meeting.)**

SUMMARY DATA:

- Size – 7.594 acres
- Proposed Zoning – PD for Campus Industrial (CI) Uses
- Proposed Building – One 127,810 square-foot one-story office, warehouse and distribution building.
- SMARTGrowth – Passed
- Traffic Analysis – Passed, based on the TA, traffic generated is not anticipated to exceed the 5% threshold.
- Exceptions – Request to not place overhead utilities along Old Gerault Rd underground (approximately 710 linear ft).
- Incentives – Economic Incentives are being requested.

BACKGROUND INFORMATION: Attached is the Planning and Zoning Commission (P&Z) report and backup for this item.

During P&Z's deliberations on the exception request, there was a question posed of whether Oncor, as the service provider, would allow the lines to be buried. This was relevant because if the utility service provider will not allow the lines to be buried, an exception is no longer required. Ultimately, P&Z recommended denial of the exception, based in part on the fact that Council had previously indicated a desire to see lines put underground with new development projects, and because no letter from the service provider had been received at that time. Staff reached out to the Town's contact with Oncor after the meeting and requested a determination in writing on the burial question. At the time this report was written, staff had not received an official response.

The Commissioners also discussed the requirement and standards to rebuild Old Gerault adjacent to the subject property, truck traffic and turning movements into and out of the property and screening/landscaping related to the impact of the proposed building on existing residential uses to the west of Old Gerault Road.

ATTACHMENTS:
1. Planning and Zoning Commission Staff Report
2. Draft Ordinance

LEGAL REVIEW: Alicia Kreh, of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the ordinance as to form and legality.

DRAFT MOTION: Move to approve as presented in the agenda caption.

PLANNING AND ZONING COMMISSION

AGENDA ITEM NO: 8

REGULAR ITEM

DATE: November 9, 2020

FROM: Chuck Russell, Principal Planner

ITEM: **Public Hearing to consider an ordinance amending the zoning (ZPD20-0005 - Niagara Conservation) from an Agricultural (A) Zoning district to Planned Development District No.179 (PD-179) with Campus Industrial uses, with certain waivers, exceptions and modifications to the Code of Ordinances. The property is generally located north of Enterprise Road and east of Old Gerault Road.**

I. ITEM SUMMARY

This application has been reviewed by DRC and determined to be ready for consideration by the Planning and Zoning Commission. There are no outstanding issues.

This application will require final action by the Town Council, which is scheduled for December 7, 2020.

II. APPLICATION ANALYSIS

The purpose of this application is to request approval of a Planned Development District (PD) to provide for an office, warehouse and distribution facility on a 7.59 acre unplatted parcel of land. The base zoning district for the proposed PD will be Campus Industrial District (CI), which is compatible with the existing Master Plan land use designation of Campus Industrial uses.

As part of the request, the applicant has asked for an exception to the Code of Ordinances (see Section III below, for detail):

Exception:

- **Underground Utilities:** The applicant is requesting an exception to Section 82-376 of the Town Code that requires overhead utilities to be placed underground.

The conceptual site plan provides for one 127,810 square-foot one-story building. Two points of access are being provided from Old Gerault Road, and the applicant is providing 80 of the required 100 parking spaces which is within the Town's allowable 20% deviation.

The conceptual plans [see Attachment B(1)] provide for a proposed development that complies with the development standards in the PD base zoning district (CI), as well as

required landscaping and buffering. The proposed conceptual elevations are in compliance with the Urban Design Plan

III. EXCEPTION

A. Exception to Section 82-376, Underground Utilities

Section 82-376 states that all existing overhead utilities, save and except transmission facilities identified in the Town Code, shall be placed underground in conjunction with the development of property, and prior to the Town's acceptance of the subdivision, subject to the certain provisions. Approximately 710 linear feet of overhead utility lines are located along the Old Gerault Road frontage.

IV. ENVIRONMENTAL CONSERVATION COMMISSION

On November 4, 2020, the Environmental Conservation Commission (ECC) recommended approval of the removal of 25 specimen trees on the subject property. The item will be forwarded to the Town Council for consideration at the same time as the subject project. The November 4, 2020 ECC meeting can be viewed here:

https://flowermoundtx.swagit.com/play/11042020-1046/6/

V. CORRESPONDENCE

The Town Code requires both public notice in a newspaper of general circulation (Denton Record Chronicle) and notification of the property owners within 200 feet of the subject property for all Zoning Amendment requests. Project No. ZPD20-0005 had a total of 39 Property Owner Notifications mailed. At the time this report was written, the Town had not received any items of correspondence in support or in opposition to the request.

VI. ATTACHMENTS

A. Background Information

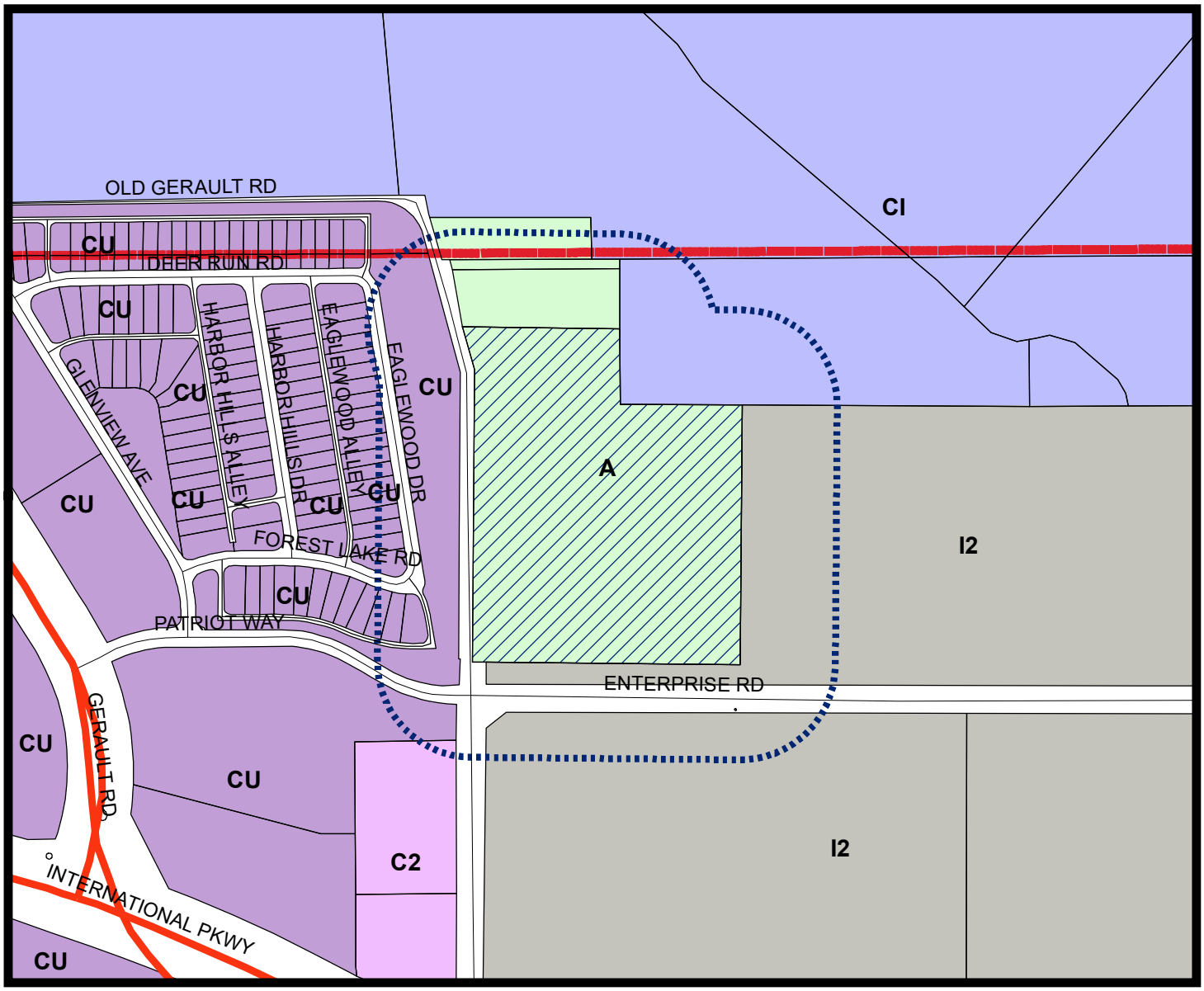
1. Vicinity Map
2. Letter of Intent

B. Application Details

1. Planned Development Zoning Package
2. Draft Planned Development (PD) Standards

Vicinity Map

Reference Project: ZPD20-0005

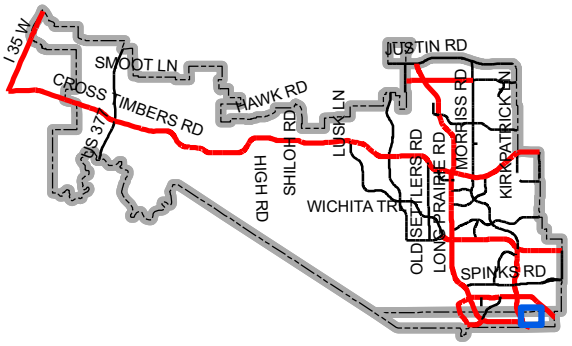


LEGEND

- Agriculture
- Campus Industrial
- *Combined Uses-See Ordinance
- Commercial 2
- Industrial 2

Subject Property

200 ft Notification Buffer around Property



Map Location

0 250 500 1,000 Feet

September 4, 2020

Mr. Chuck Russell, AICP
Principal Planner
Planning Services Division
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028

Re: Letter of Intent – Niagara
300 Old Gerault Road, Flower Mound, TX

Dear Mr. Russell:

We want to thank you and your staff at the city for working so diligently with us to accelerate this complex project. As you know we are honored to be teaming up with the "best of the best" being Meinhardt & Associates, Pacheco Koch and Bella Firma. Our team in the past has had great success with the city and acknowledge you are an instrumental part of that process.

The intent of this letter is to begin the approval process as it pertains to a Site Plan Approval so that our client, Niagara, can fully understand development requirements prior to closing on the referenced property. Niagara is pleased to have the opportunity to continue to operate their business and work with the Town of Flower Mound with the mission of relocating and making it the location of their Headquarters.

Below are bullet points of related to the subject property:

- 7.53 acres (328,006 sq.ft.)
- Will need to be rezoned to Campus Industrial for Niagara's 127,810 square foot building.
- Site is currently zoned for agricultural in agricultural district.

The challenges the site poses are listed below:

- Tree Mitigation.
- Retaining Wall.
- Powerlines.
- Construction of Old Gerault Road.
- Topography and drainage issues.

As our plan is not to have the development consist of building in phases, but all at once, we would like the Town of Flower Mound to consider these special considerations: rezoning, set back variance, sewer, power line variance and a town tax break on shared road.

With the Town's assistance, we are confident we can make Niagara's Headquarters a permanent home in Flower Mound.

Sincerely,

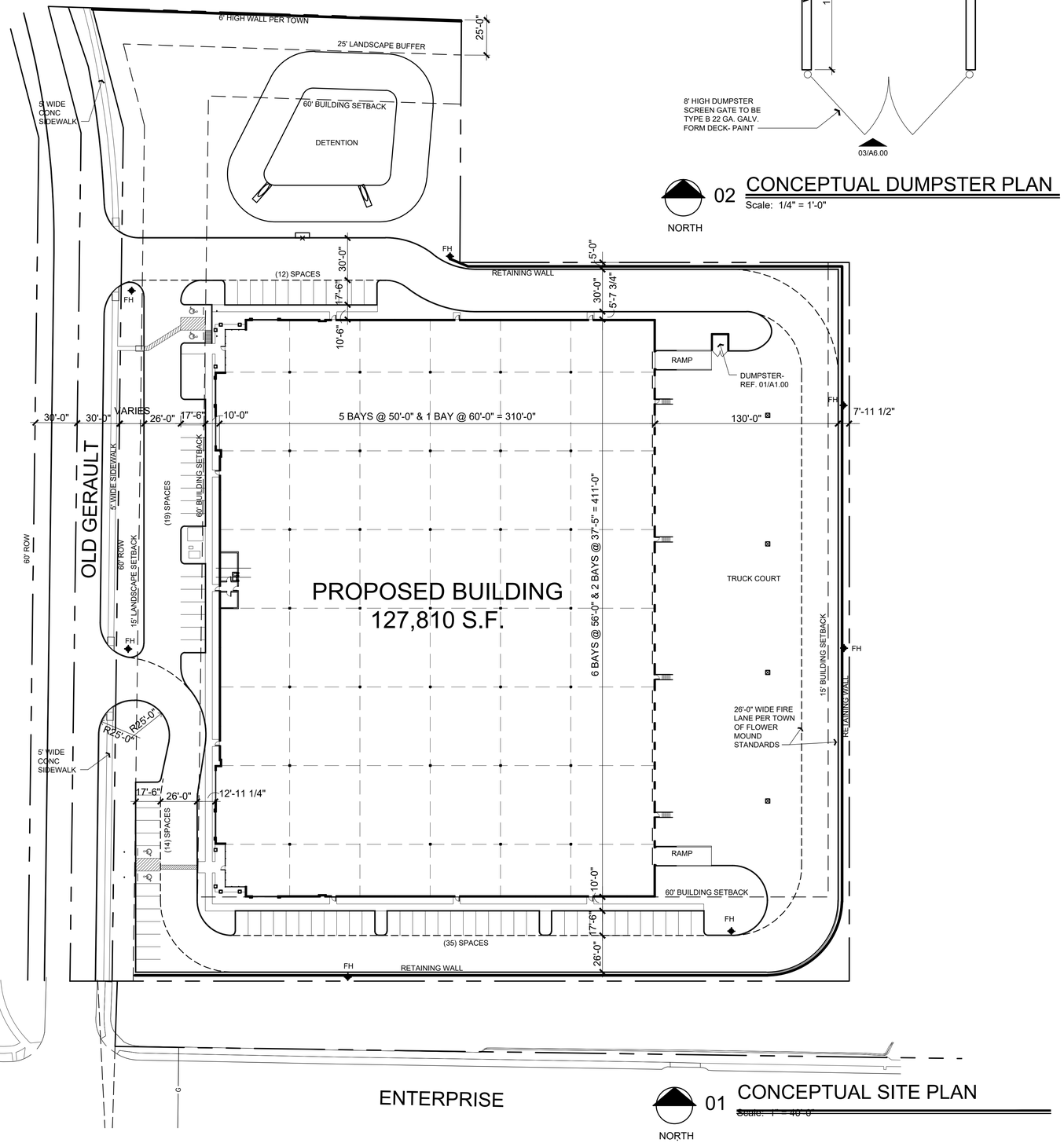
Tom Smolik

Tom C. Smolik, SIOR

TIG Real Estate Services, Inc.
4350 Beltway Dr, Addison, TX 75001
www.tigusa.com
Trusted Partner in Commercial Real Estate for 25 Years

Senior Vice President, Principal
214 697 9878 (C) | 972 661 0232 (O)
tsmolik@tigusa.com

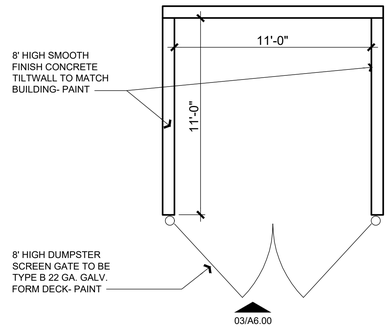
cc: Kyle Cutler
Alex Flores



02 CONCEPTUAL DUMPSTER PLAN

Scale: 1/4" = 1'-0"

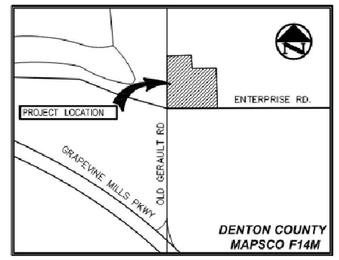
NORTH



01 CONCEPTUAL SITE PLAN

Scale: 1" = 40'-0"

NORTH



VICINITY MAP
(NOT TO SCALE)

GENERAL NOTES

1. ALL EXPOSED CONCRETE, INCLUDING BUT NOT LIMITED TO RETAINING/DETAINING WALLS, TURN-DOWN CURBS, AND TREE RETAINING WALLS, SHALL BE CLAD IN A MATERIAL TO MATCH THE MATERIALS ON THE MAIN BUILDING ON THE SITE.
2. OR ALL RETAINING/DETAINING WALLS SHALL BE CLAD IN A MATERIAL TO COMPLEMENT THE MATERIALS AND COLORS WITHIN THIS DEVELOPMENT.
3. ALL GROUND BASED MECHANICAL UNITS AND/OR EQUIPMENT SHALL BE SCREENED WITH LIVE SCREENING OR MASONRY ENCLOSURE. MASONRY ENCLOSURE SHALL BE CLAD IN A MATERIAL TO MATCH THE MATERIALS ON THE BUILDING.
4. ALL ROOF-MOUNTED MECHANICAL UNITS AND/OR EQUIPMENT SHALL BE SCREENED FROM VIEW IN ACCORDANCE WITH SECTION 82-273 OF THE LAND DEVELOPMENT REGULATIONS.
5. SIGNS REQUIRE A SEPARATE BUILDING PERMIT, ANY SIGNS DEPICTED ON THE SUBJECT SITE PLAN/ELEVATIONS ARE NOT APPROVED AS A PART OFTHIS REVIEW AND MUST COMPLY WITH ALL APPLICABLE TOWN REGULATIONS.

SITE DATA TABLE

PHYSICAL ADDRESS	XX OLD GERAULT	
GROSS SITE AREA	7.59 AC and 330,789 SF	
NET SITE AREA	4.66 AC and 202,979 SF	
ZONING	CI (CAMPUS INDUSTRIAL)	
CURRENT USE	AGRICULTURAL	
LOT COVERAGE DATA		
BUILDING COVERAGE	41% / 127,810 S.F	
IMPERVIOUS AREA	40% / 122,102 S.F.	
PERVIOUS AREA	19% / 59,967 S.F.	
PARKING SUMMARY	REQUIRED	PROVIDED
SURFACE PARKING		
OFFICE	42.6	43
WAREHOUSE	57.5	57
SUB TOTAL PARKING	100.1	
20% REDUCTION	-20	-20
TOTAL PARKING	80	80
BUILDING DATA		
BUILDING	1 STORY	
PEAK HEIGHT	45 FEET and 0 INCHES	
MEAN HEIGHT	40 FEET and 3 INCHES	
TOTAL SQUARE FOOTAGE	127,810 SF	

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 960-8660

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 09.04.2020

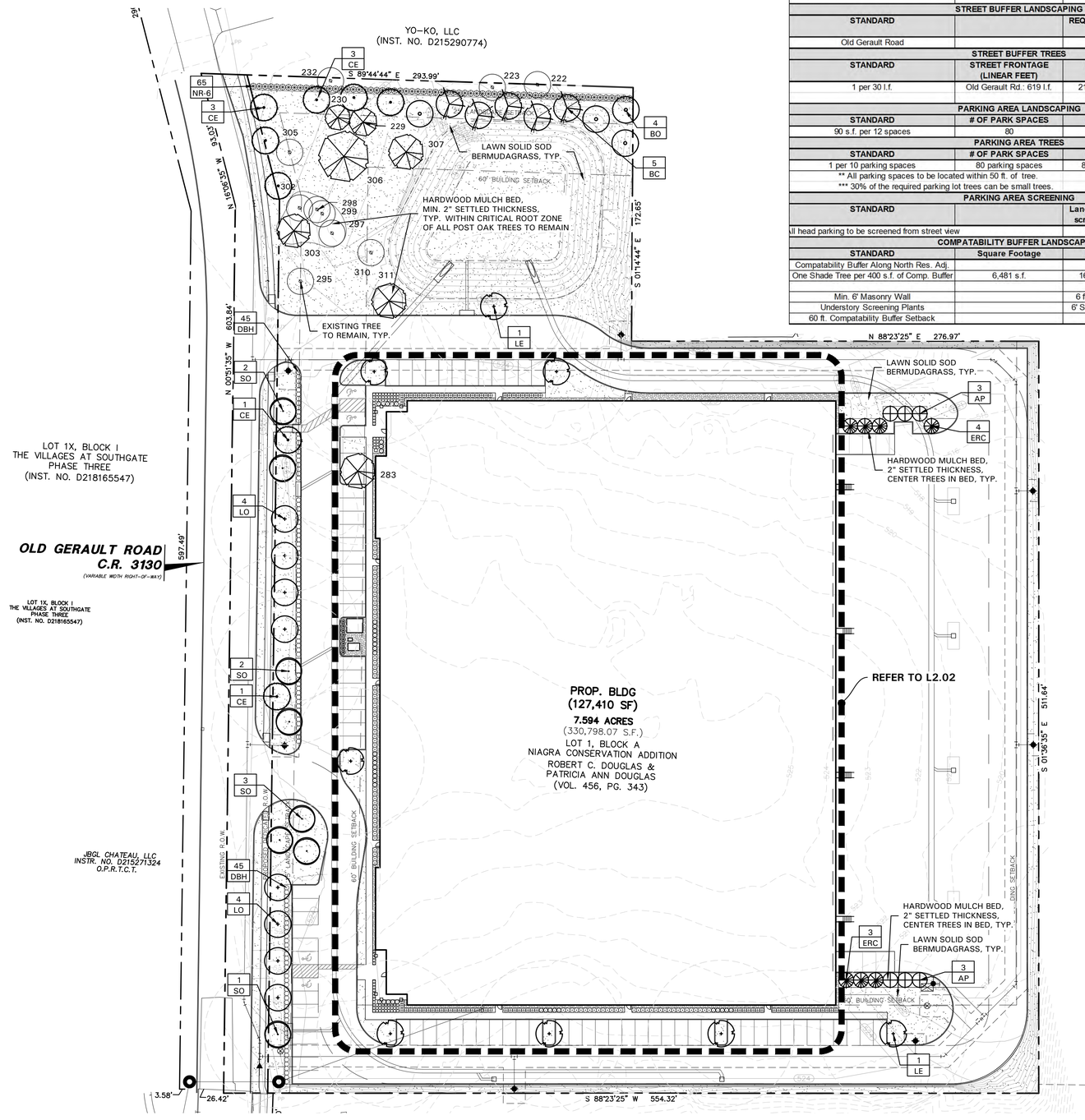
JOB # 20-204

SITE PLAN

SHEET:

A1.00

G:\MISC\20204-TIG Niagara\CDs Shell\CDs\204-A100series.dwg, 9/4/2020 10:46:02 AM, 1:1



THE TOWN OF FLOWER MOUND - LANDSCAPE CONFORMANCE CHART			
STREET YARD LANDSCAPING			
STANDARD	**TOTAL STREET YARD**	**REQUIRED**	**PROVIDED**
Min. 20% of street yard	48,492 s.f.	9,698 s.f. 20%	23,144 s.f. 47%
STREET YARD TREES			
STANDARD	**TOTAL STREET YARD (SQUARE FEET)**	**REQUIRED**	**PROVIDED**
Between 10,000 and 110,000 s.f. = 10 Trees + 1 Tree for every 2,500 s.f. over 10,000 s.f.	50,590 s.f. of Street Yard	26 Trees, 3" cal.	26 Trees, 3" cal.
STREET BUFFER LANDSCAPING			
STANDARD		**REQUIRED BUFFER WIDTH**	**PROVIDED**
Old Gerault Road		15 ft.	15 ft.
STREET BUFFER TREES			
STANDARD	**STREET FRONTAGE (LINEAR FEET)**	**REQUIRED**	**PROVIDED**
1 per 30 l.f.	Old Gerault Rd.: 619 l.f.	21 Trees, 3" cal.	18 Trees, 3" cal. 3 existing trees
PARKING AREA LANDSCAPING			
STANDARD	**# OF PARK SPACES**	**REQUIRED**	**PROVIDED**
90 s.f. per 12 spaces	80	600 s.f.	2,478 s.f.
PARKING AREA TREES			
STANDARD	**# OF PARK SPACES**	**REQUIRED**	**PROVIDED**
1 per 10 parking spaces	80 parking spaces	8 trees, 3" cal.	9 trees, 3" cal.
** All parking spaces to be located within 50 ft. of tree.			1 existing tree
*** 30% of the required parking lot trees can be small trees.			
PARKING AREA SCREENING			
STANDARD		**Landscape berm or screening shrubs**	**PROVIDED**
ll head parking to be screened from street view		3' ht. Screen	Screening shrubs (3' ht.)
COMPATABILITY BUFFER LANDSCAPING			
STANDARD	**Square Footage**	**REQUIRED**	**PROVIDED**
Compatability Buffer Along North Res. Adj.		25 ft.	25 ft.
One Shade Tree per 400 s.f. of Comp. Buffer	6,481 s.f.	16 trees, 3" cal.	13 trees, 3" cal. 3 existing trees
Min. 6' Masonry Wall		6 ft. masonry wall	6 ft. masonry wall
Understory Screening Plants		6' Screening Shrubs	6' Screening Shrubs
60 ft. Compatability Buffer Setback		60 ft.	60 ft.

LANDSCAPE NOTES

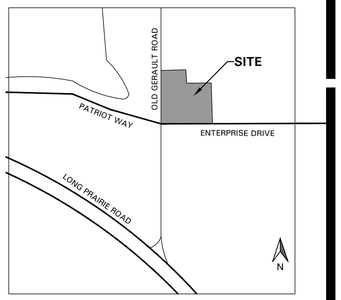
1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
3. CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
4. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
5. ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
6. TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
7. ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
9. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

MAINTENANCE NOTES

1. THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
2. ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
3. ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
5. ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
6. CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

VICINITY MAP

NOT TO SCALE



GENERAL LAWN NOTES

1. CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.
2. CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.
3. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.
6. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

SOLID SOD NOTES

1. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
2. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
	TREES				
AP	*Pinus nigra*	Austrian Pine	6	6' ht.	B&B or container grown, full to base, 3' spread
BC	*Taxodium distichum*	Bald Cypress	5	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
BO	*Quercus macrocarpa*	Bur Oak	4	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
CE	*Ulmus crassifolia*	Cedar Elm	8	3" cal.	B&B, 12' ht., 4' spread, 4' branching ht., matching
ERC	*Juniperus virginiana*	Eastern Redcedar	7	6' ht.	container grown, full to base, 3' spread
LE	*Ulmus parvifolia 'Sempervirens'*	Lacebark Elm	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
LO	*Quercus virginiana*	Live Oak	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
SO	*Quercus shumardii*	Shumard Red Oak	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
	SHRUBS/GROUNDCOVER				
DBH	*Ilex cornuta 'Dwarf Burford'*	Dwarf Burford Holly	120	5 gal.	container full, 24" spread, 36" o.c.
IH	*Raphiolepsis indica 'Jack Evans'*	Indian Hawthorne 'Jack Evans'	85	5 gal.	container full, 20" spread, 36" o.c.
LOR	*Loropetalum chinensis 'Plum Delight'*	Loropetalum 'Plum Delight'	85	5 gal.	container full, 20" spread, 36" o.c.
MIS	*Miscanthus sinensis 'Adagio'*	Miscanthus 'Adagio'	39	5 gal.	container full, 36" o.c.
NRS	*Ilex spp. 'Nellie R. Stevens'*	Nellie R. Stevens Holly	8	7 gal.	container full to base, 36" ht., 36" o.c.
NR-6	*Ilex spp. 'Nellie R. Stevens'*	Nellie R. Stevens Holly	65	15 gal.	container full to base, 36" ht., 48" o.c.
SG	*Salvia greggii 'Red'*	Salvia Greggii	84	5 gal.	container full, 20" spread 24" o.c.

NOTE: ALL TREES SHALL HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES.
PLANT LIST IS AN AID TO BIDDERS ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES ON PLAN.
ALL HEIGHTS AND SPREADS ARE MINIMUMS. ALL PLANT MATERIAL SHALL MEET OR EXCEED REMARKS AS INDICATED.

N

SCALE: 1" = 40'-0"
0 20 40 80

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 635
DALLAS TEXAS 75254
972 960-8580

REGISTERED LANDSCAPE ARCHITECT
BRYAN ANN HAAS
2246
STATE OF TEXAS

11.4.20

DATE: 08.03.2020

JOB # 20-204

CONCEPTUAL LANDSCAPE PLAN

SHEET:

L2.01

PROP. BLDG
(127,410 SF)

7.594 ACRES
(330,798.07 S.F.)

LOT 1, BLOCK A
NIAGRA CONSERVATION ADDITION
ROBERT C. DOUGLAS &
PATRICIA ANN DOUGLAS
(VOL. 456, PG. 343)

'COLORADO' RIVER ROCK,
2"-4" DIA., 4" DEPTH
WITH WEED BARRIER FABRIC, TYP.

LAWN SOLID SOD
BERMUDAGRASS, TYP.

HARDWOOD MULCH BED,
2" SETTLED THICKNESS,
TYP. WITHIN CRITICAL ROOT ZONE
OF ALL POST OAK TREES TO REMAIN

'COLORADO' RIVER ROCK,
2"-4" DIA., 4" DEPTH
WITH WEED BARRIER FABRIC, TYP.

LAWN SOLID SOD
BERMUDAGRASS, TYP.

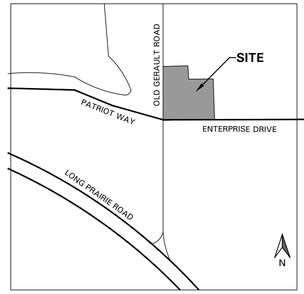
EXISTING TREE
TO REMAIN, TYP.

60' BUILDING SETBACK

283

1 LE
9 LOR
23 LOR
5 MIS
35 SG
3 MIS
9 SG
4 IH
12 IH
8 MIS
5 IH
15 IH
8 MIS
13 IH
4 IH
5 SG
8 NRS
15 LOR
7 LOR
5 MIS
18 IH
14 IH
8 LOR

VICINITY MAP
NOT TO SCALE



PLANT LEGEND

SYMBOL	COMMON NAME
AP	Austrian Pine
BC	Bald Cypress
BO	Bur Oak
CE	Cedar Elm
ERC	Eastern Redcedar
LE	Lacebark Elm
LO	Live Oak
SO	Shumard Red Oak
DBH	Dwarf Burford Holly
IH	Indian Hawthorne 'Jack Evans'
LOR	Loropetalum 'Plum Delight'
MIS	Miscanthus 'Adagio'
NRS	Nellie R. Stevens Holly
NR-6	Nellie R. Stevens Holly
SG	Salvia Greggii

REFER TO L2.01 FOR PLANT LIST

SCALE: 1" = 20'-0"
0 10 20 40

BELLE FIRMA
4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES
ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 638
DALLAS TEXAS 75254
972 960-8885

REGISTERED LANDSCAPE ARCHITECT
CHERI ANN HALL
2246
STATE OF TEXAS
09.30.20

DATE: 08.03.2020

JOB # 20-204

CONCEPTUAL LANDSCAPE ENLARGEMENT PLAN

SHEET:

L2.02

SECTION 32 9300 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

A. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs and grasses)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

A. American Standard for Nursery Stock published by American Association of Nurserymen: April 14, 2014 Edition; by American National Standards Institute, Inc. (Z60.1) – plant material

B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.

C. Texas Association of Nurserymen, Grades and Standards

D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, crushed stone, steel edging and tree stakes. Samples shall be approved by Owner's Authorized Representative before use on the project.

1.5 JOB CONDITIONS

A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.

B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.

B. Guarantee:

1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
   a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
   b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
   c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.
2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete, undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.

C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

1.7 QUALITY ASSURANCE

A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.

B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

C. Selection of Plant Material:
1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.
2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.
3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions, do not measure from branch or root tip-to-tip.
5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.
7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Preparation:
1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

B. Delivery:
1. Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored on site.
2. Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available on job site.
3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
6. Remove rejected plant material immediately from job site.
7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.

B. Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.

C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.

D. Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as specified at no additional cost to the Owner.

E. Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)

F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:
1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
2. Physical properties as follows:
   a. Clay – between 7-27 percent
   b. Silt – between 15-25 percent
   c. Sand – less than 52 percent
3. Organic matter shall be 3%-10% of total dry weight.
4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.

B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.

C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.

E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.

F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus micronutrients.

H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

A. Steel Edging: All steel edging shall be 3/16" thick x 4" deep x 16' long with 6 stakes per section, painted black at the factory as manufactured by The J.D. Russell Company and under its trade name DURAEDGE Heavy Duty Steel.

B. Staking Material for Shade Trees: refer to details.

C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.

D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.

E. River Rock: 'Colorado' or native river rock, 2" - 4" dia.

F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed earth base.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.

B. All planting areas shall be conditioned as follows:
1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
2. All planting areas shall receive a two (2") inch layer of specified mulch.
3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:
1. Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

3.2 INSTALLATION

A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.

B. Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of dryingby wind and Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

C. Position the trees and shrubs in their intended location as per plan.

D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.

E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that,when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

F. Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter (¾") inch in diameter. Plants should be thoroughly moist before removing containers.

G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per tree planting detail as approved by the Landscape Architect if the percolation test fails.

I. Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top ½ of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of 'root scoring'.

J. Do not wrap trees.

K. Do not over prune.

L. Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.

M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.

N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.

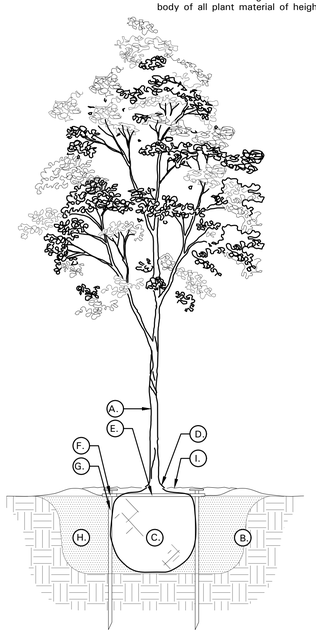
P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.
2. Pruning shall be done with clean, sharp tools.
3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

Q. Steel Curbing Installation:
1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation.
2. All steel curbing shall be free of kinks and abrupt bends.
3. Top of curbing shall be ½" maximum height above final finished grade.
4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.
5. Do not install steel edging along sidewalks or curbs.
6. Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

3.3 CLEANUP AND ACCEPTANCE

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each work day.

END OF SECTION



01 TREE PLANTING DETAIL
NOT TO SCALE

TREE PLANTING DETAIL LEGEND AND NOTES

A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR NURSERY STOCK. www.anla.org

B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE SOIL.

C. ROOT BALL: REMOVE TOP ⅓ BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.

D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE. TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.

E. ROOTBALL ANCHOR RING: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE RING.

F. ROOT ANCHOR BY TREE STAKE SOLUTIONS.

G. NAIL STAKE: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).

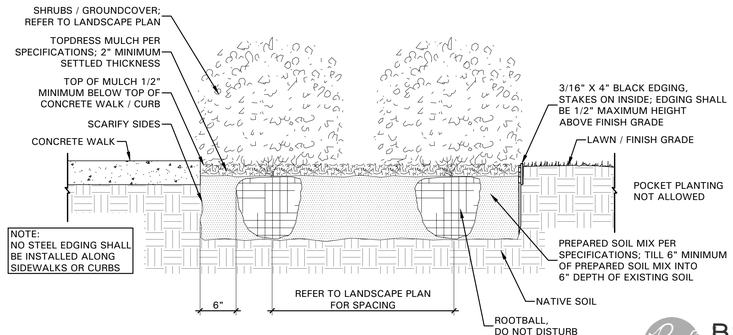
H. BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.

I. MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE SHOULD NOT BE VISIBLE.

J. TREE STAKES:
TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL AVAILABLE FROM:
Tree Stake Solutions
ATTN: Jeff Tuley
(903) 676-6143
jeff@treestakesolutions.com
www.treestakesolutions.com

OR APPROVED EQUAL. TREES SHALL BE STAKED BELOW GROUND WHERE NECESSARY; ABOVE GROUND STAKING IS EXPRESSLY PROHIBITED.

K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY OF THE MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.



02 SHRUB / GROUNDCOVER DETAIL
NOT TO SCALE

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 980-8980

REGISTERED LANDSCAPE ARCHITECT
MARY ANN HAMM
2245
STATE OF TEXAS
09.30.20

DATE: 08.03.2020

JOB # 20-204

LANDSCAPE SPECIFICATIONS AND DETAILS

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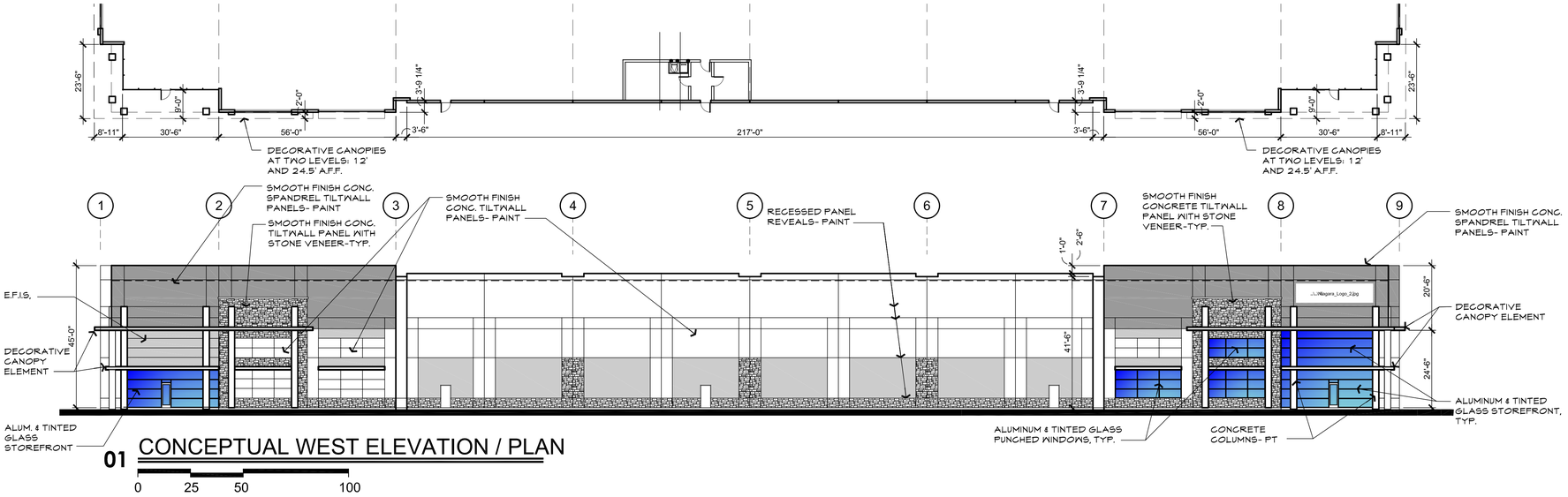

01 CONCEPTUAL WEST ELEVATION / PLAN

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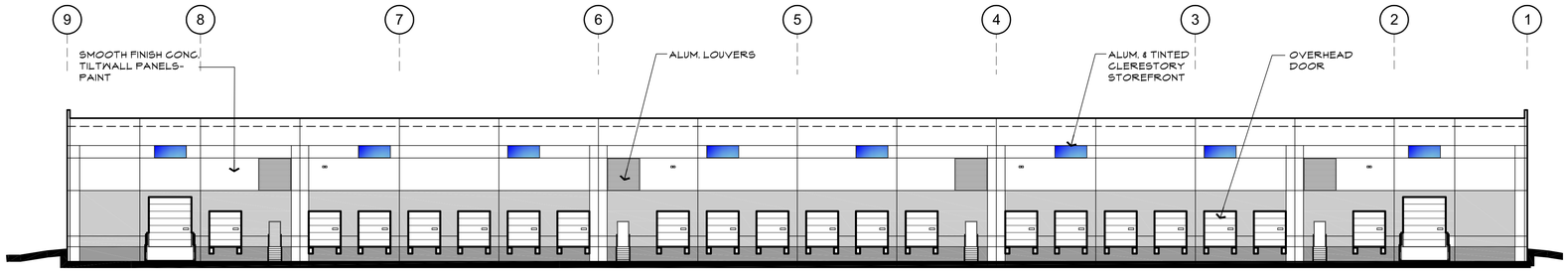

02 CONCEPTUAL EAST ELEVATION / PLAN

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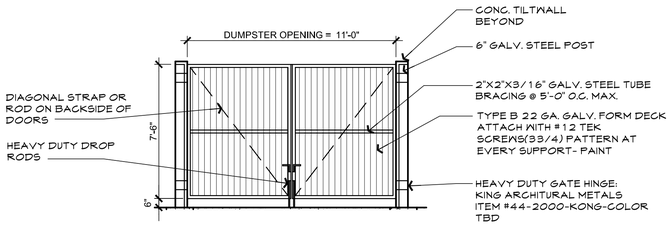

03 DUMPSTER ELEVATION

0 5 10 20

COLOR SELECTION KEY

- STONE
- FIELD COLOR
- MEDIUM ACCENT COLOR
- DARK ACCENT COLOR
- STEEL METAL COLOR

MATERIAL USE TABLE

	MATERIAL	NORTH ELEV.	SOUTH ELEV.	EAST ELEV.	WEST ELEV.
1.	TOTAL FACADE S.F.	12,957 S.F.	12,957 S.F.	15,085 S.F.	18,112 S.F.
2.	FACADE (EXCLUSIVE OF DOOR AND WINDOWS)	12,623 S.F.	12,205 S.F.	12,699 S.F.	16,517 S.F.
3.	DOORS AND WINDOWS S.F.	334 S.F.	752 S.F.	2,386 S.F.	1,595 S.F.
4.	PRIMARY MASONRY TOTALS- (MIN. 80%)	12,362 S.F. and 98%	12,127 S.F. and 99.5%	12,699 S.F. and 100%	15,922 S.F. and 96%
	*TILT WALL S.F.	11,842S.F. and 94%	10,576 S.F. and 87%	12,699 S.F. and 100%	14,043 S.F. and 85%
	*TEXTURED STONE S.F.	520 S.F. and 4%	1,551 S.F. and 12.5%		1,879 S.F. and 11%
5.	SECONDARY TOTALS - (MAX. 20%)	261 S.F. and 2%	78 S.F. AND .5%		595 S.F. and 4%
	*METAL ACCENT S.F.	94 S.F. and 1%	78 S.F. and .5%		250 S.F. and 2%
	*EIFS (STUCCO)	167 S.F. and 1%			345 S.F. and 2%

NOTE:
ANY EXTERNAL ELECTRICAL PANELS WILL BE PAINTED/TEXTURED TO MATCH THE MATERIAL AND COLOR OF THE BUILDING.

..\..\TIG_logo3.png

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

BUILD TO SUIT For

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 9904980

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 11.03.2020

JOB # 20-204

EXTERIOR ELEVATIONS

SHEET:

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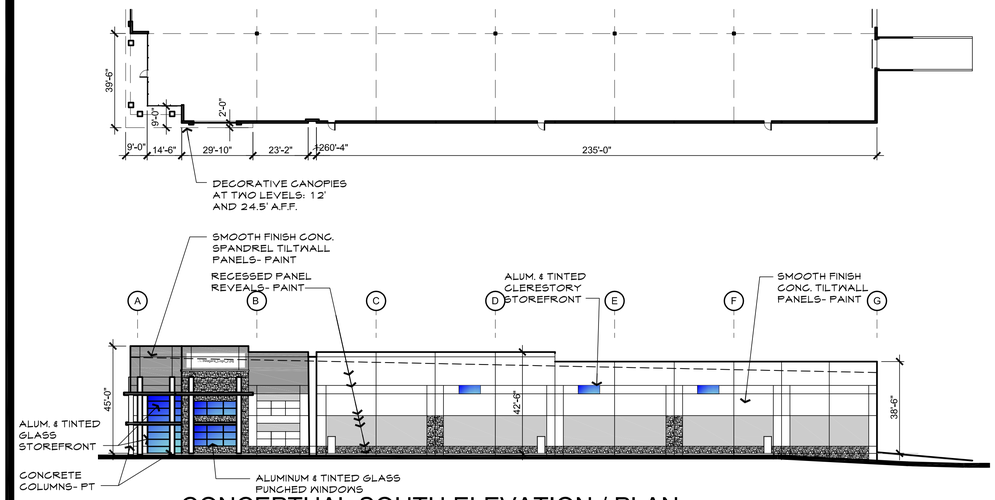

01 CONCEPTUAL SOUTH ELEVATION / PLAN

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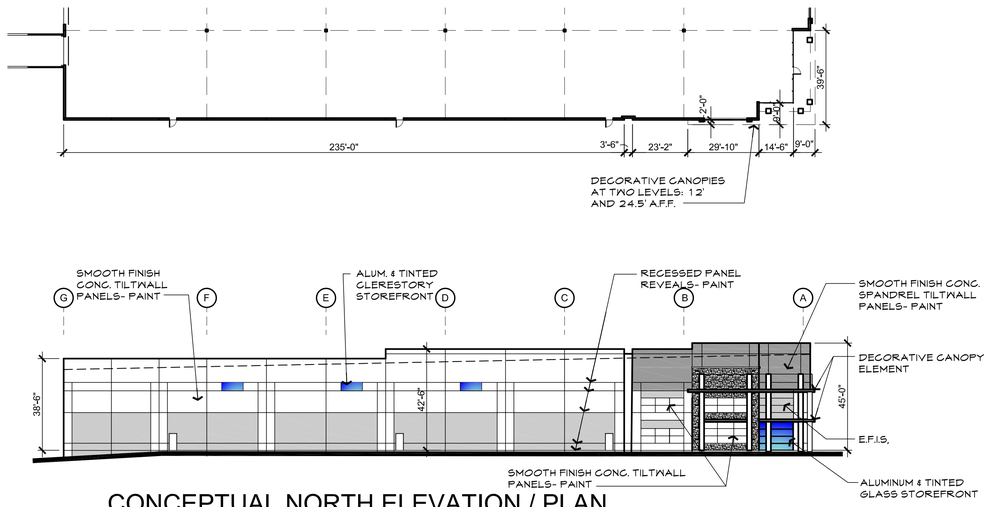

03 CONCEPTUAL NORTH ELEVATION / PLAN

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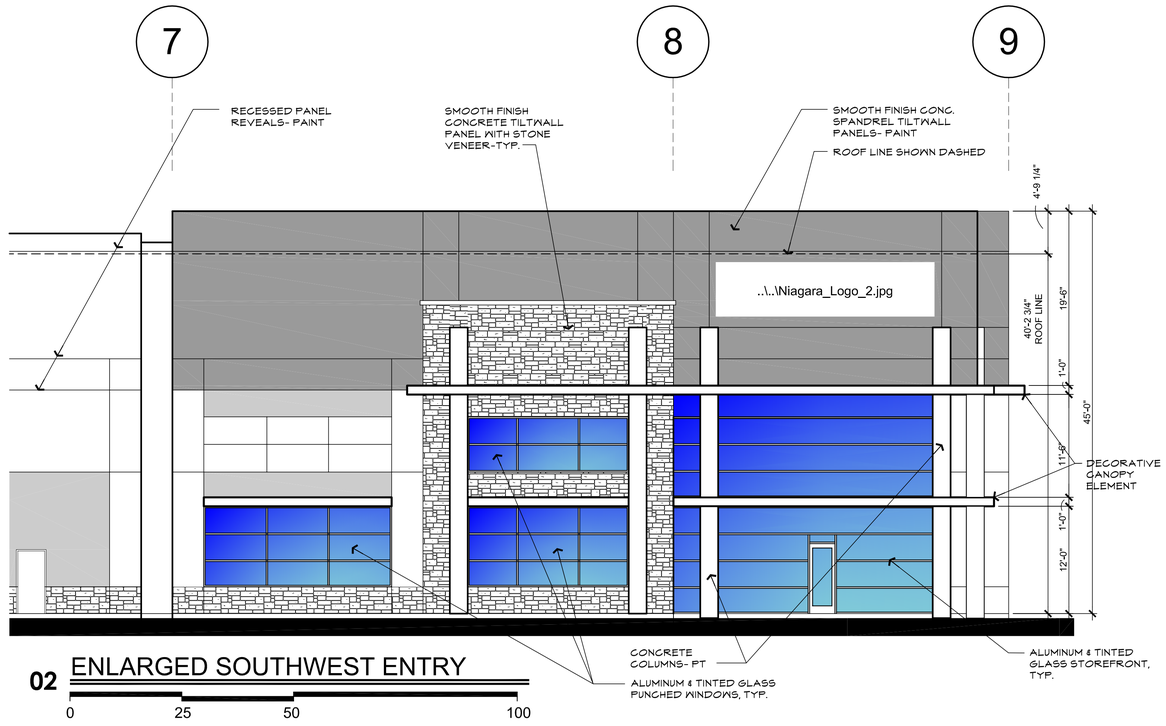

02 ENLARGED SOUTHWEST ENTRY

0 25 50 100

COLOR SELECTION KEY

- STONE
- FIELD COLOR
- MEDIUM ACCENT COLOR
- DARK ACCENT COLOR
- STEEL METAL COLOR

MATERIAL USE TABLE

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NOTE:
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BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 960-6860

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 11.03.2020

JOB # 20-204

EXTERIOR ELEVATIONS

SHEET:

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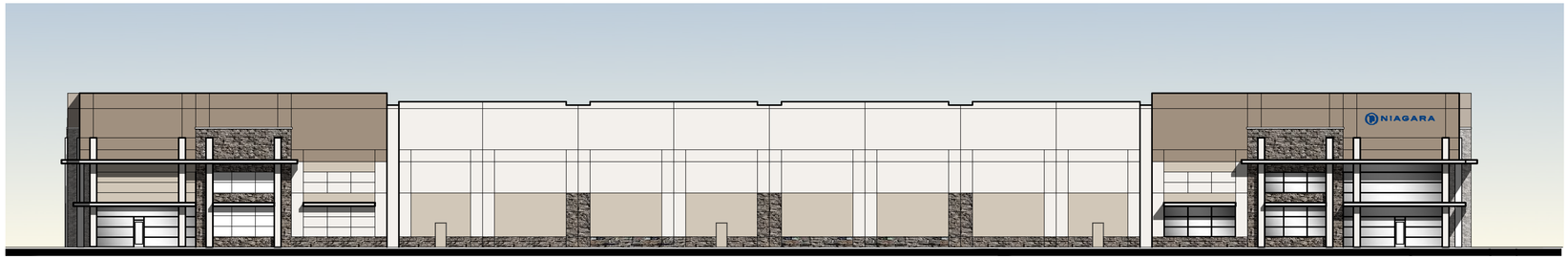
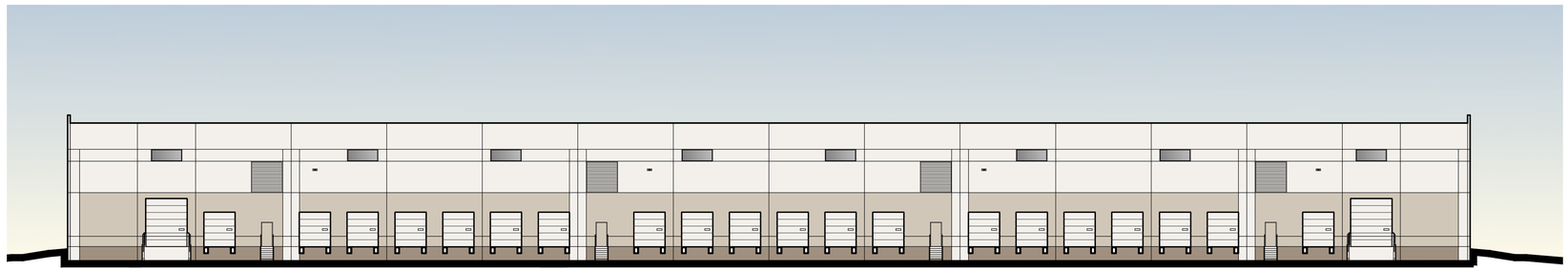
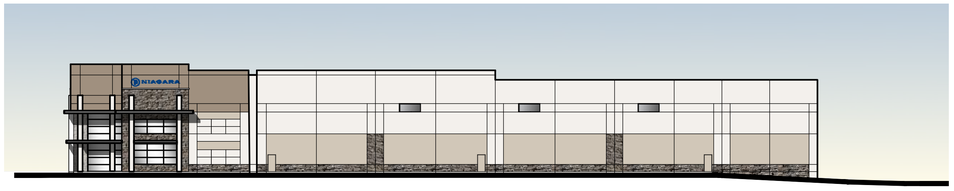


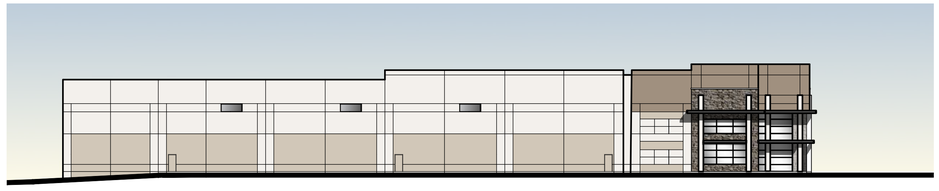
01 WEST ELEVATION



02 EAST ELEVATION



03 SOUTH ELEVATION



04 NORTH ELEVATION

05 ENLARGED SOUTHWEST ENTRY

COLOR SELECTION KEY

CORONADO STONE
ARTISAN LEDGE - FALMOUTH

SHERWIN WILLIAMS
7036 ACCESSIBLE BEIGE
FIELD COLOR

SHERWIN WILLIAMS
7037 BALANCED BEIGE

SHERWIN WILLIAMS
9174 MOTH WING

TIG

NIAGARA CONSERVATION ON OLD GERAULT

BUILD TO SUIT For

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES
ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 960-8565

DATE: 09.04.2020

JOB # 20-204

P.O.D. ELEVATIONS

SHEET:

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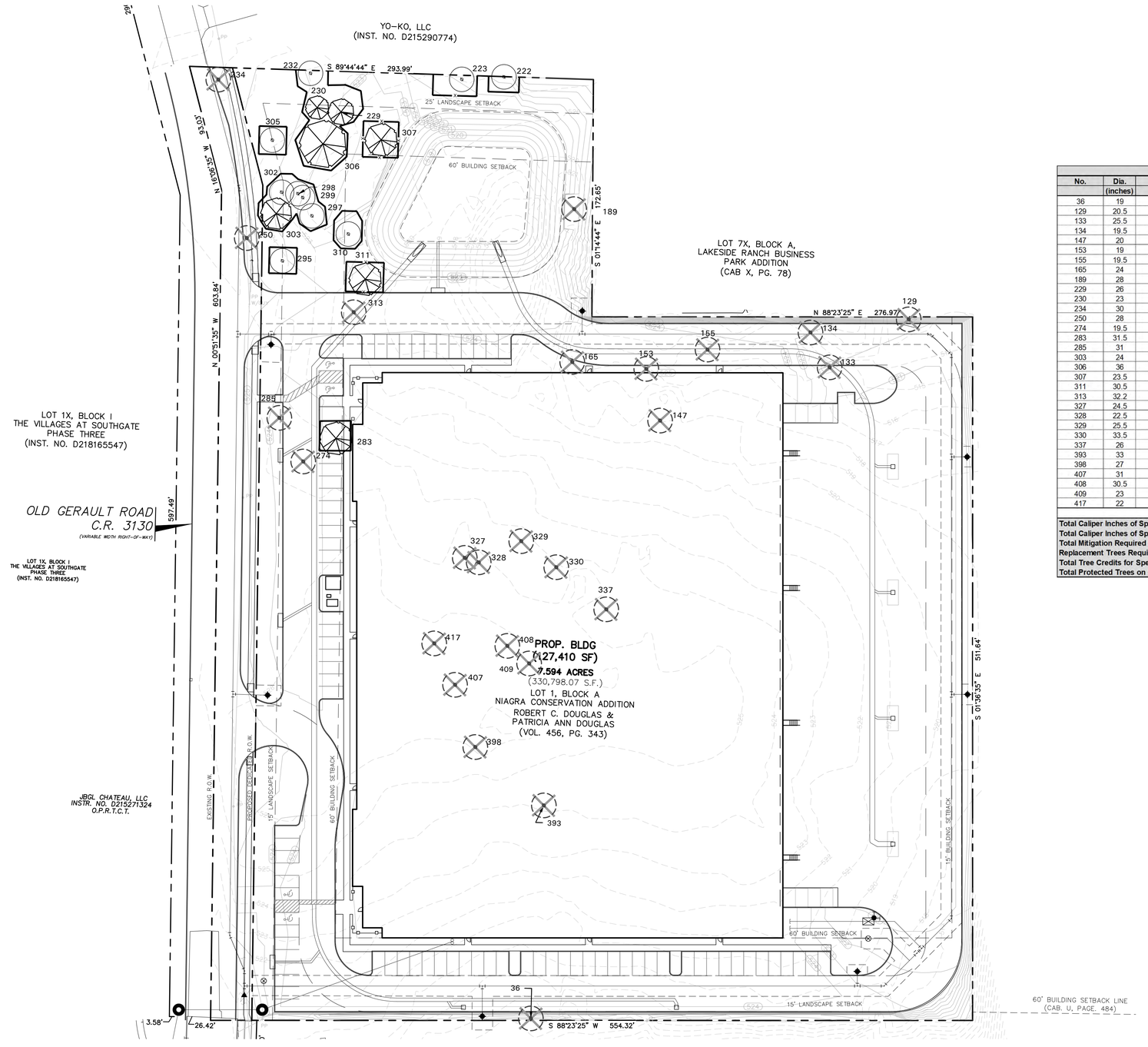
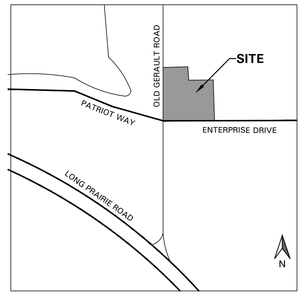


VICINITY MAP
NOT TO SCALE



TREE SURVEY FIELD DATA								
No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
36	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
129	20.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
133	25.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
134	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
147	20	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
153	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
155	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
165	24	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
189	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
229	26	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	5	BUILDABLE AREA
230	23	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
234	30	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
250	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		
274	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
283	31.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
285	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
303	24	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	FAIR	1	
306	36	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
307	23.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
311	30.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
313	32.2	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
327	24.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
328	22.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
329	25.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
330	33.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
337	26	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
393	33	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
398	27	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
407	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
408	30.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
409	23	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
417	22	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		Measurement taken at 1' ht.

Total Caliper Inches of Specimen Trees on Site to be Removed (Total: 33 Specimen Trees)	**828.7**
Total Caliper Inches of Specimen Trees to be Removed	**634.2**
Total Mitigation Required for Specimen Trees Removed	**1,268.4**
Replacement Trees Required for Specimen Trees to be Removed	**422.8**
Total Tree Credits for Specimen Trees to Remain	**32.0**
Total Protected Trees on Site	**164.0**

EXISTING TREE LEGEND

- SPECIMEN TREE TO REMAIN
- SPECIMEN TREE TO BE REMOVED
- TREE PROTECTION FENCING TO REMAIN

SCALE: 1" = 40'-0"
0 20 40 80

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

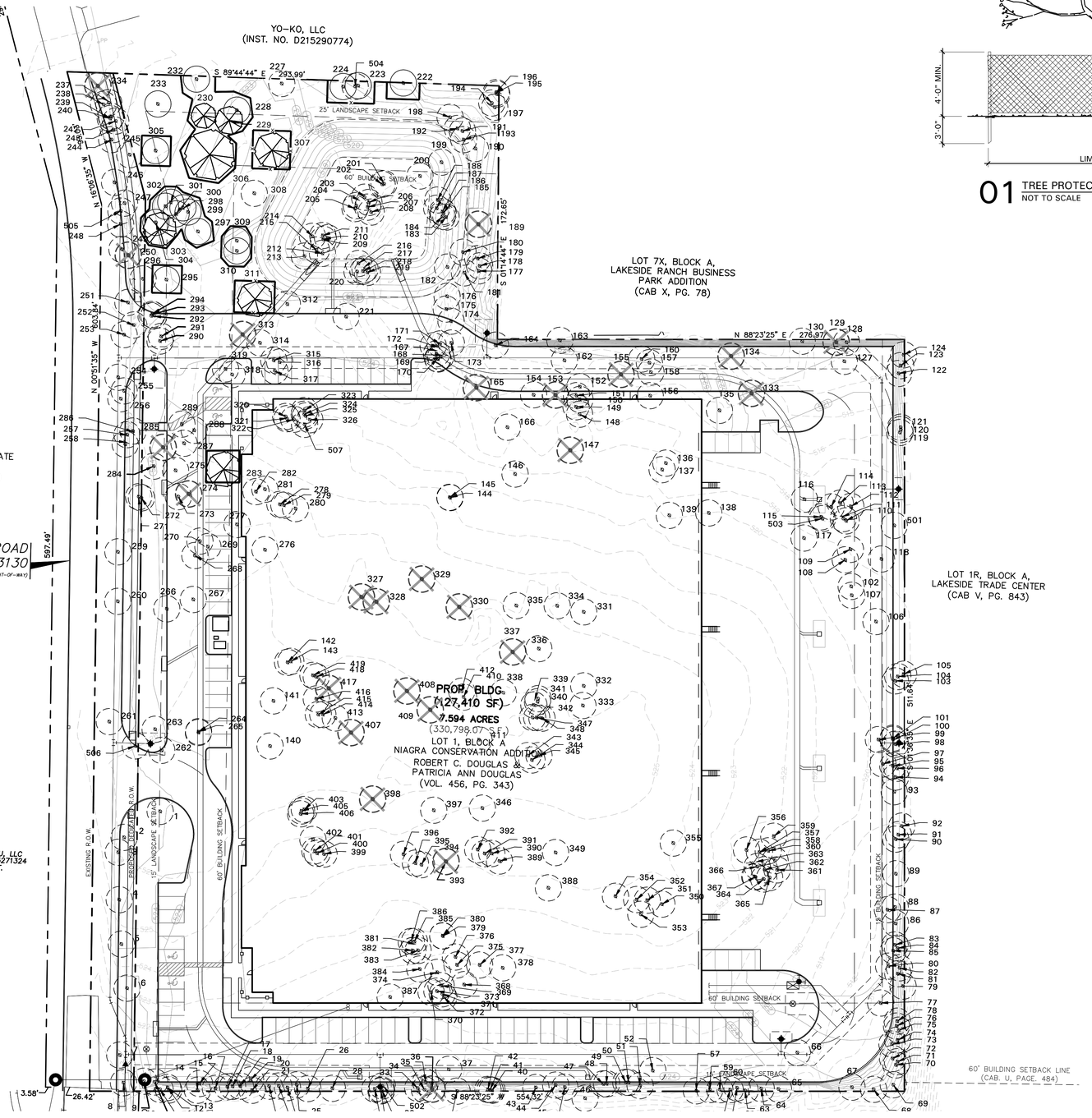
TIG

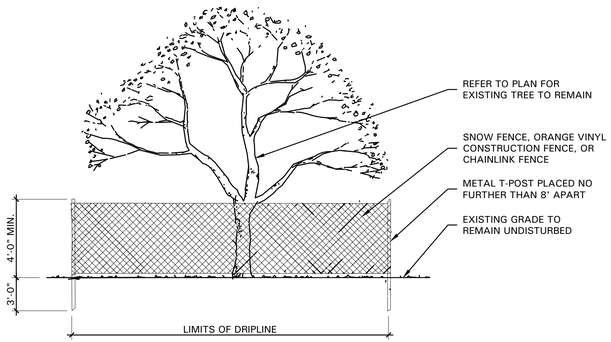
BUILD TO SUIT For
NIAGARA CONSERVATION ON OLD GERAULT
FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 980-8880

REGISTERED LANDSCAPE ARCHITECT
DARI ANN FRANKLIN
2245
STATE OF TEXAS
09.30.20

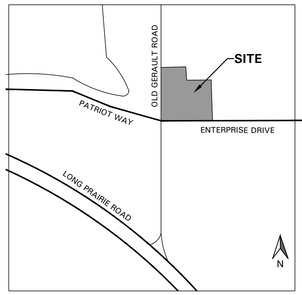
DATE: 08.03.2020
JOB # 20-204
SPECIMEN TREE PLAN
SHEET:
L1.00





01 TREE PROTECTIVE FENCING
NOT TO SCALE

VICINITY MAP
NOT TO SCALE



TREE PRESERVATION NOTES

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION FROM TREE STRUCTURE DAMAGE AND COMPACTION OF SOIL UNDER AND AROUND DRIP LINE (CANOPY) OF TREE.
2. IF ANY ROOT STRUCTURE IS DAMAGED DURING ADJACENT EXCAVATION / CONSTRUCTION, NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY. IT IS RECOMMENDED THAT A LICENSED ARBORIST BE SECURED FOR THE TREATMENT OF ANY POSSIBLE TREE WOUNDS.
3. NO DISTURBANCE OF THE SOIL GREATER THAN 4" SHALL BE LOCATED CLOSER TO THE TREE TRUNK THAN 1/2 THE DISTANCE OF THE DRIP LINE TO THE TREE TRUNK. A MINIMUM OF 75% OF THE DRIP LINE AND ROOT ZONE SHALL BE PRESERVED AT NATURAL GRADE.
4. ANY FINE GRADING DONE WITHIN THE CRITICAL ROOT ZONES OF THE PROTECTED TREES MUST BE DONE WITH LIGHT MACHINERY SUCH AS A BOBCAT OR LIGHT TRACTOR. NO EARTH MOVING EQUIPMENT WITH TRACKS IS ALLOWED WITHIN THE CRITICAL ROOT ZONE OF THE TREES.
5. NO MATERIALS INTENDED FOR USE IN CONSTRUCTION OR WASTE MATERIALS ACCUMULATED DUE TO EXCAVATION OR DEMOLITION SHALL BE PLACED WITHIN THE LIMITS OF THE DRIP LINE OF ANY TREE.
6. NO EQUIPMENT MAY BE CLEANED OR TOXIC SOLUTIONS, OR OTHER LIQUID CHEMICALS, SHALL BE DEPOSITED WITHIN THE LIMITS OF THE DRIP LINE OF A TREE, INCLUDING BUT NOT LIMITED TO: PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, PRIMERS, ETC.
7. NO SIGNS, WIRES OR OTHER ATTACHMENTS, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY TREE.
8. NO VEHICULAR / CONSTRUCTION EQUIPMENT TRAFFIC OR PARKING IS ALLOWED WITHIN THE LIMITS OF THE DRIP LINE OF TREES.
9. BORING OF UTILITIES MAY BE PERMITTED UNDER PROTECTED TREES IN CERTAIN CIRCUMSTANCES. THE MINIMUM LENGTH OF THE BORE SHALL BE THE WIDTH OF THE TREE'S CANOPY AND SHALL BE A MINIMUM DEPTH OF FORTY-EIGHT (48") INCHES.
10. IRRIGATION TRENCHING WHICH MUST BE DONE WITHIN THE CRITICAL ROOT ZONE OF A TREE SHALL BE DUG BY HAND AND ENTER THE AREA IN A RADIAL MANNER.
11. ALL TREES TO BE REMOVED FROM THE SITE SHALL BE FLAGGED BY THE CONTRACTOR WITH BRIGHT RED VINYL TAPE (3" WIDTH) WRAPPED AROUND THE MAIN TRUNK AT A HEIGHT OF FOUR (4') FEET ABOVE GRADE. FLAGGING SHALL BE APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO ANY TREE REMOVAL. CONTRACTOR SHALL CONTACT OWNER'S AUTHORIZED REPRESENTATIVE WITH 72 HOURS NOTICE TO SCHEDULE ON-SITE MEETING.
12. ALL TREES TO REMAIN, AS NOTED ON DRAWINGS, SHALL HAVE PROTECTIVE FENCING LOCATED AT THE TREE'S DRIP LINE. THE PROTECTIVE FENCING MAY BE COMPRISED OF SNOW FENCING, ORANGE VINYL CONSTRUCTION FENCING, CHAIN LINK FENCE OR OTHER SIMILAR FENCING WITH A FOUR (4') FOOT APPROXIMATE HEIGHT. THE PROTECTIVE FENCING SHALL BE LOCATED AS INDICATED ON THE TREE PROTECTION DETAIL.
13. WHEN A LOW HANGING LIMB IS BROKEN DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR PRUNE ANY PORTION OF THE DAMAGED TREE WITHOUT THE PRIOR APPROVAL BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

EXISTING TREE LEGEND

- SPECIMEN TREE TO REMAIN
- SPECIMEN TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- EXISTING TREE TO TO BE REMOVED
- TREE PROTECTION FENCING TO REMAIN DURING CONSTRUCTION, REFER TO L1.01

N

SCALE: 1" = 40'-0"
0 20 40 80

BELLE FIRMA

4245 North Central Expy
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Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

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FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 630
DALLAS TEXAS 75254
972 980-8880

REGISTERED LANDSCAPE ARCHITECT
MARY ANN HALL
2246
STATE OF TEXAS
09.30.20

DATE: 08.03.2020

JOB # 20-204

TREE PRESERVATION PLAN

SHEET:

L1.01

TREE SURVEY FIELD DATA

No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
1	19.5	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
2	13.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
3	16	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
4	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
5	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
6	13	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
7	11	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
8	21.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
9	11	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		OUTSIDE BUILABLE AREA
10	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
11	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
12	14.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
13	11.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
14	17	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
15	6	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
16	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
17	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
18	13.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
19	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
20	10	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
21	9.5	EVE'S NECKLACE	SOPHORA AFFINIS	TO BE REMOVED		GOOD		
22	36.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
23	6	EVE'S NECKLACE	SOPHORA AFFINIS	TO BE REMOVED		GOOD		
24	10	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
25	9.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
26	7	EVE'S NECKLACE	SOPHORA AFFINIS	TO BE REMOVED		GOOD		
28	13	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
30	12.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
31	7.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
32	6	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
33	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
34	10.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
35	17	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
36	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
37	6.5	CHINESE ELM	ULMUS PARVIFOLIA	TO BE REMOVED		GOOD		
38	11.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
40	15.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
41	14	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
42	12.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
43	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
44	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
45	13.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
46	13	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
47	15	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
48	19	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
49	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
50	12	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
51	6.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
52	6.5	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
57	9	BOXELDER	ACER NEGUNDO	TO BE REMOVED		POOR		
59	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
60	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
61	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
62	13	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
63	15	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
64	12	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
65	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
66	7	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
67	18	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
68	17	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
69	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
70	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
71	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
72	25.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
73	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
74	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
75	6	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
76	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
77	7	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
78	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
79	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
80	11	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
81	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
82	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
83	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
84	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
85	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
86	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
87	10	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
88	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
89	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
90	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
91	16.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
92	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
93	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
94	23	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
95	18	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
96	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
97	7	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
98	13.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
99	8.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
100	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
101	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
102	10	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
103	10	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
104	17	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
105	14	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
106	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
107	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
108	15.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
109	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
110	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
111	15	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
112	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
113	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
114	7.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
115	22.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		

TREE SURVEY FIELD DATA

No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
116	14.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
117	11.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
118	6.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
119	12	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
120	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
121	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
122	11.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
123	15.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
124	15.5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
127	7	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
128	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
129	20.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
130	9.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
133	25.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
134	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
135	7	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
136	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
137	7	CHINESE PISTACHE	PISTACIA CHINENSIS	TO BE REMOVED		GOOD		
138	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
139	16.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
140	20.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
141	22.5	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
142	13	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
143A	14	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
143B	13	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
146A	18	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
146B	13	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
144	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
145	10.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
147	20	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
148	10	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
149	6	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
150	8.5	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	POOR		BUILDABLE AREA
151	6.6	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
152	16.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
153	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
154	24.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED		HAZARD		
155	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
156	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
157	18	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	POOR		BUILDABLE AREA
158	11.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
160	15.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
162	15	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
163	14	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
164	16	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
165	24	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
166	26	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
167	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
168	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
169	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
170	6.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
171	15	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
172	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
173	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
174	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
175	12	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
176	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
177	9.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
178	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
179	5.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
180	12.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
181	11.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
182	12	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
183	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
184	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
185	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
186	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
187	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
188	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
189	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
190	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
191	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
192	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
193	11.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
194	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
195	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
196	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
197	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
198	16.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
199	9	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
200	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
201	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
202	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
203	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
204	13	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
205	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
206	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
207	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
208	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
209	13	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
210	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
211	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
212	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
213	11.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
214	9	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
215	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
216	9	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
217	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
218	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
219	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
220	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
221	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
222	11.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
223	9	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
224	10	HACKBERRY	CELTIS LAEVIGATA	TO REMAIN		GOOD		
227	8.5	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
228	7	HACKBERRY	CELTIS LAEVIGATA	TO REMAIN		GOOD		

TIG

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

BUILD TO SUIT For

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 530
DALLAS TEXAS 75254
972 960-9990

REGISTERED LANDSCAPE ARCHITECT
TERRI ANN HALL
2246
STATE OF TEXAS
09.30.20

DATE: 08.03.2020

JOB # 20-204

TREE SURVEY DATA

SHEET:

L1.02

BELLE FIRMA
4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TREE SURVEY FIELD DATA

No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
229	26	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	5	BUILDABLE AREA
230	23	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
232	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
233	10	HACKBERRY	CELTIS LAEVIGATA	TO REMAIN		GOOD		
234	30	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
237	12	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
238	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
239	8.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
240	6.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
242	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
243	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
244	12	BLACKJACK OAK	QUERCUS MARILANDICA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
245	17	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
246	10	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
247	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
248	9.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
249	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
250	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		
251	17.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
252	6	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
253	6.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
254	13.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
255	6.5	BLACKJACK OAK	QUERCUS MARILANDICA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
256	13	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
257	9	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
258	6	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		POOR		
259	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
260	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
261	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
262	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
263	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		OUTSIDE BUILDABLE AREA
264	9.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
265	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
266	8.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
267	10.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
268	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
269	14	CHINABERRY	MELIA AZEDARACH	TO BE REMOVED		GOOD		
270	7.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
271	8.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
272	9	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		DEDICATED R.O.W. BUILDABLE AREA
273	8.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
274	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
275	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
276	7	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
277	7.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
278	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
279	6.5	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
280	10.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
281	8.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
282	15	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		POOR		
283	31.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
284	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		OUTSIDE BUILDABLE AREA
285	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
286	7	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	POOR		DEDICATED R.O.W. BUILDABLE AREA
287	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
288	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
289	20	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
290	14	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
291	8	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
292	6.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
293	6	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
294	14	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
295	11	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	
296	10.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
297	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
298	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
299	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
300	6.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO REMAIN		GOOD		
301	6.5	HACKBERRY	CELTIS LAEVIGATA	TO REMAIN		GOOD		
302	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
303	24	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	FAIR	1	
304	6	HACKBERRY	CELTIS LAEVIGATA	TO REMAIN		GOOD		
305	16	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
306	36	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
307	23.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
308	33.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED		DEAD		
309	8.5	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	TO BE REMOVED		GOOD		
310	13.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED	GOOD	1	BUILDABLE AREA
311	30.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
312	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
313	32.2	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
314	9	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
315	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
316	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
317	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
318	6	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
319	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
320	13	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
321	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
322	6.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
323	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
324	16	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
325	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
326	10	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
327	24.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
328	22.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
329	25.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
330	33.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
331	9	PECAN	CARYA ILLINOINENSIS	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
332	9.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
333	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
334	7	PECAN	CARYA ILLINOINENSIS	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
335	6	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
336	15	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
337	26	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
338	23	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
339	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		

TREE SURVEY FIELD DATA

No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
340	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
341	7	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
342	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
343	10.5	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
344	8	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
345	10.5	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
346	8.5	CHINESE PISTACHE	PISTACIA CHINENSIS	TO BE REMOVED		GOOD		
347	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
348	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
349	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
350	15	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
351	12.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
352	16.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
353	16	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
354	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
355	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
356	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
357	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
358	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
359	6	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
360	16.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
361	12	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
362	19	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
363	17	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
364	16	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
365	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
366	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
367	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
368	7.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
369	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
370	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		POOR		
371	17.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
372	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
373	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
374	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
375	8.5	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		POOR		
376	18	OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		GOOD		
377	7.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
378	8.5	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
379	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
380	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
381	10	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
382	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
383	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
384	12	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
385	8	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
386	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
387	6	HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		GOOD		
388	6	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
389	9	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
390	15.5	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
391	18	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
392	15	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
393	33	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
394	9	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
395	11	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
396	8.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
397	11	BRADFORD PEAR	PYRUS CALLERYANA	TO BE REMOVED		POOR		
398	27	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
399	8	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
400	12	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
401	10	GUM BUMELIA	SIDEROXYLON LANUGINOSUM	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
402	7	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
403	7	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
405	11	BLACKJACK OAK	QUERCUS MARILANDICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
406	6	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
407	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
408	30.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
409	23	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
410	13	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
411	14	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
412	7	HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		GOOD		
413	16.5	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
414	7	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
415	14.5	JAPANESE PRIVET	LIGUSTRUM JAPONICUM	TO BE REMOVED		GOOD		
416	6	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED		GOOD		
417	22	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		Measured at 1'
418	5	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
419	8	GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED	PROTECTED	GOOD		BUILDABLE AREA
501				TO BE REMOVED		DEAD		
502		HACKBERRY	CELTIS LAEVIGATA	TO BE REMOVED		DEAD		
503		OSAGE ORANGE	MACLURA POMIFERA	TO BE REMOVED		DEAD		
504		HERCULES' CLUB	ZANTHOXYLUM CLAVA-HERCULIS	TO BE REMOVED		DEAD		
505		GREEN ASH	FRAXINUS PENNSYLVANICA	TO BE REMOVED		DEAD		
506		POST OAK	QUERCUS STELLATA	TO BE REMOVED		DEAD		
507				TO BE REMOVED		DEAD		

Total Caliper Inches of Specimen Trees on Site to be Removed (Total: 33 Specimen Trees)	**829**	
Total Caliper Inches of Specimen Trees to be Removed	**634**	
Total Mitigation Required for Specimen Trees Removed	**1,268**	
Replacement Trees Required for Specimen Trees to be Removed		**423**
Total Protected Trees On Site	**164**	
Total Protected Trees to be Removed in Buildable Area / Mitigation Trees Required		**162**
Total Caliper of Protected Trees Removed Outside Buildable Area	**17**	
Total Mitigation Due for Protected Trees Removed Outside of Buildable Area		**26**
Buildable Area Tree Credits		**-42**
Total Mitigation Trees Required		**568**

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 630
DALLAS TEXAS 75254
972 960-9860

REGISTERED LANDSCAPE ARCHITECT
TERRI ANN HALL
2246
STATE OF TEXAS

09.30.20

DATE: 08.03.2020

JOB # 20-204

TREE SURVEY DATA

SHEET:

L1.03

BELLE FIRMA
4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

Development Standards

Planned Development District - 179 (PD-179)
Niagara Conversation

The development on the property comprising approximately 7.594 acres of land within the corporate limits of the Town of Flower Mound ("Town") shall be in accordance with the Town of Flower Mound *Master Plan* and the Land Development Regulations of the Town of Flower Mound, Texas, as amended, and shall be subject to the following conditions and requirements:

A. EXHIBITS.

1. The following Exhibits are incorporated into this planned development.

   a. Exhibit "C": Conceptual Site Plan.
   b. Exhibit "D": Conceptual Landscape Plan.
   c. Exhibit "E": Conceptual Elevations.

B. PERMITTED USES. The uses listed as Permitted Uses in the Campus Industrial District (CI) in the Town's Zoning Ordinance shall be permitted in the area designated on Exhibit "C".

C. SPECIFIC USES. The uses listed as Specific Uses in the Campus Industrial District (CI) in the Town's Zoning Ordinance shall be permitted in the area designated on Exhibit "C" with a Specific Use Permit (SUP) approved by the Town Council.

D. TEMPORARY USES. The uses listed as Temporary Uses in the Campus Industrial District (CI) in the Town's Zoning Ordinance shall be permitted in the area designated on Exhibit "C" as only upon approval of a temporary use permit in accordance with the procedures and standards of 78-87 of the Land Development Code, "Temporary Use Permits".

E. DIMENSIONAL REGULATIONS. The dimensional regulations listed in the Campus Industrial District (CI) in the Town's Zoning Ordinance shall be required for this Planned Development.

F. EXCEPTIONS. The following exceptions to the Town's Ordinances shall apply to this Planned Development.

1. An exception to Section 82-376 of the Town Code that requires overhead utilities to be placed underground is granted.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO.

AN ORDINANCE OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE OFFICIAL ZONING MAP, EXHIBIT "A" OF SUBPART B, LAND DEVELOPMENT REGULATIONS, OF THE CODE OF ORDINANCES OF THE TOWN OF FLOWER MOUND, TEXAS, BY CHANGING THE ZONING ON APPROXIMATELY 7.594 ACRES OF LAND SITUATED IN THE J. TURNER SURVEY, ABSTRACT NO. 1251, FROM AGRICULTURAL DISTRICT (A) USES TO PLANNED DEVELOPMENT DISTRICT-179 (PD-179) WITH CAMPUS INDUSTRIAL (CI) USES IN ACCORDANCE WITH THE TOWN'S MASTER PLAN AND SPECIFIC REQUIREMENTS AND EXHIBITS INCORPORATED HEREIN; REPEALING ALL CONFLICTING ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY FOR VIOLATIONS HEREOF IN ACCORDANCE WITH SECTION 1-13 OF THE CODE OF ORDINANCES OF THE TOWN OF FLOWER MOUND; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound is a home rule municipality acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the Town Council of the Town of Flower Mound heretofore adopted the Land Development Regulations of the Town of Flower Mound, as amended, which Ordinance regulates and restricts the location and use of buildings, structures and land for trade, industry, residence, and other purposes, and provides for the establishment of zoning districts of such number, shape and area as may be best suited to carry out these regulations; and

WHEREAS, in accordance with Chapter 78 of the Land Development Regulations, the owners of the property described as approximately 7.594 acres of land situated in the J. Turner Survey, Abstract No. 1251, Denton County, Texas, have filed an application to change the zoning from Agricultural District (A) uses to Planned Development District-179 (PD-179) with Campus Industrial (CI) uses; and

WHEREAS, the Planning and Zoning Commission of the Town of Flower Mound, Texas held a public hearing on November 9, 2020, and the Town Council of the Town of Flower Mound, Texas, held a public hearing on December 7, 2020, with respect to the proposed rezoning as described herein; and

WHEREAS, the Town has complied with all requirements of Chapter 211 of the Local Government Code, Chapter 78 of the Land Development Regulations, and all other laws dealing with notice, publication and procedural requirements for the approval of a rezoning on the property; and

WHEREAS, the Town Council finds that amendment of the Zoning map as outlined herein is in the best interest of the Town of Flower Mound and will promote the health, safety, and general welfare of the citizens of the Town of Flower Mound and the general public.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

The Land Development Regulations of the Town of Flower Mound, Texas, as amended, are hereby amended on the hereinafter described property and area to establish a planned development district as shown below:

Approximately 7.594 acres of land situated in the J. Turner Survey, Abstract No. 1251, Denton County, Texas, and more fully described in Exhibit "A" hereto.

Planned Development District-179 (PD-179) with Campus Industrial (CI) uses.

SECTION 2

The development standards, conceptual site plan, conceptual landscape plan, and conceptual elevations of the proposed Planned Development District No. 179 (PD-179), attached hereto as Exhibits "B," "C," "D," and "E," each incorporated herein for all purposes allowed by law, are hereby approved as the development standards, conceptual site plan, conceptual landscape plan, and conceptual elevations for this Planned Development District No. 179 (PD-179).

SECTION 3

The official map of the Town of Flower Mound is hereby amended and the Director of Planning Services is directed to revise the official zoning map to reflect the approved Planned Development District No. 179 (PD-179), as set forth above.

SECTION 4

The use of the property described above shall be subject to all restrictions, terms and conditions contained in Exhibits "B," "C," "D," and "E," attached hereto, as well as the applicable regulations contained in the Land Development Regulations and all other applicable and pertinent ordinances of the Town of Flower Mound.

SECTION 5

This Ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances of the Town of Flower Mound, Texas, as amended, except when the provisions of this Ordinance are in direct conflict with the provisions of such ordinances and such code, in which event the conflicting provisions of such ordinances and such code are hereby repealed.

SECTION 6

It is hereby declared to be the intention of the Town Council that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable, and if any section, paragraph, sentence, clause, or phrase of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining sections, paragraphs, sentences, clauses, and phrases of this Ordinance, since the same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional section, paragraph, sentence, clause or phrase.

SECTION 7

Any person, firm, or corporation who violates any provision of this Ordinance as adopted by the Town Council of the Town of Flower Mound shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine as provided in Section 1-13 of the Code of Ordinances of the Town of Flower Mound. Each day any such violation or violations exist shall constitute a separate offense and shall be punishable as such.

SECTION 8

All rights and remedies of the Town of Flower Mound are expressly saved as to any and all violations of the provisions of the Land Development Regulations or any ordinances governing zoning that have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

SECTION 9

The Town Secretary of the Town of Flower Mound is hereby directed to publish the caption in the official newspaper of the Town of Flower Mound as required by Section 3.07 of the Charter of the Town of Flower Mound.

SECTION 10

This Ordinance shall take effect and be in full force from and after the date of its passage and publication as required by law, and it is so ordained.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF ___ TO ___, ON THIS THE 7TH DAY OF DECEMBER, 2020.

APPROVED:

_____
Steve Dixon, **MAYOR**

ATTEST:

_____
Theresa Scott, **TOWN SECRETARY**

Exhibit A
DESCRIPTION OF PROPERTY SURVEYED

DESCRIPTION, of a 7.594 acre tract of land situated in the J. Turner Survey, Abstract No. 1251, Denton County, Texas; said tract being all of that certain tract of land described in Warranty Deed to Robert C. Douglas & Patricia Ann Douglas recorded in Volume 456, Page 343 of the Deed Records of Denton County, Texas; said 7.594 acre tract being more particularly described as follows:

BEGINNING, at a 5/8-inch iron rod with "A.R.S." cap set for corner in Old Gerault Road (a variable width right-of-way); said point being the northwest corner of said Old Gerault Road as dedicated by plat recorded in Cabinet U, Page 484 of the Plat Records of Denton County, Texas;

THENCE, North 00 degrees, 51 minutes, 35 seconds West, along the approximate centerline of said Old Gerault Road, a distance of 603.83 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner;

THENCE, North 16 degrees, 06 minutes, 35 seconds West, continuing along the said approximate centerline of said Old Gerault Road a distance of 93.03 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being the southwest corner of that certain tract of land described in Warranty Deed to YO-KO LLC recorded in Instrument No. D215290774 of the Official Public Records of Tarrant County, Texas;

THENCE, South 89 degrees, 44 minutes, 44 seconds East, departing the said centerline of Old Gerault Road and along the south line of said YO-KO LLC tract, a distance of 293.99 feet to a 1/2-inch iron rod found for corner; said point being the southeast corner of said YO-KO LLC tract and being in the west line of Lot 7X, Block A of the lakeside Ranch Business Park Addition, an addition to the Town of Flower Mound, Texas recorded in Cabinet X, Page 78 of said Plat Records;

THENCE, South 01 degrees, 14 minutes, 44 seconds East, along the said west line of Lot 7X, a distance of 172.65 feet to a 5/8-inch iron rod found for corner at the southwest corner of said Lot 7X;

THENCE, North 88 degrees, 23 minutes, 25 seconds East, along the south line of said Lot 7X, a distance of 276.97 feet to a 1-inch pipe found for corner at the northernmost northwesterly corner of Lot 1R, Block A of Lakeside Trade Center, an addition to the Town of Flower Mound, Texas recorded in Cabinet V, Page 843 of said Plat Records;

THENCE, South 01 degrees, 36 minutes, 35 seconds East, departing the said south line of Lot 7X and along the west line of said Lot 1R, a distance of 511.64 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being an ell corner of said Lot 1R;

THENCE, South 88 degrees, 23 minutes, 25 seconds West, a north line of said Lot 1R, passing at a distance of 520.67 feet, the westernmost northwest corner of said Lot 1R, continuing for a total distance of 554.32 feet to the POINT OF BEGINNING;

CONTAINING: 330,798 square feet or 7.594 acres of land, more or less.

Exhibit B
Development Standards

Planned Development District - 179 (PD-179)
Niagara Conversation

The development on the property comprising approximately 7.594 acres of land within the corporate limits of the Town of Flower Mound ("Town") shall be in accordance with the Town of Flower Mound *Master Plan* and the Land Development Regulations of the Town of Flower Mound, Texas, as amended, and shall be subject to the following conditions and requirements:

A. EXHIBITS.

1. The following Exhibits are incorporated into this planned development.

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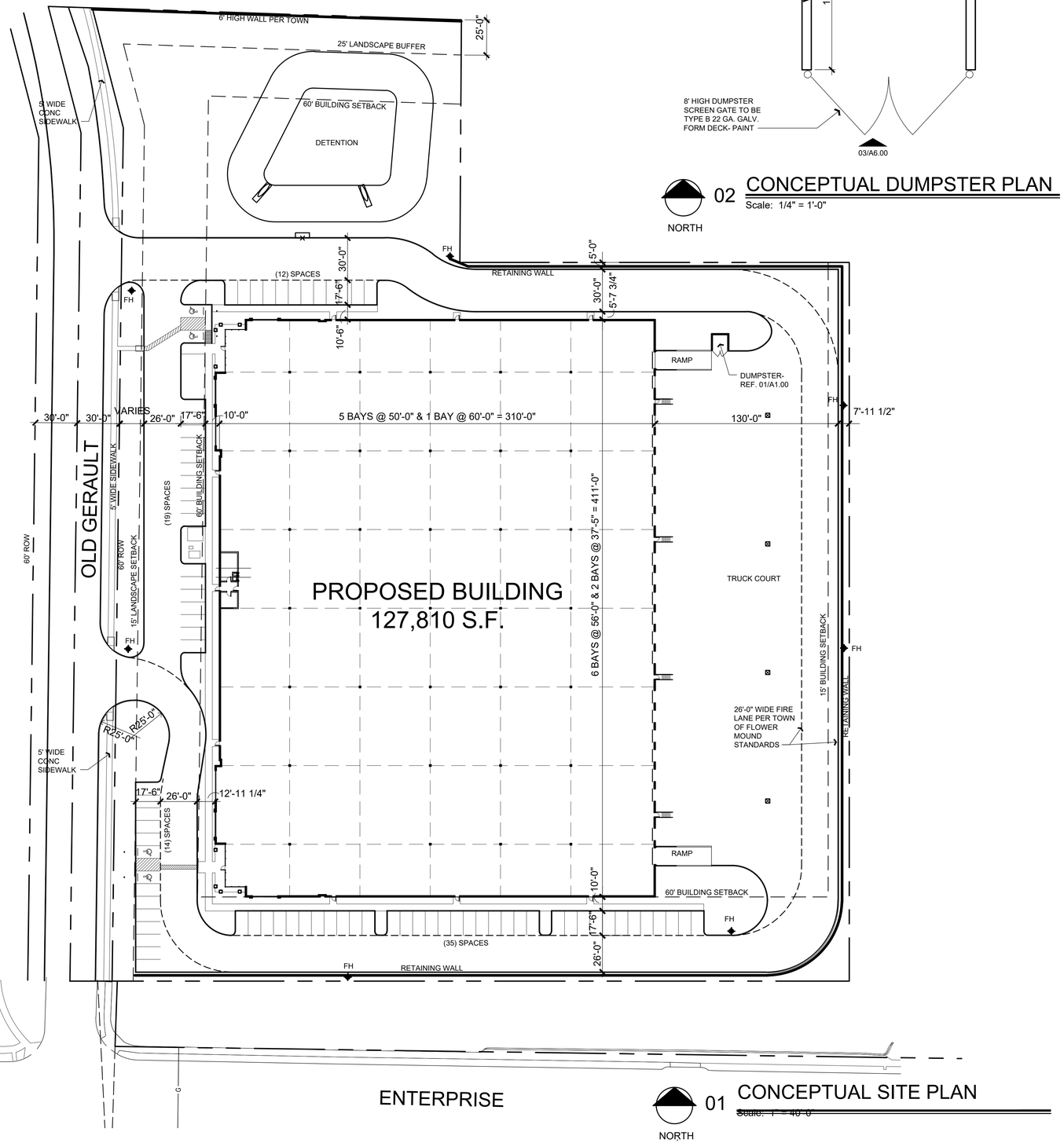
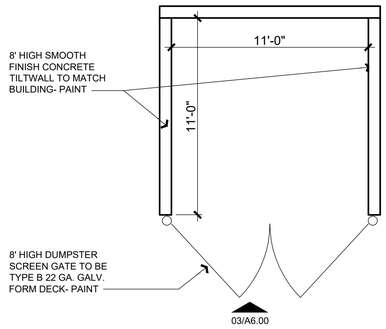
1. An exception to Section 82-376 of the Town Code that requires overhead utilities to be placed underground is granted.



NORTH

01 CONCEPTUAL SITE PLAN

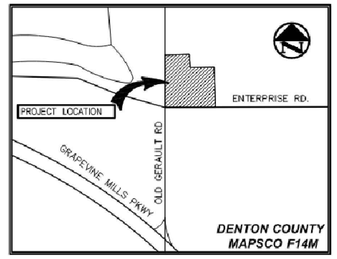
Scale: 1" = 40'-0"



NORTH

02 CONCEPTUAL DUMPSTER PLAN

Scale: 1/4" = 1'-0"



VICINITY MAP
(NOT TO SCALE)

GENERAL NOTES

1. ALL EXPOSED CONCRETE, INCLUDING BUT NOT LIMITED TO RETAINING/DETAINING WALLS, TURN-DOWN CURBS, AND TREE RETAINING WALLS, SHALL BE CLAD IN A MATERIAL TO MATCH THE MATERIALS ON THE MAIN BUILDING ON THE SITE.
2. OR ALL RETAINING/DETAINING WALLS SHALL BE CLAD IN A MATERIAL TO COMPLEMENT THE MATERIALS AND COLORS WITHIN THIS DEVELOPMENT.
3. ALL GROUND BASED MECHANICAL UNITS AND/OR EQUIPMENT SHALL BE SCREENED WITH LIVE SCREENING OR MASONRY ENCLOSURE. MASONRY ENCLOSURE SHALL BE CLAD IN A MATERIAL TO MATCH THE MATERIALS ON THE BUILDING.
4. ALL ROOF-MOUNTED MECHANICAL UNITS AND/OR EQUIPMENT SHALL BE SCREENED FROM VIEW IN ACCORDANCE WITH SECTION 82-273 OF THE LAND DEVELOPMENT REGULATIONS.
5. SIGNS REQUIRE A SEPARATE BUILDING PERMIT, ANY SIGNS DEPICTED ON THE SUBJECT SITE PLAN/ELEVATIONS ARE NOT APPROVED AS A PART OFTHIS REVIEW AND MUST COMPLY WITH ALL APPLICABLE TOWN REGULATIONS.

SITE DATA TABLE

PHYSICAL ADDRESS	XX OLD GERAULT	
GROSS SITE AREA	7.59 AC and 330,789 SF	
NET SITE AREA	4.66 AC and 202,979 SF	
ZONING	CI (CAMPUS INDUSTRIAL)	
CURRENT USE	AGRICULTURAL	
LOT COVERAGE DATA		
BUILDING COVERAGE	41% / 127,810 S.F	
IMPERVIOUS AREA	40% / 122,102 S.F.	
PERVIOUS AREA	19% / 59,967 S.F.	
PARKING SUMMARY	REQUIRED	PROVIDED
SURFACE PARKING		
OFFICE	42.6	43
WAREHOUSE	57.5	57
SUB TOTAL PARKING	100.1	
20% REDUCTION	-20	-20
TOTAL PARKING	80	80
BUILDING DATA		
BUILDING	1 STORY	
PEAK HEIGHT	45 FEET and 0 INCHES	
MEAN HEIGHT	40 FEET and 3 INCHES	
TOTAL SQUARE FOOTAGE	127,810 SF	

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

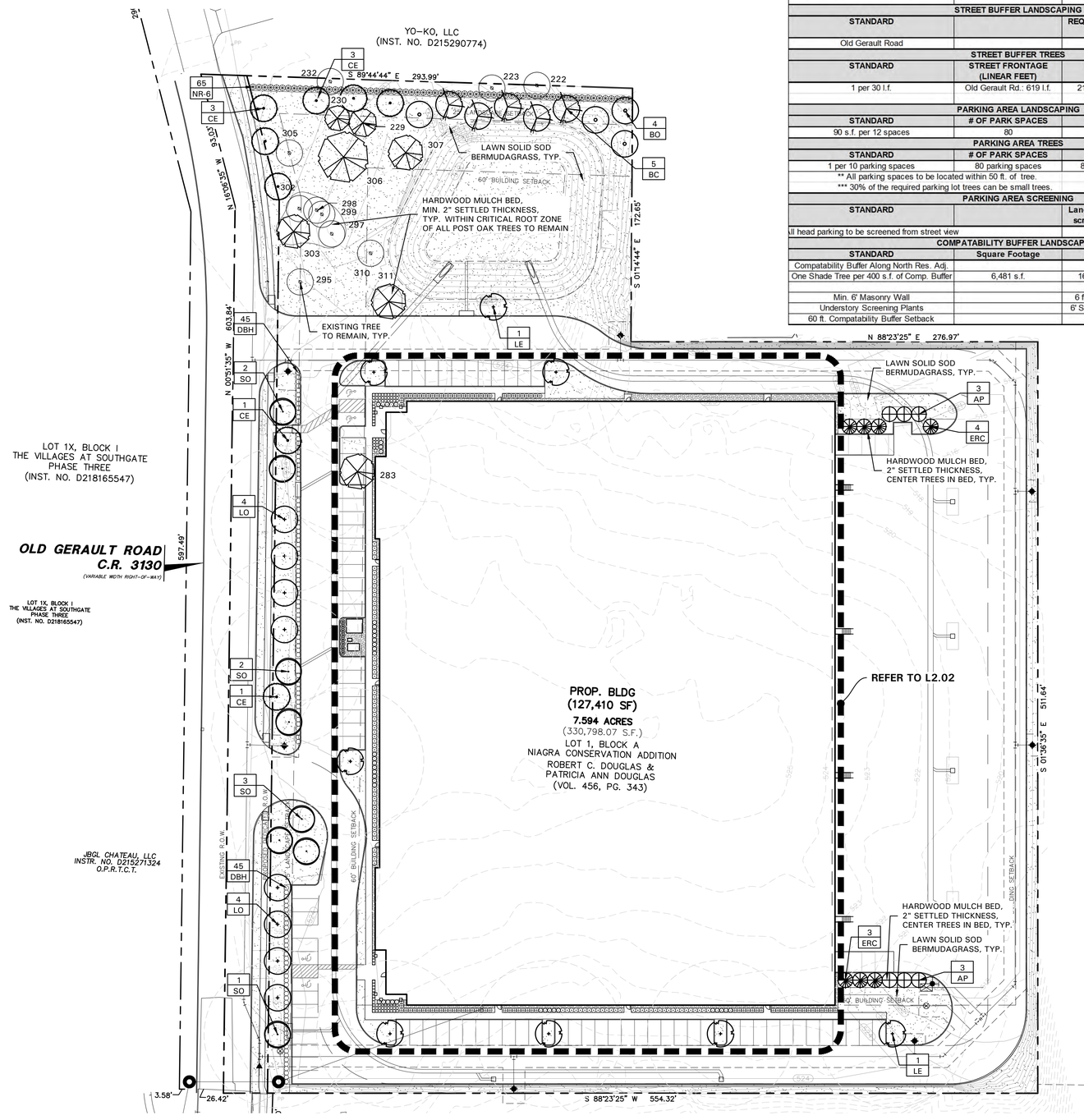
FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 435
DALLAS TEXAS 75254
972 960-8660

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 09.04.2020
JOB # 20-204
SITE PLAN
SHEET:
A1.00

G:\MISC\20204-TIG Niagara\CDs Shell\CDs\204-A100series.dwg, 9/4/2020 10:46:02 AM, 1:1



THE TOWN OF FLOWER MOUND - LANDSCAPE CONFORMANCE CHART			
STREET YARD LANDSCAPING			
STANDARD	**TOTAL STREET YARD**	**REQUIRED**	**PROVIDED**
Min. 20% of street yard	48,492 s.f.	9,698 s.f. 20%	23,144 s.f. 47%
STREET YARD TREES			
STANDARD	**TOTAL STREET YARD (SQUARE FEET)**	**REQUIRED**	**PROVIDED**
Between 10,000 and 110,000 s.f. = 10 Trees + 1 Tree for every 2,500 s.f. over 10,000 s.f.	50,590 s.f. of Street Yard	26 Trees, 3" cal.	26 Trees, 3" cal.
STREET BUFFER LANDSCAPING			
STANDARD		**REQUIRED BUFFER WIDTH**	**PROVIDED**
Old Gerault Road		15 ft.	15 ft.
STREET BUFFER TREES			
STANDARD	**STREET FRONTAGE (LINEAR FEET)**	**REQUIRED**	**PROVIDED**
1 per 30 l.f.	Old Gerault Rd.: 619 l.f.	21 Trees, 3" cal.	18 Trees, 3" cal. 3 existing trees
PARKING AREA LANDSCAPING			
STANDARD	**# OF PARK SPACES**	**REQUIRED**	**PROVIDED**
90 s.f. per 12 spaces	80	600 s.f.	2,478 s.f.
PARKING AREA TREES			
STANDARD	**# OF PARK SPACES**	**REQUIRED**	**PROVIDED**
1 per 10 parking spaces	80 parking spaces	8 trees, 3" cal.	9 trees, 3" cal.
** All parking spaces to be located within 50 ft. of tree.			1 existing tree
*** 30% of the required parking lot trees can be small trees.			
PARKING AREA SCREENING			
STANDARD		**Landscape berm or screening shrubs**	**PROVIDED**
ll head parking to be screened from street view		3' ht. Screen	Screening shrubs (3' ht.)
COMPATABILITY BUFFER LANDSCAPING			
STANDARD	**Square Footage**	**REQUIRED**	**PROVIDED**
Compatability Buffer Along North Res. Adj.		25 ft.	25 ft.
One Shade Tree per 400 s.f. of Comp. Buffer	6,481 s.f.	16 trees, 3" cal.	13 trees, 3" cal. 3 existing trees
Min. 6' Masonry Wall		6 ft. masonry wall	6 ft. masonry wall
Understory Screening Plants		6' Screening Shrubs	6' Screening Shrubs
60 ft. Compatability Buffer Setback		60 ft.	60 ft.

LANDSCAPE NOTES

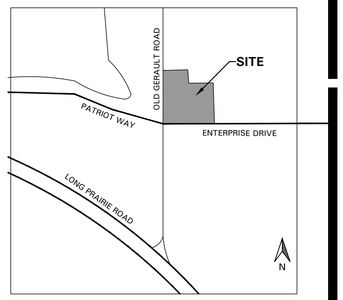
1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
3. CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
4. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
5. ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
6. TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
7. ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
9. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

MAINTENANCE NOTES

1. THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
2. ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
3. ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
5. ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
6. CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

VICINITY MAP

NOT TO SCALE



GENERAL LAWN NOTES

1. CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.
2. CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.
3. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.
6. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

SOLID SOD NOTES

1. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
2. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
	TREES				
AP	*Pinus nigra*	Austrian Pine	6	6' ht.	B&B or container grown, full to base, 3' spread
BC	*Taxodium distichum*	Bald Cypress	5	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
BO	*Quercus macrocarpa*	Bur Oak	4	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
CE	*Ulmus crassifolia*	Cedar Elm	8	3" cal.	B&B, 12' ht., 4' spread, 4' branching ht., matching
ERC	*Juniperus virginiana*	Eastern Redcedar	7	6' ht.	container grown, full to base, 3' spread
LE	*Ulmus parvifolia 'Sempervirens'*	Lacebark Elm	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
LO	*Quercus virginiana*	Live Oak	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
SO	*Quercus shumardii*	Shumard Red Oak	8	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
	SHRUBS/GROUNDCOVER				
DBH	*Ilex cornuta 'Dwarf Burford'*	Dwarf Burford Holly	120	5 gal.	container full, 24" spread, 36" o.c.
IH	*Raphiolepsis indica 'Jack Evans'*	Indian Hawthorne 'Jack Evans'	85	5 gal.	container full, 20" spread, 36" o.c.
LOR	*Loropetalum chinensis 'Plum Delight'*	Loropetalum 'Plum Delight'	85	5 gal.	container full, 20" spread, 36" o.c.
MIS	*Miscanthus sinensis 'Adagio'*	Miscanthus 'Adagio'	39	5 gal.	container full, 36" o.c.
NRS	*Ilex spp. 'Nellie R. Stevens'*	Nellie R. Stevens Holly	8	7 gal.	container full to base, 36" ht., 36" o.c.
NR-6	*Ilex spp. 'Nellie R. Stevens'*	Nellie R. Stevens Holly	65	15 gal.	container full to base, 36" ht., 48" o.c.
SG	*Salvia greggii 'Red'*	Salvia Greggii	84	5 gal.	container full, 20" spread 24" o.c.

NOTE: ALL TREES SHALL HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES.
PLANT LIST IS AN AID TO BIDDERS ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES ON PLAN.
ALL HEIGHTS AND SPREADS ARE MINIMUMS. ALL PLANT MATERIAL SHALL MEET OR EXCEED REMARKS AS INDICATED.

N

SCALE: 1" = 40'-0"
0 20 40 80

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 635
DALLAS TEXAS 75254
972.960.6860

REGISTERED LANDSCAPE ARCHITECT
MARY ANN HALL
2246
STATE OF TEXAS

11.4.20

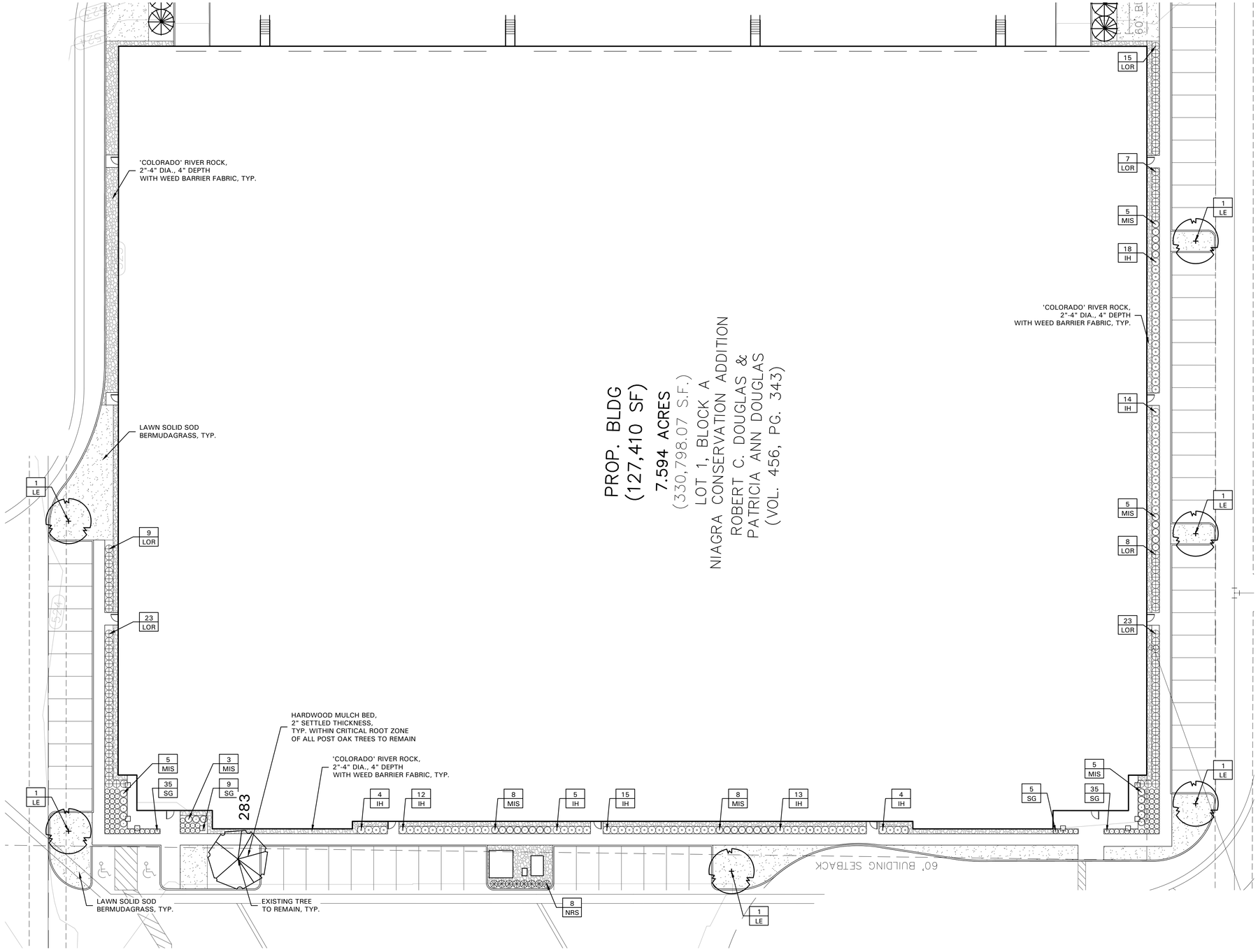
DATE: 08.03.2020

JOB # 20-204

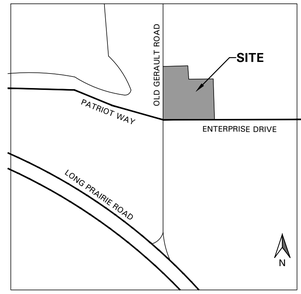
CONCEPTUAL LANDSCAPE PLAN

SHEET:

L2.01



VICINITY MAP
NOT TO SCALE



PLANT LEGEND

SYMBOL	COMMON NAME
AP	Austrian Pine
BC	Bald Cypress
BO	Bur Oak
CE	Cedar Elm
ERC	Eastern Redcedar
LE	Lacebark Elm
LO	Live Oak
SO	Shumard Red Oak
DBH	Dwarf Burford Holly
IH	Indian Hawthorne 'Jack Evans'
LOR	Loropetalum 'Plum Delight'
MIS	Miscanthus 'Adagio'
NRS	Nellie R. Stevens Holly
NR-6	Nellie R. Stevens Holly
SG	Salvia Greggii

REFER TO L2.01 FOR PLANT LIST

SCALE: 1" = 20'-0"
0 10 20 40

BELLE FIRMA
4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 638
DALLAS TEXAS 75254
972 960-8885

REGISTERED LANDSCAPE ARCHITECT
CHERI ANN HALL
2246
STATE OF TEXAS
09.30.20

DATE: 08.03.2020

JOB # 20-204

CONCEPTUAL LANDSCAPE ENLARGEMENT PLAN

SHEET:

L2.02

SECTION 32 9300 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

A. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs and grasses)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

A. American Standard for Nursery Stock published by American Association of Nurserymen: April 14, 2014 Edition; by American National Standards Institute, Inc. (Z60.1) – plant material

B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.

C. Texas Association of Nurserymen, Grades and Standards

D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, crushed stone, steel edging and tree stakes. Samples shall be approved by Owner's Authorized Representative before use on the project.

1.5 JOB CONDITIONS

A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.

B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.

B. Guarantee:

1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
   a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
   b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
   c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.
2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete, undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.

C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

1.7 QUALITY ASSURANCE

A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.

B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

C. Selection of Plant Material:
1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.
2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.
3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions, do not measure from branch or root tip-to-tip.
5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.
7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Preparation:
1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

B. Delivery:
1. Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored on site.
2. Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available on job site.
3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
6. Remove rejected plant material immediately from job site.
7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.

B. Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.

C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.

D. Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as specified at no additional cost to the Owner.

E. Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)

F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:
1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
2. Physical properties as follows:
   a. Clay – between 7-27 percent
   b. Silt – between 15-25 percent
   c. Sand – less than 52 percent
3. Organic matter shall be 3%-10% of total dry weight.
4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.

B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.

C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.

E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.

F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus micronutrients.

H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

A. Steel Edging: All steel edging shall be 3/16" thick x 4" deep x 16' long with 6 stakes per section, painted black at the factory as manufactured by The J.D. Russell Company and under its trade name DURAEDGE Heavy Duty Steel.

B. Staking Material for Shade Trees: refer to details.

C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.

D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.

E. River Rock: 'Colorado' or native river rock, 2" - 4" dia.

F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed earth base.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.

B. All planting areas shall be conditioned as follows:
1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
2. All planting areas shall receive a two (2") inch layer of specified mulch.
3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:
1. Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

3.2 INSTALLATION

A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.

B. Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

C. Position the trees and shrubs in their intended location as per plan.

D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.

E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that,when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

F. Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter (¾") inch in diameter. Plants should be thoroughly moist before removing containers.

G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per tree planting detail as approved by the Landscape Architect if the percolation test fails.

I. Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top ⅓ of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of 'root scoring'.

J. Do not wrap trees.

K. Do not over prune.

L. Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.

M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.

N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.

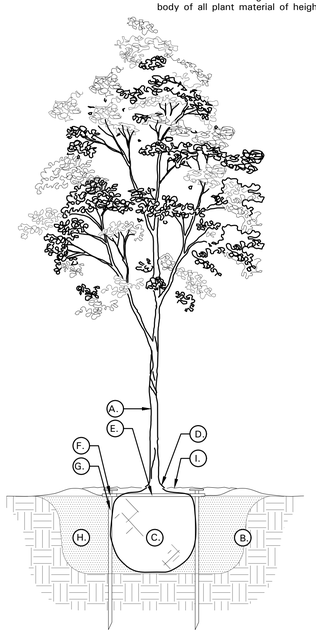
P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.
2. Pruning shall be done with clean, sharp tools.
3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

Q. Steel Curbing Installation:
1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation.
2. All steel curbing shall be free of kinks and abrupt bends.
3. Top of curbing shall be ½" maximum height above final finished grade.
4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.
5. Do not install steel edging along sidewalks or curbs.
6. Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

3.3 CLEANUP AND ACCEPTANCE

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each work day.

END OF SECTION



01 TREE PLANTING DETAIL
NOT TO SCALE

TREE PLANTING DETAIL LEGEND AND NOTES

A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR NURSERY STOCK. www.anla.org

B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE SOIL.

C. ROOT BALL: REMOVE TOP ⅓ BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.

D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE. TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.

E. ROOTBALL ANCHOR RING: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE RING.

F. ROOT ANCHOR BY TREE STAKE SOLUTIONS.

G. NAIL STAKE: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).

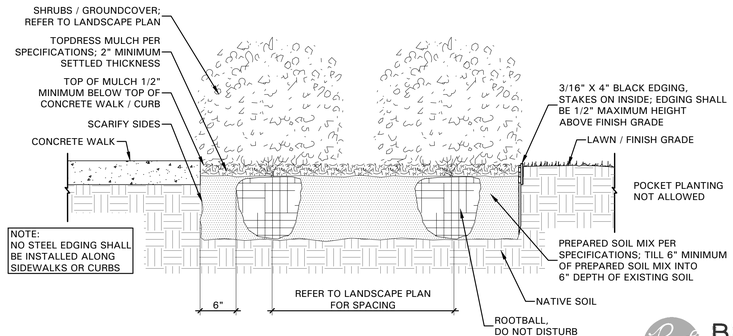
H. BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.

I. MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE SHOULD NOT BE VISIBLE.

J. TREE STAKES:
TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL AVAILABLE FROM:
Tree Stake Solutions
ATTN: Jeff Tuley
(903) 676-6143
jeff@treestakesolutions.com
www.treestakesolutions.com

OR APPROVED EQUAL. TREES SHALL BE STAKED BELOW GROUND WHERE NECESSARY; ABOVE GROUND STAKING IS EXPRESSLY PROHIBITED.

K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY OF THE MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.



02 SHRUB / GROUNDCOVER DETAIL
NOT TO SCALE

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

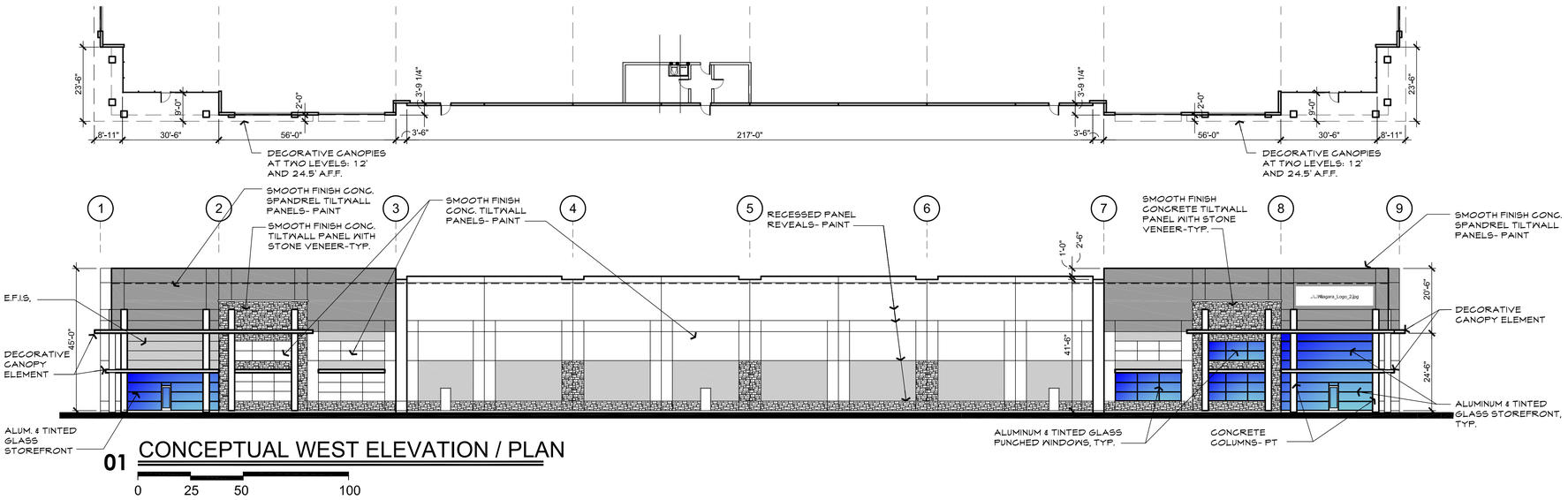
TIG

BUILD TO SUIT For
NIAGARA CONSERVATION ON OLD GERAULT
FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 980-8980

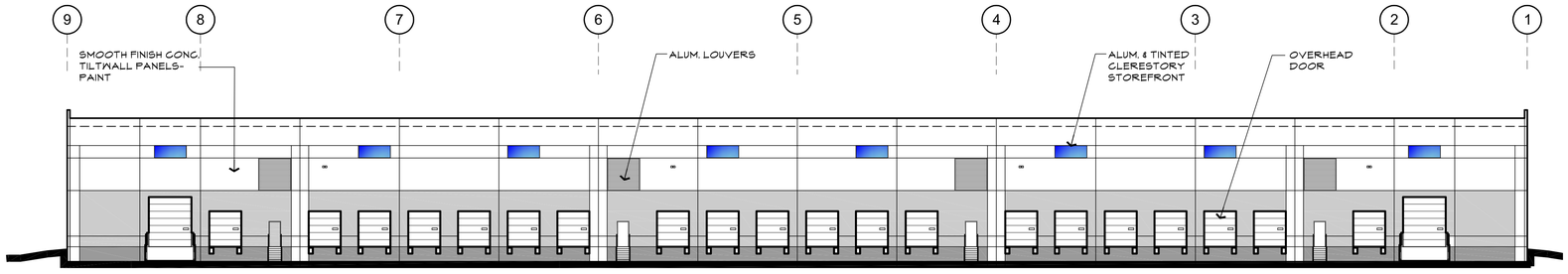
REGISTERED LANDSCAPE ARCHITECT
TERRI ANN HAINES
2245
STATE OF TEXAS
09.30.20

DATE: 08.03.2020
JOB # 20-204
LANDSCAPE SPECIFICATIONS AND DETAILS
SHEET:
L2.03



01 CONCEPTUAL WEST ELEVATION / PLAN

0 25 50 100



02 CONCEPTUAL EAST ELEVATION / PLAN

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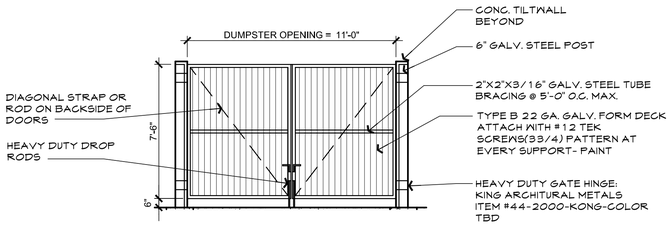

03 DUMPSTER ELEVATION

0 5 10 20

COLOR SELECTION KEY

- STONE
- FIELD COLOR
- MEDIUM ACCENT COLOR
- DARK ACCENT COLOR
- STEEL METAL COLOR

MATERIAL USE TABLE

	MATERIAL	NORTH ELEV.	SOUTH ELEV.	EAST ELEV.	WEST ELEV.
1.	TOTAL FACADE S.F.	12,957 S.F.	12,957 S.F.	15,085 S.F.	18,112 S.F.
2.	FACADE (EXCLUSIVE OF DOOR AND WINDOWS)	12,623 S.F.	12,205 S.F.	12,699 S.F.	16,517 S.F.
3.	DOORS AND WINDOWS S.F.	334 S.F.	752 S.F.	2,386 S.F.	1,595 S.F.
4.	PRIMARY MASONRY TOTALS- (MIN. 80%)	12,362 S.F. and 98%	12,127 S.F. and 99.5%	12,699 S.F. and 100%	15,922 S.F. and 96%
	*TILT WALL S.F.	11,842S.F. and 94%	10,576 S.F. and 87%	12,699 S.F. and 100%	14,043 S.F. and 85%
	*TEXTURED STONE S.F.	520 S.F. and 4%	1,551 S.F. and 12.5%		1,879 S.F. and 11%
5.	SECONDARY TOTALS - (MAX. 20%)	261 S.F. and 2%	78 S.F. AND .5%		595 S.F. and 4%
	*METAL ACCENT S.F.	94 S.F. and 1%	78 S.F. and .5%		250 S.F. and 2%
	*EIFS (STUCCO)	167 S.F. and 1%			345 S.F. and 2%

NOTE:
ANY EXTERNAL ELECTRICAL PANELS WILL BE PAINTED/TEXTURED TO MATCH THE MATERIAL AND COLOR OF THE BUILDING.

..\..\TIG_logo3.png

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

BUILD TO SUIT For

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 9904880

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 11.03.2020

JOB # 20-204

EXTERIOR ELEVATIONS

SHEET:

A6.00

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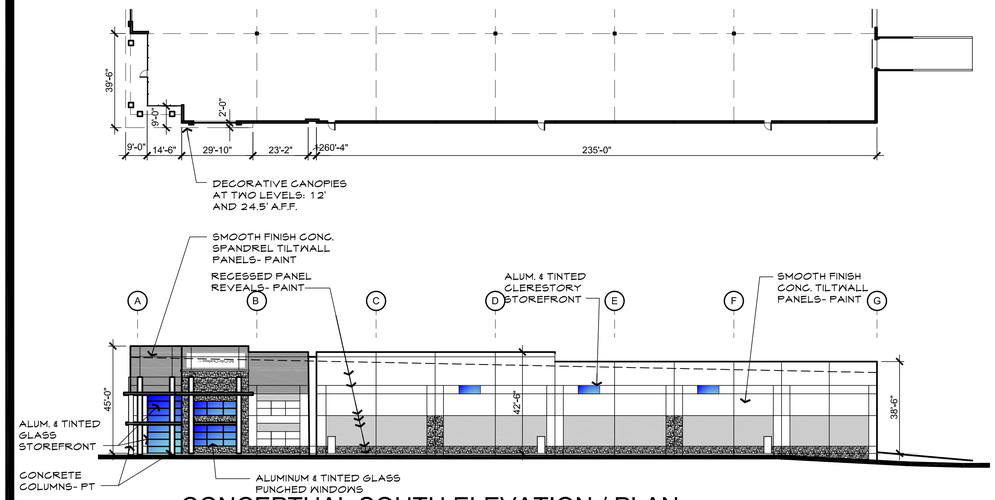
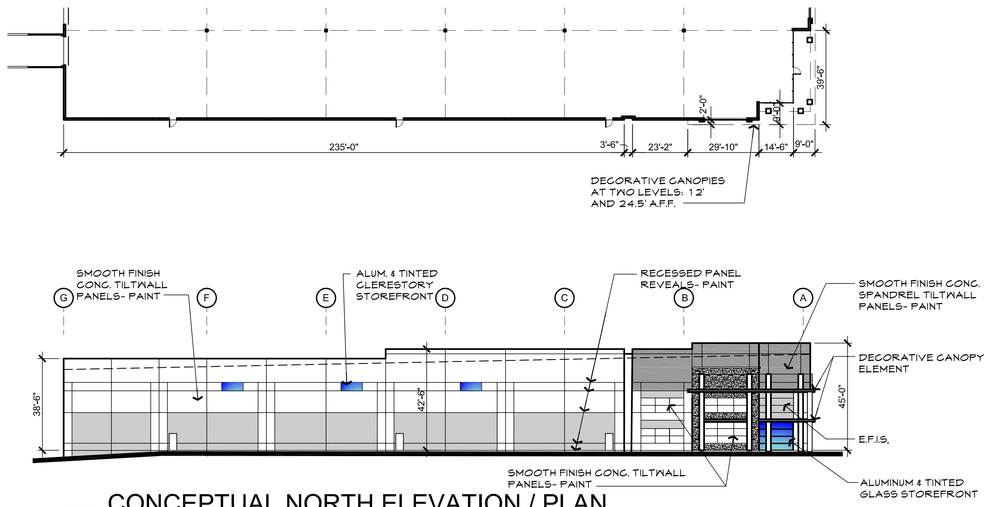


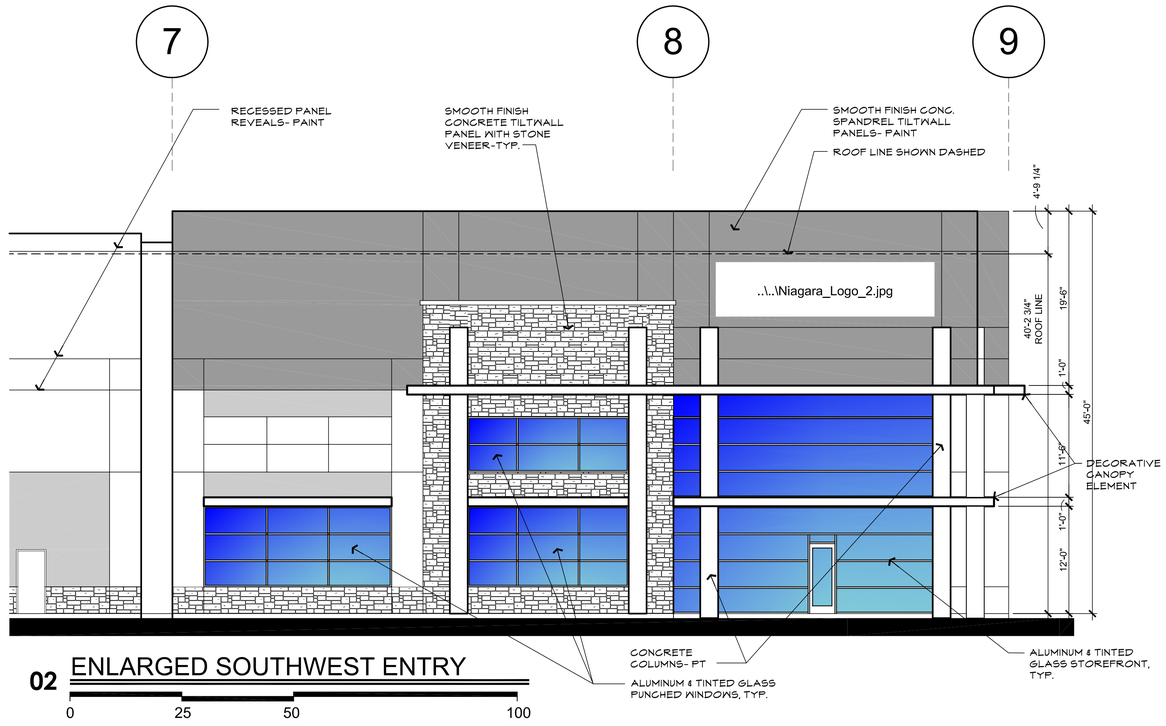
01 CONCEPTUAL SOUTH ELEVATION / PLAN

0 25 50 100



03 CONCEPTUAL NORTH ELEVATION / PLAN

0 25 50 100



02 ENLARGED SOUTHWEST ENTRY

0 25 50 100

COLOR SELECTION KEY

- STONE
- FIELD COLOR
- MEDIUM ACCENT COLOR
- DARK ACCENT COLOR
- STEEL METAL COLOR

MATERIAL USE TABLE

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NOTE:
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..\..\TIG_logo3.png

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 960-6860

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

DATE: 11.03.2020

JOB # 20-204

EXTERIOR ELEVATIONS

SHEET:

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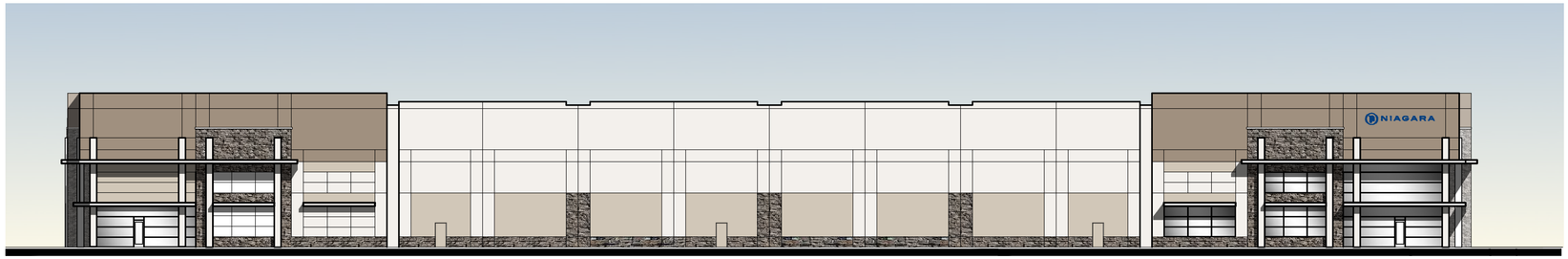
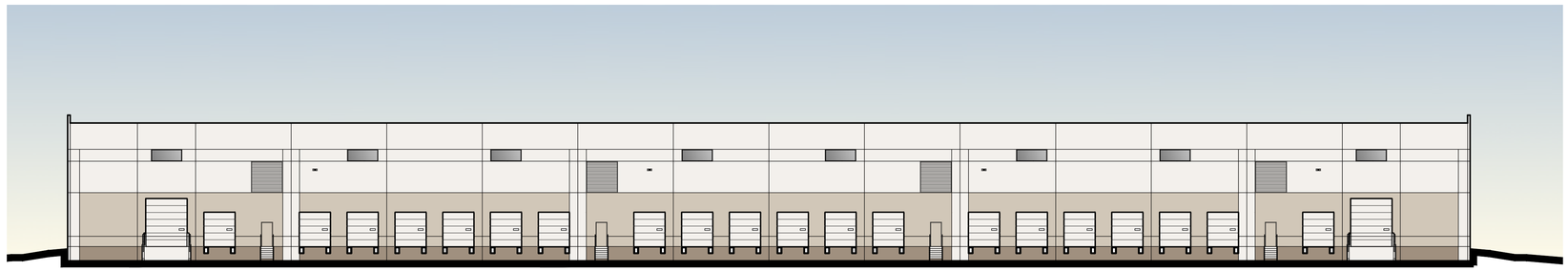


01 WEST ELEVATION



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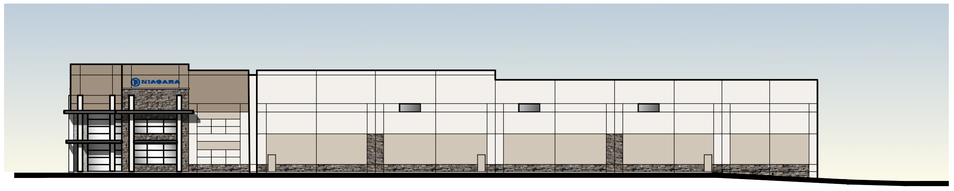
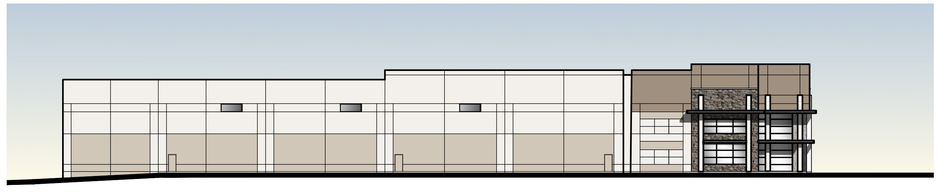


03 SOUTH ELEVATION



04 NORTH ELEVATION

05 ENLARGED SOUTHWEST ENTRY

COLOR SELECTION KEY

CORONADO STONE
ARTISAN LEDGE - FALMOUTH

SHERWIN WILLIAMS
7036 ACCESSIBLE BEIGE
FIELD COLOR

SHERWIN WILLIAMS
7037 BALANCED BEIGE

SHERWIN WILLIAMS
9174 MOTH WING

TIG

NIAGARA CONSERVATION ON OLD GERAULT

BUILD TO SUIT For

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES
ARCHITECTS, P.L.L.C
14643 DALLAS PARKWAY
SUITE 636
DALLAS TEXAS 75254
972 960-8565

DATE: 09.04.2020
JOB # 20-204
P.O.D. ELEVATIONS
SHEET:

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TOWN COUNCIL AGENDA ITEM NO. 29

REGULAR ITEM

DATE: December 7, 2020

FROM: James Hoefert, Environmental Review Analyst

ITEM: **TRP20-0021 – Tree Removal Permit - Public Hearing to consider an application for a tree removal permit for twenty-five (25) specimen trees on property proposed for development as Niagara Conservation. The property is generally located north of Enterprise Road and east of Old Gerault Road. (The Environmental Conservation Commission recommended approval by a vote of 4-3-0 at its November 4, 2020, meeting).**

BACKGROUND INFORMATION: The Niagara Conservation development is generally located north of Enterprise Road and east of Old Gerault Road. The site is approximately 7.594 acres in size. The site is currently zoned for Agricultural (A) uses and master planned for Campus Industrial within the Lakeside Business District. The applicant is requesting to rezone the site to Planned Development District No.179 (PD-179) with Campus Industrial uses. According to the tree survey for the project, the site contains thirty-two (32) specimen trees. The applicant is requesting to remove twenty-five (25) specimen trees. The specimen trees proposed for removal are all in good to poor condition and are located within the proposed buildable area.

The following is a list of the twenty-five (25) specimen trees being requested for removal:

Tree #36 – 19” cedar elm;
Tree #129 – 20” cedar elm;
Tree #133 – 25” cedar elm;
Tree #134 – 19” cedar elm;
Tree #147 – 20” cedar elm;
Tree #153 – 19” cedar elm;
Tree #155 – 19” cedar elm;
Tree #165 – 24” cedar elm;
Tree #189 – 28” post oak;
Tree #234 – 30” post oak;
Tree #250 – 28” post oak (poor condition);
Tree #274 – 19” cedar elm (fair condition);
Tree #285 – 31” post oak;
Tree #313 – 32” post oak;
Tree #327 – 24” post oak;
Tree #328 – 22” post oak;
Tree #329 – 25” post oak;
Tree #330 – 33” post oak;
Tree #337 – 26” post oak;
Tree #393 – 33” post oak (fair condition);
Tree #398 – 27” post oak;
Tree #407 – 31” post oak;
Tree #408 – 30” post oak;
Tree #409 – 23” post oak; and
Tree #417 – 22” cedar elm (poor condition)

The Town’s tree ordinance requires that specimen trees removed from the site be replaced at a rate of two times their caliper inches. Based on their sizes, 1,260” of replacement trees, equaling 420 three-inch caliper trees, will be required for the twenty-five (25) specimen trees being requested for removal on this site. In addition, protected trees removed from the buildable area will also require replacement at a tree-for-tree rate. The caliper-inch cash value fee for the removed trees may be paid instead of planting mitigation trees. The developer is proposing to preserve existing protected and specimen trees on the site, so there will be credits available for the preservation of those trees.

BOARD REVIEW/CITIZEN FEEDBACK: This application was considered by the Environmental Conservation Commission (ECC) at its November 4, 2020, meeting. The ECC recommended approval of the requested permit to remove the specimen trees. A link to the ECC meetings can be found at: **https://tx-flowermound.civicplus.com/index.aspx?NID=969**

As of November 23, 2020, staff has not received feedback related to this item.

ALTERNATIVES/OPTIONS: The Town Council may approve or deny the requested tree removal permit, or may choose to approve the permit with conditions or changes.

FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Letter from the applicant indicating the reason(s) for the tree removal permit request.
2. Specimen tree removal permit application.
3. Photographs of the specimen trees proposed for removal.
4. Tree Survey.

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

BELLE FIRMA

Beautiful Landscapes.
Signature Services.

bellefirma.com

October 15, 2020

Mr. James Hoefert
Environmental Review Analyst
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028

Re: **Letter of Intent – Specimen Tree Removal for Niagra**
300 Old Gerault Road, Flower Mound, Texas

Dear Mr. Hoefert:

Niagra has proposed development for a 127,810 square foot building on 7.53 acres along Gerault Road. This is a challenging site to develop, and as we are requesting to remove several significant and protected trees. We have worked closely with the civil engineer, architect, and developer to save as many trees on site as possible.

The intent of this letter is to summarize the total amount of Specimen Trees located at 300 Old Gerault Road and to individually identify those trees being proposed for removal along with an explanation why removal is necessary and comments on tree health if applicable. All tree information listed below references the Tree Survey Field Data, tree locations, and proposed site development as reflected on sheet L1.00, "Specimen Tree Plan" dated September 30, 2020. Also attached to this letter are labeled photos of the existing specimen trees listed below.

The site contains a total of thirty-two (32) Specimen Trees. Twenty-five (25) of these trees are being proposed for removal, individually identified with reason for removal as follows:

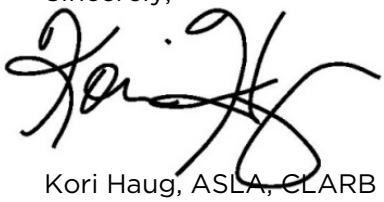
# 36	19"	Cedar Elm to be removed for site grading.
# 129	20.5"	Cedar Elm to be removed for site grading.
# 133	25.5"	Cedar Elm to be removed for drive aisle.
# 134	19.5"	Cedar Elm to be removed for drive aisle.
# 147	20"	Cedar Elm within building footprint.
# 153	19"	Cedar Elm to be removed for drive aisle.
# 155	19.5"	Cedar Elm to be removed for drive aisle.
# 165	24"	Cedar Elm to be removed for drive aisle.
# 189	28"	Post Oak to be removed for site grading
# 234	30"	Post Oak to be removed for Old Gerault Road curb.
# 250	28"	Post Oak in poor condition to be removed for Old Gerault Road curb.
# 274	19.5"	Cedar Elm to be removed for drive aisle.
# 285	31"	Post Oak to be removed for drive aisle.
# 313	32.2"	Post Oak to be removed for drive aisle.
# 327	24.5"	Post Oak within building footprint.
# 328	22.5"	Post Oak within building footprint.
# 329	25.5"	Post Oak within building footprint.
# 330	33.5"	Post Oak within building footprint.
# 337	26"	Post Oak within building footprint.
# 393	33"	Post Oak within building footprint.

# 398	27”	Post Oak within building footprint.
# 407	31”	Post Oak within building footprint.
# 408	30.5	Post Oak within building footprint.
# 409	23”	Post Oak within building footprint.
# 417	22”	Cedar Elm in poor condition within building footprint.

In addition to the Specimen Trees referenced above, there are one hundred and sixty-four (164) Protected Trees, with one hundred and fifty-four (154) Protected Trees proposed for removal. All of these trees, with the exception of two (2), are located within “Buildable Area” or “Dedicated R.O.W. Buildable Area” and all of the Protected Trees are indicated to be in good health.

Thank you for your time and consideration with this matter and please contact me if you have any questions.

Sincerely,



Kori Haug, ASLA, CLARB
President
Belle Firma, Inc.

DocuSign Envelope ID: D149CD34-60D7-4983-A7AB-4715A2E84B2D

Town of Flower Mound Environmental Services
Mailing Address: 2121 Cross Timbers Road, Flower Mound, TX 75028
Telephone: 972-874-6340 Website: www.flower-mound.com

TREE REMOVAL PERMIT

(Effective for Developments submitted 10/6/08 - present)

Check one: ___Protected Tree ___x___Specimen Tree ___Historic Tree

This application is required to be submitted 30 days prior to the next available ECC hearing.

1. Applicant- Note: Must be an ISA certified arborist, certified forester, or a registered landscape architect.

Name:
Kori Haug, ASLA, CLARB

Address:
4245 N. Central Expressway, Suite 501
Dallas, Texas 75205

Phone:
(214) 865-7192

Applicant's Legal Interest in the Property:
Landscape Architect

2. Property Owner(s)

Name(s): Kyle Cutler
Address: 1200 Lakeside Pkwy #450 Flower Mound, Texas 75028

3. Location and Legal Description of Property:
300 Old Gerault Road Flower Mound, Texas 75028
See attached for Legal Description

DocuSign Envelope ID: D149CD34-60D7-4983-A7AB-4715A2E84B2D

4. Owner's Authorization of Representation

I, Kyle Cuthe, the owner of the above described real propert, , do hereby authorize _____ to represent my interests and to file an Application for Tree Removal Permit for said real property, pursuant to the terms and provisions of Chapter 94 (Trees), of the Land Development Regulations of the Town of Flower Mound, Texas Code of Ordinances.

Signature of Owner

KATHERINE GELAT
NOTARY PUBLIC
ID# 131965523
State of Texas
Comm. Exp. 04-18-2023

Given Under My Hand and Seal of Office
This the 9 Day of October, 2020

Katherine R Gelat
Notary Public
In and For Dallas County, Texas.

5. Applicants Affidavit- Note: Applicant must be an ISA certified arborist, certified forester, or a registered landscape architect.

Subject to criminal penalties contained in Subpart B, the Land Development Regulations of the Town of Flower Mound, Texas Code of Ordinances, I Kori Haug, do hereby swear or affirm that all of the Information contained herein and submitted herein is, to the best of my knowledge, true, correct and complete and that no false, misleading or incomplete information has been intentionally provided or submitted with this Application for a Tree Removal Permit.

Kori Haug
Signature of Applicant

Landscape Architect License No. 2346
State of Licensure Texas
Or ISA Certified Arborist No. _____
Or Certified Forester No. _____

M L EAKIN
Notary ID #11774724
My Commission Expires
October 25, 2023

Given Under My Hand and Seal of Office
This the 9 Day of October, 2020

M. L. Eakin
Notary Public
In and For Dallas County, Texas

6. Received by Town of Flower Mound on (Date) 10/09/2020 by (initials) JRH .

Niagara Conservation - Specimen trees proposed for removal

Tree #36 – 19” cedar elm

Tree #129 – 20” cedar elm

Tree #133 – 25” cedar elm

Tree #134 – 19” cedar elm

Tree #147 – 20” cedar elm

Tree #153 – 19” cedar elm

Tree #155 – 19” cedar elm

Tree #165 – 24” cedar elm

Tree #189 – 28” post oak

Tree #234 – 30” post oak

Tree #250 – 28” post oak

Tree #274 – 19” cedar elm

Tree #285 – 31” post oak

Tree #313 – 32” post oak

Tree #327 – 24” post oak

Tree #328 – 22” post oak

Tree #329 – 25” post oak

Tree #330 – 33” post oak

Tree #337 – 26” post oak

Tree #393 – 33” post oak

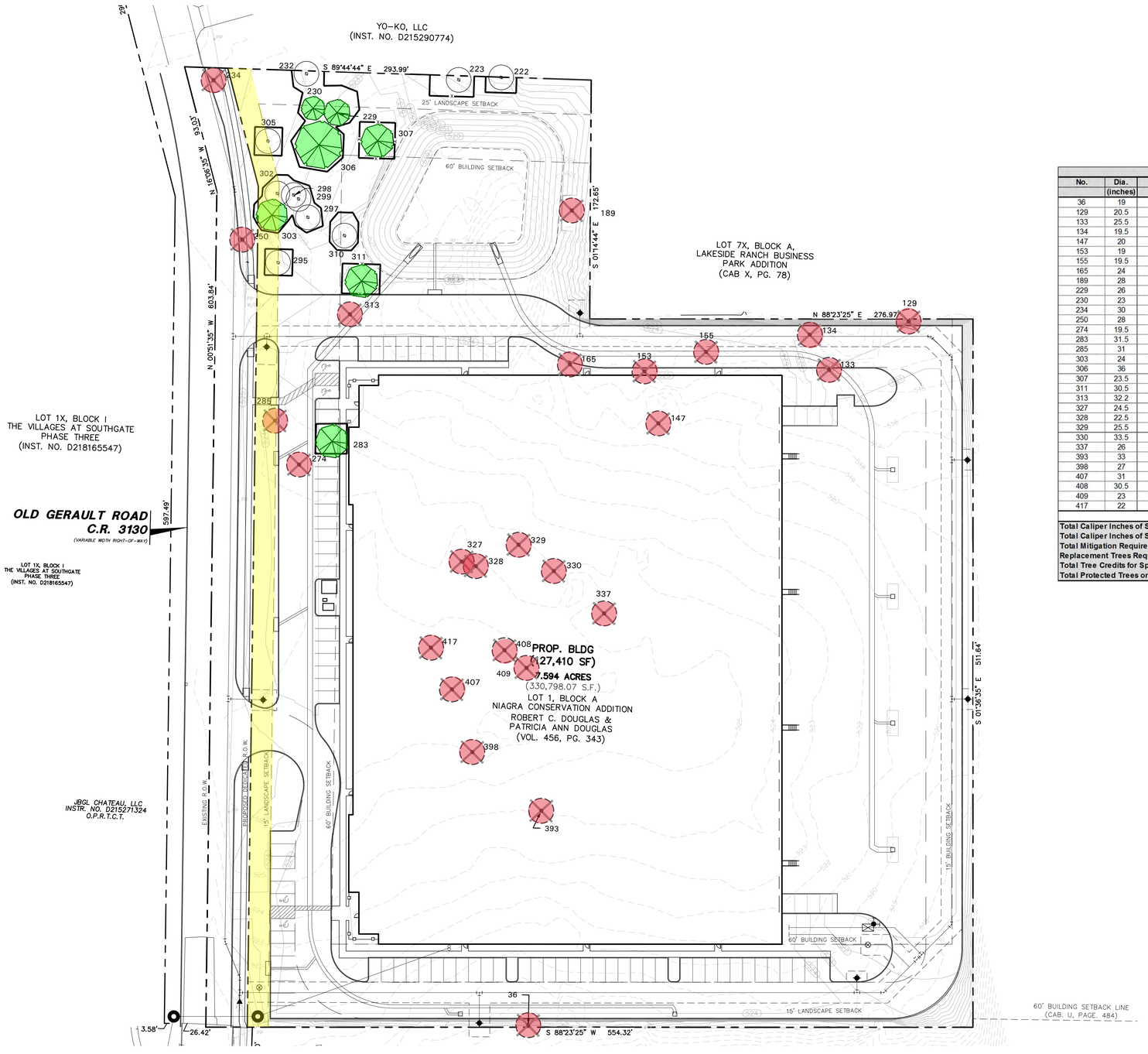
Tree #398 – 27” post oak

Tree #407 – 31” post oak

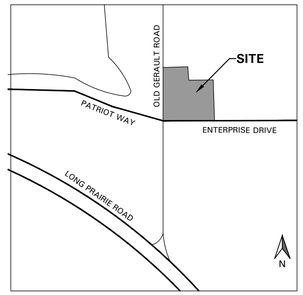
Tree #408 – 30” post oak

Tree #409 – 23” post oak

Tree #417 – 22” cedar elm



VICINITY MAP
NOT TO SCALE



TREE SURVEY FIELD DATA

No.	Dia. (inches)	Species (common name)	Species (botanical name)	Status	Protected	Health	Tree Credits	Remarks
36	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
129	20.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
133	25.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
134	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
147	20	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
153	19	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
155	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
165	24	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
189	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
229	26	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	5	BUILDABLE AREA
230	23	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
234	30	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
250	28	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		
274	19.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
283	31.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
285	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
303	24	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	FAIR	1	
306	36	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
307	23.5	CEDAR ELM	ULMUS CRASSIFOLIA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	4	BUILDABLE AREA
311	30.5	POST OAK	QUERCUS STELLATA	TO REMAIN	PROTECTED-SPECIMEN	GOOD	6	BUILDABLE AREA
313	32.2	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
327	24.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
328	22.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
329	25.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
330	33.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
337	26	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
393	33	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	FAIR		
398	27	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
407	31	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
408	30.5	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
409	23	POST OAK	QUERCUS STELLATA	TO BE REMOVED	PROTECTED-SPECIMEN	GOOD		
417	22	CEDAR ELM	ULMUS CRASSIFOLIA	TO BE REMOVED	PROTECTED-SPECIMEN	POOR		Measurement taken at 1' ht.

Total Caliper Inches of Specimen Trees on Site to be Removed (Total: 32 Specimen Trees)	828.7
Total Caliper Inches of Specimen Trees to be Removed	634.2
Total Mitigation Required for Specimen Trees Removed	1,268.4
Replacement Trees Required for Specimen Trees to be Removed	422.8
Total Tree Credits for Specimen Trees to Remain	32.0
Total Protected Trees on Site	164.0

EXISTING TREE LEGEND

- SPECIMEN TREE TO REMAIN
- SPECIMEN TREE TO BE REMOVED
- TREE PROTECTION FENCING TO REMAIN

SCALE: 1" = 40'-0"
0 20 40 80

BELLE FIRMA

4245 North Central Expy
Suite 501
Dallas, Texas 75205
214.865.7192 office

TIG

BUILD TO SUIT For

NIAGARA CONSERVATION ON OLD GERAULT

FLOWER MOUND, TEXAS

MEINHARDT & ASSOCIATES ARCHITECTS, P.L.L.C
14901 DALLAS PARKWAY
SUITE 630
DALLAS TEXAS 75254
972 960-9860

REGISTERED LANDSCAPE ARCHITECT
CHERI ANN HALL
2246
STATE OF TEXAS
09.30.20

DATE: 08.03.2020
JOB # 20-204
SPECIMEN TREE PLAN
SHEET:
L1.00

TOWN COUNCIL AGENDA ITEM NO. 30

REGULAR ITEM

DATE: December 7, 2020

FROM: Andrea Roy, Director of Economic Development

ITEM: **Public Hearing to consider approval of an ordinance establishing a Tax Abatement Reinvestment Zone for commercial tax abatement at 300 Old Gerault Road (Niagara Conservation, Inc., aka Deus, LLC).**

BACKGROUND INFORMATION: Establishment of a reinvestment zone on the 7.59 acre property will facilitate a proposed Tax Abatement and Chapter 380 Agreement between the Town and Niagara Conservation, Inc. (aka Deus, LLC), in exchange for the company constructing a 127,810 square foot office, warehouse, and distribution facility on this site. The facility will operate as Niagara's headquarters.

Chapter 312 of the Texas Tax Code requires that municipalities wishing to execute a Tax Abatement Agreement designate a Tax Abatement Reinvestment Zone by ordinance after a public hearing. Notice of the subject public hearing appeared in the Denton Record-Chronicle on Saturday, November 28, 2020. Additionally, all other applicable taxing entities (Tarrant County & Lewisville Independent School District) were notified of the intention to establish the reinvestment zone.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

All financial analysis will be provided in conjunction with the Niagara Conservation, Inc. Tax Abatement and Chapter 380 Agreement item.

LEGAL REVIEW: Drew Larkin with Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the ordinance as to form and legality.

ATTACHMENTS:

1. Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, DESIGNATING A CERTAIN AREA AS A TAX ABATEMENT REINVESTMENT ZONE FOR COMMERCIAL TAX ABATEMENT, WITHIN THE TOWN OF FLOWER MOUND, TEXAS; ESTABLISHING THE BOUNDARIES THEREOF AND OTHER MATTERS RELATED THERETO; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING FOR AN IMMEDIATE EFFECTIVE DATE.

WHEREAS, the Town Council of the Town of Flower Mound, Texas (sometimes hereinafter referred to as the "Town") desires to promote the development or redevelopment of a certain contiguous geographic area within the Town of Flower Mound, Texas, by the creation of a reinvestment zone for commercial tax abatement, as authorized by Chapter 312 of the Texas Tax Code, as amended; and,

WHEREAS, a public hearing before the Town Council of the Town was scheduled and held at 6:00 p.m. on December 7, 2020, such date being at least seven (7) days after the date of publication of the notice of such public hearing, pursuant to Section 312.201(d) of the Texas Tax Code, as amended; and,

WHEREAS, the Town Council held such public hearing after publishing notice of such public hearing, and giving written notice to all taxing units overlapping the territory inside the proposed Tax Abatement Reinvestment Zone; and,

WHEREAS, the Town at such public hearing invited any interested person to appear and speak for or against the creation of the Tax Abatement Reinvestment Zone, the boundaries of the proposed Tax Abatement Reinvestment Zone, whether all or part of the territory should be included in such proposed Tax Abatement Reinvestment Zone, and the concept of tax abatement;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2

The Town, after conducting such public hearing and having heard such evidence and testimony has made the following findings and determinations based upon the testimony presented:

(a) That a public hearing on the adoption of the Tax Abatement Reinvestment Zone has been properly called, held and conducted, and that notice of such hearing has been published at least seven (7) days before the hearing in a newspaper of general circulation within the Town, and mailed to all property taxing units overlapping the territory inside the proposed Tax Abatement Reinvestment Zone at least seven (7) days prior to the public hearing; and

(b) That the boundaries of the Tax Abatement Reinvestment Zone should be the area as described in Exhibit A, which is attached hereto and incorporated herein for all purposes; and

(c) That creation of the Tax Abatement Reinvestment Zone for commercial tax abatement with boundaries as described in Exhibit A will result in benefits to the Town, and to the land included within the Zone, and the improvements sought are feasible and practical; and

(d) That the Tax Abatement Reinvestment Zone as described and/or depicted in Exhibit A meets the criteria for the creation of a tax abatement reinvestment zone as set forth in Section 312.202(a) of the Texas Tax Code, as amended, and in particular Section 312.202(a)(6) of the Texas Tax Code, in that it is "reasonably likely as a result of the designation to contribute to the retention or expansion of primary employment or to attract major investment in the zone that would be a benefit to the property and that would contribute to the economic development of the Town"; and

(e) That the Tax Abatement Reinvestment Zone as described and/or depicted in Exhibit A meets the criteria for the creation of a tax abatement reinvestment zone as set forth in the Town's Tax Abatement Guidelines and Criteria; and

(f) That the Improvements proposed for the Tax Abatement Reinvestment Zone are feasible and practical and would be a benefit to the land and to the Town after the expiration of any tax abatement agreement.

SECTION 3

Pursuant to Section 312.201 of the Texas Tax Code, as amended, the Town of Flower Mound, Texas, hereby creates a Tax Abatement Reinvestment Zone for commercial tax abatement encompassing only the area described in Exhibit A, and such Tax Abatement Reinvestment Zone is hereby designated.

SECTION 4

The Tax Abatement Reinvestment Zone shall take effect immediately upon passage of this Ordinance. The Tax Abatement Reinvestment Zone is effective for five (5) years and may be renewed for periods not to exceed five (5) years. The expiration of the designation of the Tax Abatement Reinvestment Zone does not affect an existing tax abatement agreement.

SECTION 5

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the Town Council without the incorporation of this Ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

SECTION 6

Any provision of any prior ordinance of the Town, whether codified or uncodified, which is in conflict with any provision of this Ordinance, is hereby repealed to the extent of the conflict, but all other provisions of the ordinances of the Town, whether codified or uncodified, which are not in conflict with the provisions of this Ordinance, shall remain in full force and effect.

SECTION 7

This Ordinance shall become effective immediately upon its passage.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS BY A VOTE OF __TO __, ON THIS THE 7TH DAY OF DECEMBER, 2020.

APPROVED:

_____

STEVE DIXON, MAYOR

ATTEST:

_____

THERESA SCOTT, TOWN SECRETARY

Exhibit "A"

LEGAL DESCRIPTION

DESCRIPTION, of a 7.594 acre tract of land situated in the J. Turner Survey, Abstract No. 1251, Denton County, Texas; said tract being all of that certain tract of land described in Warranty Deed to Robert C. Douglas & Patricia Ann Douglas recorded in Volume 456, Page 343 of the Deed Records of Denton County, Texas; said 7.594 acre tract being more particularly described as follows:

BEGINNING, at a 5/8-inch iron rod with "A.R.S." cap set for corner in Old Gerault Road (a variable width right-of-way);, said point being the northwest corner of said Old Gerault Road as dedicated by plat recorded in Cabinet U, Page 484 of the Plat Records of Denton County, Texas;

THENCE, North 00 degrees, 51 minutes, 35 seconds West, along the approximate centerline of said Old Gerault Road, a distance of 603.83 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner;

THENCE, North 16 degrees, 06 minutes, 35 seconds West, continuing along the said approximate centerline of said Old Gerault Road a distance of 93.03 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being the southwest corner of that certain tract of land described in Warranty Deed to YO-KO LLC recorded in Instrument No. D215290774 of the Official Public Records of Denton County, Texas;

THENCE, South 89 degrees, 44 minutes, 44 seconds East, departing the said centerline of Old Gerault Road and along the south line of said YO-KO LLC tract, a distance of 293.99 feet to a 1/2-inch iron rod found for corner; said point being the southeast corner of said YO-KO LLC tract and being in the west line of Lot 7X, Block A of the lakeside Ranch Business Park Addition, an addition to the Town of Flower Mound, Texas recorded in Cabinet X, Page 78 of said Plat Records;

THENCE, South 01 degrees, 14 minutes, 44 seconds East, along the said west line of Lot 7X, a distance of 172.65 feet to a 5/8-inch iron rod found for corner at the southwest corner of said Lot 7X;

THENCE, North 88 degrees, 23 minutes, 25 seconds East, along the south line of said Lot 7X, a distance of 276.97 feet to a 1-inch pipe found for corner at the northernmost northwesterly corner of Lot 1R, Block A of Lakeside Trade Center, an addition to the Town of Flower Mound, Texas recorded in Cabinet V, Page 843 of said Plat Records;

THENCE, South 01 degrees, 36 minutes, 35 seconds East, departing the said south line of Lot 7X and along the west line of said Lot 1R, a distance of 511.64 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being an ell corner of said Lot 1R;

THENCE, South 88 degrees, 23 minutes, 25 seconds West, a north line of said Lot 1R, passing at a distance of 520.67 feet, the westernmost northwest corner of said Lot 1R, continuing for a total distance of 554.32 feet to the POINT OF BEGINNING;

CONTAINING: 330,798 square feet or 7.594 acres of land, more or less.

TOWN COUNCIL AGENDA ITEM NO. 31

REGULAR ITEM

DATE: December 7, 2020

FROM: Andrea Roy, Economic Development Director

ITEM: **Public Hearing to consider approval of a Chapter 380 and Tax Abatement Agreement with Niagara Conservation, Inc. (aka Deus, LLC), for the economic development of Flower Mound, and authorization for the Mayor to execute same on behalf of Town.**

BACKGROUND INFORMATION: The subject request relates to the proposed Tax Abatement and Chapter 380 Agreement between the Town and Niagara Conservation, Inc. (aka Deus, LLC). Niagara Conservation proposes to make an approximately $12+ million capital investment in the land and construction of a 127,810 square foot office, warehouse, and distribution facility, as well as related site improvements on 7.59 acres at 300 Old Gerault Road. The site is generally located at the northeast corner of Old Gerault and Enterprise Roads, on an unimproved portion of Old Gerault Road in the Lakeside Business District. The facility will be owned and occupied by Niagara, serving as the company's headquarters, with staff relocating from Niagara's current leased space in Suite 450 at 1200 Lakeside Parkway and their current offices in New Jersey. Niagara has been a Flower Mound resident since 2014 but has been in existence since 1977. The facility is expected to employ approximately 70+ individuals.

Niagara Conservation is one of the leading manufacturers and wholesalers of water and energy conservation products in the world. The company offers toilet tanks and bowls under the Niagara flapperless brand, providing also showerheads, low-flow aerators, compact fluorescent lamps, water-, energy- and gas-efficient conservation kits and various weatherization products. The company has explored various real estate options in the area, with the desire to remain in Flower Mound, but found limited options. The identification of this site was ideal, as it allows the company to construct a facility according to their specific needs, and is near their current operations, which will aid in employee retention and limit the disruption due to the relocation.

The subject property at 300 Old Gerault Road has attracted several interested parties over the years, including a truck rental facility, construction storage yard, mini-storage, speculative industrial, co-working and daycare, religious institutions, and now Niagara Conservation. On the surface, the site is of interest to many users, but contains significant development obstacles, which has caused most to walk away. The site is an irregular shape, has topography issues, requires construction of a large retaining wall along the rear of the site, possesses uncertainty surrounding the presence and potential burial of the overhead powerlines and poles, contains a number of trees requiring mitigation, requires construction of Old Gerault with its development, includes an existing home to be demolished that possesses asbestos, and the land requires environmental remediation due to oil contamination.

Niagara Conservation has requested incentive assistance in order to offset the extraordinary costs associated with developing the subject site, which are estimated at well over $750,000.

On August 17, 2020, and September 9, 2020, Town Council met in Closed Session to discuss Niagara's incentive request. Most recently, on November 9, 2020, Planning & Zoning Commission recommended approval of the rezoning of the property from (A) Agricultural Zoning to (PD #179) Planned Development with Campus Industrial uses.

The proposed Tax Abatement and Chapter 380 Agreement provides for an 8-year, 75% real property tax abatement (total estimated savings $193,000), a grant equal to 75% of impact fees ($62,250 in savings), and a building permit fee waiver ($87,000). A 10-year cost-benefit analysis indicates a total cost to the Town of $342,500, providing a minimum net benefit of over $450,000. The payback period to the Town is approximately six years; however, the applicant and staff's estimates related to estimated values are

extremely conservative, which will likely result in a reduced payback period. A secondary cost-benefit analysis was also conducted, which considers additional factors, such as anticipated purchases at the site, hotel stays for visitors to the site, spin-off jobs as a result of the additional business activity, additional sales tax generated as a result employee purchases, and the cost of needed government services. When factoring in these additional estimated revenues and expenses for the Town, the secondary cost-benefit analysis indicates a payback period of 1 year, resulting in a 10-year net benefit to the Town of $870,000.

In accordance with Section 312.207 of the Texas Tax Code, on November 28, 2020, notice of the subject public hearing was posted on the Town's bulletin board and on the Town's website.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: One time grant equal to 75% of assessed impact fees.

Proposed Expenditure/(Revenue):	**Account Number:**
$62,250	100-600-57000-5320

Finance Review by: Debra Wallace, Interim Town Manager/CFO

LEGAL REVIEW: Drew Larkin of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the Tax Abatement and Chapter 380 Incentive Agreement as to form and legality.

ATTACHMENTS:

1. Tax Abatement & Chapter 380 Agreement
2. Cost-Benefit Analysis

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment #1

TAX ABATEMENT AND CHAPTER 380 AGREEMENT BETWEEN THE TOWN OF FLOWER MOUND & DEUS, LLC (NIAGARA CONSERVATION)

This Tax Abatement and Chapter 380 Agreement ("**Agreement**") is made and entered into by and between the Town of Flower Mound, Texas ("**Town**") and Deus, LLC., a Texas limited liability company ("**Owner**"). Town and Owner may sometimes hereafter be referred to individually as a "**Party**" or collectively as the "**Parties**."

WITNESSETH:

WHEREAS, on or about December 17, 2007, the Town adopted Resolution No. 37-07 electing to become eligible to participate in tax abatement agreements, in accordance with Section 312.002(a) of the Texas Tax Code; and

WHEREAS, the Town also adopted and/or reaffirmed tax abatement guidelines and criteria, in accordance with Section 312.002 of the Texas Tax Code (hereinafter referred to as the "**Town's Tax Abatement Guidelines and Criteria**"); and

WHEREAS, the Town's Tax Abatement Guidelines and Criteria constitute appropriate guidelines and criteria governing tax abatement agreements to be entered into by the Town, as contemplated by Chapter 312 of the Texas Tax Code, as amended; and

WHEREAS, on or about December 7, 2020, the Town Council of the Town of Flower Mound, Texas, adopted Ordinance No. ____ establishing a Tax Abatement Reinvestment Zone ("**Zone**") in the Town of Flower Mound, Texas, for commercial-office tax abatement, as authorized by the Property Redevelopment and Tax Abatement Act, Chapter 312 of the Texas Tax Code; and

WHEREAS, the Owner owns the real property located within the Zone and seeks to receive incentives from the Town, including tax abatement; and

WHEREAS, this abatement of real property taxes will maintain and enhance the economic and employment base of the Town, thereby benefiting the Town, in accordance with the Tax Abatement Guidelines and Criteria and the Property Redevelopment and Tax Abatement Act; and

WHEREAS, the Town Council of the Town of Flower Mound, Texas, finds that the contemplated use of the real property, and the Improvements to the Real Property as set forth in this Agreement, and the other terms hereof are consistent with encouraging continued reinvestment within the Zone in the Town of Flower Mound, Texas, in accordance with the purposes for its creation, and are in compliance with the Town's Tax Abatement Guidelines and Criteria, and Chapter 312 of the Texas Tax Code; and

WHEREAS, the Owner acknowledges and agrees that the tax abatements granted by this Agreement are contingent upon its compliance with this Agreement in accordance with the terms and conditions set forth herein; and

WHEREAS, the Town also desires to provide incentives to the Owner pursuant to Chapter 380 of the Texas Local Government Code to locate an office-warehouse building in the Town; and

WHEREAS, the Town has concluded and hereby finds that this Agreement promotes economic development in the Town of Flower Mound, Texas, and, as such, meets the requirements of Article III, Section 52-a of the Texas Constitution, by assisting in the development and diversification of the economy of the State and Town, by eliminating unemployment or underemployment in the State and Town, and enhancing business and commercial activity within the State and Town; and

WHEREAS, the Town finds that it is in the public interest to provide the tax abatement and 380 agreement.

NOW THEREFORE, for and in consideration of the agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1
DEFINITIONS

The following words shall have the following meanings when used in this Agreement:

The terms “Agreement”, “Town”, “Owner, “Parties”, “Party”, “Zone”, and “Town’s Tax Abatement Guidelines and Criteria” shall have the meanings provided above.

“Affiliate” means any person or entity which directly or indirectly controls, is controlled by or is under common control with Owner, during the term of such control. A person or entity will be deemed to be "controlled" by any other person or entity if such other person or entity (a) possesses, directly or indirectly, power to direct or cause the direction of the management of such person or entity whether by contract or otherwise; (b) has direct or indirect ownership of at least fifty percent (50%) of the voting power of all outstanding shares entitled to vote at a general election of directors of the person or entity; or (c) has direct or indirect ownership of at least fifty percent (50%) of the equity interests in the entity. Notwithstanding the foregoing, the term “Affiliate” includes Niagara Conservation Corp. (“Niagara”) and any Affiliate of Niagara.

“Base Year Tax Value” means the assessed value of the Real Property (land only) according to the Tarrant Appraisal District for Tax Year 2020.

“Capital Investment” means the actual costs attributable to the construction of the Improvements and related infrastructure, including the actual construction costs of all buildings, site preparation, structures, infrastructure, utilities, landscaping and on-site improvements, including labor and materials, engineering costs, surveying costs, fees of consultants, permit and

inspection fees. It does not include insurance costs, marketing costs, or any interest paid to finance the cost of Capital Investment.

"Certificate of Occupancy" means the document issued by the Town to Owner certifying the Improvements' compliance with applicable building codes and other laws, and indicating it to be in a condition suitable for occupation.

"Effective Date" shall mean the last date this Agreement is executed by the Parties.

"Expiration Date" shall mean the 10th anniversary date of the date Owner receives a Certificate of Occupancy for the Improvements, unless sooner terminated as provided herein.

"Event of Bankruptcy or Insolvency" means the dissolution or termination of a Party's existence as a going business, appointment of receiver for any part of such Party's property and such appointment is not terminated within ninety (90) days after such appointment is initially made, any general assignment for the benefit of creditors, or the commencement of any proceeding under any bankruptcy or insolvency laws by or against such Party and such proceeding is not dismissed within ninety (90) days after the filing thereof.

"First Year of Abatement" shall mean January 1 of the calendar year immediately following the date Owner receives a Certificate of Occupancy for the Improvements.

"Force Majeure" means any contingency or cause beyond the reasonable control of a Party including, without limitation, acts of God or the public enemy, war, riot, civil commotion, insurrection, government or de facto governmental action (unless caused by the intentionally wrongful acts or omissions of the Party), fires, explosions, floods, strikes, slowdowns or work stoppages.

"Impact Fee Grant" means the grant from the Town in an amount equal to 75% of the Town impact fees (water, wastewater, and roadway) paid by Owner and received by the Town, which are attributable to the construction of the Improvements.

"Impositions" means all taxes, assessments, use and occupancy taxes, charges, excises, license and permit fees, and other charges by public or company governmental authority, general and special, ordinary and extraordinary, foreseen and unforeseen, which are or may be assessed, charged, levied, or imposed by any public or governmental authority on the Owner or any property or any business owned by the Owner within the Town.

"Improvements" means the one-story, approximately 127,810 square foot office-warehouse building identified on Exhibits "A" and "B" and other ancillary improvements such as reasonably required parking and landscaping more fully described in the submittals filed by Owner with the Town, and to be constructed upon the Real Property.

"Payment Request" means a written request from Owner to Town for payment of the Impact Fee Grant, which request shall be accompanied by evidence reasonably satisfactory to Town to establish that Owner is in compliance with this Agreement. The Payment Request must be submitted in accordance with the notice provisions of this Agreement.

"Person" means an individual, a corporation, partnership, limited liability company, association, trust, or other legal entity or organization.

"Real Property" means the approximately 7.59-acre tract of land located at 300 Old Gerault Road, generally at the northeast corner of Old Gerault and Enterprise Road, Town of Flower Mound, Texas, and as depicted on the attached Exhibit "A" and more particularly described by metes and bounds description on the attached Exhibit "C".

"Related Agreement" means any agreement (other than this Agreement) by and between Town and Owner.

"Taxable Value" shall mean the appraised value of the Improvements as certified by the Tarrant Appraisal District, or its successor, for a given year.

"Term" shall have the meaning assigned to such term in Section 2.2.

ARTICLE 2
PROGRAM AND TERM

2.1 Program. A program authorized under Chapter 380 of the Texas Local Government Code is hereby established to bring the Owner and the Improvements to the Town. The terms of this Agreement shall implement the program.

2.2 Term. The Term of this Agreement will commence on the Effective Date and will continue until the Expiration Date, unless sooner terminated as provided herein.

ARTICLE 3
OWNER OBLIGATIONS

As consideration for the tax abatements, Impact Fee Grant, and waiver of fees by Town, the Owner agrees and covenants as follows:

3.1 Construction of Improvements. Owner agrees to design and construct, or cause to be designed and constructed, the Improvements. Owner must: (i) submit a full and complete building permit application for construction of the Improvements, as deemed acceptable by the Town, no later than June 1, 2021; (ii) receive all necessary permits permitting construction of the Improvements from all applicable governmental authorities no later than September 1, 2021; and (iii) subject to events of Force Majeure, receive a Certificate of Occupancy for the Improvements on or before February 28, 2023.

3.2 Capital Investment. Owner agrees to make a Capital Investment of at least $7,000,000 million. In addition, Owner agrees to provide Town with documentation evidencing a minimum Capital Investment of $7,000,000 no later than ninety (90) days from the date the Owner receives a Certificate of Occupancy for the Improvements. Such documentation must be in a form reasonably acceptable to Town, and must contain a breakdown of costs paid by Owner and proof of payment in the form of contractor and/or subcontractor paid invoices and receipts.

3.3 Compliance with Laws. Owner agrees to construct the Improvements in accordance with the site plan attached hereto as Exhibit "A", the elevations and materials shown on the attached Exhibit "B", and all applicable federal, state and local laws, codes, and regulations (or valid waivers thereof).

3.4 Tenancy. Owner agrees that Owner or an Affiliate will continuously operate an office, warehouse, and distribution operation within the Improvements beginning on the date the Owner or Affiliate receives a Certificate of Occupancy for the Improvements and continuing thereafter throughout the Term of this Agreement.

3.5 Good Standing. Owner shall not have an uncured breach or default of this Agreement or a Related Agreement.

3.6 Audit. Owner shall grant access to Town, or such other persons or entities designated by Town for the purposes of inspecting, at Owner's office, during Owner's normal business hours, paper and electronic records, books, documents, tangible accounting procedures, tangible practices or any other items related to Owner's performance of this Agreement ("**Owner Records**"), provided that Town has provided five (5) business days prior notice, and Town or its representatives shall not unduly disrupt Owner's operations. The foregoing notwithstanding, all records, books, documents, accounting procedures, practices or any other items relevant to the performance of this Agreement shall be subject to examination or audit by Town, or such other persons or entities designated by Town in accordance with state and federal laws, regulations or directives applicable to Owner's performance of this Agreement. Town agrees, to the extent allowed by law, to maintain the confidentiality of the Owner Records. The Parties acknowledge that the Texas Public Information Act, Texas Government Code, Section 552.001 et seq. ("**Act**") requires that public records must be promptly disclosed by the Town upon request unless specifically exempted from disclosure. If compelled by deposition, interrogatory, request for documents, subpoena, civil investigative demand, or public records request (including under the Act or any Town ordinance, resolution or regulation implementing the Act), or similar processes, to disclose any of the Owner Records, the Town, as appropriate, shall use its best efforts to immediately provide Owner with prompt notice. Notwithstanding any term in this Agreement to the contrary, the Town's disclosure of Owner Records in compliance with a court order or an opinion from the Attorney General of Texas will not be considered a default or breach of this Agreement.

ARTICLE 4
TOWN OBLIGATIONS

Subject to Owner's continued satisfaction of its obligations as required by this Agreement, and subject to the provisions of this Article, Town will be obligated to do the following:

4.1 Tax Abatement.

(a) Subject to the terms and conditions of this Agreement, Town hereby grants Owner an abatement of seventy-five percent (75%) of the Taxable Value of the Improvements constructed upon the Real Property for a period of eight (8) consecutive years, beginning

with the First Year of Abatement. The actual percentage of Taxable Value of the Real Property subject to abatement for each year this Agreement is in effect will apply only to the portion of the Taxable Value of the Improvements that exceeds the Base Year Tax Value.

(b) The Real Property and Improvements are not in an improvement project financed by tax increment bonds.

(c) This Agreement is entered into subject to the rights of the holders of outstanding bonds of the Town.

(d) The Real Property is not owned or leased by any member of the Town's Town Council or any member of the Town's Planning and Zoning Commission.

(e) Owner shall, before May 1 of each calendar year that the Agreement is in effect, certify in writing to the Town that it is in compliance with each term of the Agreement.

(f) The Real Property and the Improvements constructed thereon at all times shall be used in the manner (i) that is consistent with the Town's Comprehensive Zoning Ordinance and all other Town development and building regulations, as amended or otherwise specified in this Agreement, and (ii) that, during the period taxes are abated hereunder, is consistent with the general purposes of encouraging development or redevelopment of the Zone.

(g) It shall be the responsibility of the Owner to file an annual exemption application form for the Real Property with the Tarrant Appraisal District. A copy of the respective exemption application shall be submitted to the Town upon request.

(h) Upon the receipt of reasonable notice, Owner will provide access to and authorize inspection of the Real Property and Improvements by Town employees to ensure that the Improvements are made according to the specifications and conditions of this Agreement.

4.2 Impact Fee Grant. The Town agrees to pay Owner the Impact Fee Grant within forty-five (45) days after: (i) the Owner receives a Certificate of Occupancy for the Improvements; and (ii) the Town's receipt of a Payment Request.

4.3 Permit Fee Waiver. The Town agrees to waive the following permit and related fees for construction of the Improvements: building permit fees, electrical permit fees, mechanical permit fees, plumbing permit fees, plan review fees, development permit fees, engineering inspection fees, and lighting plan review fees. Any fees not referenced herein as being waived are specifically deemed not to be waived by the Town.

ARTICLE 5
TERMINATION; REPAYMENT; OFFSET

5.1 Termination. This Agreement terminates on the Expiration Date, and may, prior to the Expiration Date, be terminated upon any one or more of the following:

(a) by mutual written agreement of the Parties;

(b) upon written notice by either Owner or Town, if the other Party defaults or breaches any of the terms or conditions of this Agreement and such default or breach is not cured within thirty (30) days after written notice thereof;

(c) upon written notice by Town, if any Impositions owed to Town or the State of Texas by Owner shall have become delinquent (provided, however, Owner retains the right to timely and properly protest and contest any such taxes or Impositions);

(d) upon written notice by Town, if Owner suffers an Event of Bankruptcy or Insolvency; or

(e) upon written notice by Owner or Town, if any subsequent Federal or State legislation or any final non-appealable judgment of a court of competent jurisdiction declares or renders this Agreement invalid, illegal, or unenforceable.

5.2 Repayment.

(a) Owner Repayment. In the event this Agreement is terminated by Town pursuant to Section 5.1 (b), (c), or (d), Owner shall within thirty (30) days of termination refund to Town: (i) an amount equal to the amount of the Impact Fee Grant and all fee waivers that have been provided by Town to Owner prior to the date of such termination, plus interest at the rate of interest periodically announced by the Wall Street Journal as the prime or base commercial lending rate, or if the Wall Street Journal shall ever cease to exist or cease to announce a prime or base lending rate, then at the annual rate of interest from time to time announced by Citibank, N.A. (or by any other New York money center bank selected by Town) as its prime or base commercial lending rate, accruing from the Effective Date until paid; and (ii) all real property taxes abated under this Agreement.

(b) Additional Remedies. Upon termination of this Agreement by Town, all taxes abated as a result of this Agreement shall become a debt to the Town as liquidated damages, and shall become due and payable not later than thirty (30) days after a notice of termination is provided. The Parties acknowledge that actual damages in the event of default would be speculative and difficult to determine. The Town shall have all remedies for the collection of the abated tax provided in the Texas Tax Code for the collection of delinquent property tax. The Town at its sole discretion has the option to provide a repayment schedule. The liquidated damages shall constitute a tax lien against the Real Property. Further, the liquidated damages shall incur penalties and interest as provided for

delinquent taxes in the Texas Tax Code and shall commence to accrue after expiration of the thirty (30) day payment period.

(c) Survival of Repayment Obligations. The repayment obligations of Owner set forth in this Section 5.2 shall survive termination of this Agreement.

5.3 Offsets. Town may, at its option, offset any amounts due and payable under this Agreement against any debt (including taxes) lawfully due to Town from Owner, regardless of whether the amount due arises pursuant to the terms of this Agreement, a Related Agreement or otherwise, and regardless of whether or not the debt due Town has been reduced to judgment by a court.

ARTICLE 6
MISCELLANEOUS

6.1 Binding Agreement. The terms and conditions of this Agreement are binding upon the successors and assigns of the Parties.

6.2 Limitation on Liability. It is understood and agreed between the Parties that Owner, in satisfying the conditions of this Agreement, is deemed to have acted independently, and Town assumes no responsibilities or liabilities to third parties in connection with these actions.

6.3 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 a partnership or joint venture among the Parties.

6.4 Authorization. Each Party represents that it has full capacity and authority to grant all rights and assume all obligations that are granted and assumed under this Agreement.

6.5 Notice. Any notice required or permitted to be delivered hereunder shall be deemed received three (3) days thereafter if sent by United States Mail, postage prepaid, certified mail, return receipt requested, addressed to the Party at the address set forth below (or such other address as such Party may subsequently designate in writing) or on the day actually received if sent by courier or otherwise hand delivered.

If intended for Town, to:	Town of Flower Mound, Texas Attn: Economic Development Director 2121 Cross Timbers Rd. Flower Mound, TX 75028
With a copy to:	Flower Mound Town Attorney Taylor, Olson, Adkins, Sralla & Elam, LLP 6000 Western Place, Suite 200 Fort Worth, Texas 76107
If intended for Owner, to:	Niagara Conservation Attn: Kyle Cutler

1200 Lakeside Parkway, #450
Flower Mound, TX 75028
RE: TA & Ch 380 Agrmnt.-Flower Mound/Niagara/Deus

With a copy to: Brown Moskowitz & Kallen, PC
180 River Road
Summit, New Jersey 07901
Attention: Keith E. Marlowe, Esq.

6.6 Entire Agreement. This Agreement is the entire agreement between the Parties with respect to the subject matter covered in this Agreement. There is no other collateral oral or written agreement between the Parties that in any manner relates to the subject matter of this Agreement, except as provided in any exhibits attached hereto.

6.7 Governing Law. The substantive laws of the State of Texas (and not its conflicts of law principles) govern all matters arising out of, or relating to, this Agreement and all of the transactions it contemplates, including without limitation its validity, interpretation, construction, performance and enforcement. Mandatory and exclusive venue for any action concerning this Agreement must be in a court of competent jurisdiction in Tarrant County, Texas

6.8 Amendment. This Agreement may only be amended by the mutual written agreement of the Parties.

6.9 Legal Construction. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect other provisions, and the balance of this Agreement will be deemed enforceable and must be read as if the Parties intended at all times to delete said invalid, illegal, or unenforceable provisions.

6.10 Counterparts. This Agreement may be executed in counterparts. Each of the counterparts shall be deemed an original instrument, but all of the counterparts shall constitute one and the same instrument.

6.11 Exhibits. All exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

6.12 Successors and Assigns. Except for an assignment to an Affiliate of Owner, this Agreement may not be assigned without the prior written consent of the Town.

6.13 Survival of Covenants. Any of the representations, warranties, covenants, and obligations of the Parties, as well as any rights and benefits of the Parties, pertaining to a period of time following the termination of this Agreement shall survive termination for such period of time. All other representations, warranties, covenants, and obligations shall expire.

6.14 Limitation of Damages. The Parties agree that no Party will be liable to the other under this Agreement for indirect, special, consequential damages (including lost profits), or exemplary damages.

6.15 Legislative or Judicial Changes. In the event of any legislative or judicial interpretation that limits or restricts Town's ability to pay the Impact Fee Grant, abate taxes, or otherwise extracts or imposes any penalty or other restriction upon the payment of the Impact Fee Grant or abatement of taxes, such payment and abatements will cease as of the effective date of such limitation or restriction and be of no further force, effect, or consequence in which event Town shall be under no further obligation to Owner as of the effective date of such limitation or restriction and Owner shall not be obligated to repay or compensate Town for any prior benefits provided to Owner, unless required to do so by law or court order. Town shall not take any action to seek a legislative interpretation or file an original petition in any action seeking a judicial interpretation which would limit or restrict Town's ability to pay the Impact Fee Grant, abate taxes, or otherwise extract or impose any penalty or other restriction upon the payment of the Impact Fee Grant or abatement of taxes. In any suit brought by a person not a Party to this Agreement, Owner shall have a reasonable time period to appeal any such judicial interpretation at its sole cost and expense and Town shall reasonably cooperate with any such appeals; provided, however, that Town is not obligated to become a party in any suit or expend any funds in cooperating with Owner.

6.16 Undocumented Workers. Owner certifies that Owner and its branches, divisions and departments, do not and will not knowingly employ an undocumented worker in accordance with Chapter 2264 of the Texas Government Code, as amended. If during the Term of this Agreement, Owner or any of their branches, divisions or departments is convicted of a violation under 8 U.S.C. § 1324a(f), Owner shall repay the amount of the public subsidy provided under this Agreement plus interest, at the rate of six percent (6%), not later than the 120th day after the date Town notifies Owner of the violation.

6.17 Governmental Function. The Parties agree that this Agreement concerns tax collection and serves the public purpose of contributing to the retention or expansion of primary employment or to attraction of major investment in the Zone that would be a benefit to the Real Property. The Parties further agree this Agreement serves the public purpose of assisting in the development and diversification of the economy of the Town and the State of Texas, eliminating unemployment or underemployment of the State, and developing and expanding commerce in the State, and is for all purposes a governmental function of Town for the benefit of the citizens of Town and the State of Texas. The Parties further agree that this Agreement is entered into for the purpose of carrying out governmental functions which are enjoined on the Town by law and given to it by the State of Texas as part of the State's sovereignty.

6.18 Attorney's Fees. If either Party employs an attorney or attorneys to enforce any of the provisions hereof, or to recover damages for the breach of this Agreement, the non-prevailing Party in any final judgment or award agrees to pay the other Party all reasonable costs, charges and expenses, including reasonable attorneys' fees and costs of court, expended or incurred in connection therewith.

PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, on this _____ day of _____, 2020.

TOWN:

TOWN OF FLOWER MOUND, TEXAS

_____
Steve Dixon, Mayor

STATE OF TEXAS)
)
COUNTY OF DENTON)

This instrument was acknowledged before me on the ____ day of _____, 2020, Steve Dixon, Mayor of the Town of Flower Mound, Texas, a Texas home rule municipality, on behalf of said Town.

_____
Notary Public, State of Texas

OWNER:

DEUS, LLC.

By: _____
Name: Kyle Cutler
Title: Manager

STATE OF _____)
)
COUNTY OF _____)

This instrument was acknowledged before me on the ____ day of _____, 2020, by _____, the _____ of DEUS, LLC.

_____
Notary Public, State of Texas

EXHIBIT “A”

Site Plan

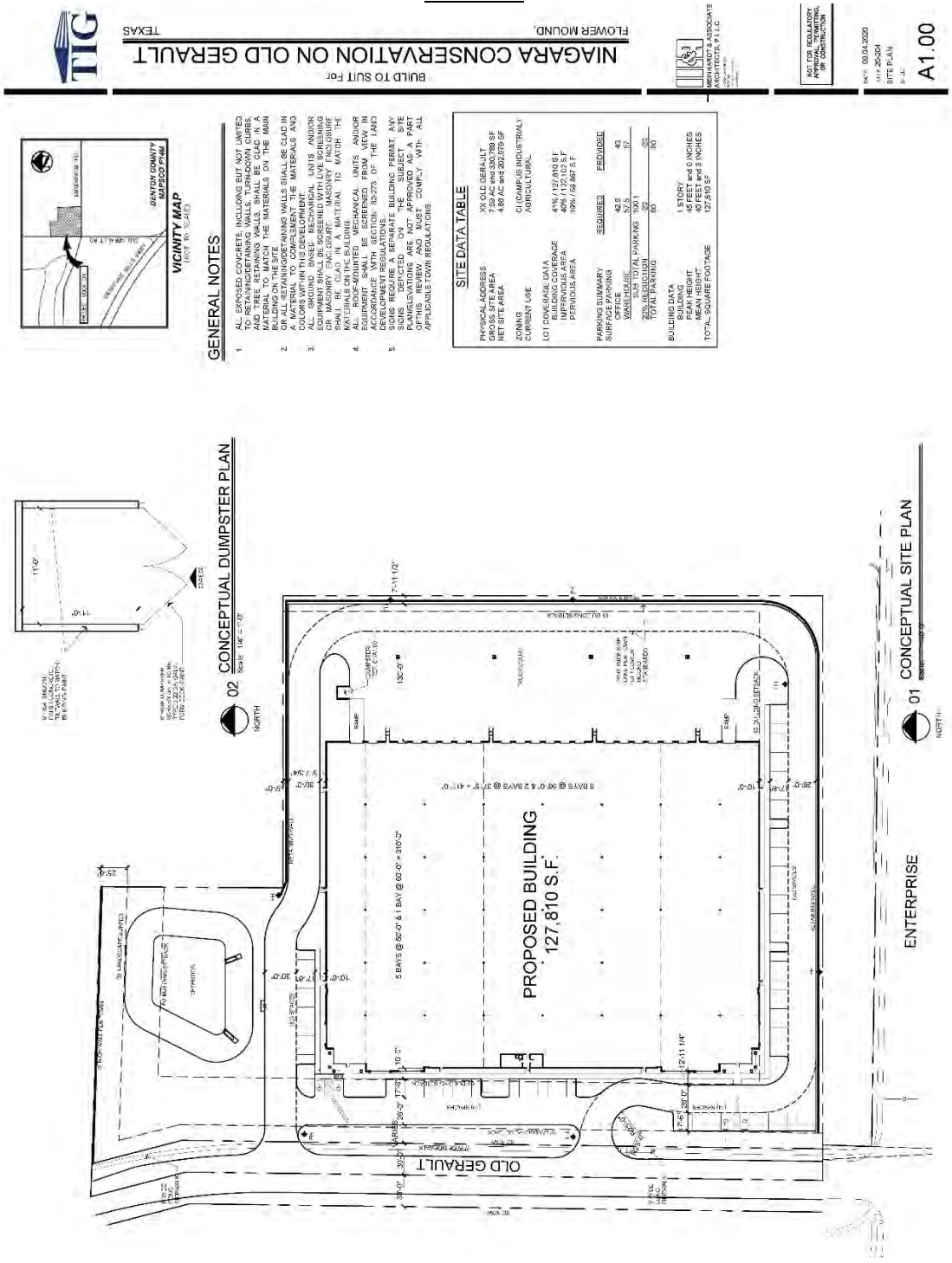


EXHIBIT "B"

Building Elevations

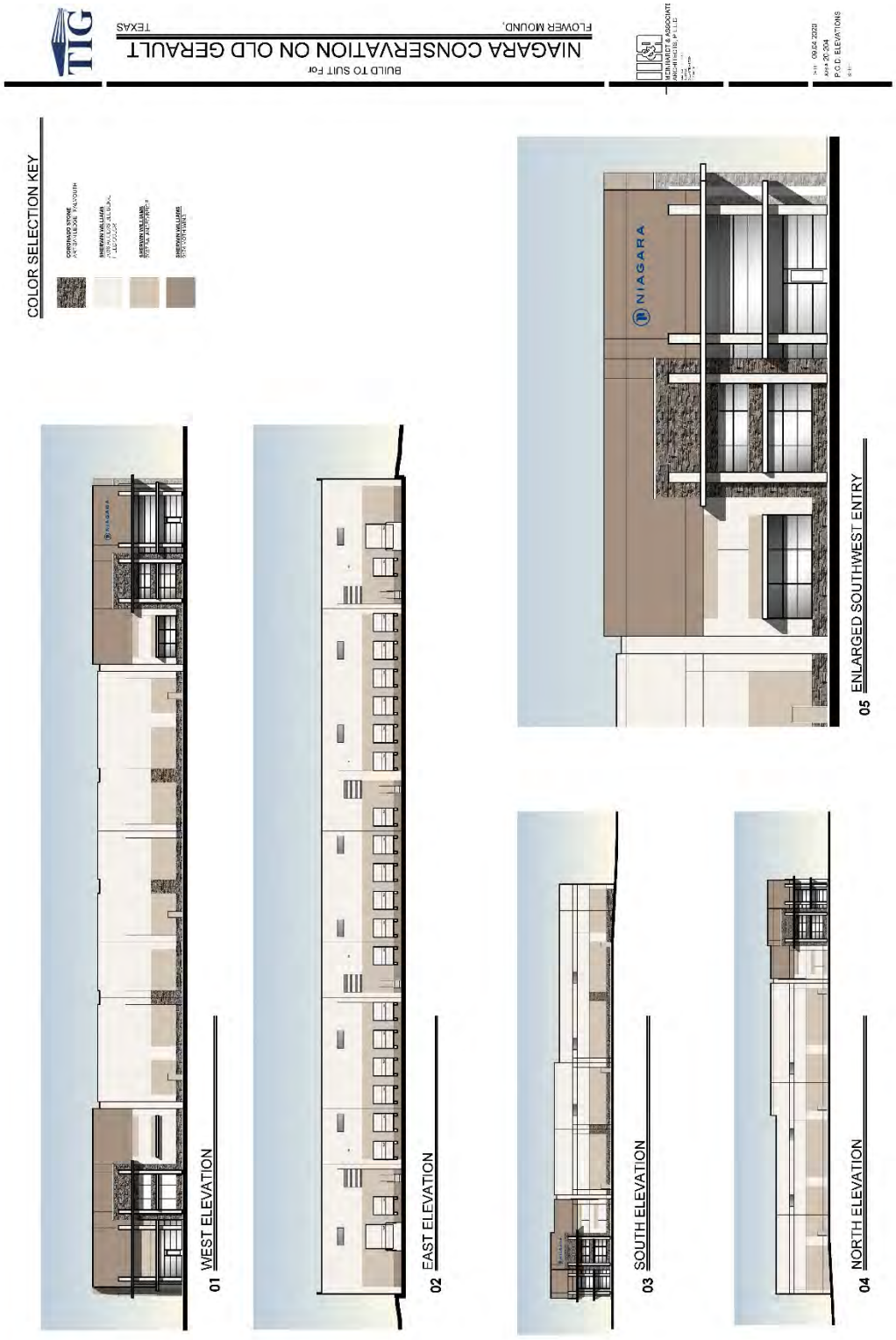


EXHIBIT “C”

Legal Description

DESCRIPTION, of a 7.594 acre tract of land situated in the J. Turner Survey, Abstract No. 1251, Denton County, Texas; said tract being all of that certain tract of land described in Warranty Deed to Robert C. Douglas & Patricia Ann Douglas recorded in Volume 456, Page 343 of the Deed Records of Denton County, Texas; said 7.594 acre tract being more particularly described as follows:

BEGINNING, at a 5/8-inch iron rod with "A.R.S." cap set for corner in Old Gerault Road (a variable width right-of-way);, said point being the northwest corner of said Old Gerault Road as dedicated by plat recorded in Cabinet U, Page 484 of the Plat Records of Denton County, Texas;

THENCE, North 00 degrees, 51 minutes, 35 seconds West, along the approximate centerline of said Old Gerault Road, a distance of 603.83 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner;

THENCE, North 16 degrees, 06 minutes, 35 seconds West, continuing along the said approximate centerline of said Old Gerault Road a distance of 93.03 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being the southwest corner of that certain tract of land described in Warranty Deed to YO-KO LLC recorded in Instrument No. D215290774 of the Official Public Records of Denton County, Texas;

THENCE, South 89 degrees, 44 minutes, 44 seconds East, departing the said centerline of Old Gerault Road and along the south line of said YO-KO LLC tract, a distance of 293.99 feet to a 1/2-inch iron rod found for corner; said point being the southeast corner of said YO-KO LLC tract and being in the west line of Lot 7X, Block A of the lakeside Ranch Business Park Addition, an addition to the Town of Flower Mound, Texas recorded in Cabinet X, Page 78 of said Plat Records;

THENCE, South 01 degrees, 14 minutes, 44 seconds East, along the said west line of Lot 7X, a distance of 172.65 feet to a 5/8-inch iron rod found for corner at the southwest corner of said Lot 7X;

THENCE, North 88 degrees, 23 minutes, 25 seconds East, along the south line of said Lot 7X, a distance of 276.97 feet to a 1-inch pipe found for corner at the northernmost northwesterly corner of Lot 1R, Block A of Lakeside Trade Center, an addition to the Town of Flower Mound, Texas recorded in Cabinet V, Page 843 of said Plat Records;

THENCE, South 01 degrees, 36 minutes, 35 seconds East, departing the said south line of Lot 7X and along the west line of said Lot 1R, a distance of 511.64 feet to a 5/8-inch iron rod with "A.R.S." cap set for corner; said point being an ell corner of said Lot 1R;

THENCE, South 88 degrees, 23 minutes, 25 seconds West, a north line of said Lot 1R, passing at a distance of 520.67 feet, the westernmost northwest corner of said Lot 1R, continuing for a total distance of 554.32 feet to the POINT OF BEGINNING;

CONTAINING: 330,798 square feet or 7.594 acres of land, more or less.

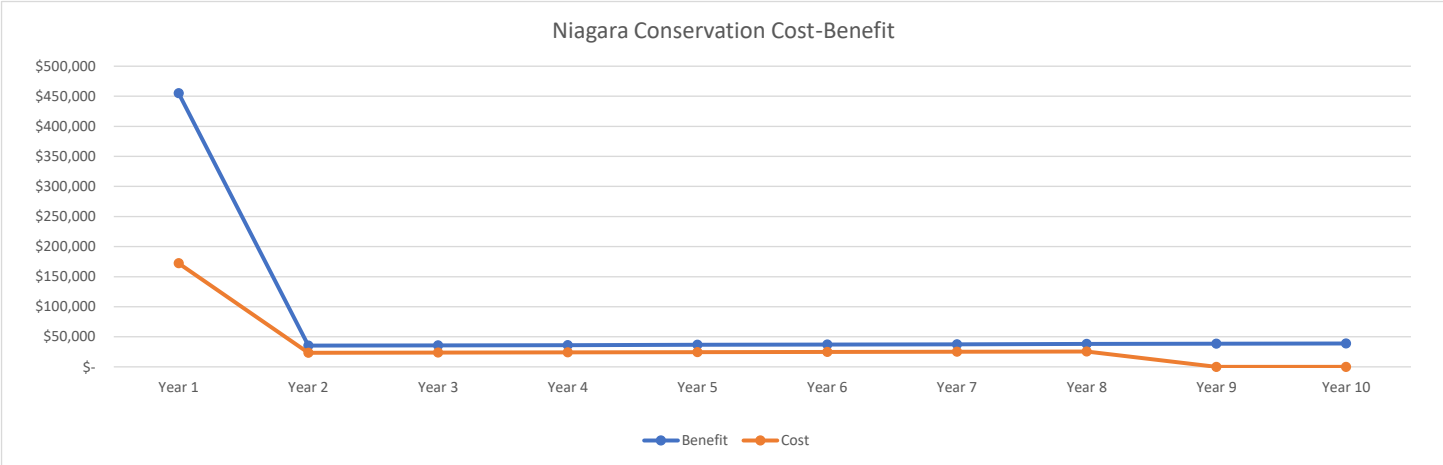
Attachment #2A

Niagara Incentive

Benefit		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
+1% rate	Real Property Value (75% of cap inv.)	$ 7,000,000	$ 7,105,000	$ 7,211,575	$ 7,319,749	$ 7,429,545	$ 7,540,988	$ 7,654,103	$ 7,768,914	$ 7,885,448	$ 8,003,730	
	Real Property Tax Revenue	$ 30,555	$ 31,013	$ 31,479	$ 31,951	$ 32,430	$ 32,916	$ 33,410	$ 33,911	$ 34,420	$ 34,936	**$ 327,022**
1% Depreciation	Business Personal Property Value	$ 1,000,000	$ 990,000	$ 980,100	$ 970,299	$ 960,596	$ 950,990	$ 941,480	$ 932,065	$ 922,745	$ 913,517	
	Business Personal Property Tax Revenue	$ 4,365	$ 4,321	$ 4,278	$ 4,235	$ 4,193	$ 4,151	$ 4,110	$ 4,068	$ 4,028	$ 3,988	**$ 41,737**
	Building Permit Fees	$ 29,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 29,000**
	Impact Fees	$ 83,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 83,000**
	Engineering Inspection Fee	$ 8,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 8,000**
	Development Permit Fee	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 50,000**
	Tree Mitigation	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 250,000**

Cost		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
75%	Real Property Abatement	$ 22,916	$ 23,260	$ 23,609	$ 23,963	$ 24,322	$ 24,687	$ 25,058	$ 25,433			**$ 193,249**
100%	Fee Waivers	$ 87,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 87,000**
75%	Impact Fees (75% Rebate)	$ 62,250	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 62,250**
												$ 342,499

Analysis		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
	Benefit	$ 454,920	$ 35,335	$ 35,757	$ 36,186	$ 36,623	$ 37,067	$ 37,520	$ 37,980	$ 38,448	$ 38,924	**$ 788,759**
	Cost	$ 172,166	$ 23,260	$ 23,609	$ 23,963	$ 24,322	$ 24,687	$ 25,058	$ 25,433	$ -	$ -	**$ 342,499**
	Net Benefit	$ 282,754	$ 12,075	$ 12,148	$ 12,223	$ 12,300	$ 12,380	$ 12,462	$ 12,546	$ 38,448	$ 38,924	**$ 446,260**



IMPACT REPORT - CURRENT & EXPANSION

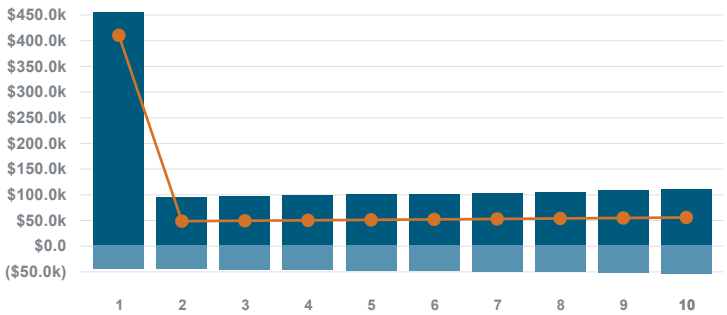
NIAGARA CONSERVATION

Niagara Scenario 1-8=Yr TA, Fee Waiver, 75% Impact Fee Rebate

Business Retention & Expansion

Town of Flower Mound

BENEFITS	COSTS	NET BENEFITS
$1,366,997	($499,640)	$867,357



JOBS

107.6 Total
71.0 Direct
36.6 Spin-off

30.0 New Jobs @ $50,000
41.0 Retained Jobs @ $50,000
71.0 Direct Jobs @ $50,000

SALARIES

$49,412 Avg
$50,000 Direct
$48,272 Spin-off

CAPITAL INVEST.

$7.0M
Buildings + FF&E

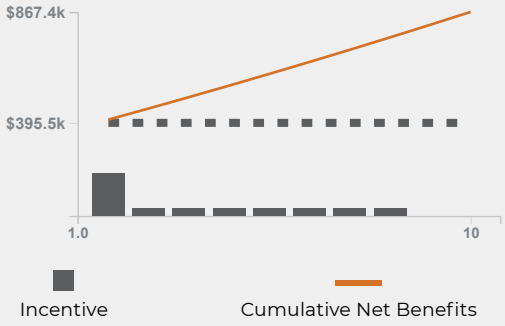
NET BENEFITS	$867,357
Present Value	$732,344

BENEFITS	
Sales Taxes	$72,436
Real Property Taxes	$477,955
FF&E Property Taxes	$47,497
Inventory Property Taxes	$0
New Residential Property Taxes	$1,917
Building Permits and Fees	$342,500
Utility Revenue	$369,079
Utility Franchise Fees	$0
Miscellaneous Taxes and User Fees	$55,613
Benefits Subtotal	**$1,366,997**

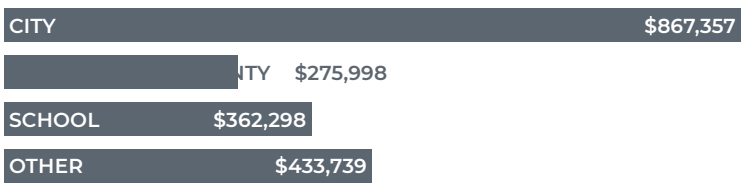
COSTS	
Cost of Government Services	($130,561)
Cost of Utility Services	($369,079)
Costs Subtotal	**($499,640)**

INCENTIVE ANALYSIS

$395,536	$13,185
Total Incentive	Per New Job
21.9%	**1.0 Yrs**
Rate of Return	Payback Period



NET BENEFITS OVER 10 YEARS



TOWN COUNCIL AGENDA ITEM NO. 32

REGULAR ITEM

DATE: December 7, 2020

FROM: Chuck Russell, Principal Planner

ITEM: **Consider a request for a Development Plan (DP20-0004 – Grace Park) to develop a residential subdivision, with an exception to Section IV.C.5. of the Town's Engineering Design Criteria requirement to provide a wet retention pond, and an exception to the access management policy and criteria, regarding driveway spacing, contained in the Town's Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances. The property is generally located south of Cross Timbers Road and east of Regency Park Court. (The Planning and Zoning Commission recommended approval by a vote of 5 to 1 at its November 9, 2020, meeting.)**

SUMMARY DATA:

- Size – 9.796 acres
- Proposed Density – 2.04 units per acre
- SMARTGrowth – Passed
- Traffic Analysis – Passed, based on the TA, traffic generated is not anticipated to exceed the 5% threshold.
- Exceptions – Dry Detention Pond and Driveway Spacing
- Incentives – N/A

BACKGROUND INFORMATION: Attached is the Planning and Zoning Commission (P&Z) report and backup for this item.

During P&Z deliberations, Commissioners had questions regarding the lots on the east side of the site. Staff verified that the lot orientation and the front, side and rear building setbacks were in compliance with the standards in the Town Code. Staff was also asked if the neighboring property owners were notified that the subject item was on the November 9, 2020, P&Z meeting. Since the item is not a public hearing, no official property owner notifications were sent. However, residents signed up to receive notification of upcoming projects on the P&Z agenda via NotifyMe were notified. In addition, on December 3, 2020, staff sent an emailed courtesy notice to everyone that had provided prior comments on the project.

Commissioners also questioned the applicant as to the reason for the dry pond exception request. He indicated that the primary reason was the difficulty in maintaining an attractive wet retention pond.

ATTACHMENTS:

1. Planning and Zoning Commission Staff Report

LEGAL REVIEW: N/A

DRAFT MOTION: Move to approve as presented in the agenda caption.

PLANNING AND ZONING COMMISSION
AGENDA ITEM NO: 7
REGULAR ITEM

DATE: November 9, 2020

FROM: Chuck Russell, Principal Planner

ITEM: **Consider a request for a Development Plan (DP20-0004 – Grace Park) to develop a residential subdivision, with an exception to Section IV.C.5. of the Town's Engineering Design Criteria requirement to provide a wet retention pond, and an exception to the access management policy and criteria, regarding driveway spacing, contained in the Town's Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances. The property is generally located south of Cross Timbers Road and east of Regency Park Court.**

I. ITEM SUMMARY

This application has been reviewed by DRC and determined to be ready for consideration by the Planning and Zoning Commission. There are no outstanding issues.

This application will require final action by the Town Council, which is scheduled for December 7, 2020.

II. APPLICATION ANALYSIS

A development plan is intended to show all the planning factors necessary to determine whether the proposed plan for land development is satisfactory from the standpoint of public health, safety and welfare and is in accordance with the general guidance provided by the comprehensive master plan. The purpose of this application is to obtain design approval for 20 buildable, single-family lots with a minimum lot size of 15,000 square feet. The site contains an approximately 9.796-acre parcel of land.

As part of the request, the applicant has asked for two exceptions to the Code of Ordinances, (see Section III below for additional information).

Exceptions:

- **Detention Pond:** The applicant is proposing to provide a dry detention pond in lieu of the required wet retention pond.
- **Driveway Spacing:** The proposed access point on Cross Timbers Road does not comply with the Town's required distance spacing from two existing driveways.

The development will provide for two points of ingress/egress; one along the south line of Cross timbers Road and one along the east side of the site connecting to an existing

stub out at Ida Lane, which will provide connectivity to the Flower Mound Woods subdivision. In addition to the proposed 20 buildable lots, the development plan depicts three open space lots, including a 25-foot landscape buffer along Cross Timbers Road. The proposed development is in compliance with the Town's landscaping standards. There are three specimen trees located on the site. All three specimen trees are proposed to be saved.

On September 21, 2020, the Town Council approved a request on the subject property for rezoning (Z20-0006 – Grace Park Residential) from Agricultural District (A) to Single-Family District-15 (SF-15). The proposed development plan is in compliance with the existing zoning as well as the Town's Master Plan designation for Low Density Residential uses.

III. EXCEPTIONS

A. Detention Pond

Section IV.C.5. of the Town's Engineering Design Criteria requires the construction of a wet retention pond for the proposed development. The applicant is requesting to provide a dry detention pond instead, located on Lot 6X of the attached development plan.

B. Driveway Spacing

The Town's Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances require driveway openings to be spaced a minimum of 360 feet apart on Major Arterials such as Cross Timbers Road. The applicant is proposing a driveway connection on Cross Timbers Road that will be approximately 238 feet from the nearest driveway to the west and approximately 144 feet from the existing driveway to the east.

IV. PARKS BOARD

On March 5, 2020, the Parks Board voted to recommend acceptance of cash, in the amount of $101,422.00, in lieu of the otherwise required Park Land Dedication, and Park Development Fees in the amount of $37,476.00. The March 5, 2020 Parks Board meeting can be viewed here:

https://flowermoundtx.swagit.com/play/03052020-969/22/

This recommendation was based on the 27 lots proposed at the time. The number of lots has since been reduced to 20, therefore the new figures for Town Council consideration are cash, in the amount of $74,875.58, be accepted in lieu of the otherwise required Park Land Dedication, and Park Development Fees in the amount of $27,760.00.

IV. ATTACHMENTS

A. Background Information

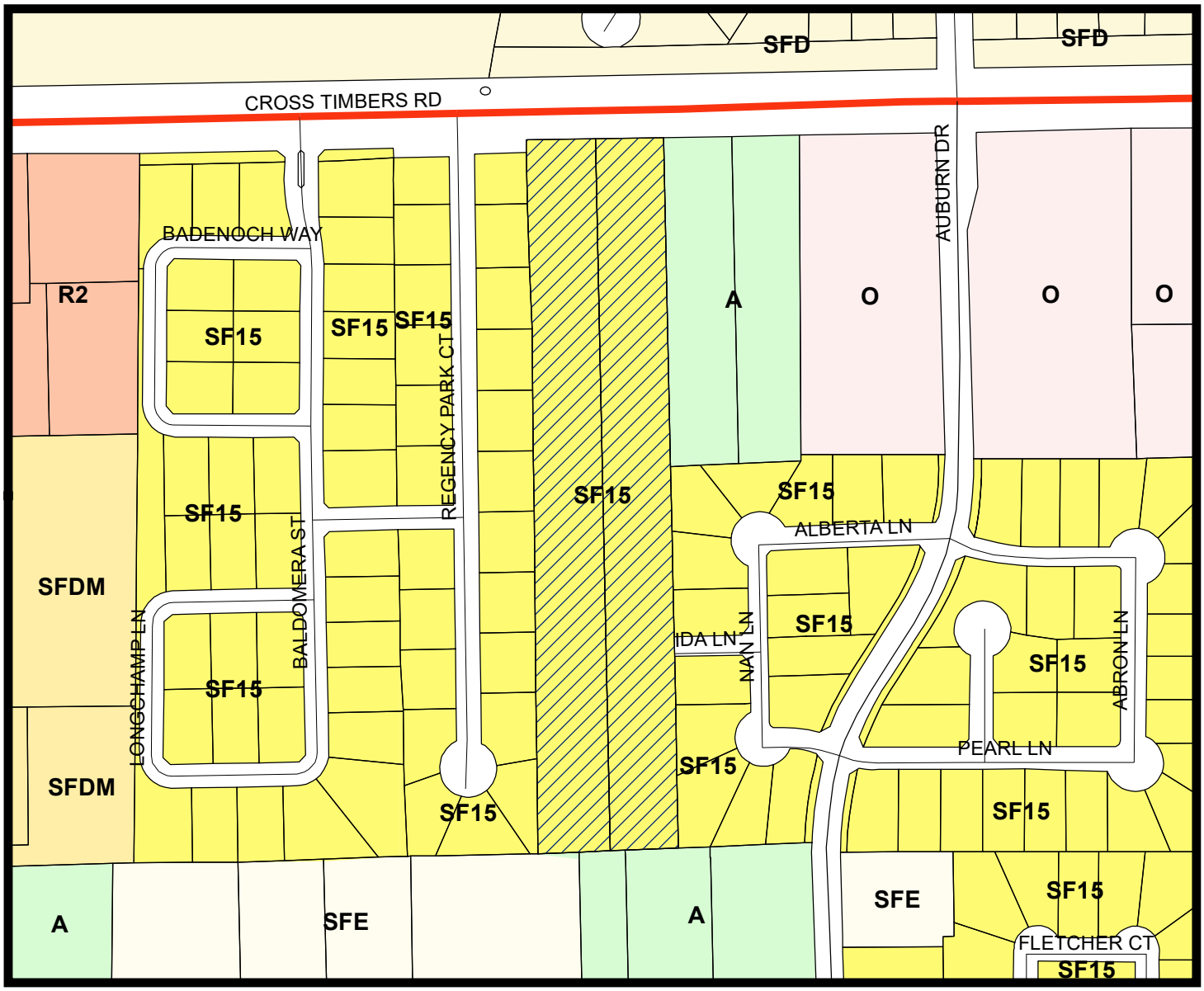
1. Vicinity Map
2. Letter of Intent

B. Application Details

1. Development Plan Exhibit

Vicinity Map

Reference Project: DP20-0004

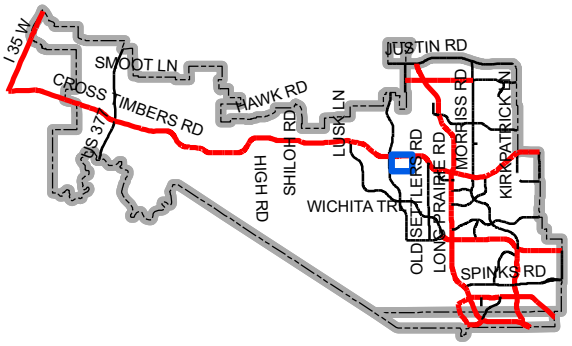


LEGEND

Agriculture | Office | Retail 2 | Single Family 15 | Single Family Density

Single Family Density Medium | Single Family Estate

Subject Property



Map Location

0 250 500 1,000 Feet

Rembert Enterprises, Inc.
3625 Bonanza Lane Flower Mound, TX 75022

September 22, 2020

Planning Division
2121 Cross Timbers Road
Flower Mound, TX 75028

RE: Grace Park (Community)
Flower Mound, Texas

To: Planning Director (Lexin Murphy)

Please accept this as our formal Letter of Intent to describe the requested Development Plan.

In October of 2019, we began the process of planning this +/- 9.796 acre tract of land near the Intersection of Regency Park Ct. and FM 1171 (also known as Cross Timbers Road, a public roadway), by meeting with the Town's Development Review Committee (DRC). This tract of land is surrounded by two (2) Low-Density Residential communities.

The current zoning for the property is SF-15, low-density residential. The proposed use is consistent with the Master Plan, zoning and density of the surrounding subdivisions.

G. Exceptions. The following exceptions to the Town's Ordinances shall apply to this Development Plan

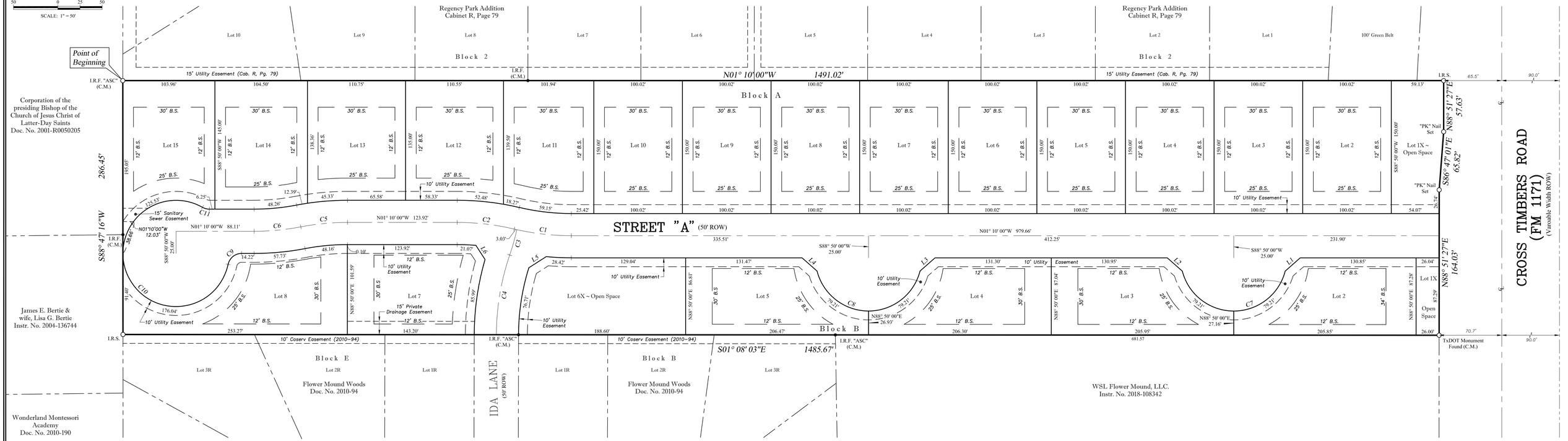
1. An exception to Section IV.C.5. of the Town's Engineering Design Criteria requirement to provide a wet retention pond. A dry detention area is provided on lot 6x Block B

2. An exception to the access management policy and criteria regarding driveway spacing contained in the Town's Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances.

We appreciate your consideration of our project and should you have any questions, please feel free to contact us.

Sincerely,

Reginald Rembert
Rembert Enterprises, Inc.



STATE OF TEXAS §

COUNTY OF DENTON §

WHEREAS, Joseph and Jody Keahey Family Trust are the owners of a called 4.952 acres tract of land described by deed recorded under Instrument Number 2020-81315, Official Public Records, Denton County, Texas (O.P.R.D.C.T.), and a called 4.952 acres tract of land described by deed recorded under Instrument Number 2020-81534, O.P.R.D.C.T., and being more particularly described by metes and bounds as follows::

BEGINNING at a 1/2 inch iron rod found for the southeast corner of Lot 10, Block 2 of Regency Park Addition, an addition to the Town of Flower Mound, as recorded in Cabinet R, Page 79, Plat Records, Denton County, Texas also being a point on the north line of a tract of land conveyed to Corp. Pres. Bishop LDS Church by deed recorded in Instrument Number 2001-50205, Deed Records, Denton County, Texas;

THENCE North 01 degrees 10 minutes 00 seconds West, departing the north line of said Corp. Pres. tract, with the east line of said Lot 10 and continuing with the east lines of Lots 8 and 9, Block 2 of said Regency Park, passing a 1/2 inch iron rod found for the northeast corner of said Lot 8, same being the southeast corner of Lot 7, Block 2 of said Regency Park, a distance of 457.24 feet and continuing with the east lines of Lots 1, 2, 3, 4, 5, 6 and 7, Block 2, of said Regency Park, and continuing with the east line of a 100 foot green belt dedication as recorded in Cabinet R, Page 79, Plat Records, Denton County, Texas and continuing to the south right of way line of Cross Timbers Road (Called 180 foot right of way by Cabinet R, Page 79, P.R.D.C.T.), a total distance of 1,491.02 feet to a 1/2 inch iron rod with blue cap stamped "Old Town Surveying" (OTS) set for corner;

THENCE the following three calls with the south right of way line of said Cross Timbers Road:

North 88 degrees 51 minutes 27 seconds East, a distance of 57.63 feet to a PK Nail set for corner;

South 86 degrees 47 minutes 01 seconds East, a distance of 65.82 feet to a PK Nail set for corner;

North 88 degrees 51 minutes 27 seconds East, a distance of 164.03 feet to a TXDOT Monument found for the northwest corner of a tract of land conveyed to WSL Flower Mound, LLC by deed recorded in Instrument Number 2018-108342, Deed Records, Denton County, Texas;

THENCE South 01 degrees 08 minutes 03 seconds East, departing the south right of way line of said Cross Timbers Road, with the west line of said WSL tract, passing a 1/2 inch iron rod capped "ASC" found for the southwest corner of said WSL tract, same being the northwest corner of Lot 3R, Block D, Flower Mound Woods, an addition to the Town of Flower Mound, as recorded in Instrument Number 2010-94, Plat Records, Denton County, Texas, at a distance of 681.54 feet, and continuing with the west line of said Lot 3R, also with Lots 1R and 2R, Block D, of said Flower Mound Woods, passing a 1/2 inch iron rod capped "ASC" found for the southwest corner of said Lot 1R, same being the northwest corner of Ida Lane (50 foot right of way line), at a distance of 1,039.14 feet and continuing with the west lines of Lots 1R, 2R, and 3R, Block E, of said Flower Mound Woods, a total distance of 1,485.67 feet to a 1/2 inch iron rod capped "ASC" set for the southwest corner of said second referenced Lot 3R and lying on the north line of a tract of land conveyed to James E. and Lisa G. Bertie by deed recorded in Instrument Number 2004-136744, Deed Records, Denton County, Texas;

THENCE South 88 degrees 47 minutes 16 seconds West, with the north line of said Bertie tract, passing a 1/2 inch iron rod capped "Concmon" found for the northwest corner of said Bertie tract, same being the northeast corner of said Corp. Pres. tract, a distance of 112.65 feet and continuing with the north line of said Corp. Pres. tract, a total distance of 286.45 feet to the **POINT OF BEGINNING** and containing 426,698 square feet or 9.796 acres of land, more or less.

Curve Table				
Curve #	Length	Radius	Delta	Chord
C1	64.95	280.00	013°17'28"	N05° 28' 44"E 64.81
C2	64.95	280.00	013°17'28"	S05° 28' 44"W 64.81
C3	29.69	280.00	006°04'33"	N75° 20' 18"W 29.68
C4	91.61	280.00	018°44'47"	S81° 40' 24"E 91.20
C5	52.99	280.00	010°50'39"	S06° 35' 19"E 52.92
C6	52.99	280.00	010°50'39"	N06° 35' 19"W 52.92
C7	158.42	60.00	151°16'37"	N01° 10' 00"W 116.25
C8	158.42	60.00	151°16'37"	N01° 10' 00"W 116.25
C9	21.14	15.50	078°09'11"	S40° 14' 36"E 19.54
C10	301.57	60.00	287°58'41"	N64° 40' 09"E 70.55
C11	8.07	15.50	029°49'30"	N13° 44' 45"E 7.98

Line Table		
Line #	Direction	Length
L1	N42° 34' 35"W	22.50
L2	S40° 14' 34"W	22.50
L3	N42° 34' 35"W	22.50
L4	S40° 14' 34"W	22.50
L5	N33° 44' 36"W	23.21
L6	S55° 52' 17"W	19.03

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

THAT THE JOSEPH AND JODY KEAHEY FAMILY TRUST, by and through its duly authorized officer, does hereby adopt this plat designated herein as **GRACE PARK**, an addition to the Town of Flower Mound, Denton County, Texas. The easements shown hereon are hereby reserved for the purposes as indicated.

The easements shown hereon are hereby reserved for the purposes as indicated. All rights-of-way are hereby dedicated in fee simple to the Town of Flower Mound for municipal purposes. Lot 1X Block A and Lots 1X and 6X, Block B are hereby dedicated in fee simple to the Home Owners Association for maintenance purposes and common areas. Private Drainage Easements are dedicated to the Home Owners Association for all maintenance purposes. All streets, alleys and common areas shall be open to the public, fire and police units, garbage and rubbish collection agencies and all public and private utilities for each particular use. No buildings, trees, shrubs or other improvements or growths shall be constructed, reconstructed or placed upon, over or across the utility easements as shown. Said utility easements being hereby reserved for the mutual use and accommodation of all public utilities using or desiring to use the same.

All and any public utility shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which in any way endanger or interfere with the construction, maintenance of efficiency of its respective system on the utility easements and all public utilities shall at all times have the full right of ingress and egress to and from and upon said utility easements for the purpose of construction, reconstructing, inspecting, patrolling, maintaining and adding to or removing all or parts of its respective systems without the necessity at any time of procuring the permission of anyone. Any public utility shall have the right of ingress and egress to private property for the purposes of reading meters and any maintenance and service required or ordinarily performed by that utility.

This plat approved subject to all platting ordinances, rules, regulations and resolutions of the Town of Flower Mound.

WITNESS my hand this _____ day of _____, 2020.

By: _____
(Authorized Agent)

STATE OF TEXAS §

COUNTY OF DENTON §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this _____day of _____ 20____.

_____
Notary Public in and for the State of Texas

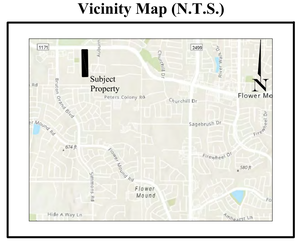
Notes:

1. Bearings shown hereon are based on the Trimble GPS Network, North Central Zone 4202.
2. It is my opinion that the property described hereon is not within the 100-year flood zone area according to the Federal Emergency Management Agency Flood Insurance Rate Map Community-Panel No. 480777 0540 G, present Effective Date of map April 18, 2011, herein property situated within Zone "X" (Unshaded).
3. Notice: Selling a portion of this addition by metes and bounds is a violation of Town subdivision ordinance and state platting statutes and is subject to fines and withholding of utilities and building certificates.
4. No concentrated drainage shall be directed at downstream lots.
5. Pursuant to the Ordinance No. 36-92 of the Town of Flower Mound, Texas, a mandatory Homeowners's association shall be established and created to assume and be responsible for the continuous and perpetual operation maintenance and/or supervisions of drainage easements, landscaping systems or their physicals facilities of ground held in common and necessary or desirable for the welfare of the area of subdivision or that are of common use or benefit. Said mandatory Homeowner's Association shall be responsible for the continuous and perpetual operation maintenance and/or supervision of landscape systems, features or elements located in parkway common area, between screening walls or living screens and adjacent curbs or street pavement edges, adjacent to drainage ways or drainage structures, or at subdivision entryways.
6. All X-lots are un-buildable and shall be dedicated to and maintained by the Homeowner's Association.
7. All retaining/detaining walls, turn-down curbs, tree retaining walls shall be clad in a material to complement the material and colors within this development.
8. The Private Drainage Easement on Lot 7, Block B is to be dedicated to the H.O.A.

LEGEND

- I.R.F. ~ 1/2" Iron Rod Found
- I.R.S. ~ 1/2" Iron Rod Set with blue cap stamped "Old Town Surveying"
- C.M. ~ Controlling Monument
- R.O.W. ~ Right-of-Way
- "ASC" ~ Arthur Surveying Company"
- B.S. ~ Building Setback

Vicinity Map (N.T.S.)



MASTER PLAN FEATURES	
Land Use Plan	Low Density Residential
Specific Plans	None
Urban Design Plan	None
Parks and Trails	8' Trail along F.M. 1171
Open Space Plan	N/A
Thoroughfare Plan	Cross Timbers Road – Major Arterial;
Water Plan	Existing 12" WM, S. Side of Cross Timbers Rd.
Wastewater Plan	Connect to existing SS manhole at Ida Lane & to Existing 8" SS stub, at west property line of subject tract. on Cross Timbers Road.

STATE OF TEXAS §

COUNTY OF DENTON §

This is to certify that I, Thomas W. Mauk, a Registered Professional Land Surveyor of the State of Texas, have platted the subdivision from an actual survey on the ground, and that this plat correctly represents that survey made by me or under my direction and supervision.

_____
Thomas W. Mauk, R.P.L.S.
No. 5119

Zoning Standard SF-15	Required
Min. Lot Area	15,000 sf.
Min. Lot Width	80 ft.
Min. Floor Area	1,800 sf.
Min. Front Yard	25 ft.
Min. Side Yard	12 ft.
Min. Rear Yard	30 ft.
Max. Lot Coverage	35 %
Max. Height (stories/ft.)	3/35 ft.

STATE OF TEXAS §

COUNTY OF DENTON §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Thomas W. Mauk, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this _____day of _____ 20____.

_____
Notary Public in and for the State of Texas

Parcel Table	
Name	Area
Lot 1X Block A	8568
Lot 2 Block A	15003
Lot 3 Block A	15003
Lot 4 Block A	15003
Lot 5 Block A	15003
Lot 6 Block A	15003
Lot 7 Block A	15003
Lot 8 Block A	15003
Lot 9 Block A	15003
Lot 10 Block A	15003
Lot 11 Block A	15002
Lot 12 Block A	15003
Lot 13 Block A	15002
Lot 14 Block A	15011
Lot 15 Block A	15013
Lot 1X Block B	2271
Lot 2 Block B	15019
Lot 3 Block B	15004
Lot 4 Block B	15011
Lot 5 Block B	15001
Lot 6X Block B	15856
Lot 7 Block B	15007
Lot 8 Block B	18004

OWNER
JOSEPH & JODY KEAHEY FAMILY TRUST
3861 Cross Timbers Road
Flower Mound, TX 75028

DEVELOPER
REMBERT ENTERPRISES
3625 Bonanza Lane
Flower Mound, TX 75022
Contact: Reginald Rembert
Phone: 214.213.5982

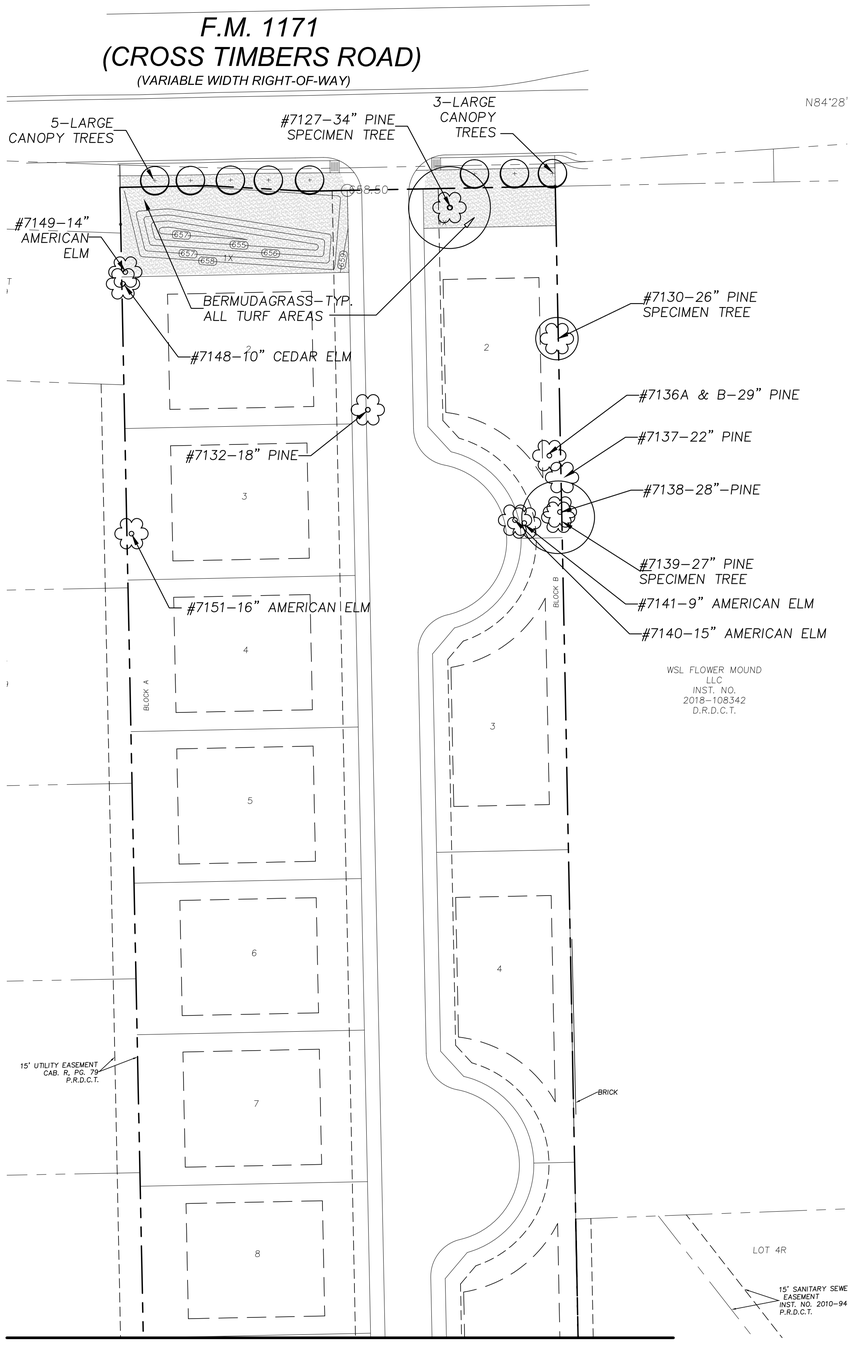
ENGINEER
Ridinger Associates, Inc.
Civil Engineers - Planners
Firm No. 13969
550 S. Edmonds Lane, Suite 101
Lewisville, Texas 75067
Tel. No. (972) 353-8000
Fax No. (972) 353-8011

SURVEYOR
Old Town Surveying, LLC
Professional Land Surveyors
579 N. Valley Pkwy., Ste. 120, Lewisville, Texas, 75067
Ph. 469-293-8079 info@oldtownsurveying.com
TFRN Number: 10194611

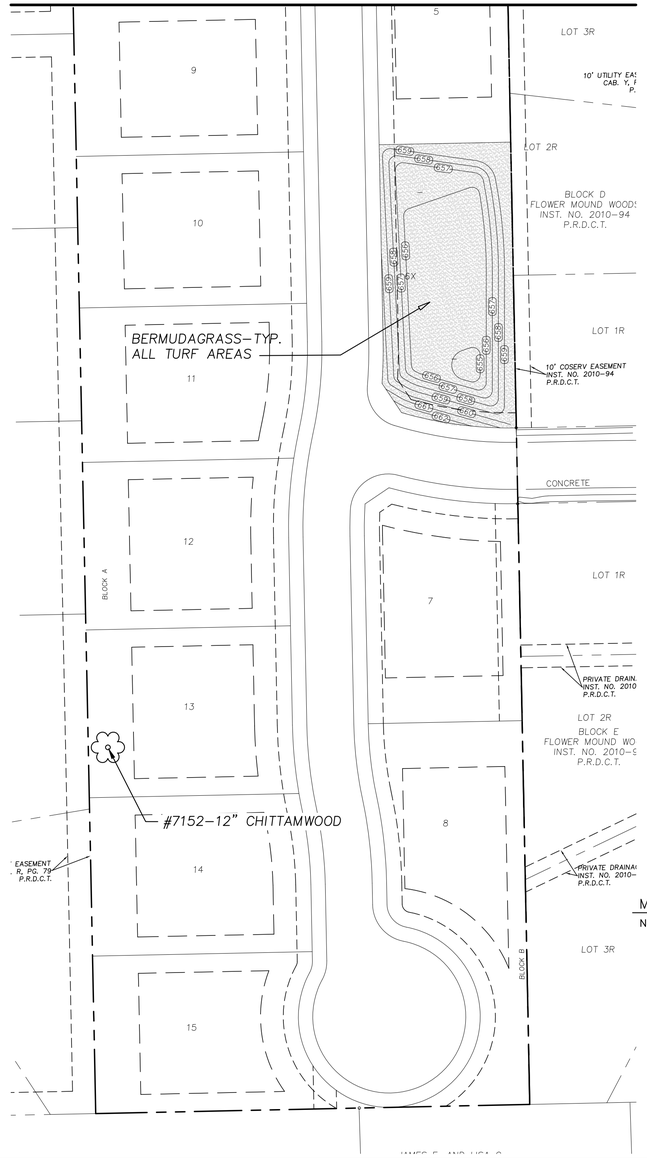
DEVELOPMENT PLAN
of
GRACE PARK
Lots 1X, 2 - 15, Block A
Lot 1X, Lots 2 - 5, Lot 6X, Lots 7 and 8, Block B
and being 9.796 Acres out of
the Perry Malone Survey, Abstract Number 836,
Town of Flower Mound, Denton County, Texas
-- 2020 --

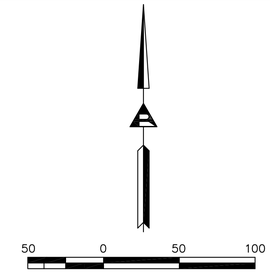
Job No.: 2020806 Date: 10/23/2020 Drafted By: TO

FOR DENTON COUNTY USE ONLY
FOR DENTON COUNTY USE ONLY
FOR DENTON COUNTY USE ONLY
FOR DENTON COUNTY USE ONLY



TAG #	SPECIES	DBH	CANOPY RADIUS	CANOPY SQ. FT.	CONDITION	NOTES	NOTES	REMARKS
7127	PINE, PINUS ELLIOTII	34"	27'	615	GOOD		PRESERVE	SPECIMEN
7130	PINE, PINUS ELLIOTII	26"	14'	615	FAIR	POWER LINES	PRESERVE	SPECIMEN
7132	PINE, PINUS ELLIOTII	18"	18'	1017	GOOD		REMOVE	PROTECTED
7141	AMERICAN ELM, ULMUS AMERICANA	9"	7'	154	GOOD		REMOVE	PROTECTED
7140	AMERICAN ELM, ULMUS AMERICANA	15"	12'	452	GOOD	POWER LINES	REMOVE	PROTECTED
7139	PINE, PINUS ELLIOTII	27"	24'	907	FAIR	DECLINE	PRESERVE	PROTECTED
7138	PINE, PINUS ELLIOTII	28"	5'	79	POOR	CANOPY DAMAGE	PRESERVE	SPECIMEN
7137	PINE, PINUS ELLIOTII	22"	12'	452	FAIR	VINES	PRESERVE	PROTECTED
7136A	PINE, PINUS ELLIOTII	20"	9'	254	FAIR	CODOMINATE STEM	PRESERVE	PROTECTED
7136B	PINE, PINUS ELLIOTII	19"	12'	452	FAIR	CODOMINATE STEM	PRESERVE	PROTECTED
7148	CEDAR ELM, ULMUS CRASSIFOLIA	10"	8'	201	GOOD		PRESERVE	PROTECTED
7149	AMERICAN ELM, ULMUS AMERICANA	14"	10'	3141	FAIR	FENCELINE	PRESERVE	PROTECTED
7151	AMERICAN ELM, ULMUS AMERICANA	16"	15'	707	POOR	FENCELINE, IRREGULAR CANOPY	PRESERVE	PROTECTED
7152	CHITTAMWOOD, BUMELIA LANGUINOSA	12"	6'	113	FAIR	IRREGULAR CANOPY	PRESERVE	PROTECTED





GENERAL LANDSCAPE NOTES

1. All landscape areas are to be received within .1' of proposed finish grade and free from all trash and debris.
2. All trees are to be planted in pits twice the diameter of the tree ball and no deeper than the depth of the ball. Scarify all tree pit sides prior to planting. All trees are to be planted plumb and at or slightly above finish grade. All tree pits are to have a 3" watering saucer formed around the perimeter of the pit. All tree pits are to be top dressed with a 2" layer of shredded hardwood mulch. Stake and / or guy trees only at the direction of the landscape architect.
3. Rotovate the existing soil of all planting beds to a minimum depth of 6". Add a 3" layer of premium compost as supplied by Living Earth Technology and till into the top 3" of the existing soil. Install all shrubs 1" above finish grade and fertilize with Agri-form slow release fertilizer tablets at the manufacturer's recommended rates of application. Top dress all planting beds with a 2" layer of shredded hardwood mulch.
4. All planting beds not formed by a concrete curb or sidewalk are to edged with Steel Edging (1/8"x4" painted green) or an approved equal. All edging stakes are to be placed to the inside of the bed and the top of the edging is to be no less than 1" and no more than 1.5" above proposed finish grade.
11. All turf and planting beds to be zoned separately. All planting bed heads to be on 12" pop-up risers. All turf heads to be on 4" pop-up risers. All valves to be plastic valves. All equipment to be Rainbird or approved equal.
12. All mainline and lateral line to have a minimum of 12" of cover and to be SDR (class 200) pipe.
13. Quantities shown on plant list are landscape architect's estimate only and should be verified prior to bidding. Contractor shall be responsible for bidding and providing quantity of plants required at spacing designated for bed sizes and configurations shown on the plans regardless of quantities designated on plant list.

IRRIGATION NOTES:

1. All landscaped areas shall be irrigated with an irrigation system capable of providing the proper amount of water for the particular for the particular type of plant material used. Irrigation will be provided by an underground sprinkler system, or a subterranean drip drip system as approved by the City Arborist.
2. Automatic underground irrigation system shall be equipped with freeze guard set at 38 degrees F.
3. Areas of open space which contain preserved trees need not be irrigated if the City Arborist determines irrigation would be harmful to the preserved trees.

OPEN SPACE GRADING SHOWN IS PRELIMINARY AND IS SUBJECT TO CHANGE WITH FINAL CONSTRUCTION PLANS.

5. All turf areas are to be hydromulch Bermudagrass, unless otherwise noted on the plan.
6. Hydromulch with Bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. If installation occurs between September 1 and April 1, all hydromulch areas to be Winter Ryegrass at a rate of four (4) pounds per thousand square feet. Contractor shall be required to re-hydromulch with Bermudagrass the following growing season.
7. All sodded areas are to receive common bermuda sod laid parallel to the contour of the land. All sod on slopes greater than 1:4 is to be pinned with 1"x1"x12" wooden stakes. All sod is to be laid with tight joints and with all joints staggerd. Roll all sod with a water ballast lawn roller upon installation and fertilize with a complete fertilizer (13-13-13) at the rate of 1.5# actual nitrogen per 1000 square feet. Water all sod thoroughly.
8. All irrigation meter(s) are to be by utility contractors as per local codes. Irrigation sleeves to be installed by licensed irrigation contractor as per the plan.
9. All irrigation controllers are to have mini-click freeze and rain stats installed as per manufacturer's recommendations.
10. All irrigation sleeves to be by licensed irrigation contractor. All sleeves to be PVC schedule 40 with 90 degree elbows on both ends with extensions protruding 18" above proposed finish grade.

MAINTENANCE NOTES:

1. All plant material shall be maintained in a healthy and growing condition, and must be replaced with plant material of similar variety and size if damaged, destroyed or removed.
2. Landscaped areas shall be kept free of trash, litter, weeds and other such materials or plants not part of the landscaping.
3. The property owner is responsible for regular weeding, mowing of grass, irrigating, fertilizing, pruning and other maintenance of all plantings, including parkways, as needed.
4. Undisturbed, naturalized area, shown on this plan is to be maintained by periodic field mowing as required by Town of Floer Mound standards.

TREE PRESERVATION AND MITIGATION NOTES:

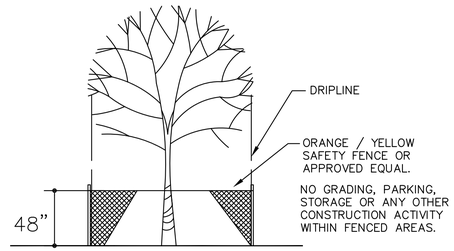
1. Developer / Contractor to install tree preservation fencing as shown by Limits of Construction as shown on this plan and Per Detail on Sheet LP-1. Fencing Installation and proper location to be verified by Town of Flower Mound prior to construction. Refer to tree protection notes on Tree Survey and Tree Preservation Plan.
2. Existing Protected trees removed shall be mitigated as required by the Town of Flower Mound. Credits for tree preservation, If any, shall be calculated as provided by the Town of Flower Mound ordinanances.

Required screenwall shall be provided per detail shown on this plan.
No Amenities are to be provided per this plan.

PLANT LIST

8-LARGE CANOPY TREES / 3" cal. /8-10' Ht. /6' Sp./ Container grown
Bermudagrass / Cynodon dactylon / Hydromulch

Note:
Per Sec. 94-66. Approved tree planting lists.
To promote biodiversity, there shall be no more than 20 percent of a tree species, and no more than 50 percent of any tree genus permitted to satisfy the planting requirements on all new developments.



MINIMUM TREE PROTECTION
N.T.S.

ST. CLAIR DESIGN GROUP, INC
Landscape Architecture
P. O. Box 12519
Dallas, Texas 75225
T. 214-454-9934

JOHN G. ST. CLAIR — 2210 — REGISTERED LANDSCAPE ARCHITECT — STATE OF TEXAS

DATE SEALED: NOVEMBER 2, 2020
DESIGN BY: JBS
DRAWN BY: JBS
CHECKED BY: SCDG
DATE: SEPTEMBER 11, 2019

DEVELOPMENT PLAN
LANDSCAPE PLAN
GRACE PARK
RESIDENTIAL SUBDIVISION
9.796 acres Situated in the
P. Malone Survey, Abstract No. 836
in the
Town of Flower Mound
Denton County, Texas

No.	Date	Revisions	App.

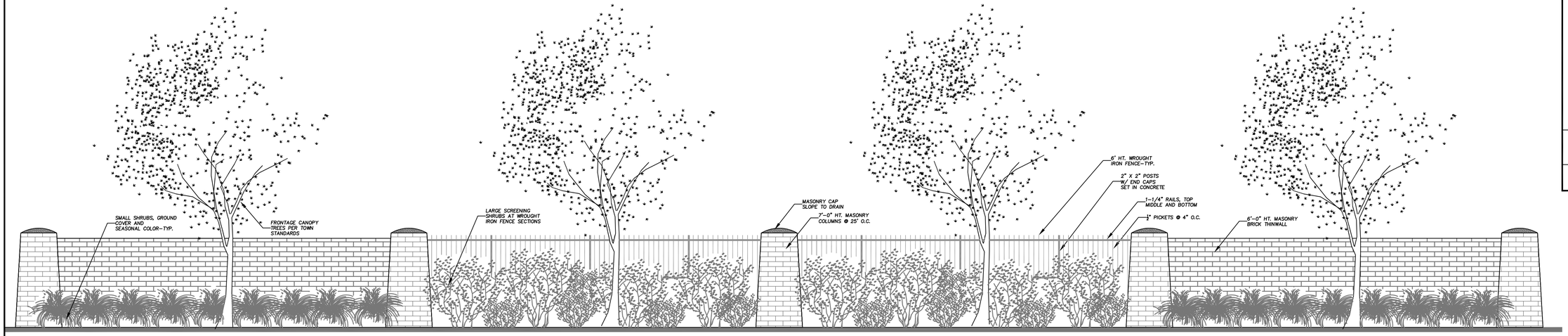
Ridinger Associates, Inc.
Civil Engineers - Planners
Firm No. 1969
550 S. Edmonds Lane, Suite 101
Lewisville, Texas 75067
Tel. No. (972) 353-8000
Fax No. (972) 353-8011

GRACE PARK
RESIDENTIAL SUBDIVISION
FLOWER MOUND, TEXAS

DEVELOPMENT PLAN
LANDSCAPE PLAN

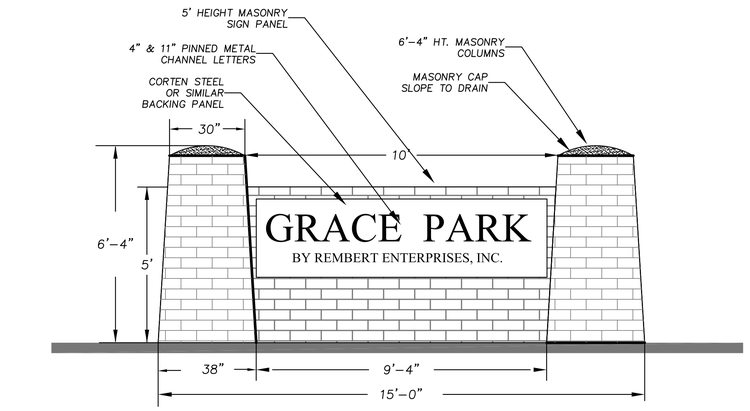
Scale: 1" = 100'
Designed by: LDR
Drawn by: JWH
Checked by: LDR
Date: NOVEMBER 2, 2020
Project No. 035-030

SHEET
LP-1



WALL AND FENCE ELEVATION (EACH SIDE OF ENTRY DRIVE)

NOT TO SCALE



ENTRY SIGNAGE

NOT TO SCALE

ST. CLAIR DESIGN GROUP, INC
Landscape Architecture
P. O. Box 12519
Dallas, Texas 75225
T. 214-454-9934

REGISTERED LANDSCAPE ARCHITECT
GRACE B. ST. CLAIR
2210
STATE OF TEXAS

DATE SEALED: OCTOBER 23, 2020
DESIGN BY: JBS
DRAWN BY: JBS
CHECKED BY: SCDG
DATE: NOVEMBER 7, 2019

DEVELOPMENT
LANDSCAPE PLAN DETAILS
GRACE PARK
RESIDENTIAL SUBDIVISION
9.796 acres Situated in the
P. Malone Survey, Abstract No. 836
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GRACE PARK
RESIDENTIAL SUBDIVISION
FLOWER MOUND, TEXAS

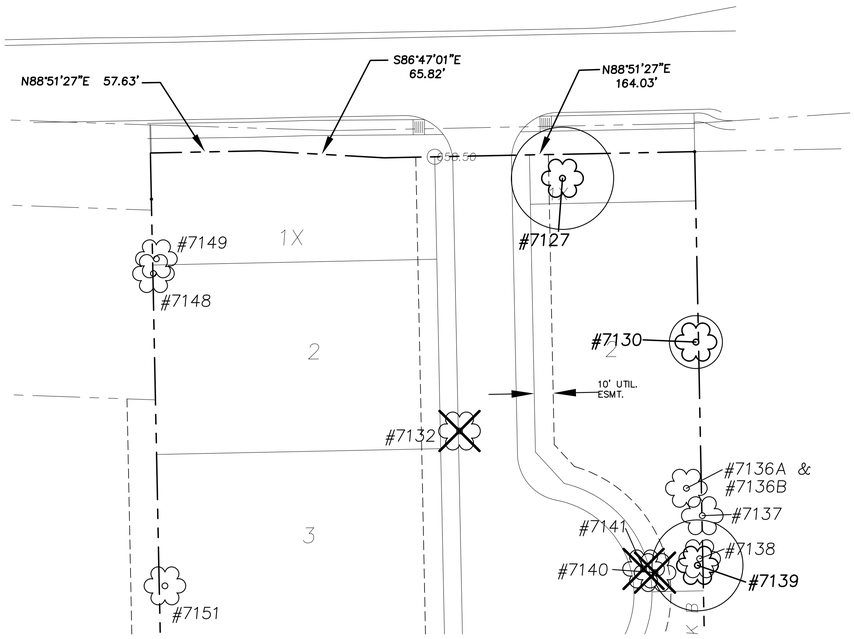
DEVELOPMENT
LANDSCAPE PLAN
DETAILS

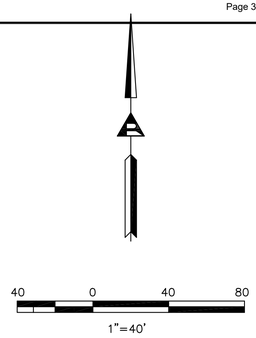
Scale: NOT TO SCALE
Designed by: JBS
Drawn by: JBS
Checked by: SCDG
Date: OCTOBER 23, 2020
Project No. 035–030

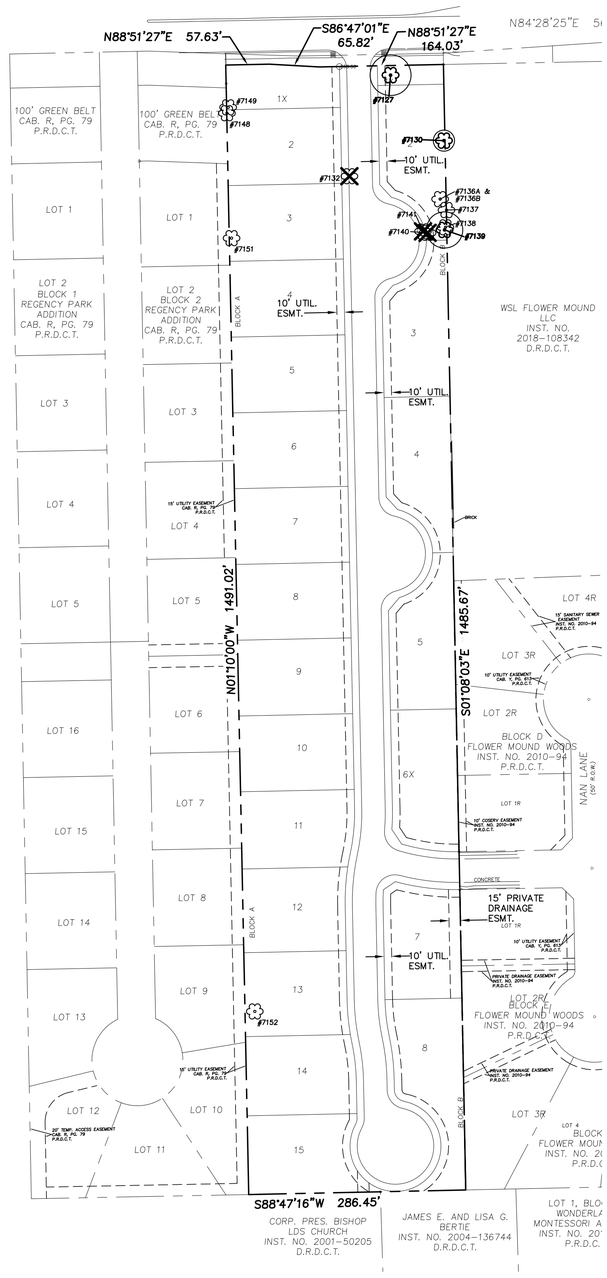
SHEET
LP-2

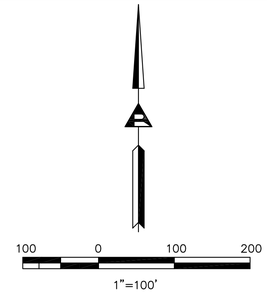
F.M. 1171
(CROSS TIMBERS ROAD)

(VARIABLE WIDTH RIGHT-OF-WAY)









TREE LEGEND

- SPECIMEN TREE
- SPECIMEN TREE CANOPY
- PROTECTED TREE TO REMAIN
- PROTECTED TO TO BE REMOVED

MATTHEW CLEMONS
ASCA
ARBORIST CERTIFICATION #5903
Board Certified Consulting Arborist
10/23/2020

TAG NO.	COMMON NAME	BOTANICAL NAME	DBH	CANOPY RADIUS	CANOPY SQ. FT.	CONDITION	NOTES	STATUS
7127	PINE	PINUS ELLIOTII	34	27	2289	GOOD		SPECIMEN
7130	PINE	PINUS ELLIOTII	26	14	615	FAIR	POWER LINES	SPECIMEN
7139	PINE	PINUS ELLIOTII	27	24	1809	FAIR	DECLINE	SPECIMEN
7132	PINE	PINUS ELLIOTII	18	18	1017	GOOD		PROTECTED
7136A	PINE	PINUS ELLIOTII	20	9	254	FAIR	CODOMINANT STEM	PROTECTED
7136B	PINE	PINUS ELLIOTII	19	12	452	FAIR	CODOMINANT STEM	PROTECTED
7137	PINE	PINUS ELLIOTII	22	12	452	FAIR	VINES	PROTECTED
7138	PINE	PINUS ELLIOTII	12	4	13	POOR	CANOPY DAMAGE	PROTECTED
7140	AMERICAN ELM	ULMUS AMERICANA	15	12	452	GOOD		PROTECTED
7141	AMERICAN ELM	ULMUS AMERICANA	9	7	154	GOOD		PROTECTED
7148	CEDAR ELM	ULMUS CRASSIFOLIA	10	8	201	GOOD		PROTECTED
7149	AMERICAN ELM	ULMUS AMERICANA	14	10	314	FAIR	FENCELINE	PROTECTED
7151	AMERICAN ELM	ULMUS AMERICANA	16	15	707	POOR	FENCELINE,IRREGULAR CANOPY	PROTECTED
7152	CHITTAMWOOD	BUMELIA LANGUINOSA	12	6	113	FAIR	IRREGULAR CANOPY	PROTECTED

3 – SPECIMEN TREES ON SITE.
0 – SPECIMEN TREES TO BE REMOVED FROM SITE.
11 – PROTECTED TREES ON–SITE.
0 – PROTECTED TREES TO BE REMOVED FROM A BUILDABLE AREA.
3 – PROTECTED TREES TO BE REMOVED FROM A PROPOSED RIGHT–OF WAY.
$0.00 TREE MITIGATION COST

GRACE PARK
RESIDENTIAL SUBDIVISION
Being 20 Buildable Lots & 3 X-Lots
9.796 acres Situated in the
P. Malone Survey, Abstract No. 836
in the
Town of Flower Mound
Denton County, Texas

No.	Date	Revisions	App.

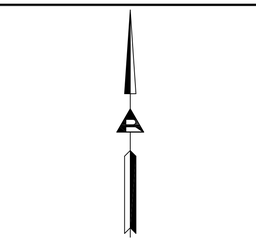
Ridinger Associates, Inc.
Civil Engineers - Planners
Firm No. 1969
550 S. Edmonds Lane, Suite 101
Lewisville, Texas 75067
Tel. No. (972) 353-8000
Fax No. (972) 353-8011

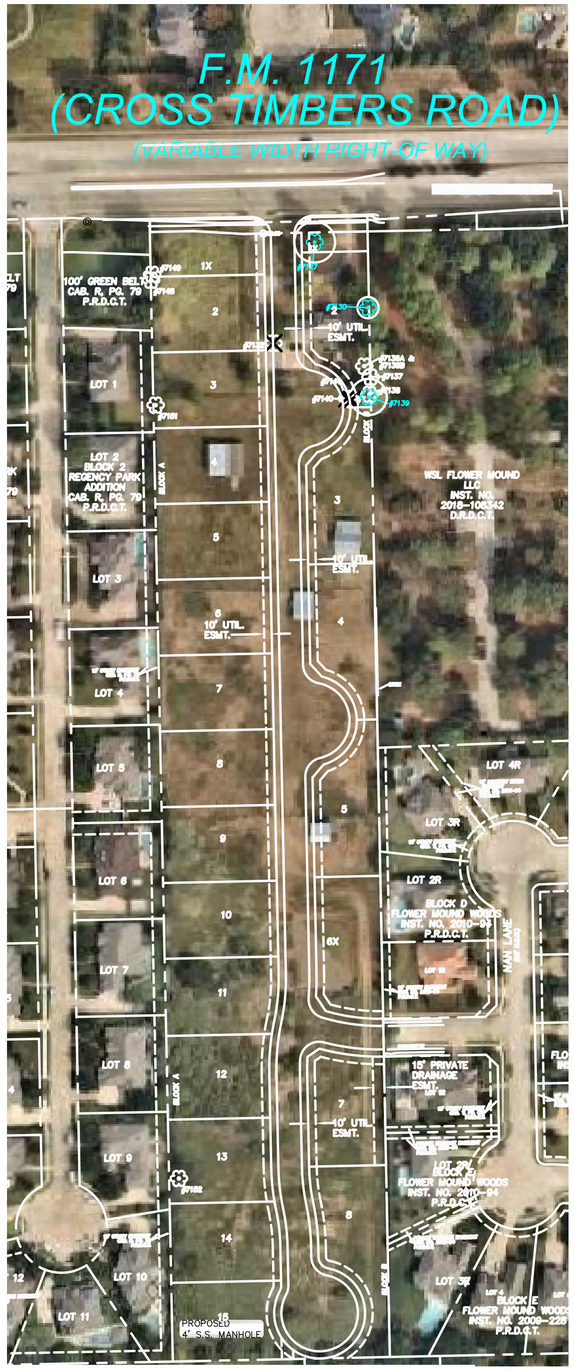
GRACE PARK
RESIDENTIAL SUBDIVISION
FLOWER MOUND, TEXAS

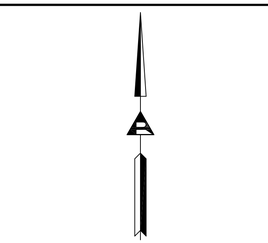
TREE SURVEY

Scale: 1" = 100'
Designed by: LDR
Drawn by: JWH
Checked by: LDR
Date: OCTOBER 23, 2020
Project No. 035-030

SHEET
TS–1







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MATTHEW CLEMONS
ASCA AMERICAN SOCIETY OF CONSULTING ARBORISTS
Registered Consulting Arborist #670
10/23/2020

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GRACE PARK
RESIDENTIAL SUBDIVISION
FLOWER MOUND, TEXAS

TREE SURVEY

Scale: 1" = 100'
Designed by: LDR
Drawn by: JWH
Checked by: LDR
Date: OCTOBER 23, 2020
Project No. 035-030

SHEET
TS-1

TOWN COUNCIL AGENDA ITEM NO. 33

REGULAR ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Public Hearing to consider a recommendation to amend the Town of Flower Mound Master Plan through the amendment of Section 8.0 Water Plan, to adopt amendments and additions to the 2009 Water Master Plan Update as a component of the Master Plan. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020, meeting.)**

BACKGROUND INFORMATION: The Town periodically provides updates to its Master Plans. Growth trends and population distribution, along with collected field data, are reflected in the update to the Town's Water Model. The updated model helps the Town determine priorities for upcoming Capital Projects and is used to determine updated impact fees. The water model has been updated and, as a result, staff is recommending approval of the amendment to the Water component of the Master Plan. Upon approval of this amendment, staff will continue with the impact fee update process.

BOARD REVIEW/CITIZEN FEEDBACK: The Planning & Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020 meeting.

The Town Code requires public notice in a newspaper of general circulation (Denton Record Chronicle) for all Master Plan amendment requests. At the time this report was written, staff had received no correspondence regarding the request.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: The Ordinance was prepared by Lindsey Hale with Taylor, Olson, Sralla, & Elam L.L.P.

ATTACHMENTS:

1. Proposed Water Master Plan Amendment
2. Proposed Section 8.0 Water Plan
3. Draft Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

Kimley»Horn

Technical Memorandum

Prepared for: Town of Flower Mound

Prepared by: Kimley-Horn and Associates, Inc.

Date: November 4, 2020

WATER MASTER PLAN AMENDMENTS

This memo amends the Water System Master Plan Update prepared by Kellogg Brown & Root (KBR) in 2009. Sections of this memo are designated with the corresponding section number from the 2009 document.

1.1.A Background Supplemental

The Town of Flower Mound has retained Kimley-Horn to update the Town's water model and Water Master Plan for the year 2020. Kimley-Horn utilized the model prepared by KBR in 2009 and subsequently updated by Kimley-Horn in 2015. This master plan updated the 2015 model based on current water demands, demographics, future land uses and growth projections.

1.2 Study Area

The Town encompasses approximately 44 square miles of land area. Of this area, approximately 32 square miles is developable with the remainder consisting of Grapevine Lake, floodplain, and roads. Of this developable area, approximately 68% of this land is developed and 32% is either undeveloped or planned to be redeveloped in the future. The future undeveloped/redeveloped areas were evaluated to determine future densities of population and non-residential developments. Projected buildout water demands were estimated by working with the Town's planning department.

The Town has three large planning areas identified on their land use map with potential future growth: the Lakeside District, the Denton Creek District, and the Prairie Vista District. In the 2015 master plan update, the Lakeside area land use was modified to include some residential in the Campus Commercial areas. Kimley-Horn worked with the Town's planning department to determine the projected water demands for this area. The 2020 model reflects what is currently developed in that area as well as entitlements for developments that have already been approved by the Town. The second area, Denton Creek, is currently being developed and will include a mix of residential and non-residential areas. The Denton Creek area is

planned to be served with Reuse Water in the future. The reuse supply has been included in the future water projections to decrease the amount of needed potable water. The third area, Prairie Vista, is planned to consist of mixed use and estate density residential developments.

1.3.2 Master Planning Scenarios

The water system was analyzed for existing and future scenarios. The analysis included an extended period simulation using InfoWater software which models the system demands and performance over a 24-hour period. Future scenarios were modeled for years 2025, 2030 and buildout. Growth projections for future scenarios were derived by evaluating historic data and coordinating with the Town's planning department.

1.4.2 Hydraulic Analysis Criteria

Replace second paragraph.

The Town currently operates several ground storage tanks at water supply points. One 10 MG tank is located at the Stonehill pump station (UTRWD supply), one 5 MG tank is located at Stonecrest pump station (UTRWD supply), and three tanks (3 MG, 2 MG, and 1 MG) are located at the Pintail pump station (DWU supply).

2.2 Ground Storage

The Town of Flower Mound currently has 21 million gallons (MG) of ground storage located between the three existing pump stations. The next phase of construction at Stonecrest pump station will increase the station's storage capacity by 5 MG, bringing the total ground storage to 26 MG.

2.3 Elevated Storage

The Town currently has three elevated storage tanks in operation: Bruton Orand, Waketon, and Freeman. These tanks provided 5.5 MG of storage, The Freeman tank has the ability to not only serve the western portion of the Town, but due to its height has the ability to serve the eastern portion of Town if either of the other two tanks needs to be serviced.

The Texas Commission on Environmental Quality (TCEQ) Chapter 290 requires a minimum of 100 gallons of elevated storage per connection. With the current 5.5 MG of storage available, the Town's system has the capacity to serve up to 55,000 water connections. As of December 2019, the Town served 24,039 connections. The regulation does not account for the operational use of the elevated tanks, so the actual capacity of the elevated storage may be less than the 55,000 connections depending on future land uses. Connections versus storage will need to be evaluated as the Town continues to develop.

Figure 3: Replaced With Attached Figure 3 – Existing Water System

Land Use Map
Figure 2

THE TOWN OF FLOWER MOUND TEXAS

N
W E
S

0 4,100 8,200 Feet

Kimley»Horn

February 2020

Legend

- COE
- Campus Commercial
- Campus Industrial
- Commercial/Industrial
- Cross Timbers Consrv District
- Denton Creek District
- Estate
- Flood Plain
- Grapevine Lake
- High
- High Density Single Family Detached
- Institutional
- Lakeside Business District
- Low
- Medium
- Mixed Use
- Office
- Park
- Prairie Vista District
- Retail
- Rural
- Utility
- Service Area Boundary

IH-35W
OAK RIDGE LN
DENTON CREEK SPINE RD
CANYON FALLS DR
DENTON CREEK BLVD
UPRR
US HWY 377
FM 1171
RED ROCK
SHILOH RD
LUSK LN
KINGS RD
FM 407
CHINN CHAPEL RD
DIXON LN
VALLEY RIDGE BLVD
WAKETON RD
KIRKPATRICK LN
RIPPY RD
MORRISS RD
COLLEGE PKWY
TIMBER CREEK RD
BRIDLEWOOD BLVD
W WINDSOR DR
CHURCHILL DR
FM 2499
QUAIL RUN
BRITON ORAND BLVD
OLD SETTLERS RD
SAGEBRUSH DR
FIREWHEEL DR
LONG PRAIRIE RD
FOREST VISTA DR
FLOWER MOUND RD
SKILLERN RD
WICHITA TRAIL
RIDGECREST DR
SCENIC DR
MCKAMY CREEK RD
FM 3040
SIMMONS RD
LAKE FOREST BLVD
STRAIT LN
LEXINGTON AVE
GERAULT RD
GARDEN RIDGE BLVD
DUNCAN LN
ABERDEEN
SPINKS RD
LAKESIDE PKWY
SILVERON BLVD
OAK DR
Grapevine Lake

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stonecrest Pump Station
Current Firm Capacity: 12,000 gpm
Current Ground Storage: 5 MG
Future Firm Capacity: 24,000 GPM
Future Ground Storage: 10 MG
UTRWD Delivery Point

Freeman EST
Capacity: 2.5 MG

Bruton Orand EST
Capacity: 2.0 MG

Waketon EST
Capacity 1.0 MG

Stonehill Pump Station
Firm Capacity: 28,000 gpm
Ground Storage Capacity: 10 MG
UTRWD Delivery Point

Pintail Pump Station
Firm Capacity: 13,000 gpm
Ground Storage: 6 MG
DWU Delivery Point

IH-35W
OAK RIDGE LN
DENTON CREEK SPINE RD
CANYON FALLS DR
DENTON CREEK BLVD
UPRR
US HWY 377
FM 1171
RED ROCK
SHILOH RD
RIDGECREST DR
SCENIC DR
WICHITA TRAIL
SKILLERN RD
LUSK LN
WEST (HIGH) PRESSURE PLANE
EAST (LOW) PRESSURE PLANE
KINGS RD
QUAIL RUN
BRUTON ORAND BLVD
BRIDLEWOOD BLVD
W WINDSOR DR
FLOWER MOUND RD
OLD SETTLERS RD
MCKAMY CREEK RD
SIMMONS RD
CHINN CHAPEL RD
FM 407
DIXON LN
WAKETON RD
RIPPY RD
MORRISS RD
COLLEGE PKWY
VALLEY RIDGE BLVD
KIRKPATRICK LN
TIMBER CREEK RD
CHURCHILL DR
FM 2499
SAGEBRUSH DR
FIREWHEEL DR
LONG PRAIRIE RD
FOREST VISTA DR
FM 3040
STRAIT LN
LAKE FOREST BLVD
LEXINGTON AVE
GERAULT RD
GARDEN RIDGE BLVD
DUNCAN LN
ABERDEEN
SPINKS RD
LAKESIDE PKWY
SILVERON BLVD
OAK DR

Grapevine Lake

Existing Water System
Figure 3

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 4,100 8,200 Feet

Kimley»Horn November 2020

Legend

- Existing Water Transmission System: Modeled Pipes
- PS Existing Pump Station
- Existing Elevated Storage Tank
- Service Area Boundary
- Pressure Plane Boundary

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Kimley»Horn

2.4 Pumping Stations

The Town currently supplies treated water from three pumping stations, Stonehill, Pintail, and Stonecrest. The Stonehill pump station has a firm capacity of 28,000 gallons per minute (gpm), Pintail pump station has a firm capacity of 13,000 gpm, and Stonecrest pump station has a firm capacity of 12,000 gpm. Stonecrest will have an ultimate firm capacity of 24,000 gpm once phases two and three are complete. The Lusk Lane booster pump station has been decommissioned.

2.5 Distribution System

Replace second paragraph.

The Town's water system is divided into two pressure planes, east and west. The west pressure plane is served by the Freeman elevated storage tank and the Stonecrest pump station. The east pressure plane, which operates at a lower pressure plane elevation, is served by the Stonehill and Pintail pump stations, and the Bruton Orand elevated storage tank. In previous years, the pressure plane has had a natural divide. Pressure reducing valves will likely be necessary to maintain that divide in the future. Refer to Appendix E for valve locations.

3.1 Population

The population and growth projections used to estimate future water demands were derived by working with the Town's planning department and are based on the Land Use plan that was updated in February of 2020 (Reference Figure 2).

Table 3. Projected Population

Year	2020	2025	2030
Population[1]	77,286	82,408	89,499

1. Numbers reflect population within the water service area.

3.2.1 Current Water System Demands

The current water system demands were developed by evaluating historic usage and existing demographics. Based on pumping data obtained from 2015-2019, the Town's historical high maximum day and peak hour demands, 31.57 MGD and 55.87 MGD respectively, were recorded on August 10, 2015 and August 10, 2016. Based on historic demands, the average dwelling demand of 500 gallons per day per lot (gpd/lot) for single family residences was generally confirmed to be adequate. However, historical data showed that the parcels classified as Conservation District, previously estimated at 846 gpd/lot, used the same amount of water on average as a normal single-family home. The current duty factor for conservation

district has been adjusted to 700 gpd/lot to reflect historical usage. Demand for future residential developments were calculated using the average demand of 500 or 700 gpd/lot and an assumed lot size (shown below in square feet, or SF) for each single-family density to develop a demand per acre for future residential development demand projections. Additionally, the multi-family duty factor from the 2015 Master Plan proved to be sufficient after comparing against historical meter data. Table 4 shows the resulting water demands for various residential uses.

Table 4. Residential Demands per Land Use Type

Land Use Type	Assumed Lot Size (SF)	Demand (gpd)	Demand (gpm/acre)
Multifamily	-	-	2.08
Existing Single Family Lot (Excludes Conservation District)	Varies	500	-
High	8000	500	1.88
Medium	12000	500	1.25
Low	16000	500	0.90
Estate	43,560 (1 acre)	500	0.35
Rural	Varies	500	-
Conservation District (Buildout Only)	87,120 (2 acres)	700	0.24
Prairie Vista District*	43,560 (1 acre)	500	0.35
Medium SF-10*	12,500	500	1.18
Medium SF-5*	8,500	500	1.74

**As part of the Denton Creek Reuse Master Plan, portions of the Denton Creek District were assumed to contain 10,000 SF lots and Mixed-Use developments. Tracts of land in the west part of Town were identified to develop as Medium SF-10 and Medium SF-5 single family densities with lot sizes of 12,500 SF and 8,500 SF, respectively. Prairie Vista District was assumed to develop at Estate and Mixed-Use densities.*

In 2015 the water demands for non-residential land uses were taken from the 2001 Water Master Plan then compared to historical customer usage and were determined to be appropriate apart from a few single large volume users such as Lifetime Fitness Center and Texas Health Presbyterian Hospital. In 2020, the current non-residential water demands were again calibrated utilizing customer usage data from 2015-2019. The historical data showed demands differing from what was predicted in 2015 for most land use types. The model duty factors were adjusted to reflect historical data and took into consideration the top water users, some of which were classified into their own land use types for this exercise. Table 4.1 shows the resulting water demands for various non-residential uses.

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Table 4.1. Non-Residential Demands per Land Use Type

Land Use Type	Demand (gpd/acre)
Mixed Use	4,000
Lakeside area with residential	3050
Office	2625
Retail	1000
Commercial	2025
Industrial	1300
Park	250
Utility	200
Hospital	3000
Institutional	150
School	2000
Nature's Best	1500
Bridlewood	2250
Wellington	2000
Mi Windows	1800
Lifetime	2500
Inventrust	3500

The 2020 model did require manual adjustments in the Lakeside area to account for entitlements for future development. Entitled demands were based on demand information that was established during the Development Review process for several developments including Lakeside DFW, Lakeside Village, The Point, Southgate, and Stryker. No demand was generated by the following land uses: Grapevine Lake, Corps of Engineers, Floodplain, Open, and Road.

3.2.2 Projected Water System Demands

Replace Table 5 with the table below.

Table 5. Projected Water System Demands

Year	2020	2025	2030	Buildout
Average Day Demand (MGD)	15.16	17.00	18.97	26.83
Maximum Day Demand (MGD)	31.57	35.18	39.26	55.54

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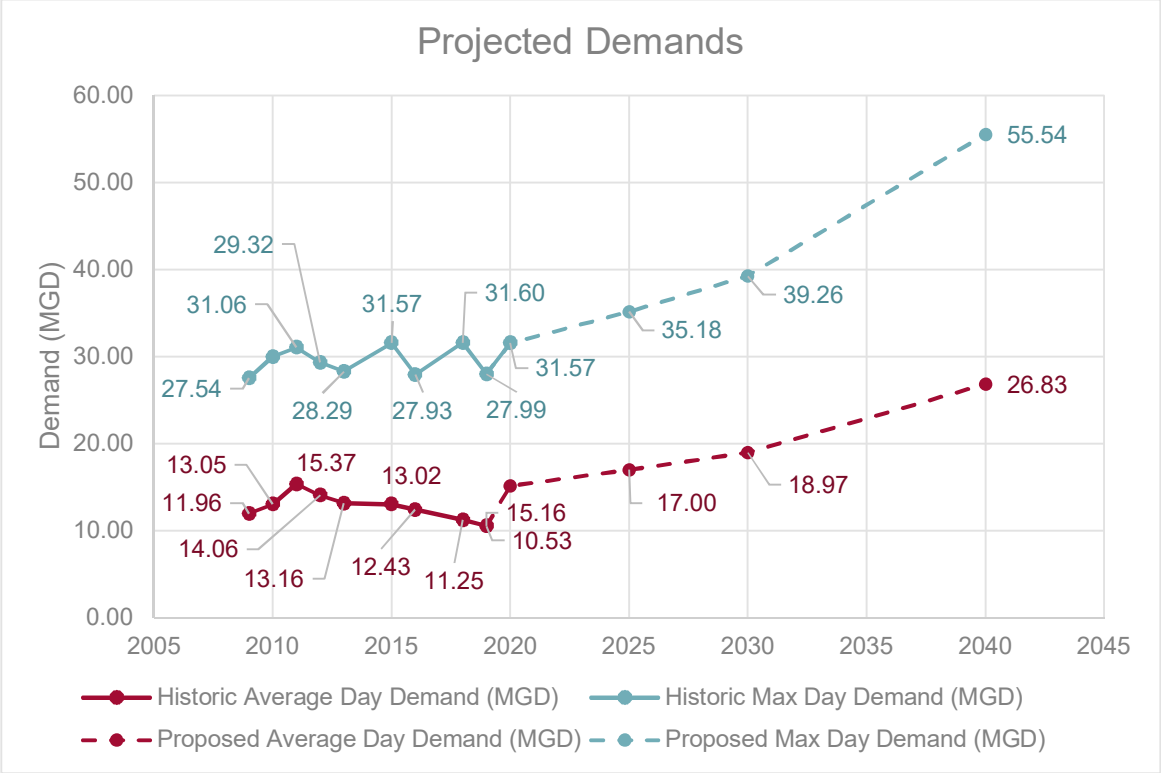
Replace Figure 5 with attached Figure 5.

Figure 5: Projected Water Demands



3.3.A Land Use (supplemental)

Kimley-Horn coordinated with the Town's planning department to determine projected growth rates. These projections were used to then project water demands, and the water demands were distributed over the water system. Growth was evaluated for years 2025, 2030 and buildout. This was utilized to determine projected demands for these scenarios. Reference Figure 2 for updated land use map.

4.1.1 Water Supplies

The Town currently is contracted for 11 million gallons a day (MGD) from Dallas Water Utilities and is contracted with the Upper Trinity Regional Water District for another 30 MGD. The Town currently has plans to implement Reuse Water systems in Denton Creek and Lakeside, which will decrease the amount of potable water required in the future. The projected reuse offset for the Denton Creek and Lakeside areas has been incorporated into the future project water demands shown below. It should be noted that these areas are not fully developed at this time so the ultimate reclaimed water demand in these areas could vary higher or lower

from the projections provided. Additionally, the Lakeside Reuse study projects a maximum anticipated irrigation demand in order to conservatively size the needed infrastructure. The actual amount of potable water that could be saved may be lower than the projections provided. The projected ultimate maximum day demand is 55.54 MGD, which will result in a water supply deficiency of 14.5 MGD not including reuse water supply. Based on the growth projections utilized it is estimated that the Town will exceed their currently contracted water supply by year 2031 without implementation of reuse water.

Table 6. Contracted Water Supplies by Planning Scenario

Planning Scenario	2020	2025	2030	Buildout
Projected Demands				
Average Day Demand (MGD)	15.16	17.00	18.97	26.83
Maximum Day Demand (MGD)	31.57	35.18	39.26	55.54
Contracted Water Supply Point				
Pintail (MGD)	11	11	11	11
Stonehill (MGD)	20	20	20	20
Stonecrest (MGD)	10	10	10	10
Denton Creek Reuse[1]			1.08	2.16
Lakeside Reuse[2]				6.56
Future Supply (MGD)				5.82
Total (MG)	41	41	42	55.54

1. Reuse supply from Denton Creek Reuse Water Master Plan prepared by Kimley-Horn and Associates, Inc. dated October 2014. These values do not include the future Lakeside Reuse Demands.
2. Reuse supply from Lakeside Reuse Water Master Plan prepared by Alan Plummer Associates, Inc. dated October 2018.

4.1.2 Ground Storage

In order to balance supply rates with pumping rates, it is recommended that the Town continue to store approximately half of the daily demand in ground storage. Currently the Town has 10 MG of ground storage available at the Stonehill Pump Station, 6 MG available at Pintail Pump Station, and 5 MG available at Stonecrest Pump Station for a total of 21 MG. Combined with elevated storage and future construction of a 5 MG ground storage tank at Stonecrest, the system will be able to store 50% of the maximum daily demand in 2040. The total storage will also satisfy TCEQ regulations requiring the system to provide a minimum of 200 gallons of storage per connection.

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Table 7. Ground Storage Facilities

Planning Scenario	2020	2025	2030	Buildout
Regulatory Requirements				
200 gal per connection (MG)	5.21	5.45	5.67	6.67
50% MDD (MG)	15.79	17.59	19.63	27.77
Ground Storage Tanks				
Pintail (MG)	6	6	6	6
Stonehill (MG)	10	10	10	10
Stonecrest (MG)	5	5	5	10
Total (MG)	21	21	21	26

4.1.4 Pumping Stations

The Stonehill, Pintail, and Stonecrest Pump Stations currently have a combined firm pumping capacity of 53,000 gpm (76.32-MGD). The current firm pumping capacity is sufficient to supply the Town's projected peak hour demand through the year 2030. Additional pumping improvements at Stonecrest Pump Station will be needed to meet the buildout peak hour demand projections.

Table 9. Firm Pumping Capacity

Planning Scenario	2020	2025	2030	Buildout
Regulatory Requirements				
2 gpm per connection (MGD)	74.96	78.47	81.60	96.10
Peak Hour Demands (MGD)	55.88	62.27	69.49	98.30
Pump Station Firm Capacity				
Pintail (gpm)	13,000	13,000	13,000	13,000
Stonehill (gpm)	28,000	28,000	28,000	28,000
Stonecrest (gpm)	12,000	12,000	12,000	24,000
Total (gpm)	53,000	53,000	53,000	65,000
Total (MGD)	76.32	76.32	76.32	93.60

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4.2.1 System Improvements

The proposed system improvements for the 5-year planning window as well as future buildout water system improvements (beyond 5-year CIP) are presented in this section. The Proposed System Map is included in Appendix D. A water distribution system map showing the locations of proposed capacity capital projects is included in Appendix E. Projected opinions of probable construction costs are shown in Appendix F.

4.2.2 5-Year CIP (2020 Scenario)

1. **Morriss Road Parallel 20-inch Water Line (Mallard Way to FM 3040)**
   Approximately 1,100 LF of 20-inch water line is proposed from Mallard Way to FM 3040. This line will parallel and existing 16-inch line and provide secondary transmission from Pintail Pump Station to the Lakeside Business District.

   Project Cost $720,000

2. **Morriss Road Water Line Phase III (Eaton to Waketon Road)**
   Approximately 4,400 LF of 30-inch water line in Morriss Road from Eaton to Waketon Road. This water line will replace the existing 20-inch water line in Morriss Road and provide transmission from Stonehill Pump Station.

   Project Cost $3,140,000

3. **Morriss Road Water Line Phase IV (Waketon Road to FM 407)**
   Approximately 5,200 LF of 30-inch water line in Morriss Road from Waketon Road to FM 407. This water line will replace the existing 20-inch water line in Morriss Road and provide transmission from Stonehill Pump Station.

   Project Cost $4,190,000

4. **Denton Creek Boulevard 12-inch Water Line**
   Approximately 5,000 LF of 12-inch water line is proposed along Denton Creek Boulevard. This line will extend from FM 1171 north through the Canyon Falls development where it will connect to an existing water line.

   Project Cost $1,300,000

5. **Denton Creek Spine Road 12-inch Water Line**
   Approximately 14,300 LF of 12-inch water line is proposed for the far northwest portion of town, extending to Interstate Highway 35-W.

   Project Cost $3,210,000

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6. **Kirkpatrick Lane 12-inch Water Line Phase III (South of FM 1171)**
   Approximately 1,000 LF of 12-inch water line is proposed to connect the 12-inch water line along Kirkpatrick Lane, south of Spanish Oak Drive, to the 12-inch water line along Bellaire Boulevard, east of Wager Drive.

   Project Cost $450,000

4.2.3 Beyond 5-Year CIP

1. **Cowboy Lane Water Line**
   Approximately 3,800 LF of 12-inch water line is proposed to extend from the intersection of Highway 377 and FM 1171, southeast, to Cowboy Lane.

   Project Cost $930,000

2. **FM 1171 to Highway 377 Water Line Phase II**
   Approximately 12,600 LF of 24-inch water line is proposed along the south side of FM 1171 parallel to the existing 20-inch transmission line. The project would begin east of the Freeman Elevated Tank at High Road and extend west to Highway 377, where it will connect to the 20-inch water line proposed in the Highway 377/UPRR Water Line Phase II project. The line will serve as secondary transmission from the Stonecrest Pump Station to the western portion of the Town.

   Project Cost $6,400,000

3. **Highway 377/UPRR Water Lines Phase II**
   Approximately 7,600 LF of 24-inch water line is proposed along Stonecrest Lane, adjacent to the Union Pacific Railroad, beginning south of Stonecrest Road and extending south to the intersection of the railroad and FM 1171, then continuing east to Highway 377. This line will provide secondary transmission from the Stonecrest Pump Station to the western portion of the Town.

   Project Cost $3,410,000

4. **Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)**
   Approximately 5,600 LF of 12-inch water line is proposed extending from FM 3040 south to Spinks Road parallel to the existing 12-inch water line in Lake Forest Boulevard. This water line is the second section of the parallel Lake Forest 12-inch line and will provide secondary transmission to the Lakeside Business District to accommodate residential uses in the district.

   Project Cost $1,760,000

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5. **Lusk/Red Rock East-West Connector**
   Approximately 12,000 LF of 16-inch water line is proposed along the future Lusk/Red Rock East-West Connector as shown on the Master Thoroughfare Plan. It also includes roughly 3,500 LF of 16-inch water line along FM 1171, from Red Rock to the Freeman Elevated Tank. This line will provide secondary transmission to the western portion of the Town.

   Project Cost $4,250,000

6. **Scenic Drive Water Line (South of FM 1171 to River Hill Drive)**
   Approximately 5,700 LF of 12-inch water line is proposed along Scenic Drive, connecting to the existing 12-inch water line along Scenic Drive south of FM 1171 to River Hill Drive. This project also includes installing approximately 500 LF of 12-inch water line to fill an existing gap in the water system east of the intersection of Scenic Drive and Wichita Trail.

   Project Cost $1,430,000

7. **Stonecrest Pump Station Phase II**
   Phase II of the Stonecrest Pump Station will consist of an additional 5 MG of ground storage capacity and an additional fourth pump bringing the firm pumping capacity of the pump station to 18,000 gpm.

   Project Cost $5,460,000

8. **Stonecrest Pump Station Phase III**
   Phase III of the Stonecrest Pump Station will consist of installing a fifth pump, bringing the station to its ultimate firm pumping capacity of approximately 24,000 gpm.

   Project Cost $790,000

9. **Timber Creek 20-inch Water Line**
   Approximately 550 LF of 20-inch water line is proposed in Timber Creek Road from Kirkpatrick Lane to Colony Street. This line, which will parallel an existing 12-inch line, will connect the existing 16-inch lines in Kirkpatrick Lane and Colony Street and alleviate high velocities and headloss in the existing 12-inch line.

   Project Cost $490,000

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10. West Side Water Lines (East)

Approximately 12,300 LF of 16-inch water line and 2,700 LF of 20-inch water line is proposed north of FM 1171, east of Highway 377, and west of Tour 18 Drive.

Project Cost $4,850,000

11. West Side Water Lines (South)

Approximately 19,100 LF of looped, 12-inch water line is proposed south of FM 1171, eventually providing service to the southwest portion of the Town.

Project Cost $4,550,000

12. West Side Water Lines (West)

Approximately 3,000 LF of 12-inch water line connecting the system from the 30-inch water line along Highway 377 to Denton Creek Boulevard. This project also includes approximately 2,600 LF of 12-inch water line on the north side of FM 1171 from the future 20-inch water line at UPRR west to the Trailwood Terrace 12-inch Water Line near Canyon Falls Drive. These lines will comprise a portion of the distribution system in the west side of the Town.

Project Cost $1,560,000

13. Pressure Reducing Valves

Pressure Reducing Stations are proposed to define the boundary between the East and West Pressure Planes:

- Lusk/Red Rock East-West Connector
- FM 1171, west of Flower Mound Road (FM 3040)
- Scenic Drive at River Hill Drive
- Cardinal Drive, west of Wichita Trail

Project Cost $710,000

Stonecrest Pump Station
Current Firm Capacity: 12,000 gpm
Current Ground Storage: 5 MG
Future Firm Capacity: 24,000 GPM
Future Ground Storage: 10 MG
UTRWD Delivery Point

Freeman EST
Capacity: 2.5 MG

Bruton Orand EST
Capacity: 2.0 MG

Waketon EST
Capacity 1.0 MG

Stonehill Pump Station
Firm Capacity: 28,000 gpm
Ground Storage Capacity: 10 MG
UTRWD Delivery Point

Pintail Pump Station
Firm Capacity: 13,000 gpm
Ground Storage: 6 MG
DWU Delivery Point

WEST (HIGH) PRESSURE PLANE
EAST (LOW) PRESSURE PLANE

IH-35W
DENTON CREEK SPINE RD
OAK RIDGE LN
CANYON FALLS DR
DENTON CREEK BLVD
UPRR
US HWY 377
FM 1171
RED ROCK
SHILOH RD
LUSK LN
KINGS RD
WAKETON RD
CHINN CHAPEL RD
FM 407
DIXON LN
VALLEY RIDGE BLVD
KIRKPATRICK LN
RIPPY RD
MORRISS RD
COLLEGE PKWY
TIMBER CREEK RD
W WINDSOR DR
BRIDLEWOOD BLVD
CHURCHILL DR
FM 2499
EATON
QUAIL RUN
BRUTON ORAND BLVD
OLD SETTLERS RD
SAGEBRUSH DR
FIREWHEEL DR
LONG PRAIRIE RD
FOREST VISTA DR
FLOWER MOUND RD
OAK DR
RIDGECREST DR
SCENIC DR
SKILLERN RD
WICHITA TRAIL
MCKAMY CREEK RD
SIMMONS RD
FM 3040
STRAIT LN
LAKE FOREST BLVD
LEXINGTON AVE
GERAULT RD
GARDEN RIDGE BLVD
DUNCAN LN
ABERDEEN
SPINKS RD
LAKESIDE PKWY
SILVERON BLVD
Grapevine Lake

Proposed Water System
Appendix D

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 4,100 8,200 Feet

Kimley»Horn November 2020

Legend

- Pressure Plane Boundary
- Existing Elevated Storage Tank
- Existing Pump Station
- Proposed Pressure Reducing Valves
- Proposed Water System
- Existing Water Transmission System: Modeled Pipes
- Service Area Boundary

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stonecrest Pump Station
Current Firm Capacity: 12,000 gpm
Current Ground Storage: 5 MG
Future Firm Capacity: 24,000 GPM
Future Ground Storage: 10 MG
UTRWD Delivery Point

Freeman EST
Capacity: 2.5 MG

Bruton Orand EST
Capacity: 2.0 MG

Waketon EST
Capacity: 1.0 MG

Stonehill Pump Station
Firm Capacity: 28,000 gpm
Ground Storage Capacity: 10 MG
UTRWD Delivery Point

Pintail Pump Station
Firm Capacity: 13,000 gpm
Ground Storage: 6 MG
DWU Delivery Point

WEST (HIGH) PRESSURE PLANE
EAST (LOW) PRESSURE PLANE

IH-35W
DENTON CREEK SPINE RD
OAK RIDGE LN
CANYON FALLS DR
DENTON CREEK BLVD
FM 1171
UPRR
US HWY 377
RED ROCK
SHILOH RD
LUSK LN
KINGS RD
RIDGECREST DR
SCENIC DR
QUAIL RUN
BRUTON ORAND BLVD
BRIDLEWOOD BLVD
WICHITA TRAIL
SKILLERN RD
FLOWER MOUND RD
OLD SETTLERS RD
CHINN CHAPEL RD
FM 407
DIXON LN
WAKETON RD
RIPPY RD
MORRISS RD
VALLEY RIDGE BLVD
KIRKPATRICK LN
COLLEGE PKWY
TIMBER CREEK RD
W WINDSOR DR
CHURCHILL DR
FM 2499
SAGEBRUSH DR
FIREWHEEL DR
LONG PRAIRIE RD
FOREST VISTA DR
OAK DR
MCKAMY CREEK RD
SIMMONS RD
FM 3040
STRAIT LN
LAKE FOREST BLVD
ABERDEEN
LEXINGTON AVE
GERAULT RD
GARDEN RIDGE BLVD
DUNCAN LN
SPINKS RD
LAKESIDE PKWY
SILVERON BLVD

Grapevine Lake

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Water Capital Improvements Capacity Projects Appendix E

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 4,100 8,200 Feet

Kimley»Horn November 2020

Legend

- Existing Water Transmission System: Modeled Pipes
- Proposed Water Distribution: Under Design or Construction
- Proposed Water Distribution System: 5-year CIP
- Proposed Water Distribution System: Beyond 5-year CIP
- Existing Elevated Storage Tank
- Existing Pump Station
- Pump Station Improvements: Beyond 5-year CIP
- Pressure Reducing Valves: Beyond 5-year CIP
- Pressure Plane Boundary
- Service Area Boundary

Flower Mound Under Design or Construction Project List

1. Garden Ridge Boulevard Water Line Phase II
2. Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)
3. Morriss Road Water Line Phase II (FM 1171 to Eaton)
4. Canyon Falls 20-inch Water Line

Flower Mound 5-year Water CIP Project List

1. Morriss Road Parallel 20-inch (Mallard to FM 3040)
2. Morriss Road Water Line Phase III (Eaton to Waketon Road)
3. Morriss Roaad Water Line Phase IV (Waketon Road to FM 407)
4. Denton Creek Boulevard 12-inch Water Line
5. Denton Creek Spine Road 12-inch Water Line
6. Kirkpatrick 12-inch Water Line Phase III (South of FM 1171)

Flower Mound Beyond 5-year Water CIP Project List

1. Cowboy Lane Water Line
2. FM 1171 to Hwy 377 Water Line Phase II
3. Hwy 377/UPRR Water Line Phase II
4. Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)
5. Lusk/Red Rock East-West Connector
6. Scenic Drive Water Line (South of FM 1171 to River Hill Drive)
7. Stonecrest Pump Station Phase II
8. Stonecrest Pump Station Phase III
9. Timber Creek 20-inch Water Line
10. West Side Water Lines (East)
11. West Side Water Lines (South)
12. West Side Water Lines (West)
13. Pressure Reducing Valves

Town 5-year Water CIP Estimate
OPC Summary

Proj. #	Description	Total Project Cost
1	Morriss Road 20-inch Water Line (Mallard Way to FM 3040)	$ 720,000
2	Morriss Road Water Line (Eaton to Waketon Road)	$ 3,140,000
3	Morriss Road Water Line (Waketon Road to FM 407)	$ 4,190,000
4	Denton Creek Boulevard 12-inch Water Line	$ 1,300,000
5	Denton Creek Spine Road 12-inch Water Line	$ 3,210,000
6	Kirkpatrick 12-inch Water Line Phase III (South of FM 1171)	$ 450,000
	Total	**$ 13,010,000**

Town Beyond 5-year Water CIP Estimate

Proj. #	Description	Total Project Cost
1	Cowboy Lane Water Line	$ 930,000
2	FM 1171 to Hwy 377 Water Line Phase II	$ 6,400,000
3	Hwy 377/UPRR Water Line Phase II	$ 3,410,000
4	Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)	$ 1,760,000
5	Lusk/Red RockEast-West Connector	$ 4,250,000
6	Scenic Drive Water Line (S of FM 1171 to River Hill Drive)	$ 1,430,000
7	Stonecrest Pump Station Phase II	$ 5,460,000
8	Stonecrest Pump Station Phase III	$ 790,000
9	Timber Creek 20-inch Water Line	$ 490,000
10	West Side Water Line (East)	$ 4,850,000
11	West Side Water Line (South)	$ 4,550,000
12	West Side Water Line (West)	$ 1,560,000
13	Pressure Reducing Valves	$ 710,000
	Total	**$ 36,590,000**

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Morriss Road 20-inch Water Line (Mallard Way to FM 3040)**	**Sheet:**	**1**

Item No.	Item Description	Quantity	Unit		Unit Price		Item Cost
1	Mobilization	1	LS	$	20,000.00	$	20,000
2	20" Water Line	1,100	LF	$	210.00	$	231,000
3	Trench Safety	1,000	LF	$	2.00	$	2,000
4	Concrete Pavement Repair	100	SY	$	110.00	$	11,000
5	Seed, Fertilizer and Erosion Control	1,000	LF	$	10.00	$	10,000
6	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	2	EA	$	35,000.00	$	70,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	1	EA	$	7,500.00	$	7,500
8	Bore with 36" Steel Casing	100	LF	$	850.00	$	85,000
9	Connect to Large Diameter Water Line	2	EA	$	15,000.00	$	30,000
10	Combination 4" Air Release/Vacuum Valve & Vault	1	EA	$	20,000.00	$	20,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$	10,000.00	$	10,000
12	Cathodic Protection	1	LS	$	15,000.00	$	15,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 511,500
Eng/Survey Fees (+/- %):	15	$ 77,000
Contingency (+/- %):	25	$ 131,500
Prop Acquisition:		$ -
Total:		$ 720,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Morriss Road Water Line Phase III (Eaton to Waketon Road)**	**Sheet:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	30" Water Line	4,400	LF	$ 275.00	$ 1,210,000
3	Trench Safety	4,100	LF	$ 2.00	$ 8,200
4	Seed, Fertilizer and Erosion Control	3,560	LF	$ 10.00	$ 35,600
5	Concrete Pavement Repair	600	SY	$ 110.00	$ 66,000
6	30" Gate Valve with Vault	2	EA	$ 90,000.00	$ 180,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	3	EA	$ 7,500.00	$ 22,500
8	Bore with 48" Steel Casing	300	LF	$ 1,250.00	$ 375,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 8" Blow Off Valve & Vault	1	EA	$ 22,500.00	$ 22,500
12	Combination 6" Air Release/Vacuum Valve & Vault	1	EA	$ 30,000.00	$ 30,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 2,234,800
Eng/Survey Fees (+/- %):	15	$ 336,000
Contingency (+/- %):	25	$ 569,200
Prop Acquisition:		$ -
Total:		$ 3,140,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Morriss Road Water Line Phase IV (Waketon Road to FM 407)**	**Sheet:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	30" Water Line	5,200	LF	$ 275.00	$ 1,430,000
3	Trench Safety	4,500	LF	$ 2.00	$ 9,000
4	Seed, Fertilizer and Erosion Control	3,960	LF	$ 10.00	$ 39,600
5	Concrete Pavement Repair	600	SY	$ 110.00	$ 66,000
6	30" Gate Valve with Vault	2	EA	$ 90,000.00	$ 180,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	3	EA	$ 7,500.00	$ 22,500
8	Bore with 48" Steel Casing	700	LF	$ 1,250.00	$ 875,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 8" Blow Off Valve & Vault	1	EA	$ 22,500.00	$ 22,500
12	Combination 6" Air Release/Vacuum Valve & Vault	2	EA	$ 30,000.00	$ 60,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 2,989,600
Eng/Survey Fees (+/- %):	15	$ 449,000
Contingency (+/- %):	25	$ 751,400
Prop Acquisition:		$ -
Total:		$ 4,190,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Denton Creek Boulevard 12-inch Water Line**	**Sheet:**	**4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	12" Water Line	5,000	LF	$ 120.00	$ 600,000
3	Trench Safety	4,900	LF	$ 2.00	$ 9,800
4	Seed, Fertilizer and Erosion Control	4,900	LF	$ 10.00	$ 49,000
5	Concrete Pavement Repair	20	SY	$ 110.00	$ 2,200
6	12" Gate Valve (1 per 500 lf of pipe)	10	EA	$ 5,000.00	$ 50,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	10	EA	$ 7,500.00	$ 75,000
8	Bore with 24" Steel Casing	100	LF	$ 600.00	$ 60,000
9	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
10	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 926,000
Eng/Survey Fees (+/- %):	15	$ 139,000
Contingency (+/- %):	25	$ 235,000
Prop Acquisition:		$ -
Total:		$ 1,300,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Denton Creek Spine Road 12-inch Water Line**	**Sheet:**	**5**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 90,000.00	$ 90,000
2	12" Water Line	14,300	LF	$ 120.00	$ 1,716,000
3	Trench Safety	14,300	LF	$ 2.00	$ 28,600
4	Seed, Fertilizer and Erosion Control	14,270	LF	$ 10.00	$ 142,700
5	Concrete Pavement Repair	50	SY	$ 110.00	$ 5,500
6	12" Gate Valve (1 per 500 lf of pipe)	29	EA	$ 5,000.00	$ 145,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	29	EA	$ 7,500.00	$ 217,500
8	Connect to Small Diameter Water Line	2	LF	$ 5,000.00	$ 10,000
9	Hydrostatic Testing and Disinfection (Long)	1	LF	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 2,285,300
Eng/Survey Fees (+/- %):	15	$ 343,000
Contingency (+/- %):	25	$ 581,700
Prop Acquisition:		$ -
Total:		$ 3,210,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Kirkpatrick Lane 12-inch Water Line Phase III (South of FM 1171)**	**Sheet:**	**6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	12" Water Line	1,000	LF	$ 120.00	$ 120,000
3	Trench Safety	800	LF	$ 2.00	$ 1,600
4	Seed, Fertilizer and Erosion Control	770	LF	$ 10.00	$ 7,700
5	Concrete Pavement Repair	35	SY	$ 110.00	$ 3,850
6	12" Gate Valve (1 per 500 lf of pipe)	2	EA	$ 5,000.00	$ 10,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	2	EA	$ 7,500.00	$ 15,000
8	Bore with 24" Steel Casing	200	LF	$ 600.00	$ 120,000
9	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 318,150
Eng/Survey Fees (+/- %):	15		$ 48,000
Contingency (+/- %):	25		$ 83,850
Prop Acquisition:			$ -
Total:			$ 450,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Cowboy Lane Water Line**	**Sheet:**	**7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	12" Water Line	3,800	LF	$ 120.00	$ 456,000
3	Trench Safety	3,800	LF	$ 2.00	$ 7,600
4	Seed, Fertilizer and Erosion Control	3,750	LF	$ 10.00	$ 37,500
5	Concrete Pavement Repair	25	SY	$ 110.00	$ 2,750
6	12" Gate Valve (1 per 500 lf of pipe)	8	EA	$ 5,000.00	$ 40,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	8	EA	$ 7,500.00	$ 60,000
8	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
9	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 663,850
Eng/Survey Fees (+/- %):	15		$ 100,000
Contingency (+/- %):	25		$ 166,150
Prop Acquisition:			$ -
Total:			$ 930,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**FM 1171 to Highway 377 Water Line Phase II**	**Sheet:**	**8**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	24" Water Line	12,600	LF	$ 250.00	$ 3,150,000
3	Trench Safety	12,050	LF	$ 2.00	$ 24,100
4	Seed, Fertilizer and Erosion Control	12,000	LF	$ 10.00	$ 120,000
5	Concrete Pavement Repair	56	SY	$ 110.00	$ 6,111
6	24" Gate Valve with Vault (1 per 3,000 lf of pipe)	5	EA	$ 50,000.00	$ 250,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	6	EA	$ 7,500.00	$ 45,000
8	Bore with 42" Steel Casing	550	LF	$ 1,000.00	$ 550,000
9	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
10	Connect to Large Diameter Water Line	4	EA	$ 15,000.00	$ 60,000
11	Hydrostatic Testing and Disinfection (Long)	1	EA	$ 20,000.00	$ 20,000
12	Combination 6" Blow Off Valve & Vault	4	EA	$ 15,000.00	$ 60,000
13	Combination 4" Air Release/Vacuum Valve & Vault	4	EA	$ 20,000.00	$ 80,000
14	Cathodic Protection	1	LS	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 4,560,211
Eng/Survey Fees (+/- %):	15	$ 685,000
Contingency (+/- %):	25	$ 1,154,789
Prop Acquisition:		$ -
Total:		$ 6,400,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Highway 377/UPRR Water Lines Phase II**	**Sheet:**	**9**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 90,000.00	$ 90,000
2	24" Water Line	7,600	LF	$ 250.00	$ 1,900,000
3	Trench Safety	7,600	LF	$ 2.00	$ 15,200
4	Seed, Fertilizer and Erosion Control	7,580	LF	$ 10.00	$ 75,800
5	Concrete Pavement Repair	20	SY	$ 110.00	$ 2,200
6	24" Gate Valve with Vault (1 per 3,000 lf of pipe)	3	EA	$ 50,000.00	$ 150,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	4	EA	$ 7,500.00	$ 30,000
8	Connect to Small Diameter Water Line	4	EA	$ 5,000.00	$ 20,000
9	Connect to Large Diameter Water Line	1	LS	$ 15,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 6" Blow Off Valve & Vault	2	EA	$ 15,000.00	$ 30,000
12	Combination 4" Air Release/Vacuum Valve & Vault	2	EA	$ 20,000.00	$ 40,000
13	Cathodic Protection	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 2,428,200
Eng/Survey Fees (+/- %):	15	$ 365,000
Contingency (+/- %):	25	$ 616,800
Prop Acquisition:		$ -
Total:		$ 3,410,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**KSS**
KHA No.:	**061000201**	**Checked By:**	**MLD**

Title:	**Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)**	**Sheet:**	**10**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000
2	12" Water Line	5,600	LF	$ 120.00	$ 672,000
3	Trench Safety	5,200	LF	$ 2.00	$ 10,400
4	Seed, Fertilizer and Erosion Control	4,850	LF	$ 10.00	$ 48,500
5	Concrete Pavement Repair	390	SY	$ 110.00	$ 42,900
6	12" Gate Valve (1 per 500 lf of pipe)	12	EA	$ 5,000.00	$ 60,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	12	EA	$ 7,500.00	$ 90,000
8	Bore with 24" Steel Casing	400	LF	$ 600.00	$ 240,000
9	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
10	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,248,800
Eng/Survey Fees (+/- %):	15		$ 188,000
Contingency (+/- %):	25		$ 323,200
Prop Acquisition:			$ -
Total:			$ 1,760,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Lusk/Red Rock East-West Connector**	**Sheet:**	**11**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 120,000.00	$ 120,000
2	16" Water Line	15,500	LF	$ 150.00	$ 2,325,000
3	Trench Safety	15,450	LF	$ 2.00	$ 30,900
4	Seed, Fertilizer and Erosion Control	15,350	LF	$ 10.00	$ 153,500
5	Concrete Pavement Repair	70	SY	$ 110.00	$ 7,700
6	16" Gate Valve (1 per 3,000 lf of pipe)	6	EA	$ 12,000.00	$ 72,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	7	EA	$ 7,500.00	$ 52,500
8	Bore with 30" Steel Casing	50	LF	$ 750.00	$ 37,500
9	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000
11	Combination 4" Blow Off Valve & Vault	6	EA	$ 20,000.00	$ 60,000
12	Combination 2" Air Release/Vacuum Valve & Vault	6	EA	$ 10,000.00	$ 60,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 3,029,100
Eng/Survey Fees (+/- %):	15	$ 455,000
Contingency (+/- %):	25	$ 765,900
Prop Acquisition:		$ -
Total:		$ 4,250,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Scenic Drive Water Line (South of FM 1171 to River Hill Drive)**	**Sheet:**	**12**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	12" Water Line	6,200	LF	$ 120.00	$ 744,000
3	Trench Safety	6,200	LF	$ 2.00	$ 12,400
4	Seed, Fertilizer and Erosion Control	6,050	LF	$ 10.00	$ 60,500
5	Concrete Pavement Repair	83	SY	$ 110.00	$ 9,167
6	12" Gate Valve (1 per 500 lf of pipe)	13	EA	$ 5,000.00	$ 65,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	13	EA	$ 7,500.00	$ 97,500
8	Connect to Small Diameter Water Line	4	EA	$ 5,000.00	$ 20,000
9	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,018,567
Eng/Survey Fees (+/- %):	15	$ 153,000
Contingency (+/- %):	25	$ 261,433
Prop Acquisition:		$ -
Total:		$ 1,430,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Stonecrest Pump Station Phase II**	**Sheet:**	**13**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 150,000.00	$ 150,000
2	Tank Supply Line	175	LF	$ 400.00	$ 70,000
3	Tank Discharge Line	170	LF	$ 450.00	$ 76,500
4	5 MG Ground Storage Tank	1	EA	$ 2,300,000.00	$ 2,300,000
5	Excavation	4,750	CY	$ 30.00	$ 142,500
6	Select Backfill	4,750	CY	$ 30.00	$ 142,500
7	Connect to Existing Water Line	2	EA	$ 10,000.00	$ 20,000
8	Grading	1	LS	$ 50,000.00	$ 50,000
9	Landscaping	1	LS	$ 25,000.00	$ 25,000
10	Irrigation	1	LS	$ 10,000.00	$ 10,000
11	Horizontal Split Case Pump	1	EA	$ 300,000.00	$ 300,000
12	Mechanical Piping	1	LS	$ 50,000.00	$ 50,000
13	Control Valve	1	LS	$ 30,000.00	$ 30,000
14	Feeder and soft starter to pump	1	LS	$ 50,000.00	$ 50,000
15	Yard Valves	1	LS	$ 275,000.00	$ 275,000
16	Electrical	1	LS	$ 150,000.00	$ 150,000
17	SCADA/Instumentation	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 3,891,500
Eng/Survey Fees (+/- %):	15	$ 584,000
Contingency (+/- %):	25	$ 984,500
Prop Acquisition:		$ -
Total:		$ 5,460,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Stonecrest Pump Station Phase III**	**Sheet:**	**14**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	Horizontal Split Case Pump	1	EA	$ 300,000.00	$ 300,000
3	Mechanical Piping	1	LS	$ 45,000.00	$ 45,000
4	Control Valve	1	LS	$ 30,000.00	$ 30,000
5	Feeder and soft starter to pump	1	LS	$ 50,000.00	$ 50,000
6	Electrical	1	LS	$ 50,000.00	$ 50,000
7	SCADA/Instumentation	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 555,000
Eng/Survey Fees (+/- %):	15		$ 84,000
Contingency (+/- %):	25		$ 151,000
Prop Acquisition:			$ -
Total:			$ 790,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLS**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Timber Creek 20-inch Water Line**	**Sheet:**	**15**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	20" Water Line	550	LF	$ 210.00	$ 115,500
3	Trench Safety	470	LF	$ 2.00	$ 940
4	Seed, Fertilizer and Erosion Control	390	LF	$ 10.00	$ 3,900
5	Concrete Pavement Repair	45	SY	$ 110.00	$ 4,950
6	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	1	EA	$ 35,000.00	$ 35,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	1	EA	$ 7,500.00	$ 7,500
8	Bore with 36" Steel Casing	80	LF	$ 850.00	$ 68,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 6" Blow Off Valve & Vault	1	EA	$ 15,000.00	$ 15,000
12	Combination 4" Air Release/Vacuum Valve & Vault	2	EA	$ 20,000.00	$ 40,000
13	Cathodic Protection	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 340,790
Eng/Survey Fees (+/- %):	15	$ 52,000
Contingency (+/- %):	25	$ 97,210
Prop Acquisition:		$ -
Total:		$ 490,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**West Side Water Lines (East)**	**Sheet:**	**16**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 130,000.00	$ 130,000
2	16" Water Line	12,300	LF	$ 150.00	$ 1,845,000
3	20" Water Line	2,700	LF	$ 210.00	$ 567,000
4	Trench Safety	15,000	LF	$ 2.00	$ 30,000
5	Seed, Fertilizer and Erosion Control	15,000	LF	$ 10.00	$ 150,000
7	16" Gate Valve (1 per 3,000 lf of pipe)	7	EA	$ 12,000.00	$ 84,000
8	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	2	EA	$ 35,000.00	$ 70,000
9	Fire Hydrant Assembly (1 per 500 lf of pipe)	8	EA	$ 7,500.00	$ 60,000
10	Connect to Large Diameter Water Line	3	EA	$ 15,000.00	$ 45,000
11	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000
12	Combination 2" Blow Off Valve & Vault	5	EA	$ 7,500.00	$ 37,500
13	Combination 2" Air Release/Vacuum Valve & Vault	5	EA	$ 10,000.00	$ 50,000
14	Cathodic Protection	5	EA	$ 75,000.00	$ 375,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 3,463,500
Eng/Survey Fees (+/- %):	15	$ 520,000
Contingency (+/- %):	25	$ 866,500
Prop Acquisition:		$ -
Total:		$ 4,850,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**West Side Water Lines (South)**	**Sheet:**	**17**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 120,000.00	$ 120,000
2	12" Water Line	19,100	LF	$ 120.00	$ 2,292,000
3	Trench Safety	18,800	LF	$ 2.00	$ 37,600
4	Seed, Fertilizer and Erosion Control	18,750	LF	$ 10.00	$ 187,500
5	Concrete Pavement Repair	28	SY	$ 110.00	$ 3,056
6	12" Gate Valve (1 per 500 lf of pipe)	39	EA	$ 5,000.00	$ 195,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	39	EA	$ 7,500.00	$ 292,500
8	Bore with 24" Steel Casing	300	LF	$ 600.00	$ 180,000
9	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
10	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
11	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 3,242,656
Eng/Survey Fees (+/- %):	15		$ 487,000
Contingency (+/- %):	25		$ 817,344
Prop Acquisition:			$ -
Total:			$ 4,550,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**West Side Water Lines (West)**	**Sheet:**	**18**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000
2	12" Water Line	5,600	LF	$ 120.00	$ 672,000
3	Trench Safety	5,300	LF	$ 2.00	$ 10,600
4	Seed, Fertilizer and Erosion Control	5,300	LF	$ 10.00	$ 53,000
5	12" Gate Valve (1 per 500 lf of pipe)	12	EA	$ 5,000.00	$ 60,000
6	Fire Hydrant Assembly (1 per 500 lf of pipe)	12	EA	$ 7,500.00	$ 90,000
7	Bore with 24" Steel Casing	300	LF	$ 600.00	$ 180,000
8	Connect to Small Diameter Water Line	7	EA	$ 5,000.00	$ 35,000
9	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 1,110,600
Eng/Survey Fees (+/- %):	15		$ 167,000
Contingency (+/- %):	25		$ 279,400
Prop Acquisition:			$ -
Total:			$ 1,560,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**11/4/2020**
Project:	**Water Master Plan Updates: Beyond 5-year CIP**	**Prepared By:**	**MLD**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Pressure Reducing Valves**	**Sheet:**	**19**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	20" Pressure Reducing Valve	1	EA	$ 30,000.00	$ 30,000
3	20" Gate Valve	2	EA	$ 40,000.00	$ 80,000
4	Connect to Existing 20" Water Line	2	EA	$ 15,000.00	$ 30,000
5	Concrete Vault (15'x15')	1	EA	$ 30,000.00	$ 30,000
6	8" Bypass Line	1	EA	$ 10,000.00	$ 10,000
7	SCADA/Electrical	1	EA	$ 25,000.00	$ 25,000
8	16" Pressure Reducing Valve	1	EA	$ 20,000.00	$ 20,000
9	16" Gate Valve	2	EA	$ 12,000.00	$ 24,000
10	Connect to Existing 16" Water Line	2	EA	$ 15,000.00	$ 30,000
11	Concrete Vault (12'x12')	1	EA	$ 20,000.00	$ 20,000
12	6" Bypass Line	1	EA	$ 5,000.00	$ 5,000
13	SCADA/Electrical	1	EA	$ 25,000.00	$ 25,000
20	8" Pressure Reducing Valve	2	EA	$ 15,000.00	$ 30,000
21	8" Gate Valve	4	EA	$ 3,500.00	$ 14,000
22	Connect to Existing 8" Water Line	4	EA	$ 5,000.00	$ 20,000
23	Concrete Vault (10'x10')	2	EA	$ 15,000.00	$ 30,000
24	4" Bypass Line	2	EA	$ 5,000.00	$ 10,000
25	SCADA/Electrical	2	EA	$ 25,000.00	$ 50,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 503,000
Eng/Survey Fees (+/- %):	15	$ 76,000
Contingency (+/- %):	25	$ 127,000
Prop Acquisition:		$ -
Total:		$ 710,000

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TCEQ Requirements
Water Supplies
Ground Storage
Elevated Storage
Pumping Stations
Distribution System
Denton Creek Reuse Water Master Plan
Lakeside Reuse Water Master Plan

Existing & Proposed Water Distribution System ..... Appendix D

8.0 WATER PLAN

The existing and proposed components of the water system were evaluated in detail and are included in the 2009 Water Master Plan prepared by Kellogg Brown & Root, Inc. and adopted by the Town Council on May 4, 2009. In 2015 and 2020, the Town adopted updates to the 2009 Water Master Plan based on water demands, demographics, future land uses, and growth projections. This document provides details about the Town's system based on the 2009 Water Master Plan and the 2015 and 2020 updates. The 2009 Water Master Plan Update and the 2015 and 2020 Water Master Plan Amendments provide additional details about the Town's system and are incorporated herein by reference for all purposes allowed by law. The following components of the water system have been evaluated:

- Water Supplies
- Ground Storage
- Elevated Storage
- Pumping Stations
- Distribution System

TCEQ (Texas Commission on Environmental Quality)

Chapter 290 of the Texas Commission of Environmental Quality Rules and Regulations, "Public Drinking Water," mandates the minimum requirements for water systems operation in the State of Texas.

The minimum requirements are as follows:

- Total Storage – Equal to 200 gallons per connection.
- Elevated Storage – Equal to 100 gallons per connection.
- Pressure – Minimum pressure under normal conditions should exceed 35 psi while pressure during extremes may not drop below 20 psi.
- Pumping – each pressure plane must have two or more pumps capable of delivering two gallons per minutes (GPM) per connection (a capacity of 1000 gallons per minute), and the ability to supply peak demands, whichever is less.

Water Supplies

The Town of Flower Mound obtains its treated water from the Upper Trinity Regional Water District (UTRWD) and the City of Dallas Water Utilities Department (DWU). Water is supplied from the UTRWD at the Stonehill Pump Station and from DWU at the Pintail Pump Station.

The Town currently is contracted for 11 million gallons a day (MGD) from Dallas Water Utilities (DWU) and is contracted with the Upper Trinity Regional Water District (UTRWD) for 30 MGD. Under its current contract with the UTRWD, the Town of Flower Mound is required to take a minimum of 3.7 MGD. During the winter months (November-May) water from the UTRWD is used to meet morning peak demands. The remaining daily demand is met with DWU water supplied from the Pintail Pump Station. The Town of Flower Mound attempts to maximize its use of DWU water because of its lower cost.

Ground Storage

The Town of Flower Mound currently has a combined 21 million gallons (MG) of ground storage located at its three pumping stations, Stonehill (10MG), Pintail (6 MG), and Stonecrest (5MG). An additional 5 MG is planned for future construction at Stonecrest bringing the total

available storage to 26 MG.

In order to balance supply rates with pumping rates, it is recommended that the Town continue to store approximately half of the daily demand in ground storage. Currently the Town has 10 MG of ground storage available at the Stonehill Pump Station, 6 MG available at Pintail Pump Station, and 5 MG available at Stonecrest Pump Station for a total of 21 MG. Combined with elevated storage and future construction of a 5 MG ground storage tank at Stonecrest, the system will be able to store 50% of the maximum daily demand in 2040. The total storage will also satisfy TCEQ regulations requiring the system to provide a minimum of 200 gallons of storage per connection.

Elevated Storage

The Town currently has three elevated storage tanks in operation: Bruton Orand, Waketon, and Freeman. These tanks provide 5.5 MG of storage. The Freeman tank has the ability to not only serve the western portion of the Town, but due to its height has the ability to serve the eastern portion of the Town if either of the other two tanks needs to be serviced.

The Texas Commission on Environmental Quality (TCEQ) Chapter 290 requires a minimum of 100 gallons of elevated storage per connection. With the current 5.5 MG of storage available, the Town's system has the capacity to serve up to 55,000 water connections. As of December 2019, the Town served 24,039 connections. The regulation does not account for the operational use of the elevated tanks, so the actual capacity of the elevated storage may be less than the 55,000 connections depending on future land uses.

Pumping Stations

The Town currently supplies treated water from three pumping stations, Stonehill, Pintail, and Stonecrest. The Stonehill pump station has a firm capacity of 28,000 gallons per minute (gpm), Pintail pump station has a firm capacity of 13,000 gpm, and Stonecrest pump station has a firm capacity of 12,000 gpm. Stonecrest will have an ultimate firm capacity of 24,000 gpm once phases two and three are complete. The Lusk Lane booster pump station has been decommissioned.

Distribution System

The Town's water system is divided into two pressure planes, east and west. The west pressure plane is served by the Freeman elevated storage tank and will be served by the Stonecrest pump station. The east pressure plane, which operates at a lower pressure plane elevation, is served by the Stonehill and Pintail pump stations and the Bruton Orand and Waketon elevated storage tanks. In previous years, the pressure plane has had a natural divide. Pressure reducing valves will likely be necessary to maintain that divide in the future.

Previously it was thought that a third pressure plane may be created for the Lakeside area due to higher pressures. This was evaluated and due to the existing developments in this area and previously designed water suppression systems it was not feasible to lower the pressure in this area.

A network of pipes delivers water from the pump stations that receive water from the Town's water providers. Water is conveyed from the Stonehill Pump Station by a 30-inch diameter

waterline along Justin Road and a 20-inch diameter waterline along Valley Ridge Blvd. A 30-inch diameter line along Dixon Lane then carries water to the west side of the Long Prairie District. Water is conveyed from Pintail Pump Station by a 30-inch diameter waterline along Flower Mound Road. The transmission main then reduces to a 24-inch diameter and then to a 20-inch diameter west of Long Prairie. Water is conveyed south of Flower Mound Road by a 16-inch diameter waterline along Long Prairie Road and a 20-inch diameter waterline along Gerault Road.

The Stonehill and Pintail Pump Station transmission systems are connected by two transmission mains that run north and south: a 16-inch diameter waterline that runs along Bridlewood Blvd. and a 20-inch diameter waterline along Morriss Road.

A 20-inch diameter transmission line carries water along Cross Timbers Rd. from Morriss Rd. to the west side of the Town and ends west of the Tour18 area.

Denton Creek Reuse Water Master Plan

The Town has adopted the Denton Creek Reuse Water Master Plan prepared by Kimley-Horn and Associates, Inc. to meet the Town's reuse water system infrastructure needs. The Reuse Water Master Plan document provides a strategic plan for the Town's reuse water distribution system within certain areas of the Town. The document serves as a planning tool for current and future needs by projecting reuse water system demands, identifying the resulting required infrastructure, and developing a list of recommended capital improvements.

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TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE MASTER PLAN, BY AMENDING ORDINANCE NO. 24-01 IN PART, WHICH ADOPTED THE MASTER PLAN; BY AMENDING SECTION 8.0 WATER PLAN TO ADOPT UPDATES FOR THE YEAR 2020 TO THE 2009 WATER MASTER PLAN AS A COMPONENT OF THE MASTER PLAN; REPEALING ALL CONFLICTING ORDINANCES, ORDERS, OR RESOLUTIONS; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, the Town Council of the Town of Flower Mound has previously adopted a Water Plan, together with all amendments thereto, as a component to the Master Plan; and,

WHEREAS, the Town Council of the Town of Flower Mound has previously amended the Master Plan by adopting the Denton Creek Water Reuse Master Plan on December 15, 2014; and,

WHEREAS, the Town Council previously updated Section 8.0 of the Master Plan in 2015; and,

WHEREAS, the Town Council of the Town of Flower Mound has previously amended the Master Plan by adopting the Lakeside Water Reuse Master Plan on October 15, 2018; and,

WHEREAS, the Town engaged Kimley-Horn and Associates, Inc. to update the Town's water model and Water Master Plan for the year 2020; and,

WHEREAS, the 2020 updates as set out herein are based on current water demands, demographics, future land uses, and growth projections; and,

WHEREAS, the Planning and Zoning Commission of the Town of Flower Mound, Texas, held a public hearing on November 9, 2020, and the Town Council of the Town of Flower Mound, Texas, held a public hearing on December 7, 2020, with respect to the Master Plan Amendment described herein to consider adoption of the Water Master Plan Amendments with updates proposed for 2020; and,

WHEREAS, the Town has complied with all publication and procedural requirements for the approval of a Master Plan Amendment; and,

WHEREAS, the Town Council finds that an amendment to the Master Plan as outlined herein and adoption of the Water Master Plan Amendments with updates proposed for 2020 are in the best interest of the Town of Flower Mound and will promote the health, safety and general welfare of the citizens of the Town of Flower Mound and the general public;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct legislative and factual findings of the Town of Flower Mound, and they are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

From and after the effective date of this Ordinance, Section 8.0 Water Plan, of Master Plan, is hereby amended by amending the language in Section 8.0 Water Plan to read as follows:

"**8.0 Water Plan**

The existing and proposed components of the water system were evaluated in detail and are included in the 2009 Water Master Plan prepared by Kellogg Brown & Root, Inc. and adopted by the Town Council on May 4, 2009. In 2015 and 2020, the Town adopted updates to the 2009 Water Master Plan based on water demands, demographics, future land uses, and growth projections. This document provides details about the Town's system based on the 2009 Water Master Plan and the 2015 and 2020 updates. The 2009 Water Master Plan Update and the 2015 and 2020 Water Master Plan Amendments provide additional details about the Town's system and are incorporated herein by reference for all purposes allowed by law. The following components of the water system have been evaluated:

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SECTION 3

From and after the effective date of this Ordinance, the 2020 Water Master Plan Amendments prepared by Kimley-Horn and Associates, Inc. is hereby adopted as a component of Section 8.0, Wastewater Plan, of the Master Plan and adopts updates and changes to the 2009 Wastewater System Master Plan Update document prepared by Kellogg Brown & Root,

Inc. in 2009. The 2020 Water Master Plan Amendments prepared by Kimley-Horn and Associates, Inc. is attached hereto as Exhibit A and incorporated herein by reference for all purposes.

SECTION 4

This Ordinance shall be cumulative of all provisions of ordinances of the Town of Flower Mound, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances or any resolution of the Town, in which event the conflicting provisions of such ordinances or resolutions are hereby repealed.

SECTION 5

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section, and said remaining portions shall remain in full force and effect.

SECTION 6

The Town Secretary of the Town of Flower Mound is hereby directed to publish the caption in the official newspaper of the Town of Flower Mound as required by Section 3.07 of the Charter of the Town of Flower Mound.

SECTION 7

This Ordinance shall take effect and be in full force from and after its passage and publication as required by law, and it is so ordained.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF ____ TO ____, ON THIS THE 7th DAY OF DECEMBER 2020.

APPROVED:

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

APPROVED AS TO FORM AND LEGALITY:

_____
Bryn D. Meredith, TOWN ATTORNEY

EXHIBIT A

Water Master Plan Amendments
Prepared by Kimley-Horn and Associates, Inc.

TOWN COUNCIL AGENDA ITEM NO. 34

REGULAR ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Public Hearing to consider a recommendation to amend the Town of Flower Mound Master Plan through the amendment of Section 9.0 Wastewater Plan, to adopt amendments and additions to the 2009 Wastewater Master Plan Update as a component of the Master Plan. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020, meeting.)**

BACKGROUND INFORMATION: The Town periodically provides updates to its Master Plans. Growth trends and population distribution, along with collected field data, are reflected in the update to the Town's Wastewater Model. The updated model helps the Town determine priorities for upcoming Capital Projects and is used to determine updated impact fees. The wastewater model has been updated and, as a result, staff is recommending approval of the amendment to the Wastewater Plan component of the Master Plan. Upon approval of this amendment, staff will continue with the impact fee update process.

BOARD REVIEW/CITIZEN FEEDBACK: The Planning & Zoning Commission recommended approval by a vote of 6 to 0 at its November 9, 2020 meeting.

The Town Code requires public notice in a newspaper of general circulation (Denton Record Chronicle) for all Master Plan amendment requests. At the time this report was written, staff had received no correspondence regarding the request.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: The Ordinance was prepared by Lindsey Hale with Taylor, Olson, Sralla, & Elam L.L.P.

ATTACHMENTS:

1. Proposed Wastewater Master Plan Amendment
2. Proposed Section 9.0 Wastewater Plan
3. Draft Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

Kimley»Horn

Technical Memorandum

Prepared for: Town of Flower Mound

Prepared by: Kimley-Horn and Associates, Inc.

Date: November 4, 2020

WASTEWATER MASTER PLAN AMENDMENTS

This memo amends the Wastewater System Master Plan Update prepared by Kellogg Brown & Root (KBR) in 2009. Sections of this memo are designated with the corresponding section number from the 2009 document.

1.2 Project Scope Updated

The Town has retained Kimley-Horn to update the Town's wastewater model and Wastewater Master Plan for the year 2020. The 2009 Wastewater Master Plan and wastewater model done by KBR was previously updated by Kimley-Horn in 2015. This master plan updated the 2015 model based on current wastewater flows, demographics, future land uses and growth projections. This master plan projects growth and associated infrastructure needs for years 2025, 2030 and buildout.

As part of the model update, Kimley-Horn reconfigured the wastewater model to be directly linked to the Town's land use plan so that projected flows could be generated. In 2015, the Town's gravity sewer basin was modified slightly from the 2009 KBR model. The King tract, a tract which includes twelve single family residential lots, was incorporated into the Town's service area. Additionally, the Lewisville ISD property which already has sewer service and is included in the model was shown within the service boundary. See **Figure 1** (attached).

The Town has three large planning areas with potential future growth: the Lakeside District, the Denton Creek District, and the Prairie Vista District. In the 2015 master plan update, the Lakeside area land use was modified to include some residential in the Campus Commercial areas. Kimley-Horn worked with the Town's planning department to determine the projected wastewater demands for this area. Since that time, significant development has occurred in the Lakeside area with some parcels developing significantly denser than the Campus Commerical initially projected. A more detailed breakdown of the changes in the Lakeside area can be found in Section 3.5.1. The second area, Denton Creek, is currently being developed and will include a mix of residential and non-residential areas. The third area,

Kimley»Horn

Prairie Vista, is planned to consist of mixed use and estate density residential developments. Denton Creek and Prairie Vista will be served by the Trinity River Authority for wastewater service. This report includes a section detailing the Trinity River Authority wastewater service area (Section 3.6). This section was not previously included in the 2009 KBR Wastewater Master Plan.

2.3.1 Calculation of System Loads (2020 Updates)

The previous model used an extended period simulation (EPS) analysis where residential and commercial loads were calculated separately and loaded using diurnal patterns. The 2020 master plan was updated to run in a steady state scenario. In a steady state scenario, the wastewater flow peaks throughout the system simultaneously and the scenario is not dependent on time. As a result, diurnal patterns are not applied to the commercial or residential loadings in a steady state scenario. Furthermore, it was assumed that all land uses within a specific sub-basin will have the same peaking factor based on the Harmon's Formula. Since diurnal patterns are no longer utilized and peaking factors are consistent across land uses, the commercial and residential loads were combined into a single load which reduces the complexity of the model. See sections 3.1.2 and 3.2.2 for additional information related to dry weather and wet weather modeling methodology.

2.4.1 Collection System Updates (2020 Updates)

In 2012, the Town entered into an agreement with the City of Copper Canyon (Copper Canyon) in which the Town agreed to provide service to a portion of Copper Canyon. The agreement states that Copper Canyon may discharge up to 400,000 gallons of wastewater flow per day into the Town's wastewater system. This flow has been incorporated into the wastewater model.

3.1.2 Dry Weather Modeling (2020 Updates)

As part of the model update, historical flow data was gathered and evaluated. Data used to generate dry weather flows was obtained from system flow meters, lift station data, and wastewater treatment plant data. Accurate flow meter data was difficult to obtain for a few of the meter stations. It was observed that some meters had inaccurate readings or unavailable data. Accurate meter data will be important for calibrating future models and determining observed flows. It is recommended to replace and/or relocate some of the existing meter stations according to revised sub basins. See Section 3.3 for more information on replacing and relocating meter stations. In determining dry weather flows, flow data was only used for meter stations where accurate data could be obtained. The available historical flow data indicated that the residential wastewater flows utilized in the 2015 model were appropriate; however, some of the non-residential flows were no longer accurate. The following non-

residential land use factors were updated to align with historical data in this model update: mixed use, office, commercial, institutional, hospital, park, utility, and retail.

The 2009 KBR model did not provide projected dry weather flows for future scenario; it only focused on wet weather peak events. As part of the 2015 model update, a dry weather model was created for future scenarios. The 2020 model utilizes dry weather model scenarios as well. This data will be useful when evaluating the available capacity of the Town's wastewater treatment plant.

Record information and/or pump curves were not provided by the Town for the following lift stations: Garden Ridge, Emerald Bay, and La Salle

3.2.2 Wet Weather Modeling (2020 Updates)

The 2009 model used historical data to generate a peaking factor for both I/I and domestic wastewater usage for each meter basin. Historical flow meter data was collected for the 2020 wet weather model calibration. However, as discussed in the section above, the available flow meter data was limited. Additionally, observed inflow rates at several of the Town's lift stations did not correlate well with projected modeled flows during wet weather conditions. Due to limited meter data and inconsistent observed flows, it was determined that the peaking factors and I&I factors previously utilized in the model could no longer be relied upon moving forward. As a result, the 2020 wet weather model was changed to utilize an alternate wet weather approach. This approach should allow for the sub-basin peaking factors to continually be calibrated and modified based on actual flow data during future model updates.

In the 2020 model, the Town's wastewater service area was divided into 12 different sub-basins based on existing wastewater infrastructure. See **Figure 2** for sub-basin boundaries. The wastewater sub-basins were divided in a way that will make it simple to collect flow meter data from each basin to calibrate future models. A peaking factor was calculated for each sub-basin using Harmon's Formula. Harmon's Formula is an engineering equation used to calculate peak flows through gravity wastewater systems. Peak flow in this equation is determined as a factor of population. See below for Harmon's Formula.

Harmon's Formula:

$$PF = \frac{1 + 14}{(4 + P^{\frac{1}{2}})}$$

P = Population in thousands

The 2020 model with updated peaking factors was compared to the previous model using KBR's wet weather approach to ensure significant flow discrepancies wouldn't exist. It was

Kimley»Horn

determined that the model results were within a reasonable tolerance and appear to be valid for the Town's system. See **Table 3.2** for sub-basin peaking factors.

Table 3.2. Sub-Basin Peaking Factors

Sub-Basin	Peaking Factor
1	3.58
2	3.15
3	3.33
4	3.00
5	3.44
6	3.05
7	3.61
8	2.83
9	2.97
10	3.13
11	3.20
12	3.32

As discussed above, the 2020 model was run using a steady state analysis. The steady state scenario provides a more conservative analysis than the EPS scenario because it assumes that all flow throughout the wastewater system peaks simultaneously whereas the EPS scenario uses diurnal patterns for the wastewater loadings that do not always peak at the same time. In addition, the lift station operations in the steady state scenario assume that all lift stations are running at the same time. This can be difficult to capture in the EPS scenario as all of the lift stations in the system may not run simultaneously due to the different peaking times throughout the system. This additional conservatism will help ensure the Town's infrastructure is sized to meet future peak flow events.

3.3.1 Metering Stations (2020 Updates)

The Town currently has 10 permanent meter station sites. These sites are located throughout the Town and appear to be evenly distributed, as shown in **Figure 2**. When gathering historical flow meter data for model calibration, it was observed that some meter stations have limited available data or inaccurate flow readings. Meter data from stations 4 and 6 appear to surcharge at a high level on wet weather days and flow meter data was not available for stations 5, 7, and 9 on observed wet weather days. Furthermore, station 5 is no longer located at an applicable location due to the revised sub-basins that were developed as part of the 2020 model update. Because flow meter data was limited and historical peaking factors could

not be determined, the peaking factors developed using Harmon's Formula were not able to calibrated against actual flow data.

Accurate meter data will be important for calibrating future models and determining observed wet weather peaking factors for each sub-basin. To collect accurate historical flow data for future model updates, the Town may consider repairing or replacing these meters over the next five years as well as relocating and/or installing new meters at more appropriate locations based on the updated sub-basins. Long term or temporary meter stations may be used to satisfy wet weather calibration going forward. See **Figure 2** for sub-basin boundaries as well as existing and proposed meter station locations.

3.4 Wastewater Treatment Plant

Currently the treatment plant serves the Long Prairie and Lakeside service areas. While the collection system is designed and rated to accommodate peak wet weather conditions, the wastewater treatment plant is permitted and rated based on average annual flow rates. According to the Town, the treatment plant had a capacity of 9.5 million gallons a day (MGD) but was recently de-rated in 2019 to have a capacity of 8.7 MGD. Utilizing the dry weather model prepared as part of the model update, the projected build out annual average flow for these areas is around 9 MGD. The Texas Commission on Environmental Quality (TCEQ) requires an expansion on wastewater treatment plants that are at 75% capacity. Since the capacity of the wastewater treatment plant is now 8.7 MGD, 75% capacity is at 6.5 MGD. The model shows that the current average day wastewater flow into the treatment plant is 6.2 MGD. Additionally, field data indicated that the annual average flow ranged between 5.4 to 6.2 MGD depending on where in the plant the flow was measured. A study in the 5-year CIP window is recommended to determine if and when a plant expansion should be performed.

3.5.1 Lakeside Business District (2020 Updates)

The Lakeside Business District includes three land uses: Mixed Use, Campus Industrial and Campus Commercial. The Campus Industrial use is fairly developed, and this type of use historically generates low flows. For the remaining undeveloped portions of Campus Industrial areas, an average daily flow of 1,000 gallons per acre per day was assumed. Prior to the 2015 update, developers began approaching the Town with plans to pursue mixed use developments in this area that exceeded the density projections associated with Campus Commercial. Lakeside DFW was the first significant development to be approved and has since almost fully developed. As a result of this, Kimley-Horn worked with the Town's planning department to determine what wastewater demands should be utilized in this area to account for future development. Based on the guidance provided by the Town, a composite average day wastewater demand of 2,440 gallons per day per acre was utilized for an anticipated mixture of residential and non-residential uses.

Since then, several additional developments including Southgate, Lakeside Village, The Point, and Stryker have gone through the development review process and had their development plans approved with densities greater than that projected by Campus Commercial. These developments have been incorporated into the current model.

It is anticipated that the Town's Southside Lift Station will require pumping improvements in the future to accommodate the projected flows. In addition to these pumping improvements, it may be necessary to extend the force main from the lift station to the wastewater treatment plant preliminary treatment area. Currently the force main discharges into the Town's gravity sewer systems just north of Lakeside Parkway, but in the future may need to be extended from this point to the treatment plant.

In addition to the lift station and force main improvements, it appears that portions of the gravity system will need to be upsized to accommodate the future flows.

3.6 TRA Service Area

The Town currently has a contract with the Trinity River Authority (TRA) for wastewater service on the west side of the Town. The areas to be serviced by TRA are the Denton Creek and Prairie Vista areas. Denton Creek is currently being developed and will include a mix of residential and non-residential areas. The third area, Prairie Vista, is planned to consist of mixed use and estate density residential developments.

The TRA wastewater service area is currently not modeled since it does not affect the Town's CIP plan; however, it's important to understand the volume of flow discharged into TRA's system relative to the Town's contracted allowable. As part of the 2015 master plan update and subsequent model updates, the existing and projected buildout wastewater flows in the TRA service area have been calculated using a tracking spreadsheet. Prairie Vista is undeveloped and does not have an existing demand. The buildout wastewater flow from Prairie Vista is 4.26 MGD. The existing and the build out wastewater flows for the Denton Creek area are 1.19 MGD and 8.72 MGD respectively. The total projected buildout wastewater flow from the TRA service area is 12.97 MGD. **Figure 3** shows the TRA service area as well as the existing and buildout flow projections.

From conversations with the Town, there is a potential wastewater agreement with the Town of Argyle (Argyle). Argyle's wastewater will route through the TRA service area and ultimately will be served by TRA. Argyle is expected to contribute around 0.4 MGD through the system. The estimated buildout flows for Prairie Vista and Denton Creek include this contribution from Argyle.

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4.1 Population Projections

The population and growth projections used to estimate future water demands were derived by working with the Town's planning department and are based on the Town's current land use plan.

4.2.A Land Use

Kimley-Horn worked with the Town's planning department to determine projected growths for the years 2025, 2030 and buildout. These scenarios were evaluated to identify necessary infrastructure improvements for each planning year. These projections included the revised land use plan for the Lakeside Area, updates to the future Prairie Vista development plan, and include the current land use plan for the Riverwalk development which was added in the 2015 model update.

4.3 5-Year CIP (2025 Scenario)

1. **Lift Station Improvements and Decommissioning Phase III**
   This project will include improvements to Kipling and Park Bend Lift Stations to add additional capacity.

   Project Cost $980,000

2. **Oak Street Lift Station and Force Main Phase IV**
   This project will include replacing one of the existing small 3400 gpm, 77 hp submersible pumps with a large 7000 gpm, 215 hp pump with variable frequency drive, upgrading the lift station's mechanical piping, and installing control valves for three large pumps.

   Project Cost $3,400,000

3. **Southside Force Main Extension**
   Approximately 4,600 LF of 18-inch force main is proposed to alleviate capacity constraints at the raw water lift station at the wastewater treatment plant. This force main will connect to the existing 18" force main constructed as part of the Lakeside Lift Station and Force Main project and end at the headworks of the Town's wastewater treatment plant. A detailed capacity study of the raw water lift station located at the wastewater treatment plant should be performed to determine if and when the force main extension will be required.

   Project Cost $2,020,000

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4. **Southside Pump Upgrade**
   This project includes upsizing the two smaller pumps at the Southside Lift Station to add capacity to the lift station.

   Project Cost $680,000

5. **Southside Gravity Main Improvements**
   Approximately 2,970 LF of 15-inch wastewater main, and 620 LF 12-inch wastewater main is proposed to provide adequate capacity for density increases in the Lakeside area.

   Project Cost $1,570,000

6. **Upper Timber Interceptor (College Parkway to Pecan Drive)**
   Approximately 1,240 LF of 15-inch wastewater main is proposed to replace the existing 12-inch wastewater line along Long Prairie Road south of College Parkway.

   Project Cost $480,000

7. **Wastewater Treatment Plant Master Plan**
   This project is a capacity study on the Town's existing wastewater treatment plant to accommodate higher average influents than the current capacity of 8.7 MG.

   Project Cost $130,000

4.4 10-year CIP (2030 Scenario)

1. **Riverwalk Collector (Morris Road to Windsor Drive)**
   Approximately 1,430 LF of 15-inch wastewater main is proposed running north and east from between FM 2499 and Morriss Road to Morriss Road, north of the intersection with Eaton. Inflow and infiltration monitoring of the existing line is recommended prior to construction.

   Project Cost $530,000

4.5 Buildout CIP

1. **Upper Timber Interceptor (Morriss Road to 1 Place Lane)**
   Approximately 3,700 LF of 30-inch wastewater main is proposed to replace the existing 27-inch wastewater line from Morriss Road to 1 Pl Lane.

   Project Cost $2,170,000

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2. **Wastewater Treatment Plant Expansion**
   Upgrade the Town's existing wastewater treatment plant to accommodate higher average influents than the current capacity of 8.7 MG. The Wastewater Treatment Plant Capacity Study recommended in the 5-year CIP window will further determine the necessity of this project.

Project Cost	TBD

FM 1171

SCENIC DR

FLOWER MOUND RD

CROSS TIMBERS RD

BRUTON ORAND RD

LISD Property

QUAIL RUN

King Tract

FLOWER MOUND RD

CARDINAL DR

WICHITA TRAIL

Wastewater Service Area Exhibit
Figure 1

THE TOWN OF FLOWER MOUND TEXAS

N
W E
S

0 600 1,200 1,800 2,400
Feet

Kimley»Horn November 2020

Legend

Revised Service Area Boundary

Tracts Added to Service Area

sri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LONG PRAIRIE SERVICE AREA

LAKESIDE SERVICE AREA

JUSTIN RD
FM 407
VALLEY RIDGE BLVD
DIXON LN
KIRKPATRICK LN
WAKETON RD
MORRISS RD
LONG PRAIRIE RD
BRIDLEWOOD BLVD
GARDEN RIDGE RD
COLLEGE PKWY
FM 1171
CROSS TIMBERS RD
FM 2499
FIREWHEEL DR
OAK DR
FOREST VISTA DR
WICHITA TRL
SIMMONS RD
OLD SETTLERS RD
MCKAMY CREEK RD
FM 3040
SPINKS RD
GERAULT RD
LAKESIDE PKWY
INTERNATIONAL PKWY

Terracina
Justin Lift Station
MS-9
Kirkpatrick Lift Station
Prop MS-11
MS-10
MS-8
Prop MS-12
Yucca Lift Station
MS-5
MS-6
Oak Street Lift Station
MS-4
MS-7
MS-3
Garden Ridge Lift Station
MS-2
MS-1
Prop MS-13
Prop MS 14
Prop MS-5
Wichita I Lift Station
Wichita II Lift Station
Bella Lago
Emerald Bay
La Salle
Park Bend Lift Station
Sanctuary Lift Station
Kipling
Wickersham St
Sunset Point
Point Noble
Twin Coves Park
Glen Chester

Grapevine Lake

1 2 3 4 5 6 7 8 9 10 11 12

Wastewater Subbasins and Meter Station Locations
Figure 2

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 2,800 5,600 Feet

Kimley»Horn

November 2020

Legend

- Wastewater Treatment Plant
- Existing Meter Stations (To Be Abandoned/Relocated)
- Existing Meter Stations (To Remain)
- Proposed Meter Stations
- Existing Lift Station
- Existing Force Main
- Existing Wastewater Gravity Mains (Modeled)
- Existing Wastewater Gravity Collectors
- 2020 Sub-Basin Boundaries

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

DENTON CREEK BLVD

CANYON FALLS

SMOOT LN

DENTON CREEK

HWY 377

PRAIRIE VISTA

CROSS TIMBERS RD

DUNHAM RD

HAYNES RD

TOWN OF FLOWER MOUND
TRA Service Area
Figure 3

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 1,800 3,600 Feet

Kimley»Horn

November 2020

Legend

- Ex. TRA Wastewater
- Ex. Town Wastewater
- TRA Service Area

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LONG PRAIRIE SERVICE AREA

LAKESIDE SERVICE AREA

Grapevine Lake

Wastewater Capital Improvement Capacity Projects

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 2,800 5,600 Feet

Kimley»Horn

November 2020

Legend

- Wastewaster Treatment Plant
- Meter Stations
- Lift Station Improvements: Under Design or Construction
- Lift Station Improvements: 5-year CIP
- Existing Lift Station
- Wastewater Gravity Main: Under Design or Construction
- Wastewater Gravity Main: 5-year CIP
- Wastewater Gravity Main: 10-year CIP
- Wastewater Gravity Main: Build Out CIP
- Wastewater Force Main: Under Design or Construction
- Wastewater Force Main: 5-Year CIP
- Existing Force Main
- Service Area Boundary
- Existing Wastewater Gravity Collectors
- Existing Wastewater Gravity Mains (Modeled)

Flower Mound CIP Project Under Design or Construction

1. Sunset Point Lift Station and Force Main

Flower Mound 5-year Wastewater CIP Project List

1. Lift Station Improvements and Decommissioning Phase III
2. Oak Street Lift Station and Force Main Phase IV
3. Southside Force Main Extension
4. Southside Pump Upgrade
5. Southside Gravity Main Improvements
6. Upper Timber Interceptor (College Parkway to Pecan Drive)
7. Wastewater Treatment Plant Master Plan

Flower Mound 10-year Wastewater CIP Project List

1. Riverwalk Collector (Morriss Road to Windsor Drive)

Flower Mound Buildout Wastewater CIP Project List

1. Upper Timber Interceptor (Morriss Road to 1 Place Lane)
2. Wastewater Treatment Plant Expansion

Town 5-year Wastewater CIP Estimate
OPC Summary

Proj. #	Description	Total Project Cost
1	Lift Station Improvements and Decommissioning Phase III	$ 980,000
2	Oak Street Lift Station and Force Main Phase IV	$ 3,400,000
3	Southside Force Main Extension	$ 2,020,000
4	Southside Pump Upgrade	$ 680,000
5	Southside Gravity Main Improvements	$ 1,570,000
6	Upper Timber Interceptor (College Parkway to Pecan Drive)	$ 480,000
7	Wastewater Treatment Plant Master Plan	$ 130,000
	Total	**$ 7,670,000**

Town 10-year Wastewater CIP Estimate
OPC Summary

Proj. #	Description	Total Project Cost
1	Riverwalk Collector (Morris Road to Windsor Drive)	$ 530,000
	Total	**$ 530,000**

Town Build Out Wastewater CIP Estimate
OPC Summary

Proj. #	Description	Total Project Cost
1	Upper Timber Interceptor (Morriss Road to 1 Place Lane)	$ 2,170,000
2	Wastewater Treatment Plant Expansion	TBD
	Total	**TBD**

5-year CIP Total	$	7,670,000
Beyond 5-year CIP Total (Not including future WWTP expansion)	$	2,700,000
Grand Total (Not including future WWTP expansion)	**$**	**10,370,000**

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Lift Station Improvements and Decommissioning Phase III**	**Sheet:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Construction Costs	1	LS	$ 980,000.00	$ 980,000
	Total:			$ 980,000	

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**KSS**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title: **Oak Street Lift Station and Force Main Phase IV** **Sheet:** **2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$ 90,000.00	$ 90,000
	MECHANICAL				
2	7,000 gpm Submersible Pump and 215 HP Motor	1	EA	$ 230,000.00	$ 230,000
3	20"x12" Stainless Steel Reducing Elbow	3	EA	$ 15,000.00	$ 45,000
4	20" Stainless Steel Mechanical Piping	45	LF	$ 1,000.00	$ 45,000
5	20" Check Valve with Oil Cushion	3	EA	$ 25,000.00	$ 75,000
6	20" Harnessed Coupling	6	EA	$ 5,000.00	$ 30,000
7	20" Isolation Valve	3	EA	$ 20,000.00	$ 60,000
8	2" Air Release/Vacuum Valve	3	EA	$ 5,000.00	$ 15,000
9	Stainless Steel Pump Guide Rails	3	EA	$ 10,000.00	$ 30,000
10	Relocation of Existing 215 HP Pumps	2	EA	$ 40,000.00	$ 80,000
11	Remove and Dispose Existing Piping/Valves/Pump	1	LS	$ 30,000.00	$ 30,000
	YARD PIPING				
12	Bypass Pumping	1	LS	$ 350,000.00	$ 350,000
13	30" Discharge Header	60	LF	$ 1,000.00	$ 60,000
14	24" Gravity Line	30	LF	$ 700.00	$ 21,000
15	30" Gravity Line	30	LF	$ 900.00	$ 27,000
16	Connect to Existing Force Main	1	EA	$ 10,000.00	$ 10,000
17	Connect to Existing Gravity Main	2	EA	$ 10,000.00	$ 20,000
	SITE				
18	Splitter Box	1	EA	$ 150,000.00	$ 150,000
19	Grading, Erosion Control, Site Restoration	1	LS	$ 50,000.00	$ 50,000
20	Demolish Existing Electrical Building	1	LS	$ 25,000.00	$ 25,000
21	Move Equipment to New Electrical Building	1	LS	$ 50,000.00	$ 50,000
22	Remove Existing Hoist	1	LS	$ 5,000.00	$ 5,000
23	Install 5 Ton Bridge Crane	1	LS	$ 75,000.00	$ 75,000
24	Driveway Improvements	1	LS	$ 15,000.00	$ 15,000
	ELECTRICAL/SCADA				
20	Misc Electrical/SCADA/HVAC	1	LS	$ 100,000.00	$ 100,000
21	Motor Control Center	1	LS	$ 100,000.00	$ 100,000
22	Variable Frequency Drive	1	EA	$ 75,000.00	$ 75,000
23	400 KW Genset	1	EA	$ 175,000.00	$ 175,000
24	Automatic Transfer Switch and Switchgear Mods	1	LS	$ 100,000.00	$ 100,000
25	Temporary Power/Controls	1	LS	$ 100,000.00	$ 100,000
	STRUCTURAL				
26	New Electrical Building and Foundation	600	SF	$ 300.00	$ 180,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 2,418,000
Eng/Survey Fees (+/- %):	15	$ 363,000
Contingency (+/- %):	25	$ 619,000
Prop Acquisition:		$ -
Total		$ 3,400,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Southside Force Main Extension**	**Sheet:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$50,000.00	$50,000
2	18" Ductile Iron Force Main	4,600	LF	$200.00	$920,000
3	Bore with 36" Steel Casing	400	LF	$800.00	$320,000
4	Connect to Headwork	1	EA	$5,000.00	$5,000
5	Trench Safety	4,600	LF	$2.00	$9,200
6	Seeding, Fertilizer and Erosion Control	4,600	EA	$5.00	$23,000
7	Air Release/Vacuum Valve	2	EA	$20,000.00	$40,000
8	Connect to Existing 18" Force Main	1	EA	$15,000.00	$15,000
9	Cathodic Protection	1	EA	$55,000.00	$55,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$	1,437,200
Eng/Survey Fees (+/- %):	15	$	216,000
Contingency (+/- %):	25	$	366,800
Prop Acquisition:		$	-
Total:		$	2,020,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**7/21/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**KSS**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title: **Southside Pump Upgrade** **Sheet:** **4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$20,000.00	$20,000
2	1,500 GPM Submersible Pump and 85 HP Motor	2	EA	$120,000.00	$240,000
3	Electrical / SCADA	1	LS	$12,500.00	$12,500
4	Mechanical Piping	1	LS	$50,000.00	$50,000
5	Variable Frequency Drives	2	EA	$65,000.00	$130,000
6	Remove Existing Pumps	2	EA	$10,000.00	$20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 472,500
Eng/Survey Fees (+/- %):	15		$ 71,000
Contingency (+/- %):	25		$ 136,500
Prop Acquisition:			$ -
Total:			$ 680,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title: **Southside Gravity Main Improvements** **Sheet:** **5**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$40,000.00	$40,000
	Eastern Improvements				
2	15" Wastewater Main	2,970	LF	$ 155.00	$460,350
3	4' Manhole (8" - 18" Main)	9	EA	$ 10,000.00	$90,000
4	Concrete Pavement Repair	267	SY	$ 110.00	$29,333
5	Bore with 36" Steel Casing	380	LF	$ 850.00	$323,000
6	Seeding, Fertilizer & Erosion Control	2,390	LF	$ 10.00	$23,900
7	Trench Safety	2,590	LF	$ 2.00	$5,180
8	TV Inspection	2,970	LF	$ 2.00	$5,940
9	Vacuum Testing of Sanitary Sewer Manholes	11	EA	$ 500.00	$5,500
10	Connect to Existing Manhole	2	EA	$ 9,000.00	$18,000
	Subtotal				*$961,203*
	Western Improvements				
9	12" Wastewater Main	620	LF	$ 130.00	$80,600
10	4' Manhole (8" - 18" Main)	2	EA	$ 10,000.00	$20,000
11	Seeding, Fertilizer & Erosion Control	620	LF	$ 10.00	$6,200
12	Trench Safety	620	LF	$ 2.00	$1,240
13	TV Inspection	620	LF	$ 2.00	$1,240
14	Vacuum Testing of Sanitary Sewer Manholes	4	EA	$ 500.00	$2,000
15	Connect to Existing Manhole	2	EA	$ 9,000.00	$18,000
	Subtotal				*$111,280*

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,112,483
Eng/Survey Fees (+/- %):	15	$ 167,000
Contingency (+/- %):	25	$ 290,517
Prop Acquisition:		$ -
Total:		$ 1,570,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 5-year CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Upper Timber Interceptor (College Parkway to Pecan Drive)**	**Sheet:**	**6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000.00
2	15" Wastewater Main	1,240	LF	$ 155.00	$ 192,200
3	4' Manhole (8" - 18" Main)	5	EA	$ 10,000.00	$ 50,000
4	Seeding, Fertilizer & Erosion Control	1,180	LF	$ 10.00	$ 11,800
5	Concrete Pavement Repair	5	SY	$ 110.00	$ 550
6	Bore with 30" Steel Casing	60	LF	$ 750.00	$ 45,000
7	Trench Safety	1,180	LF	$ 2.00	$ 2,360
8	Vacuum Testing of Sanitary Sewer Manholes	7	EA	$ 500.00	$ 3,500
9	TV Inspection	1,240	LF	$ 2.00	$ 2,480
10	Connect to Existing Manhole	2	EA	$ 9,000.00	$ 18,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 335,890
Eng/Survey Fees (+/- %):	15	$ 51,000
Contingency (+/- %):	25	$ 93,110
Prop Acquisition:		$ -
Total:		$ 480,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: Buildout CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Wastewater Treatment Plant Master Plan**	**Sheet:**	**7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Construction Costs	1	LS	$ 130,000.00	$ 130,000
	Total:			$ 130,000	

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [x] Final Design

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: 10-year CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title: **Riverwalk Collector (Morris Road to Windsor Drive)** **Sheet:** **1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000.00
2	15" Wastewater Main	1,430	LF	$ 155.00	$ 221,650
3	4' Manhole (8" - 18" Main)	6	EA	$ 10,000.00	$ 60,000
4	Seeding, Fertilizer & Erosion Control	800	LF	$ 10.00	$ 8,000
5	Concrete Pavement Repair	420	SY	$ 110.00	$ 46,200
6	Trench Safety	1,430	LF	$ 2.00	$ 2,860
7	TV Inspection	1,430	LF	$ 2.00	$ 2,860
8	Vacuum Testing of Sanitary Sewer Manholes	8	EA	$ 500.00	$ 4,000
9	Connect to Existing Manhole	2	EA	$ 9,000.00	$ 18,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 373,570
Eng/Survey Fees (+/- %):	15	$ 57,000
Contingency (+/- %):	25	$ 99,430
Prop Acquisition:		$ -
Total:		$ 530,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: Build Out CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Upper Timber Interceptor (Morriss Road to 1 Place Lane)**	**Sheet:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 70,000.00	$ 70,000.00
2	30" Wastewater Main	3,700	LF	$ 300.00	$ 1,110,000
3	5' Manhole (21" - 30" Main)	13	EA	$ 17,500.00	$ 227,500
4	Seeding, Fertilizer & Erosion Control	3,580	LF	$ 10.00	$ 35,800
5	Concrete Pavement Repair	10	SY	$ 110.00	$ 1,100
6	Bore with 48" Steel Casing	120	LF	$ 1,200.00	$ 144,000
7	Trench Safety	3,580	LF	$ 2.00	$ 7,160
8	Vacuum Testing of Sanitary Sewer Manholes	13	EA	$ 500.00	$ 6,500
9	TV Inspection	3,700	LF	$ 2.00	$ 7,400

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,539,460
Eng/Survey Fees (+/- %):	15	$ 231,000
Contingency (+/- %):	25	$ 399,540
Prop Acquisition:		$ -
Total:		$ 2,170,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**8/10/2020**
Project:	**Wastewater Master Plan Updates: Build-Out CIP**	**Prepared By:**	**JDJ**
KHA No.:	**061000201**	**Checked By:**	**KSS**

Title:	**Wastewater Treatment Plant Expansion**	**Sheet:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Construction Costs	1	LS	TBD	TBD
	Total:			TBD	

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

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Wastewater Treatment Plant
Service Areas
Long Prairie
Lakeside Business District
Denton Creek District
Prairie Vista

Wastewater Model .....Appendix D

9.0 WASTEWATER PLAN

The existing and proposed components of the wastewater system were evaluated in detail and are included in the 2009 Wastewater Master Plan prepared by Kellogg Brown & Root, Inc. and adopted by the Town Council on May 4, 2009. In 2015 and 2020, the Town adopted updates to the 2009 Wastewater Master Plan based on wastewater flows, demographics, future land uses, and growth projections. This document provides details about the Town's system based on the 2009 Water Master Plan and the 2015 and 2020 updates. The 2009 Wastewater Master Plan Update and the 2015 and 2020 Wastewater Master Plan Amendments provide additional details about the Town's system and are incorporated herein by reference for all purposes allowed by law.

The 2020 Wastewater Master Plan Amendments projected growth for year 2025, 2030 and buildout and determined associated infrastructure needs.

Since the previous Master Plan adopted in 2009, the Town's gravity sewer basin has been modified slightly. The King Tract, the Lewisville ISD property, and Rockpointe Church which already has sewer service are now included in the model are now shown in the service boundary.

The Town has three large planning areas with potential future growth: the Lakeside District, the Denton Creek District, and the Prairie Vista District. In the 2015 master plan update, the Lakeside area land use was modified to include some residential in the Campus Commercial areas. Kimley-Horn worked with the Town's planning department to determine the projected wastewater demands for this area. Since that time, significant development has occurred in the Lakeside area with some parcels developing significantly denser than the Campus Commercial initially projected. The second area, Denton Creek, is currently being developed and will include a mix of residential and non-residential areas. The third area Prairie Vista, is planned to consist of mixed use and estate density residential developments. Denton Creek and Prairie Vista will be served by the Trinity River Authority for wastewater service.

Wastewater Treatment Plant

The Town owns and operates a wastewater treatment plant (WWTP) which serves the Long Prairie and Lakeside service areas. While the collection system is designed and rated to accommodate peak wet weather conditions, the WWTP plant is permitted and rated based on average annual flow rates. The capacity of the WWTP was de-rated in 2019 from 9.5 million gallons a day (MGD) to 8.7 MGD at the request of the Texas Commission on Environmental Quality (TCEQ). Utilizing the dry weather model prepared as part of the model update, the projected build out annual average flow for these areas is approximately 9.0 MGD. TCEQ requires an expansion on wastewater treatment plants that are at 75% capacity. Since the capacity of the wastewater treatment plant is now 8.7 MGD, 75% capacity is at 6.5 MGD. The model shows that the current average day wastewater flow into the treatment plant is 6.2 MGD. Additionally, field data indicated that the annual average flow ranged between 5.4 to 6.2 MGD depending on where in the plant the flow was measured. A study in the 5-year CIP window is recommended to determine if and when a plant expansion should be performed.

Service Areas

Four wastewater service areas exist within the Town and are identified as Long Prairie, Lakeside Business District, Prairie Vista and Denton Creek District.

Long Prairie

This area is currently served by the existing collection system and wastewater treatment plant. It is nearly built-out, except in the far northwestern corner along FM 2499 and FM 407. Based on the 2009 Master Plan Update, recommendations have been made for capital improvements to increase the capacities of the interceptor lines, lift stations and force mains to accommodate future flows expected from ultimate build-out conditions in the existing service area.

Lakeside Business District

The Lakeside Business District includes three land uses: Mixed Use, Campus Industrial, and Campus Commercial. The Campus Industrial use is fairly developed, and this type of use historically generates low flows. For the remaining undeveloped portions of Campus Industrial areas, an average daily flow of 1,000 gallons per acre per day was assumed. Due to approved developments in the area that have exceed the density projections associated with Campus Commercial, Kimley-Horn worked with the Town's planning department to determine what wastewater demands should be utilized in this area to account for existing and future development. Based on the guidance provided by the Town, a composite average day wastewater demand of 2,440 gallons per day per acre was utilized for an anticipated mixture of residential and non-residential uses.

It is anticipated that the Town's Southside Lift Station will require pumping improvements in the future to accommodate the projected flows. In addition to these pumping improvements, it may be necessary to extend the force main from the lift station to the wastewater treatment plant preliminary treatment area. Currently the force main discharges into the Town's gravity sewer systems just north of Lakeside Parkway, but in the future may need to be extended from this point to the treatment plant.

In addition to the lift station and force main improvements, it appears that portions of the gravity system will need to be upsized to accommodate the future flows.

Denton Creek District

The Denton Creek District is located in western Flower Mound, generally between US 377 and IH-35 W, along FM 1171. This area is planned to be a mixture of light industrial, commercial development and residential. With the Town's existing wastewater treatment facility located so far from this area and the Trinity River Authority (TRA) operating a wastewater treatment facility immediately south of this area, the Town entered into a wastewater treatment agreement with TRA and has joined TRA's Denton Creek Regional Wastewater System. The ultimate peak wastewater flow for this area is projected to be approximately 8.7 MGD.

Prairie Vista

The Prairie Vista District, immediately east of the Denton Creek District, is comprised of developable land that is planned for Estate Density. Based on the 2009 Master Plan Update, recommendations have been made for capital improvements to provide the interceptor lines, lift stations and force mains necessary to accommodate flows expected from ultimate build-out conditions in this service area. These projects will provide for the flow to be sent to the TRA system located in the Denton Creek District. The infrastructure required to transmit flow from this area to the TRA system have not been identified in the Capital Improvement Plan. These improvements would be required by each development as they develop. The ultimate peak wastewater flow for this area is projected to be approximately 4.3 MGD.

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE MASTER PLAN, BY AMENDING ORDINANCE NO. 24-01 IN PART, WHICH ADOPTED THE MASTER PLAN; BY AMENDING SECTION 9.0 WASTEWATER PLAN TO ADOPT UPDATES FOR THE YEAR 2020 TO THE 2009 WASTEWATER MASTER PLAN AS A COMPONENT OF THE MASTER PLAN; REPEALING ALL CONFLICTING ORDINANCES, ORDERS, OR RESOLUTIONS; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5, of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, the Town Council of the Town of Flower Mound has previously adopted a Wastewater Plan, together with all amendments thereto, as a component to the Master Plan; and,

WHEREAS, the Town Council previously updated Section 9.0 of the Master Plan in 2015; and,

WHEREAS, the Town engaged Kimley-Horn and Associates, Inc. to update the Town's wastewater model and Wastewater Master Plan for the year 2020; and,

WHEREAS, the 2020 updates as set out herein are based on current water demands, demographics, future land uses, and growth projections; and,

WHEREAS, the Planning and Zoning Commission of the Town of Flower Mound, Texas, held a public hearing on November 9, 2020, and the Town Council of the Town of Flower Mound, Texas, held a public hearing on December 7, 2020, with respect to the Master Plan Amendment described herein to consider adoption of the Wastewater Master Plan Amendments with updates proposed for 2020; and,

WHEREAS, the Town has complied with all publication and procedural requirements for the approval of a Master Plan Amendment; and,

WHEREAS, the Town Council finds that an amendment to the Master Plan as outlined herein and adoption of the Wastewater Master Plan Amendments with updates proposed for 2020 are in the best interest of the Town of Flower Mound and will promote the health, safety and general welfare of the citizens of the Town of Flower Mound and the general public;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All of the above premises are hereby found to be true and correct legislative and factual findings of the Town of Flower Mound, and they are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

From and after the effective date of this Ordinance, Section 9.0 Wastewater Plan, of Master Plan, is hereby amended to read as follows:

"**9.0 WASTEWATER PLAN**

The existing and proposed components of the wastewater system were evaluated in detail and are included in the 2009 Wastewater Master Plan prepared by Kellogg Brown & Root, Inc. and adopted by the Town Council on May 4, 2009. In 2015 and 2020, the Town adopted updates to the 2009 Wastewater Master Plan based on wastewater flows, demographics, future land uses, and growth projections. This document provides details about the Town's system based on the 2009 Water Master Plan and the 2015 and 2020 updates. The 2009 Wastewater Master Plan Update and the 2015 and 2020 Wastewater Master Plan Amendments provide additional details about the Town's system and are incorporated herein by reference for all purposes allowed by law.

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Prairie Vista

The Prairie Vista District, immediately east of the Denton Creek District, is comprised of developable land that is planned for Estate Density. Based on the 2009 Master Plan Update, recommendations have been made for capital improvements to provide the interceptor lines, lift

stations and force mains necessary to accommodate flows expected from ultimate build-out conditions in this service area. These projects will provide for the flow to be sent to the TRA system located in the Denton Creek District. The infrastructure required to transmit flow from this area to the TRA system have not been identified in the Capital Improvement Plan. These improvements would be required by each development as they develop. The ultimate peak wastewater flow for this area is projected to be approximately 4.3 MGD."

SECTION 3

From and after the effective date of this Ordinance, the 2020 Wastewater Master Plan Amendments prepared by Kimley-Horn and Associates, Inc. is hereby adopted as a component of Section 9.0, Wastewater Plan, of the Master Plan and adopts updates and changes to the 2009 Wastewater System Master Plan Update document prepared by Kellogg Brown & Root, Inc. in 2009. The 2020 Wastewater Master Plan Amendments prepared by Kimley-Horn and Associates, Inc. is attached hereto as Exhibit A and incorporated herein by reference for all purposes.

SECTION 4

This Ordinance shall be cumulative of all provisions of ordinances of the Town of Flower Mound, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances or any resolution of the Town, in which event the conflicting provisions of such ordinances or resolutions are hereby repealed.

SECTION 5

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section, and said remaining portions shall remain in full force and effect.

SECTION 6

The Town Secretary of the Town of Flower Mound is hereby directed to publish the caption in the official newspaper of the Town of Flower Mound as required by Section 3.07 of the Charter of the Town of Flower Mound.

SECTION 7

This Ordinance shall take effect and be in full force from and after its passage and publication as required by law, and it is so ordained.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF ____ TO ____, ON THIS THE 7th DAY OF DECEMBER 2020.

APPROVED:

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

APPROVED AS TO FORM AND LEGALITY:

_____
Bryn D. Meredith, TOWN ATTORNEY

EXHIBIT A

Wastewater Master Plan Amendments
Prepared by Kimley-Horn and Associates, Inc.

TOWN COUNCIL AGENDA ITEM NO. 35

REGULAR ITEM

DATE: December 7, 2020

FROM: Brian Waltenburg, P.E., Assistant Director of Engineering

ITEM: **Public Hearing to consider the approval of an ordinance adopting updated land use assumptions and updated capital improvements plans, and to update and amend certain provisions of Chapter 42, "Impact Fees," regarding the imposition of impact fees and amending Appendix A, "Fee Schedule", accordingly. (The CIAC recommended approval by a vote of 9 to 0 at its November 9, 2020, meeting.)**

BACKGROUND INFORMATION: This item provides for the 5-year update of the Town's Impact Fee program as required by state law. It includes updates to the Town's land use assumptions, capital improvements plan and the imposition of impact fees that reflect the Town's current infrastructure and projected needs to serve new development during the next ten years.

Impact fees allow the Town to recoup costs associated with infrastructure needed to serve new development. The Town is required by Chapter 395 of the Texas Local Government Code to update impact fees every five years. The Town's last impact fee update was done in 2015. The 2020 Impact Fee update, performed by Kimley-Horn and Associates, Inc., as attached here, determines the maximum fee allowed by state law. The Town Council sets the actual fee to be collected from new development.

BOARD REVIEW/CITIZEN FEEDBACK: The Capital Improvements Advisory Committee recommended approval by a vote of 9 to 0 at its November 9, 2020 meeting.

The Town Code requires public notice in a newspaper of general circulation (Denton Record Chronicle) for all Impact Fee amendment requests. At the time this report was written, staff had received no correspondence regarding the request.

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: The draft ordinance was prepared by Lindsey Hale with Taylor, Olson, Sralla, & Elam L.L.P.

ATTACHMENTS:

1. 2020 Land Use Assumptions for Impact Fee Update
2. 2020 Roadway Impact Fee Update
3. 2020 Water Impact Fee Update
4. 2020 Wastewater Impact Fee Update
5. Draft Ordinance

DRAFT MOTION: Move to approve as presented in the agenda caption.

Attachment 1

Town of Flower Mound, Texas

2020 Land Use Assumptions for Impact Fee Update

November 2020

Prepared for:
Town of Flower Mound

Prepared by:
Kimley»Horn
Kimley-Horn and Associates, Inc.
801 Cherry Street, Unit 11, Suite 1300
Fort Worth, TX 76102
Phone: 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061000201

© Kimley-Horn and Associates, Inc.

STATE OF TEXAS
PETER C. KELLY
125337
LICENSED
PROFESSIONAL ENGINEER

11-4-2020

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Purpose

Chapter 395 of the Texas Local Government Code describes the procedure Texas political subdivisions must follow in order to assess impact fees for new development. The first step required in updating impact fees is the development of Land Use Assumptions. These Land Use Assumptions, including both population and employment estimates, form the basis for the development of impact fee Capital Improvement Plans for roadway, wastewater, and water, facilities.

Reasonable future growth estimates are necessary in order to aid the Town of Flower Mound in establishing the need for capital improvements required to serve future development. In accordance with Chapter 395, Kimley-Horn and Associates, Inc. (KHA) has compiled the information required to complete the update of the Land Use Assumptions using the following sources: the Town of Flower Mound Future Land Use Plan, previous land use assumptions used for recent thoroughfare plan modeling, consultation with Town staff, and building permit history. Included in this report are the growth projections based on assumptions pertaining to the type, location, quantity, and timing of various future land uses within the Town. In addition, this report also documents the methodology used in generating the growth and land use assumptions.

Components of the Land Use Assumptions Report

Methodology: An explanation of the general methodology used to create the land use assumptions.

Impact Fee Service Areas: An explanation and the division of Flower Mound into impact fee Service Areas for roadway, wastewater, and water facilities.

Base Year Data: Data on population, employment, and land use for the Town in the year 2020 for each Service Area.

Build Out Population Projection: Population and employment projections by Service Area, for a completely developed scenario.

Ten Year Growth Assumptions: Population and employment growth assumptions over the next ten years (2020-2030) for each Service Area.

Summary: A synopsis of the land use assumptions report.

Methodology

Chapter 395 of the Texas Local Government Code defines Land Use Assumptions as "a description of the service area and projections of changes in land uses, densities, intensities, and population in the service area over at least a 10-year period." The population and employment growth projections formulated in this report were done so using reasonable and generally accepted planning principles.

The future growth projections and land use assumptions were based upon several development patterns, which are listed below.

- Character, type, density, and quantity of existing development
- Zoning patterns in place
- Land use anticipated (as shown in the Master Land Use Plan)
- Growth trends currently in place
- Location and configuration of vacant land
- Physical holding capacity of Flower Mound
- Development projects, known or anticipated

The general methodology used in developing the land use assumptions include:

1. Establishing impact fee service areas for roadway, wastewater, and water facilities. (Exhibit 1, 2, & 3)
2. Collection/determination of population and employment data for the base year 2020.
3. Projection of the population and employment growth by Service Area at build out.
4. Projection of the ten-year (2020-2030) population and employment by Service Area.

Demographics from Denton and Tarrant County Appraisal Districts (DCAD/TAD) parcel data and recent building permit data served as the basis for establishing the year 2020 and ten year (2020-2030) demographic estimates and projections. After analyzing the build-out condition with consultation from Town staff, the determination was made that the build out projections would be based on a future Town population of 111,842.

Impact Fee Service Areas

Roadway Impact Fee Service Areas

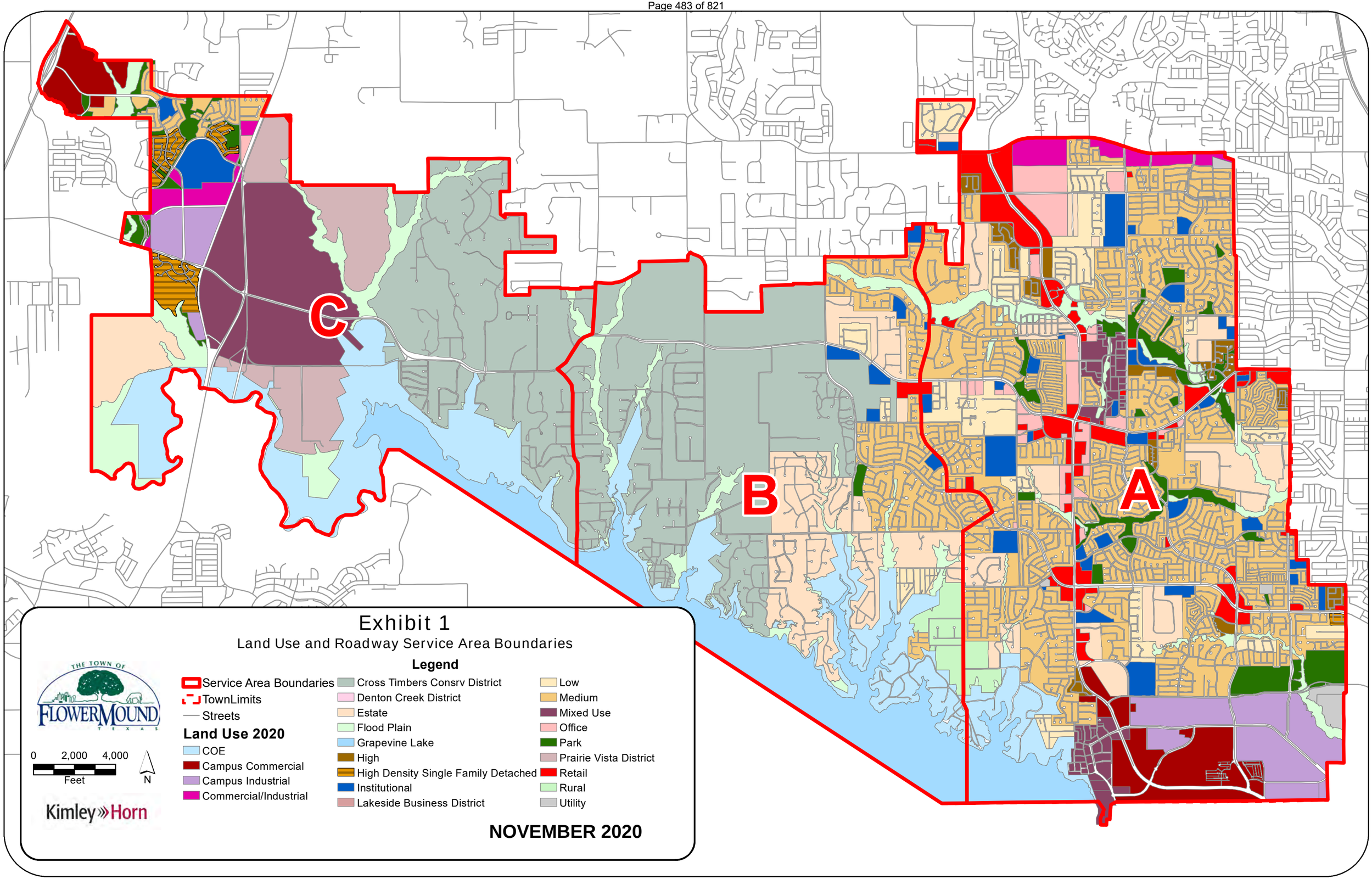
The geographic boundaries of the three (3) impact fee service areas for roadway facilities are shown in Exhibit 1. The roadway service areas cover the entire corporate boundary of the Town of Flower Mound. Chapter 395 of the Texas Local Government Code specifies that "the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles." The service areas used in the 2020 Roadway Impact Fee Update are the same as in the previous impact fee update (adopted in 2015).

Wastewater Impact Fee Service Areas

The geographic boundaries of the four (4) impact fee service areas for wastewater facilities are shown in Exhibit 2. These service areas consist of the Long Prairie, Lakeside, Denton Creek, and Prairie Vista areas.

Water Impact Fee Service Areas

The geographic boundary of the impact fee service area for water facilities is shown in Exhibit 3. Note that the water impact fee service area includes the Town limits plus some areas outside the corporate limits where the Town is providing or will be providing service.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B
A
Exhibit 1
Land Use and Roadway Service Area Boundaries
THE TOWN OF FLOWER MOUND TEXAS
0 2,000 4,000
Feet
N
Kimley»Horn
Legend
Service Area Boundaries
TownLimits
Streets
Land Use 2020
COE
Campus Commercial
Campus Industrial
Commercial/Industrial
Cross Timbers Consrv District
Denton Creek District
Estate
Flood Plain
Grapevine Lake
High
High Density Single Family Detached
Institutional
Lakeside Business District
Low
Medium
Mixed Use
Office
Park
Prairie Vista District
Retail
Rural
Utility
NOVEMBER 2020

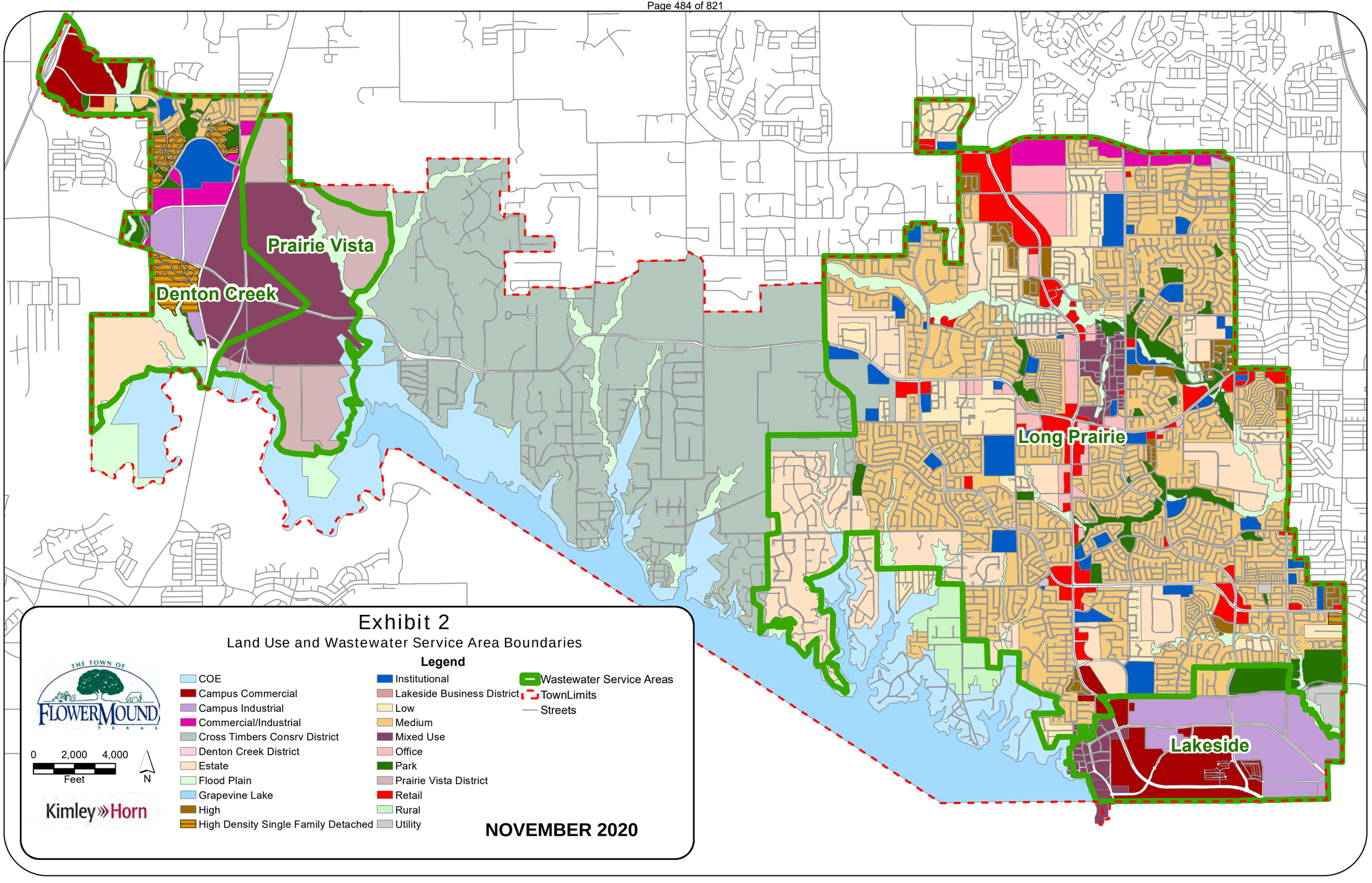
Prairie Vista
Denton Creek
Long Prairie
Lakeside
Exhibit 2
Land Use and Wastewater Service Area Boundaries
Legend
COE
Campus Commercial
Campus Industrial
Commercial/Industrial
Cross Timbers Consrv District
Denton Creek District
Estate
Flood Plain
Grapevine Lake
High
High Density Single Family Detached
Institutional
Lakeside Business District
Low
Medium
Mixed Use
Office
Park
Prairie Vista District
Retail
Rural
Utility
Wastewater Service Areas
TownLimits
Streets
THE TOWN OF FLOWER MOUND TEXAS
0 2,000 4,000
Feet
N
Kimley»Horn
NOVEMBER 2020

Exhibit 3

Land Use and Water Service Area Boundaries

Legend

- COE
- Campus Commercial
- Campus Industrial
- Commercial/Industrial
- Cross Timbers Consrv District
- Denton Creek District
- Estate
- Flood Plain
- Grapevine Lake
- High
- High Density Single Family Detached
- Institutional
- Lakeside Business District
- Low
- Medium
- Mixed Use
- Office
- Park
- Prairie Vista District
- Retail
- Rural
- Utility
- Water Service Area
- TownLimits
- Streets

THE TOWN OF FLOWER MOUND TEXAS

0 2,000 4,000
Feet

N

Kimley»Horn

NOVEMBER 2020

Data Format

The base year, ten year, and build out population and employment estimates were all compiled in accordance with the following categories and format:

Impact Fee Service Areas: Larger zones, which correspond to the proposed roadway, wastewater, and water facilities service areas (as described in the previous section).

Units: Number of dwelling units, both single and multi-family.

Population: Number of people, based on person per dwelling unit factors.

Employment: Square feet of building area based on three (3) different classifications.

Retail: Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector such as grocery stores and restaurants.

Service: Land use activities which provide personal and professional services such as government and other professional administrative offices.

Basic: Land use activities that produce goods and services such as those that are exported outside the local economy; manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

Town Limits – Base Year Data (2020)

The baseline projections were made for the entire town corporate limits. The roadway, water, and wastewater land use assumptions were derived from these Town wide assumptions.

2020 Population

Population data for Flower Mound from 1970 to 2020 can be seen in the table below.

Year	Flower Mound
1970[1]	1,685
1980[1]	4,402
1990[1]	15,527
1995[2]	29,600
2000[1]	50,702
2010[1]	64,669
2019[3]	76,030
2020[4]	78,085

[1] Source: United States Census
[2] Source: NCTCOG Estimate
[3] Source: Town of Flower Mound Estimate
[4] Source: Kimley-Horn and Associates, Inc.

2020 Employment

The year 2020 employment was estimated using the DCAD parcel data and an aerial survey of existing development. Listed below is a summary of the employment figures for the year 2020.

2020 Employment in Square Feet[1]	
Type	
Basic	8,877,000
Retail	4,430,000
Service	5,743,000
Total	19,050,000

[1] Source: Kimley-Horn and Associates, Inc.

Town Limits – Build Out Year Data

Build Out Population

The build out dwelling unit figures were found by multiplying the Town's build out residential land area by the corresponding housing densities found in the Future Land Use Plan. It is estimated that there will be a total of approximately 40,842 housing units, both single and multi-family, resulting in a build out population of 111,842.

Build Out Employment

Build out employment, expressed as square feet of development, was calculated by multiplying the build out non-residential land area by the corresponding floor-to-area ratio (FAR). A summary of the projected total square feet of employment by basic, retail, and service can be seen below.

Build Out Employment in Square Feet [1]	
Basic	14,131,000
Retail	10,763,000
Service	12,439,000
Total	37,333,000

[1] Source: Kimley-Horn and Associates, Inc.

Roadway Land Use Assumptions Summary

The previously referenced town limit's base line and build out projections were further broken down into the three (3) Roadway Service Areas illustrated in Exhibit 1.

Residential

Based on the historical population data provided by the town, the 10-year rolling growth rate in the Town of Flower Mound as of 2019 was 1.94%. It was reasonable to assume that residential growth rate will be relatively similar during the next ten-year window. Based on knowledge of known growth areas and coordination with Town staff, it was assumed that the residential growth rate will be approximately 1.7% over the next ten years. This growth will add an additional 5,044 residential dwelling units to the Town of Flower Mound, resulting in an approximate 2030 total of 32,690 dwelling units.

Non-Residential

For the roadway land use assumptions, non-residential land uses were displayed in terms of square footage. Non-residential land use was projected based on known growth areas and on input from town staff. This growth will bring approximately an additional 8,022,000 square feet of non-residential development to the Town of Flower Mound by the year 2030.

Table 1 illustrates the baseline (2020), ten-year window (2030) by Roadway Service Area.

Table 1. Population and Employment Data by Roadway Service Area

Service Area	Year	Population	Units	Employment			
				Basic	Service	Retail	Total
A	2020	62,370	22,082	8,781,000	5,127,000	4,315,000	18,223,000
	2030	66,980	23,884	9,930,000	7,491,000	5,891,000	23,312,000
	Buildout	70,070	25,092	10,769,000	8,440,000	6,619,000	25,828,000
B	2020	11,775	4,169	41,000	477,000	115,000	633,000
	2030	12,108	4,299	41,000	537,000	115,000	693,000
	Buildout	13,154	4,708	41,000	547,000	140,000	728,000
C	2020	3,940	1,395	55,000	139,000	0	194,000
	2030	11,901	4,507	690,000	1,148,000	1,229,000	3,067,000
	Buildout	28,619	11,042	3,321,000	3,452,000	4,004,000	10,777,000
Total	2020	78,085	27,646	8,877,000	5,743,000	4,430,000	19,050,000
	2030	90,988	32,690	10,661,000	9,176,000	7,235,000	27,072,000
	Buildout	111,842	40,842	14,131,000	12,439,000	10,763,000	37,333,000

Wastewater Land Use Assumptions Summary

The previously referenced town limit's base line and build out projections were further broken down into the four (4) Wastewater Service Areas illustrated in Exhibit 2.

Table 2 illustrates the baseline (2020), ten-year window (2030), and build out by Wastewater Service Areas. For wastewater the non-residential land uses are converted to acreage. Note the land uses for the wastewater services area do not include the Cross Timbers Protection Area.

Table 2. Population and Employment by Wastewater Service Area

SA	Year	Population	Units	Employment			
				Basic	Service	Retail	Total
Denton Creek	2020	2,028	718	32,000	133,000	0	165,000
	2030	6,249	2,368	667,000	823,000	750,000	2,240,000
	Buildout	13,251	5,105	3,933,000	3,178,000	3,318,000	10,429,000
Prairie Vista	2020	42	15	23,000	0	0	23,000
	2030	3,153	1,231	23,000	276,000	414,000	713,000
	Buildout	11,150	4,357	23,000	1,147,000	1,720,000	2,890,000
Lakeside	2020	6,578	2,329	8,534,000	100,000	213,000	8,847,000
	2030	9,594	3,508	9,512,000	1,700,000	1,541,000	12,753,000
	Buildout	10,912	4,023	11,328,000	3,804,000	3,259,000	18,391,000
Long Prairie	2020	64,084	22,689	248,000	5,504,000	4,203,000	9,955,000
	2030	65,680	23,313	419,000	6,273,000	4,431,000	11,123,000
	Buildout	67,581	24,056	590,000	7,458,000	5,002,000	13,050,000
Total 2020		72,732	25,751	8,837,000	5,737,000	4,416,000	18,990,000
Total 2030		84,676	30,420	10,621,000	9,072,000	7,136,000	26,829,000
Buildout		102,893	37,541	15,874,000	15,587,000	13,299,000	44,760,000

Water Land Use Assumptions Summary

As previously mentioned, the Water Service Area is roughly a combination of the three roadway Service Areas.

Table 3 illustrates the baseline (2020) and ten-year window (2030) by the Water Service Area.

Table 3. Employment and Population Data by Service Area

Service Area	Year	Population	Units	Employment			
				Basic	Service	Retail	Total
Town Limits	2020	77,286	27,363	8,861,000	5,560,000	4,360,000	18,781,000
	2030	89,499	32,137	10,386,000	8,266,000	6,568,000	25,220,000
	Buildout	108,171	39,436	13,619,000	10,291,000	8,971,000	32,881,000

Summary

The following is a summary for the Town limits. This is equivalent to the roadway land use assumptions which was the adjusted for the wastewater and water land use assumptions.

- The existing (2020) population is approximately 78,085.
- The existing (2020) employment area is approximately 19,050,000 square feet.
- The ten-year (2030) population projection is approximately 90,998.
- The ten-year (2030) employment area projection is approximately 27,072,000 square feet.
- The build out population projection is approximately 111,842.
- The build out employment area projection is approximately 37,333,000 square feet.

THE TOWN OF FLOWER MOUND TEXAS

2020

Roadway

Impact Fee Update

Town of Flower Mound, Texas

Kimley»Horn

Town of Flower Mound, Texas

2020 Roadway Impact Fee Update

November 2020

Prepared for:
Town of Flower Mound

Prepared by:
Kimley»Horn
Kimley-Horn and Associates, Inc.
801 Cherry Street, Unit 11, Suite 950
Fort Worth, TX 76102
Phone: 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061000201

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STATE OF TEXAS
PETER C. KELLY
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PROFESSIONAL ENGINEER

11-4-2020

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EXECUTIVE SUMMARY

Introduction

Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. Across the country, they are used to fund police and fire facilities, parks, schools, roads, and utilities. In Texas, the legislature has allowed their use for roadway and drainage, water, and wastewater facilities. In 2020, the Town of Flower Mound began its update of the previously adopted (2015) Roadway, Water, and Wastewater Impact Fees as a funding tool for infrastructure needs as a result of growth in the Town.

In the most basic terms, impact fees are meant to recover the incremental cost of the impact of each new unit of development towards new infrastructure needs. Impact Fees are a mathematical calculation that determine a maximum fee that would be equivalent to growth paying for growth. This study's purpose is to calculate the maximum impact fee per service unit of new growth.

The Maximum Impact Fee is considered an appropriate measure of the impacts generated by a new unit of development on a city's infrastructure system. An impact fee program is anticipated to be designed so that it is **predictable** for both the development community and city. An impact fee program is **transparent**. This report describes in detail how the fee is calculated and how the Capital Improvements Advisory Committee (CIAC) monitors the Impact Fee program. An impact fee program is **flexible** in that funds can be used on priority projects and not just on projects adjacent to a specific development. An impact fee program is both **equitable** and **proportional** in that every new development pays an equal fee that is directly related to its systemwide impact.

Impact Fee Basics

Service Areas

A Service Area is a geographic area within which a unique maximum impact fee is determined. All fees collected within the Service Area must be spent on eligible improvements within the same Service Area. For Roadway Impact Fees, the Service Area may not exceed a 6-mile diameter trip length. In Flower Mound, this results in the creation of three (3) separate Roadway Service Areas. For Water and Wastewater Impact Fees, this study utilizes a singular Service Area for the Water and Wastewater components respectively. The Water and Wastewater Impact Fees are addressed in a separate report.

Land Use Assumptions

The Impact Fee determination is required to be based on the projected growth and corresponding capacity needs in a 10-year window. This study considers the years 2020-2030. The 10-year increase in residential units is projected to be 5,044 units within the Town Limits. The 2030 projections show an increase of 8,022,000 square feet of non-residential land uses over the 10-year window. These projections set the basis for determining loadings and demands to serve new growth. The distribution of residential and non-residential growth utilized information from historical population data and input from Town staff.

Service Units

The "service unit" is a measure of consumption or use of the capital facilities by new development. In other words, it is the unit of measure used to quantify the supply and demand for roads and utilities in the Town. Service units are attributable to an individual unit of development and utilized to calculate the maximum impact fee of a development.

For roadway purposes, the service unit is defined as a vehicle-mile. A "vehicle-mile" refers to the capacity consumed in a single lane by a vehicle making a trip one mile in length during the PM peak hour. The PM peak hour is the one-hour period during the afternoon/evening when the highest vehicular volumes are observed. In accordance with the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, the PM Peak is used as the basis for transportation planning and the estimation of trips caused by new development.

Capital Improvement Plans

The Town and project staff have identified the roadway, water, and wastewater projects needed to accommodate the projected growth over the next ten (10) years within the Town of Flower Mound. These projects include existing, proposed, and recently completed projects that were determined based on their current or anticipated impact on each defined Service Area and the Town as a whole.

Roadway Impact Fee Capital Improvement Plan

The Town of Flower Mound Thoroughfare Plan is the ultimate plan for the roadway infrastructure within the Town Limits. The projects on the Roadway Impact Fee Capital Improvement Plan were selected from the Thoroughfare Plan and cover existing, proposed, and completed roadway improvements, as well as intersection improvements with 10-year growth potential. The project team and Town staff identified roadway and intersection projects with a projected total project cost (*not* impact fee eligible cost) of $170,120,119 over three (3) Roadway Service Areas.

Recoverable Project Costs

Impact Fees are a one-time fee meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs within a ten-year window. With this consideration, the maximum assessable impact fee does not specifically cover the entire cost of a roadway, water, or wastewater project. The calculations that determine the percentage of a project's cost that is impact fee eligible are defined as the project's *recoverable cost*.

Roadway Recoverable Project Costs

The recoverable costs for roadway projects are calculated by first determining the net capacity of vehicle-miles supplied to support future growth within a 10-year window. This net capacity is then multiplied by the percentage of roadway capacity added attributable to this 10-year growth. This growth percentage is obtained through the derivation of a *transportation demand factor* (TDF), which computes the total vehicle-miles associated to a single land use development unit. The TDF is applied to both the net vehicle-miles supplied and the vehicle-mile growth projections to calculate the growth percentage needed to determine the total recoverable project costs, which total $116,345,778 (pre-finance) over three (3) Roadway Service Areas. Per state law this recoverable cost is reduced to account for future ad valorem tax revenues from the new development.

Maximum Assessable Impact Fee Calculation

In simplest terms, the maximum impact fee allowable by law is calculated by dividing the recoverable cost of the Capital Improvement Plans by the number of new service units of development. In accordance with state law, both the cost of the Capital Improvement Plan and the number of new service units of development used in the equation

are based on the growth and corresponding capacity needs projected to occur within a 10-year window. This calculation is performed for each service area individually; each service area has a stand-alone Capital Improvement Plan and 10-year growth projection.

In practice, there are many factors that complicate this calculation. The maximum impact fee allowable by law for each service area is shown on the following page:

Roadway Service Area	Roadway Maximum Fee Per Single Family Dwelling[1]
A	$2,954
B	$17,974
C	$15,976

Adoption Process

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption of impact fees. A Capital Improvements Advisory Committee (CIAC) is required to review the Land Use Assumptions and Capacity Plan used in calculating the maximum fee, and to provide the Committee's findings for consideration by the Town Council. This CIAC also reviews the calculation and resulting maximum fees and provides its findings to the Town Council. The composition of the CIAC is required to have adequate representation of the building and development communities. In Flower Mound this is the Planning & Zoning Commission plus representatives from the Real Estate and Development communities. The Town Council then conducts a public hearing on the Land Use Assumptions, Capital Improvements Plan, and Impact Fee Ordinance.

Following policy adoption, the CIAC is tasked with advising the Town Council of the need to update the Land Use Assumptions or the Capital Improvements Plan at any time within five years of adoption. Finally, the CIAC oversees the proper administration of the Impact Fee, once in place, and advises the Council as necessary.

Chapter 395 of the Texas Local Government Code requires a total of two (2) public hearings before Council to approve an impact fee program. The first public hearing to discuss the land use assumptions and capacity plans was held on October 5, 2020. The second public hearing is scheduled to be held on December 7, 2020 with the intent of presenting a proposal for impact fee calculations and the adoption of an impact fee report (this study) and ordinance.

I. Introduction

Chapter 395 of the Texas Local Government Code describes the procedure Texas cities must follow in order to create and implement Impact Fees. Senate Bill 243 (SB 243) amended Chapter 395 in September 2001 to define an Impact Fee as "a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development."

Chapter 395 mandates that impact fees be reviewed and updated at least every five (5) years. Accordingly, the Town of Flower Mound has initiated a review of its Land Use Assumptions, Capital Improvement Plan (CIP), and Roadway Impact Fees. The Town has retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the 2020 update of their Roadway Impact Fees. This report includes the details of the Roadway Impact Fee calculation methodology in accordance with Chapter 395 and the adopted revisions to the Land Use Assumptions, Capital Improvement Plan, and refinement of the Land Use Equivalency Table.

This report introduces and references two of the basic inputs to the Roadway Impact Fee:

1. Land Use Assumptions (Pg. 2)
2. Capital Improvement Plan (Pg. 4)

Information from the Land Use Assumptions and this Capital Improvement Plan is used extensively throughout the remainder of the report.

This report consists of a detailed discussion of the methodology for the computation of impact fees and is broken down into two components:

1. Methodology for Roadway Impact Fees (Pg. 8)
2. Roadway Impact Fee Calculation (Pg. 19)

The components of the Methodology for Roadway Impact Fee include development of:

- Service Areas
- Service Units
- Cost Per Service Unit
- Cost of the CIP
- Service Unit Calculation

The components of the Roadway Impact Fee Calculation include:

- Maximum Assessable Impact Fee Per Service Unit
- Service Unit Demand Per Unit of Development

This report also includes a section concerning the Plan for Awarding the Roadway Impact Fee Credit. This plan, prepared by NewGen Strategies, details the maximum assessable impact fee per service unit the Town of Flower Mound may apply under Chapter 395 of the Texas Local Government Code.

The final section of the report is the Conclusion, which presents the findings of the update analysis and summarizes the report.

II. Roadway Impact Fee Calculation Inputs

A. Land Use Assumptions

In order to assess an impact fee, land use assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. The land use assumptions used in this report were developed and presented in a separate report titled 2020 Land Use Assumptions for Impact Fee Update (September 2020, Kimley-Horn and Associates, Inc.).

The future land use map and the geographic boundaries of the impact fee service areas for roadway facilities are shown in Exhibit 1. The Town of Flower Mound is divided into three (3) service areas, each based on a six (6) mile limit as required in Chapter 395.

Table 1 summarizes the residential and non-residential projections by service area within the Town of Flower Mound for 2020 and 2030. The Build Out projections are provided for reference purposes only. The information provided in Table 1 was taken from the previously referenced 2020 Land Use Assumptions for Impact Fee Update.

Table 1. Residential and Non-Residential Projections for the Town of Flower Mound

Service Area	Year	Population	Units	Employment			
				Basic	Service	Retail	Total
A	2020	62,370	22,082	8,781,000	5,127,000	4,315,000	18,223,000
	2030	66,980	23,884	9,930,000	7,491,000	5,891,000	23,312,000
	Buildout	70,070	25,092	10,769,000	8,440,000	6,619,000	25,828,000
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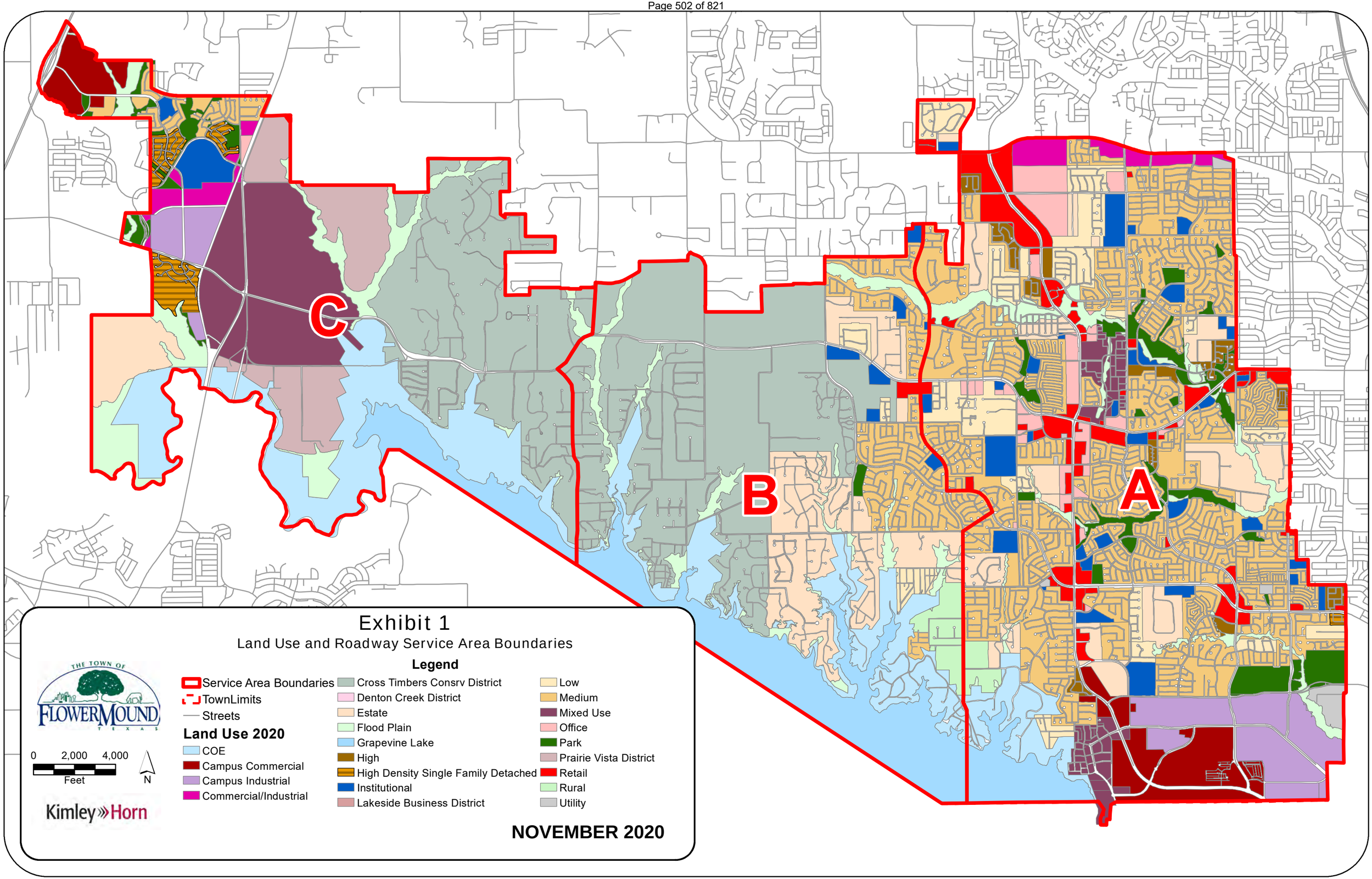
Total	2020	78,085	27,646	8,877,000	5,743,000	4,430,000	19,050,000
	2030	90,988	32,690	10,661,000	9,176,000	7,235,000	27,072,000
	Buildout	111,842	40,842	14,131,000	12,439,000	10,763,000	37,333,000


C
B
A
Exhibit 1
Land Use and Roadway Service Area Boundaries
THE TOWN OF FLOWER MOUND TEXAS
0 2,000 4,000
Feet
N
Kimley»Horn
Legend
Service Area Boundaries
TownLimits
Streets
Land Use 2020
COE
Campus Commercial
Campus Industrial
Commercial/Industrial
Cross Timbers Consrv District
Denton Creek District
Estate
Flood Plain
Grapevine Lake
High
High Density Single Family Detached
Institutional
Lakeside Business District
Low
Medium
Mixed Use
Office
Park
Prairie Vista District
Retail
Rural
Utility
NOVEMBER 2020

B. Capital Improvement Plan

The Town has identified the Town-funded transportation projects needed to accommodate the projected growth within the Town. The Capital Improvement Plan (CIP) for Roadway Impact Fees is made up of the following:

- Recently completed projects with excess capacity available to serve new growth;
- Projects currently under construction; and
- All remaining projects needed to complete the Town's Master Thoroughfare Plan.

The CIP includes arterial and collector class roadway facilities as well as intersection improvements. All of the facilities are part of the currently adopted Master Thoroughfare Plan.

The CIP for Roadway Impact Fees for the 2020 Impact Fee Update is listed in Table 2 and mapped in Exhibit 2. The table shows the length of each project as well as the facility's Master Thoroughfare Plan classification. The CIP was developed in conjunction with input from Town of Flower Mound staff and represents those projects that will be needed to accommodate the growth projected in the 2020 Land Use Assumptions for Impact Fee Update.

Table 2.A. Roadway Improvement Plan for Roadway Impact Fees – Service Area A

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
Service Area A	A-1	UMAD	Aberdeen Dr	FM 2499 (Long Prairie Rd) to 1340' N of Spinks Rd	0.48	100%
	A-2	UMAD	Aberdeen Dr	1340' N of Spinks Rd to 700' N of Spinks Rd	0.12	100%
	A-3	UMAU	Chinn Chapel Rd	FM 407 (Justin Rd) to Waketon Rd	0.66	50%
	A-4	UMAD	Dixon Ln	Chinn Chapel Rd to Crestside Dr	1.24	100%
	A-5	UMAU	Duncan Ln	Honeysuckle Way to Spinks Rd	0.38	50%
	A-6	UMAU	Firewheel Dr	515' S of FM 1171 to 140' S of Hearthstone Dr	0.24	100%
	A-7	P6D	FM 2499 (Long Prairie Rd)	FM 1171 (Cross Timbers) to Spinks Rd	2.73	100%
	A-8	GUA	Garden Ridge Blvd	Bellaire Blvd to Forest Vista Dr	0.81	50%
	A-9	GUA	Garden Ridge Blvd	FM 3040 to Spinks Rd	0.75	100%
	A-10	GUA	Garden Ridge Blvd	Spinks Rd to Lakeside Pkwy	0.42	100%
	A-11	UC	Kirkpatrick Ln	Morriss Rd to Kirkpatrick Ln	0.99	100%
	A-12	UMAD	Kirkpatrick Ln	Spanish Oak Dr to 1310' W of Garden Ridge Blvd	0.41	100%
	A-13	UC	Lake Forest Blvd	75' S of Lincoln Ct to Foxborough Trail	0.15	100%
	A-14	P6D	Lakeside Pkwy	FM 2499 (Long Prairie Rd) to Gerault Rd	1.08	100%
	A-15	P6D	Lakeside Pkwy	Gerault Rd to Garden Ridge Blvd	0.50	100%
	A-16	P6D	Lakeside Pkwy	Garden Ridge Blvd to South Town Limit	0.53	100%
	A-17	UMAD	Morriss Rd	Mandarin Way to Flower Mound Rd	0.16	100%
	A-18	UC	Sagebrush Dr	Old Settlers Rd to FM 2499 (Long Prairie Rd)	0.51	100%
	A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	50%
	A-20	UMAD	Spinks Rd	Aberdeen Dr to Gerault Rd	0.93	100%
	A-21	UMAD	Spinks Rd	Gerault Rd to Garden Ridge Blvd	0.56	100%
	A-22	UMAU	Timber Creek Rd	445' S of Glenn Hollow Ln to Kirkpatrick Ln	0.20	100%
	A-23	UC	Waketon/College Connector	Waketon Rd to College Pkwy	0.27	100%
	A-24	UC	Windsor Dr	Amy Ln to FM 2499 (Long Prairie Rd)	0.60	100%
	A-25	UC	Yucca Dr	440' E of FM 2499 to 460' S of FM 1171	0.08	100%
	S-1		Intersection	College Pkwy. at Timber Creek Rd.		100%
	S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.		50%
	S-3		Intersection	Churchill Dr. at Peters Colony Rd.		100%
	S-4		Intersection	Cross Timbers Rd. at Forums Dr.		100%
	S-5		Intersection	Garden Ridge Blvd. at Kirkpatrick Ln.		100%
	S-6		Intersection	FM 2499 (Long Prairie Rd.) at Chaparral Ln.		100%
	S-7		Intersection	Garden Ridge Blvd. at Forest Vista Rd.		100%
	S-8		Intersection	FM 2499 (Long Prairie Rd.) at Northshore Blvd.		100%
	S-9		Intersection	FM 2499 (Long Prairie Rd.) at Aberdeen Dr.		100%
	S-10		Intersection	Lakeside Pkwy. at Silveron Blvd.		100%
	S-11		Intersection	FM 2499 (Long Prairie Rd.) at Silveron Blvd.		100%
	S-12		Intersection	Gerault Rd. at Old Gerault Rd.		100%
	S-13		Intersection	Lakeside Pkwy. at Enterprise Dr.		100%
	I - 1		Intersection Improvement	Dixon Ln. at Morriss Rd.		100%
	I - 2		Right-turn lane - all directions	FM 2499 (Long Prairie Rd.) at Waketon Rd.		100%
	I - 3		Intersection Improvement	FM 2499 (Long Prairie Rd.) at College Pkwy.		100%
	I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.		50%
	I - 5		Intersection Improvement	Cross Timbers Rd. at Auburn Dr.		100%
	I - 6		Westbound right-turn lane	Cross Timbers Rd. at FM 2499 (Long Prairie Rd.)		100%
	I - 7		Intersection Improvement	Flower Mound Rd. at McKamy Creek Rd.		100%
	I - 8		Second left-turn lane, EB and SB	Flower Mound Rd. at FM 2499 (Long Prairie Rd.)		100%
	I - 9		Intersection Improvement	Flower Mound Rd. at Garden Ridge Blvd.		100%
	I - 10		Intersection Improvement	FM 2499 (Long Prairie Rd.) at Lakeside Pkwy.		100%
	I-11		Intersection Improvement	Lakeside Pkwy. At Gerault Rd.		100%

Table 2.B. Roadway Improvement Plan for Roadway Impact Fees – Service Area B

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
Service Area B	B-1	UMAD	Flower Mound Rd	FM 1171 (Cross Timbers) to Skillern Rd	1.21	100%
	B-2	RC	Red Rock/Shiloh Connector	Red Rock Ln to Shiloh Rd	1.01	100%
	B-3	RC	Scenic /Flower Mound Connector	Scenic Dr to Alcott Ave	0.45	100%
	B-4	RC	Shiloh Rd/Lusk Ln Connector	2820' E of Shiloh Rd to Lusk Ln	0.58	100%
	B-5	RC	Shiloh Rd/Lusk Ln Connector	Shiloh Rd to 2820' E of Shiloh Rd	0.53	50%
	A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	50%
	S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.		50%
	I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.		50%
	I-12		Intersection Improvement	Cross Timbers Rd. at Flower Mound Rd.		100%

Table 2.C. Roadway Improvement Plan for Roadway Impact Fees – Service Area C

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
Service Area C	C-1	RC	CrossTimbers/Dunham Connector	Cross Timbers Rd to Dunham Rd	0.51	100%
	C-2	GRA	CrossTimbers/US 377 Connector1	US 377 to Cross Timbers Rd	2.14	100%
	C-3	RC	CrossTimbers/US 377 Connector2	CrossTimbers/US 377 Connector1 to Cross Timbers Rd	0.90	100%
	C-4	UMABL	Denton Creek Blvd	IH-35 Diamond Interchange to 120' NW of Prairie Ridge Rd	1.17	100%
	C-5	UMABL	Denton Creek Blvd	Canyon Falls Dr to 1155' S of Canyon Falls Dr	0.23	100%
	C-6	UMABL	Denton Creek Blvd	1155' S of Canyon Falls Dr to Cross Timbers Rd	0.68	100%
	C-7	UC	Stonecrest Rd	850' S of Canyon Falls Dr to UMAB 1	0.24	100%
	C-8	UC	Stonecrest Rd	UMAB 1 to Cross Timbers Rd	0.70	100%
	C-9	UMABL	UMAB 1	Denton Creek Blvd to US 377	0.57	100%
	C-10	UMABL	UMAB2	Denton Creek Blvd to West Town Limit	0.27	100%
	C-11	UC	Urban Collector 1	Cross Timbers Road to Cross Timbers Rd	0.83	100%
	C-12	UC	Urban Collector 1	Stonecrest Rd to Cross Timbers Rd	0.59	100%
	S-14		Intersection	US 377 at Canyon Falls Dr.		100%
	S-15		Intersection	Cross Timbers Rd. at Canyon Falls Dr.		50%
	S-16		Intersection	Cross Timbers Rd. at Denton Creek Blvd.		100%
	S-17		Intersection	Cross Timbers Rd. at Cross Timbers/US 377 Connector 1		100%

Exhibit 2

Roadway Impact Fee CIP

THE TOWN OF FLOWER MOUND TEXAS

0 2,000 4,000

Feet

N

Kimley»Horn

NOVEMBER 2020

Legend

- Bridge, Proposed
- Intersection Improvements, Completed
- Intersection Improvements, In Design
- Intersection Improvements, Proposed
- Signal, Completed
- Signal, In Design
- Signal, Partially Completed
- Signal, Proposed

Impact Fee CIP

- Impact Fee Eligible Projects
- Impact Fee Eligible Widening Projects
- Impact Fee Eligible Median Lane Projects
- Impact Fee Eligible Completed Projects
- Other Thoroughfare Facilities

Service Areas

- A
- B
- C

III. Methodology for Roadway Impact Fees

A. Service Areas

The three (3) service areas used in the 2020 Roadway Impact Fee Update are shown in the previously referenced Exhibit 1. These service areas cover the entire corporate boundary of the Town of Flower Mound. Chapter 395 of the Texas Local Government Code specifies that "the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles." The roadway service areas used in the 2020 Roadway Impact Fee Update are the same as in the previous impact fee update (adopted in 2015).

B. Service Units

The "service unit" is a measure of consumption or use of the roadway facilities by new development. In other words, it is the measure of supply and demand for roads in the Town. For transportation purposes, the service unit is defined as a vehicle-mile.

Another aspect of the service unit is the service volume that is provided (supplied) by a lane-mile of roadway facility. This number, also referred to as capacity, is a function of the facility type, facility configuration, number of lanes, and level of service. Below is the definition for vehicle-mile.

Vehicle-Mile: The capacity consumed in a single lane in the PM peak hour by a vehicle making a trip one mile in length. The PM Peak is commonly used as the basis for transportation planning and the estimation of trips caused by new development.

Total Vehicle-Miles of Supply: Based on the total length (miles), number of lanes, and capacity (vehicles per hour) provided by the Flower Mound Thoroughfare Plan (see Appendix B).

Total Vehicle-Miles of Demand: Based on the 10-year growth projections. The demand is equal to PM Trip Rate (trips) * Trip Length (miles).

The hourly service volumes used in the Roadway Impact Fee Update are based upon Thoroughfare Capacity Criteria published by the North Central Texas Council of Governments (NCTCOG) and applied to the Town of Flower Mound. Tables 3A and 3B shows the service volumes as a function of the facility type.

Table 3A. Level of Use for Proposed Facilities (used in Appendix B – CIP Units of Supply)

Roadway Type (MTP Classifications)	Median Configuration	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
P6D – Major Arterial	Divided	750
GUA – Greenway Urban Arterial	Divided	650
GRA – Greenway Rural Arterial	Divided	650
UMAD – Urban Minor Arterial	Divided	650
UMABL* – Urban Minor Arterial	Divided	650
UMAU – Urban Minor Arterial	Undivided	525
UC – Urban Collector	Undivided	425
RC – Rural Collector	Undivided	425

*(BL) – Facilities with bike lanes

Table 3B. Level of Use for Existing Facilities (used in Appendix C – Existing Facilities Inventory)

Roadway Type	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
7U	Seven lane undivided (TWLTL)	750
6D	Six lane divided	750
5U	Five lane undivided (TWLTL)	625
4D	Four lane divided	650
4U	Four lane undivided	525
3U	Three lane undivided (TWLTL)	525
2U-H	High Speed, Limited Access Two lane	750
2U	Two lane undivided	475
2U-R	Rural Cross-Section (i.e. gravel, dirt, etc.)	150

C. Cost Per Service Unit

A fundamental step in the impact fee process is to establish the cost for each service unit. In the case of the Roadway Impact Fee, this is the cost for each vehicle-mile of travel. This cost per service unit is the cost to construct a roadway (lane-mile) needed to accommodate a vehicle-mile of travel at a level of service corresponding to the Town's standards. The cost per service unit is calculated for each service area based on a specific list of projects within that service area.

The second component of the cost per service unit is the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period. Chapter 395 requires that impact fees be assessed only to pay for growth projected to occur in the Town limits within the next ten-years, a concept that will be covered in a later section of this report (see Section III.E). As noted earlier, the units of demand are vehicle-miles of travel.

D. Cost of the CIP

The costs that may be included in the cost per service unit are all of the implementation costs for the Roadway Impact Fee Update, as well as project costs for arterial system elements within the Capital Improvement Plan. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are "…including and limited to the:

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

The engineer's opinion of the probable costs of the projects in the CIP is based, in part, on the calculation of a unit cost of construction. This means that a cost per linear foot of roadway is calculated based on an average price for the various components of roadway construction. This allows the probable cost to be determined by the type of facility being constructed, the number of lanes, and the length of the project. The costs for location-specific items such as bridges, highway ramps, drainage structures, and any other special components are added to each project as appropriate. In addition, based upon discussions with Town of Flower Mound staff, projects in which the Town has contributed a portion of the total project cost have been included in the CIP as lump sum costs. The following is a detailed description of the costing worksheet/methodology for the Roadway Impact Fee CIP.

1. Overview of Roadway Impact Fee CIP Costing Worksheets

For each project a specific costing worksheet was developed (see Appendix A). Each worksheet contained the following four (4) main components:

- Project Information,
- Construction Pay Items,
- Construction Component Allowances and
- Summary of Costs and Allowances

Project Information

Construction Pay Items

Construction Component Allowances

Summary of Costs and Allowances

Town of Flower Mound
2020 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 10/16/2020

Project Information:		**Description:**	**Project No.**	**A-2**
Name:	Aberdeen Dr	**This project consists of the widening of the existing two-lane concrete facility into a four-lane divided Urban Minor Arterial.**		
Limits:	1340' N of Spinks Rd to 700' N of Spinks Rd			
Impact Fee Class:	UMAD (1/2)			
Ultimate Class:	UMAD			
Length (lf):	655			
Service Area(s):	A			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
112	Unclassified Street Excavation	946	CY	$ 27.00	$ 25,545
212	10" Lime Stabilization	2,038	SY	$ 15.00	$ 30,567
312	8" Reinforced Concrete	1,892	SY	$ 73.00	$ 138,132
412	Block Sod with 4" Topsoil (with sidewalk)	509	SY	$ 10.00	$ 5,094
512	4' Sidewalk	2,620	SF	$ 8.00	$ 20,960
				Paving Construction Cost Subtotal:	**$ 220,298**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 11,015
√	Traffic Control	Construction Phase Traffic Control	15%	$ 33,045
√	Pavement Markings/Markers		5%	$ 11,015
√	Roadway Drainage	Standard Internal System	35%	$ 77,104
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 11,015
√	Sewer	Minor Adjustments	5%	$ 11,015
√	Establish Turf / Erosion Control		2%	$ 4,406
√	Illumination	Standard Ilumination System	6%	$ 13,218
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 171,833**
			Paving and Allowance Subtotal:	**$ 392,131**
			Construction Contingency: 15%	$ 58,820
			Construction Cost TOTAL:	**$ 451,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 451,000**
Engineering/Survey/Testing:		20%	$ 90,200
Mobilization		6%	$ 27,060
ROW/Easement Acquisition:	Existing Alignment	15%	$ 67,650
		Impact Fee Project Cost TOTAL:	**$ 636,000**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.
The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

2. Project Information

In order to correctly estimate the cost of a roadway project, several attributes are first identified:

- Project Number – Identifies which Service Area the project is in with a corresponding number. The corresponding number does not represent any prioritizations and is used only to identify projects. For example, Project A-10 is in Service Area A and is the 10th project on the list.
- Name – A unique identifier for each project. In some cases where roadway names are unknown the connecting limits may be used such as US 377 – FM 1171.
- Limits – Represents the beginning and ending location for each project.
- Impact Fee Class – The costing class to be used in the analysis. The impact fee class provides the width for the various elements in the roadway. The construction costs are variable, based on the proposed Thoroughfare Plan classification of the roadway. For example, UMAU stands for Urban Minor Arterial Undivided. A UMAU Impact Fee Class means the entire roadway is to be constructed. Additional classifications are utilized in cases where a portion of the facility currently exists and the road is only to be widened. The following notations are used for these projects:
  - "(1/2)" for facilities where half the facility still needs to be constructed;
  - "(1/6)" for future six-lane principal arterial facilities where one additional lane is needed
  - "(1/3)" for future six-lane principal arterial facilities where two additional median lanes are needed
  - "(2/3)" for future six-lane principal arterial facilities where four additional lanes are needed
- Ultimate Class – The functional classification on Flower Mound's Thoroughfare Plan.
- Length (ft) – The distance measured in feet that is used to cost out the project.
- Service Area(s) – Represents the service areas where the project is located.
- Description – Used to describe the project type assumed in the costing such as a widening or reconstruction.

3. Construction Pay Items

A typical roadway project consists of a number of costs, including the following: planning, survey, design engineering, permitting, right-of way acquisition, construction and inspection. While the construction cost component of a project may actually consist of approximately 100 various pay items, a simplified approach was used for developing the conceptual level project costs. Each new project's construction cost was divided into three cost components: roadway construction cost, major construction component allowances, and summary of cost and allowances.

4. Construction Component Allowances

A percentage of the paving construction cost is allotted for various major construction component allowances, as appropriate. These allowances include traffic control, pavement markings and signage, roadway drainage, illumination, minor water and sewer adjustments, landscaping and irrigation. These allowance percentages are also based on historical data.

In addition, lump sum dollar allowances are provided for special drainage structures, railroad crossings, and intersection improvements where needs are anticipated. The paving and allowance subtotal is given a fifteen percent (15%) contingency.

5. Summary of Cost and Allowances

To determine the total Impact Fee Project Cost, twenty percent (20%) of the construction cost total is added for engineering, surveying, and testing. An additional six percent (6%) of the construction cost total is added for mobilization.

Percentages are also allotted for ROW/easement acquisition. ROW/easement acquisition was based on whether the project was an existing alignment or future alignment. For an existing alignment, the ROW/easement acquisition cost was provided an allotment equal to 15% of the construction cost total. For a new alignment, the ROW/easement acquisition cost was equal to 30% of the construction cost total. The value for ROW/easement acquisition is an estimated contribution allocation and does not represent actual ROW/easement acquisition needs.

The Impact Fee Project Cost Total is the Construction Cost Total plus engineering, surveying, testing, and inspection; plus ROW/easement acquisition; and minus roadway escrow agreements.

Table 4.A – 10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area A

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
Service Area A	A-1	UMAD	Aberdeen Dr	FM 2499 (Long Prairie Rd) to 1340' N of Spinks Rd	0.48	100%	$ 1,454,821	$ 1,454,821
	A-2	UMAD	Aberdeen Dr	1340' N of Spinks Rd to 700' N of Spinks Rd	0.12	100%	$ 636,000	$ 636,000
	A-3	UMAU	Chinn Chapel Rd	FM 407 (Justin Rd) to Waketon Rd	0.66	50%	$ 2,728,803	$ 1,364,402
	A-4	UMAD	Dixon Ln	Chinn Chapel Rd to Crestside Dr	1.24	100%	$ 5,297,438	$ 5,297,438
	A-5	UMAU	Duncan Ln	Honeysuckle Way to Spinks Rd	0.38	50%	$ 562,532	$ 281,266
	A-6	UMAU	Firewheel Dr	515' S of FM 1171 to 140' S of Hearthstone Dr	0.24	100%	$ 603,525	$ 603,525
	A-7	P6D	FM 2499 (Long Prairie Rd)	FM 1171 (Cross Timbers) to Spinks Rd	2.73	100%	$ 1,515,721	$ 1,515,721
	A-8	GUA	Garden Ridge Blvd	Bellaire Blvd to Forest Vista Dr	0.81	50%	$ 1,146,031	$ 573,016
	A-9	GUA	Garden Ridge Blvd	FM 3040 to Spinks Rd	0.75	100%	$ 1,891,126	$ 1,891,126
	A-10	GUA	Garden Ridge Blvd	Spinks Rd to Lakeside Pkwy	0.42	100%	$ 2,504,704	$ 2,504,704
	A-11	UC	Kirkpatrick Ln	Morriss Rd to Kirkpatrick Ln	0.99	100%	$ 3,794,884	$ 3,794,884
	A-12	UMAD	Kirkpatrick Ln	Spanish Oak Dr to 1310' W of Garden Ridge Blvd	0.41	100%	$ 5,243,000	$ 5,243,000
	A-13	UC	Lake Forest Blvd	75' S of Lincoln Ct to Foxborough Trail	0.15	100%	$ 1,400,601	$ 1,400,601
	A-14	P6D	Lakeside Pkwy	FM 2499 (Long Prairie Rd) to Gerault Rd	1.08	100%	$ 4,375,554	$ 4,375,554
	A-15	P6D	Lakeside Pkwy	Gerault Rd to Garden Ridge Blvd	0.50	100%	$ 2,018,856	$ 2,018,856
	A-16	P6D	Lakeside Pkwy	Garden Ridge Blvd to South Town Limit	0.53	100%	$ 2,145,590	$ 2,145,590
	A-17	UMAD	Morriss Rd	Mandarin Way to Flower Mound Rd	0.16	100%	$ 1,009,492	$ 1,009,492
	A-18	UC	Sagebrush Dr	Old Settlers Rd to FM 2499 (Long Prairie Rd)	0.51	100%	$ 3,209,771	$ 3,209,771
	A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	50%	$ 1,128,789	$ 564,395
	A-20	UMAD	Spinks Rd	Aberdeen Dr to Gerault Rd	0.93	100%	$ 448,253	$ 448,253
	A-21	UMAD	Spinks Rd	Gerault Rd to Garden Ridge Blvd	0.56	100%	$ 968,297	$ 968,297
	A-22	UMAU	Timber Creek Rd	445' S of Glenn Hollow Ln to Kirkpatrick Ln	0.20	100%	$ 690,850	$ 690,850
	A-23	UC	Waketon/College Connector	Waketon Rd to College Pkwy	0.27	100%	$ 1,353,000	$ 1,353,000
	A-24	UC	Windsor Dr	Amy Ln to FM 2499 (Long Prairie Rd)	0.60	100%	$ 1,058,867	$ 1,058,867
	A-25	UC	Yucca Dr	440' E of FM 2499 to 460' S of FM 1171	0.08	100%	$ 214,416	$ 214,416
	S-1		Intersection	College Pkwy. at Timber Creek Rd.		100%	$ 275,000	$ 275,000
	S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.		50%	$ 275,000	$ 137,500
	S-3		Intersection	Churchill Dr. at Peters Colony Rd.		100%	$ 990,000	$ 990,000
	S-4		Intersection	Cross Timbers Rd. at Forums Dr.		100%	$ 179,000	$ 179,000
	S-5		Intersection	Garden Ridge Blvd. at Kirkpatrick Ln.		100%	$ 275,000	$ 275,000
	S-6		Intersection	FM 2499 (Long Prairie Rd.) at Chaparral Ln.		100%	$ 375,000	$ 375,000
	S-7		Intersection	Garden Ridge Blvd. at Forest Vista Rd.		100%	$ 275,000	$ 275,000
	S-8		Intersection	FM 2499 (Long Prairie Rd.) at Northshore Blvd.		100%	$ 275,000	$ 275,000
	S-9		Intersection	FM 2499 (Long Prairie Rd.) at Aberdeen Dr.		100%	$ 380,000	$ 380,000
	S-10		Intersection	Lakeside Pkwy. at Silveron Blvd.		100%	$ 275,000	$ 275,000
	S-11		Intersection	FM 2499 (Long Prairie Rd.) at Silveron Blvd.		100%	$ 390,000	$ 390,000
	S-12		Intersection	Gerault Rd. at Old Gerault Rd.		100%	$ 275,000	$ 275,000
	S-13		Intersection	Lakeside Pkwy. at Enterprise Dr.		100%	$ 275,000	$ 275,000
	I - 1		Intersection Improvement	Dixon Ln. at Morriss Rd.		100%	$ 375,000	$ 375,000
	I - 2		Right-turn lane - all directions	FM 2499 (Long Prairie Rd.) at Waketon Rd.		100%	$ 1,473,000	$ 1,473,000
	I - 3		Intersection Improvement	FM 2499 (Long Prairie Rd.) at College Pkwy.		100%	$ 333,000	$ 333,000
	I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.		50%	$ 375,000	$ 187,500
	I - 5		Intersection Improvement	Cross Timbers Rd. at Auburn Dr.		100%	$ 375,000	$ 375,000
	I - 6		Westbound right-turn lane	Cross Timbers Rd. at FM 2499 (Long Prairie Rd.)		100%	$ 492,000	$ 492,000
	I - 7		Intersection Improvement	Flower Mound Rd. at McKamy Creek Rd.		100%	$ 336,000	$ 336,000
	I - 8		Second left-turn lane, EB and SB	Flower Mound Rd. at FM 2499 (Long Prairie Rd.)		100%	$ 460,000	$ 460,000
	I - 9		Intersection Improvement	Flower Mound Rd. at Garden Ridge Blvd.		100%	$ 375,000	$ 375,000
	I - 10		Intersection Improvement	FM 2499 (Long Prairie Rd.) at Lakeside Pkwy.		100%	$ 375,000	$ 375,000
	I-11		Intersection Improvement	Lakeside Pkwy. At Gerault Rd.		100%	$ 375,000	$ 375,000
							Service Area Project Cost Subtotal	**$ 54,150,844**
							2020 Roadway Impact Fee Update Cost Per Service Area	**$ 30,000**
							Total Cost in SERVICE AREA A	**$ 54,180,844**

Table 4.B – 10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area B

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
Service Area B	B-1	UMAD	Flower Mound Rd	FM 1171 (Cross Timbers) to Skillern Rd	1.21	100%	$ 680,380	$ 680,380
	B-2	RC	Red Rock/Shiloh Connector	Red Rock Ln to Shiloh Rd	1.01	100%	$ 6,845,000	$ 6,845,000
	B-3	RC	Scenic /Flower Mound Connector	Scenic Dr to Alcott Ave	0.45	100%	$ 3,067,000	$ 3,067,000
	B-4	RC	Shiloh Rd/Lusk Ln Connector	2820' E of Shiloh Rd to Lusk Ln	0.58	100%	$ 3,945,000	$ 3,945,000
	B-5	RC	Shiloh Rd/Lusk Ln Connector	Shiloh Rd to 2820' E of Shiloh Rd	0.53	50%	$ 3,611,000	$ 1,805,500
	A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	50%	$ 1,128,789	$ 564,395
	S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.		50%	$ 275,000	$ 137,500
	I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.		50%	$ 230,000	$ 115,000
	I-12		Intersection Improvement	Cross Timbers Rd. at Flower Mound Rd.		100%	$ 375,000	$ 375,000
							Service Area Project Cost Subtotal	**$ 17,534,775**
							2020 Roadway Impact Fee Update Cost Per Service Area	**$ 30,000**
							Total Cost in SERVICE AREA B	**$ 17,564,775**

Table 4.C – 10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area C

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
Service Area C	C-1	RC	CrossTimbers/Dunham Connector	Cross Timbers Rd to Dunham Rd	0.51	100%	$ 3,483,000	$ 3,483,000
	C-2	GRA	CrossTimbers/US 377 Connector1	US 377 to Cross Timbers Rd	2.14	100%	$ 22,005,000	$ 22,005,000
	C-3	RC	CrossTimbers/US 377 Connector2	CrossTimbers/US 377 Connector1 to Cross Timbers Rd	0.90	100%	$ 6,090,000	$ 6,090,000
	C-4	UMABL	Denton Creek Blvd	IH-35 Diamond Interchange to 120' NW of Prairie Ridge Rd	1.17	100%	$ 28,014,000	$ 28,014,000
	C-5	UMABL	Denton Creek Blvd	Canyon Falls Dr to 1155' S of Canyon Falls Dr	0.23	100%	$ 1,435,000	$ 1,435,000
	C-6	UMABL	Denton Creek Blvd	1155' S of Canyon Falls Dr to Cross Timbers Rd	0.68	100%	$ 4,323,000	$ 4,323,000
	C-7	UC	Stonecrest Rd	850' S of Canyon Falls Dr to UMAB 1	0.24	100%	$ 3,137,000	$ 3,137,000
	C-8	UC	Stonecrest Rd	UMAB 1 to Cross Timbers Rd	0.70	100%	$ 5,437,000	$ 5,437,000
	C-9	UMABL	UMAB 1	Denton Creek Blvd to US 377	0.57	100%	$ 4,444,000	$ 4,444,000
	C-10	UMABL	UMAB2	Denton Creek Blvd to West Town Limit	0.27	100%	$ 3,512,000	$ 3,512,000
	C-11	UC	Urban Collector 1	Cross Timbers Road to Cross Timbers Rd	0.83	100%	$ 10,995,000	$ 10,995,000
	C-12	UC	Urban Collector 1	Stonecrest Rd to Cross Timbers Rd	0.59	100%	$ 4,577,000	$ 4,577,000
	S-14		Intersection	US 377 at Canyon Falls Dr.		100%	$ 205,000	$ 205,000
	S-15		Intersection	Cross Timbers Rd. at Canyon Falls Dr.		50%	$ 275,000	$ 137,500
	S-16		Intersection	Cross Timbers Rd. at Denton Creek Blvd.		100%	$ 275,000	$ 275,000
	S-17		Intersection	Cross Timbers Rd. at Cross Timbers/US 377 Connector 1		100%	$ 275,000	$ 275,000
							Service Area Project Cost Subtotal	**$ 98,344,500**
							2020 Roadway Impact Fee Update Cost Per Service Area	**$ 30,000**
							Total Cost in SERVICE AREA C	**$ 98,374,500**
							Total CIP COST	**$ 170,120,119**

Notes:

a. The planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.
b. The planning level cost projections shall not supersede the Town's design standards contained within the Subdivision Ordinance or the determination of the Town Engineer for a specific project.
c. The project cost total within each Service Area may differ from the total shown in the Summary sheets contained within Appendix A due to some projects that are split between multiple service areas.

E. Service Unit Calculation

The basic service unit for the computation of Flower Mound's roadway impact fees is the vehicle-mile of travel during the evening peak-hour. To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service area for the ten-year period.

The growth in vehicle-miles from 2020 to 2030 is based upon projected changes in residential and non-residential growth for the period. In order to determine this growth, baseline estimates of population, basic square feet, service square feet, and retail square feet for 2020 were made by the Town, along with projections for each of these demographic statistics through 2030. The Land Use Assumptions for 2020 Impact Fee Update details the growth estimates used for the impact fee determination.

The residential and non-residential statistics in the Land Use Assumptions provide the "independent variables" that are used to calculate the existing (2020) and projected (2030) transportation service units used to establish the roadway impact fee maximum rates within each service area. The roadway demand service units (vehicle-miles) for each service area are the sum of the vehicle-miles "generated" by each category of land use in the service area.

For the purpose of impact fees, all developed and developable land is categorized as either residential or non-residential. For residential land uses, the existing and projected population is converted to dwelling units. The number of dwelling units in each service area is multiplied by a transportation demand factor to compute the vehicle-miles of travel that occur during the evening peak hour. This factor computes the average amount of demand caused by the residential land uses in the service area. The transportation demand factor is discussed in more detail below.

For non-residential land uses, the process is similar. The Land Use Assumptions provide existing and projected number of building square footages for three (3) categories of non-residential land uses – basic, service, and retail. These categories correspond to an aggregation of other specific land use categories based on the North American Industrial Classification System (NAICS).

Building square footage is the most common independent variable for the estimation of non-residential trips in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition. This characteristic is more appropriate than the number of employees because building square footage is tied more closely to trip generation and is known at the time of application for any development or development modification that would require the assessment of an impact fee.

The existing and projected Land Use Assumptions for the dwelling units and the square footage of basic, service, and retail land uses provide the basis for the projected increase in vehicle-miles of travel. As noted earlier, a transportation demand factor is applied to these values and then summed to calculate the total peak hour vehicle-miles of demand for each service area.

The transportation demand factors are aggregate rates derived from two sources – the ITE Trip Generation Manual, 10th Edition and the latest Regional Origin-Destination Travel Survey performed by NCTCOG. ITE's Trip Generation Manual, 10th Edition provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that particular establishment anyway, such as a trip between work and home. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail rate to avoid double counting trips.

The next component of the transportation demand factor accounts for the length of each trip. The average trip length for each category is based on the region-wide travel characteristics survey conducted by NCTCOG.

The computation of the *transportation demand factor* is detailed in the following equation:

$$TDF = T * (1 - P_b) * L_{\max}$$

$$\text{where...}\ L_{\max} = \min (L * OD \ \text{ or } \text{SA}_\text{L})$$

Variables:

- TDF = Transportation Demand Factor,
- T = Trip Rate (peak hour trips / unit),
- P_b = Pass-By Discount (% of trips),
- L_{max} = Maximum Trip Length (miles),
- L = Average Trip Length (miles), and
- OD = Origin-Destination Reduction (50%)
- SA_L = Max Service Area Trip Length (see Table 5)

The maximum trip length was limited to six (6) miles based on the maximum trip length within each service area. Chapter 395 of the Texas Local Government Code allows for a service area of six (6) miles, and the service areas within Flower Mound are approximately six (6) miles in distance.

The adjustment made to the average trip length statistic in the computation of the maximum trip length is the origin-destination reduction. This adjustment is made because the Roadway Impact Fee is charged to both the origin and destination end of the trip. For example, impact fee methodology will account for a trip from home to work within Flower Mound to both residential and non-residential land uses. To avoid counting these trips as both residential and non-residential trips, a 50% origin-destination (OD) reduction factor is applied. Therefore, only half of the trip length is assessed to each land use. This methodology is consistent with that used in the National Household Travel Survey.

Table 5 shows the derivation of the Transportation Demand Factor for the residential land uses and the three (3) non-residential land use categories. The values utilized for all variables shown in the transportation demand factor equation are also shown in the table.

Table 5. Transportation Demand Factor Calculations

Variable	Residential (ITE 210)	Basic (ITE 110)	Service (ITE 710)	Retail (ITE 820)
T	.99	0.63	1.15	3.81
P_b	0%	0%	0%	34%
L	9.79	10.02	14.65	5.60
L_{max} *	4.90	5.01	6.00	2.80
TDF	4.85	3.16	6.90	7.04

The application of the demographic projections and the transportation demand factors are presented in the 10-Year Growth Projections in Table 6. This table shows the total vehicle-miles by service area for the years 2020 and 2030. These estimates and projections lead to the Vehicle-Miles of Travel for both 2020 and 2030.

Table 6. 10-Year Growth Projections

Year 2020

SERVICE AREA	RESIDENTIAL VEHICLE-MILES			SQUARE FEET[4]			TRANS. DEMAND FACTOR[5]			NON-RESIDENTIAL VEHICLE-MILES[9]				TOTAL VEHICLE MILES[10]
	DWELLING UNITS[1]	TDF[2]	VEHICLE MILES[3]	BASIC	SERVICE	RETAIL	BASIC[6]	SERVICE[7]	RETAIL[8]	BASIC	SERVICE	RETAIL	TOTAL	
		0.99					*0.63*	*1.15*	*2.51*					
A	22,082	4.85	107,098	8,781,000	5,127,000	4,315,000	3.16	6.90	7.04	27,748	35,376	30,381	93,505	200,603
B	4,169	4.85	20,220	41,000	477,000	115,000	3.16	6.90	7.04	130	3,291	810	4,231	24,451
C	1,395	4.85	6,766	55,000	139,000	0	3.16	6.90	7.04	174	959	0	1,133	7,899
Totals	**27,646**		**134,083**	**8,877,000**	**5,743,000**	**4,430,000**				**28,052**	**39,626**	**31,191**	**98,869**	**232,952**

Year 2030

SERVICE AREA	RESIDENTIAL VEHICLE-MILES			SQUARE FEET[4]			TRANS. DEMAND FACTOR[5]			NON-RESIDENTIAL VEHICLE-MILES[9]				TOTAL VEHICLE MILES[10]
	DWELLING UNITS[1]	TDF[2]	VEHICLE MILES[3]	BASIC	SERVICE	RETAIL	BASIC[6]	SERVICE[7]	RETAIL[8]	BASIC	SERVICE	RETAIL	TOTAL	
		0.99					*0.63*	*1.15*	*3.81*					
A	23,884	4.85	115,837	9,930,000	7,491,000	5,891,000	3.16	6.90	7.04	31,379	51,688	41,478	124,545	240,382
B	4,299	4.85	20,850	41,000	537,000	115,000	3.16	6.90	7.04	130	3,705	810	4,645	25,495
C	4,507	4.85	21,859	690,000	1,148,000	1,229,000	3.16	6.90	7.04	2,180	7,921	8,653	18,754	40,613
Totals	**32,690**		**158,547**	**10,661,000**	**9,176,000**	**7,235,000**				**33,689**	**63,314**	**50,941**	**147,944**	**306,491**

VEHICLE-MILES OF INCREASE[11] (2020 - 2030)

SERVICE AREA	VEH-MILES
A	39,780
B	1,045
C	32,714
Total	73,538

Notes:

[1] From *Land Use Assumptions for 2020 Impact Fees Update Report*

[2] Transportation Demand Factor for each Service Area (from LUVMET) using Single Family Detached Housing land use and *trip generation rate*

[3] Calculated by multiplying TDF by the number of dwelling units

[5] *Trip generation rate* and Transportation Demand Factors from LUVMET for each land use

[6] 'Basic' corresponds to General Light Industrial land use and *trip generation rate*

[7] 'Service' corresponds to General Office land use and *trip generation rate*

[8] 'Retail' corresponds to Shopping Center land use and *trip generation rate*

[9] Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use

[10] Residential plus non-residential vehicle-mile totals for each Service Area

[11] Total Vehicle-Miles (2020) subtracted from Total Vehicle-Miles (2030)

IV. Roadway Impact Fee Calculation

A. Maximum Assessable Impact Fee Per Service Unit

This section presents the maximum assessable impact fee rate calculated for each service area. The maximum assessable impact fee is the sum of the eligible Roadway Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. Table 7 illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation.

Table 7. Maximum Assessable Roadway Impact Fee Computation

Line	Title	Description
1	*Total Vehicle-Miles of Capacity Added by the CIP*	The total number of vehicle-miles added to the service area based on the capacity, length, and number of lanes in each project (from Appendix B – CIP Service Units of Supply)

Each project identified in the Impact Fee CIP will add a certain amount of capacity to the Town's roadway network based on its length and classification. This line displays the total amount added within each service area.

2	*Total Vehicle-Miles of Existing Demand*	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added (from Appendix B – CIP Service Units of Supply)

A number of facilities identified in the Impact Fee CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently being used by existing traffic.

3	*Total Vehicle-Miles of Existing Deficiencies*	Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from Appendix C – Existing Roadway Facilities Inventory)

In order to ensure that existing deficiencies on the Town's roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the Impact Fee CIP – will have these additional vehicle-miles removed from the calculation.

4	*Net Amount of Vehicle-Miles of Capacity Added*	A measurement of the number of vehicle-miles added by the CIP that will not be utilized by existing demand (Line 1 – Line 2 – Line 3)

This calculation identifies the portion of the Impact Fee CIP (in vehicle-miles) that may be recoverable through the collection of impact fees.

5	*Total Cost of the CIP within the Service Area*	The total cost of the projects within each service area (from Table 4: 10-Year Capital Improvement Plan with Conceptual Level Cost Opinions)

This line simply identifies the total cost of all projects identified in each service area.

6	*Cost of Net Capacity Supplied*	The total CIP cost (Line 5) prorated by the ratio of Net Capacity Added (Line 4) to Total Capacity Added (Line 1). [(Line 4 / Line 1) * (Line 5)]

Using the ratio of vehicle-miles added by the Roadway Impact Fee CIP available to serve future growth to the total vehicle-miles added, the total cost of the CIP is reduced to the amount available for future growth (i.e. excluding existing usage and deficiencies).

7	*Cost to Meet Existing Needs and Usage*	The difference between the Total Cost of the CIP (Line 5) and the Cost of the Net Capacity supplied (Line 6). (Line 5 – Line 6)

This line is provided for informational purposes only – it is to present the portion of the total cost of the Roadway Impact Fee CIP that is required to meet existing demand.

8	*Total Vehicle-Miles of New Demand over Ten Years*	Based upon the growth projection provided in the Land Use Assumptions, an estimate of the number of new vehicle-miles within the service area over the next ten years (from Table 6)

This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

9	*Percent of Capacity Added Attributable to New Growth*	The result of dividing Total Vehicle-Miles of New Demand (Line 8) by the Net Amount of Capacity Added (Line 4), limited to 100% (Line 10). This calculation is required by Chapter 395 to ensure capacity added is attributable to new growth.
10	*Chapter 395 Check*	

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 number 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.

11	*Cost of Capacity Added Attributable to New Growth*	The result of multiplying the Cost of Net Capacity Added (Line 6) by the Percent of Capacity Added Attributable to New Growth, limited to 100% (Line 9).

This value is the total Impact Fee CIP project costs (excluding financial costs) that may be recovered through impact fees. This line is determined considering the limitations to impact fees required by the Texas legislature.

A. Plan For Awarding the Roadway Impact Fee Credit

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

"(7) A plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

(B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan…"

The plan following 395.014(7)(A) is summarized, as prepared by NewGen Strategies, in Appendix D and E, Plan for Awarding the Roadway Impact Fee Credit. The following table summarizes the portions of Table 7 that utilize this credit calculation.

Line	Title	Description
12	*Financing Costs*	(from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
13	*Interest Earnings*	(from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
14	*Cost of the CIP and Financing Attributable to New Growth*	The sum of the Cost of Capacity Added Attributable to New Growth, Financing Costs, and Interest Earnings. (Line 11 + Line 12 + Line 13)
15	*Pre-Credit Maximum Fee Per Service Unit*	Found by dividing the Cost of the CIP and Financing Attributable to New Growth (Line 14) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 14 / Line 8)
16	*Credit for Ad Valorem Taxes*	A credit for the portion of ad valorem taxes projected to be generated by the new service units, as per Section 395.014 of the Local Government Code. (from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
17	*Recoverable Cost of CIP and Financing*	The difference between the Cost of the CIP and Financing Attributable to New Growth (Line 14) and the Credit for Ad Valorem Taxes (Line 16). (Line 14 + Line 16)
18	*Maximum Assessable Fee Per Service Unit*	Found by dividing the Recoverable Cost of the CIP and Financing (Line 17) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 17 / Line 8)

Table 8. Maximum Assessable Roadway Impact Fee

	SERVICE AREA:	A	B	C
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM CIP UNITS OF SUPPLY, **APPENDIX B)**	40,792	5,645	16,352
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM CIP UNITS OF SUPPLY, **APPENDIX B**)	20,744	1,133	0
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING FACILITIES INVENTORY, **APPENDIX C**)	3,329	31	1,244
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	16,719	4,481	15,108
5	TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM **TABLE 4)**	$ 54,180,844	$ 17,564,775	$ 98,374,500
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	$ 22,206,549	$ 13,942,915	$ 90,890,530
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	$ 31,974,295	$ 3,621,860	$ 7,483,970
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM **TABLE 6** and **Land Use Assumptions**)	39,780	1,045	32,714
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	237.9%	23.3%	216.5%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	100.0%	23.3%	100.0%
11	COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	$ 22,206,549	$ 3,248,699	$ 90,890,530
12	FINANCING COSTS (FROM **APPENDIX D**)	$ 2,660,377	$ 717,918	$ 21,232,053
13	INTEREST EARNINGS (FROM **APPENDIX D**)	$ (115,159)	$ (91,866)	$ (2,746,439)
14	COST OF CIP AND FINANCING ATTRIBUTABLE TO GROWTH (LINE 11 + LINE 12 + LINE 13)	$ 24,751,766	$ 3,874,751	$ 109,376,144
15	PRE-CREDIT MAX FEE PER SERVICE UNIT ($ PER VEH-MI) (LINE 14 / LINE 8)	$ 622	$ 3,708	$ 3,343
16	CREDIT FOR AD VALOREM TAXES (FROM **APPENDIX D**)	$ (540,978)	$ (1,984)	$ (1,614,052)
17	RECOVERABLE COST OF CIP AND FINANCING (LINE 14 + LINE 16)	$ 24,210,788	$ 3,872,766	$ 107,762,092
18	MAX ASSESSABLE FEE PER SERVICE UNIT ($ PER VEH-MI) (LINE 17 / LINE 8)	$ 609	$ 3,706	$ 3,294

B. Service Unit Demand Per Unit of Development

The Roadway Impact Fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the Town utilizes the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in Table 9. This table lists the predominant land uses that may occur within the Town of Flower Mound. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of uses are found in this table. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

The trip rates presented for each land use is a fundamental component of the LUVMET. The trip rate is the average number of trips generated during the evening peak hour by each land use per development unit. The next column, if applicable to the land use, presents the number of trips to and from certain land uses reduced by pass-by trips, as previously discussed.

The source of the trip generation and pass-by statistics is ITE's Trip Generation Manual, 10th Edition, the latest edition of the definitive source for trip generation data. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The adjusted trip length values are based on the Regional Origin-Destination Travel Survey performed by the North Central Texas Council of Governments (NCTCOG). The other adjustment to trip length is the 50% origin-destination reduction to avoid double counting of trips. At this stage, another important aspect of the state law is applied – the limit on transportation service unit demand. If the adjusted trip length is above six (6) miles, the maximum trip length used for calculation is reduced to six (6) miles. This reduction, as discussed previously, limits the maximum trip length to the approximate size of the service areas.

The remaining column in the LUVMET shows the vehicle-miles per development unit. This number is the product of the trip rate and the maximum trip length. This number, previously referred to as the Transportation Demand Factor, is used in the impact fee estimate to compute the number of service units attributed to each land use category. The number of service units is multiplied by the impact fee rate (established by Town ordinance) in order to determine the impact fee for a development.

Table 9. Land Use / Vehicle-Mile Equivalency Table (LUVMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev. Unit
INDUSTRIAL											
General Light Industrial	110	1,000 SF GFA	0.63			0.63	10.02	50%	5.01	5.01	3.16
Industrial Park	130	1,000 SF GFA	0.40			0.40	10.02	50%	5.01	5.01	2.00
Warehousing	150	1,000 SF GFA	0.19			0.19	10.02	50%	5.01	5.01	0.95
Mini-Warehouse	151	1,000 SF GFA	0.17			0.17	10.02	50%	5.01	5.01	0.85
RESIDENTIAL											
Single-Family Detached Housing	210	Dwelling Unit	0.99			0.99	9.79	50%	4.90	4.90	4.85
Townhomes	220	Dwelling Unit	0.56			0.56	9.79	50%	4.90	4.90	2.74
Multi-family Housing (Apartment/Condominium)	220	Dwelling Unit	0.56			0.56	9.79	50%	4.90	4.90	2.74
Senior Adult Housing-Detached	251	Dwelling Unit	0.30			0.30	9.79	50%	4.90	4.90	1.47
Senior Adult Housing-Attached	252	Dwelling Unit	0.26			0.26	9.79	50%	4.90	4.90	1.27
Assisted Living	254	Beds	0.26			0.26	9.79	50%	4.90	4.90	1.27
LODGING											
Hotel	310	Room	0.60			0.60	6.43	50%	3.22	3.22	1.93
Motel / Other Lodging Facilities	320	Room	0.38			0.38	6.43	50%	3.22	3.22	1.22
RECREATIONAL											
Golf Course	430	Acre	0.28			0.28	7.86	50%	3.93	3.93	1.10
Miniature Golf Course	431	Hole	0.33			0.33	7.86	50%	3.93	3.93	1.30
Golf Driving Range	432	Tee	1.25			1.25	7.86	50%	3.93	3.93	4.91
Multiplex Movie Theater	445	Screens	13.73			13.73	15.77	50%	7.89	6.00	82.38
Ice Skating Rink	465	1,000 SF GFA	1.33			1.33	7.86	50%	3.93	3.93	5.23
Racquet / Tennis Club	491	Court	3.82			3.82	7.86	50%	3.93	3.93	15.01
Recreational Community Center	495	1,000 SF GFA	2.31			2.31	7.86	50%	3.93	3.93	9.08
INSTITUTIONAL											
Church	560	1,000 SF GFA	0.49			0.49	8.31	50%	4.16	4.16	2.04
Day Care Center	565	1,000 SF GFA	11.12	44%	B	6.23	3.49	50%	1.75	1.75	10.87
Primary/Middle School (1-8)	522	Students	0.17			0.17	3.49	50%	1.75	1.75	0.30
High School	530	Students	0.14			0.14	3.49	50%	1.75	1.75	0.24
Junior / Community College	540	Students	0.11			0.11	10.44	50%	5.22	5.22	0.57
University / College	550	Students	0.15			0.15	10.44	50%	5.22	5.22	0.78
MEDICAL											
Clinic	630	1,000 SF GFA	3.28			3.28	9.85	50%	4.93	4.93	16.15
Hospital	610	1,000 SF GFA	0.97			0.97	9.85	50%	4.93	4.93	4.78
Nursing Home	620	Beds	0.22			0.22	9.85	50%	4.93	4.93	1.08
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	3.53	30%	B	2.47	9.85	50%	4.93	4.93	12.16
OFFICE											
Corporate Headquarters Building	714	1,000 SF GFA	0.60			0.60	14.65	50%	7.33	6.00	3.60
General Office Building	710	1,000 SF GFA	1.15			1.15	14.65	50%	7.33	6.00	6.90
Medical-Dental Office Building	720	1,000 SF GFA	3.46			3.46	9.85	50%	4.93	4.93	17.04
Single Tenant Office Building	715	1,000 SF GFA	1.71			1.71	14.65	50%	7.33	6.00	10.26
Office Park	750	1,000 SF GFA	1.07			1.07	14.65	50%	7.33	6.00	6.42

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: ITE rate adjusted upward by KHA based on logical relationship to other categories

Table **9 Cont'd**. Land Use / Vehicle-Mile Equivalency Table (LUVMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev Unit
COMMERCIAL											
Automobile Related											
Automobile Care Center	942	1,000 SF GFA	3.11	40%	B	1.87	4.45	50%	2.23	2.23	4.15
Automobile Parts Sales	843	1,000 SF GFA	4.91	43%	A	2.80	4.45	50%	2.23	2.23	6.23
Gasoline/Service Station	944	Vehicle Fueling Position	14.03	42%	A	8.14	1.20	50%	0.60	0.60	4.88
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.99	56%	B	6.16	1.20	50%	0.60	0.60	3.69
New Car Sales	840	1,000 SF GFA	2.43	20%	B	1.94	5.60	50%	2.80	2.80	5.44
Quick Lubrication Vehicle Shop	941	Servicing Positions	4.85	40%	B	2.91	4.45	50%	2.23	2.23	6.47
Automated Car Wash	948	1,000 SF GFA	5.08	40%	B	3.05	1.20	50%	0.60	0.60	1.83
Tire Store	848	1,000 SF GFA	3.98	28%	A	2.87	4.45	50%	2.23	2.23	6.38
Dining											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	32.67	50%	A	16.34	5.64	50%	2.82	2.82	46.06
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	28.34	50%	B	14.17	5.64	50%	2.82	2.82	39.96
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.77	43%	A	5.57	5.64	50%	2.82	2.82	15.70
Quality Restaurant	931	1,000 SF GFA	7.80	44%	A	4.37	5.64	50%	2.82	2.82	12.32
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	43.38	70%	A	13.01	5.64	50%	2.82	2.82	36.70
Other Retail											
Free-Standing Discount Store	815	1,000 SF GFA	4.83	30%	C	3.38	5.60	50%	2.80	2.80	9.47
Nursery (Garden Center)	817	1,000 SF GFA	6.94	30%	B	4.86	5.60	50%	2.80	2.80	13.60
Home Improvement Superstore	862	1,000 SF GFA	2.33	42%	A	1.35	5.60	50%	2.80	2.80	3.78
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.51	53%	A	4.00	5.60	50%	2.80	2.80	11.20
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	10.29	49%	A	5.25	5.60	50%	2.80	2.80	14.69
Shopping Center	820	1,000 SF GFA	3.81	34%	A	2.51	5.60	50%	2.80	2.80	7.04
Supermarket	850	1,000 SF GFA	9.24	36%	A	5.91	5.60	50%	2.80	2.80	16.56
SERVICES											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	4.45	50%	2.23	2.23	16.19
Drive-In Bank	912	Drive-in Lanes	27.15	35%	A	17.65	4.45	50%	2.23	2.23	39.27

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: ITE rate adjusted upward by KHA based on logical relationship to other categories

Table 10. Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description	Development Unit
INDUSTRIAL			
General Light Industrial	110	Emphasis on activities other than manufacturing; typically employing fewer than 500 workers	1,000 SF GFA
Industrial Park	130	Area containing a number of industries or related facilities	1,000 SF GFA
Warehousing	150	Devoted to storage of materials but may have included office and maintenance areas	1,000 SF GFA
Mini-Warehouse	151	Facilities with a number of units rented to others for the storage of goods	1,000 SF GFA
RESIDENTIAL			
Single-Family Detached Housing	210	Single-family detached homes on individual lots	Dwelling Unit
Townhomes	220	Single-family attached homes on individual lots	
Multi-family Housing (Apartment/Condominium)	220	At least 3 rental dwelling units and one or two levels (floors) per building	Dwelling Unit
Senior Adult Housing-Detached	251	Consists of detached independent living developments that include amenities such as golf courses and swimming pools	Dwelling Unit
Senior Adult Housing-Attached	252	Consists of attached independent living developments that include limited social or recreation services	Dwelling Unit
Assisted Living	254	Residential settings that provide either routine general protective oversight or assistance with activities	Beds
LODGING			
Hotel	310	Lodging facilities that typically have on-site restaurants, lounges, meeting and/or banquet rooms, or other retail shops and services	Room
Motel / Other Lodging Facilities	320	Lodging facilities that may have small on-site restaurant or buffet area but little or no meeting space	Room
RECREATIONAL			
Golf Course	430	May include municipal courses and private country clubs; may have driving ranges, pro shops, and restaurant/banquet facilities	Acre
Miniature Golf Course	431	One or more individual putting courses; category should not be used when part of a larger entertainment center(with batting cages, video game centers, etc)	Hole
Golf Driving Range	432	Facilities with driving tees for practice; may provide individual or group lessons; may have prop shop and/or refreshment facilities	Tee
Multiplex Movie Theater	445	Movie theater with audience seating, minimum of ten screens, lobby, and refreshment area.	Screens
Ice Skating Rink	465	Rinks for ice skating and related sports; may contain spectator areas and refreshment facilities	1,000 SF GFA
Racquet / Tennis Club	491	Indoor or outdoor facilities specifically designed for playing tennis	Court
Recreational Community Center	495	Category includes racquet clubs, health/fitness clubs, can include facilities such as YMCA's	1,000 SF GFA
INSTITUTIONAL			
Church	560	Churches and houses of worship	1,000 SF GFA
Day Care Center	565	Generally includes facilities for care of pre-school aged children, generally includes classrooms, offices, eating areas, and playgrounds	1,000 SF GFA
Primary/Middle School (1-8)	522	Serves students who have not yet entered high school	Students
High School	530	Serves students who have completed middle or junior high school	Students
Junior / Community College	540	Two-year junior, community or technical colleges	Students
University / College	550	Four-year universities or colleges that may or may not offer graduate programs	Students
MEDICAL			
Clinic	630	Facilities with limited diagnostic and outpatient care	1,000 SF GFA
Hospital	610	Medical and surgical facilities with overnight accommodations	1,000 SF GFA
Nursing Home	620	Rest and convalescent homes with residents who do little or no driving	Beds
Animal Hospital/Veterinary Clinic	640	Rest and convalescent homes with residents who do little or no driving	1,000 SF GFA
OFFICE			
Corporate Headquarters Building	714	Office building housing corporate headquarters of a single company or organization	1,000 SF GFA
General Office Building	710	Office buildings which house multiple tenants	1,000 SF GFA
Medical-Dental Office Building	720	Multi-tenant building with offices for physicians and/or dentists	1,000 SF GFA
Single Tenant Office Building	715	Single tenant office buildings other than corporate headquarters	1,000 SF GFA
Office Park	750	Office buildings (typically low-rise) in a campus setting and served by a common roadway system	1,000 SF GFA

Table 10 **Cont'd**. Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description	Development Unit
COMMERCIAL			
Automobile Related			
Automobile Care Center	942	Automobile repair and servicing including stereo installations and upholstering	1,000 SF GFA
Automobile Parts Sales	843	Retail sale of auto parts but no on-site vehicle repair	1,000 SF GFA
Gasoline/Service Station	944	Gasoline sales without convenience store or car wash; may include repair	Vehicle Fueling Position
Gasoline/Service Station w/ Conv Market	945	Gasoline sales with convenience store where the primary business is gasoline sales	Vehicle Fueling Position
New Car Sales	840	New car dealerships, typically with automobile servicing, part sales, and used car sales	1,000 SF GFA
Quick Lubrication Vehicle Shop	941	Primary business is to perform oil changes and fluid/filter changes with other repair services not provided	Servicing Positions
Automated Car Wash	948	Allows for mechanical cleaning of the exterior of vehicles; manual cleaning and detailing may also take place	1,000 SF GFA
Tire Store	848	Primary business is sales and installation of tires; usually do not have large storage or warehouse area	1,000 SF GFA
Dining			
Fast Food Restaurant with Drive-Thru Window	934	High-turnover fast food restaurant for carry-out and eat-in customers with a drive-thru window	1,000 SF GFA
Fast Food Restaurant without Drive-Thru Window	933	High-turnover fast food restaurant for carry-out and eat-in customers, but without a drive-thru window	1,000 SF GFA
High Turnover (Sit-Down) Restaurant	932	Restaurants with turnover rates less than one hour; typically includes moderately-priced chain restaurants	1,000 SF GFA
Quality Restaurant	931	Restaurants with turnover rates of one hour or longer; typically require reservations	1,000 SF GFA
Coffee/Donut Shop with Drive-Thru Window	937	Coffee and Donut restaurants with drive-through windows, hold long store hours and have limited indoor seating	1,000 SF GFA
Other Retail			
Free-Standing Discount Store	815	Category includes free-standing stores with off-street parking; typically offer a variety of products and services with long store hours	1,000 SF GFA
Nursery (Garden Center)	817	Building with a yard of planting or landscape stock; may have office, storage, shipping or greenhouse facilities	1,000 SF GFA
Home Improvement Superstore	862	Warehouse-type facilities offering a large variety of products and services including lumber, tool, paint, lighting, and fixtures, among other items.	1,000 SF GFA
Pharmacy/Drugstore w/o Drive-Thru Window	880	Facilities that primarily sell prescription and non-prescription drugs without a drive-through window	1,000 SF GFA
Pharmacy/Drugstore w/ Drive-Thru Window	881	Facilities that primarily sell prescription and non-prescription drugs with a drive-through window	1,000 SF GFA
Shopping Center	820	Integrated group of commercial establishments; planning, owned, and managed as a unit	1,000 SF GFA
Supermarket	850	Primary business is sale of groceries, food, and household cleaning items; may include photo, pharmacy, video rental, and/or ATM	1,000 SF GFA
SERVICES			
Walk-In Bank	911	Banks with their own parking lots, no drive-in lanes but contain non-drive-through ATMs	1,000 SF GFA
Drive-In Bank	912	Banking facilities to conduct financial transactions from the vehicle; also usually a part of a walk-in bank	Drive-in Lanes

V. Sample Calculations

The following section details two (2) examples of maximum assessable Roadway Impact Fee calculations.

Example 1:
Development Type - One (1) Unit of Single-Family Housing in Service Area A

Roadway Impact Fee Calculation Steps – Example 1	
Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	From Table 10 [Land Use – Vehicle-mile Equivalency Table] Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 4.85
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit
	From Table 8, Line 20 [Maximum Assessable Fee Per Service Unit] Service Area A: $609
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 1 * 4.85 * $609 Maximum Assessable Impact Fee = $2,954

Example 2:
Development Type – 125,000 square foot Home Improvement Superstore in Service Area C

Roadway Impact Fee Calculation Steps – Example 2	
Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	From Table 10 [Land Use – Vehicle-mile Equivalency Table] Development Type: 125,000 square feet of Home Improvement Superstore Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.78
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit
	From Table 8, Line 20 [Maximum Assessable Fee Per Service Unit] Service Area C: $3,294
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 125 * 3.78 * $3,294 Maximum Assessable Impact Fee = $1,556,415

VI. Conclusion

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

This report establishes the maximum allowable roadway impact fee that could be assessed by the Town of Flower Mound within each of the three (3) service areas. The maximum assessable roadway impact fees calculated in this report are presented in the table below:

Service Areas	A	B	C
2020 Roadway Impact Fee Study Maximum Assessible Fee Per Vehicle-Mile	$609	$3,706	$3,294

This document serves as a guide to the assessment of roadway impact fees pertaining to future development and the Town's need for roadway improvements to accommodate that growth. Following the public hearing process, the Town Council may establish an amount to be assessed (if any) up to the maximum established within this report and update the Roadway Impact Fee Ordinance accordingly.

In conclusion, it is our opinion that the data and methodology used in this update are appropriate and consistent with Chapter 395 of the Texas Local Government Code. Furthermore, the Land Use Assumptions and the proposed Capital Improvement Plan are appropriately incorporated into the process.

VII. APPENDICES

A. Conceptual Level Project Cost Projections

SERVICE AREA A
SERVICE AREA B
SERVICE AREA C

B. CIP Service Units of Supply

C. Existing Roadway Facilities Inventory

D. Plan For Awarding the Roadway Impact Fee Credit Summary

E. Plan For Awarding the Roadway Impact Fee Credit Supporting Exhibits

A. Conceptual Level Project Cost Projections

Town of Flower Mound - 2020 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees

Appendix A - Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area A

#	Class	Project	Limits	Status	Project Cost
A-1	UMAD	Aberdeen Dr	FM 2499 (Long Prairie Rd) to 1340' N of Spinks Rd	Widening	$ 1,454,821
A-2	UMAD	Aberdeen Dr	1340' N of Spinks Rd to 700' N of Spinks Rd	Widening	$ 636,000
A-3	UMAU	Chinn Chapel Rd	FM 407 (Justin Rd) to Waketon Rd	Completed	$ 2,728,803
A-4	UMAD	Dixon Ln	Chinn Chapel Rd to Crestside Dr	Completed	$ 5,297,438
A-5	UMAU	Duncan Ln	Honeysuckle Way to Spinks Rd	Widening	$ 562,532
A-6	UMAU	Firewheel Dr	515' S of FM 1171 to 140' S of Hearthstone Dr	Completed	$ 603,525
A-7	P6D	FM 2499 (Long Prairie Rd)	FM 1171 (Cross Timbers) to Spinks Rd	Completed	$ 1,515,721
A-8	GUA	Garden Ridge Blvd	Bellaire Blvd to Forest Vista Dr	Completed	$ 1,146,031
A-9	GUA	Garden Ridge Blvd	FM 3040 to Spinks Rd	Completed	$ 1,891,126
A-10	GUA	Garden Ridge Blvd	Spinks Rd to Lakeside Pkwy	Completed	$ 2,504,704
A-11	UC	Kirkpatrick Ln	Morriss Rd to Kirkpatrick Ln	Completed	$ 3,794,884
A-12	UMAD	Kirkpatrick Ln	Spanish Oak Dr to 1310' W of Garden Ridge Blvd	New	$ 5,243,000
A-13	UC	Lake Forest Blvd	75' S of Lincoln Ct to Foxborough Trail	Completed	$ 1,400,601
A-14	P6D	Lakeside Pkwy	FM 2499 (Long Prairie Rd) to Gerault Rd	Widening	$ 4,375,554
A-15	P6D	Lakeside Pkwy	Gerault Rd to Garden Ridge Blvd	Widening	$ 2,018,856
A-16	P6D	Lakeside Pkwy	Garden Ridge Blvd to South Town Limit	Widening	$ 2,145,590
A-17	UMAD	Morriss Rd	Mandarin Way to Flower Mound Rd	Widening	$ 1,009,492
A-18	UC	Sagebrush Dr	Old Settlers Rd to FM 2499 (Long Prairie Rd)	Completed	$ 3,209,771
A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	Completed	$ 1,128,789
A-20	UMAD	Spinks Rd	Aberdeen Dr to Gerault Rd	Completed	$ 448,253
A-21	UMAD	Spinks Rd	Gerault Rd to Garden Ridge Blvd	Completed	$ 968,297
A-22	UMAU	Timber Creek Rd	445' S of Glenn Hollow Ln to Kirkpatrick Ln	Completed	$ 690,850
A-23	UC	Waketon/College Connector	Waketon Rd to College Pkwy	New	$ 1,353,000
A-24	UC	Windsor Dr	Amy Ln to FM 2499 (Long Prairie Rd)	Completed	$ 1,058,867
A-25	UC	Yucca Dr	440' E of FM 2499 to 460' S of FM 1171	Completed	$ 214,416

Signal Installation And Intersection Improvements

S-1		Intersection	College Pkwy. at Timber Creek Rd.	Proposed	$ 275,000
S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.	Proposed	$ 275,000
S-3		Intersection	Churchill Dr. at Peters Colony Rd.	Proposed	$ 990,000
S-4		Intersection	Cross Timbers Rd. at Forums Dr.	Completed	$ 179,000
S-5		Intersection	Garden Ridge Blvd. at Kirkpatrick Ln.	Proposed	$ 275,000
S-6		Intersection	FM 2499 (Long Prairie Rd.) at Chaparral Ln.	In Design	$ 375,000
S-7		Intersection	Garden Ridge Blvd. at Forest Vista Rd.	Proposed	$ 275,000
S-8		Intersection	FM 2499 (Long Prairie Rd.) at Northshore Blvd.	Proposed	$ 275,000
S-9		Intersection	FM 2499 (Long Prairie Rd.) at Aberdeen Dr.	Completed	$ 380,000
S-10		Intersection	Lakeside Pkwy. at Silveron Blvd.	Proposed	$ 275,000
S-11		Intersection	FM 2499 (Long Prairie Rd.) at Silveron Blvd.	Completed	$ 390,000
S-12		Intersection	Gerault Rd. at Old Gerault Rd.	Proposed	$ 275,000
S-13		Intersection	Lakeside Pkwy. at Enterprise Dr.	Proposed	$ 275,000
I - 1		Intersection Improvement	Dixon Ln. at Morriss Rd.	Proposed	$ 375,000
I - 2		Right-turn lane - all directions	FM 2499 (Long Prairie Rd.) at Waketon Rd.	In Design	$ 1,473,000
I - 3		Intersection Improvement	FM 2499 (Long Prairie Rd.) at College Pkwy.	Completed	$ 333,000
I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.	In Design	$ 375,000
I - 5		Intersection Improvement	Cross Timbers Rd. at Auburn Dr.	Proposed	$ 375,000
I - 6		Westbound right-turn lane	Cross Timbers Rd. at FM 2499 (Long Prairie Rd.)	In Design	$ 492,000
I - 7		Intersection Improvement	Flower Mound Rd. at McKamy Creek Rd.	Completed	$ 336,000
I - 8		Second left-turn lane, EB and SB	Flower Mound Rd. at FM 2499 (Long Prairie Rd.)	Proposed	$ 460,000
I - 9		Intersection Improvement	Flower Mound Rd. at Garden Ridge Blvd.	Proposed	$ 375,000
I - 10		Intersection Improvement	FM 2499 (Long Prairie Rd.) at Lakeside Pkwy.	Proposed	$ 375,000
I-11		Intersection Improvement	Lakeside Pkwy. At Gerault Rd.	Proposed	$ 375,000

TOTAL $ 57,258,921

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-1**
Name:	Aberdeen Dr	**This project consists of the widening of the existing two-lane concrete facility into a four-lane divided Urban Minor Arterial. The Town's anticipated contribution is $1,455,000.**		
Limits:	FM 2499 (Long Prairie Rd) to 1340' N of Spinks Rd			
Impact Fee Class:	UMAD (1/2)			
Ultimate Class:	UMAD			
Length (lf):	2,545			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,459,821**
Non-Recoverable Funds:	$5,000 Escrow		$ (5,000)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,454,821**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-2**
Name:	Aberdeen Dr	**This project consists of the widening of the existing two-lane concrete facility into a four-lane divided Urban Minor Arterial.**		
Limits:	1340' N of Spinks Rd to 700' N of Spinks Rd			
Impact Fee Class:	UMAD (1/2)			
Ultimate Class:	UMAD			
Length (lf):	655			
Service Area(s):	A			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
112	Unclassified Street Excavation	946	CY	$ 27.00	$ 25,545
212	10" Lime Stabilization	2,038	SY	$ 15.00	$ 30,567
312	8" Reinforced Concrete	1,892	SY	$ 73.00	$ 138,132
412	Block Sod with 4" Topsoil (with sidewalk)	509	SY	$ 10.00	$ 5,094
512	4' Sidewalk	2,620	SF	$ 8.00	$ 20,960
				Paving Construction Cost Subtotal:	**$ 220,298**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 11,015
√	Traffic Control	Construction Phase Traffic Control	15%	$ 33,045
√	Pavement Markings/Markers		5%	$ 11,015
√	Roadway Drainage	Standard Internal System	35%	$ 77,104
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 11,015
√	Sewer	Minor Adjustments	5%	$ 11,015
√	Establish Turf / Erosion Control		2%	$ 4,406
√	Illumination	Standard Ilumination System	6%	$ 13,218
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 171,833**
			Paving and Allowance Subtotal:	**$ 392,131**
			Construction Contingency: 15%	$ 58,820
			Construction Cost TOTAL:	**$ 451,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 451,000**
Engineering/Survey/Testing:		20%	$ 90,200
Mobilization		6%	$ 27,060
ROW/Easement Acquisition:	Existing Alignment	15%	$ 67,650
		Impact Fee Project Cost TOTAL:	**$ 636,000**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-3**
Name:	Chinn Chapel Rd	**This project consisted of the construction a new four-lane undivided Urban Minor Arterial. The Town of Flower Mound contributed $2,729,000 to this project.**		
Limits:	FM 407 (Justin Rd) to Waketon Rd			
Impact Fee Class:	UMAU			
Ultimate Class:	UMAU			
Length (lf):	3,460			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 2,728,803**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 2,728,803**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-4**
Name:	Dixon Ln	**This project consisted of the construction a new four-lane divided Urban Minor Arterial. The Town contributed $5,297,000 to this project.**		
Limits:	Chinn Chapel Rd to Crestside Dr			
Impact Fee Class:	UC			
Ultimate Class:	UMAD			
Length (lf):	6,520			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 5,689,141**
Non-Recoverable Funds:	$391,703 Escrow		$ (391,703)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 5,297,438**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-5**
Name:	Duncan Ln	**This project consists of the widening of the existing two-lane concrete facility into a four-lane undivided Urban Minor Arterial. The Town's contribution was 563,000.**		
Limits:	Honeysuckle Way to Spinks Rd			
Impact Fee Class:	UMAD			
Ultimate Class:	UMAU			
Length (lf):	1,990			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 751,744**
Non-Recoverable Funds:	$189,212 RTR		$ (189,212)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 562,532**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-6**
Name:	Firewheel Dr	**This project consisted of the construction of the easternmost two lanes to complete the ultimate four-lane concrete undivided Urban Minor Arterial. The Town's contribution was $604,000.**		
Limits:	515' S of FM 1171 to 140' S of Hearthstone Dr			
Impact Fee Class:	UMAU (1/2)			
Ultimate Class:	UMAU			
Length (lf):	1,290			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 603,525**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 603,525**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-7**
Name:	FM 2499 (Long Prairie Rd)	**This TxDOT project consisted of the construction of the two additional through lanes within the existing median. The Town's contribution was $1,516,000.**		
Limits:	FM 1171 (Cross Timbers) to Spinks Rd			
Impact Fee Class:	UMAU (1/2)			
Ultimate Class:	P6D			
Length (lf):	14,410			
Service Area(s):	A			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Contribution to Construction Cost:		-	**$ 1,515,721**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,515,721**

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Flower Mound.

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-8**
Name:	Garden Ridge Blvd	**This project consisted of the construction of half of a new Greenway Urban Arterial. The easternmost half is within the City of Lewisville. The Town's contribution was $1,146,000. The remaining funds come from other sources.**		
Limits:	Bellaire Blvd to Forest Vista Dr			
Impact Fee Class:	P6D (1/3)			
Ultimate Class:	GUA			
Length (lf):	4,290			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 6,650,404**
Non-Recoverable Funds:	$5,504,373 Interlocal Funds		$ (5,504,373)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,146,031**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-9**
Name:	Garden Ridge Blvd	**This project consisted of the construction of half of a new Greenway Urban Arterial. Note, two lanes from FM 3040 to Somerset exist and are not included in the CIP cost. The Town's contribution was $1,891,000.**		
Limits:	FM 3040 to Spinks Rd			
Impact Fee Class:	GUA (1/2)			
Ultimate Class:	GUA			
Length (lf):	3,945			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 5,534,149**
Non-Recoverable Funds:	$649,377 Interlocal Funds / $2,993,646 RTR Funds		$ (3,643,023)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,891,126**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-10**
Name:	Garden Ridge Blvd	**This project consisted of the construction of a new Greenway Urban Arterial. The Town's contribution was $2,505,000.**		
Limits:	Spinks Rd to Lakeside Pkwy			
Impact Fee Class:	GUA			
Ultimate Class:	GUA			
Length (lf):	2,240			
Service Area(s):	A			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Contribution to Construction Cost:		-	**$ 2,504,704**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 2,504,704**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-11**
Name:	Kirkpatrick Ln	**This project consisted of the reconstruction of an existing two-lane asphalt facility to a concrete Urban Collector with left-turn lanes at major cross streets. The Town's contribution was $3,795,000.**		
Limits:	Morriss Rd to Kirkpatrick Ln			
Impact Fee Class:	GUA			
Ultimate Class:	UC			
Length (lf):	5,240			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 3,815,000**
Non-Recoverable Funds:	$20,116 Road Escrow		$ (20,116)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 3,794,884**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-12**
Name:	Kirkpatrick Ln	**This project consists of the construction of a four-lane divided arterial. The project was part of the Denton County '08 Bond Program. The Town's anticipated contribution is $5,243,000.**		
Limits:	Spanish Oak Dr to 1310' W of Garden Ridge Blvd			
Impact Fee Class:	UC			
Ultimate Class:	UMAD			
Length (lf):	2,165			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 8,718,000**
Non-Recoverable Funds:	$3,475,000 RTR		$ (3,475,000)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 5,243,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-13**
Name:	Lake Forest Blvd 75' S of Lincoln Ct to Foxborough	**This project consisted of the extension of the Urban Collector. It also includes the drainage structure to accommodate the existing creek. The City's contribution was $1,401,000.**		
Limits:	Trail			
Impact Fee Class:	UMAD			
Ultimate Class:	UC			
Length (lf):	810			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,400,601**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,400,601**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-14**
Name:	Lakeside Pkwy	**This project consists of the widening of the existing four-lane concrete facility into a six-lane divided Major Arterial. The Town's anticipated costs are $4,376,000.**		
Limits:	FM 2499 (Long Prairie Rd) to Gerault Rd			
Impact Fee Class:	UC			
Ultimate Class:	P6D			
Length (lf):	5,700			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 4,375,554**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 4,375,554**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-15**
Name:	Lakeside Pkwy	**This project consists of the widening of the existing four-lane concrete facility into a six-lane divided Major Arterial. The Town's anticipated costs are $2,019,000.**		
Limits:	Gerault Rd to Garden Ridge Blvd			
Impact Fee Class:	P6D (1/3)			
Ultimate Class:	P6D			
Length (lf):	2,630			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 2,018,856**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 2,018,856**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-16**
Name:	Lakeside Pkwy	**This project consists of the widening of the existing four-lane concrete facility into a six-lane divided Major Arterial. The Town's anticipated costs are $2,146,000.**		
Limits:	Garden Ridge Blvd to South Town			
Impact Fee Class:	P6D (1/3)			
Ultimate Class:	P6D			
Length (lf):	2,795			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 2,145,590**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 2,145,590**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-17**
Name:	Morriss Rd	**This project consisted of the widening of the existing five-lane concrete facility into a six-lane divided Major Arterial. The Town's contribution was $1,009,000.**		
Limits:	Mandarin Way to Flower Mound Rd			
Impact Fee Class:	P6D (1/3)			
Ultimate Class:	UMAD			
Length (lf):	835			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,409,336**
Non-Recoverable Funds:	$399,844 RTR		$ (399,844)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,009,492**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-18**
Name:	Sagebrush Dr	**This project consisted of the reconstruction of a two-lane asphalt facility to a concrete Urban Collector. The Town's contribution was $3,210,000.**		
Limits:	Old Settlers Rd to FM 2499 (Long Prairie Rd)			
Impact Fee Class:	P6D (1/6)			
Ultimate Class:	UC			
Length (lf):	2,720			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 3,209,771**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 3,209,771**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-19,B-6**
Name:	Simmons Rd	**This project consisted of the reconstruction of an existing two-lane facility as a four-lane undivided Urban Minor Arterial. The Town contributed $1,129,000 to the construction of this facility.**		
Limits:	Wichita Trail to McKamy Creek Rd			
Impact Fee Class:	UMAU			
Ultimate Class:	UMAU			
Length (lf):	2,715			
Service Area(s):	A/B			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,198,860**
Non-Recoverable Funds:	$70,071 Escrow Funds		$ (70,071)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,128,789**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-20**
Name:	Spinks Rd	**This project consisted of the construction of a new four-lane divided Urban Minor Arterial. The Town contributed $448,000 to the construction of this facility.**		
Limits:	Aberdeen Dr to Gerault Rd			
Impact Fee Class:	UMAU			
Ultimate Class:	UMAD			
Length (lf):	4,910			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 2,023,037**
Non-Recoverable Funds:	$1,574,784 Interlocal Funds		$ (1,574,784)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 448,253**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-21**
Name:	Spinks Rd	**This project consisted of the construction of a new four-lane divided Urban Minor Arterial. The Town contributed $968,000 to the construction of this facility.**		
Limits:	Gerault Rd to Garden Ridge Blvd			
Impact Fee Class:	UMAD			
Ultimate Class:	UMAD			
Length (lf):	2,970			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,857,999**
Non-Recoverable Funds:	$889,702 Interlocal Funds		$ (889,702)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 968,297**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-22**
Name:	Timber Creek Rd	**This project consisted of the widening of the existing two-lane concrete facility to a four-lane undivided Urban Minor Arterial. The Town contributed $691,000 to the construction of this facility.**		
Limits:	445' S of Glenn Hollow Ln to Kirkpatrick Ln			
Impact Fee Class:	UMAD			
Ultimate Class:	UMAU			
Length (lf):	1,075			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 690,850**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 690,850**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-23**
Name:	Waketon/College Connector	**This project consists of the construction of a concrete two-lane Urban Collector.**		
Limits:	Waketon Rd to College Pkwy			
Impact Fee Class:	UMAU (1/2)			
Ultimate Class:	UC			
Length (lf):	1,415			
Service Area(s):	A			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
113	Unclassified Street Excavation	1,965	CY	$ 27.00	$ 53,063
213	10" Lime Stabilization	4,088	SY	$ 15.00	$ 61,317
313	8" Reinforced Concrete	3,931	SY	$ 73.00	$ 286,931
413	Block Sod with 4" Topsoil (with sidewalk)	1,572	SY	$ 10.00	$ 15,722
513	4' Sidewalk	5,660	SF	$ 8.00	$ 45,280
				Paving Construction Cost Subtotal:	**$ 462,312**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 23,116
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 23,116
√	Roadway Drainage	Standard Internal System	35%	$ 161,809
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 23,116
√	Sewer	Minor Adjustments	5%	$ 23,116
√	Establish Turf / Erosion Control		2%	$ 9,246
√	Illumination	Standard Ilumination System	6%	$ 27,739
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 291,257**

Paving and Allowance Subtotal:		**$ 753,568**
Construction Contingency:	15%	$ 113,035
Construction Cost TOTAL:		**$ 867,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 867,000**
Engineering/Survey/Testing:		20%	$ 173,400
Mobilization		6%	$ 52,020
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 260,100
		Impact Fee Project Cost TOTAL:	**$ 1,353,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-24**
Name:	Windsor Dr	**This project consisted of the construction of an Urban Collector. The Town's contribution was $1,059,000 to the construction of this facility.**		
Limits:	Amy Ln to FM 2499 (Long Prairie Rd)			
Impact Fee Class:	UC			
Ultimate Class:	UC			
Length (lf):	3,180			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 4,160,508**
Non-Recoverable Funds:	$520,000 Interlocal / $2,581,641 RTR		$ (3,101,641)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,058,867**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-25**
Name:	Yucca Dr 440' E of FM 2499 to 460' S of FM	**This project consisted of the construction of a new Urban Collector. The Town's contribution was $214,000.**		
Limits:	1171			
Impact Fee Class:	UC			
Ultimate Class:	UC			
Length (lf):	410			
Service Area(s):	A			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 214,416**
Non-Recoverable Funds:			
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
	Impact Fee Project Cost TOTAL:		**$ 214,416**

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Town of Flower Mound - 2020 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees

Appendix A - Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area B

#	Class	Project	Limits	Status	Project Cost
B-1	UMAD	Flower Mound Rd	FM 1171 (Cross Timbers) to Skillern Rd	Completed	$ 680,380
B-2	RC	Red Rock/Shiloh Connector	Red Rock Ln to Shiloh Rd	New	$ 6,845,000
B-3	RC	Scenic /Flower Mound Connector	Scenic Dr to Alcott Ave	New	$ 3,067,000
B-4	RC	Shiloh Rd/Lusk Ln Connector	2820' E of Shiloh Rd to Lusk Ln	New	$ 3,945,000
B-5	RC	Shiloh Rd/Lusk Ln Connector	Shiloh Rd to 2820' E of Shiloh Rd	New	$ 3,611,000
A-19,B-6	UMAU	Simmons Rd	Wichita Trail to McKamy Creek Rd	Completed	$ 1,128,789

Signal Installation And Intersection Improvements

S-2		Intersection	Bruton Orand Blvd. at Quail Run Rd.	Proposed	$ 275,000
I - 4		Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.	In Design	$ 230,000
I-12		Intersection Improvement	Cross Timbers Rd. at Flower Mound Rd.	Proposed	$ 375,000

TOTAL $ 20,157,169

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**B-1**
Name:	Flower Mound Rd FM 1171 (Cross Timbers) to Skillern Rd	**This project consisted of the reconstruction of an existing two-lane facility to a four-lane divided Urban Minor Arterial. The Town's contribution is $680,000 to the construction of this facility.**		
Limits:				
Impact Fee Class:	UMAD			
Ultimate Class:	UMAD			
Length (lf):	6,370			
Service Area(s):	B			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Contribution to Construction Cost:		-	**$ 4,451,353**
Non-Recoverable Funds:	$3,770,973 Interlocal Funds		$ (3,770,973)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 680,380**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**B-2**
Name:	Red Rock/Shiloh Connector	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	Red Rock Ln to Shiloh Rd			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	5,345			
Service Area(s):	B			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	10,096	CY	$ 27.00	$ 272,595
207	8" Lime Stabilization	21,380	SY	$ 15.00	$ 320,700
307	8" Reinforced Concrete	20,192	SY	$ 73.00	$ 1,474,032
407	Block Sod with 4" Topsoil (no sidewalk)	27,319	SY	$ 10.00	$ 273,189
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 2,340,516**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 117,026
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 117,026
√	Roadway Drainage	Standard Internal System	35%	$ 819,181
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 117,026
√	Sewer	Minor Adjustments	5%	$ 117,026
√	Establish Turf / Erosion Control		2%	$ 46,810
√	Illumination	Standard Ilumination System	6%	$ 140,431
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 1,474,525**

Paving and Allowance Subtotal:		**$ 3,815,041**
Construction Contingency:	15%	$ 572,256
Construction Cost TOTAL:		**$ 4,388,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 4,388,000**
Engineering/Survey/Testing:		20%	$ 877,600
Mobilization		6%	$ 263,280
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 1,316,400
		Impact Fee Project Cost TOTAL:	**$ 6,845,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**B-3**
Name:	Scenic /Flower Mound Connector	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	Scenic Dr to Alcott Ave			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	2,395			
Service Area(s):	B			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	4,524	CY	$ 27.00	$ 122,145
207	8" Lime Stabilization	9,580	SY	$ 15.00	$ 143,700
307	8" Reinforced Concrete	9,048	SY	$ 73.00	$ 660,488
407	Block Sod with 4" Topsoil (no sidewalk)	12,241	SY	$ 10.00	$ 122,411
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,048,744**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 52,437
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 52,437
√	Roadway Drainage	Standard Internal System	35%	$ 367,060
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 52,437
√	Sewer	Minor Adjustments	5%	$ 52,437
√	Establish Turf / Erosion Control		2%	$ 20,975
√	Illumination	Standard Ilumination System	6%	$ 62,925
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 660,709**

Paving and Allowance Subtotal:		**$ 1,709,453**
Construction Contingency:	15%	$ 256,418
Construction Cost TOTAL:		**$ 1,966,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 1,966,000**
Engineering/Survey/Testing:		20%	$ 393,200
Mobilization		6%	$ 117,960
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 589,800
		Impact Fee Project Cost TOTAL:	**$ 3,067,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**B-4**
Name:	Shiloh Rd/Lusk Ln Connector	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	2820' E of Shiloh Rd to Lusk Ln			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	3,080			
Service Area(s):	B			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,818	CY	$ 27.00	$ 157,080
207	8" Lime Stabilization	12,320	SY	$ 15.00	$ 184,800
307	8" Reinforced Concrete	11,636	SY	$ 73.00	$ 849,396
407	Block Sod with 4" Topsoil (no sidewalk)	15,742	SY	$ 10.00	$ 157,422
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,348,698**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 67,435
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 67,435
√	Roadway Drainage	Standard Internal System	35%	$ 472,044
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 67,435
√	Sewer	Minor Adjustments	5%	$ 67,435
√	Establish Turf / Erosion Control		2%	$ 26,974
√	Illumination	Standard Ilumination System	6%	$ 80,922
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 849,680**

Paving and Allowance Subtotal:		**$ 2,198,377**
Construction Contingency:	15%	$ 329,757
Construction Cost TOTAL:		**$ 2,529,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,529,000**
Engineering/Survey/Testing:		20%	$ 505,800
Mobilization		6%	$ 151,740
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 758,700
		Impact Fee Project Cost TOTAL:	**$ 3,945,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**B-5**
Name:	Shiloh Rd/Lusk Ln Connector	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	Shiloh Rd to 2820' E of Shiloh Rd			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	2,820			
Service Area(s):	B			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,327	CY	$ 27.00	$ 143,820
207	8" Lime Stabilization	11,280	SY	$ 15.00	$ 169,200
307	8" Reinforced Concrete	10,653	SY	$ 73.00	$ 777,693
407	Block Sod with 4" Topsoil (no sidewalk)	14,413	SY	$ 10.00	$ 144,133
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,234,847**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 61,742
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 61,742
√	Roadway Drainage	Standard Internal System	35%	$ 432,196
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 61,742
√	Sewer	Minor Adjustments	5%	$ 61,742
√	Establish Turf / Erosion Control		2%	$ 24,697
√	Illumination	Standard Ilumination System	6%	$ 74,091
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 777,953**

Paving and Allowance Subtotal:		**$ 2,012,800**
Construction Contingency:	15%	$ 301,920
Construction Cost TOTAL:		**$ 2,315,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,315,000**
Engineering/Survey/Testing:		20%	$ 463,000
Mobilization		6%	$ 138,900
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 694,500
		Impact Fee Project Cost TOTAL:	**$ 3,611,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**A-19,B-6**
Name:	Simmons Rd	**This project consisted of the reconstruction of an existing two-lane facility to construct a four-lane undivided Urban Minor Arterial. The Town contributed $1,129,000 to the construction of this facility.**		
Limits:	Wichita Trail to McKamy Creek Rd			
Impact Fee Class:	UMAU			
Ultimate Class:	UMAU			
Length (lf):	2,715			
Service Area(s):	A/B			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Contribution to Construction Cost:		-	**$ 1,198,860**
Non-Recoverable Funds:	$70,071 Escrow Funds		$ (70,071)
Engineering/Survey/Testing:			
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 1,128,789**

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Town of Flower Mound - 2020 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees

Appendix A - Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area C

#	Class	Project	Limits	Status	Project Cost
C-1	RC	CrossTimbers/Dunham Connector	Cross Timbers Rd to Dunham Rd	New	$ 3,483,000
C-2	GRA	CrossTimbers/US 377 Connector1	US 377 to Cross Timbers Rd	New	$ 22,005,000
C-3	RC	CrossTimbers/US 377 Connector2	CrossTimbers/US 377 Connector1 to Cross Timbers R	New	$ 6,090,000
C-4	UMABL	Denton Creek Blvd	IH-35 Diamond Interchange to 120' NW of Prairie Ridge	New	$ 28,014,000
C-5	UMABL	Denton Creek Blvd	Canyon Falls Dr to 1155' S of Canyon Falls Dr	Widening	$ 1,435,000
C-6	UMABL	Denton Creek Blvd	1155' S of Canyon Falls Dr to Cross Timbers Rd	New	$ 4,323,000
C-7	UC	Stonecrest Rd	850' S of Canyon Falls Dr to UMAB 1	New	$ 3,137,000
C-8	UC	Stonecrest Rd	UMAB 1 to Cross Timbers Rd	New	$ 5,437,000
C-9	UMABL	UMAB 1	Denton Creek Blvd to US 377	New	$ 4,444,000
C-10	UMABL	UMAB2	Denton Creek Blvd to West Town Limit	New	$ 3,512,000
C-11	UC	Urban Collector 1	Cross Timbers Road to Cross Timbers Rd	New	$ 10,995,000
C-12	UC	Urban Collector 1	Stonecrest Rd to Cross Timbers Rd	New	$ 4,577,000

Signal Installation And Intersection Improvements

S-14		Intersection	US 377 at Canyon Falls Dr.	Proposed	$ 205,000
S-15		Intersection	Cross Timbers Rd. at Canyon Falls Dr.	Proposed	$ 275,000
S-16		Intersection	Cross Timbers Rd. at Denton Creek Blvd.	Proposed	$ 275,000
S-17		Intersection	Cross Timbers Rd. at Cross Timbers/US 377 Connecto	Proposed	$ 275,000

TOTAL $ 98,482,000

Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-1**
Name:	CrossTimbers/Dunham Connector	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	Cross Timbers Rd to Dunham Rd			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	2,720			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,138	CY	$ 27.00	$ 138,720
207	8" Lime Stabilization	10,880	SY	$ 15.00	$ 163,200
307	8" Reinforced Concrete	10,276	SY	$ 73.00	$ 750,116
407	Block Sod with 4" Topsoil (no sidewalk)	13,902	SY	$ 10.00	$ 139,022
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,191,058**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 59,553
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 59,553
√	Roadway Drainage	Standard Internal System	35%	$ 416,870
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 59,553
√	Sewer	Minor Adjustments	5%	$ 59,553
√	Establish Turf / Erosion Control		2%	$ 23,821
√	Illumination	Standard Ilumination System	6%	$ 71,463
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 750,366**

Paving and Allowance Subtotal:		**$ 1,941,424**
Construction Contingency:	15%	$ 291,214
Construction Cost TOTAL:		**$ 2,233,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,233,000**
Engineering/Survey/Testing:		20%	$ 446,600
Mobilization		6%	$ 133,980
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 669,900
		Impact Fee Project Cost TOTAL:	**$ 3,483,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-2**
Name:	CrossTimbers/US 377 Connector1	**This project consists of the construction of a concrete four-lane Greenway Rural Arterial.**		
Limits:	US 377 to Cross Timbers Rd			
Impact Fee Class:	GRA			
Ultimate Class:	GRA			
Length (lf):	11,275			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	36,331	CY	$ 27.00	$ 980,925
203	10" Lime Stabilization	77,672	SY	$ 15.00	$ 1,165,083
303	8" Reinforced Concrete	55,122	SY	$ 73.00	$ 4,023,922
403	Block Sod with 4" Topsoil (no sidewalk)	77,672	SY	$ 10.00	$ 776,722
503	No Sidewalk	0	SF	$ 8.00	$ -
601	Turn Lanes and Median Openings	8,264	SY	$ 70.00	$ 578,484
				Paving Construction Cost Subtotal:	**$ 7,525,137**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 376,257
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 376,257
√	Roadway Drainage	Standard Internal System	35%	$ 2,633,798
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 376,257
√	Sewer	Minor Adjustments	5%	$ 376,257
√	Establish Turf / Erosion Control		2%	$ 150,503
√	Illumination	Standard Ilumination System	6%	$ 451,508
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 4,740,836**
			Paving and Allowance Subtotal:	**$ 12,265,974**
			Construction Contingency: 15%	$ 1,839,896
			Construction Cost TOTAL:	**$ 14,106,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 14,106,000**
Engineering/Survey/Testing:		20%	$ 2,821,200
Mobilization		6%	$ 846,360
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 4,231,800
		Impact Fee Project Cost TOTAL:	**$ 22,005,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-3**
Name:	CrossTimbers/US 377 Connector2 CrossTimbers/US 377 Connector1 to	**This project consists of the construction of a concrete two-lane Rural Collector.**		
Limits:	Cross Timbers Rd			
Impact Fee Class:	RC			
Ultimate Class:	RC			
Length (lf):	4,755			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	8,982	CY	$ 27.00	$ 242,505
207	8" Lime Stabilization	19,020	SY	$ 15.00	$ 285,300
307	8" Reinforced Concrete	17,963	SY	$ 73.00	$ 1,311,323
407	Block Sod with 4" Topsoil (no sidewalk)	24,303	SY	$ 10.00	$ 243,033
507	No Sidewalk	0	SF	$ 8.00	$ -
				Paving Construction Cost Subtotal:	**$ 2,082,162**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 104,108
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 104,108
√	Roadway Drainage	Standard Internal System	35%	$ 728,757
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 104,108
√	Sewer	Minor Adjustments	5%	$ 104,108
√	Establish Turf / Erosion Control		2%	$ 41,643
√	Illumination	Standard Ilumination System	6%	$ 124,930
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 1,311,762**
			Paving and Allowance Subtotal:	**$ 3,393,924**
			Construction Contingency: 15%	$ 509,089
			Construction Cost TOTAL:	**$ 3,904,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 3,904,000**
Engineering/Survey/Testing:		20%	$ 780,800
Mobilization		6%	$ 234,240
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 1,171,200
		Impact Fee Project Cost TOTAL:	**$ 6,090,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-4**
Name:	Denton Creek Blvd IH-35 Diamond Interchange to 120'	**This project consists of the construction of a new four-lane Urban Minor Arterial with bike lanes and a bridge costing $7,000,000.**		
Limits:	NW of Prairie Ridge Rd			
Impact Fee Class:	UMABL			
Ultimate Class:	UMABL			
Length (lf):	6,185			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
114	Unclassified Street Excavation	21,304	CY	$ 27.00	$ 575,205
214	10" Lime Stabilization	45,357	SY	$ 15.00	$ 680,350
314	8" Reinforced Concrete	42,608	SY	$ 73.00	$ 3,110,368
414	Block Sod with 4" Topsoil (with sidewalk)	20,617	SY	$ 10.00	$ 206,167
514	4' Sidewalk	49,480	SF	$ 8.00	$ 395,840
601	Turn Lanes and Median Openings	4,533	SY	$ 70.00	$ 317,333
				Paving Construction Cost Subtotal:	**$ 5,285,262**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 264,263
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 264,263
√	Roadway Drainage	Standard Internal System	35%	$ 1,849,842
√	Special Drainage Structures	Bridge	$7,000,000	$ 7,000,000
√	Water	Minor Adjustments	5%	$ 264,263
√	Sewer	Minor Adjustments	5%	$ 264,263
√	Establish Turf / Erosion Control		2%	$ 105,705
√	Illumination	Standard Ilumination System	6%	$ 317,116
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 10,329,715**

Paving and Allowance Subtotal:		**$ 15,614,977**
Construction Contingency:	15%	$ 2,342,247
Construction Cost TOTAL:		**$ 17,958,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 17,958,000**
Engineering/Survey/Testing:		20%	$ 3,591,600
Mobilization		6%	$ 1,077,480
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 5,387,400
		Impact Fee Project Cost TOTAL:	**$ 28,014,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 11/4/2020

Project Information:		**Description:**	**Project No.**	**C-5**
Name:	Denton Creek Blvd	**This project consists of the construction of half of an Urban Minor Arterial with bike lanes.**		
Limits:	Canyon Falls Dr to 1155' S of Canyon Falls Dr			
Impact Fee Class:	UMABL (1/2)			
Ultimate Class:	UMABL			
Length (lf):	1,195			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
115	Unclassified Street Excavation	2,058	CY	$ 27.00	$ 55,568
215	10" Lime Stabilization	4,382	SY	$ 15.00	$ 65,725
315	8" Reinforced Concrete	4,116	SY	$ 73.00	$ 300,476
415	Block Sod with 4" Topsoil (with sidewalk)	3,054	SY	$ 10.00	$ 30,539
515	4' Sidewalk	4,780	SF	$ 8.00	$ 38,240
				Paving Construction Cost Subtotal:	**$ 490,548**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 24,527
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 24,527
√	Roadway Drainage	Standard Internal System	35%	$ 171,692
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 24,527
√	Sewer	Minor Adjustments	5%	$ 24,527
√	Establish Turf / Erosion Control		2%	$ 9,811
√	Illumination	Standard Ilumination System	6%	$ 29,433
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 309,045**
			Paving and Allowance Subtotal:	**$ 799,592**
			Construction Contingency: 15%	$ 119,939
			Construction Cost TOTAL:	**$ 920,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 920,000**
Engineering/Survey/Testing:		20%	$ 184,000
Previous Contribution			
Mobilization		6%	$ 55,200
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 276,000
		Impact Fee Project Cost TOTAL:	**$ 1,435,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-6**
Name:	Denton Creek Blvd	**This project consists of the construction of an Urban Minor Arterial with bike lanes.**		
Limits:	1155' S of Canyon Falls Dr to Cross Timbers Rd			
Impact Fee Class:	UMABL (1/2)			
Ultimate Class:	UMABL			
Length (lf):	3,600			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
115	Unclassified Street Excavation	6,200	CY	$ 27.00	$ 167,400
215	10" Lime Stabilization	13,200	SY	$ 15.00	$ 198,000
315	8" Reinforced Concrete	12,400	SY	$ 73.00	$ 905,200
415	Block Sod with 4" Topsoil (with sidewalk)	9,200	SY	$ 10.00	$ 92,000
515	4' Sidewalk	14,400	SF	$ 8.00	$ 115,200
601	Turn Lanes and Median Openings	0	SY	$ 70.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,477,800**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 73,890
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 73,890
√	Roadway Drainage	Standard Internal System	35%	$ 517,230
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 73,890
√	Sewer	Minor Adjustments	5%	$ 73,890
√	Establish Turf / Erosion Control		2%	$ 29,556
√	Illumination	Standard Ilumination System	6%	$ 88,668
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 931,014**

Paving and Allowance Subtotal:		**$ 2,408,814**
Construction Contingency:	15%	$ 361,322
Construction Cost TOTAL:		**$ 2,771,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,771,000**
Engineering/Survey/Testing:		20%	$ 554,200
Mobilization		6%	$ 166,260
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 831,300
		Impact Fee Project Cost TOTAL:	**$ 4,323,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-7**
Name:	Stonecrest Rd	**This project consists of the construction of an**		
Limits:	850' S of Canyon Falls Dr to UMAB 1	**Urban Collector.**		
Impact Fee Class:	UMABL			
Ultimate Class:	UC			
Length (lf):	1,255			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
114	Unclassified Street Excavation	4,323	CY	$ 27.00	$ 116,715
214	10" Lime Stabilization	9,203	SY	$ 15.00	$ 138,050
314	8" Reinforced Concrete	8,646	SY	$ 73.00	$ 631,126
414	Block Sod with 4" Topsoil (with sidewalk)	4,183	SY	$ 10.00	$ 41,833
514	4' Sidewalk	10,040	SF	$ 8.00	$ 80,320
				Paving Construction Cost Subtotal:	**$ 1,072,434**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 53,622
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 53,622
√	Roadway Drainage	Standard Internal System	35%	$ 375,352
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 53,622
√	Sewer	Minor Adjustments	5%	$ 53,622
√	Establish Turf / Erosion Control		2%	$ 21,449
√	Illumination	Standard Ilumination System	6%	$ 64,346
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 675,633**

Paving and Allowance Subtotal:		**$ 1,748,067**
Construction Contingency:	15%	$ 262,210
Construction Cost TOTAL:		**$ 2,011,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,011,000**
Engineering/Survey/Testing:		20%	$ 402,200
Mobilization		6%	$ 120,660
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 603,300
		Impact Fee Project Cost TOTAL:	**$ 3,137,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-8**
Name:	Stonecrest Rd	**This project consists of the construction of an Urban Collector.**		
Limits:	UMAB 1 to Cross Timbers Rd			
Impact Fee Class:	UC			
Ultimate Class:	UC			
Length (lf):	3,700			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	7,606	CY	$ 27.00	$ 205,350
206	8" Lime Stabilization	16,033	SY	$ 15.00	$ 240,500
306	8" Reinforced Concrete	15,211	SY	$ 73.00	$ 1,110,411
406	Block Sod with 4" Topsoil (with sidewalk)	6,578	SY	$ 10.00	$ 65,778
506	4' Sidewalk	29,600	SF	$ 8.00	$ 236,800
				Paving Construction Cost Subtotal:	**$ 1,858,839**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 92,942
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 92,942
√	Roadway Drainage	Standard Internal System	35%	$ 650,594
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 92,942
√	Sewer	Minor Adjustments	5%	$ 92,942
√	Establish Turf / Erosion Control		2%	$ 37,177
√	Illumination	Standard Ilumination System	6%	$ 111,530
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 1,171,069**

Paving and Allowance Subtotal:		**$ 3,029,907**
Construction Contingency:	15%	$ 454,486
Construction Cost TOTAL:		**$ 3,485,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 3,485,000**
Engineering/Survey/Testing:		20%	$ 697,000
Mobilization		6%	$ 209,100
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 1,045,500
		Impact Fee Project Cost TOTAL:	**$ 5,437,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-9**
Name:	UMAB 1	**This project consists of the construction of an Urban Minor Arterial with bike lanes.**		
Limits:	Denton Creek Blvd to US 377			
Impact Fee Class:	UC			
Ultimate Class:	UMABL			
Length (lf):	3,025			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	6,218	CY	$ 27.00	$ 167,888
206	8" Lime Stabilization	13,108	SY	$ 15.00	$ 196,625
306	8" Reinforced Concrete	12,436	SY	$ 73.00	$ 907,836
406	Block Sod with 4" Topsoil (with sidewalk)	5,378	SY	$ 10.00	$ 53,778
506	4' Sidewalk	24,200	SF	$ 8.00	$ 193,600
601	Turn Lanes and Median Openings	0	SY	$ 70.00	$ -
				Paving Construction Cost Subtotal:	**$ 1,519,726**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 75,986
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 75,986
√	Roadway Drainage	Standard Internal System	35%	$ 531,904
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 75,986
√	Sewer	Minor Adjustments	5%	$ 75,986
√	Establish Turf / Erosion Control		2%	$ 30,395
√	Illumination	Standard Ilumination System	6%	$ 91,184
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 957,428**
			Paving and Allowance Subtotal:	**$ 2,477,154**
			Construction Contingency: 15%	$ 371,573
			Construction Cost TOTAL:	**$ 2,849,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,849,000**
Engineering/Survey/Testing:		20%	$ 569,800
Mobilization		6%	$ 170,940
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 854,700
		Impact Fee Project Cost TOTAL:	**$ 4,444,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-10**
Name:	UMAB2 Denton Creek Blvd to West Town	**This project consists of the construction of an Urban Minor Arterial with bike lanes.**		
Limits:	Limit			
Impact Fee Class:	UMABL			
Ultimate Class:	UMABL			
Length (lf):	1,405			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
114	Unclassified Street Excavation	4,839	CY	$ 27.00	$ 130,665
214	10" Lime Stabilization	10,303	SY	$ 15.00	$ 154,550
314	8" Reinforced Concrete	9,679	SY	$ 73.00	$ 706,559
414	Block Sod with 4" Topsoil (with sidewalk)	4,683	SY	$ 10.00	$ 46,833
514	4' Sidewalk	11,240	SF	$ 8.00	$ 89,920
601	Turn Lanes and Median Openings	1,030	SY	$ 70.00	$ 72,086
				Paving Construction Cost Subtotal:	**$ 1,200,613**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 60,031
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 60,031
√	Roadway Drainage	Standard Internal System	35%	$ 420,215
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 60,031
√	Sewer	Minor Adjustments	5%	$ 60,031
√	Establish Turf / Erosion Control		2%	$ 24,012
√	Illumination	Standard Ilumination System	6%	$ 72,037
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 756,386**

Paving and Allowance Subtotal:		**$ 1,957,000**
Construction Contingency:	15%	$ 293,550
Construction Cost TOTAL:		**$ 2,251,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,251,000**
Engineering/Survey/Testing:		20%	$ 450,200
Mobilization		6%	$ 135,060
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 675,300
		Impact Fee Project Cost TOTAL:	**$ 3,512,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-11**
Name:	Urban Collector 1 Cross Timbers Road to Cross Timbers Rd	**This project consists of the construction of an Urban Collector.**		
Limits:				
Impact Fee Class:	UMABL			
Ultimate Class:	UC			
Length (lf):	4,400			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
114	Unclassified Street Excavation	15,156	CY	$ 27.00	$ 409,200
214	10" Lime Stabilization	32,267	SY	$ 15.00	$ 484,000
314	8" Reinforced Concrete	30,311	SY	$ 73.00	$ 2,212,711
414	Block Sod with 4" Topsoil (with sidewalk)	14,667	SY	$ 10.00	$ 146,667
514	4' Sidewalk	35,200	SF	$ 8.00	$ 281,600
				Paving Construction Cost Subtotal:	**$ 3,759,928**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 187,996
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 187,996
√	Roadway Drainage	Standard Internal System	35%	$ 1,315,975
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 187,996
√	Sewer	Minor Adjustments	5%	$ 187,996
√	Establish Turf / Erosion Control		2%	$ 75,199
√	Illumination	Standard Ilumination System	6%	$ 225,596
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 2,368,755**
			Paving and Allowance Subtotal:	**$ 6,128,682**
			Construction Contingency: 15%	$ 919,302
			Construction Cost TOTAL:	**$ 7,048,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 7,048,000**
Engineering/Survey/Testing:		20%	$ 1,409,600
Mobilization		6%	$ 422,880
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 2,114,400
		Impact Fee Project Cost TOTAL:	**$ 10,995,000**

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Town of Flower Mound

2020 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 10/30/2020

Project Information:		**Description:**	**Project No.**	**C-12**
Name:	Urban Collector 1	**This project consists of the construction of an Urban Collector.**		
Limits:	Stonecrest Rd to Cross Timbers Rd			
Impact Fee Class:	UC			
Ultimate Class:	UC			
Length (lf):	3,115			
Service Area(s):	C			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	6,403	CY	$ 27.00	$ 172,883
206	8" Lime Stabilization	13,498	SY	$ 15.00	$ 202,475
306	8" Reinforced Concrete	12,806	SY	$ 73.00	$ 934,846
406	Block Sod with 4" Topsoil (with sidewalk)	5,538	SY	$ 10.00	$ 55,378
506	4' Sidewalk	24,920	SF	$ 8.00	$ 199,360
				Paving Construction Cost Subtotal:	**$ 1,564,941**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 78,247
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		5%	$ 78,247
√	Roadway Drainage	Standard Internal System	35%	$ 547,729
	Special Drainage Structures	None Anticipated	$0	$ -
√	Water	Minor Adjustments	5%	$ 78,247
√	Sewer	Minor Adjustments	5%	$ 78,247
√	Establish Turf / Erosion Control		2%	$ 31,299
√	Illumination	Standard Ilumination System	6%	$ 93,896
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 985,913**

Paving and Allowance Subtotal:		**$ 2,550,854**
Construction Contingency:	15%	$ 382,628
Construction Cost TOTAL:		**$ 2,934,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,934,000**
Engineering/Survey/Testing:		20%	$ 586,800
Mobilization		6%	$ 176,040
ROW/Easement Acquisition:	New Roadway Alignment	30%	$ 880,200
		Impact Fee Project Cost TOTAL:	**$ 4,577,000**

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B. CIP Service Units of Supply

Town of Flower Mound - 2020 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area A

10/30/2020

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
A-1	Aberdeen Dr	FM 2499 (Long Prairie Rd) to 1340' N of Spinks Rd	0.48	4	UMAD	0	100%	650	1,252	0	1,252	$ 1,454,821	$ 1,454,821
A-2	Aberdeen Dr	1340' N of Spinks Rd to 700' N of Spinks Rd	0.12	4	UMAD	8	100%	650	323	1	322	$ 636,000	$ 636,000
A-3	Chinn Chapel Rd	FM 407 (Justin Rd) to Waketon Rd	0.66	4	UMAU	1,163	50%	525	688	381	307	$ 2,728,803	$ 1,364,402
A-4	Dixon Ln	Chinn Chapel Rd to Crestside Dr	1.24	4	UMAD	1,192	100%	650	3,211	1,472	1,739	$ 5,297,438	$ 5,297,438
A-5	Duncan Ln	Honeysuckle Way to Spinks Rd	0.38	4	UMAU	408	50%	525	396	77	319	$ 562,532	$ 281,266
A-6	Firewheel Dr	515' S of FM 1171 to 140' S of Hearthstone Dr	0.24	4	UMAU	36	100%	525	513	9	504	$ 603,525	$ 603,525
A-7	FM 2499 (Long Prairie Rd)	FM 1171 (Cross Timbers) to Spinks Rd	2.73	6	P6D	4,530	100%	750	12,282	12,364	-82	$ 1,515,721	$ 1,515,721
A-8	Garden Ridge Blvd	Bellaire Blvd to Forest Vista Dr	0.81	4	GUA	1,247	50%	650	1,057	507	550	$ 1,146,031	$ 573,016
A-9	Garden Ridge Blvd	FM 3040 to Spinks Rd	0.75	4	GUA	912	100%	650	1,942	681	1,261	$ 1,891,126	$ 1,891,126
A-10	Garden Ridge Blvd	Spinks Rd to Lakeside Pkwy	0.42	4	GUA	911	100%	650	1,103	386	716	$ 2,504,704	$ 2,504,704
A-11	Kirkpatrick Ln	Morriss Rd to Kirkpatrick Ln	0.99	2	UC	473	100%	425	844	469	374	$ 3,794,884	$ 3,794,884
A-12	Kirkpatrick Ln	Spanish Oak Dr to 1310' W of Garden Ridge Blvd	0.41	4	UMAD	0	100%	650	1,067	0	1,067	$ 5,243,000	$ 5,243,000
A-13	Lake Forest Blvd	75' S of Lincoln Ct to Foxborough Trail	0.15	2	UC	200	100%	425	131	31	100	$ 1,400,601	$ 1,400,601
A-14	Lakeside Pkwy	FM 2499 (Long Prairie Rd) to Gerault Rd	1.08	6	P6D	937	100%	750	4,859	1,012	3,847	$ 4,375,554	$ 4,375,554
A-15	Lakeside Pkwy	Gerault Rd to Garden Ridge Blvd	0.50	6	P6D	1,270	100%	750	2,242	633	1,609	$ 2,018,856	$ 2,018,856
A-16	Lakeside Pkwy	Garden Ridge Blvd to South Town Limit	0.53	6	P6D	999	100%	750	2,381	529	1,852	$ 2,145,590	$ 2,145,590
A-17	Morriss Rd	Mandarin Way to Flower Mound Rd	0.16	4	UMAD	1,981	100%	650	412	314	98	$ 1,009,492	$ 1,009,492
A-18	Sagebrush Dr	Old Settlers Rd to FM 2499 (Long Prairie Rd)	0.51	2	UC	476	100%	425	438	245	193	$ 3,209,771	$ 3,209,771
A-19,B-6	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	4	UMAU	428	50%	525	540	110	430	$ 1,128,789	$ 564,395
A-20	Spinks Rd	Aberdeen Dr to Gerault Rd	0.93	4	UMAD	1,259	100%	650	2,417	1,170	1,247	$ 448,253	$ 448,253
A-21	Spinks Rd	Gerault Rd to Garden Ridge Blvd	0.56	4	UMAD	324	100%	650	1,464	182	1,281	$ 968,297	$ 968,297
A-22	Timber Creek Rd	445' S of Glenn Hollow Ln to Kirkpatrick Ln	0.20	4	UMAU	116	100%	525	428	24	404	$ 690,850	$ 690,850
A-23	Waketon/College Connector	Waketon Rd to College Pkwy	0.27	2	UC	0	100%	425	228	0	228	$ 1,353,000	$ 1,353,000
A-24	Windsor Dr	Amy Ln to FM 2499 (Long Prairie Rd)	0.60	2	UC	246	100%	425	512	148	364	$ 1,058,867	$ 1,058,867
A-25	Yucca Dr	440' E of FM 2499 to 460' S of FM 1171	0.08	2	UC	0	100%	425	66	0	66	$ 214,416	$ 214,416
S-1	Intersection	College Pkwy. at Timber Creek Rd.	0.00				100%					$ 275,000	$ 275,000
S-2	Intersection	Bruton Orand Blvd. at Quail Run Rd.	0.00				50%					$ 275,000	$ 137,500
S-3	Intersection	Churchill Dr. at Peters Colony Rd.	0.00				100%					$ 990,000	$ 990,000
S-4	Intersection	Cross Timbers Rd. at Forums Dr.	0.00				100%					$ 179,000	$ 179,000
S-5	Intersection	Garden Ridge Blvd. at Kirkpatrick Ln.	0.00				100%					$ 275,000	$ 275,000
S-6	Intersection	FM 2499 (Long Prairie Rd.) at Chaparral Ln.	0.00				100%					$ 375,000	$ 375,000
S-7	Intersection	Garden Ridge Blvd. at Forest Vista Rd.	0.00				100%					$ 275,000	$ 275,000
S-8	Intersection	FM 2499 (Long Prairie Rd.) at Northshore Blvd.	0.00				100%					$ 275,000	$ 275,000
S-9	Intersection	FM 2499 (Long Prairie Rd.) at Aberdeen Dr.	0.00				100%					$ 380,000	$ 380,000
S-10	Intersection	Lakeside Pkwy. at Silveron Blvd.	0.00				100%					$ 275,000	$ 275,000
S-11	Intersection	FM 2499 (Long Prairie Rd.) at Silveron Blvd.	0.00				100%					$ 390,000	$ 390,000
S-12	Intersection	Gerault Rd. at Old Gerault Rd.	0.00				100%					$ 275,000	$ 275,000
S-13	Intersection	Lakeside Pkwy. at Enterprise Dr.	0.00				100%					$ 275,000	$ 275,000
I - 1	Intersection Improvement	Dixon Ln. at Morriss Rd.	0.00				100%					$ 375,000	$ 375,000
I - 2	Right-turn lane - all directions	FM 2499 (Long Prairie Rd.) at Waketon Rd.	0.00				100%					$ 1,473,000	$ 1,473,000
I - 3	Intersection Improvement	FM 2499 (Long Prairie Rd.) at College Pkwy.	0.00				100%					$ 333,000	$ 333,000
I - 4	Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.	0.00				50%					$ 375,000	$ 187,500
I - 5	Intersection Improvement	Cross Timbers Rd. at Auburn Dr.	0.00				100%					$ 375,000	$ 375,000
I - 6	Westbound right-turn lane	Cross Timbers Rd. at FM 2499 (Long Prairie Rd.)	0.00				100%					$ 492,000	$ 492,000
I - 7	Intersection Improvement	Flower Mound Rd. at McKamy Creek Rd.	0.00				100%					$ 336,000	$ 336,000
I - 8	Second left-turn lane, EB and SB	Flower Mound Rd. at FM 2499 (Long Prairie Rd.)	0.00				100%					$ 460,000	$ 460,000
I - 9	Intersection Improvement	Flower Mound Rd. at Garden Ridge Blvd.	0.00				100%					$ 375,000	$ 375,000
I - 10	Intersection Improvement	FM 2499 (Long Prairie Rd.) at Lakeside Pkwy.	0.00				100%					$ 375,000	$ 375,000
I-11	Intersection Improvement	Lakeside Pkwy. At Gerault Rd.	0.00				100%					$ 375,000	$ 375,000
SUBTOTAL									**40,792**	**20,744**	**20,048**	**$ 57,258,921**	**$ 54,150,844**

2020 Roadway Impact Fee Update Cost Per Service Area $ 30,000

TOTAL COST IN SERVICE AREA A $ 54,180,844

Town of Flower Mound - 2020 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area B

10/30/2020

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
B-1	Flower Mound Rd	FM 1171 (Cross Timbers) to Skillern Rd	1.21	4	UMAD	848	100%	650	3,136	1,023	2,113	$ 680,380	$ 680,380
B-2	Red Rock/Shiloh Connector	Red Rock Ln to Shiloh Rd	1.01	2	RC	0	100%	425	861	0	861	$ 6,845,000	$ 6,845,000
B-3	Scenic /Flower Mound Connector	Scenic Dr to Alcott Ave	0.45	2	RC	0	100%	425	385	0	385	$ 3,067,000	$ 3,067,000
B-4	Shiloh Rd/Lusk Ln Connector	2820' E of Shiloh Rd to Lusk Ln	0.58	2	RC	0	100%	425	496	0	496	$ 3,945,000	$ 3,945,000
B-5	Shiloh Rd/Lusk Ln Connector	Shiloh Rd to 2820' E of Shiloh Rd	0.53	2	RC	0	50%	425	227	0	227	$ 3,611,000	$ 1,805,500
A-19,B-6	Simmons Rd	Wichita Trail to McKamy Creek Rd	0.51	4	UMAU	428	50%	525	540	110	430	$ 1,128,789	$ 564,395
S-2	Intersection	Bruton Orand Blvd. at Quail Run Rd.	0.00				50%					$ 275,000	$ 137,500
I - 4	Northbound right-turn lane	Bruton Orand Blvd. at Cross Timbers Rd.	0.00				50%					$ 230,000	$ 115,000
I-12	Intersection Improvement	Cross Timbers Rd. at Flower Mound Rd.	0.00				100%					$ 375,000	$ 375,000
SUBTOTAL									**5,645**	**1,133**	**4,512**	**$ 20,157,169**	**$ 17,534,775**

2020 Roadway Impact Fee Update Cost Per Service Area $ 30,000

TOTAL COST IN SERVICE AREA B $ 17,564,775

Town of Flower Mound - 2020 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area C

10/30/2020

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
C-1	CrossTimbers/Dunham Connector	Cross Timbers Rd to Dunham Rd	0.51	2	RC	0	100%	425	437	0	437	$ 3,483,000	$ 3,483,000
C-2	CrossTimbers/US 377 Connector1	US 377 to Cross Timbers Rd	2.14	4	GRA	0	100%	650	5,551	0	5,551	$ 22,005,000	$ 22,005,000
C-3	CrossTimbers/US 377 Connector2	CrossTimbers/US 377 Connector1 to Cross Timbers Rd	0.90	2	RC	0	100%	425	766	0	766	$ 6,090,000	$ 6,090,000
C-4	Denton Creek Blvd	IH-35 Diamond Interchange to 120' NW of Prairie Ridge Rd	1.17	4	UMABL	0	100%	650	3,047	0	3,047	$ 28,014,000	$ 28,014,000
C-5	Denton Creek Blvd	Canyon Falls Dr to 1155' S of Canyon Falls Dr	0.23	4	UMABL	2	100%	650	589	0	589	$ 1,435,000	$ 1,435,000
C-6	Denton Creek Blvd	1155' S of Canyon Falls Dr to Cross Timbers Rd	0.68	4	UMABL	0	100%	650	1,772	0	1,772	$ 4,323,000	$ 4,323,000
C-7	Stonecrest Rd	850' S of Canyon Falls Dr to UMAB 1	0.24	2	UC	0	100%	425	202	0	202	$ 3,137,000	$ 3,137,000
C-8	Stonecrest Rd	UMAB 1 to Cross Timbers Rd	0.70	2	UC	0	100%	425	596	0	596	$ 5,437,000	$ 5,437,000
C-9	UMAB 1	Denton Creek Blvd to US 377	0.57	4	UMABL	0	100%	650	1,491	0	1,491	$ 4,444,000	$ 4,444,000
C-10	UMAB2	Denton Creek Blvd to West Town Limit	0.27	4	UMABL	0	100%	650	692	0	692	$ 3,512,000	$ 3,512,000
C-11	Urban Collector 1	Cross Timbers Road to Cross Timbers Rd	0.83	2	UC	0	100%	425	708	0	708	$ 10,995,000	$ 10,995,000
C-12	Urban Collector 1	Stonecrest Rd to Cross Timbers Rd	0.59	2	UC	0	100%	425	501	0	501	$ 4,577,000	$ 4,577,000
S-14	Intersection	US 377 at Canyon Falls Dr.					100%					$ 205,000	$ 205,000
S-15	Intersection	Cross Timbers Rd. at Canyon Falls Dr.					50%					$ 275,000	$ 137,500
S-16	Intersection	Cross Timbers Rd. at Denton Creek Blvd.					100%					$ 275,000	$ 275,000
S-17	Intersection	Cross Timbers Rd. at Cross Timbers/US 377 Connector 1					100%					$ 275,000	$ 275,000
SUBTOTAL									**16,352**	**0**	**16,352**	**$ 98,482,000**	**$ 98,344,500**

2020 Roadway Impact Fee Update Cost Per Service Area $ 30,000

TOTAL COST IN SERVICE AREA C $ 98,374,500

C. Existing Roadway Facilities Inventory

Town of Flower Mound - 2020 Roadway Impact Fee Update
Existing Roadway Facilities Inventory

Service Area A

10/30/2020

OBJECTID	ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	SERVICE AREA	STATUS	STATUS 2020	EXIST LANE		EXIST TYPE	TP TYPE	PM PEAK HOUR VOLUME		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI	
									EB/NB	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
27	Aberdeen Dr	700' N of Spinks Rd	Spinks Rd	698	0.13	A	Completed	Established	2	2	4D	UMAD	8	8	100%	650	650	172	172	1	1	171	171		
28	Aberdeen Dr	FM 2499 (Long Prairie Rd)	1340' N of Spinks Rd	2,543	0.48	A	Widening	Widening	0	2	2U	UMAD	0	0	100%	475	475	0	458	0	0	0	458		
205	Aberdeen Dr	1340' N of Spinks Rd	700' N of Spinks Rd	655	0.12	A	Widening	Widening	2	0	2U	UMAD	8	0	100%	475	475	118	0	1	0	117	0		
68	Auburn Dr	Cross Timbers Rd	Peters Colony Rd	2,164	0.41	A	Completed	Established	1	1	2U	UC	155	155	100%	475	475	195	195	64	64	131	131		
103	Bridlewood Blvd	Waketon Rd	Windsor Dr	5,148	0.97	A/B	Completed	Established	2	2	4D	UMAD	419	432	50%	650	650	634	634	204	211	429	423		
132	Bridlewood Blvd	Windsor Dr	Cross Timbers Rd	2,813	0.53	A/B	Completed	Established	2	2	4D	UMAD	455	368	50%	650	650	346	346	121	98	225	248		
36	Browning Dr	Grand Park Pl Ln	Valley Ridge Blvd	1,131	0.21	A	Completed	Established	1	1	2U	UC	413	413	100%	475	475	102	102	88	88	13	13		
126	Browning Dr	FM 407 (Justin Rd)	Grand Park Pl Ln	759	0.14	A	Completed	Established	2	2	4D	UC	413	413	100%	650	650	187	187	59	59	127	127		
69	Bruton Orand Blvd	Quail Run	Flower Mound Rd	3,727	0.71	A/B	Completed	Established	2	2	4D	UMAD	491	331	50%	650	650	459	459	173	117	286	342		
160	Bruton Orand Blvd	Cross Timbers Rd	Quail Run	2,032	0.38	A/B	Completed	Established	2	2	4D	UMAD	543	474	50%	650	650	250	250	105	91	146	159		
34	Chinn Chapel Rd	North Town Limit	FM 407 (Justin Rd)	2,535	0.48	A	Completed	Established	1	1	2U	RC	221	221	50%	475	475	114	114	53	53	61	61		
39	Chinn Chapel Rd	FM 407 (Justin Rd)	Waketon Rd	3,459	0.66	A	Completed	Completed_2015	2	2	4U	UMAU	612	551	50%	525	525	344	344	200	180	143	163		
56	Churchill Dr	Windsor Dr	Cross Timbers Rd	2,774	0.53	A	Completed	Established	1	1	2U	UC	200	200	100%	475	475	250	250	105	105	145	145		
67	Churchill Dr	Peters Colony Rd	FM 2499 (Long Prairie Rd)	1,751	0.33	A	Completed	Established	2	2	4U	UMAU	160	160	100%	525	525	348	348	53	53	295	295		
133	Churchill Dr	Cross Timbers Rd	Peters Colony Rd	675	0.13	A	Completed	Established	2	2	4U	UMAU	350	350	100%	525	525	134	134	45	45	90	90		
50	College Pkwy	Morriss Rd	Kirkpatrick Ln	5,535	1.05	A	Completed	Established	2	2	4D	UMAD	270	284	100%	650	650	1,363	1,363	283	298	1,080	1,065		
52	College Pkwy	FM 2499 (Long Prairie Rd)	Morriss Rd	4,620	0.88	A	Completed	Established	2	2	4D	UMAD	177	200	100%	650	650	1,138	1,138	155	175	983	963		
120	College Pkwy	Waketon/College Connector	FM 2499 (Long Prairie Rd)	676	0.13	A	Completed	Completed_2020	1	1	2U	UC	13	13	100%	475	475	61	61	2	2	59	59		
1	Cross Timbers Rd	Morriss Rd	Kirkpatrick Ln	6,286	1.19	A	Completed	Established	3	3	6D	P6D	1,619	1,623	100%	750	750	2,679	2,679	1,928	1,932	751	747		
55	Cross Timbers Rd	Bruton Orand Blvd	Old Settlers Rd	5,080	0.96	A	Completed	Established	3	3	6D	P6D	1,119	1,331	100%	750	750	2,165	2,165	1,077	1,281	1,088	884		
59	Cross Timbers Rd	Kirkpatrick Ln	East Town Limit	2,659	0.50	A	Completed	Established	3	3	6D	P6D	1,659	1,808	50%	750	750	567	567	418	455	149	111		
65	Cross Timbers Rd	FM 2499 (Long Prairie Rd)	Morriss Rd	2,606	0.49	A	Completed	Established	3	3	6D	P6D	1,486	1,696	100%	750	750	1,111	1,111	734	837	377	273		
66	Cross Timbers Rd	Old Settlers Rd	FM 2499 (Long Prairie Rd)	3,270	0.62	A	Completed	Established	3	3	6D	P6D	1,434	1,428	100%	750	750	1,394	1,394	888	884	505	509		
2	Dixon Ln	Chinn Chapel Rd	Crestside Dr	6,521	1.24	A	Completed	Completed_2015	2	2	4D	UMAD	561	631	100%	650	650	1,606	1,606	693	779	913	826		
201	Dixon Ln	Crestside Dr	Morriss Rd	1,548	0.29	A	Completed	Established	2	2	4D	UMAD	472	612	100%	650	650	381	381	138	179	243	202		
13	Duncan Ln	Honeysuckle Way	Spinks Rd	1,989	0.38	A	Widening	Widening	1	1	2U	UMAU	204	204	50%	475	475	89	89	38	38	51	51		
202	Duncan Ln	Flower Mound Rd	Honeysuckle Way	1,491	0.28	A	Completed	Established	2	2	4U	UMAU	212	212	50%	525	525	148	148	30	30	118	118		
57	Eaton St	Morriss Rd	Timber Creek Rd	501	0.09	A	Completed	Established	2	2	4D	UMAD	112	112	100%	650	650	123	123	11	11	113	113		
75	Firewheel Dr	Morriss Rd	FM 2499 (Long Prairie Rd)	3,049	0.58	A	Completed	Established	2	2	4D	UMAD	127	127	100%	650	650	751	751	73	73	677	677		
138	Firewheel Dr	140' S of Hearthstone Dr	Morriss Rd	1,841	0.35	A	Completed	Established	2	2	4D	UMAD	64	64	100%	650	650	453	453	22	22	431	431		
189	Firewheel Dr	515' S of FM 1171	140' S of Hearthstone Dr	1,290	0.24	A	Completed	Completed_2020	2	2	4U	UMAU	18	18	100%	525	525	257	257	4	4	252	252		
192	Firewheel Dr	Cross Timbers	420' S of Cross Timbers	425	0.08	A	Completed	Established	2	2	4U	UMAU	18	18	100%	525	525	85	85	1	1	83	83		
14	Flower Mound Rd	Garden Ridge Blvd	Duncan Ln	2,796	0.53	A	Completed	Established	3	3	6D	P6D	1,122	1,174	100%	750	750	1,191	1,191	594	622	597	570		
15	Flower Mound Rd	Lake Forest Blvd	Gerault Rd	5,538	1.05	A	Completed	Established	3	3	6D	P6D	810	1,290	100%	750	750	2,360	2,360	850	1,353	1,510	1,007		
16	Flower Mound Rd	McKamy Creek Rd	FM 2499 (Long Prairie Rd)	1,339	0.25	A	Completed	Established	3	3	6D	P6D	1,019	1,789	100%	750	750	571	571	258	454	312	117		
72	Flower Mound Rd	Simmons Rd	1660' W of Old Settlers Rd	2,731	0.52	A/B	Completed	Established	2	2	4D	UMAD	607	1,104	50%	650	650	336	336	157	285	179	51		
73	Flower Mound Rd	Old Settlers Rd	McKamy Creek Rd	2,972	0.56	A	Completed	Established	2	2	4D	UMAD	1,399	705	100%	650	650	732	732	787	397	-56	335	56	
76	Flower Mound Rd	Gerault Rd	Garden Ridge Blvd	2,553	0.48	A	Completed	Established	3	3	6D	P6D	1,243	1,323	100%	750	750	1,088	1,088	601	640	487	448		
139	Flower Mound Rd	FM 2499 (Long Prairie Rd)	Lake Forest Blvd	2,847	0.54	A	Completed	Established	3	3	6D	P6D	831	1,164	100%	750	750	1,213	1,213	448	628	765	586		
195	Flower Mound Rd	1660' W of Old Settlers Rd	Old Settlers Rd	1,639	0.31	A	Completed	Established	2	2	4D	UMAD	607	1,104	100%	650	650	404	404	188	343	215	61		
7	FM 2499 (Long Prairie Rd)	Gerault Rd	South Town Limit	921	0.17	A	Completed	Established	3	3	6D	P6D	1,019	1,789	100%	750	750	392	392	178	312	215	80		
11	FM 2499 (Long Prairie Rd)	Lakeside Village Blvd	Gerault Rd	4,812	0.91	A	Completed	Established	3	3	6D	P6D	1,191	2,490	100%	750	750	2,051	2,051	1,085	2,269	965	-219		219
30	FM 2499 (Long Prairie Rd)	FM 407 (Justin Rd)	Dixon Ln	2,179	0.41	A	Completed	Established	3	3	6D	P6D	2,161	1,150	100%	750	750	928	928	892	475	37	454		
40	FM 2499 (Long Prairie Rd)	Dixon Ln	Waketon Rd	3,251	0.62	A	Completed	Established	3	3	6D	P6D	2,285	1,320	100%	750	750	1,385	1,385	1,407	813	-22	573	22	
64	FM 2499 (Long Prairie Rd)	125' S of W Windsor Dr	Cross Timbers Rd	4,077	0.77	A	Completed	Established	3	3	6D	P6D	2,339	1,456	100%	750	750	1,737	1,737	1,806	1,124	-69	613	69	
82	FM 2499 (Long Prairie Rd)	FM 1171 (Cross Timbers)	Spinks Rd	14,410	2.73	A	Completed	Completed_2015	3	3	6D	P6D	2,950	1,580	100%	750	750	6,141	6,141	8,051	4,312	-1,910	1,829	1,910	
130	FM 2499 (Long Prairie Rd)	College Pkwy	125' S of Windsor Dr	3,427	0.65	A	Completed	Established	3	3	6D	P6D	2,339	1,456	100%	750	750	1,460	1,460	1,518	945	-58	515	58	
131	FM 2499 (Long Prairie Rd)	Waketon Rd	College Pkwy	1,533	0.29	A	Completed	Established	3	3	6D	P6D	2,353	1,411	100%	750	750	653	653	683	410	-30	244	30	
151	FM 2499 (Long Prairie Rd)	Spinks Rd	Lakeside Village Blvd	4,454	0.84	A	Completed	Established	3	3	6D	P6D	2,828	1,263	100%	750	750	1,898	1,898	2,385	1,065	-488	833	488	
33	FM 407 (Justin Road)	West Town Limit	FM 2499 (Long Prairie Rd)	3,453	0.65	A	Completed	Established	2	2	4D	UMAD	990	1,566	50%	650	650	425	425	324	512	101	-87		87
35	FM 407 (Justin Road)	FM 2499 (Long Prairie Rd)	Browning Dr	8,170	1.55	A	Completed	Established	2	2	4D	UMAD	1,307	1,539	50%	650	650	1,006	1,006	1,011	1,191	-5	-185	5	185
122	FM 407 (Justin Road)	Browning Dr	East Town Limit	3,581	0.68	A	Completed	Established	2	2	4D	UMAD	1,120	1,284	50%	650	650	441	441	380	435	61	5		
20	Forest Vista Dr	FM 2499 (Long Prairie Rd)	Morriss Rd	5,290	1.00	A	Completed	Established	2	2	4D	UMAD	229	164	100%	650	650	1,303	1,303	229	164	1,073	1,138		
21	Forest Vista Dr	Morriss Rd	Garden Ridge Blvd	6,035	1.14	A	Completed	Established	2	2	4D	UMAD	277	350	100%	650	650	1,486	1,486	317	400	1,169	1,086		
17	Garden Ridge Blvd	Cross Timbers Rd	Kirkpatrick Ln	3,550	0.67	A	Completed	Established	2	2	4D	UMAD	1,126	1,126	50%	650	650	437	437	379	379	58	58		
18	Garden Ridge Blvd	Forest Vista Dr	Flower Mound Rd	3,933	0.74	A	Completed	Established	2	2	4D	GUA	958	453	100%	650	650	968	968	714	337	255	631		
19	Garden Ridge Blvd	Bellaire Blvd	Forest Vista Dr	4,292	0.81	A	Completed	Completed_2015	2	2	4D	GUA	792	455	50%	650	650	528	528	322	185	206	343		
83	Garden Ridge Blvd	FM 3040	Spinks Rd	3,944	0.75	A	Completed	Completed_2015	2	2	4D	GUA	736	176	100%	650	650	971	971	550	131	421	839		
145	Garden Ridge Blvd	Spinks Rd	Lakeside Pkwy	2,240	0.42	A	Completed	Completed_2015	2	2	4D	GUA	743	168	100%	650	650	551	551	315	71	236	480		
8	Gerault Rd	Lakeside Pkwy	FM 2499 (Long Prairie Rd)	3,355	0.64	A	Completed	Established	3	3	6D	P6D	1,451	833	100%	750	750	1,430	1,430	922	529	508	900		
147	Gerault Rd	Flower Mound Rd	Spinks Rd	4,410	0.84	A	Completed	Established	3	3	6D	P6D	1,886	731	100%	750	750	1,879	1,879	1,575	610	304	1,269		
153	Gerault Rd	Spinks Rd	Lakeside Pkwy	1,426	0.27	A	Completed	Established	3	3	6D	P6D	1,422	1,422	100%	750	750	608	608	384	384	224	224		

Town of Flower Mound - 2020 Roadway Impact Fee Update
Existing Roadway Facilities Inventory

Service Area A

10/30/2020

OBJECTID	ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	SERVICE AREA	STATUS	STATUS 2020	EXIST LANE		EXIST TYPE	TP TYPE	PM PEAK HOUR VOLUME		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI	
									EB/NB	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
31	Kirkpatrick Ln	Spanish Oak Dr	1310' W of Garden Ridge Blvd	2,167	0.41	A	New	Future	0	0	0	UMAD	0	0	100%	0	0	0	0	0	0	0	0		
32	Kirkpatrick Ln	College Pkwy	Cross Timbers Rd	2,711	0.51	A	Completed	Established	1	1	2U	UC	326	326	50%	475	475	122	122	84	84	38	38		
44	Kirkpatrick Ln	Morriss Rd	Kirkpatrick Ln	5,240	0.99	A	Completed	Completed_2015	1	1	2U	UC	224	249	100%	475	475	471	471	222	247	249	224		
49	Kirkpatrick Ln	Lonebuck Dr	College Pkwy	3,973	0.75	A	Completed	Established	1	1	2U	UC	203	203	50%	475	475	179	179	76	76	102	102		
140	Kirkpatrick Ln	1340' W of Garden Ridge Blvd	Garden Ridge Blvd	1,342	0.25	A	Completed	Established	2	2	4D	UMAD	201	201	100%	650	650	330	330	51	51	279	279		
141	Kirkpatrick Ln	Cross Timbers Rd	Spanish Oak Dr	2,361	0.45	A	Completed	Established	2	2	4D	UMAD	201	201	100%	650	650	581	581	90	90	491	491		
22	Lake Forest Blvd	Flower Mound Rd	75' S of Lincoln Ct	2,718	0.51	A	Completed	Established	1	1	2U	UC	100	100	100%	475	475	244	244	51	51	193	193		
108	Lake Forest Blvd	Forest Vista Dr	Flower Mound Rd	2,453	0.46	A	Completed	Established	2	2	4D	UMAD	31	31	100%	650	650	604	604	14	14	590	590		
190	Lake Forest Blvd	Foxborough Trail	Aberdeen Dr	590	0.11	A	Completed	Established	1	1	2U	UC	100	100	100%	475	475	53	53	11	11	42	42		
191	Lake Forest Blvd	75' S of Lincoln Ct	Foxborough Trail	812	0.15	A	Completed	Completed_2020	1	1	2U	UC	100	100	100%	475	475	73	73	15	15	58	58		
9	Lakeside Pkwy	Lakeside Village Blvd	FM 2499 (Long Prairie Rd)	4,349	0.82	A	Completed	Established	2	2	4D	UMAP	349	349	100%	650	650	1,071	1,071	287	287	783	783		
10	Lakeside Pkwy	Garden Ridge Blvd	South Town Limit	2,794	0.53	A	Widening	Widening	2	2	4D	P6D	375	624	100%	650	650	688	688	198	330	489	358		
152	Lakeside Pkwy	Gerault Rd	Garden Ridge Blvd	2,630	0.50	A	Widening	Widening	2	2	4D	P6D	464	806	100%	650	650	648	648	231	401	416	246		
154	Lakeside Pkwy	FM 2499 (Long Prairie Rd)	Gerault Rd	5,701	1.08	A	Widening	Widening	2	2	4D	P6D	611	326	100%	650	650	1,404	1,404	660	352	744	1,052		
118	Lakeside Village Blvd	Lakeside Pkwy	FM 2499 (Long Prairie Rd)	2,036	0.39	A	Completed	Established	3	3	6D	P6D	772	772	100%	750	750	868	868	298	298	570	570		
24	Lexington Ave	Strait Ln	Gerault Rd	1,471	0.28	A	Completed	Established	2	2	4D	UMAD	64	64	100%	650	650	362	362	18	18	344	344		
25	Lexington Ave	Spinks Rd	Strait Ln	4,388	0.83	A	Completed	Established	2	2	4D	UMAD	70	70	100%	650	650	1,080	1,080	58	58	1,022	1,022		
48	Lonebuck Dr	Valley Ridge Blvd	Kirkpatrick Ln	1,767	0.33	A	Completed	Established	1	1	2U	UC	250	250	50%	475	475	79	79	42	42	38	38		
81	McKamy Creek Rd	Old Settlers Rd	Flower Mound Rd	1,772	0.34	A	Completed	Established	2	2	4U	UMAU	100	100	100%	525	525	352	352	34	34	319	319		
105	McKamy Creek Rd	Simmons Rd	Old Settlers Rd	2,739	0.52	A	Completed	Established	2	2	4U	UMAU	121	121	100%	525	525	545	545	63	63	482	482		
42	Morriss Rd	FM 407 (Justin Rd)	Dixon Ln	2,268	0.43	A	Completed	Established	2	2	4D	UMAD	1,000	677	100%	650	650	559	559	430	291	129	268		
43	Morriss Rd	Kirkpatrick Ln	Waketon Rd	598	0.11	A	Completed	Established	2	2	4D	UMAD	993	720	100%	650	650	147	147	112	82	35	66		
51	Morriss Rd	Waketon Rd	College Pkwy	2,518	0.48	A	Completed	Established	2	2	4D	UMAD	993	720	100%	650	650	620	620	474	343	146	277		
60	Morriss Rd	College Pkwy	Cross Timbers Rd	6,475	1.23	A	Completed	Established	2	2	4D	UMAD	1,170	742	100%	650	650	1,594	1,594	1,435	910	159	684		
77	Morriss Rd	Forest Vista Dr	Mandarin Way	4,051	0.77	A	Completed	Established	2	2	4D	UMAD	1,361	620	100%	650	650	997	997	1,044	476	-47	522	47	
78	Morriss Rd	Firewheel Dr	Forest Vista Dr	4,126	0.78	A	Completed	Established	2	2	4D	UMAD	1,265	789	100%	650	650	1,016	1,016	988	617	27	399		
124	Morriss Rd	Dixon Ln	Kirkpatrick Ln	2,042	0.39	A	Completed	Established	2	2	4D	UMAD	1,120	803	100%	650	650	503	503	433	311	70	192		
137	Morriss Rd	Cross Timbers Rd	Firewheel Dr	2,759	0.52	A	Completed	Established	2	2	4D	UMAD	1,129	678	100%	650	650	679	679	590	354	89	325		
194	Morriss Rd	Mandarin Way	Flower Mound Rd	837	0.16	A	Widening	Widening	2	3	4D	UMAD	1,361	620	100%	650	650	206	309	216	98	-10	211	10	
3	Old Settlers Rd	Flower Mound Rd	McKamy Creek Rd	2,784	0.53	A	Completed	Established	2	2	4U	UMAU	97	225	100%	525	525	554	554	51	119	503	435		
74	Old Settlers Rd	Cross Timbers Rd	Sagebrush Dr	3,402	0.64	A	Completed	Established	2	2	4U	UMAU	261	103	100%	525	525	677	677	168	66	508	610		
157	Old Settlers Rd	Sagebrush Dr	Flower Mound Rd	3,148	0.60	A	Completed	Established	2	2	4U	UMAU	345	539	100%	525	525	626	626	206	321	420	305		
63	Peters Colony Rd	Old Settlers Rd	Churchill Dr	1,349	0.26	A	Completed	Established	1	1	2U	UC	100	100	100%	475	475	121	121	26	26	96	96		
158	Peters Colony Rd	Auburn Dr	Old Settlers Rd	3,314	0.63	A	Completed	Established	1	1	2U	UC	100	100	100%	475	475	298	298	63	63	235	235		
159	Quail Run	Bruton Orand Blvd	Auburn Dr	1,921	0.36	A	Completed	Established	1	1	2U	UC	94	94	100%	475	475	173	173	34	34	139	139		
29	Rippy Rd	Waketon Rd	FM 2499 (Long Prairie Rd)	4,404	0.83	A	Completed	Established	1	1	2U	UC	98	98	100%	475	475	396	396	82	82	314	314		
61	Sagebrush Dr	Yucca Dr	Morriss Rd	1,620	0.31	A	Completed	Established	2	2	4D	UMAD	369	369	100%	650	650	399	399	113	113	286	286		
119	Sagebrush Dr	Old Settlers Rd	FM 2499 (Long Prairie Rd)	2,718	0.51	A	Completed	Completed_2020	1	1	2U	UC	238	238	100%	475	475	244	244	123	123	122	122		
136	Sagebrush Dr	FM 2499 (Long Prairie Rd)	Yucca Dr	841	0.16	A	Completed	Established	2	2	4U	UMAU	362	362	100%	525	525	167	167	58	58	110	110		
6	Silveron Blvd	FM 2499 (Long Prairie Rd)	Lakeside Pkwy	3,741	0.71	A	Completed	Established	2	2	4D	UMAD	611	326	100%	650	650	921	921	433	231	488	690		
106	Simmons Rd	McKamy Creek Rd	White Chalk Rd	5,508	1.04	A/B	Completed	Established	1	1	2U	RC	100	100	50%	475	475	248	248	52	52	196	196		
107	Simmons Rd	Wichita Trail	McKamy Creek Rd	2,715	0.51	A/B	Completed	Completed_2015	2	2	4U	UMAU	202	226	50%	525	525	270	270	52	58	218	212		
12	Spinks Rd	Gerault Rd	Garden Ridge Blvd	2,972	0.56	A	Completed	Completed_2015	2	2	4D	UMAD	179	145	100%	650	650	732	732	101	82	631	650		
26	Spinks Rd	Aberdeen Dr	Gerault Rd	4,908	0.93	A	Completed	Completed_2015	2	2	4D	UMAD	657	602	100%	650	650	1,208	1,208	611	560	598	649		
146	Spinks Rd	Garden Ridge Blvd	Duncan Ln	2,859	0.54	A	Completed	Established	2	2	4D	UMAD	226	175	100%	650	650	704	704	122	95	582	609		
150	Spinks Rd	FM 2499 (Long Prairie Rd)	Aberdeen Dr	1,127	0.21	A	Completed	Established	2	2	4D	UMAD	657	602	100%	650	650	277	277	140	128	137	149		
45	Stone Hill Farms Pkwy	205' S of Stone Bend Ln	Valley Ridge Blvd	1,275	0.24	A	Completed	Established	1	1	2U	UMAD	158	158	100%	475	475	115	115	38	38	77	77		
127	Stone Hill Farms Pkwy	FM 407 (Justin Rd)	205' S of Stone Bend Ln	766	0.15	A	Completed	Established	2	2	4D	UMAD	146	146	100%	650	650	189	189	21	21	167	167		
23	Strait Ln	Flower Mound Rd	Lexington Ave	1,753	0.33	A	Completed	Established	1	1	2U	UC	28	28	100%	475	475	158	158	9	9	148	148		
46	Timber Creek Rd	Kirkpatrick Ln	College Pkwy	4,887	0.93	A	Completed	Established	1	1	2U	UC	47	47	100%	475	475	440	440	44	44	396	396		
47	Timber Creek Rd	445' S of Glenn Hollow Ln	Kirkpatrick Ln	1,076	0.20	A	Completed	Completed_2020	2	2	4U	UMAU	58	58	100%	525	525	214	214	12	12	202	202		
58	Timber Creek Rd	Eaton St	Cross Timbers Rd	5,257	1.00	A	Completed	Established	1	1	2U	UC	189	189	100%	475	475	473	473	188	188	285	285		
129	Timber Creek Rd	College Pkwy	Eaton St	2,490	0.47	A	Completed	Established	1	1	2U	UC	50	50	100%	475	475	224	224	24	24	200	200		
203	Timber Creek Rd	Valley Ridge Blvd	445' S of Glenn Hollow Ln	882	0.17	A	Completed	Established	2	2	4U	UMAU	58	58	100%	525	525	175	175	10	10	166	166		
125	Valley Ridge Blvd	Morriss Rd	Lonebuck Dr	5,309	1.01	A	Completed	Established	2	2	4U	UMAD	412	802	100%	525	525	1,056	1,056	414	806	642	249		
38	Waketon Rd	Chinn Chapel Rd	Rippy Rd	3,623	0.69	A	Completed	Established	1	1	2U	UC	165	225	100%	475	475	326	326	113	154	213	172		
41	Waketon Rd	FM 2499 (Long Prairie Rd)	Morriss Rd	4,148	0.79	A	Completed	Established	1	1	2U	UC	570	564	100%	475	475	373	373	448	443	-75	-70	75	70
128	Waketon Rd	Rippy Rd	FM 2499 (Long Prairie Rd)	971	0.18	A	Completed	Established	1	1	2U	UC	187	187	100%	475	475	87	87	34	34	53	53		
199	Waketon Rd	Bridlewood Blvd	515' E of Bridlewood Blvd	514	0.10	A	Completed	Established	1	1	2U	RC	136	136	50%	475	475	23	23	7	7	17	17		
121	Waketon/College Connector	Waketon Rd	College Pkwy	1,417	0.27	A	New	Future	0	0	0	UC	0	0	100%	0	0	0	0	0	0	0	0		
110	Windsor Dr	Bridlewood Blvd	Amy Ln	4,184	0.79	A	Completed	Established	1	1	2U	UC	120	126	100%	475	475	376	376	95	100	281	277		
200	Windsor Dr	Amy Ln	FM 2499 (Long Prairie Rd)	3,178	0.60	A	Completed	Completed_2015	1	1	2U	UC	120	126	100%	475	475	286	286	72	76	214	210		
62	Yucca Dr	Cross Timbers Rd	Yucca Dr	727	0.14	A	Completed	Established	1	1	2U	UC	162	162	100%	475	475	65	65	22	22	43	43		
142	Yucca Dr	440' E of FM 2499	460' S of FM 1171	411	0.08	A	Completed	Completed_2020	1	1	2U	UC	0	0	100%	475	475	37	37	0	0	37	37		
143	Yucca Dr	420' E of Long Prairie Rd	FM 2499 (Long Prairie Rd)	419	0.08	A	Completed	Established	1	1	2U	UC	160	160	100%	475	475	38	38	13	13	25	25		
	SUBTOTAL			**369,715**	**70.02**													**167,124**		**89,462**		**77,662**		**3,329**	

Town of Flower Mound - 2020 Roadway Impact Fee Update
Existing Roadway Facilities Inventory

Service Area B

10/30/2020

OBJECTID	ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	SERVICE AREA	STATUS	STATUS 2020	EXIST LANE		EXIST TYPE	TP TYPE	PM PEAK HOUR VOLUME		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI	
									EB/NB	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
103	Bridlewood Blvd	Waketon Rd	Windsor Dr	5,148	0.97	A/B	Completed	Established	2	2	4D	UMAD	419	432	50%	650	650	634	634	204	211	429	423		
132	Bridlewood Blvd	Windsor Dr	Cross Timbers Rd	2,813	0.53	A/B	Completed	Established	2	2	4D	UMAD	455	368	50%	650	650	346	346	121	98	225	248		
69	Bruton Orand Blvd	Quail Run	Flower Mound Rd	3,727	0.71	A/B	Completed	Established	2	2	4D	UMAD	491	331	50%	650	650	459	459	173	117	286	342		
160	Bruton Orand Blvd	Cross Timbers Rd	Quail Run	2,032	0.38	A/B	Completed	Established	2	2	4D	UMAD	543	474	50%	650	650	250	250	105	91	146	159		
163	Cardinal Dr	Rocky Point Rd	Wichita Trail	1,641	0.31	B	Completed	Established	1	1	2U	RC	15	15	100%	475	475	148	148	5	5	143	143		
54	Cross Timbers Rd	Flower Mound Rd	Bruton Orand Blvd	5,133	0.97	B	Completed	Established	3	3	6D	P6D	945	1,053	100%	750	750	2,187	2,187	919	1,024	1,269	1,164		
90	Cross Timbers Rd	Red Rock Ln	Shiloh Rd	5,493	1.04	B	Completed	Established	3	3	6D	P6D	1,005	1,032	100%	750	750	2,341	2,341	1,045	1,074	1,295	1,267		
96	Cross Timbers Rd	Shiloh Rd	Flower Mound Rd	5,966	1.13	B	Completed	Established	3	3	6D	P6D	1,058	1,318	100%	750	750	2,542	2,542	1,195	1,489	1,347	1,053		
166	Cross Timbers Rd	High Rd	Red Rock Ln	2,403	0.46	B/C	Completed	Established	3	3	6D	P6D	1,005	1,032	50%	750	750	512	512	229	235	283	277		
72	Flower Mound Rd	Simmons Rd	1660' W of Old Settlers Rd	2,731	0.52	A/B	Completed	Established	2	2	4D	UMAD	607	1,104	50%	650	650	336	336	157	285	179	51		
155	Flower Mound Rd	Skillern Blvd	Simmons Rd	4,769	0.90	B	Completed	Established	2	2	4D	UMAD	291	501	100%	650	650	1,174	1,174	263	452	911	722		
162	Flower Mound Rd	FM 1171 (Cross Timbers)	Skillern Rd	6,369	1.21	B	Completed	Completed_2015	2	2	4D	UMAD	347	501	100%	650	650	1,568	1,568	419	604	1,150	964		
85	High Rd	Cross Timbers Rd	South Town Limit	9,117	1.73	B/C	Completed	Established	1	1	2U	RC	20	20	50%	475	475	410	410	17	17	393	393		
101	Kings Rd	Lusk Ln	3090' E of Lusk Ln	3,092	0.59	B	Completed	Established	1	1	2U	RC	100	100	50%	475	475	139	139	29	29	110	110		
102	Kings Rd	3090' E of Lusk Ln	North Town Limit	2,119	0.40	B	Completed	Established	1	1	2U	RC	199	199	50%	475	475	95	95	40	40	55	55		
100	Lusk Ln	Kings Rd	1315' S of Kings Rd	1,339	0.25	B	Completed	Established	1	1	2U	RC	316	316	50%	475	475	60	60	40	40	20	20		
135	Lusk Ln	Shiloh Rd/Lusk Ln Connector	Cross Timbers Rd	1,599	0.30	B	Completed	Established	1	1	2U	RC	300	300	100%	475	475	144	144	91	91	53	53		
196	Lusk Ln	1315' S of Kings Rd	Shiloh Rd/Lusk Ln Connector	1,310	0.25	B	Completed	Established	1	1	2U	RC	316	316	100%	475	475	118	118	78	78	39	39		
104	Quail Run Rd	Flower Mound Rd	Bruton Orand Blvd	3,183	0.60	B	Completed	Established	1	1	2U	UC	9	9	100%	475	475	286	286	5	5	281	281		
89	Red Rock Ln	Red Rock/Shiloh Connector	Cross Timbers Rd	1,798	0.34	B/C	Completed	Established	1	1	2U	RC	343	343	50%	475	475	81	81	58	58	22	22		
167	Red Rock Ln	North Town Limit	Red Rock/Shiloh Connector	756	0.14	B/C	Completed	Established	1	1	2U	RC	337	337	50%	475	475	34	34	24	24	10	10		
84	Red Rock/Shiloh Connector	Red Rock Ln	Shiloh Rd	5,346	1.01	B	New	Future	0	0	0	RC	0	0	100%	0	0	0	0	0	0	0	0		
93	Ridgecrest Dr	Raintree Pl	Sunset Trail	4,268	0.81	B	Completed	Established	1	1	2U	RC	3	3	100%	475	475	384	384	2	2	382	382		
94	Rocky Point Rd	Sunset Trail	Orchard Dr	3,149	0.60	B	Completed	Established	1	1	2U	RC	15	15	100%	475	475	283	283	9	9	274	274		
4	Scenic /Flower Mound Connec	Scenic Dr	Alcott Ave	2,393	0.45	B	New	Future	0	0	0	RC	0	0	100%	0	0	0	0	0	0	0	0		
95	Scenic Dr	Cross Timbers Rd	Wichita Trail	10,083	1.91	B	Completed	Established	1	1	2U	RC	15	15	100%	475	475	907	907	29	29	878	878		
193	Scenic/Flower Mound Connec	Alcott Ave	Flower Mound Rd	285	0.05	B	Completed	Completed_2020	1	1	2U	RC	0	0	100%	475	475	26	26	0	0	26	26		
91	Shiloh Rd	North Town Limits	Shiloh Rd/Lusk Ln Connector	3,108	0.59	B	Completed	Established	1	1	2U	RC	500	500	50%	475	475	140	140	147	147	-7	-7	7	7
92	Shiloh Rd	Cross Timbers Rd	Sunset Trail	6,466	1.22	B	Completed	Established	1	1	2U	RC	55	55	100%	475	475	582	582	67	67	514	514		
168	Shiloh Rd	Shiloh Rd/Lusk Ln Connector	Cross Timbers Rd	1,685	0.32	B	Completed	Established	1	1	2U	RC	500	500	100%	475	475	152	152	160	160	-8	-8	8	8
99	Shiloh Rd/Lusk Ln Connector	2820' E of Shiloh Rd	Lusk Ln	3,082	0.58	B	New	Future	0	0	0	RC	0	0	100%	0	0	0	0	0	0	0	0		
197	Shiloh Rd/Lusk Ln Connector	Shiloh Rd	2820' E of Shiloh Rd	2,822	0.53	B	New	Future	0	0	0	RC	0	0	50%	0	0	0	0	0	0	0	0		
71	Simmons Rd	Flower Mound Rd	Wichita Trail	2,213	0.42	B	Completed	Established	2	2	4U	UMAU	202	226	100%	525	525	440	440	85	95	355	345		
106	Simmons Rd	McKamy Creek Rd	White Chalk Rd	5,508	1.04	A/B	Completed	Established	1	1	2U	RC	100	100	50%	475	475	248	248	52	52	196	196		
107	Simmons Rd	Wichita Trail	McKamy Creek Rd	2,715	0.51	A/B	Completed	Completed_2015	2	2	4U	UMAU	202	226	50%	525	525	270	270	52	58	218	212		
98	Skillern Blvd	River Hill Dr	Wichita Trail	2,670	0.51	B	Completed	Established	1	1	2U	RC	18	18	100%	475	475	240	240	9	9	231	231		
156	Skillern Blvd	Flower Mound Rd	River Hill Dr	936	0.18	B	Completed	Established	1	1	2U	RC	70	70	100%	475	475	84	84	12	12	72	72		
164	Sunset Trail	Rocky Point Rd	Shiloh Rd	978	0.19	B	Completed	Established	1	1	2U	RC	12	12	100%	475	475	88	88	2	2	86	86		
165	Sunset Trail	Ridgecrest Dr	Rocky Point Rd	1,169	0.22	B	Completed	Established	1	1	2U	RC	3	3	100%	475	475	105	105	1	1	104	104		
53	Waketon Rd	525' W of Bridlewood Blvd	Bridlewood Blvd	532	0.10	B	Completed	Established	1	1	2U	RC	136	136	50%	475	475	24	24	7	7	17	17		
70	Wichita Trail	Skillern Blvd	Simmons Rd	5,373	1.02	B	Completed	Established	1	1	2U	RC	31	31	100%	475	475	483	483	32	32	452	452		
97	Wichita Trail	Scenic Dr	Skillern Blvd	7,472	1.42	B	Completed	Established	1	1	2U	RC	27	27	100%	475	475	672	672	38	38	634	634		
	SUBTOTAL			**144,788**	**27.42**													**37,985**		**12,711**		**25,275**		**31**	

Town of Flower Mound - 2020 Roadway Impact Fee Update
Existing Roadway Facilities Inventory

Service Area C

10/30/2020

OBJECTID	ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	SERVICE AREA	STATUS	STATUS 2020	EXIST LANE		EXIST TYPE	TP TYPE	PM PEAK HOUR VOLUME		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI	
									EB/NB	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
113	Canyon Falls Dr	Cross Timbers Rd	West Town Limit	1,766	0.33	C	Completed	Established	2	2	4D	UMABL	177	175	100%	650	650	435	435	59	59	376	376		
114	Canyon Falls Dr	Prairie Ridge Rd	US 377	2,558	0.48	C	Completed	Established	2	2	4D	UMABL	250	250	100%	650	650	630	630	121	121	509	509		
182	Canyon Falls Dr	West Town Limit	Denton Creek Blvd	1,613	0.31	C	Completed	Established	2	2	4D	UMABL	151	152	100%	650	650	397	397	46	46	351	351		
183	Canyon Falls Dr	Denton Creek Blvd	Prairie Ridge Rd	2,287	0.43	C	Completed	Established	2	2	4D	UMABL	250	250	100%	650	650	563	563	108	108	455	455		
88	Cross Timbers Rd	CrossTimbers/US 377 Connector1	High Rd	9,310	1.76	C	Completed	Established	3	3	6D	P6D	990	988	100%	750	750	3,968	3,968	1,746	1,742	2,222	2,225		
166	Cross Timbers Rd	High Rd	Red Rock Ln	2,403	0.46	B/C	Completed	Established	3	3	6D	P6D	1,005	1,032	50%	750	750	512	512	229	235	283	277		
170	Cross Timbers Rd	CrossTimbers/US 377 Connector2	CrossTimbers/US 377 Connector1	4,336	0.82	C	Completed	Established	3	3	6D	P6D	990	988	100%	750	750	1,848	1,848	813	811	1,035	1,036		
172	Cross Timbers Rd	US 377	CrossTimbers/US 377 Connector2	2,923	0.55	C	Completed	Established	3	3	6D	P6D	858	826	100%	750	750	1,246	1,246	475	457	771	788		
178	Cross Timbers Rd	West Town Limit	Canyon Falls Dr	1,031	0.20	C	Completed	Established	3	3	6D	P6D	858	826	50%	750	750	220	220	84	81	136	139		
179	Cross Timbers Rd	470' E of Canyon Falls Dr	US 377	5,134	0.97	C	Completed	Established	3	3	6D	P6D	858	826	100%	750	750	2,188	2,188	834	803	1,353	1,385		
198	Cross Timbers Rd	Canyon Falls Dr	470' E of Canyon Falls Dr	468	0.09	C	Completed	Established	3	3	6D	P6D	858	826	50%	750	750	100	100	38	37	62	63		
171	CrossTimbers/Dunham Conne	Cross Timbers Rd	Dunham Rd	2,718	0.51	C	New	Future	0	0	0	RC	0	0	100%	0	0	0	0	0	0	0	0		
169	CrossTimbers/US 377 Conned	US 377	Cross Timbers Rd	11,273	2.14	C	New	Future	0	0	0	GRA	0	0	100%	0	0	0	0	0	0	0	0		
87	CrossTimbers/US 377 Conned	CrossTimbers/US 377 Connector1	Cross Timbers Rd	4,756	0.90	C	New	Future	0	0	0	RC	0	0	100%	0	0	0	0	0	0	0	0		
115	Denton Creek Blvd	120' NW of Prairie Ridge Rd	Canyon Falls Dr	3,436	0.65	C	Completed	Completed_2020	2	2	4D	UMABL	81	82	100%	650	650	846	846	53	53	793	793		
180	Denton Creek Blvd	IH-35 Diamond Interchange	120' NW of Prairie Ridge Rd	6,187	1.17	C	New	Future	0	0	0	UMABL	0	0	100%	0	0	0	0	0	0	0	0		
181	Denton Creek Blvd	Canyon Falls Dr	1155' S of Canyon Falls Dr	1,196	0.23	C	Widening	Widening	2	0	2U	UMABL	2	0	100%	475	475	215	0	0	0	215	0		
187	Denton Creek Blvd	1155' S of Canyon Falls Dr	Cross Timbers Rd	3,599	0.68	C	New	Future	0	0	0	UMABL	0	0	100%	0	0	0	0	0	0	0	0		
86	Dunham Rd	Dunham/US 377 Connector	CrossTimbers/Dunham Connector	5,368	1.02	C	Completed	Established	1	1	2U	RC	1,087	1,087	100%	475	475	483	483	1,105	1,105	-622	-622	622	622
85	High Rd	Cross Timbers Rd	South Town Limit	9,117	1.73	B/C	Completed	Established	1	1	2U	RC	20	20	50%	475	475	410	410	17	17	393	393		
112	Oak Knoll Rd	Prairie Ridge Rd	Stonecrest Rd	800	0.15	C	Completed	Established	1	1	2U	UC	100	100	100%	475	475	72	72	15	15	57	57		
111	Prairie Ridge Rd	North Town Limits	Denton Creek Blvd	604	0.11	C	Completed	Established	1	1	2U	UC	0	0	100%	475	475	54	54	0	0	54	54		
186	Prairie Ridge Rd	North Town Limit	Canyon Falls Dr	2,584	0.49	C	Completed	Established	1	1	2U	UC	100	100	100%	475	475	232	232	49	49	184	184		
89	Red Rock Ln	Red Rock/Shiloh Connector	Cross Timbers Rd	1,798	0.34	B/C	Completed	Established	1	1	2U	RC	343	343	50%	475	475	81	81	58	58	22	22		
167	Red Rock Ln	North Town Limit	Red Rock/Shiloh Connector	756	0.14	B/C	Completed	Established	1	1	2U	RC	337	337	50%	475	475	34	34	24	24	10	10		
116	Stonecrest Rd	Oak Knoll Rd	Canyon Falls Dr	1,933	0.37	C	Completed	Established	1	1	2U	UC	68	68	100%	475	475	174	174	25	25	149	149		
177	Stonecrest Rd	UMAB 1	Cross Timbers Rd	3,700	0.70	C	New	Future	0	0	0	UC	0	0	100%	0	0	0	0	0	0	0	0		
184	Stonecrest Rd	850' S of Canyon Falls Dr	UMAB 1	1,256	0.24	C	New	Future	0	0	0	UC	0	0	100%	0	0	0	0	0	0	0	0		
185	Stonecrest Rd	Canyon Falls Dr	850' S of Canyon Falls Dr	880	0.17	C	Completed	Established	1	1	2U	UC	32	32	100%	475	475	79	79	5	5	74	74		
188	Stonecrest Rd	North Town Limit	Oak Knoll Rd	1,454	0.28	C	Completed	Established	1	1	2U	UC	55	55	100%	475	475	131	131	15	15	116	116		
5	UMAB 1	Denton Creek Blvd	US 377	3,027	0.57	C	New	Future	0	0	0	UMABL	0	0	100%	0	0	0	0	0	0	0	0		
117	UMAB2	Denton Creek Blvd	West Town Limit	1,405	0.27	C	New	Future	0	0	0	UMABL	0	0	100%	0	0	0	0	0	0	0	0		
175	Urban Collector 1	Cross Timbers Road	Cross Timbers Rd	4,399	0.83	C	New	Future	0	0	0	UC	0	0	100%	0	0	0	0	0	0	0	0		
176	Urban Collector 1	Stonecrest Rd	Cross Timbers Rd	3,115	0.59	C	New	Future	0	0	0	UC	0	0	100%	0	0	0	0	0	0	0	0		
109	US 377	North Town Limit	CrossTimbers/US 377 Connector1	4,661	0.88	C	Completed	Established	2	2	4D	P6D	642	647	100%	650	650	1,148	1,148	567	571	581	576		
173	US 377	Cross Timbers Rd	West Town Limit	5,019	0.95	C	Completed	Established	2	2	4D	P6D	1,215	868	100%	650	650	1,236	1,236	1,155	825	81	411		
174	US 377	CrossTimbers/US 377 Connector1	Cross Timbers Rd	4,174	0.79	C	Completed	Established	2	2	4D	P6D	657	602	100%	650	650	1,028	1,028	519	476	508	552		
	SUBTOTAL			**123,041**	**23.30**													**36,439**		**15,902**		**20,537**		**1,244**	

D. Plan For Awarding the Roadway Impact Fee Credit Summary

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area A

Recoverable Impact Fee CIP Costs	$	22,206,549	Line 11, Max Fee Calculation Table
Financing Costs		2,660,377	See Detail Below
Existing Fund Balance		-	Page 1 of Appendix E - Service Area A
Interest Earnings		(115,159)	Page 5 of Appendix E - Service Area A
Pre Credit Recoverable Cost for Impact Fee	$	24,751,766	Sum of Above
Credit for Ad Valorem Revenues		(540,978)	Page 7 of Appendix E - Service Area A
Maximum Recoverable Cost for Impact Fee	**$**	**24,210,788**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area A column, line 11 on the Max Fee Calculation Table.

Financing Costs:

New Annual Debt Service	$	1,037,766	(Page 3 of Appendix E - Service Area A)
Existing Annual Debt Service		9,910,133	(Page 3 of Appendix E - Service Area A)
Principal Component		(8,287,522)	(Page 4 of Appendix E - Service Area A)
Financing Costs	$	2,660,377	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates.
To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area B

Recoverable Impact Fee CIP Costs	$	3,248,699	Line 11, Max Fee Calculation Table
Financing Costs		717,918	See Detail Below
Existing Fund Balance		-	Page 1 of Appendix E - Service Area B
Interest Earnings		(91,866)	Page 5 of Appendix E - Service Area B
Pre Credit Recoverable Cost for Impact Fee	$	3,874,751	Sum of Above
Credit for Ad Valorem Revenues		(1,984)	Page 7 of Appendix E - Service Area B
Maximum Recoverable Cost for Impact Fee	**$**	**3,872,766**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area B column, line 11 on the Max Fee Calculation Table.

Financing Costs:

New Annual Debt Service	$	2,191,723	(Page 3 of Appendix E - Service Area B)
Existing Annual Debt Service		66,017	(Page 3 of Appendix E - Service Area B)
Principal Component		(1,539,822)	(Page 4 of Appendix E - Service Area B)
Financing Costs	$	717,918	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates.
To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area C

Recoverable Impact Fee CIP Costs	$	90,890,530	Line 11, Max Fee Calculation Table
Financing Costs		21,232,053	See Detail Below
Existing Fund Balance		-	Page 1 of Appendix E - Service Area C
Interest Earnings		(2,746,439)	Page 5 of Appendix E - Service Area C
Pre Credit Recoverable Cost for Impact Fee	$	109,376,144	Sum of Above
Credit for Ad Valorem Revenues		(1,614,052)	Page 7 of Appendix E - Service Area C
Maximum Recoverable Cost for Impact Fee	**$**	**107,762,092**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area C column, line 11 on the Max Fee Calculation Table.

Financing Costs:

New Annual Debt Service	$	66,250,027	(Page 3 of Appendix E - Service Area C)
Existing Annual Debt Service		-	(Page 3 of Appendix E - Service Area C)
Principal Component		(45,017,974)	(Page 4 of Appendix E - Service Area C)
Financing Costs	$	21,232,053	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates.
To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

E. Plan For Awarding the Roadway Impact Fee Credit Supporting Exhibits

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation Assumptions

Appendix E - Impact Fee Calculation Assumptions

Service Area A

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	3,978
Available Existing Fund Balance [3]	-

Portion of Projects Funded by Existing Debt [4]	$ 7,582,343
Non-debt Funded Project Cost [5]	13,919,026
Project Cost Funded Through New Debt [6]	705,179
Total Recoverable Project Cost [7]	$ 22,206,549

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ 70,518	4.00%	20
2	70,518	4.00%	20
3	70,518	4.00%	20
4	70,518	4.00%	20
5	70,518	4.00%	20
6	70,518	4.00%	20
7	70,518	4.00%	20
8	70,518	4.00%	20
9	70,518	4.00%	20
10	70,518	4.00%	20
Total	$ 705,179		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 1,427,162
2	1,462,421
3	1,462,421
4	1,462,421
5	1,462,421
6	1,462,421
7	1,462,421
8	1,462,421
9	1,462,421
10	1,497,679
Total	$ 14,624,205

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Assumes all existing fund balances are already encumbered
(4) Per discussion with Town staff and files
(5) Unless specified in Town CIP, Assumes 50% of new project cost funded through sources other than debt
(6) Unless specified in Town CIP, Assumes 50% of new project costs funded through new debt issues
(7) Line 11 of the Max Fee Table Report
(8) Assumes new debt issued based on Town Input
(9) Estimated interest cost provided by Town's Financial Advisor
(10) Non-debt funded capital expenditures made in equal annual amounts. Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year.

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary
Appendix E - Impact Fee Calculation Assumptions
Service Area A

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ 5,189	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,189
2	5,189	5,189	-	-	-	-	-	-	-	-	10,378
3	5,189	5,189	5,189	-	-	-	-	-	-	-	15,566
4	5,189	5,189	5,189	5,189	-	-	-	-	-	-	20,755
5	5,189	5,189	5,189	5,189	5,189	-	-	-	-	-	25,944
6	5,189	5,189	5,189	5,189	5,189	5,189	-	-	-	-	31,133
7	5,189	5,189	5,189	5,189	5,189	5,189	5,189	-	-	-	36,322
8	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	-	-	41,511
9	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	-	46,699
10	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
11	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
12	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
13	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
14	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
15	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
16	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
17	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
18	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
19	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
20	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	51,888
21	-	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	46,699
22	-	-	5,189	5,189	5,189	5,189	5,189	5,189	5,189	5,189	41,511
23	-	-	-	5,189	5,189	5,189	5,189	5,189	5,189	5,189	36,322
24	-	-	-	-	5,189	5,189	5,189	5,189	5,189	5,189	31,133
25	-	-	-	-	-	5,189	5,189	5,189	5,189	5,189	25,944
26	-	-	-	-	-	-	5,189	5,189	5,189	5,189	20,755
27	-	-	-	-	-	-	-	5,189	5,189	5,189	15,566
28	-	-	-	-	-	-	-	-	5,189	5,189	10,378
29	-	-	-	-	-	-	-	-	-	5,189	$ 5,189
	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 103,777	$ 1,037,766

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary

Appendix E - 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	$ 5,189	$ 1,427,162	$ (70,518)	$ 1,113,646	$ (18,785)	2,456,694
2	10,378	1,462,421	(70,518)	1,035,356	(34,535)	2,403,101
3	15,566	1,462,421	(70,518)	919,064	(45,547)	2,280,986
4	20,755	1,462,421	(70,518)	797,867	(52,342)	2,158,183
5	25,944	1,462,421	(70,518)	758,607	(61,717)	2,114,736
6	31,133	1,462,421	(70,518)	707,537	(68,650)	2,061,923
7	36,322	1,462,421	(70,518)	626,112	(70,730)	1,983,607
8	41,511	1,462,421	(70,518)	512,918	(66,638)	1,879,694
9	46,699	1,462,421	(70,518)	396,308	(59,015)	1,775,895
10	51,888	1,497,679	(70,518)	380,173	(63,019)	1,796,203
11	51,888	-	-	357,591	-	409,479
12	51,888	-	-	337,691	-	389,579
13	51,888	-	-	337,623	-	389,511
14	51,888	-	-	338,700	-	390,588
15	51,888	-	-	310,816	-	362,704
16	51,888	-	-	307,416	-	359,305
17	51,888	-	-	270,221	-	322,109
18	51,888	-	-	235,712	-	287,601
19	51,888	-	-	111,611	-	163,499
20	51,888	-	-	55,165	-	107,053
21	46,699	-	-	-	-	46,699
22	41,511	-	-	-	-	41,511
23	36,322	-	-	-	-	36,322
24	31,133	-	-	-	-	31,133
25	25,944	-	-	-	-	25,944
26	20,755	-	-	-	-	20,755
27	15,566	-	-	-	-	15,566
28	10,378	-	-	-	-	10,378
29	5,189	-	-	-	-	5,189
	$ 1,037,766	$ 14,624,205	$ (705,179)	$ 9,910,133	$ (540,978)	$ 24,325,947

(1) Appendix E - Service Area A, Page 2

(2) Appendix E - Service Area A, Page 1

(3) Eligible Outstanding Debt Funded Projects Percent of General Projects Debt Issuance times total outstanding tax-supported annual debt service

(4) Appendix E - Service Area A, Page 7

Town of Flower Mound 2020 Roadway Impact Fee Update

Revenue Test

Appendix E - Impact Fee Calculation Assumptions

Service Area A

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ -
1	$ 609	3,978	$ 2,421,079	$ 2,456,694	$ (35,615)	(78)	(35,693)
2	609	3,978	2,421,079	2,403,101	17,978	(117)	(17,832)
3	609	3,978	2,421,079	2,280,986	140,093	229	122,489
4	609	3,978	2,421,079	2,158,183	262,895	1,112	386,497
5	609	3,978	2,421,079	2,114,736	306,342	2,364	695,203
6	609	3,978	2,421,079	2,061,923	359,156	3,832	1,058,191
7	609	3,978	2,421,079	1,983,607	437,472	5,593	1,501,255
8	609	3,978	2,421,079	1,879,694	541,385	7,761	2,050,402
9	609	3,978	2,421,079	1,775,895	645,184	10,394	2,705,979
10	609	3,978	2,421,079	1,796,203	624,875	13,221	3,344,075
11	-	-	-	409,479	(409,479)	13,750	2,948,347
12	-	-	-	389,579	(389,579)	12,061	2,570,828
13	-	-	-	389,511	(389,511)	10,407	2,191,725
14	-	-	-	390,588	(390,588)	8,744	1,809,881
15	-	-	-	362,704	(362,704)	7,133	1,454,309
16	-	-	-	359,305	(359,305)	5,583	1,100,588
17	-	-	-	322,109	(322,109)	4,115	782,594
18	-	-	-	287,601	(287,601)	2,798	497,791
19	-	-	-	163,499	(163,499)	1,822	336,114
20	-	-	-	107,053	(107,053)	1,238	230,299
21	-	-	-	46,699	(46,699)	906	184,506
22	-	-	-	41,511	(41,511)	717	143,713
23	-	-	-	36,322	(36,322)	550	107,941
24	-	-	-	31,133	(31,133)	405	77,213
25	-	-	-	25,944	(25,944)	281	51,550
26	-	-	-	20,755	(20,755)	180	30,975
27	-	-	-	15,566	(15,566)	102	15,510
28	-	-	-	10,378	(10,378)	45	5,178
29	-	-	-	5,189	(5,189)	11	-
			24,210,788	24,325,947		115,159	

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation

Appendix E - Impact Fee Calculation Assumptions

Service Area A

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	3,978	4,506	2,456,694	2,782,573
2	28	1.1277	1.0000	3,978	4,486	2,403,101	2,710,002
3	27	1.1228	1.0000	3,978	4,466	2,280,986	2,561,074
4	26	1.1179	1.0000	3,978	4,447	2,158,183	2,412,625
5	25	1.1130	1.0000	3,978	4,428	2,114,736	2,353,746
6	24	1.1082	1.0000	3,978	4,408	2,061,923	2,284,956
7	23	1.1033	1.0000	3,978	4,389	1,983,607	2,188,583
8	22	1.0985	1.0000	3,978	4,370	1,879,694	2,064,887
9	21	1.0937	1.0000	3,978	4,351	1,775,895	1,942,355
10	20	1.0890	1.0000	3,978	4,332	1,796,203	1,955,999
11	19	1.0842	1.0000	-	-	409,479	443,963
12	18	1.0795	1.0000	-	-	389,579	420,545
13	17	1.0748	1.0000	-	-	389,511	418,638
14	16	1.0701	1.0000	-	-	390,588	417,965
15	15	1.0654	1.0000	-	-	362,704	386,434
16	14	1.0608	1.0000	-	-	359,305	381,143
17	13	1.0562	1.0000	-	-	322,109	340,197
18	12	1.0515	1.0000	-	-	287,601	302,425
19	11	1.0470	1.0000	-	-	163,499	171,177
20	10	1.0424	1.0000	-	-	107,053	111,591
21	9	1.0378	1.0000	-	-	46,699	48,467
22	8	1.0333	1.0000	-	-	41,511	42,894
23	7	1.0288	1.0000	-	-	36,322	37,369
24	6	1.0243	1.0000	-	-	31,133	31,890
25	5	1.0199	1.0000	-	-	25,944	26,460
26	4	1.0154	1.0000	-	-	20,755	21,075
27	3	1.0110	1.0000	-	-	15,566	15,738
28	2	1.0066	1.0000	-	-	10,378	10,446
29	1	1.0022	1.0000	-	-	5,189	5,200
					44,183	24,325,947	26,890,416

Total Escalated Expense for Entire Period	$	26,890,416
Total Escalated Service Units		44,183
Impact Fee for Service Area A	**$**	**609**

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Project Funding

Appendix E - Impact Fee Calculation Assumptions

Service Area A

Impact Fee Project Name[1]	Impact Fee Project No. [1]	Cost in Service Area [1]	Impact Fee Recoverable Cost [2]	Debt Funded [3] Existing	Debt Funded [3] Proposed	Non-Debt Funded [3]	Impact Fee Recoverable Cost
Roadway Improvements - Service Area A							
Aberdeen Dr	A-1	$ 1,454,821	$ 595,797	$ -	$ 297,899	$ 297,899	$ 595,797
Aberdeen Dr	A-2	636,000	260,463	-	130,231	130,231	260,463
Chinn Chapel Rd	A-3	1,364,402	558,767	2,457	-	556,310	558,767
Dixon Ln	A-5	5,297,438	2,169,475	-	-	2,169,475	2,169,475
Duncan Ln	A-6	281,266	115,188	115,188	-	-	115,188
Firewheel Dr	A-7	603,525	247,163	19,873	-	227,291	247,163
FM 2499 (Long Prairie Rd)	A-8	1,515,721	620,738	409,533	-	211,205	620,738
Garden Ridge Blvd	A-9	573,016	234,669	169,143	-	65,525	234,669
Garden Ridge Blvd	A-10	1,891,126	774,478	631,517	-	142,961	774,478
Garden Ridge Blvd	A-11	2,504,704	1,025,759	1,025,759	-	-	1,025,759
Kirkpatrick Ln	A-12	3,794,884	1,554,130	1,462,709	-	91,421	1,554,130
Kirkpatrick Ln	A-13	5,243,000	2,147,181	1,548,444	-	598,737	2,147,181
Lake Forest Blvd	A-14	1,400,601	573,592	328,842	-	244,750	573,592
Lakeside Pkwy	A-15	4,375,554	1,791,933	-	-	1,791,933	1,791,933
Lakeside Pkwy	A-16	2,018,856	826,788	-	-	826,788	826,788
Lakeside Pkwy	A-17	2,145,590	878,690	-	-	878,690	878,690
Morriss Rd	A-18	1,009,492	413,420	167,700	-	245,720	413,420
Sagebrush Dr	A-19	3,209,771	1,314,507	1,305,630	-	8,876	1,314,507
Simmons Rd	A-20,B-7	564,395	231,138	-	-	231,138	231,138
Spinks Rd	A-21	448,253	183,574	183,574	-	-	183,574
Spinks Rd	A-22	968,297	396,549	184,775	-	211,775	396,549
Timber Creek Rd	A-23	690,850	282,926	-	-	282,926	282,926
Waketon/College Connector	A-24	1,353,000	554,098	-	277,049	277,049	554,098
Windsor Dr	A-25	1,058,867	433,641	27,200	-	406,440	433,641
Yucca Dr	A-26	214,416	87,810	-	-	87,810	87,810
Signal Installation And Intersection Improvements							
College Pkwy. at Timber Creek Rd.	S-1	$ 275,000	$ 112,622	$ -	$ -	$ 112,622	$ 112,622
Bruton Orand Blvd. at Quail Run Rd.	S-2	137,500	56,311	-	-	56,311	56,311
Churchill Dr. at Peters Colony Rd.	S-3	990,000	405,438	-	-	405,438	405,438
Cross Timbers Rd. at Forums Dr.	S-4	179,000	73,306	-	-	73,306	73,306
Garden Ridge Blvd. at Kirkpatrick Ln.	S-5	275,000	112,622	-	-	112,622	112,622
FM 2499 (Long Prairie Rd.) at Chaparral Ln.	S-6	375,000	153,575	-	-	153,575	153,575
Garden Ridge Blvd. at Forest Vista Rd.	S-7	275,000	112,622	-	-	112,622	112,622
FM 2499 (Long Prairie Rd.) at Northshore Blvd.	S-8	275,000	112,622	-	-	112,622	112,622
FM 2499 (Long Prairie Rd.) at Aberdeen Dr.	S-9	380,000	155,622	-	-	155,622	155,622
Lakeside Pkwy. at Silveron Blvd.	S-10	275,000	112,622	-	-	112,622	112,622
FM 2499 (Long Prairie Rd.) at Silveron Blvd.	S-11	390,000	159,718	-	-	159,718	159,718
Gerault Rd. at Old Gerault Rd.	S-12	275,000	112,622	-	-	112,622	112,622
Lakeside Pkwy. at Enterprise Dr.	S-13	275,000	112,622	-	-	112,622	112,622
Dixon Ln. at Morriss Rd.	I - 1	375,000	153,575	-	-	153,575	153,575
FM 2499 (Long Prairie Rd.) at Waketon Rd.	I - 2	1,473,000	603,242	-	-	603,242	603,242
FM 2499 (Long Prairie Rd.) at College Pkwy.	I - 3	333,000	136,374	-	-	136,374	136,374
Bruton Orand Blvd. at Cross Timbers Rd.	I - 4	187,500	76,787	-	-	76,787	76,787
Cross Timbers Rd. at Auburn Dr.	I - 5	375,000	153,575	-	-	153,575	153,575
Cross Timbers Rd. at FM 2499 (Long Prairie Rd.)	I - 6	492,000	201,490	-	-	201,490	201,490
Flower Mound Rd. at McKamy Creek Rd.	I - 7	336,000	137,603	-	-	137,603	137,603
Flower Mound Rd. at FM 2499 (Long Prairie Rd.)	I - 8	460,000	188,385	-	-	188,385	188,385
Flower Mound Rd. at Garden Ridge Blvd.	I - 9	375,000	153,575	-	-	153,575	153,575
FM 2499 (Long Prairie Rd.) at Lakeside Pkwy.	I - 10	375,000	153,575	-	-	153,575	153,575
Lakeside Pkwy. At Gerault Rd.	I-11	375,000	153,575	-	-	153,575	153,575
Roadway Impact Fee Project		$ 30,000	$ 30,000	$ -	$ -	$ 30,000	$ 30,000
Total		**$ 54,180,844**	**$ 22,206,549**	**$ 7,582,343**	**$ 705,179**	**$ 13,919,026**	**$ 22,206,549**

(1) 2020 Roadway Impact Fee Study, Appendix A

(2) Line 11 of the Max Fee Table Report

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

Town of Flower Mound 2020 Roadway Impact Fee Update

Credit Determination

Appendix E - Impact Fee Calculation Assumptions

Service Area A

2020 Vehicle Miles (All Service Areas) [1]	232,952	
Ten Year Growth in Vehicle Miles (Service Area A) [1]	39,780	
	10	years
Annual Growth in Vehicle Miles	3,978	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 1,118,835	$ 1,045,734	$ 934,631	$ 818,622	$ 784,551	$ 738,670	$ 662,434	$ 554,429	$ 443,008	$ 432,061	$ 7,532,974
2020 Vehicle Miles plus Service Area A Growth	236,930	240,908	244,886	248,864	252,842	256,820	260,798	264,776	268,754	272,732	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	$ 4.72	$ 4.34	$ 3.82	$ 3.29	$ 3.10	$ 2.88	$ 2.54	$ 2.09	$ 1.65	$ 1.58	
Annual Growth in Service Area A Vehicle Miles (Cumulative)	3,978	7,956	11,934	15,912	19,890	23,868	27,846	31,824	35,802	39,780	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	$ 18,785	$ 34,535	$ 45,547	$ 52,342	$ 61,717	$ 68,650	$ 70,730	$ 66,638	$ 59,015	$ 63,019	$ 540,978

Credit Amount	**$ 540,978**

(1) Per Kimley-Horn Impact Fee Update

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation Assumptions

Appendix E - Impact Fee Calculation Assumptions

Service Area B

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	105
Available Existing Fund Balance [3]	-

Portion of Projects Funded by Existing Debt [4]	$ 50,510
Non-debt Funded Project Cost [5]	1,708,877
Project Cost Funded Through New Debt [6]	1,489,312
Total Recoverable Project Cost [7]	$ 3,248,699

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ 148,931	4.00%	20
2	148,931	4.00%	20
3	148,931	4.00%	20
4	148,931	4.00%	20
5	148,931	4.00%	20
6	148,931	4.00%	20
7	148,931	4.00%	20
8	148,931	4.00%	20
9	148,931	4.00%	20
10	148,931	4.00%	20
Total	$ 1,489,312		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 245,353
2	319,819
3	319,819
4	319,819
5	319,819
6	319,819
7	319,819
8	319,819
9	319,819
10	394,284
Total	$ 3,198,189

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Assumes all existing fund balances are already encumbered
(4) Per discussion with Town staff and files
(5) Unless specified in Town CIP, Assumes 50% of new project cost funded through sources other than debt
(6) Unless specified in Town CIP, Assumes 50% of new project costs funded through new debt issues
(7) Line 11 of the Max Fee Table Report
(8) Assumes new debt issued based on Town Input
(9) Estimated interest cost provided by Town's Financial Advisor
(10) Non-debt funded capital expenditures made in equal annual amounts. Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year.

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary
Appendix E - Impact Fee Calculation Assumptions
Service Area B

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ 10,959	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,959
2	10,959	10,959	-	-	-	-	-	-	-	-	21,917
3	10,959	10,959	10,959	-	-	-	-	-	-	-	32,876
4	10,959	10,959	10,959	10,959	-	-	-	-	-	-	43,834
5	10,959	10,959	10,959	10,959	10,959	-	-	-	-	-	54,793
6	10,959	10,959	10,959	10,959	10,959	10,959	-	-	-	-	65,752
7	10,959	10,959	10,959	10,959	10,959	10,959	10,959	-	-	-	76,710
8	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	-	-	87,669
9	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	-	98,628
10	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
11	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
12	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
13	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
14	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
15	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
16	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
17	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
18	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
19	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
20	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	109,586
21	-	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	98,628
22	-	-	10,959	10,959	10,959	10,959	10,959	10,959	10,959	10,959	87,669
23	-	-	-	10,959	10,959	10,959	10,959	10,959	10,959	10,959	76,710
24	-	-	-	-	10,959	10,959	10,959	10,959	10,959	10,959	65,752
25	-	-	-	-	-	10,959	10,959	10,959	10,959	10,959	54,793
26	-	-	-	-	-	-	10,959	10,959	10,959	10,959	43,834
27	-	-	-	-	-	-	-	10,959	10,959	10,959	32,876
28	-	-	-	-	-	-	-	-	10,959	10,959	21,917
29	-	-	-	-	-	-	-	-	-	10,959	$ 10,959
	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 219,172	$ 2,191,723

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary

Appendix E - 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
Prev						
1	$ 10,959	$ 245,353	$ (148,931)	$ 7,419	$ (8)	$ 114,791
2	21,917	319,819	(148,931)	6,897	(26)	199,676
3	32,876	319,819	(148,931)	6,122	(52)	209,834
4	43,834	319,819	(148,931)	5,315	(88)	219,949
5	54,793	319,819	(148,931)	5,054	(134)	230,600
6	65,752	319,819	(148,931)	4,713	(189)	241,164
7	76,710	319,819	(148,931)	4,171	(253)	251,516
8	87,669	319,819	(148,931)	3,417	(326)	261,648
9	98,628	319,819	(148,931)	2,640	(407)	271,748
10	109,586	394,284	(148,931)	2,533	(501)	356,971
11	109,586	-	-	2,382	-	111,968
12	109,586	-	-	2,250	-	111,836
13	109,586	-	-	2,249	-	111,835
14	109,586	-	-	2,256	-	111,842
15	109,586	-	-	2,071	-	111,657
16	109,586	-	-	2,048	-	111,634
17	109,586	-	-	1,800	-	111,386
18	109,586	-	-	1,570	-	111,156
19	109,586	-	-	744	-	110,330
20	109,586	-	-	367	-	109,954
21	98,628	-	-	-	-	98,628
22	87,669	-	-	-	-	87,669
23	76,710	-	-	-	-	76,710
24	65,752	-	-	-	-	65,752
25	54,793	-	-	-	-	54,793
26	43,834	-	-	-	-	43,834
27	32,876	-	-	-	-	32,876
28	21,917	-	-	-	-	21,917
29	10,959	-	-	-	-	10,959
	$ 2,191,723	$ 3,198,189	$ (1,489,312)	$ 66,017	$ (1,984)	$ 3,964,633

(1) Appendix E - Service Area B, Page 2

(2) Appendix E - Service Area B, Page 1

(3) Eligible Outstanding Debt Funded Projects Percent of General Projects Debt Issuance times total outstanding tax-supported annual debt service

(4) Appendix E - Service Area B, Page 7

Town of Flower Mound 2020 Roadway Impact Fee Update

Revenue Test

Appendix E - Impact Fee Calculation Assumptions

Service Area B

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ -
1	$ 3,706	105	$ 387,277	114,791	$ 272,486	$ 597	273,082
2	3,706	105	387,277	199,676	187,600	1,607	462,290
3	3,706	105	387,277	209,834	177,443	2,413	642,146
4	3,706	105	387,277	219,949	167,327	3,179	812,653
5	3,706	105	387,277	230,600	156,676	3,903	973,231
6	3,706	105	387,277	241,164	146,113	4,583	1,123,927
7	3,706	105	387,277	251,516	135,761	5,220	1,264,908
8	3,706	105	387,277	261,648	125,629	5,815	1,396,353
9	3,706	105	387,277	271,748	115,529	6,369	1,518,250
10	3,706	105	387,277	356,971	30,305	6,716	1,555,272
11	-	-	-	111,968	(111,968)	6,567	1,449,870
12	-	-	-	111,836	(111,836)	6,106	1,344,140
13	-	-	-	111,835	(111,835)	5,642	1,237,947
14	-	-	-	111,842	(111,842)	5,177	1,131,282
15	-	-	-	111,657	(111,657)	4,710	1,024,336
16	-	-	-	111,634	(111,634)	4,242	916,944
17	-	-	-	111,386	(111,386)	3,772	809,330
18	-	-	-	111,156	(111,156)	3,301	701,475
19	-	-	-	110,330	(110,330)	2,831	593,976
20	-	-	-	109,954	(109,954)	2,361	486,384
21	-	-	-	98,628	(98,628)	1,914	389,670
22	-	-	-	87,669	(87,669)	1,515	303,516
23	-	-	-	76,710	(76,710)	1,161	227,967
24	-	-	-	65,752	(65,752)	855	163,070
25	-	-	-	54,793	(54,793)	594	108,871
26	-	-	-	43,834	(43,834)	381	65,418
27	-	-	-	32,876	(32,876)	215	32,756
28	-	-	-	21,917	(21,917)	95	10,935
29	-	-	-	10,959	(10,959)	24	-
			3,872,766	3,964,633		91,866	

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation

Appendix E - Impact Fee Calculation Assumptions

Service Area B

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Future Value Escalation Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
1	29	1.1326	1.0000	105	118	$ 114,791	$ 130,018
2	28	1.1277	1.0000	105	118	199,676	225,177
3	27	1.1228	1.0000	105	117	209,834	235,600
4	26	1.1179	1.0000	105	117	219,949	245,880
5	25	1.1130	1.0000	105	116	230,600	256,663
6	24	1.1082	1.0000	105	116	241,164	267,250
7	23	1.1033	1.0000	105	115	251,516	277,506
8	22	1.0985	1.0000	105	115	261,648	287,426
9	21	1.0937	1.0000	105	114	271,748	297,220
10	20	1.0890	1.0000	105	114	356,971	388,729
11	19	1.0842	1.0000	-	-	111,968	121,398
12	18	1.0795	1.0000	-	-	111,836	120,725
13	17	1.0748	1.0000	-	-	111,835	120,198
14	16	1.0701	1.0000	-	-	111,842	119,682
15	15	1.0654	1.0000	-	-	111,657	118,962
16	14	1.0608	1.0000	-	-	111,634	118,419
17	13	1.0562	1.0000	-	-	111,386	117,641
18	12	1.0515	1.0000	-	-	111,156	116,886
19	11	1.0470	1.0000	-	-	110,330	115,511
20	10	1.0424	1.0000	-	-	109,954	114,615
21	9	1.0378	1.0000	-	-	98,628	102,361
22	8	1.0333	1.0000	-	-	87,669	90,590
23	7	1.0288	1.0000	-	-	76,710	78,921
24	6	1.0243	1.0000	-	-	65,752	67,352
25	5	1.0199	1.0000	-	-	54,793	55,881
26	4	1.0154	1.0000	-	-	43,834	44,510
27	3	1.0110	1.0000	-	-	32,876	33,237
28	2	1.0066	1.0000	-	-	21,917	22,061
29	1	1.0022	1.0000	-	-	10,959	10,983
					1,161	3,964,633	4,301,401

Total Escalated Expense for Entire Period	$	4,301,401
Total Escalated Service Units		1,161
Impact Fee for Service Area B	**$**	**3,706**

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Project Funding

Appendix E - Impact Fee Calculation Assumptions

Service Area B

Impact Fee Project Name[1]	Impact Fee Project No. [1]	Cost in Service Area [1]	Impact Fee Recoverable Cost [2]	Debt Funded [3] Existing	Debt Funded [3] Proposed	Non-Debt Funded [3]	Impact Fee Recoverable Cost
Roadway Improvements - Service Area B							
Flower Mound Rd	B-1	$ 680,380	$ 124,891	$ 50,510	$ -	$ 74,381	$ 124,891
Red Rock/Shiloh Connector	B-2	6,845,000	1,256,474	-	628,237	628,237	1,256,474
Scenic /Flower Mound Connector	B-3	3,067,000	562,981	-	281,491	281,491	562,981
Shiloh Rd/Lusk Ln Connector	B-4	3,945,000	724,148	-	362,074	362,074	724,148
Shiloh Rd/Lusk Ln Connector	B-5	1,805,500	331,419	-	165,710	165,710	331,419
Simmons Rd	A-19,B-6	564,395	103,601	-	51,800	51,800	103,601
Signal Installation And Intersection Improvements							
Bruton Orand Blvd. at Quail Run Rd.	S-2	137,500	25,240	-	-	25,240	25,240
Bruton Orand Blvd. at Cross Timbers Rd.	I - 4	115,000	21,110	-	-	21,110	21,110
Cross Timbers Rd. at Flower Mound Rd.	I-12	375,000	68,835	-	-	68,835	68,835
Roadway Impact Fee Project		$ 30,000	$ 30,000	$ -	$ -	$ 30,000	$ 30,000
Total		**$ 17,564,775**	**$ 3,248,699**	**$ 50,510**	**$ 1,489,312**	**$ 1,708,877**	**$ 3,248,699**

(1) 2020 Roadway Impact Fee Study, Appendix A

(2) Line 11 of the Max Fee Table Report

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

Town of Flower Mound 2020 Roadway Impact Fee Update

Credit Determination

Appendix E - Impact Fee Calculation Assumptions

Service Area B

2020 Vehicle Miles (All Service Areas) [1]	232,952	
Ten Year Growth in Vehicle Miles (Service Area B) [1]	1,045	
	10	years
Annual Growth in Vehicle Miles	105	

		1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees		$ 18,377	$ 28,814	$ 38,998	$ 49,150	$ 59,847	$ 70,465	$ 80,881	$ 91,086	$ 101,268	$ 112,119	$ 651,004
2020 Vehicle Miles plus Service Area B Growth		233,057	233,161	233,266	233,370	233,475	233,579	233,684	233,788	233,893	233,997	
Total Debt Service Eligible for Impact Fees per Vehicle Mile		$ 0.08	$ 0.12	$ 0.17	$ 0.21	$ 0.26	$ 0.30	$ 0.35	$ 0.39	$ 0.43	$ 0.48	
Annual Growth in Service Area B Vehicle Miles (Cumulative)		105	209	314	418	523	627	732	836	941	1,045	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees		$ 8	$ 26	$ 52	$ 88	$ 134	$ 189	$ 253	$ 326	$ 407	$ 501	$ 1,984
Credit Amount	**$ 1,984**											

(1) Per Kimley-Horn Impact Fee Update

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation Assumptions

Appendix E - Impact Fee Calculation Assumptions

Service Area C

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	3,271
Available Existing Fund Balance [3]	-

Portion of Projects Funded by Existing Debt [4]	$ -
Non-debt Funded Project Cost [5]	45,872,556
Project Cost Funded Through New Debt [6]	45,017,974
Total Recoverable Project Cost [7]	$ 90,890,530

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ 4,501,797	4.00%	20
2	4,501,797	4.00%	20
3	4,501,797	4.00%	20
4	4,501,797	4.00%	20
5	4,501,797	4.00%	20
6	4,501,797	4.00%	20
7	4,501,797	4.00%	20
8	4,501,797	4.00%	20
9	4,501,797	4.00%	20
10	4,501,797	4.00%	20
Total	$ 45,017,974		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 6,838,154
2	9,089,053
3	9,089,053
4	9,089,053
5	9,089,053
6	9,089,053
7	9,089,053
8	9,089,053
9	9,089,053
10	11,339,952
Total	$ 90,890,530

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Assumes all existing fund balances are already encumbered
(4) Per discussion with Town staff and files
(5) Unless specified in Town CIP, Assumes 50% of new project cost funded through sources other than debt
(6) Unless specified in Town CIP, Assumes 50% of new project costs funded through new debt issues
(7) Line 11 of the Max Fee Table Report
(8) Assumes new debt issued based on Town Input
(9) Estimated interest cost provided by Town's Financial Advisor
(10) Non-debt funded capital expenditures made in equal annual amounts. Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year.

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary
Appendix E - Impact Fee Calculation Assumptions
Service Area C

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ 331,250	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 331,250
2	331,250	331,250	-	-	-	-	-	-	-	-	662,500
3	331,250	331,250	331,250	-	-	-	-	-	-	-	993,750
4	331,250	331,250	331,250	331,250	-	-	-	-	-	-	1,325,001
5	331,250	331,250	331,250	331,250	331,250	-	-	-	-	-	1,656,251
6	331,250	331,250	331,250	331,250	331,250	331,250	-	-	-	-	1,987,501
7	331,250	331,250	331,250	331,250	331,250	331,250	331,250	-	-	-	2,318,751
8	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	-	-	2,650,001
9	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	-	2,981,251
10	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
11	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
12	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
13	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
14	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
15	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
16	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
17	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
18	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
19	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
20	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	3,312,501
21	-	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	2,981,251
22	-	-	331,250	331,250	331,250	331,250	331,250	331,250	331,250	331,250	2,650,001
23	-	-	-	331,250	331,250	331,250	331,250	331,250	331,250	331,250	2,318,751
24	-	-	-	-	331,250	331,250	331,250	331,250	331,250	331,250	1,987,501
25	-	-	-	-	-	331,250	331,250	331,250	331,250	331,250	1,656,251
26	-	-	-	-	-	-	331,250	331,250	331,250	331,250	1,325,001
27	-	-	-	-	-	-	-	331,250	331,250	331,250	993,750
28	-	-	-	-	-	-	-	-	331,250	331,250	662,500
29	-	-	-	-	-	-	-	-	-	331,250	$ 331,250
	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 6,625,003	$ 66,250,027

Town of Flower Mound 2020 Roadway Impact Fee Update

Debt Service and Expenses Summary

Appendix E - 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
Prev						
1	$ 331,250	$ 6,838,154	$ (4,501,797)	$ -	$ (4,587)	$ 2,663,020
2	662,500	9,089,053	(4,501,797)	-	(18,099)	5,231,657
3	993,750	9,089,053	(4,501,797)	-	(40,174)	5,540,832
4	1,325,001	9,089,053	(4,501,797)	-	(70,471)	5,841,785
5	1,656,251	9,089,053	(4,501,797)	-	(108,666)	6,134,841
6	1,987,501	9,089,053	(4,501,797)	-	(154,452)	6,420,305
7	2,318,751	9,089,053	(4,501,797)	-	(207,538)	6,698,469
8	2,650,001	9,089,053	(4,501,797)	-	(267,648)	6,969,609
9	2,981,251	9,089,053	(4,501,797)	-	(334,518)	7,233,989
10	3,312,501	11,339,952	(4,501,797)	-	(407,900)	9,742,756
11	3,312,501	-	-	-	-	3,312,501
12	3,312,501	-	-	-	-	3,312,501
13	3,312,501	-	-	-	-	3,312,501
14	3,312,501	-	-	-	-	3,312,501
15	3,312,501	-	-	-	-	3,312,501
16	3,312,501	-	-	-	-	3,312,501
17	3,312,501	-	-	-	-	3,312,501
18	3,312,501	-	-	-	-	3,312,501
19	3,312,501	-	-	-	-	3,312,501
20	3,312,501	-	-	-	-	3,312,501
21	2,981,251	-	-	-	-	2,981,251
22	2,650,001	-	-	-	-	2,650,001
23	2,318,751	-	-	-	-	2,318,751
24	1,987,501	-	-	-	-	1,987,501
25	1,656,251	-	-	-	-	1,656,251
26	1,325,001	-	-	-	-	1,325,001
27	993,750	-	-	-	-	993,750
28	662,500	-	-	-	-	662,500
29	331,250	-	-	-	-	331,250
	$ 66,250,027	$ 90,890,530	$ (45,017,974)	$ -	$ (1,614,052)	$ 110,508,531

(1) Appendix E - Service Area C, Page 2

(2) Appendix E - Service Area C, Page 1

(3) Eligible Outstanding Debt Funded Projects Percent of General Projects Debt Issuance times total outstanding tax-supported annual debt service

(4) Appendix E - Service Area C, Page 7

Town of Flower Mound 2020 Roadway Impact Fee Update

Revenue Test

Appendix E - Impact Fee Calculation Assumptions

Service Area C

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ -
1	$ 3,294	3,271	$ 10,776,209	$ 2,663,020	$ 8,113,190	$ 17,768	8,130,958
2	3,294	3,271	10,776,209	5,231,657	5,544,552	47,756	13,723,266
3	3,294	3,271	10,776,209	5,540,832	5,235,377	71,573	19,030,217
4	3,294	3,271	10,776,209	5,841,785	4,934,424	94,159	24,058,799
5	3,294	3,271	10,776,209	6,134,841	4,641,368	115,542	28,815,710
6	3,294	3,271	10,776,209	6,420,305	4,355,904	135,752	33,307,366
7	3,294	3,271	10,776,209	6,698,469	4,077,741	154,817	37,539,923
8	3,294	3,271	10,776,209	6,969,609	3,806,600	172,761	41,519,285
9	3,294	3,271	10,776,209	7,233,989	3,542,221	189,612	45,251,118
10	3,294	3,271	10,776,209	9,742,756	1,033,454	200,463	46,485,034
11	-	-	-	3,312,501	(3,312,501)	196,350	43,368,883
12	-	-	-	3,312,501	(3,312,501)	182,701	40,239,083
13	-	-	-	3,312,501	(3,312,501)	168,993	37,095,574
14	-	-	-	3,312,501	(3,312,501)	155,224	33,938,297
15	-	-	-	3,312,501	(3,312,501)	141,395	30,767,191
16	-	-	-	3,312,501	(3,312,501)	127,506	27,582,196
17	-	-	-	3,312,501	(3,312,501)	113,556	24,383,250
18	-	-	-	3,312,501	(3,312,501)	99,544	21,170,293
19	-	-	-	3,312,501	(3,312,501)	85,472	17,943,263
20	-	-	-	3,312,501	(3,312,501)	71,337	14,702,099
21	-	-	-	2,981,251	(2,981,251)	57,866	11,778,714
22	-	-	-	2,650,001	(2,650,001)	45,787	9,174,500
23	-	-	-	2,318,751	(2,318,751)	35,106	6,890,856
24	-	-	-	1,987,501	(1,987,501)	25,829	4,929,184
25	-	-	-	1,656,251	(1,656,251)	17,963	3,290,896
26	-	-	-	1,325,001	(1,325,001)	11,512	1,977,408
27	-	-	-	993,750	(993,750)	6,485	990,142
28	-	-	-	662,500	(662,500)	2,886	330,528
29	-	-	-	331,250	(331,250)	722	(0)
			107,762,092	110,508,531		2,746,439	

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Calculation

Appendix E - Impact Fee Calculation Assumptions

Service Area C

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Future Value Escalation Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
1	29	1.1326	1.0000	3,271	3,705	$ 2,663,020	$ 3,016,268
2	28	1.1277	1.0000	3,271	3,689	5,231,657	5,899,794
3	27	1.1228	1.0000	3,271	3,673	5,540,832	6,221,205
4	26	1.1179	1.0000	3,271	3,657	5,841,785	6,530,510
5	25	1.1130	1.0000	3,271	3,641	6,134,841	6,828,207
6	24	1.1082	1.0000	3,271	3,625	6,420,305	7,114,772
7	23	1.1033	1.0000	3,271	3,609	6,698,469	7,390,653
8	22	1.0985	1.0000	3,271	3,594	6,969,609	7,656,277
9	21	1.0937	1.0000	3,271	3,578	7,233,989	7,912,050
10	20	1.0890	1.0000	3,271	3,562	9,742,756	10,609,501
11	19	1.0842	1.0000	-	-	3,312,501	3,591,461
12	18	1.0795	1.0000	-	-	3,312,501	3,575,799
13	17	1.0748	1.0000	-	-	3,312,501	3,560,205
14	16	1.0701	1.0000	-	-	3,312,501	3,544,679
15	15	1.0654	1.0000	-	-	3,312,501	3,529,221
16	14	1.0608	1.0000	-	-	3,312,501	3,513,831
17	13	1.0562	1.0000	-	-	3,312,501	3,498,507
18	12	1.0515	1.0000	-	-	3,312,501	3,483,251
19	11	1.0470	1.0000	-	-	3,312,501	3,468,061
20	10	1.0424	1.0000	-	-	3,312,501	3,452,937
21	9	1.0378	1.0000	-	-	2,981,251	3,094,091
22	8	1.0333	1.0000	-	-	2,650,001	2,738,309
23	7	1.0288	1.0000	-	-	2,318,751	2,385,572
24	6	1.0243	1.0000	-	-	1,987,501	2,035,859
25	5	1.0199	1.0000	-	-	1,656,251	1,689,151
26	4	1.0154	1.0000	-	-	1,325,001	1,345,427
27	3	1.0110	1.0000	-	-	993,750	1,004,670
28	2	1.0066	1.0000	-	-	662,500	666,859
29	1	1.0022	1.0000	-	-	331,250	331,976
					36,335	110,508,531	119,689,104

Total Escalated Expense for Entire Period	$	119,689,104
Total Escalated Service Units		36,335
Impact Fee for Service Area C	**$**	**3,294**

Town of Flower Mound 2020 Roadway Impact Fee Update

Impact Fee Project Funding

Appendix E - Impact Fee Calculation Assumptions

Service Area C

Impact Fee Project Name[1]	Impact Fee Project No. [1]	Cost in Service Area [1]	Impact Fee Recoverable Cost [2]	Debt Funded [3] Existing	Debt Funded [3] Proposed	Non-Debt Funded [3]	Impact Fee Recoverable Cost
Roadway Improvements - Service Area C							
CrossTimbers/Dunham Connector	C-1	$ 3,483,000	$ 3,217,945	$ -	$ 1,608,973	$ 1,608,973	$ 3,217,945
CrossTimbers/US 377 Connector1	C-2	22,005,000	20,330,430	-	10,165,215	10,165,215	20,330,430
CrossTimbers/US 377 Connector2	C-3	6,090,000	5,626,554	-	2,813,277	2,813,277	5,626,554
Denton Creek Blvd	C-4	28,014,000	25,882,148	-	12,941,074	12,941,074	25,882,148
Denton Creek Blvd	C-5	1,435,000	1,325,797	-	662,899	662,899	1,325,797
Denton Creek Blvd	C-6	4,323,000	3,994,022	-	1,997,011	1,997,011	3,994,022
Stonecrest Rd	C-7	3,137,000	2,898,276	-	1,449,138	1,449,138	2,898,276
Stonecrest Rd	C-8	5,437,000	5,023,247	-	2,511,623	2,511,623	5,023,247
UMAB 1	C-9	4,444,000	4,105,814	-	2,052,907	2,052,907	4,105,814
UMAB2	C-10	3,512,000	3,244,738	-	1,622,369	1,622,369	3,244,738
Urban Collector 1	C-11	10,995,000	10,158,286	-	5,079,143	5,079,143	10,158,286
Urban Collector 1	C-12	4,577,000	4,228,692	-	2,114,346	2,114,346	4,228,692
Signal Installation And Intersection Improvements							
US 377 at Canyon Falls Dr.	S-14	205,000	189,400	-	-	189,400	189,400
Cross Timbers Rd. at Canyon Falls Dr.	S-15	137,500	127,036	-	-	127,036	127,036
Cross Timbers Rd. at Denton Creek Blvd.	S-16	275,000	254,073	-	-	254,073	254,073
Cross Timbers Rd. at Cross Timbers/US 377 Conne	S-17	275,000	254,073	-	-	254,073	254,073
Roadway Impact Fee Project		$ 30,000	$ 30,000	$ -	$ -	$ 30,000	$ 30,000
Total		**$ 98,374,500**	**$ 90,890,530**	**$ -**	**$ 45,017,974**	**$ 45,872,556**	**$ 90,890,530**

(1) 2020 Roadway Impact Fee Study, Appendix A

(2) Line 11 of the Max Fee Table Report

(3) Based on Contributions by Project and Planned Future Debt Financing from Town CIP where available

Town of Flower Mound 2020 Roadway Impact Fee Update

Credit Determination

Appendix E - Impact Fee Calculation Assumptions

Service Area C

2020 Vehicle Miles (All Service Areas) [1]	232,952	
Ten Year Growth in Vehicle Miles (Service Area C) [1]	32,714	
	10	years
Annual Growth in Vehicle Miles	3,271	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 331,250	$ 662,500	$ 993,750	$ 1,325,001	$ 1,656,251	$ 1,987,501	$ 2,318,751	$ 2,650,001	$ 2,981,251	$ 3,312,501	$ 18,218,757
2020 Vehicle Miles plus Service Area C Growth	236,223	239,495	242,766	246,038	249,309	252,580	255,852	259,123	262,395	265,666	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	$ 1.40	$ 2.77	$ 4.09	$ 5.39	$ 6.64	$ 7.87	$ 9.06	$ 10.23	$ 11.36	$ 12.47	
Annual Growth in Service Area C Vehicle Miles (Cumulative)	3,271	6,543	9,814	13,086	16,357	19,628	22,900	26,171	29,443	32,714	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	$ 4,587	$ 18,099	$ 40,174	$ 70,471	$ 108,666	$ 154,452	$ 207,538	$ 267,648	$ 334,518	$ 407,900	$ 1,614,052

Credit Amount **$ 1,614,052**

(1) Per Kimley-Horn Impact Fee Update

THE TOWN OF FLOWERMOUND TEXAS

2020

Water

Impact Fee Update

Town of Flower Mound, Texas

Kimley»Horn

Town of Flower Mound, Texas

Water Impact Fee Update Report for 2020

November 2020

Prepared for:
Town of Flower Mound

Prepared by:
Kimley»Horn
Kimley-Horn and Associates, Inc.
13455 Noel Road
Two Galleria Tower, Suite 700
Dallas, TX 75240
Phone: 972 770 1300

TBPE Firm Registration Number: F-928

11-5-20

Project Number: 061000201

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1.0 Introduction

The Town of Flower Mound retained the services of Kimley-Horn and Associates, Inc. (Kimley-Horn) for the purpose of updating the impact fees for water system improvements required to serve new development. The existing fees were adopted by the Town in 2015 in accordance with Chapter 395 of the *Local Government Code* (impact fees), which requires a city imposing impact fees to update the land-use assumptions and capital improvements plan upon which the fees are calculated.

The purpose of this report is to satisfy the requirements of the law and provide the Town with an updated impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

(a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(3) a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(4) a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;

(5) the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;

(6) the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and

(7) a plan for awarding:

i. a credit for the portion of ad valorem tax and utility service revenues generated by new service unit during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

ii. in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The impact fee study includes information from the *2015 Water Master Plan Update* completed by Kimley-Horn in May 2015 and from the 2015 Water Model Update completed by Kimley-Horn in 2020. The impact fees are based on recommended capital improvements and population growth projections outlined in the *2020 Water Master Plan Update.*

The study process was comprised of three tasks:

A. Land Use Assumptions

This task involved evaluating the existing and future land use plan and projecting future growth for the Town. Kimley-Horn worked with Town staff to determine future projections. The growth projections were then used to project wastewater flow throughout the Town.

B. Impact Fee Capital Improvements Plan

This task involved the evaluation of the water capital improvements plan outlined in the 2020 Water System Master Plan Amendments and discussion with Town staff to identify projects that will be constructed in the 10-year planning window and that meet the design criteria to be impact fee eligible.

C. Impact Fee Analysis and Report

This task included calculating the additional service units, service unit equivalents, and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

1.2 Executive Summary

This study was performed to update the Town of Flower Mound's Water System Impact Fees. Water system analysis and the Water System Master Plan are important tools for facilitating orderly growth of the water system and for providing adequate facilities that promote economic development in the Town of Flower Mound. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Elements of the water system, including storage facilities, pumping facilities, and the distribution network itself, were evaluated against industry standards as outlined in the Design Criteria section of this report. Information related to the growth of the Town was obtained from the 2020 Land Use Assumptions Update. Also included in the water system are the proposed improvements for the reuse water system detailed in the Denton Creek Reuse Water Master Plan and Lakeside Reuse Master Plan.

Water system improvements necessary to serve 10-year (2030) and ultimate system needs were evaluated. Typically, infrastructure improvements are sized beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. For example, the projected cost to serve the ultimate system needs is $146,975,635. Of this, $39,158,083 is projected to be eligible for recovery through impact fees within the next 10 years. A portion of the remainder can be assessed as the planning window extends beyond 2030 and as the impact fees are updated in the future.

The impact fee law defines a service unit as follows: *"'Service Unit' means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."* Therefore, the Town of Flower Mound defines a service unit as a unit of development that consumes the amount of water requiring a standard 5/8"x3/4" meter. For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8"x3/4" meter. The equivalency factor and associated impact fee by meter size is shown in Table 1.1.

Based on the Town's 10-year growth projections and the associated demand (consumption) values, 9,000 additional service units will need water by the year 2030. Based on the additional service units and the recoverable capital improvements plans, the Town may assess a maximum of $4,676 per service unit.

Table 1.1 Maximum Assessable Water Impact Fee for Commonly Used Meters

Meter Size	Maximum Continuous Operating Capacity (gpm)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	4,676
3/4" PD	15	1.5	7,013
1" PD	25	2.5	11,689
1 1/2" PD	50	5	23,378
2" PD	80	8	37,405
2" Compound	80	8	37,405
2" Turbine	160	16	74,809
3" Compound	175	17.5	81,823
3" Turbine	350	35	163,646
4" Compound	300	30	140,268
4" Turbine	650	65	303,913
6" Compound	675	67.5	315,602
6" Turbine	1,400	140	654,582
8" Compound	900	90	420,803
8" Turbine	2,400	240	1,122,141
10" Turbine	3,500	350	1,636,455

*PD = Positive Displacement Meter (typical residential meter)
**Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-19. Turbine and Compound meter flows are based on Class II (in-line) meters.

1.3 Design Criteria

A. Water Transmission Lines

Water transmission lines shall be sized to maintain the following pressure requirements:

- Peak hour demand with a minimum pressure of 35 psi;
- Peak day demand plus fire flow with a minimum pressure of 20 psi.

B. Storage Tanks

The Texas Commission on Environmental Quality (TCEQ) has established criteria for ground and elevated water storage. These criteria address volume and height requirements only. The layout of the distribution system, location of the storage facilities, and the interaction with the high service pumps and booster pumps affect the amount of storage necessary for the most efficient and reliable operation of the system.

1. Ground Storage

Ground storage serves two functions:

- Equalization for differing feed rates between water supply and pumping output to the system; and
- Emergency capacity in the event of temporary loss of water supply.

Generally, ground storage facilities are located at water supply points or at each pump station within the water distribution system. Suggested storage capacities are established based on several criteria. There are specific requirements of the TCEQ. These criteria are detailed later in this section. Although ground and elevated storage facilities perform separate functions within the system, both are aimed at decreasing the impact of demand fluctuations. Their capacities are established based on knowledge of how demand varies seasonally and daily.

2. Elevated Storage

Elevated storage serves three purposes:

- Functionally, elevated storage equalizes the pumping rate to compensate for daily variations in demand and to maintain a fairly constant pumping rate (usually referred to as operational storage), or a pumping rate that conforms to the requirements of the electrical rate structure.
- Provides pressure maintenance and protection against surges created by instantaneous demand, such as fire flow and main breaks, and instantaneous change in supply, such as pumps turning on and off.
- Maintains a reserve capacity for fire protection and pressure maintenance in case of power failure to one or more pump stations. Sufficient storage should be maintained to provide four hours of fire flow demand during a loss of power to the pump station.

Suggested storage capacities are established by the TCEQ. Adequate operational storage is established by determining the required volume to equalize the daily fluctuations in flow during the maximum day demand, plus the reserve volume required for fire protection.

The minimum requirements for storage, according to Chapter 290 of the Texas Administrative Code, are as follows:

- Total Storage: equal to 200 gallons per connection.
- Elevated Storage: equal to 100 gallons per connection; or

- Elevated Storage: equal to 200 gallons per connection for a firm pumping capacity reduction from 2.0 gallons per minute (gpm) per connection to 0.6 gpm.

C. Pump Stations

Pumping capacities must provide the maximum day demand or the peak hour demand required by the water system of the suggested capacities established by the TCEQ. Pumping capacity should supply the maximum demand with sufficient redundancy to allow for the largest pump at the pump station to be out of service. This is known as firm pumping capacity.

Each pump station or pressure plane must have two or more pumps that have a total capacity of 2.0 gpm per connection or have a total capacity of at least 1,000 gpm and the ability to meet peak hour demand with the largest pump out of service, whichever is less. If the system provides elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 gpm per connection are required.

D. Water Demand

The criteria used for projecting the water demands for the water system were derived from the 2020 Water System Master Plan Amendments.

Table 1.2 Demand by Land Use Type

Land Use Type	Demand (gpd/acre)	Demand (gpd/dwelling unit)
Single Family Residential Unit	-	500
Conservation District Residential	350	-
Multifamily	3,000	-
Mixed Use	4,000	-
Lakeside area with residential	3,050	-
Office	2,625	-
Retail	1,000	-
Commercial	2,025	-
Industrial	1,300	-
Park	250	-
Utility	200	-
Hospital	3,000	-
School	2,000	-
Nature's Best	1,500	-
Bridlewood	2,250	-
Wellington	2,000	-
MI Windows	1,800	-
Lifetime Fitness	2,500	-
Inventrust	3,500	-

1.4 Impact Fee Capital Improvements Plan

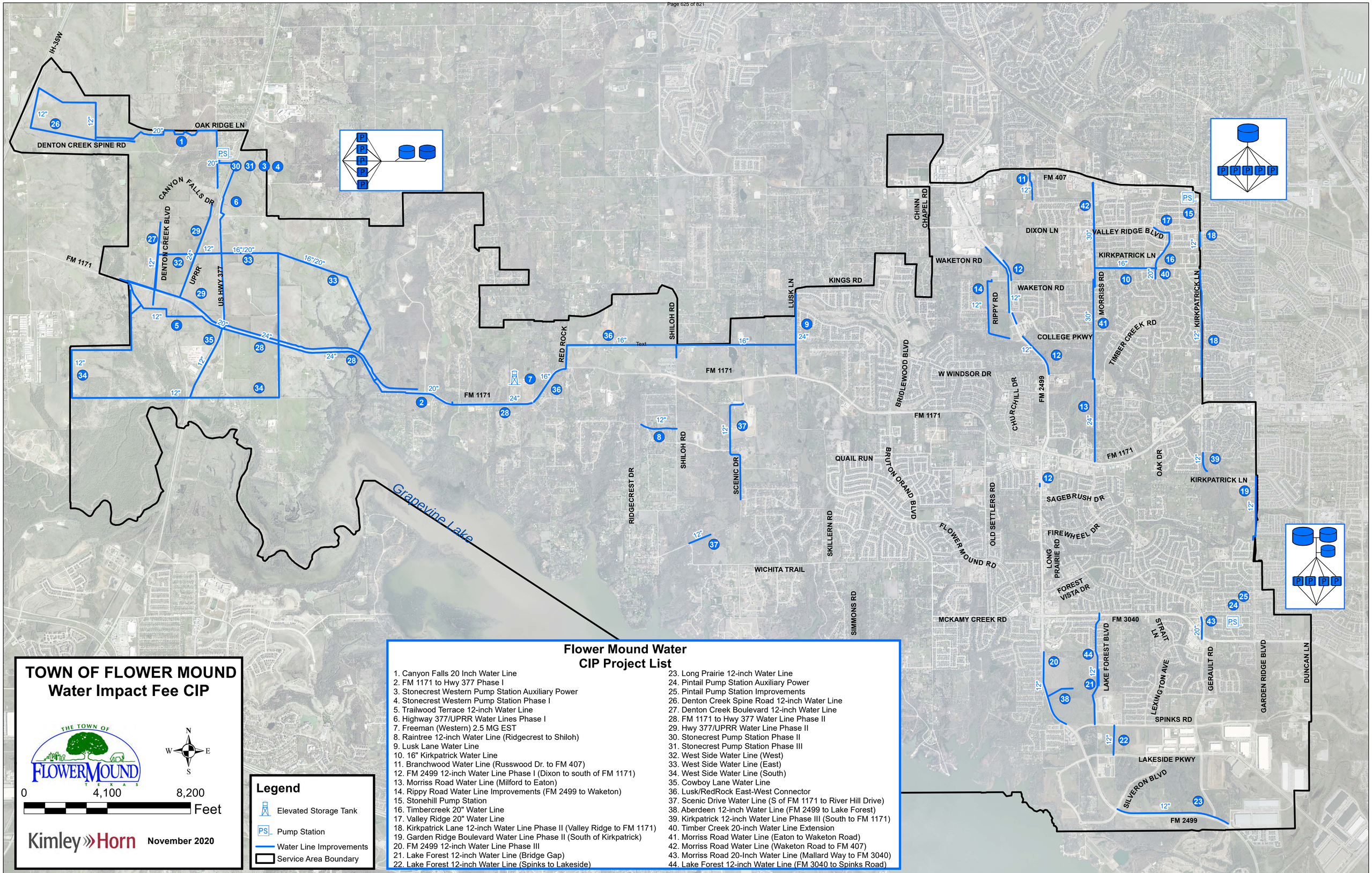
Kimley-Horn assisted the Town with an update to the water model. The update included an evaluation of existing and future demands along with the required infrastructure needed to serve future needs. The model updated recommended system improvements to accommodate growth through the Town's build-out. Also included in the recommended project list are the improvements associated with the Denton Creek and Lakeside reuse water system.. In 2015 the Town adopted the Denton Creek Reuse Water System Master Plan for proposed reuse improvements. Only the first three phases of the Lakeside Reuse projects are included due to their estimated construction dates per Alan Plummer's 2018 Report. The reuse water systems will offset some of the future potable water demand needs and thus is a benefit to the overall water system of the Town.

Sixty-eight (68) projects have been determined to be eligible for recoverable cost through impact fees over the next 10 years. The total of these projects is $146,975,635. The projected total recoverable amount through impact fees is $39,158,083. After financing costs are added and the credit calculation is completed, $42,080,278 is recoverable through impact fees serving the 10-year system needs. These impact fee improvements are shown in Table 1.3 and illustrated in Figure 1.1 and Figure 1.2.

Table 1.3 Water Impact Fee Capital Improvements Project Cost and 10-Year Recoverable Cost

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Projected Recoverable Cost
1	Canyon Falls 20-inch Water Line	0%	24%	24%	$1,746,339	$419,121
2	Highway 377/UPRR Water Lines Phase I	16%	24%	8%	$2,296,815	$183,745
3	Stonecrest Pump Station Auxiliary Power	7%	22%	15%	$2,550,000	$382,500
4	Stonecrest (Western) Pump Station Phase I	13%	51%	38%	$11,944,788	$4,539,019
5	Trailwood Terrace 12-inch Water Line	32%	100%	68%	$325,099	$221,067
6	FM 1171 to Hwy 377 Phase I	32%	92%	60%	$2,810,382	$1,686,229
7	Freeman (Western) 2.5 MG EST	16%	46%	30%	$5,613,340	$1,684,002
8	Raintree 12-inch Water Line (Ridgecrest to Shiloh)	50%	100%	50%	$308,757	$154,379
9	Lusk Lane Water Line	80%	100%	20%	$1,060,864	$212,173
10	16" Kirkpatrick Water Line	69%	91%	22%	$570,341	$125,475
11	Branchwood Water Line (Russwood Dr. to FM 407)	50%	100%	50%	$55,222	$27,611
12	FM 2499 12-inch Water Line Phase I (Dixon to south of FM 1171)	0%	100%	100%	$1,157,783	$1,157,783
13	Morriss Road Water Line Phase II (FM 1171 to Eaton)	0%	91%	91%	$2,722,500	$2,477,475
14	Rippy Road Water Line Improvements (FM 2499 to Waketon)	5%	100%	95%	$750,000	$712,500
15	Stonehill Pump Station	85%	97%	12%	$9,487,799	$1,138,536
16	Timber Creek 20" Water Line	67%	91%	24%	$542,164	$130,119
17	Valley Ridge 20" Water Line	67%	91%	24%	$208,441	$50,026
18	Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)	0%	100%	100%	$1,079,971	$1,079,971
19	Garden Ridge Boulevard Water Line Phase II (South of Kirkpatrick)	0%	100%	100%	$743,844	$743,844
20	FM 2499 12-inch Water Line Phase III	5%	82%	77%	$762,253	$586,935
21	Lake Forest 12-inch Water Line (Bridge Gap)	50%	100%	50%	$127,571	$63,786
22	Lake Forest 12-inch Water Line (Spinks to Lakeside)	38%	82%	44%	$109,252	$48,071
23	Long Prairie 12-inch Water Line	5%	82%	77%	$828,903	$638,255
24	Pintail Pump Station Auxiliary Power	85%	100%	15%	$1,269,857	$190,479
25	Pintail Pump Station Capacity Improvements	31%	82%	51%	$300,000	$153,000
26	Denton Creek Spine Road 12-inch Water Line	0%	18%	18%	$3,210,000	$577,800
27	Denton Creek Boulevard 12-inch Water Line	0%	24%	24%	$1,300,000	$312,000
28	FM 1171 to Hwy 377 Water Line Phase II	0%	24%	24%	$6,400,000	$1,536,000
29	Hwy 377/UPRR Water Line Phase II	0%	24%	24%	$3,410,000	$818,400
30	Stonecrest Pump Station Phase II	0%	5%	5%	$5,460,000	$273,000
31	Stonecrest Pump Station Phase III	0%	5%	5%	$790,000	$39,500
32	West Side Water Line (West)	0%	24%	24%	$1,560,000	$374,400
33	West Side Water Line (East)	0%	5%	5%	$4,850,000	$242,500
34	West Side Water Line (South)	0%	36%	36%	$4,550,000	$1,638,000
35	Cowboy Lane Water Line	0%	36%	36%	$930,000	$334,800
36	Lusk/Red RockEast-West Connector	0%	5%	5%	$4,250,000	$212,500
37	Scenic Drive Water Line (S of FM 1171 to River Hill Drive)	0%	5%	5%	$1,430,000	$71,500
38	Aberdeen 12-inch Water Line (FM 2499 to Lake Forest)	40%	82%	42%	$207,187	$87,019
39	Kirkpatrick 12-inch Water Line Phase III (South to FM 1171)	0%	100%	100%	$450,000	$450,000
40	Timber Creek 20-inch Water Line Extension	0%	91%	91%	$490,000	$445,900
41	Morriss Road Water Line Phase III (Eaton to Waketon Road)	0%	91%	91%	$3,140,000	$2,857,400

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Projected Recoverable Cost
42	Morriss Road Water Line Phase IV (Waketon Road to FM 407)	0%	91%	91%	$4,190,000	$3,812,900
43	Morriss Road 20-Inch Water Line (Mallard Way to FM 3040)	0%	91%	91%	$720,000	$655,200
44	Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)	0%	5%	5%	$1,760,000	$88,000
45	2020 Water Master Plan and Impact Fee Updates	0%	100%	100%	$179,500	$179,500
46	Reuse Pump Station and Ground Storage Tanks	0%	15%	15%	$7,900,000	$1,185,000
47	Reuse Transmission Lines	0%	15%	15%	$1,770,000	$265,500
48	FM 1171/Hwy 377 Central Reuse Loop	0%	15%	15%	$1,570,000	$235,500
49	FM 1171 West Reuse Line	0%	15%	15%	$1,570,000	$235,500
50	FM 1171 East Reuse Line	0%	15%	15%	$1,360,000	$204,000
51	Highway 377 Central Reuse Line	0%	15%	15%	$1,290,000	$193,500
52	Canyon Falls Drive Reuse Line	0%	15%	15%	$1,320,000	$198,000
53	Denton Creek Boulevard South Reuse Line	0%	15%	15%	$1,060,000	$159,000
54	UPRR Central Reuse Line	0%	15%	15%	$960,000	$144,000
55	Stonecrest Road Reuse Line	0%	15%	15%	$770,000	$115,500
56	Canyon Falls North Reuse Line	0%	15%	15%	$680,000	$102,000
57	East Reuse Lines	0%	15%	15%	$2,320,000	$348,000
58	Reuse Central Connector	0%	15%	15%	$630,000	$94,500
59	Denton Creek North Distribution Line	0%	15%	15%	$870,000	$130,500
60	Denton Creek Spine Road Reuse Lines	0%	15%	15%	$1,110,000	$166,500
61	Hwy 377 North Reuse Line	0%	15%	15%	$440,000	$66,000
62	Dunham/Hayes Reuse Loop	0%	15%	15%	$900,000	$135,000
63	Cowboy Lane Reuse Line	0%	15%	15%	$770,000	$115,500
64	Southwest Reuse Line	0%	15%	15%	$800,000	$120,000
65	Lakeside Business District - Water Reuse Master Plan	0%	100%	100%	$126,663	$126,663
66	Lakeside Reuse Phase I	0%	5%	5%	$9,030,000	$451,500
67	Lakeside Reuse Phase II	0%	5%	5%	$5,450,000	$272,500
68	Lakeside Reuse Phase III	0%	5%	5%	$5,630,000	$281,500
	Total				$146,975,635	$39,158,083



TOWN OF FLOWER MOUND
Water Impact Fee CIP

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 4,100 8,200 Feet

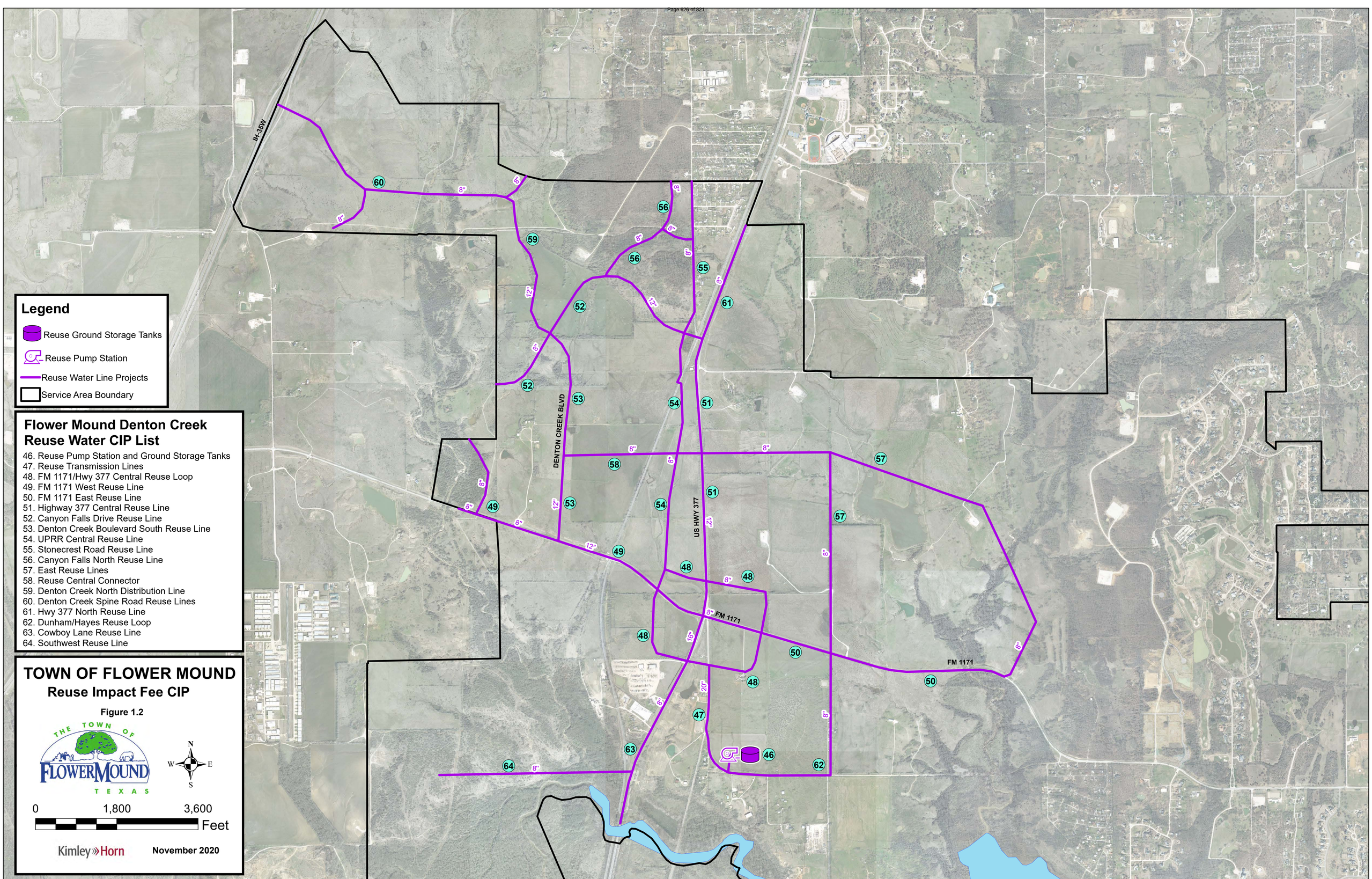
Kimley»Horn November 2020

Legend

- Elevated Storage Tank
- PS Pump Station
- Water Line Improvements
- Service Area Boundary

Flower Mound Water
CIP Project List

1. Canyon Falls 20 Inch Water Line
2. FM 1171 to Hwy 377 Phase I
3. Stonecrest Western Pump Station Auxiliary Power
4. Stonecrest Western Pump Station Phase I
5. Trailwood Terrace 12-inch Water Line
6. Highway 377/UPRR Water Lines Phase I
7. Freeman (Western) 2.5 MG EST
8. Raintree 12-inch Water Line (Ridgecrest to Shiloh)
9. Lusk Lane Water Line
10. 16" Kirkpatrick Water Line
11. Branchwood Water Line (Russwood Dr. to FM 407)
12. FM 2499 12-inch Water Line Phase I (Dixon to south of FM 1171)
13. Morriss Road Water Line (Milford to Eaton)
14. Rippy Road Water Line Improvements (FM 2499 to Waketon)
15. Stonehill Pump Station
16. Timbercreek 20" Water Line
17. Valley Ridge 20" Water Line
18. Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)
19. Garden Ridge Boulevard Water Line Phase II (South of Kirkpatrick)
20. FM 2499 12-inch Water Line Phase III
21. Lake Forest 12-inch Water Line (Bridge Gap)
22. Lake Forest 12-inch Water Line (Spinks to Lakeside)
23. Long Prairie 12-inch Water Line
24. Pintail Pump Station Auxiliary Power
25. Pintail Pump Station Improvements
26. Denton Creek Spine Road 12-inch Water Line
27. Denton Creek Boulevard 12-inch Water Line
28. FM 1171 to Hwy 377 Water Line Phase II
29. Hwy 377/UPRR Water Line Phase II
30. Stonecrest Pump Station Phase II
31. Stonecrest Pump Station Phase III
32. West Side Water Line (West)
33. West Side Water Line (East)
34. West Side Water Line (South)
35. Cowboy Lane Water Line
36. Lusk/RedRock East-West Connector
37. Scenic Drive Water Line (S of FM 1171 to River Hill Drive)
38. Aberdeen 12-inch Water Line (FM 2499 to Lake Forest)
39. Kirkpatrick 12-inch Water Line Phase III (South to FM 1171)
40. Timber Creek 20-inch Water Line Extension
41. Morriss Road Water Line (Eaton to Waketon Road)
42. Morriss Road Water Line (Waketon Road to FM 407)
43. Morriss Road 20-Inch Water Line (Mallard Way to FM 3040)
44. Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)



Legend

- Reuse Ground Storage Tanks
- Reuse Pump Station
- Reuse Water Line Projects
- Service Area Boundary

Flower Mound Denton Creek Reuse Water CIP List

46. Reuse Pump Station and Ground Storage Tanks
47. Reuse Transmission Lines
48. FM 1171/Hwy 377 Central Reuse Loop
49. FM 1171 West Reuse Line
50. FM 1171 East Reuse Line
51. Highway 377 Central Reuse Line
52. Canyon Falls Drive Reuse Line
53. Denton Creek Boulevard South Reuse Line
54. UPRR Central Reuse Line
55. Stonecrest Road Reuse Line
56. Canyon Falls North Reuse Line
57. East Reuse Lines
58. Reuse Central Connector
59. Denton Creek North Distribution Line
60. Denton Creek Spine Road Reuse Lines
61. Hwy 377 North Reuse Line
62. Dunham/Hayes Reuse Loop
63. Cowboy Lane Reuse Line
64. Southwest Reuse Line

TOWN OF FLOWER MOUND

Reuse Impact Fee CIP

Figure 1.2

N
W E
S

0 1,800 3,600

Feet

Kimley»Horn

November 2020

SPINKS RD

FM 2499

GERAULT RD

LAKESIDE PKWY

INTERNATIONAL PKWY

LAKESIDE
SERVICE AREA

TOWN OF FLOWER MOUND

Lakeside Reuse Map

Figure 1

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 500 1,000
Feet

Kimley»Horn

NOVEMBER 2020

Legend

- Phase 1
- Phase 2
- Phase 3
- Town_Boundary

Flower Mound Lakeside Reuse Water CIP List

66. Lakeside Reuse Phase I
67. Lakeside Reuse Phase II
68. Lakeside Reuse Phase III

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

A. Project Descriptions

1. Canyon Falls 20-inch Water Line
   Approximately 7,600 LF of 20-inch water line along Stonecrest Road through the Canyon Falls development from Stonecrest Road to Prairie Ridge Road. This water line is being constructed in phases as part of a Development Agreement in which the Town reimburses the developer for the waterline progress as it is completed.

Project Cost	$1,746,339
Recoverable Cost	$419,121

2. Highway 377/UPRR Water Lines Phase I
   Approximately 6,500 LF of 30-inch water line was constructed along Highway 377 from FM 1171 to Stonecrest Road, in addition to 2,700 LF of 36-inch water line along Highway 377, from Stonecrest Road to the proposed Western (Stonecrest) Pump Station. This line will provide the primary transmission from the Stonecrest Pump Station to the western portion of the Town.

Project Cost	$2,296,815
Recoverable Cost	$183,745

3. Stonecrest Pump Station Auxiliary Power
   This project includes installing a 1,500 kW generator and associated items to provide auxiliary power to the Stonecrest Pump Station.

Project Cost	$2,550,000
Recoverable Cost	$382,500

4. Stonecrest (Western) Pump Station Phase I
   The Stonecrest Pump Station was constructed in 2015. The first phase of the pump station included 5 MG of ground storage capacity and a firm pumping capacity of approximately 12,000 gpm. The station is currently oversized to meet future demands; therefore, a portion of the tank cost is recoverable through impact fees.

Project Cost	$11,944,788
Recoverable Cost	$4,539,019

5. Trailwood Terrace 12-inch Water Line
   This project included approximately 8,000 LF of 12-inch water line from Highway 377 west to Canyon Falls Drive. This project also included approximately 150 LF of 20-inch water line installed by bore under FM 1171 on the west side of Highway 377. This water line provides service to Trailwood Terrace and other developments in the west part of Town. The cost shown is the Town's reimbursement to the developer based on the required upsize of the waterline from 8" to 12" as established in the corresponding Developer Agreement.

Project Cost	$325,099
Recoverable Cost	$221,067

6. FM 1171 to Hwy 377 Phase I
   Approximately 13,100 LF of 20-inch water line was constructed along the north side of FM 1171, from Tour 18 Drive to Highway 377 and connects to the 30-inch water line constructed as part of the Highway 377/UPRR Water Line Phase I project. This water line will serve as primary transmission from the Stonecrest Pump Station to the western portion of the Town.

Project Cost	$2,810,382
Recoverable Cost	$1,686,229

7. Freeman (Western) 2.5 MG EST
   Construction of this 2.5 MG EST near the intersection of FM 1171 and High Road in western Flower Mound was completed in 2013. The tank is currently oversized to meet projected demands; therefore, a portion of the tank cost is recoverable through impact fees.

Project Cost	$5,613,340
Recoverable Cost	$1,684,002

8. Raintree 12-inch Water Line (Ridgecrest to Shiloh)
   Approximately 1,800 LF of 12-inch water line was constructed along Raintree Place, from Ridgecrest Drive to Shiloh Road.

Project Cost	$308,757
Recoverable Cost	$154,379

9. Lusk Lane Water Line
   Lusk Lane water line was completed and placed into service in the fall of 2009. The project consisted of 4,000 LF of 20-inch/24-inch water line which was constructed along Lusk Lane, from Kings Roads to FM 1171. The line completes an additional transmission loop from the 24-inch water line on Kings Road to the existing 20-inch water line on FM 1171.

Project Cost	$1,060,864
Recoverable Cost	$212,173

10. 16-inch Kirkpatrick Water Line
    Kirkpatrick water line was completed and placed into service in the spring of 2009. The project consisted of 4,700 LF of 16-inch water line along Kirkpatrick Lane, from Morriss Road to Timber Creek Road.

Project Cost	$570,341
Recoverable Cost	$125,475

11. Branchwood Water Line (Russwood Dr. to FM 407)
    Approximately 1,350 LF of 12-inch water line was constructed to connect the system along FM 407 to the existing 12-inch water line along Dixon Lane, approximately half way between FM 2499 and Morriss Road. The cost shown is the Town's reimbursement to the developer based on the required line upsize from 8" to 12" as established in the corresponding Developer Agreement.

Project Cost	$55,222
Recoverable Cost	$27,611

12. FM 2499 12-inch Water Line Phase I (Dixon to south of FM 1171)
Approximately 7,560 LF of 12-inch water line is proposed along FM 2499 from south of the Robertson's Creek commercial development south to the Texas Presbyterian Hospital filling in gaps between existing water lines. An additional 140 LF of water line is proposed along FM 2499, south of FM 1171, closing a gap in the 12-inch loop south of FM 1171.

Project Cost	$1,157,783
Recoverable Cost	$1,157,783

13. Morriss Road Water Line Phase II (FM 1171 to Eaton)
Approximately 100 LF of 20-inch, 3,900 LF of 24-inch, 800 LF of 30-inch, 150 LF of 8-inch, and 200 LF of 12-inch water line is proposed from FM 1171 to north of Eaton Street.

Project Cost	$2,722,500
Recoverable Cost	$2,477,475

14. Rippy Road Water Line Improvements (FM 2499 to Waketon)
Approximately 1,400 LF of 12-inch water line has been constructed along Rippy Road from Waketon to Pecan Meadows. The remaining approximately 2,500 LF of 12-inch water line is proposed to be constructed along Rippy Road to connect this line to existing water mains in FM 2499.

Project Cost	$750,000
Recoverable Cost	$712,500

15. Stonehill Pump Station
The Stonehill Pump Station was completed and placed into service in the fall of 2002. The pump station consists of 10 MG of ground storage and a firm pumping capacity of approximately 28,000 gpm. The station is currently oversized to meet future system needs; therefore, a portion of the station cost is recoverable through impact fees.

Project Cost	$9,487,799
Recoverable Cost	$1,138,536

16. Timber Creek 20-inch Water Line
Approximately 1,930 LF of 20-inch water line was constructed along Timber Creek Road, beginning at Valley Ridge Boulevard and ending at Kirkpatrick Lane. The water line provides secondary transmission from the Stonehill Pump Station.

Project Cost	$542,164
Recoverable Cost	$130,119

17. Valley Ridge 20-inch Water Line
Approximately 760 LF of 20-inch water line was constructed along Valley Ridge Boulevard, beginning at Stone Hill Farms Parkway and ending at Timber Creek Road. The water line provides secondary transmission from the Stonehill Pump Station.

Project Cost	$208,441
Recoverable Cost	$50,026

18. Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)
Approximately 5,980 LF of 12-inch water line is proposed along the north-south leg of Kirkpatrick Lane, from the bend in Kirkpatrick Lane to the dead end of the existing 12-inch line in Kirkpatrick Lane.

Project Cost	$1,079,971
Recoverable Cost	$1,079,971

19. Garden Ridge Boulevard Water Line Phase II (South of Kirkpatrick)
Approximately 3,200 LF of 12-inch water line is proposed along Garden Ridge Boulevard from Bellaire Boulevard to Ridgecreek Drive.

Project Cost	$743,844
Recoverable Cost	$743,844

20. FM 2499 12-inch Water Line Phase III
Approximately 3,950 LF of 12-inch water line was constructed along FM 2499, between Sherri Lane and Spinks Road.

Project Cost	$762,253
Recoverable Cost	$586,935

21. Lake Forest 12-inch Water Line (Bridge Gap)
Approximately 750 LF of 12-inch water line was constructed to close the gap located along Lake Forest Boulevard, south of Lincoln Court and north of Spinks Road.

Project Cost	$127,571
Recoverable Cost	$63,786

22. Lake Forest 12-inch Water Line (Spinks to Lakeside)
Approximately 1,450 LF of 12-inch water line was constructed from Spinks Road to Lakeside Parkway. This water line was installed in an easement adjacent to an industrial development. This line is the first section of the parallel Lake Forest Water Line which provides secondary transmission to the Lakeside Business District to accommodate residential uses in the district.

Project Cost	$109,252
Recoverable Cost	$48,071

23. Long Prairie 12-inch Water Line
Approximately 5,500 LF of 12-inch water line was constructed along Long Prairie Road, from Silveron Boulevard to Enterprise Drive. This line provides a second line along Long Prairie Road, preventing service lines from running under the roadway.

Project Cost	$828,903
Recoverable Cost	$638,255

24. Pintail Pump Station Auxiliary Power
This project included installing a 1,500 kW generator and associated items to provide auxiliary power to the Pintail Pump Station.

Project Cost	$1,269,857
Recoverable Cost	$190,479

25. Pintail Pump Station Capacity Improvements
This project included the replacement of one existing small pump with a larger pump along with necessary piping and valve improvements for larger pump and increased overall capacity. The total project cost for this project was $1,245,395; of that the Southgate Development contributed $945,395 per the development agreement. This $945,395 is not included in the project cost below because it is not a recoverable cost.

Project Cost	$300,000
Recoverable Cost	$153,000

26. Denton Creek Spine Road 12-inch Water Line
Approximately 14,300 LF of 12-inch water line is proposed for the far northwest portion of town, extending to Interstate Highway 35-W.

Project Cost	$3,210,000
Recoverable Cost	$577,800

27. Denton Creek Boulevard 12-inch Water Line
Approximately 5,000 LF of 12-inch water line is proposed along Denton Creek Boulevard. This line will extend from FM 1171 north through the Canyon Falls development where it will connect to an existing water line.

Project Cost	$1,300,000
Recoverable Cost	$312,000

28. FM 1171 to Hwy 377 Water Line Phase II
Approximately 12,600 LF of 24-inch water line is proposed along the south side of FM 1171 parallel to the existing 20-inch transmission line. The project would begin east of the Freeman Elevated Tank at High Road and extend west to Highway 377, where it will connect to the 20-inch water line proposed in the Highway 377/UPRR Water Line Phase II project. The line will serve as secondary transmission from the Stonecrest Pump Station to the western portion of the Town.

Project Cost	$6,400,000
Recoverable Cost	$1,536,000

29. Highway 377/UPRR Water Lines Phase II
Approximately 7,600 LF of 24-inch to 30-inch water line is proposed along Stonecrest Lane, adjacent to the Union Pacific Railroad, beginning south of Stonecrest Road and extending south to the intersection of the railroad and FM 1171, then continuing east to Highway 377. This line will provide secondary transmission from the Stonecrest Pump Station of the western portion of the Town.

Project Cost	$3,410,000

Recoverable Cost	$818,400

30. Stonecrest Pump Station Phase II
Phase II of the Stonecrest Pump Station will consist of an additional 5 MG of ground storage capacity and an additional fourth pump bringing the firm pumping capacity of the pump station to 18,000 gpm.

Project Cost	$5,460,000
Recoverable Cost	$273,000

31. Stonecrest Pump Station Phase III
Phase III of the Stonecrest Pump Station will consist of installing a fifth pump, bringing the station to its ultimate firm pumping capacity of approximately 24,000 gpm.

Project Cost	$790,000
Recoverable Cost	$39,500

32. West Side Water Line (West)
Approximately 3,000 LF of 12-inch water line connecting the system from the 30-inch water line along Highway 377 to Denton Creek Boulevard. This project also includes approximately 2,600 LF of 12-inch water line on the north side of FM 1171 from the future 20-inch water line at UPRR west to the Trailwood Terrace 12-inch Water Line near Canyon Falls Drive. These lines will comprise a portion of the distribution system in the west side of the Town.

Project Cost	$1,560,000
Recoverable Cost	$374,400

33. West Side Water Line (East)
Approximately 12,300 LF of 16-inch water line and 2,700 LF of 20-Inch water line is proposed north of FM 1171, east of Highway 377, and west of Tour 18 Drive.

Project Cost	$4,850,000
Recoverable Cost	$242,500

34. West Side Water Line (South)
Approximately 19,100 LF of looped, 12-inch water line is proposed south of FM 1171, eventually providing service to the southwest portion of the Town.

Project Cost	$4,550,000
Recoverable Cost	$1,638,000

35. Cowboy Lane Water Line
Approximately 3,800 LF of 12-inch water line is proposed to extend from the intersection of Highway 377 and FM 1171, southeast, to Cowboy Lane.

Project Cost	$930,000
Recoverable Cost	$334,800

36. Lusk/Red Rock East-West Connector
    Approximately 12,000 LF of 16-inch water line is proposed along the future Lusk/Red Rock East-West Connector as shown on the Master Thoroughfare Plan. It also includes roughly 3,500 LF of 16-inch water line along FM 1171, from Red Rock to the Freeman Elevated Tank. This line will provide secondary transmission to the western portion of the Town.

Project Cost	$4,250,000
Recoverable Cost	$212,500

37. Scenic Drive Water Line (S of FM 1171 to River Hill Drive)
    Approximately 5,700 LF of 12-inch water line is proposed along Scenic Drive, connecting to the existing 12-inch water line along Scenic Drive south of FM 1171 to River Hill Drive.

Project Cost	$1,430,000
Recoverable Cost	$71,500

38. Aberdeen 12-inch Water Line (FM 2499 to Lake Forest)
    Approximately 1,150 LF of 12-inch water line was constructed along Aberdeen Road, from Long Prairie Road (FM 2499) to Lake Forest Boulevard, north of Spinks Road. This line provides additional capacity from the system in Long Prairie Road, east, into the Lakeside Business District.

Project Cost	$207,187
Recoverable Cost	$87,019

39. Kirkpatrick Lane 12-inch Water Line Phase III (South of FM 1171)
    Approximately 1,000 LF of 12-inch water line is proposed to connect the 12-inch water line along Kirkpatrick Lane, south of Spanish Oak Drive, to the 12-inch water line along Bellaire Boulevard, east of Wager Drive.

Project Cost	$450,000
Recoverable Cost	$450,000

40. Timber Creek 20-inch Water Line Extension
    Approximately 550 LF of 20-Inch water line is proposed in Timber Creek Road from Kirkpatrick Lane to Colony Street. This line, which will parallel an existing 12-inch line, will connect the existing 16-inch lines in Kirkpatrick Lane and Colony Street and alleviate high velocities and headloss in the existing 12-inch line.

Project Cost	$490,000
Recoverable Cost	$445,900

41. Morriss Road Water Line Phase III (Eaton to Waketon Road)
    Approximately 4,400 LF of 30-inch water line in Morriss Road from Eaton to Waketon Road. This water line will replace the existing 20-inch water line in Morriss Road and provide transmission from Stonehill Pump Station.

Project Cost	$3,140,000
Recoverable Cost	$2,857,000

42. Morriss Road Water Line Phase IV (Waketon Road to FM 407)
Approximately 5,200 LF of 30-inch water line in Morriss Road from Waketon Road to FM 407. This water line will replace the existing 20-inch water line in Morriss Road and provide transmission from Stonehill Pump Station.

Project Cost	$4,190,000
Recoverable Cost	$3,812,900

43. Morriss Road Parallel 20-inch Water Line (Mallard Way to FM 3040)
Approximately 1,100 LF of 20-inch water line is proposed from Mallard Way to FM 3040. This line will parallel and existing 16-inch line and provide secondary transmission from Pintail Pump Station to the Lakeside Business District.

Project Cost	$720,000
Recoverable Cost	$655,200

44. Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)
Approximately 5,600 LF of 12-inch water line is proposed extending from FM 3040 south to Spinks Road parallel to the existing 12-inch water line in Lake Forest Boulevard. This water line is the second section of the parallel Lake Forest 12-inch line and will provide secondary transmission to the Lakeside Business District to accommodate residential uses in the district.

Project Cost	$1,760,000
Recoverable Cost	$88,000

45. 2020 Water Master Plan and Impact Fee Updates
The major update to the Water Master Plan was performed in 2020. Based on projected future infrastructure needs, a Water Impact Fee Update was also completed to determine how much of the infrastructure costs may be recovered by the Town.

Project Cost	$179,500
Recoverable Cost	$179,500

46. Reuse Pump Station and Ground Storage Tanks
This project includes a pump station with a capacity of 4,500 gpm as well as two 2 MG ground storage tanks. Reuse water from the Trinity River Authority will be delivered to this site; the pump station will pressurize and distribute the reuse water throughout the reuse pipe network.

Project Cost	$7,900,000
Recoverable Cost	$1,185,000

47. Reuse Transmission Lines
Approximately 3,470 LF of 20-inch reuse water line and 1,090 LF of 16-inch reuse water line is proposed to provide primary distribution of reuse water from the Reuse Pump Station to the Town. The Reuse Transmission Lines connect directly to the FM 1171/Hwy 377 Central Reuse Loop, FM 1171 East and West Reuse Lines and the Hwy 377 Central Reuse Line.

Project Cost	$1,770,000
Recoverable Cost	$265,500

48. FM 1171/Hwy 377 Central Reuse Loop
    Approximately 7,630 LF of 8-inch reuse water line is proposed to provide reuse water to the area surrounding the intersection of Hwy 377 and FM 1171. This reuse line will also provide secondary transmission from the Reuse Pump Station to the FM 1171/Hwy 377 Central Reuse Loop, FM 1171 East and West Reuse Lines, Hwy 377 Central Reuse Line and the UPRR Central Reuse Line.

Project Cost	$1,570,000
Recoverable Cost	$235,500

49. FM 1171 West Reuse Line
    Approximately 3,700 LF of 12-inch reuse water line and 4,150 LF of 8-inch reuse water line is proposed to connect to the Reuse Transmission Line at Hwy 377 and FM 1171. The FM 1171 West Reuse Line will provide reuse water to FM 1171 west of Hwy 377 as well as Canyon Falls Drive north of FM 1171.

Project Cost	$1,570,000
Recoverable Cost	$235,500

50. FM 1171 East Reuse Line
    Approximately 6,900 LF of 8-inch reuse water line is proposed to provide reuse water along FM 1171 east of where it connects to the Reuse Transmission Line at Hwy 377. This reuse line will connect to the proposed East Reuse Lines north of FM 1171.

Project Cost	$1,360,000
Recoverable Cost	$204,000

51. Hwy 377 Central Reuse Line
    Approximately 6,170 LF of 12" reuse water line is proposed to connect to the Reuse Transmission Line and will provide reuse water north along Hwy 377 between FM 1171 and Canyon Falls Drive. The Hwy 377 Central Refuse Line provides reuse water to the East Reuse Lines and the Canyon Falls Drive Reuse Line.

Project Cost	$1,290,000
Recoverable Cost	$193,500

52. Canyon Falls Drive Reuse Line
    Approximately 4,560 LF of 12-inch reuse water line and 1,780 LF of 8-inch reuse water line is proposed to provide reuse water along Canyon Falls Drive west of Hwy 377 to the Town's service area boundary. The Canyon Falls Drive Reuse Line also provides reuse water to the Canyon Falls North Reuse Line.

Project Cost	$1,320,000
Recoverable Cost	$198,000

53. Denton Creek Boulevard South Reuse Line
    Approximately 4,770 LF of 12-inch reuse water line is proposed to connect to the FM 1171 West Reuse Line at Denton Creek Blvd. This reuse water line will provide reuse water along Denton Creek Blvd. north to Canyon Falls Drive.

Project Cost	$1,060,000
Recoverable Cost	$159,000

54. UPRR Central Reuse Line
Approximately 5,370 LF of 8-inch reuse water line is proposed to connect to the FM 1171/Hwy 377 Central Reuse Loop and will extend north to the connection with the Stonecrest Road Reuse Line at Canyon Falls Drive.

Project Cost	$960,000
Recoverable Cost	$144,000

55. Stonecrest Road Reuse Line
Approximately 3,400 LF of 8-inch reuse water line is proposed to provide reuse water along Stonecrest Road from Canyon Falls Drive to Oakridge Drive at the Town's north service area boundary.

Project Cost	$770,000
Recoverable Cost	$115,500

56. Canyon Falls North Reuse Line
Approximately 3,520 LF of 8-inch reuse water line is proposed to provide water to the area north of Canyon Falls Drive and west of Stonecrest Road.

Project Cost	$680,000
Recoverable Cost	$102,000

57. East Reuse Lines
Approximately 15,150 LF of 8-inch reuse water line is proposed to connect to the FM 1171 East Reuse Line east of Hwy 377 and also to the Hwy 377 Central Reuse Line north of FM 1171. This reuse water line will provide reuse water to the area of the Town north of FM 1171 and east of Hwy 377.

Project Cost	$2,320,000
Recoverable Cost	$348,000

58. Reuse Central Connector
Approximately 3,000 LF of 8-inch reuse water line is proposed to connect to the Hwy 377 Central Reuse Line north of FM 1171, where it will extend west and connect to the Denton Creek Blvd. South Reuse Line.

Project Cost	$630,000
Recoverable Cost	$94,500

59. Denton Creek North Distribution Line
Approximately 3,430 LF of 12-inch reuse water line and 660 LF of 8-inch reuse water line is proposed to connect to the Denton Creek Blvd. South Reuse Line and extend north along Denton Creek Blvd. until it connects to the Denton Creek Spine Road Reuse Line at the point where future Denton Creek Blvd. extends west.

Project Cost	$870,000
Recoverable Cost	$130,500

60. Denton Creek Spine Road Reuse Lines
    Approximately 7,130 LF of 8-inch reuse line is proposed to extend west from where it connects to the Denton Creek North Distribution Line until it reaches the Town's west service area boundary at Interstate Highway 35-W.

Project Cost	$1,110,000
Recoverable Cost	$166,500

61. Hwy 377 North Reuse Line
    Approximately 2,680 LF of 8-inch reuse water line is proposed to connect to the Hwy 377 Central Reuse Line and provide reuse water north along Hwy 377 to the north service area boundary at Oakridge Drive.

Project Cost	$440,000
Recoverable Cost	$66,000

62. Dunham/Hayes Reuse Loop
    Approximately 4,970 LF of 8-inch reuse water line is proposed to connect to the Reuse Transmission Line at Dunham Road. The reuse line will extend east to Hayes Road, where it will turn north and provide reuse water along Hayes Road south of FM 1171.

Project Cost	$900,000
Recoverable Cost	$135,000

63. Cowboy Lane Reuse Line
    Approximately 3,920 LF of 8-inch water line is proposed to provide water along Hwy 377 where it connects to the Reuse Transmission Line, south to the southern service area boundary. The Cowboy Lane Reuse Line also supplies reuse water to the Southwest Reuse Line.

Project Cost	$770,000
Recoverable Cost	$115,500

64. Southwest Reuse Line
    Approximately 4,270 LF of 8-inch reuse water line is proposed to connect to the Cowboy Lane Reuse Line south of Cowboy Lane. The Southwest Reuse Line will provide reuse water west of Hwy 377 near the southern service area boundary.

Project Cost	$800,000
Recoverable Cost	$120,000

65. Lakeside Business District – Water Reuse Master Plan
    The Lakeside Reuse Water Master Plan was performed in 2020. This Master Plan was created to determine recommendations for providing reclaimed water to irrigation customers in the Lakeside Business District area of the Town.

Project Cost	$126,663
Recoverable Cost	$126,663

66. Lakeside Reuse Phase I
    Approximately 15,0000 linear feet of proposed reclaimed water piping to connect to 26 existing irrigation meters and upgrades to the WWTP are proposed to provide reuse water to the Lakeside area near the Town's Wastewater Treatment facility. The proposed WWTP improvements constructed in Phase 1 include the transfer pump station, sodium hypochlorite feed system, temporary polyethylene storage tanks, and the reuse pump station.

Project Cost	$9,030,000
Recoverable Cost	$451,500

67. Lakeside Reuse Phase II
    Approximately 20,800 linear feet of proposed reclaimed water piping to connect to an additional 29 existing irrigation meters on commercial properties generally located along Lakeside Parkway, east of Gerault Road. Temporary storage tanks installed at the WWTP during Phase I are anticipated to be replaced with the first 1 MG covered storage tank and additional pumps are proposed to be installed at the Transfer and Reuse Pump Stations.

Project Cost	$5,450,000
Recoverable Cost	$272,500

68. Lakeside Reuse Phase III
    Approximately 18,900 linear feet of proposed reclaimed water piping to connect an additional 24 irrigation meters along Lakeside Parkway and Spinks Road between Gerault Road and Long Prairie Road. A second 1 MG covered storage tank is also proposed to be installed at the WWTP.

Project Cost	$5,630,000
Recoverable Cost	$281,500

1.5 Water Impact Fee Calculation

Chapter 395 of the Local Government Code defines a service unit as follows: *"'Service Unit' means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."* Therefore, the Town of Flower Mound defines a service unit based on historical water usage over the past 10 years as compared to the estimated residential units. The residential unit is the development type that predominately uses a 5/8"x3/4" meter. The measure of consumption per service unit is based on a 5/8"x3/4" meter and the data is shown in Table 1.4.

Table 1.4 Service Unit Consumption Calculation

Year	Population	Residential Units (3.16 persons/unit)	Water Usage Average Day Demand (MGD)	Consumption per Service Unit (gpd)
2010	64,669	22,932	13.05	569
2011	65,071	23,075	15.37	666
2012	65,394	23,189	14.06	606
2013	65,701	23,298	13.16	565
2014	66,833	23,700	13.49	569
2015	67,893	24,076	13.02	541
2016	69,070	24,493	12.43	507
2017	71,850	25,479	11.84	465
2018	73,130	25,933	11.25	434
2019	76,030	26,961	10.53	391
Average Consumption per Service Unit				531

The consumption calculated above, 531 gallons, was considered a high estimate given the Town's downward trend over the past 10 years. During this update a revised consumption per service unit was used which more closely follows the recent trends. The assumed service unit consumption value to be used is 400 gallons per service unit.

Additional Service Units and Water Impact Fee Calculation

Based on the Town's 10-year growth projections and the resulting water demand projections, water service will be required for an additional 9,000 service units. The calculation is as follows:

- A service unit, which is a unit of development that consumes approximately 400 gallons per day (gpd), is a typical residential connection that uses a 5/8"x3/4" meter. Table 1.5 outlines the future water demand projections and their relationships to the additional service units projected for the next ten years.

Table 1.5 10-year Additional Service Units Calculation

Year	Average Day Demand (MGD)	Service Unit Demand (gpd)	Service Units
2020	16.27	400	40,675
2030	19.87	400	49,675
10-year Additional Service Units			9,000

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated to pay for a portion of future capital improvements. The intent of this credit is to prevent the Town from double charging development for future capital improvements via impact fees and utility rates. If the Town chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The Town has chosen to perform a financial analysis. The maximum recoverable cost for impact fee is shown below.

A breakdown of the 10-year recoverable costs and the associated impact fee per service unit is as follows:

Table 1.6 10-year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	$39,158,082
Financing Costs	$8,119,930
Existing Fund Balance	($2,872,750)
Interest Earnings	($877,307)
Pre Credit Recoverable Cost for Impact Fee	$43,527,955
Credit for Utility Revenues	($1,447,677)
Maximum Recoverable Cost for Impact Fee	$42,080,278

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$42{,}080{,}278}{9000}$$

$$\text{Impact fee per service unit} = \$4{,}676$$

Therefore, the maximum assessable water impact fee for the Town per service unit is $4,676.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8"x3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown in Table 1.7 below.

Table 1.7 Service Unit Equivalency Table for Commonly Used Meters

Meter Size	Maximum Continuous Operating Capacity (gpm)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	4,676
3/4" PD	15	1.5	7,013
1" PD	25	2.5	11,689
1 1/2" PD	50	5	23,378
2" PD	80	8	37,405
2" Compound	80	8	37,405
2" Turbine	160	16	74,809
3" Compound	175	17.5	81,823
3" Turbine	350	35	163,646
4" Compound	300	30	140,268
4" Turbine	650	65	303,913
6" Compound	675	67.5	315,602
6" Turbine	1,400	140	654,582
8" Compound	900	90	420,803
8" Turbine	2,400	240	1,122,141
10" Turbine	3,500	350	1,636,455

* PD = Positive Displacement Meter (typical residential meter)
** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-19. Turbine and Compound meter flows are based on Class II (in-line) meters.

Appendix A: Plan for Awarding Water Impact Fee Credit

SUMMARY OF WATER IMPACT FEE DETERMINATION

Water

Recoverable Impact Fee CIP Costs	$	39,158,082	Per Kimley-Horn Impact Fee Update
Financing Costs		8,119,930	See Detail Below
Existing Fund Balance		(2,872,750)	Page 1 of Appendix B - Water.
Interest Earnings		(877,307)	Page 4 of Appendix B - Water
Pre Credit Recoverable Cost for Impact Fee	$	43,527,955	Sum of Above
Credit for Utility Revenues		(1,447,677)	Page 8 of Appendix B - Water
Maximum Recoverable Cost for Impact Fee	**$**	**42,080,278**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.

Financing Costs:

New Annual Debt Service	$	16,487,069	(Page 3 of Appendix B - Water)
Existing Annual Debt Service		12,830,238	(Page 3 of Appendix B - Water)
Principal Component		(21,197,378)	(Page 7 of Appendix B - Water)
Financing Costs	$	8,119,930	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or other revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Service Revenues. This is the maximum cost that can be recovered through impact fees.

Appendix B: Impact Fee Calculation Assumptions

Town of Flower Mound 2020 Water Impact Fee Update

Impact Fee Calculation Assumptions

Appendix B - Impact Fee Calculation Assumptions

Water

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	900
Available Existing Fund Balance [3]	2,872,750

Portion of Projects Funded by Existing Debt [4]	$ 9,994,145
Non-debt Funded Project Cost [5]	17,960,705
Project Cost Funded Through New Debt [6]	11,203,233
Total Recoverable Project Cost [7]	$ 39,158,082

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ 1,120,323	4.00%	20
2	1,120,323	4.00%	20
3	1,120,323	4.00%	20
4	1,120,323	4.00%	20
5	1,120,323	4.00%	20
6	1,120,323	4.00%	20
7	1,120,323	4.00%	20
8	1,120,323	4.00%	20
9	1,120,323	4.00%	20
10	1,120,323	4.00%	20
Total	$ 11,203,233		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 2,356,232
2	2,916,394
3	2,916,394
4	2,916,394
5	2,916,394
6	2,916,394
7	2,916,394
8	2,916,394
9	2,916,394
10	3,476,555
Total	$ 29,163,937

(1) Town's current earning rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Balances for this service area available as of July 31, 2020
(4) Per discussions with Town staff and files
(5) Unless specified in Town CIP, Assumes 50% of new project cost funded through sources other than debt
(6) Unless specified in Town CIP, Assumes 50% of new project costs funded through new debt issues
(7) Per Kimley-Horn Impact Fee Update
(8) Assumes new debt issued based on Town input
(9) Estimated interest cost provided by Town's Financial Advisor
(10) Non-debt funded capital expenditures made in equal annual amounts. Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year.

Town of Flower Mound 2020 Water Impact Fee Update

Debt Service and Expenses Summary
Appendix B - Impact Fee Calculation Assumptions
Water

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ 82,435	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 82,435
2	82,435	82,435	-	-	-	-	-	-	-	-	164,871
3	82,435	82,435	82,435	-	-	-	-	-	-	-	247,306
4	82,435	82,435	82,435	82,435	-	-	-	-	-	-	329,741
5	82,435	82,435	82,435	82,435	82,435	-	-	-	-	-	412,177
6	82,435	82,435	82,435	82,435	82,435	82,435	-	-	-	-	494,612
7	82,435	82,435	82,435	82,435	82,435	82,435	82,435	-	-	-	577,047
8	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	-	-	659,483
9	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	-	741,918
10	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
11	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
12	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
13	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
14	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
15	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
16	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
17	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
18	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
19	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
20	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	824,353
21	-	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	741,918
22	-	-	82,435	82,435	82,435	82,435	82,435	82,435	82,435	82,435	659,483
23	-	-	-	82,435	82,435	82,435	82,435	82,435	82,435	82,435	577,047
24	-	-	-	-	82,435	82,435	82,435	82,435	82,435	82,435	494,612
25	-	-	-	-	-	82,435	82,435	82,435	82,435	82,435	412,177
26	-	-	-	-	-	-	82,435	82,435	82,435	82,435	329,741
27	-	-	-	-	-	-	-	82,435	82,435	82,435	247,306
28	-	-	-	-	-	-	-	-	82,435	82,435	164,871
29	-	-	-	-	-	-	-	-	-	82,435	$ 82,435
	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 1,648,707	$ 16,487,069

Town of Flower Mound 2020 Water Impact Fee Update

Debt Service and Expenses Summary

Appendix B - 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	$ 82,435	$ 2,356,232	$ (1,120,323)	$ 1,092,197	$ (25,428)	2,385,113
2	164,871	2,916,394	(1,120,323)	1,123,154	(54,584)	3,029,511
3	247,306	2,916,394	(1,120,323)	859,404	(68,890)	2,833,890
4	329,741	2,916,394	(1,120,323)	859,939	(96,733)	2,889,018
5	412,177	2,916,394	(1,120,323)	860,112	(126,736)	2,941,623
6	494,612	2,916,394	(1,120,323)	815,406	(153,534)	2,952,554
7	577,047	2,916,394	(1,120,323)	805,484	(185,417)	2,993,185
8	659,483	2,916,394	(1,120,323)	792,647	(218,388)	3,029,812
9	741,918	2,916,394	(1,120,323)	727,011	(243,943)	3,021,057
10	824,353	3,476,555	(1,120,323)	688,106	(274,024)	3,594,668
11	824,353	-	-	687,795	-	1,512,149
12	824,353	-	-	671,487	-	1,495,840
13	824,353	-	-	645,482	-	1,469,835
14	824,353	-	-	598,214	-	1,422,567
15	824,353	-	-	532,939	-	1,357,292
16	824,353	-	-	429,826	-	1,254,180
17	824,353	-	-	371,186	-	1,195,540
18	824,353	-	-	212,760	-	1,037,113
19	824,353	-	-	57,089	-	881,443
20	824,353	-	-	-	-	824,353
21	741,918	-	-	-	-	741,918
22	659,483	-	-	-	-	659,483
23	577,047	-	-	-	-	577,047
24	494,612	-	-	-	-	494,612
25	412,177	-	-	-	-	412,177
26	329,741	-	-	-	-	329,741
27	247,306	-	-	-	-	247,306
28	164,871	-	-	-	-	164,871
29	82,435	-	-	-	-	82,435
	$ 16,487,069	$ 29,163,937	$ (11,203,233)	$ 12,830,238	$ (1,447,677)	$ 45,830,335

(1) Appendix B - Water, Page 2
(2) Appendix B - Water, Page 1
(3) Eligible Outstanding Debt Funded Projects Percent of Utility Self-Supported Debt Issuance times total outstanding utility self-supported annual debt service
(4) Appendix B - Water, Page 8

Town of Flower Mound 2020 Water Impact Fee Update

Revenue Test

Appendix B - Impact Fee Calculation Assumptions

Water

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ 2,872,750
1	$ 4,676	900	$ 4,208,028	$ 2,385,113	$ 1,822,915	16,575	4,712,240
2	4,676	900	4,208,028	3,029,511	1,178,516	23,221	5,913,977
3	4,676	900	4,208,028	2,833,890	1,374,138	28,913	7,317,027
4	4,676	900	4,208,028	2,889,018	1,319,010	34,937	8,670,974
5	4,676	900	4,208,028	2,941,623	1,266,404	40,752	9,978,131
6	4,676	900	4,208,028	2,952,554	1,255,474	46,454	11,280,058
7	4,676	900	4,208,028	2,993,185	1,214,842	52,067	12,546,967
8	4,676	900	4,208,028	3,029,812	1,178,215	57,536	13,782,719
9	4,676	900	4,208,028	3,021,057	1,186,971	62,968	15,032,658
10	4,676	900	4,208,028	3,594,668	613,360	67,186	15,713,204
11	-	-	-	1,512,149	(1,512,149)	65,512	14,266,568
12	-	-	-	1,495,840	(1,495,840)	59,212	12,829,939
13	-	-	-	1,469,835	(1,469,835)	52,976	11,413,080
14	-	-	-	1,422,567	(1,422,567)	46,874	10,037,387
15	-	-	-	1,357,292	(1,357,292)	40,991	8,721,086
16	-	-	-	1,254,180	(1,254,180)	35,452	7,502,358
17	-	-	-	1,195,540	(1,195,540)	30,242	6,337,060
18	-	-	-	1,037,113	(1,037,113)	25,485	5,325,432
19	-	-	-	881,443	(881,443)	21,395	4,465,384
20	-	-	-	824,353	(824,353)	17,753	3,658,784
21	-	-	-	741,918	(741,918)	14,401	2,931,266
22	-	-	-	659,483	(659,483)	11,395	2,283,178
23	-	-	-	577,047	(577,047)	8,737	1,714,867
24	-	-	-	494,612	(494,612)	6,428	1,226,683
25	-	-	-	412,177	(412,177)	4,470	818,977
26	-	-	-	329,741	(329,741)	2,865	492,100
27	-	-	-	247,306	(247,306)	1,614	246,408
28	-	-	-	164,871	(164,871)	718	82,256
29	-	-	-	82,435	(82,435)	180	-
			42,080,278	45,830,335		877,307	

Town of Flower Mound 2020 Water Impact Fee Update

Impact Fee Calculation

Appendix B - Impact Fee Calculation Assumptions

Water

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Future Value Escalation Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	900	1,019	2,385,113	2,701,498
2	28	1.1277	1.0000	900	1,015	3,029,511	3,416,411
3	27	1.1228	1.0000	900	1,011	2,833,890	3,181,870
4	26	1.1179	1.0000	900	1,006	2,889,018	3,229,622
5	25	1.1130	1.0000	900	1,002	2,941,623	3,274,089
6	24	1.1082	1.0000	900	997	2,952,554	3,271,924
7	23	1.1033	1.0000	900	993	2,993,185	3,302,485
8	22	1.0985	1.0000	900	989	3,029,812	3,328,319
9	21	1.0937	1.0000	900	984	3,021,057	3,304,228
10	20	1.0890	1.0000	900	980	3,594,668	3,914,460
11	19	1.0842	1.0000	-	-	1,512,149	1,639,493
12	18	1.0795	1.0000	-	-	1,495,840	1,614,739
13	17	1.0748	1.0000	-	-	1,469,835	1,579,747
14	16	1.0701	1.0000	-	-	1,422,567	1,522,277
15	15	1.0654	1.0000	-	-	1,357,292	1,446,093
16	14	1.0608	1.0000	-	-	1,254,180	1,330,407
17	13	1.0562	1.0000	-	-	1,195,540	1,262,673
18	12	1.0515	1.0000	-	-	1,037,113	1,090,574
19	11	1.0470	1.0000	-	-	881,443	922,836
20	10	1.0424	1.0000	-	-	824,353	859,302
21	9	1.0378	1.0000	-	-	741,918	770,000
22	8	1.0333	1.0000	-	-	659,483	681,459
23	7	1.0288	1.0000	-	-	577,047	593,677
24	6	1.0243	1.0000	-	-	494,612	506,647
25	5	1.0199	1.0000	-	-	412,177	420,364
26	4	1.0154	1.0000	-	-	329,741	334,825
27	3	1.0110	1.0000	-	-	247,306	250,024
28	2	1.0066	1.0000	-	-	164,871	165,955
29	1	1.0022	1.0000	-	-	82,435	82,616
					9,996	45,830,335	49,998,615

Total Escalated Expense for Entire Period	$	49,998,615
Total Escalated Service Units		9,996
Impact Fee for Water	**$**	**4,676**

Town of Flower Mound 2020 Water Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Water

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost [1]	Percent Recoverable[1]	Impact Fee Recoverable Cost[2]	Debt Funded[3] Existing	Debt Funded[3] Proposed	Non-Debt Funded[3]	Impact Fee Recoverable Cost
Water Capital Improvements								
Canyon Falls 20-inch Water Line	1	$ 1,746,339	24%	$ 419,121	$ 267,860	$ -	$ 151,262	$ 419,121
Highway 377/UPRR Water Lines Phase I	2	2,296,815	8%	183,745	40,651	-	143,094	183,745
Stonecrest Pump Station Auxiliary Power	3	2,550,000	15%	382,500	-	300,000	82,500	382,500
Stonecrest (Western) Pump Station Phase I	4	11,944,788	38%	4,539,019	4,389,492	-	149,528	4,539,019
Trailwood Terrace 12-inch Water Line	5	325,099	68%	221,067	-	-	221,067	221,067
FM 1171 to Hwy 377 Phase I	6	2,810,382	60%	1,686,229	-	-	1,686,229	1,686,229
Freeman (Western) 2.5 MG EST	7	5,613,340	30%	1,684,002	1,528,002	-	156,000	1,684,002
Raintree 12-inch Water Line (Ridgecrest to Shiloh)	8	308,757	50%	154,378	116,878	-	37,500	154,378
Lusk Lane Water Line	9	1,060,864	20%	212,173	212,173	-	-	212,173
16" Kirkpatrick Water Line	10	570,341	22%	125,475	125,475	-	-	125,475
Branchwood Water Line (Russwood Dr. to FM 407)	11	55,222	50%	27,611		13,806	13,806	27,611
FM 2499 12-inch Water Line Phase I (Dixon to south of FM 1171)	12	1,157,783	100%	1,157,783	325,626	-	832,157	1,157,783
Morriss Road Water Line Phase II (FM 1171 to Eaton)	13	2,722,500	91%	2,477,475	855,855	-	1,621,620	2,477,475
Rippy Road Water Line Improvements (FM 2499 to Waketon)	14	750,000	95%	712,500	380,000	-	332,500	712,500
Stonehill Pump Station	15	9,487,799	12%	1,138,536		569,268	569,268	1,138,536
Timber Creek 20" Water Line	16	542,164	24%	130,119	129,984	-	136	130,119
Valley Ridge 20" Water Line	17	208,441	24%	50,026	50,026	-	-	50,026
Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)	18	1,079,971	100%	1,079,971	408,374	-	671,596	1,079,971
Garden Ridge Boulevard Water Line Phase II (South of Kirkpatrick)	19	743,844	100%	743,844	190,714	-	553,130	743,844
FM 2499 12-inch Water Line Phase III	20	762,253	77%	586,935	339,928	-	247,007	586,935
Lake Forest 12-inch Water Line (Bridge Gap)	21	127,571	50%	63,786	-	-	63,786	63,786
Lake Forest 12-inch Water Line (Spinks to Lakeside)	22	109,252	44%	48,071	48,071	-	-	48,071
Long Prairie 12-inch Water Line	23	828,903	77%	638,256	293,808	-	344,448	638,256
Pintail Pump Station Auxiliary Power	24	1,269,857	15%	190,479	130,479	-	60,000	190,479
Pintail Pump Station Capacity Improvements	25	300,000	51%	153,000	153,000	-	-	153,000
Denton Creek Spine Road 12-inch Water Line	26	3,210,000	18%	577,800		288,900	288,900	577,800
Denton Creek Boulevard 12-inch Water Line	27	1,300,000	24%	312,000		156,000	156,000	312,000
FM 1171 to Hwy 377 Water Line Phase II	28	6,400,000	24%	1,536,000		768,000	768,000	1,536,000
Hwy 377/UPRR Water Line Phase II	29	3,410,000	24%	818,400		409,200	409,200	818,400
Stonecrest Pump Station Phase II	30	5,460,000	5%	273,000		136,500	136,500	273,000
Stonecrest Pump Station Phase III	31	790,000	5%	39,500		19,750	19,750	39,500
West Side Water Line (West)	32	1,560,000	24%	374,400		187,200	187,200	374,400
West Side Water Line (East)	33	4,850,000	5%	242,500		121,250	121,250	242,500
West Side Water Line (South)	34	4,550,000	36%	1,638,000		819,000	819,000	1,638,000
Cowboy Lane Water Line	35	930,000	36%	334,800		167,400	167,400	334,800
Lusk/Red RockEast-West Connector	36	4,250,000	5%	212,500		106,250	106,250	212,500
Scenic Drive Water Line (S of FM 1171 to River Hill Drive)	37	1,430,000	5%	71,500		35,750	35,750	71,500

Town of Flower Mound 2020 Water Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Water

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost[1]	Percent Recoverable[1]	Impact Fee Recoverable Cost[2]	Debt Funded[3] Existing	Debt Funded[3] Proposed	Non-Debt Funded[3]	Impact Fee Recoverable Cost
Aberdeen 12-inch Water Line (FM 2499 to Lake Forest)	38	207,187	42%	87,019		43,509	43,509	87,019
Kirkpatrick 12-inch Water Line Phase III (South to FM 1171)	39	450,000	100%	450,000		225,000	225,000	450,000
Timber Creek 20-inch Water Line Extension	40	490,000	91%	445,900		222,950	222,950	445,900
Morriss Road Water Line Phase III (Eaton to Waketon Road)	41	3,140,000	91%	2,857,400		1,428,700	1,428,700	2,857,400
Morriss Road Water Line Phase IV (Waketon Road to FM 407)	42	4,190,000	91%	3,812,900		1,906,450	1,906,450	3,812,900
Morriss Road 20-Inch Water Line (Mallard Way to FM 3040)	43	720,000	91%	655,200		327,600	327,600	655,200
Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)	44	1,760,000	5%	88,000		44,000	44,000	88,000
2020 Water Master Plan and Impact Fee Updates	45	179,500	100%	179,500		-	179,500	179,500
Reuse Pump Station and Ground Storage Tanks	46	7,900,000	15%	1,185,000		592,500	592,500	1,185,000
Reuse Transmission Lines	47	1,770,000	15%	265,500		132,750	132,750	265,500
FM 1171/Hwy 377 Central Reuse Loop	48	1,570,000	15%	235,500		117,750	117,750	235,500
FM 1171 West Reuse Line	49	1,570,000	15%	235,500		117,750	117,750	235,500
FM 1171 East Reuse Line	50	1,360,000	15%	204,000		102,000	102,000	204,000
Highway 377 Central Reuse Line	51	1,290,000	15%	193,500		96,750	96,750	193,500
Canyon Falls Drive Reuse Line	52	1,320,000	15%	198,000		99,000	99,000	198,000
Denton Creek Boulevard South Reuse Line	53	1,060,000	15%	159,000		79,500	79,500	159,000
UPRR Central Reuse Line	54	960,000	15%	144,000		72,000	72,000	144,000
Stonecrest Road Reuse Line	55	770,000	15%	115,500		57,750	57,750	115,500
Canyon Falls North Reuse Line	56	680,000	15%	102,000		51,000	51,000	102,000
East Reuse Lines	57	2,320,000	15%	348,000		174,000	174,000	348,000
Reuse Central Connector	58	630,000	15%	94,500		47,250	47,250	94,500
Denton Creek North Distribution Line	59	870,000	15%	130,500		65,250	65,250	130,500
Denton Creek Spine Road Reuse Lines	60	1,110,000	15%	166,500		83,250	83,250	166,500
Hwy 377 North Reuse Line	61	440,000	15%	66,000		33,000	33,000	66,000
Dunham/Hayes Reuse Loop	62	900,000	15%	135,000		67,500	67,500	135,000
Cowboy Lane Reuse Line	63	770,000	15%	115,500		57,750	57,750	115,500
Southwest Reuse Line	64	800,000	15%	120,000		60,000	60,000	120,000
Lakeside Business District - Water Reuse Master Plan	65	126,663	100%	126,663	7,750	-	118,913	126,663
Lakeside Reuse Phase I	66	9,030,000	5%	451,500	-	400,000	51,500	451,500
Lakeside Reuse Phase II	67	5,450,000	5%	272,500	-	200,000	72,500	272,500
Lakeside Reuse Phase III	68	5,630,000	5%	281,500	-	200,000	81,500	281,500
Total		**$ 146,975,635**		**$ 39,158,082**	**$ 9,994,145**	**$ 11,203,233**	**$ 17,960,705**	**$ 39,158,082**

(1) 2020 Water Impact Fee Study, Appendix C

(2) Per Kimley-Horn Impact Fee Update

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

Town of Flower Mound 2020 Water Impact Fee Update

Credit Determination

Appendix B - Impact Fee Calculation Assumptions

Water

2020 Service Units [1]	40,675	
Ten Year Growth in Service Units [1]	9,000	
	10	years
Annual Growth in Service Units	900	

		1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees		$ 1,174,632	$ 1,288,025	$ 1,106,710	$ 1,189,680	$ 1,272,289	$ 1,310,018	$ 1,382,532	$ 1,452,130	$ 1,468,929	$ 1,512,459	$ 13,157,404
2020 Service Units Plus Water Growth		41,575	42,475	43,375	44,275	45,175	46,075	46,975	47,875	48,775	49,675	
Total Debt Service Eligible for Impact Fees per Service Unit		$ 28.25	$ 30.32	$ 25.51	$ 26.87	$ 28.16	$ 28.43	$ 29.43	$ 30.33	$ 30.12	$ 30.45	
Annual Service Unit Growth in Water (Cumulative)		900	1,800	2,700	3,600	4,500	5,400	6,300	7,200	8,100	9,000	
Annual Water Utility Revenue Generated by Additional Service Units for Debt Service Eligible for Impact Fees		$ 25,428	$ 54,584	$ 68,890	$ 96,733	$ 126,736	$ 153,534	$ 185,417	$ 218,388	$ 243,943	$ 274,024	$ 1,447,677
Credit Amount	**$ 1,447,677**											

(1) Per Kimley-Horn Impact Fee Update

Appendix C: Construction Cost Projections

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Canyon Falls 20-inch Water Line**	**Project:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 1,746,339.00	$ 1,746,339
	Basis for Cost Projection:	**Total:**			$ 1,746,339
	Existing Development Agreement				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Highway 377/UPRR Water Lines Phase I**	**Project:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 2,296,815.28	$ 2,296,815
	Basis for Cost Projection:	**Total:**			$ 2,296,815
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Stonecrest Pump Station Auxiliary Power**	**Project:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 2,550,000.00	$ 2,550,000
	Basis for Cost Projection:	**Total:**			$ 2,550,000
	Design Contract & Current OPCC				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Stonecrest (Western) Pump Station Phase I**	**Project:**	**4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 11,944,788.00	$ 11,944,788
	Basis for Cost Projection:	**Total:**			$ 11,944,788
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Trailwood Terrace 12-inch Water Line**	**Project:**	**5**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 325,098.74	$ 325,099
	Basis for Cost Projection:	**Total:**			$ 325,099
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**FM 1171 to Hwy 377 Phase I**	**Project:**	**6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 2,810,382.31	$ 2,810,382
	Basis for Cost Projection:	**Total:**			$ 2,810,382
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Freeman (Western) 2.5 MG EST**	**Project:**	**7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 5,613,339.75	$ 5,613,340
	Basis for Cost Projection:	**Total:**			$ 5,613,340
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Raintree 12-inch Water Line (Ridgecrest to Shiloh)**	**Project:**	**8**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 308,756.85	$ 308,757
	Basis for Cost Projection:	**Total:**			$ 308,757
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lusk Lane Water Line**	**Project:**	**9**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 1,060,864.16	$ 1,060,864
	Basis for Cost Projection:	**Total:**			$ 1,060,864
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**16" Kirkpatrick Water Line**	**Project:**	**10**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 570,340.80	$ 570,341
	Basis for Cost Projection:	**Total:**			$ 570,341
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Branchwood Water Line (Russwood Dr. to FM 407)**	**Project:**	**11**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 55,222.00	$ 55,222
	Basis for Cost Projection:	**Total:**			$ 55,222
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**FM 2499 12-inch Water Line Phase I (Dixon to south of FM 1171)**	**Project:**	**12**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 1,157,783.44	$ 1,157,783
	Basis for Cost Projection:	**Total:**			$ 1,157,783
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Morriss Road Water Line Phase II (FM 1171 to Eaton)**	**Project:**	**13**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 2,722,500.00	$ 2,722,500
	Basis for Cost Projection:	**Total:**			$ 2,722,500
	Design Contract & Current OPCC				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Rippy Road Water Line Improvements (FM 2499 to Waketon)**	**Project:**	**14**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 750,000.00	$ 750,000
	Basis for Cost Projection:	**Total:**			$ 750,000
	Phase I Constructed + Phase II OPCC				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Stonehill Pump Station**	**Project:**	**15**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 9,487,799.00	$ 9,487,799
	Basis for Cost Projection:	**Total:**			$ 9,487,799
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Timber Creek 20" Water Line**	**Project:**	**16**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 542,163.58	$ 542,164
	Basis for Cost Projection:	**Total:**			$ 542,164
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Valley Ridge 20" Water Line**	**Project:**	**17**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 208,441.26	$ 208,441
	Basis for Cost Projection:	**Total:**			$ 208,441
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Kirkpatrick Lane 12-inch Water Line Phase II (Valley Ridge to FM 1171)**	**Project:**	**18**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 1,079,970.54	$ 1,079,971
	Basis for Cost Projection:	**Total:**			$ 1,079,971
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Garden Ridge Boulevard Water Line Phase II (South of Kirkpatrick)**	**Project:**	**19**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 743,844.00	$ 743,844
	Basis for Cost Projection:	**Total:**			$ 743,844
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**FM 2499 12-inch Water Line Phase III**	**Project:**	**20**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 762,253.11	$ 762,253
	Basis for Cost Projection:	**Total:**			$ 762,253
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lake Forest 12-inch Water Line (Bridge Gap)**	**Project:**	**21**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 127,571.00	$ 127,571
	Basis for Cost Projection:	**Total:**			$ 127,571
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lake Forest 12-inch Water Line (Spinks to Lakeside)**	**Project:**	**22**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 109,251.74	$ 109,252
	Basis for Cost Projection:	**Total:**			$ 109,252
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Long Prairie 12-inch Water Line**	**Project:**	**23**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 828,903.25	$ 828,903
	Basis for Cost Projection:	**Total:**			$ 828,903
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Pintail Pump Station Auxiliary Power**	**Project:**	**24**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project per KH Design Contract + Contractor's Bid	1	LS	$ 1,269,857.00	$ 1,269,857
	Basis for Cost Projection:	**Total:**			$ 1,269,857
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Pintail Pump Station Capacity Improvements**	**Project:**	**25**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 300,000.00	$ 300,000
	Basis for Cost Projection:	**Total:**			$ 300,000
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Denton Creek Spine Road 12-inch Water Line**	**Project:**	**26**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 90,000.00	$ 90,000
2	12" Water Line	14,300	LF	$ 120.00	$ 1,716,000
3	Trench Safety	14,300	LF	$ 2.00	$ 28,600
4	Seed, Fertilizer and Erosion Control	14,270	LF	$ 10.00	$ 142,700
5	Concrete Pavement Repair	50	SY	$ 110.00	$ 5,500
6	12" Gate Valve (1 per 500 lf of pipe)	29	EA	$ 5,000.00	$ 145,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	29	EA	$ 7,500.00	$ 217,500
8	Connect to Small Diameter Water Line	2	LF	$ 5,000.00	$ 10,000
9	Hydrostatic Testing and Disinfection (Long)	1	LF	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 2,285,300
Eng/Survey Fees (+/- %):	15	$ 343,000
Contingency (+/- %):	25	$ 581,700
Prop Acquisition:		$ -
Total:		$ 3,210,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Denton Creek Boulevard 12-inch Water Line** **Project:** **27**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	12" Water Line	5,000	LF	$ 120.00	$ 600,000
3	Trench Safety	4,900	LF	$ 2.00	$ 9,800
4	Seed, Fertilizer and Erosion Control	4,900	LF	$ 10.00	$ 49,000
5	Concrete Pavement Repair	20	SY	$ 110.00	$ 2,200
6	12" Gate Valve (1 per 500 lf of pipe)	10	EA	$ 5,000.00	$ 50,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	10	EA	$ 7,500.00	$ 75,000
8	Bore with 24" Steel Casing	100	LF	$ 600.00	$ 60,000
9	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
10	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 926,000
Eng/Survey Fees (+/- %):	15	$ 139,000
Contingency (+/- %):	25	$ 235,000
Prop Acquisition:		$ -
Total:		$ 1,300,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**FM 1171 to Hwy 377 Water Line Phase II**	**Project:**	**28**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	24" Water Line	12,600	LF	$ 250.00	$ 3,150,000
3	Trench Safety	12,050	LF	$ 2.00	$ 24,100
4	Seed, Fertilizer and Erosion Control	12,000	LF	$ 10.00	$ 120,000
5	Concrete Pavement Repair	56	SY	$ 110.00	$ 6,111
6	24" Gate Valve with Vault (1 per 3,000 lf of pipe)	5	EA	$ 50,000.00	$ 250,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	6	EA	$ 7,500.00	$ 45,000
8	Bore with 42" Steel Casing	550	LF	$ 1,000.00	$ 550,000
9	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
10	Connect to Large Diameter Water Line	4	EA	$ 15,000.00	$ 60,000
11	Hydrostatic Testing and Disinfection (Long)	1	EA	$ 20,000.00	$ 20,000
12	Combination 6" Blow Off Valve & Vault	4	EA	$ 15,000.00	$ 60,000
13	Combination 4" Air Release/Vacuum Valve & Vault	4	EA	$ 20,000.00	$ 80,000
14	Cathodic Protection	1	LS	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 4,560,211
Eng/Survey Fees (+/- %):	15		$ 685,000
Contingency (+/- %):	25		$ 1,154,789
Prop Acquisition:			$ -
Total:			$ 6,400,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Highway 377/UPRR Water Lines Phase II** **Project:** **29**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 90,000.00	$ 90,000
2	24" Water Line	7,600	LF	$ 250.00	$ 1,900,000
3	Trench Safety	7,600	LF	$ 2.00	$ 15,200
4	Seed, Fertilizer and Erosion Control	7,580	LF	$ 10.00	$ 75,800
5	Concrete Pavement Repair	20	SY	$ 110.00	$ 2,200
6	24" Gate Valve with Vault (1 per 3,000 lf of pipe)	3	EA	$ 50,000.00	$ 150,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	4	EA	$ 7,500.00	$ 30,000
8	Connect to Small Diameter Water Line	4	EA	$ 5,000.00	$ 20,000
9	Connect to Large Diameter Water Line	1	LS	$ 15,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 6" Blow Off Valve & Vault	2	EA	$ 15,000.00	$ 30,000
12	Combination 4" Air Release/Vacuum Valve & Vault	2	EA	$ 20,000.00	$ 40,000
13	Cathodic Protection	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 2,428,200
Eng/Survey Fees (+/- %):	15	$ 365,000
Contingency (+/- %):	25	$ 616,800
Prop Acquisition:		$ -
Total:		$ 3,410,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Stonecrest Pump Station Phase II** **Project:** **30**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 150,000.00	$ 150,000
2	Tank Supply Line	175	LF	$ 400.00	$ 70,000
3	Tank Discharge Line	170	LF	$ 450.00	$ 76,500
4	5 MG Ground Storage Tank	1	EA	$ 2,300,000.00	$ 2,300,000
5	Excavation	4,750	CY	$ 30.00	$ 142,500
6	Select Backfill	4,750	CY	$ 30.00	$ 142,500
7	Connect to Existing Water Line	2	EA	$ 10,000.00	$ 20,000
8	Grading	1	LS	$ 50,000.00	$ 50,000
9	Landscaping	1	LS	$ 25,000.00	$ 25,000
10	Irrigation	1	LS	$ 10,000.00	$ 10,000
11	Horizontal Split Case Pump	1	EA	$ 300,000.00	$ 300,000
12	Mechanical Piping	1	LS	$ 50,000.00	$ 50,000
13	Control Valve	1	LS	$ 30,000.00	$ 30,000
14	Feeder and soft starter to pump	1	LS	$ 50,000.00	$ 50,000
15	Yard Valves	1	LS	$ 275,000.00	$ 275,000
16	Electrical	1	LS	$ 150,000.00	$ 150,000
17	SCADA/Instumentation	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 3,891,500
Eng/Survey Fees (+/- %):	15		$ 584,000
Contingency (+/- %):	25		$ 984,500
Prop Acquisition:			$ -
Total:			$ 5,460,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Stonecrest Pump Station Phase III**	**Project:**	**31**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	Horizontal Split Case Pump	1	EA	$ 300,000.00	$ 300,000
3	Mechanical Piping	1	LS	$ 45,000.00	$ 45,000
4	Control Valve	1	LS	$ 30,000.00	$ 30,000
5	Feeder and soft starter to pump	1	LS	$ 50,000.00	$ 50,000
6	Electrical	1	LS	$ 50,000.00	$ 50,000
7	SCADA/Instumentation	1	LS	$ 50,000.00	$ 50,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 555,000
Eng/Survey Fees (+/- %):	15	$ 84,000
Contingency (+/- %):	25	$ 151,000
Prop Acquisition:		$ -
Total:		$ 790,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**West Side Water Line (West)**	**Project:**	**32**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000
2	12" Water Line	5,600	LF	$ 120.00	$ 672,000
3	Trench Safety	5,300	LF	$ 2.00	$ 10,600
4	Seed, Fertilizer and Erosion Control	5,300	LF	$ 10.00	$ 53,000
5	12" Gate Valve (1 per 500 lf of pipe)	12	EA	$ 5,000.00	$ 60,000
6	Fire Hydrant Assembly (1 per 500 lf of pipe)	12	EA	$ 7,500.00	$ 90,000
7	Bore with 24" Steel Casing	300	LF	$ 600.00	$ 180,000
8	Connect to Small Diameter Water Line	7	EA	$ 5,000.00	$ 35,000
9	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,110,600
Eng/Survey Fees (+/- %):	15		$ 167,000
Contingency (+/- %):	25		$ 279,400
Prop Acquisition:			$ -
Total:			$ 1,560,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **West Side Water Line (East)** **Project:** **33**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 130,000.00	$ 130,000
2	16" Water Line	12,300	LF	$ 150.00	$ 1,845,000
3	20" Water Line	2,700	LF	$ 210.00	$ 567,000
4	Trench Safety	15,000	LF	$ 2.00	$ 30,000
5	Seed, Fertilizer and Erosion Control	15,000	LF	$ 10.00	$ 150,000
6	16" Gate Valve (1 per 3,000 lf of pipe)	7	EA	$ 12,000.00	$ 84,000
7	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	2	EA	$ 35,000.00	$ 70,000
8	Fire Hydrant Assembly (1 per 500 lf of pipe)	8	EA	$ 7,500.00	$ 60,000
9	Connect to Large Diameter Water Line	3	EA	$ 15,000.00	$ 45,000
10	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000
11	Combination 2" Blow Off Valve & Vault	5	EA	$ 7,500.00	$ 37,500
12	Combination 2" Air Release/Vacuum Valve & Vault	5	EA	$ 10,000.00	$ 50,000
13	Cathodic Protection	5	EA	$ 75,000.00	$ 375,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 3,463,500
Eng/Survey Fees (+/- %):	15	$ 520,000
Contingency (+/- %):	25	$ 866,500
Prop Acquisition:		$ -
Total:		$ 4,850,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **West Side Water Line (South)** **Project:** **34**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 120,000.00	$ 120,000
2	12" Water Line	19,100	LF	$ 120.00	$ 2,292,000
3	Trench Safety	18,800	LF	$ 2.00	$ 37,600
4	Seed, Fertilizer and Erosion Control	18,750	LF	$ 10.00	$ 187,500
5	Concrete Pavement Repair	28	SY	$ 110.00	$ 3,056
6	12" Gate Valve (1 per 500 lf of pipe)	39	EA	$ 5,000.00	$ 195,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	39	EA	$ 7,500.00	$ 292,500
8	Bore with 24" Steel Casing	300	LF	$ 600.00	$ 180,000
9	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
10	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
11	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 3,242,656
Eng/Survey Fees (+/- %):	15		$ 487,000
Contingency (+/- %):	25		$ 817,344
Prop Acquisition:			$ -
Total:			$ 4,550,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Cowboy Lane Water Line** **Project:** **35**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	12" Water Line	3,800	LF	$ 120.00	$ 456,000
3	Trench Safety	3,800	LF	$ 2.00	$ 7,600
4	Seed, Fertilizer and Erosion Control	3,750	LF	$ 10.00	$ 37,500
5	Concrete Pavement Repair	25	SY	$ 110.00	$ 2,750
6	12" Gate Valve (1 per 500 lf of pipe)	8	EA	$ 5,000.00	$ 40,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	8	EA	$ 7,500.00	$ 60,000
8	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
9	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 663,850
Eng/Survey Fees (+/- %):	15		$ 100,000
Contingency (+/- %):	25		$ 166,150
Prop Acquisition:			$ -
Total:			$ 930,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Lusk/Red Rock East-West Connector** **Project:** **36**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 120,000.00	$ 120,000
2	16" Water Line	15,500	LF	$ 150.00	$ 2,325,000
3	Trench Safety	15,450	LF	$ 2.00	$ 30,900
4	Seed, Fertilizer and Erosion Control	15,350	LF	$ 10.00	$ 153,500
5	Concrete Pavement Repair	70	SY	$ 110.00	$ 7,700
6	16" Gate Valve (1 per 3,000 lf of pipe)	6	EA	$ 12,000.00	$ 72,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	7	EA	$ 7,500.00	$ 52,500
8	Bore with 30" Steel Casing	50	LF	$ 750.00	$ 37,500
9	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Long)	1	LS	$ 20,000.00	$ 20,000
11	Combination 4" Blow Off Valve & Vault	6	EA	$ 20,000.00	$ 60,000
12	Combination 2" Air Release/Vacuum Valve & Vault	6	EA	$ 10,000.00	$ 60,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 3,029,100
Eng/Survey Fees (+/- %):	15	$ 455,000
Contingency (+/- %):	25	$ 765,900
Prop Acquisition:		$ -
Total:		$ 4,250,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Scenic Drive Water Line (S of FM 1171 to River Hill Drive)**	**Project:**	**37**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	12" Water Line	6,200	LF	$ 120.00	$ 744,000
3	Trench Safety	6,200	LF	$ 2.00	$ 12,400
4	Seed, Fertilizer and Erosion Control	6,050	LF	$ 10.00	$ 60,500
5	Concrete Pavement Repair	83	SY	$ 110.00	$ 9,167
6	12" Gate Valve (1 per 500 lf of pipe)	13	EA	$ 5,000.00	$ 65,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	13	EA	$ 7,500.00	$ 97,500
8	Connect to Small Diameter Water Line	4	EA	$ 5,000.00	$ 20,000
9	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,018,567
Eng/Survey Fees (+/- %):	15		$ 153,000
Contingency (+/- %):	25		$ 261,433
Prop Acquisition:			$ -
Total:			$ 1,430,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Aberdeen 12-inch Water Line (FM 2499 to Lake Forest)**	**Project:**	**38**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 207,187.00	$ 207,187
	Basis for Cost Projection:	**Total:**			$ 207,187
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Kirkpatrick Lane 12-inch Water Line Phase III (South of FM 1171)** **Project:** **39**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	12" Water Line	1,000	LF	$ 120.00	$ 120,000
3	Trench Safety	800	LF	$ 2.00	$ 1,600
4	Seed, Fertilizer and Erosion Control	770	LF	$ 10.00	$ 7,700
5	Concrete Pavement Repair	35	SY	$ 110.00	$ 3,850
6	12" Gate Valve (1 per 500 lf of pipe)	2	EA	$ 5,000.00	$ 10,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	2	EA	$ 7,500.00	$ 15,000
8	Bore with 24" Steel Casing	200	LF	$ 600.00	$ 120,000
9	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 318,150
Eng/Survey Fees (+/- %):	15		$ 48,000
Contingency (+/- %):	25		$ 83,850
Prop Acquisition:			$ -
Total:			$ 450,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Timber Creek 20-inch Water Line Extension**	**Project:**	**40**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	20" Water Line	550	LF	$ 210.00	$ 115,500
3	Trench Safety	470	LF	$ 2.00	$ 940
4	Seed, Fertilizer and Erosion Control	390	LF	$ 10.00	$ 3,900
5	Concrete Pavement Repair	45	SY	$ 110.00	$ 4,950
6	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	1	EA	$ 35,000.00	$ 35,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	1	EA	$ 7,500.00	$ 7,500
8	Bore with 36" Steel Casing	80	LF	$ 850.00	$ 68,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 6" Blow Off Valve & Vault	1	EA	$ 15,000.00	$ 15,000
12	Combination 4" Air Release/Vacuum Valve & Vault	2	EA	$ 20,000.00	$ 40,000
13	Cathodic Protection	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 340,790
Eng/Survey Fees (+/- %):	15	$ 52,000
Contingency (+/- %):	25	$ 97,210
Prop Acquisition:		$ -
Total:		$ 490,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Morriss Road Water Line Phase III (Eaton to Waketon Road)** **Project:** **41**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	30" Water Line	4,400	LF	$ 275.00	$ 1,210,000
3	Trench Safety	4,100	LF	$ 2.00	$ 8,200
4	Seed, Fertilizer and Erosion Control	3,560	LF	$ 10.00	$ 35,600
5	Concrete Pavement Repair	600	SY	$ 110.00	$ 66,000
6	30" Gate Valve with Vault	2	EA	$ 90,000.00	$ 180,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	3	EA	$ 7,500.00	$ 22,500
8	Bore with 48" Steel Casing	300	LF	$ 1,250.00	$ 375,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 8" Blow Off Valve & Vault	1	EA	$ 22,500.00	$ 22,500
12	Combination 6" Air Release/Vacuum Valve & Vault	1	EA	$ 30,000.00	$ 30,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 2,234,800
Eng/Survey Fees (+/- %):	15		$ 336,000
Contingency (+/- %):	25		$ 569,200
Prop Acquisition:			$ -
Total:			$ 3,140,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Morriss Road Water Line Phase IV (Waketon Road to FM 407)** **Project:** **42**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 170,000.00	$ 170,000
2	30" Water Line	5,200	LF	$ 275.00	$ 1,430,000
3	Trench Safety	4,500	LF	$ 2.00	$ 9,000
4	Seed, Fertilizer and Erosion Control	3,960	LF	$ 10.00	$ 39,600
5	Concrete Pavement Repair	600	SY	$ 110.00	$ 66,000
6	30" Gate Valve with Vault	2	EA	$ 90,000.00	$ 180,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	3	EA	$ 7,500.00	$ 22,500
8	Bore with 48" Steel Casing	700	LF	$ 1,250.00	$ 875,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
11	Combination 8" Blow Off Valve & Vault	1	EA	$ 22,500.00	$ 22,500
12	Combination 6" Air Release/Vacuum Valve & Vault	2	EA	$ 30,000.00	$ 60,000
13	Cathodic Protection	1	LS	$ 75,000.00	$ 75,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 2,989,600
Eng/Survey Fees (+/- %):	15	$ 449,000
Contingency (+/- %):	25	$ 751,400
Prop Acquisition:		$ -
Total:		$ 4,190,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Morriss Road 20-inch Water Line (Mallard Way to FM 3040)** **Project:** **43**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	20" Water Line	1,100	LF	$ 210.00	$ 231,000
3	Trench Safety	1,000	LF	$ 2.00	$ 2,000
4	Concrete Pavement Repair	100	SY	$ 110.00	$ 11,000
5	Seed, Fertilizer and Erosion Control	1,000	LF	$ 10.00	$ 10,000
6	20" Gate Valve with Vault (1 per 3,000 lf of pipe)	2	EA	$ 35,000.00	$ 70,000
7	Fire Hydrant Assembly (1 per 2,500 lf of pipe)	1	EA	$ 7,500.00	$ 7,500
8	Bore with 36" Steel Casing	100	LF	$ 850.00	$ 85,000
9	Connect to Large Diameter Water Line	2	EA	$ 15,000.00	$ 30,000
10	Combination 4" Air Release/Vacuum Valve & Vault	1	EA	$ 20,000.00	$ 20,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
12	Cathodic Protection	1	LS	$ 15,000.00	$ 15,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 511,500
Eng/Survey Fees (+/- %):	15	$ 77,000
Contingency (+/- %):	25	$ 131,500
Prop Acquisition:		$ -
Total:		$ 720,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Lake Forest 12-inch Water Line (FM 3040 to Spinks Road)** **Project:** **44**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000
2	12" Water Line	5,600	LF	$ 120.00	$ 672,000
3	Trench Safety	5,200	LF	$ 2.00	$ 10,400
4	Seed, Fertilizer and Erosion Control	4,850	LF	$ 10.00	$ 48,500
5	Concrete Pavement Repair	390	SY	$ 110.00	$ 42,900
6	12" Gate Valve (1 per 500 lf of pipe)	12	EA	$ 5,000.00	$ 60,000
7	Fire Hydrant Assembly (1 per 500 lf of pipe)	12	EA	$ 7,500.00	$ 90,000
8	Bore with 24" Steel Casing	400	LF	$ 600.00	$ 240,000
9	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
10	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 1,248,800
Eng/Survey Fees (+/- %):	15		$ 188,000
Contingency (+/- %):	25		$ 323,200
Prop Acquisition:			$ -
Total:			$ 1,760,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2020 Water Master Plan and Impact Fee Updates**	**Project:**	**45**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 179,500.00	$ 179,500
	Basis for Cost Projection:	**Total:**			$ 179,500
	Design Contract				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Reuse Pump Station and Ground Storage Tanks**	**Project:**	**46**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$100,000.00	$100,000
2	20" Water Line	400	LF	$210.00	$84,000
3	30" TRA Supply Line	1,500	LF	$230.00	$345,000
4	20" Gate Valve	1	EA	$35,000.00	$35,000
5	Seed, Fertilizer and Erosion Control	500	LF	$10.00	$5,000
6	Concrete Pavement Repair	10	SY	$110.00	$1,100
7	Trench Safety	1,900	LF	$2.00	$3,800
8	Project Sign	1	EA	$500.00	$500
9	Connect to Large Diameter Water Line	1	EA	$15,000.00	$15,000
10	Pump Station (4500 GPM Capacity)	1	LS	$2,000,000.00	$2,000,000
11	Ground Storage Tank (2 - 2 MG)	1	LS	$3,000,000.00	$3,000,000
12	Chemical Feed Station	1	LS	$50,000.00	$50,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$5,639,400
Engineering, Surveying (%,+/-)		15	$840,000
Conting. (%,+/-)		25	$1,420,600
Total:			**$7,900,000**

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Reuse Transmission Lines**	**Project:**	**47**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	16" Water Line	1,090	LF	$ 150.00	$ 163,500
3	20" Water Line	3,470	LF	$ 210.00	$ 728,700
4	Trench Safety	4,360	LF	$ 2.00	$ 8,720
5	Seed, Fertilizer and Erosion Control	4,360	LF	$ 10.00	$ 43,600
6	16" Gate Valve	1	EA	$ 12,000.00	$ 12,000
7	20" Gate Valve	2	EA	$ 35,000.00	$ 70,000
8	Bore with 36" Steel Casing	200	LF	$ 850.00	$ 170,000
9	Connect to Large Diameter Water Line	1	EA	$ 15,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,261,520
Eng/Survey Fees (+/- %):	15		$ 190,000
Contingency (+/- %):	25		$ 318,480
Prop Acquisition:			$ -
Total:			$ 1,770,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**FM 1171/Hwy 377 Central Reuse Loop**	**Project:**	**48**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 40,000.00	$ 40,000
2	8" Water Line	7,630	LF	$ 90.00	$ 686,700
3	Trench Safety	7,180	LF	$ 2.00	$ 14,360
4	Seed, Fertilizer and Erosion Control	7,180	LF	$ 10.00	$ 71,800
5	8" Gate Valve	4	EA	$ 3,500.00	$ 14,000
6	Bore with 24" Steel Casing	450	LF	$ 600.00	$ 270,000
7	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,116,860
Eng/Survey Fees (+/- %):	15		$ 168,000
Contingency (+/- %):	25		$ 283,140
Prop Acquisition:			$ -
Total:			$ 1,570,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**FM 1171 West Reuse Line**	**Project:**	**49**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	8" Water Line	4,150	LF	$ 90.00	$ 373,500
3	12" Water Line	3,700	LF	$ 120.00	$ 444,000
4	Trench Safety	7,600	LF	$ 2.00	$ 15,200
5	Seed, Fertilizer and Erosion Control	7,600	LF	$ 10.00	$ 76,000
6	8" Gate Valve	3	EA	$ 3,500.00	$ 10,500
7	12" Gate Valve	2	EA	$ 5,000.00	$ 10,000
8	Bore with 20" Steel Casing	100	LF	$ 550.00	$ 55,000
9	Bore with 24" Steel Casing	150	LF	$ 600.00	$ 90,000
10	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,119,200
Eng/Survey Fees (+/- %):	15	$ 168,000
Contingency (+/- %):	25	$ 280,800
Prop Acquisition:		$ -
Total:		$ 1,570,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**FM 1171 East Reuse Line**	**Project:**	**50**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	8" Water Line	6,900	LF	$ 90.00	$ 621,000
3	Trench Safety	6,550	LF	$ 2.00	$ 13,100
4	Seed, Fertilizer and Erosion Control	6,550	LF	$ 10.00	$ 65,500
5	8" Gate Valve	4	EA	$ 3,500.00	$ 14,000
6	Bore with 20" Steel Casing	350	LF	$ 550.00	$ 192,500
7	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 961,100
Eng/Survey Fees (+/- %):	15	$ 145,000
Contingency (+/- %):	25	$ 248,900
Prop Acquisition:		$ -
Total:		$ 1,360,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Highway 377 Central Reuse Line**	**Project:**	**51**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	12" Water Line	6,170	LF	$ 120.00	$ 740,400
3	Trench Safety	6,120	LF	$ 2.00	$ 12,240
4	Seed, Fertilizer and Erosion Control	6,120	LF	$ 10.00	$ 61,200
5	12" Gate Valve	4	EA	$ 5,000.00	$ 20,000
6	Bore with 24" Steel Casing	50	LF	$ 600.00	$ 30,000
7	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 918,840
Eng/Survey Fees (+/- %):	15		$ 138,000
Contingency (+/- %):	25		$ 231,160
Prop Acquisition:			$ -
Total:			$ 1,290,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Canyon Falls Drive Reuse Line**	**Project:**	**52**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	8" Water Line	1,780	LF	$ 90.00	$ 160,200
3	12" Water Line	4,560	LF	$ 120.00	$ 547,200
4	Trench Safety	6,190	LF	$ 2.00	$ 12,380
5	Seed, Fertilizer and Erosion Control	6,190	LF	$ 10.00	$ 61,900
6	8" Gate Valve	1	EA	$ 3,500.00	$ 3,500
7	12" Gate Valve	3	EA	$ 5,000.00	$ 15,000
8	Bore with 24" Steel Casing	150	LF	$ 600.00	$ 90,000
9	Concrete Pavement Repair	67	SY	$ 110.00	$ 7,333
10	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
11	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 942,513
Eng/Survey Fees (+/- %):	15		$ 142,000
Contingency (+/- %):	25		$ 237,487
Prop Acquisition:			$ -
Total:			$ 1,320,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Denton Creek Boulevard South Reuse Line**	**Project:**	**53**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	12" Water Line	4,770	LF	$ 120.00	$ 572,400
3	Trench Safety	4,670	LF	$ 2.00	$ 9,340
4	Seed, Fertilizer and Erosion Control	4,670	LF	$ 10.00	$ 46,700
5	12" Gate Valve	3	EA	$ 5,000.00	$ 15,000
6	Bore with 24" Steel Casing	100	LF	$ 600.00	$ 60,000
7	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 753,440
Eng/Survey Fees (+/- %):	15		$ 114,000
Contingency (+/- %):	25		$ 196,560
Prop Acquisition:			$ -
Total:			$ 1,060,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**UPRR Central Reuse Line**	**Project:**	**54**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	5,370	LF	$ 90.00	$ 483,300
3	Trench Safety	5,220	LF	$ 2.00	$ 10,440
4	Seed, Fertilizer and Erosion Control	5,220	LF	$ 10.00	$ 52,200
5	8" Gate Valve	3	EA	$ 3,500.00	$ 10,500
6	Bore with 20" Steel Casing	150	LF	$ 550.00	$ 82,500
7	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
8	Hydrostatic Testing and Disinfection (Short)	2	LS	$ 10,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 683,940
Eng/Survey Fees (+/- %):	15	$ 103,000
Contingency (+/- %):	25	$ 176,060
Prop Acquisition:		$ -
Total:		$ 960,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Stonecrest Road Reuse Line**	**Project:**	**55**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	3,400	LF	$ 90.00	$ 306,000
3	Trench Safety	3,110	LF	$ 2.00	$ 6,220
4	Seed, Fertilizer and Erosion Control	3,110	LF	$ 10.00	$ 31,100
5	8" Gate Valve	2	EA	$ 3,500.00	$ 7,000
6	Bore with 20" Steel Casing	290	LF	$ 550.00	$ 159,500
7	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 544,820
Eng/Survey Fees (+/- %):	15		$ 82,000
Contingency (+/- %):	25		$ 145,180
Prop Acquisition:			$ -
Total:			$ 770,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Canyon Falls North Reuse Line**	**Project:**	**56**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	3,520	LF	$ 90.00	$ 316,800
3	Trench Safety	3,420	LF	$ 2.00	$ 6,840
4	Seed, Fertilizer and Erosion Control	3,420	LF	$ 10.00	$ 34,200
5	8" Gate Valve	2	EA	$ 3,500.00	$ 7,000
6	Bore with 20" Steel Casing	100	LF	$ 550.00	$ 55,000
7	Concrete Pavement Repair	71	SY	$ 110.00	$ 7,822
8	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
9	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000
10	Combination 2" Air Release/Vacuum Valve & Assembly	2	EA	$ 10,000.00	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 482,662
Eng/Survey Fees (+/- %):	15		$ 73,000
Contingency (+/- %):	25		$ 127,338
Prop Acquisition:			$ -
Total:			$ 680,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**East Reuse Lines**	**Project:**	**57**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000
2	8" Water Line	15,150	LF	$ 90.00	$ 1,363,500
3	Trench Safety	15,150	LF	$ 2.00	$ 30,300
4	Seed, Fertilizer and Erosion Control	15,150	LF	$ 10.00	$ 151,500
5	8" Gate Valve	8	EA	$ 3,500.00	$ 28,000
6	Connect to Small Diameter Water Line	3	EA	$ 5,000.00	$ 15,000
7	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 15,000.00	$ 15,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,653,300
Eng/Survey Fees (+/- %):	15		$ 248,000
Contingency (+/- %):	25		$ 416,700
Prop Acquisition:			$ -
Total:			$ 2,320,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Reuse Central Connector**	**Project:**	**58**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	3,000	LF	$ 90.00	$ 270,000
3	Trench Safety	2,850	LF	$ 2.00	$ 5,700
4	Seed, Fertilizer and Erosion Control	2,900	LF	$ 10.00	$ 29,000
5	8" Gate Valve	2	EA	$ 3,500.00	$ 7,000
6	Bore with 20" Steel Casing	150	LF	$ 550.00	$ 82,500
7	Connect to Small Diameter Water Line	4	EA	$ 5,000.00	$ 20,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 444,200
Eng/Survey Fees (+/- %):	15	$ 67,000
Contingency (+/- %):	25	$ 115,800
Prop Acquisition:		$ -
Total:		$ 630,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Denton Creek North Distribution Line**	**Project:**	**59**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	660	LF	$ 90.00	$ 59,400
3	12" Water Line	3,430	LF	$ 120.00	$ 411,600
4	Trench Safety	3,990	LF	$ 2.00	$ 7,980
5	Seed, Fertilizer and Erosion Control	3,990	LF	$ 10.00	$ 39,900
6	8" Gate Valve	1	EA	$ 3,500.00	$ 3,500
7	12" Gate Valve	2	EA	$ 5,000.00	$ 10,000
8	Bore with 20" Steel Casing	100	LF	$ 550.00	$ 55,000
9	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
10	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 622,380
Eng/Survey Fees (+/- %):	15	$ 94,000
Contingency (+/- %):	25	$ 157,620
Prop Acquisition:		$ -
Total:		$ 870,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Denton Creek Spine Road Reuse Lines**	**Project:**	**60**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 30,000.00	$ 30,000
2	8" Water Line	7,130	LF	$ 90.00	$ 641,700
3	Trench Safety	7,130	LF	$ 2.00	$ 14,260
4	Seed, Fertilizer and Erosion Control	7,130	LF	$ 10.00	$ 71,300
5	8" Gate Valve	4	EA	$ 3,500.00	$ 14,000
6	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
7	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 786,260
Eng/Survey Fees (+/- %):	15		$ 118,000
Contingency (+/- %):	25		$ 203,740
Prop Acquisition:			$ -
Total:			$ 1,110,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Hwy 377 North Reuse Line**	**Project:**	**61**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000
2	8" Water Line	2,680	LF	$ 90.00	$ 241,200
3	Trench Safety	2,680	LF	$ 2.00	$ 5,360
4	Seed, Fertilizer and Erosion Control	2,680	LF	$ 10.00	$ 26,800
5	8" Gate Valve	2	EA	$ 3,500.00	$ 7,000
6	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
7	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 305,360
Eng/Survey Fees (+/- %):	15		$ 46,000
Contingency (+/- %):	25		$ 84,640
Prop Acquisition:			$ -
Total:			$ 440,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Dunham/Hayes Reuse Loop**	**Project:**	**62**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	4,970	LF	$ 90.00	$ 447,300
3	Trench Safety	4,970	LF	$ 2.00	$ 9,940
4	Seed, Fertilizer and Erosion Control	4,970	LF	$ 10.00	$ 49,700
5	8" Gate Valve	3	EA	$ 3,500.00	$ 10,500
6	Bore with 20" Steel Casing	150	EA	$ 550.00	$ 82,500
7	Connect to Small Diameter Water Line	2	EA	$ 5,000.00	$ 10,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 639,940
Eng/Survey Fees (+/- %):	15		$ 96,000
Contingency (+/- %):	25		$ 160,060
Prop Acquisition:			$ -
Total:			$ 900,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Cowboy Lane Reuse Line**	**Project:**	**63**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	3,920	LF	$ 90.00	$ 352,800
3	Trench Safety	3,730	LF	$ 2.00	$ 7,460
4	Seed, Fertilizer and Erosion Control	3,730	LF	$ 10.00	$ 37,300
5	8" Gate Valve	2	EA	$ 3,500.00	$ 7,000
6	Bore with 20" Steel Casing	190	LF	$ 550.00	$ 104,500
7	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 544,060
Eng/Survey Fees (+/- %):	15		$ 82,000
Contingency (+/- %):	25		$ 145,940
Prop Acquisition:			$ -
Total:			$ 770,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000152**	**Checked By:**	**MAS**

Title:	**Southwest Reuse Line**	**Project:**	**64**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	8" Water Line	4,270	LF	$ 90.00	$ 384,300
3	Trench Safety	4,270	LF	$ 2.00	$ 8,540
4	Seed, Fertilizer and Erosion Control	4,270	LF	$ 10.00	$ 42,700
5	8" Gate Valve	3	EA	$ 3,500.00	$ 10,500
6	Bore with 20" Steel Casing	150	LF	$ 550.00	$ 82,500
7	Connect to Small Diameter Water Line	1	EA	$ 5,000.00	$ 5,000
8	Hydrostatic Testing and Disinfection (Short)	1	LS	$ 10,000.00	$ 10,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 563,540
Eng/Survey Fees (+/- %):	15		$ 85,000
Contingency (+/- %):	25		$ 146,460
Prop Acquisition:			$ -
Total:			$ 800,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lakeside Business District - Water Reuse Master Plan**	**Project:**	**65**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$ 126,663.00	$ 126,663
	Basis for Cost Projection:	**Total:**			$ 126,663
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lakeside Reuse Phase I**	**Project:**	**66**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 9,030,000.00	$ 9,030,000
	Basis for Cost Projection:	**Total:**			$ 9,030,000
	Alan Plummer 2018 Reuse Master Plan Report				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lakeside Reuse Phase II**	**Project:**	**67**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 5,450,000.00	$ 5,450,000
	Basis for Cost Projection:	**Total:**			$ 5,450,000
	Alan Plummer 2018 Reuse Master Plan Report				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/26/2020**
Project:	**Water Impact Fee Updates**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lakeside Reuse Phase III**	**Project:**	**68**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost	1	LS	$ 5,630,000.00	$ 5,630,000
	Basis for Cost Projection:	**Total:**			$ 5,630,000
	Alan Plummer 2018 Reuse Master Plan Report				

Attachment 4

THE TOWN OF FLOWER MOUND TEXAS

2020

Wastewater

Impact Fee Update

Town of Flower Mound, Texas

Kimley»Horn

Town of Flower Mound, Texas

Wastewater Impact Fee Update Report for 2020

November 2020

Prepared for:
Town of Flower Mound

Prepared by:
Kimley»Horn

Kimley-Horn and Associates, Inc.
13455 Noel Road
Two Galleria Office Tower, Suite 700
Dallas, TX 75240
Phone: 972 770 1300

TBPE Firm Registration Number: F-928

Project Number: 061000201

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Introduction

Chapter 395 of the Texas Local Government Code describes the procedure Texas political subdivisions must follow in order to assess impact fees for new development. The first step required in updating impact fees is the development of Land Use Assumptions. These Land Use Assumptions, including both population and employment estimates, form the basis for the development of impact fee Capital Improvement Plans for roadway, wastewater, and water, facilities.

Reasonable future growth estimates are necessary in order to aid the Town of Flower Mound in establishing the need for capital improvements required to serve future development. In accordance with Chapter 395, Kimley-Horn and Associates, Inc. (Kimley-Horn) has compiled the information required to complete the update of the Land Use Assumptions using the following sources: the Town of Flower Mound Future Land Use Plan, previous land use assumptions used for recent thoroughfare plan modeling, consultation with Town staff, and building permit history. Included in this report are the growth projections based on assumptions pertaining to the type, location, quantity, and timing of various future land uses within the Town. In addition, this report also documents the methodology used in generating the growth and land use assumptions.

The Town of Flower Mound retained the services of Kimley-Horn for the purpose of updating the impact fees for wastewater system improvements required to serve new development. The existing fees were adopted by the Town in 2015 in accordance with Chapter 395 of the *Local Government Code* (impact fees), which requires a city imposing impact fees to update the land-use assumptions and capital improvements plan upon which the fees are calculated.

The purpose of this report is to satisfy the requirements of the law and provide the Town with an updated impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

(a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(3) a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;

(4) a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an

equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;

(5) the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;

(6) the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and

(7) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service unit during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

(B) in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The impact fee study includes information from the *2015 Wastewater Master Plan Update* completed by Kimley-Horn in May 2015 and from the *2020 Wastewater Model Update* completed by Kimley-Horn in 2020. The impact fees are based on recommended capital improvements and population growth projections outlined in the *2020 Wastewater Model Update.*

The study process was comprised of three tasks:

A. Land Use Assumptions

This task involved evaluating the existing and future land use plan and projecting future growth for the Town. Kimley-Horn worked with Town staff to determine future projections. The growth projections were then used to project wastewater flow throughout the Town.

B. Impact Fee Capital Improvements Plan

This task involved evaluation of the wastewater capital improvements plan outlined in the master plan and discussion with Town staff to identify projects that will be built in the 10-year planning window and meet the design criteria.

C. Impact Fee Analysis and Report

This task included calculating the additional service units, service unit equivalents, and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

Executive Summary

This study was performed to update the Town of Flower Mound's Wastewater System Impact Fees. Wastewater system analysis and the Wastewater System Master Plan are important tools for facilitating orderly growth of the wastewater system and for providing adequate facilities that promote economic development in the Town of Flower Mound. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Elements of the wastewater system, including gravity pipes, force mains and lift station facilities, were evaluated against industry standards as outlined in the Design Criteria section of this report. Information related to the growth of the Town was developed based on the future land use plan and direction from Town staff.

Texas impact fee law (Chapter 395) requires that if a system has multiple service areas those areas must be evaluated individually to determine the appropriate fee for each service area. The Town has five wastewater service areas, Long Prairie, Lakeside, Denton Creek, Prairie Vista and Cross Timbers Conservation service area. The Cross Timbers Conservation area currently has no sewer service and there are no future plans to provide sewer to this area, thus there are no future system needs and no impact fees associated with this area.

The other four service areas were evaluated to determine the necessary wastewater system improvements required to serve the 10-year (2030) and ultimate system needs. Typically, infrastructure improvements are sized beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. For example, the projected total cost to serve the ultimate system needs for all four impact fee eligible service areas will be $52,505,795. Of this, $17,767,572 is projected to be eligible for recovery through impact fees within the next 10 years. A portion of the remainder can be assessed as the planning window extends beyond 2030 and as the impact fees are updated in the future.

The impact fee law defines a service unit as follows, "'Service Unit' means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years." Therefore, the Town of Flower Mound defines a *service unit* as a unit of development that consumes the amount of water requiring a standard 5/8"x 3/4" meter. For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8"x 3/4" meter. The equivalency factor and associated impact fee by meter size is shown in Table 2.1.

Based on the Town's 10-year growth projections and the associated flow values, a total of 8,301 additional service units will need wastewater service by the year 2030. Table 2.2 shows the additional service unit breakdown by service area. Based on the additional service units and the recoverable capital improvements plans, the maximum impact fee per service unit was calculated for each service area. Table 2.1 shows the maximum allowable impact fees for the four service areas.

Table 2.1 Maximum Assessable Wastewater Impact Fee for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee per Service Area ($)			
			Long Prairie	Lakeside	Denton Creek	Prairie Vista
5/8"x 3/4" PD	10	1	2,862	2,428	586	456
3/4" PD	15	1.5	4,293	3,642	879	684
1" PD	25	2.5	7,155	6,070	1,465	1,140
1 1/2" PD	50	5	14,310	12,140	2,930	2,280
2" PD	80	8	22,896	19,424	4,688	3,648
2" Compound	80	8	22,896	19,424	4,688	3,648
2" Turbine	160	16	45,792	38,848	9,376	7,296
3" Compound	175	17.5	50,085	42,490	10,255	7,980
3" Turbine	350	35	100,170	84,980	20,510	15,960
4" Compound	300	30	85,860	72,840	17,580	13,680
4" Turbine	650	65	186,030	157,820	38,090	29,640
6" Compound	675	67.5	193,185	163,890	39,555	30,780
6" Turbine	1400	140	400,680	339,920	82,040	63,840
8" Compound	900	90	257,580	218,520	52,740	41,040
8" Turbine	2,400	240	686,880	582,720	140,640	109,440
10" Turbine	3,500	350	1,001,700	849,800	205,100	159,600

*PD = Positive Displacement Meter (typical residential meter)
**Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-19. Turbine and Compound meter flows are based on Class II (in-line) meters.

Table 2.2 Additional Service Units - 2030

Service Area	2030 Additional Service Units
Long Prairie	1,371
Lakeside	3,113
Denton Creek	2,372
Prairie Vista	1,445
TOTAL	8,301

Design Criteria

A. Sewer Trunk Lines (Interceptors)

The design criteria for sewer trunk lines or interceptors is based on the TCEQ requirements that meet peak wet weather design flows with no overflows while maintaining a minimum of 2 ft/sec cleaning velocity and a maximum of 8 ft/sec velocity.

B. Lift Stations Pumping Capacity

The design criteria for lift station pumping shall be to provide firm pumping capacity to meet the peak wet weather design flows. The firm pumping capacity is defined as the available total pumping capacity with the largest pump out of service.

C. Lift Station Wet Well Capacity

The design criteria for lift station wet wells are to provide adequate volumes to limit pump cycling to once every 10 minutes. Based on this criterion, the required operating volume for each pump can be calculated as

V = tQ/4 where,

t = Maximum pump cycling time = 10 minutes

Q = Lead pump discharge rate in gallons per minute (gpm)

V = Required wet well volume between pump start and stop elevation

D. Force Mains

The design criteria recommended for force mains is to meet the required pumping capacity of the lift station at a velocity less than 8 feet per second and a maximum discharge pressure of 100 psi and to allow a minimum of 2 feet per second scouring velocity during a single pump operation.

E. Wastewater Demand

The criteria used for projecting the wastewater demands for the four service areas were derived from the 2020 Wastewater Model Update.

For the Long Prairie and Lakeside service areas, residential and commercial flows were obtained for existing developments. As part of the Model Update, a large amount of data was collected throughout the Long Prairie and Lakeside service areas. This data was used to calibrate the existing and buildout demands in the updated model. For the Denton Creek and Prairie Vista service areas, projected build out flows were also calculated in the Model Update based on the future land use plan.

Impact Fee Capital Improvements Plan

Kimley-Horn assisted the Town with an update to the wastewater model. The update included an evaluation of existing and future demands along with the required infrastructure needed to serve future needs. The model update recommended system improvements to accommodate growth through the Town's build-out.

The Town's Wastewater system is divided into five service areas, Long Prairie, Lakeside, Denton Creek, Prairie Vista, and Cross Timbers Conservation District. Each of these areas must be evaluated individually to determine the maximum impact fee allowable for each service area.

The Long Prairie service area has twelve (12) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $36,823,649. The projected total recoverable through impact fees is $6,601,303. After financing costs are added and the credit calculation is completed, $3,925,349 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 2.3.1 and illustrated in Figure 2.1.

The Lakeside service area has Seven (7) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $25,921,362. The projected total recoverable through impact fees is $8,682,056. After financing costs are added and the credit calculation is completed, $7,558,414 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 2.3.2 and illustrated in Figure 2.1.

Both the Denton Creek and Prairie Vista service areas are to be served by the Trinity River Authority (TRA) through an agreement the Town has entered into with TRA. The Town will participate in cost sharing for infrastructure related to service for this part of town. A total average daily flow of 3.83 MGD is projected for these two service areas, 2.38 MGD for Denton Creek and 1.45 MGD for Prairie Vista. Denton Creek makes up approximately 62% of the total projected 3.83 MGD flow and Prairie Vista makes up the remaining 38%. The total cost associated with the TRA agreement is $8,860,048. The projected total recoverable through impact fees is $1,529,172 for Denton Creek and $955,041 for Prairie Vista. After financing costs are added and the credit calculation is completed, the recoverable amount through impact fees serving the 10-year system needs is $1,391,931 for Denton Creek and $659,634 for Prairie Vista. A detailed cost breakdown of the TRA agreement can be found in Table 2.3.4. The impact fee capital improvements are shown in Table 2.3.5 and illustrated in Figure 2.2.

The Cross Timbers Conservation District does not currently have sewer service, and there are no plans to provide service in the future. Therefore, this area has no wastewater capital improvement projects associated with it and thus no wastewater impact fee.

Table 2.3.1 Long Prairie
Wastewater Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Project Recoverable Cost
1	Bakers Branch Collector Phase I (Gerault to Lower Timber Interceptor)	41%	60%	19%	$607,181	$115,364
2	Bakers Branch Wastewater Collector Phase II (Lexington Ave to Gerault Rd)	22%	45%	23%	$1,351,217	$310,780
3	Oak Street Lift Station Phase III and Force Main	49%	78%	29%	$5,833,654	$1,691,760
4	Oak Street Lift Station and Force Main Phase IV	74%	84%	10%	$3,400,000	$340,000
5	Upper Timber Creek Interceptor Phase I (FM 2499 to Morriss Rd and Buckthorn Ct to FM 1171)	42%	68%	26%	$1,525,872	$396,727
6	Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)	20%	57%	37%	$2,448,208	$905,837
7	Upper Timber Interceptor (College Parkway to Pecan Drive)	0%	31%	31%	$480,000	$148,800
8	Wellington Interceptor Improvements (Sections I and II)	27%	77%	50%	$1,345,254	$672,627
9	Riverwalk Collector (Morris Road to Windsor Drive)	0%	57%	57%	$530,000	$302,100
10	2001 Wastewater Treatment Plant Improvements[2]	-	-	-	$19,191,263	$1,606,309
11	2020 Wastewater Master Plan and Impact Fee Updates[1]	0%	100%	100%	$46,000	$46,000
12	Wastewater Treatment Plant Master Plan[3]	0%	100%	100%	$65,000	$65,000
	Total				$36,823,649	$6,601,303

[1]Master Plan and Impact Fee Update Costs were divided equally among the four (4) impact fee eligible service areas

[2]Refer to Table 2.3.3 for Service Area proportional cost breakdown

[3]WWTP Master Plan was divided proportionally between Long Prairie and Lakeside Service Areas

Table 2.3.2 Lakeside
Wastewater Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Project Recoverable Cost
1	Lakeside Lift Station and Force Main	25%	100%	75%	$2,499,099	$1,874,324
2	Southside Force Main Extension	0%	75%	75%	$2,020,000	$1,515,000
3	Southside Pump Upgrade	0%	75%	75%	$530,000	$397,500
4	Southside Gravity Main Improvements	0%	77%	77%	$1,570,000	$1,208,900
5	2001 Wastewater Treatment Plant Improvements[2]	-	-	-	$19,191,263	$3,575,332
6	2020 Wastewater Master Plan and Impact Fee Updates[1]	0%	100%	100%	$46,000	$46,000
7	Wastewater Treatment Plant Master Plan[3]	0%	100%	100%	$65,000	$65,000
	Total				$25,921,362	$8,682,056

[1]Master Plan and Impact Fee Update Costs were divided equally among the four (4) impact fee eligible service areas

[2]Refer to Table 2.3.3 for Service Area proportional cost breakdown

[3]WWTP Master Plan was divided proportionally between Long Prairie and Lakeside Service Areas

In 2001 the Town's wastewater treatment plant was upgraded. The upgrade increased the plant capacity from 5 MGD to 10 MGD. The plant treats flow from both the Long Prairie and Lakeside service areas. Since both service areas flow to the plant, each service area may be proportioned a percentage of the improvement costs associated with the plant upgrade. Table 2.3.3 shows the total recoverable cost for the 2001 improvements and also shows what percentages of the recoverable cost may be applied to each service area. The percent for each service area is based on the service area's projected flow.

Table 2.3.3
Wastewater Treatment Plant
Project Cost and 10-Year Recoverable Cost

Description	2020 Required Capacity (Percent Utilization)	2030 Required Capacity (Percent Utilization)	2020-2030 Required Capacity (Percent Utilization)	Total Project Cost	2030 Projected Recoverable Cost
2001 Wastewater Treatment Plant Improvements	73%	100%	27%	$19,191,263	$5,181,641

Proportional Recoverable Costs for Long Prairie and Lakeside Service Areas		
Description	Percentage of Projected 2030 Growth	2030 WWTP Recoverable Cost
Long Prairie[1]	31%	$1,606,309
Lakeside[1]	69%	$3,575,332
Total		$5,181,641

[1]Percentage of proportional cost for Long Prairie and Lakeside Service areas is based on ratio of projected growth for each service area

Table 2.3.4
Trinity River Authority Contract Breakdown

Trinity River Authority - Denton Creek Wastewater Transportation System Contract		
Phase 1	$	4,275,352
Additional Town Reimbursable Cost	$	691,837
CDBG Funds Utilized for TRA Agreement	$	(135,595)
CDBG Fund Utilized for Engineering Services	$	(197,785)
Phase 2	$	4,226,239
Total	$	8,860,048

Proportional Total Cost per Service Area	
Denton Creek (62%)	$ 5,493,230
Prairie Vista (38%)	$ 3,366,818

Table 2.3.5
Denton Creek and Prairie Vista
Wastewater Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

Denton Creek Service Area

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Project Recoverable Cost
1	TRA System Contract	8%	35%	27%	$5,493,230	$1,483,172
2	2020 Wastewater Master Plan and Impact Fee Updates[1]	0%	100%	100%	$46,000	$46,000
	Total				$5,539,230	$1,529,172

[1]Master Plan and Impact Fee Update Costs were divided equally among the four (4) impact fee eligible service areas

Prairie Vista Service Area

Proj #	Description	2020 Required Capacity (Percent Utilized)	2030 Required Capacity (Percent Utilized)	2020-2030 Required Capacity (Percent Utilized)	Total Project Cost	2030 Project Recoverable Cost
1	TRA System Contract	0%	27%	27%	$3,366,818	$909,041
2	2020 Wastewater Master Plan and Impact Fee Updates[1]	0%	100%	100%	$46,000	$46,000
	Total				$3,412,818	$955,041

[1]Master Plan and Impact Fee Update Costs were divided equally among the four (4) impact fee eligible service areas

LONG PRAIRIE SERVICE AREA

LAKESIDE SERVICE AREA

Grapevine Lake

LONG PRAIRIE RD
DIXON LN
VALLEY RIDGE BLVD
FM 407
12"
7
KIRKPATRICK LN
WAKETON RD
MORRISS RD
BRIDLEWOOD BLVD
15"
7
27"
5
COLLEGE PKWY
GARDEN RIDGE RD
FM 1171
FM 2499
CROSS TIMBERS RD
BRUTON ORAND BLVD
QUAIL RUN
30"/ 33"
27"
5
6
FIREWHEEL DR
OAK DR
27"
27"
3
4
8
21"
8
FOREST VISTA DR
WICHITA TRL
SIMMONS RD
OLD SETTLERS RD
MCKAMY CREEK RD
FM 3040
18"
21"
2
1
SPINKS RD
18" FM
2
5
10
GERAULT RD
18" FM
3
LAKESIDE PKWY
FM 2499
12"
4
INTERNATIONAL PKWY
15"
4
1
3

TOWN OF FLOWER MOUND
Wastewater Impact Fee CIP
Long Prairie and Lakeside

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 2,800 5,600 Feet

Kimley»Horn

November 2020

Legend

- Wastewaster Treatment Plant
- Lakeside Basin Lift Station
- Long Prairie Basin Lift Station
- Wastewater Force Main
- Lakeside
- Long Prairie
- Service Area Boundary

Flower Mound Wastewater CIP Project List (Long Prairie)

1. Bakers Branch Collector Phase I (Gerault to Lower Timber Interceptor)
2. Bakers Branch Wastewater Collector Phase II (Lexington Ave to Gerault Rd)
3. Oak Street Lift Station Ph III and Force Main
4. Oak Street Lift Station and Force Main Phase IV
5. Upper Timber Creek Interceptor Phase I (FM 2499 to Morriss Rd and Buckthorn Ct to FM 1171)
6. Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)
7. Upper Timber Creek Interceptor (College Parkway to Pecan Drive)
8. Wellington Interceptor Improvements (Sections I and II)
9. Riverwalk Collector (Morriss Road to Windsor Drive)
10. 2001 Wastewater Treatment Plan Improvements

Flower Mound Wastewater CIP Project List (Lakeside)

1. Lakeside Lift Station and Force Main
2. Southside Force Main Extension
3. Southside Pump Upgrade
4. Southside Gravity Main Improvements
5. 2001 Wastewater Treatment Plan Improvements

DENTON CREEK BLVD

CANYON FALLS

SMOOT LN

DENTON CREEK
SERVICE AREA

HWY 377

PRAIRIE VISTA
SERVICE AREA

CROSS TIMBERS RD

DUNHAM RD

HAYNES RD

TOWN OF FLOWER MOUND
Wastewater Impact Fee CIP
Prairie Vista and Denton Creek
Figure 2.2

THE TOWN OF FLOWER MOUND TEXAS

N W E S

0 1,800 3,600 Feet

Kimley»Horn

November 2020

Legend

- TRA Wastewater Line
- TRA Service Area

Flower Mound Wastewater CIP Project List (Prairie Vista and Denton Creek)

1. TRA System Contract

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

A. Project Descriptions (By Service Area)

I. Long Prairie Service Area

1. Bakers Branch Wastewater Collector Phase I (Gerault Rd to Lower Timber Interceptor)
   In 2014 the Town installed approximately 1,750 LF of 21-inch wastewater main from Gerault Rd to the Lower Timber interceptor. This project replaced the existing 15-inch wastewater main to provide additional capacity for future demands.

Project Cost	$607,181
Recoverable Cost	$115,364

2. Bakers Branch Collector Phase II (Lexington Avenue to Gerault Road)
   Approximately 2,300 LF of 18-inch wastewater main was built to replace an existing 12-inch/15-inch wastewater main. The alignment begins at the intersection of Gerault Road and the east-west creek south of Lexington Avenue. The main parallels the southern fork of the creek, then parallels Strait Lane to Twilight Drive, then west approximately 1,050 LF before intersecting Lexington Avenue.

Project Cost	$1,351,217
Recoverable Cost	$310,780

3. Oak Street Phase III Lift Station and Force Main
   This project included the installation of approximately 12,700 LF of 30-inch Force Main from the Oak Street Lift Station to the WWTP. This force main parallels the existing 24-inch force main and provides additional capacity to the station.

Project Cost	$5,833,654
Recoverable Cost	$1,691,760

4. Oak Street Lift Station and Force Main Phase IV
   This project will include replacing one of the existing small 3400 gpm, 77 hp submersible pumps with a large 7000 gpm, 215 hp pump with variable frequency drive, upgrading the lift station's mechanical piping, and installing control valves for three large pumps.

Project Cost	$3,400,000
Recoverable Cost	$340,000

5. Upper Timber Creek Interceptor Phase I (FM 2499 to Morriss Rd and Buckthorn Ct to FM 1171)
   In 2013 the Town installed approximately 3,800 LF of 27-inch wastewater main from FM 2499 to Morriss Road. This project replaced the existing 15" wastewater main to provide additional capacity for future demands. As part of this project approximately 400 LF of 33-inch and 30-inch wastewater main was installed near Parker Square.

Project Cost	$1,525,872
Recoverable Cost	$396,727

6. Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)
Approximately 1,900 LF of 27-inch wastewater main was installed to replace an existing 24-inch main from FM 1171 to Hidden Forest Drive. The main connects to the 33-inch main constructed as part of the Upper Timber Interceptor Phase I project just north of FM 1171.

Project Cost	$2,448,208
Recoverable Cost	$905,837

7. Upper Timber Interceptor (College Parkway to Pecan Drive)
Approximately 1,240 LF of 15-inch wastewater main is proposed to replace the existing 12-inch wastewater line along Long Prairie Road south of College Parkway.

Project Cost	$480,000
Recoverable Cost	$148,800

8. Wellington Interceptor Improvements (Sections I and II)
In 2012 and 2013 the Town upgraded two sections of the Wellington interceptor. Approximately 2,500 LF of 27-inch wastewater main was installed as part of Section I and 900 LF of 21-inch wastewater main was installed as part of Section II.

Project Cost	$1,345,254
Recoverable Cost	$672,627

9. Riverwalk Collector (Morris Road to Windsor Drive)
Approximately 1,430 LF of 15-inch wastewater main is proposed running north and east from between FM 2499 and Morriss Road to Morriss Road north of the intersection with Eaton. Inflow and infiltration monitoring of the existing line is recommended prior to construction.

Project Cost	$530,000
Recoverable Cost	$302,100

10. 2001 Wastewater Treatment Plant Improvements
In 2001, the Town upgraded the existing wastewater treatment plant (WWTP). The improvements increased the WWTP capacity from 5 MGD to 10 MGD. The WWTP is oversized to meet future system needs; therefore, a portion of the station cost is recoverable through impact fees. Since the WWTP serves both the Long Prairie and Lakeside Service Areas, a proportional amount of the recoverable cost is assigned to each service area based on project flow. (See Table 2.3.3)

Project Cost	$19,191,263
Recoverable Cost	$1,368,337

11. 2020 Wastewater Master Plan and Impact Fee Updates
The major update to the Wastewater Master Plan was performed in 2020. Based on projected future infrastructure needs, a Wastewater Impact Fee Update was also completed to determine how much of the infrastructure costs may be recovered by the Town. The recoverable cost associated with the Wastewater Master Plan and Impact Fee Updates has been divided among the four service areas with impact fees.

Project Cost	$46,000
Recoverable Cost	$46,000

12. Wastewater Treatment Plant Master Plan

This project included an analysis of influent and treatment capacity of the Town's wastewater treatment plant and recommendations for future improvements at the existing treatment plant. This project cost was split evenly between the Long Prairie and Lakeside Service Areas.

Project Cost	$65,000
Recoverable Cost	$65,000

II. Lakeside Service area

1. Lakeside Lift Station and Force Main

In order to serve the projected flows for the Lakeside service area, the existing Lakeside lift station underwent improvements to add capacity to the station. This project involved the installation of two additional pumps to the existing lift station along with required electrical improvements. It also involved the installation of approximately 4,500 LF of a parallel 18-inch force main.

Project Cost	$2,499,099
Recoverable Cost	$1,874,324

2. Southside Force Main Extension

Approximately 4,600 LF of 18-inch force main is proposed to alleviate capacity constraints at the raw water lift station at the wastewater treatment plant. This force main will connect to the force main constructed as part of the Lakeside Lift Station and Force Main project and end at the Town's wastewater treatment plant.

Project Cost	$2,020,000
Recoverable Cost	$1,515,000

3. Southside Pump Upgrade

This project includes upsizing the two smaller pumps at the Southside Lift Station to add capacity to the lift station. Total projected cost for this project is $680,000, of that the Lakeside DFW development has committed to contribute $150,000 per the development agreement. This $150,000 is not included in the project cost below because it is not a recoverable cost.

Project Cost	$530,000
Recoverable Cost	$397,500

4. Southside Gravity Improvements

Approximately 2,970 LF 15-inch wastewater main and 620 LF 12-inch wastewater main is proposed to provide adequate capacity for density increases in the Lakeside area.

Project Cost	$1,570,000
Recoverable Cost	$1,208,900

5. 2001 Wastewater Treatment Plant Improvements

In 2001, the Town upgraded the existing wastewater treatment plant (WWTP). The improvements increased the WWTP capacity from 5 MGD to 10 MGD. The WWTP is oversized to meet future system needs; therefore, a portion of the station cost is recoverable through impact fees. Since the WWTP serves both the Long Prairie and Lakeside Service Areas, a proportional amount of the recoverable cost is assigned to each service area based on project flow. (See Table 2.3.3)

Project Cost	$19,191,263
Recoverable Cost	$3,045,653

6. 2020 Wastewater Master Plan and Impact Fee Updates

The major update to the Wastewater Master Plan was performed in 2020. Based on projected future infrastructure needs, a Wastewater Impact Fee Update was also completed to determine how much of the infrastructure costs may be recovered by the Town. The recoverable cost associated with the Wastewater Master Plan and Impact Fee Updates has been divided among the four service areas with impact fees.

Project Cost	$46,000
Recoverable Cost	$46,000

7. Wastewater Treatment Plant Master Plan

This project included an analysis of influent and treatment capacity of the Town's wastewater treatment plant and recommendations for future improvements at the existing treatment plant. This project cost was split evenly between the Long Prairie and Lakeside Service Areas.

Project Cost	$65,000
Recoverable Cost	$65,000

III. Denton Creek Service Area

1. TRA System Contract

The Town has entered into an agreement with the Trinity River Authority (TRA) for wastewater service for the western part of Flower Mound. As part of this agreement TRA will provide wastewater service for the area and in return Flower Mound has agreed to pay a portion of the cost associated with the infrastructure improvements necessary to serve this area. (See Table 2.3.4)

Project Cost	$5,493,230
Recoverable Cost	$1,483,172

2. 2020 Wastewater Master Plan and Impact Fee Updates

The major update to the Wastewater Master Plan was performed in 2020. Based on projected future infrastructure needs, a Wastewater Impact Fee Update was also completed to determine how much of the infrastructure costs may be recovered by the Town. The recoverable cost associated with the Wastewater Master Plan and Impact Fee Updates has been divided among the four service areas with impact fees.

Project Cost	$46,000
Recoverable Cost	$46,000

IV. Prairie Vista Service Area

1. TRA System Contract

The Town has entered into an agreement with the Trinity River Authority (TRA) for wastewater service for the western part of Flower Mound. As part of this agreement TRA will provide wastewater service for the area and in return Flower Mound has agreed to pay a portion of the cost associated with the infrastructure improvements necessary to serve this area. (See Table 2.3.4)

Project Cost	$3,366,818
Recoverable Cost	$909,041

2. 2020 Wastewater Master Plan and Impact Fee Updates

The major update to the Wastewater Master Plan was performed in 2020. Based on projected future infrastructure needs, a Wastewater Impact Fee Update was also completed to determine how much of the infrastructure costs may be recovered by the Town. The recoverable cost associated with the Wastewater Master Plan and Impact Fee Updates has been divided among the four service areas with impact fees.

Project Cost	$46,000
Recoverable Cost	$46,000

Wastewater Impact Fee Calculation

Chapter 395 of the Local Government Code defines a service unit as follows, ""*Service Unit" means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years.*" Therefore, the Town of Flower Mound defines a *service unit* based on historical wastewater usage over the past 10 years as compared to the estimated residential units. The residential unit is the development type that predominately uses a 5/8"x 3/4" meter. The measure of consumption per service unit is based on a 5/8"x 3/4" meter and the data shown in Table 2.4.

Table 2.4 Service Unit Consumption Calculation

Year	Population[1]	Residential Units (3.16 persons/unit) [1]	Wastewater Flow Average Day Flow (MGD)	Flow per Service Unit (GPD)
2010	58,521	20,752	5.49	265
20011	58,885	20,881	4.77	228
2012	59,177	20,985	4.60	219
2013	59,455	21,083	4.37	207
2014	60,480	21,447	4.18	195
2015	61,439	21,787	6.31	290
2016	62,504	22,165	6.31	285
2017	65,020	23,057	6.33	275
2018	66,178	23,467	5.78	246
2019	68,802	24,398	6.2	254
10-yr Average Flow per Service Unit				246
5-Yr Average Flow per Service Unit				270

Wastewater Usage Source: Town of Flower Mound
(1) Source: Land Use Assumptions, 2020
Populations and Flows are for Lakeside and Long Prairie Service Areas

The flows calculated above, 246 gpd per service unit, was considered a low estimate per the Town's recent upward trend in historical wastewater flows. In order to obtain a more accurate flow projection, the 5-year average flow of 270 gpm was used instead of the 10-year average flow.

Based on the Town's growth projections and the resulting wastewater flow projections, wastewater service will be required for 8,301 additional service units. Chapter 395 of the Local Government Code requires that service areas be evaluated individually. The Town of Flower Mound has four wastewater service areas subject to impact fees: Long Prairie, Lakeside, Denton Creek, and Prairie Vista. The growth projections must be evaluated individually for each service area, as well as the impact calculated for each service area. The calculation is as follows:

- A service unit, which is a unit of development that discharges approximately 270 gallons per day (GPD), is a typical residential connection that uses a 5/8"x 3/4" meter. Tables 2.5.1 through 2.5.4 outlines the future wastewater discharge projections and its relationship to the additional service units projected for the next 10-years.

Table 2.5.1 Long Prairie Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2020	6.99	270	25,903
2030	7.36	270	27,274
10-year Additional Service Units			1,371

Table 2.5.2 Lakeside Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2020	0.70	270	2,594
2030	1.54	270	5,707
10-year Additional Service Units			3,113

Table 2.5.3 Denton Creek Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2020	0.2	270	741
2030	0.84	270	3,113
10-year Additional Service Units			2,372

Table 2.5.4 Prairie Vista Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2020	0.00	270	0
2030	0.39	270	1,445
10-year Additional Service Units			1,445

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the Town from double charging development for future capital improvements via impact fees and utility rates. If the city chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The Town has chosen to perform a financial analysis. The maximum recoverable cost for impact fee or each service area is shown in Tables 2.6.1 through 2.6.4.

A breakdown of the 10-year recoverable costs and the associated impact fee for each service area per service unit is as follows:

Table 2.6.1 Long Prairie Service Area 10-year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	$6,601,303
Financing Costs	$1,443,740
Existing Fund Balance	($3,828,736)
Interest Earnings	($175,366)
Pre Credit Recoverable Cost for Impact Fee	$4,040,940
Credit for Utility Revenues	($115,591)
Maximum Recoverable Cost for Impact Fee	$3,925,349

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$3,925,349}{1,371}$$

$$\text{Impact fee per service unit} = \$2,862$$

Therefore, the maximum assessable impact fee for the Long Prairie Service area per service unit is $2,862.

Table 2.6.2 Lakeside Service Area 10-year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	$8,682,056
Financing Costs	$2,274,182
Existing Fund Balance	($1,619,658)
Interest Earnings	($218,048)
Pre Credit Recoverable Cost for Impact Fee	$9,118,532
Credit for Utility Revenues	($1,560,118)
Maximum Recoverable Cost for Impact Fee	$7,558,414

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$7,558,414}{3,113}$$

$$\text{Impact fee per service unit} = \$2,428$$

Therefore, the maximum assessable impact fee for the Lakeside Service area per service unit is $2,428.

Table 2.6.3 Denton Creek Service Area 10-year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	$1,529,172
Financing Costs	$283,822
Existing Fund Balance	$0
Interest Earnings	($13,437)
Pre Credit Recoverable Cost for Impact Fee	$1,799,557
Credit for Utility Revenues	($407,626)
Maximum Recoverable Cost for Impact Fee	$1,391,931

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$1,391,931}{2,372}$$

$$\text{Impact fee per service unit} = \$586$$

Therefore, the maximum assessable impact fee for the Denton Creek Service area per service unit is $586.

Table 2.6.4 Prairie Vista Service Area 10-year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	$955,041
Financing Costs	$173,955
Existing Fund Balance	($16,560)
Interest Earnings	($9,834)
Pre Credit Recoverable Cost for Impact Fee	$1,102,602
Credit for Utility Revenues	($442,969)
Maximum Recoverable Cost for Impact Fee	$659,634

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$659,634}{1,445}$$

$$\text{Impact fee per service unit} = \$456$$

Therefore, the maximum assessable impact fee for the Prairie Vista Service area per service unit is $456.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8"x 3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown on Table 2.7, Service Unit Equivalency Table for Commonly Used Meters.

Table 2.7 Service Unit Equivalency Table for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee per Service Area ($)			
			Long Prairie	Lakeside	Denton Creek	Prairie Vista
5/8"x 3/4" PD	10	1	2,862	2,428	586	456
3/4" PD	15	1.5	4,293	3,642	879	684
1" PD	25	2.5	7,155	6,070	1,465	1,140
1 1/2" PD	50	5	14,310	12,140	2,930	2,280
2" PD	80	8	22,896	19,424	4,688	3,648
2" Compound	80	8	22,896	19,424	4,688	3,648
2" Turbine	160	16	45,792	38,848	9,376	7,296
3" Compound	175	17.5	50,085	42,490	10,255	7,980
3" Turbine	350	35	100,170	84,980	20,510	15,960
4" Compound	300	30	85,860	72,840	17,580	13,680
4" Turbine	650	65	186,030	157,820	38,090	29,640
6" Compound	675	67.5	193,185	163,890	39,555	30,780
6" Turbine	1400	140	400,680	339,920	82,040	63,840
8" Compound	900	90	257,580	218,520	52,740	41,040
8" Turbine	2,400	240	686,880	582,720	140,640	109,440
10" Turbine	3,500	350	1,001,700	849,800	205,100	159,600

* PD = Positive Displacement Meter (typical residential meter)

** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-15. Turbine and Compound meter flows are based on Class II (in-line) meters.

Appendix A: Plan for Awarding Wastewater Impact Fee Credit

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Denton Creek

Recoverable Impact Fee CIP Costs	$	1,529,172	Per Kimley-Horn Impact Fee Update
Financing Costs		283,822	See Detail Below
Existing Fund Balance		-	Page 1 of Appendix B - Denton Creek
Interest Earnings		(13,437)	Page 4 of Appendix B - Denton Creek
Pre Credit Recoverable Cost for Impact Fee	$	1,799,557	Sum of Above
Credit for Utility Revenues		(407,626)	Page 7 of Appendix B - Denton Creek
Maximum Recoverable Cost for Impact Fee	**$**	**1,391,931**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.

Financing Costs:

New Annual Debt Service	$	-	(Page 3 of Appendix B - Denton Creek)
Existing Annual Debt Service		1,121,438	(Page 3 of Appendix B - Denton Creek)
Principal Component		(837,616)	(Page 1 of Appendix B - Denton Creek)
Financing Costs	$	283,822	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or other revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Service Revenues. This is the maximum cost that can be recovered through impact fees.

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Lakeside

Recoverable Impact Fee CIP Costs	$	8,682,056	Per Kimley-Horn Impact Fee Update
Financing Costs		2,274,182	See Detail Below
Existing Fund Balance		(1,619,658)	Page 1 of Appendix B - Lakeside
Interest Earnings		(218,048)	Page 4 of Appendix B - Lakeside
Pre Credit Recoverable Cost for Impact Fee	$	9,118,532	Sum of Above
Credit for Utility Revenues		(1,560,118)	Page 7 of Appendix B - Lakeside
Maximum Recoverable Cost for Impact Fee	**$**	**7,558,414**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.

Financing Costs:

New Annual Debt Service	$	2,774,714	(Page 3 of Appendix B - Lakeside)
Existing Annual Debt Service		5,472,147	(Page 3 of Appendix B - Lakeside)
Principal Component		(5,972,678)	(Page 1 of Appendix B - Lakeside)
Financing Costs	$	2,274,182	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or other revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Service Revenues. This is the maximum cost that can be recovered through impact fees.

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Long Prairie

Recoverable Impact Fee CIP Costs	$	6,601,303	Per Kimley-Horn Impact Fee Update
Financing Costs		1,443,740	See Detail Below
Existing Fund Balance		(3,828,736)	Page 1 of Appendix B - Long Prairie
Interest Earnings		(175,366)	Page 4 of Appendix B - Long Prairie
Pre Credit Recoverable Cost for Impact Fee	$	4,040,940	Sum of Above
Credit for Utility Revenues		(115,591)	Page 7 of Appendix B - Long Prairie
Maximum Recoverable Cost for Impact Fee	**$**	**3,925,349**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.

Financing Costs:

New Annual Debt Service	$	218,979	(Page 3 of Appendix B - Long Prairie)
Existing Annual Debt Service		6,711,356	(Page 3 of Appendix B - Long Prairie)
Principal Component		(5,486,595)	(Page 1 of Appendix B - Long Prairie)
Financing Costs	$	1,443,740	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or other revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Service Revenues. This is the maximum cost that can be recovered through impact fees.

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Prairie Vista

Recoverable Impact Fee CIP Costs	$	955,041	Per Kimley-Horn Impact Fee Update
Financing Costs		173,955	See Detail Below
Existing Fund Balance		(16,560)	Page 1 of Appendix B - Prairie Vista
Interest Earnings		(9,834)	Page 4 of Appendix B - Prairie Vista
Pre Credit Recoverable Cost for Impact Fee	$	1,102,602	Sum of Above
Credit for Utility Revenues		(442,969)	Page 7 of Appendix B - Prairie Vista
Maximum Recoverable Cost for Impact Fee	**$**	**659,634**	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.

Financing Costs:

New Annual Debt Service	$	-	(Page 3 of Appendix B - Prairie Vista)
Existing Annual Debt Service		687,333	(Page 3 of Appendix B - Prairie Vista)
Principal Component		(513,378)	(Page 1 of Appendix B - Prairie Vista)
Financing Costs	$	173,955	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2020 Impact Fee Update were also included in the previous Impact Fee Updates. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs.

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.438% annual interest rate based on the Town's current annual return as of 06/30/2020. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs.

Pre Credit Recoverable Cost for Impact Fee:

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or other revenue sources.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Service Revenues. This is the maximum cost that can be recovered through impact fees.

Appendix B: Impact Fee Calculation Assumptions

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation Assumptions

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	145
Available Existing Fund Balance [3]	16,560

Portion of Projects Funded by Existing Debt [4]	$ 513,378
Non-debt Funded Project Cost [5]	441,663
Project Cost Funded Through New Debt [6]	-
Total Recoverable Project Cost [7]	$ 955,041

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ -	4.00%	20
2	-	4.00%	20
3	-	4.00%	20
4	-	4.00%	20
5	-	4.00%	20
6	-	4.00%	20
7	-	4.00%	20
8	-	4.00%	20
9	-	4.00%	20
10	-	4.00%	20
Total	$ -		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 44,166
2	44,166
3	44,166
4	44,166
5	44,166
6	44,166
7	44,166
8	44,166
9	44,166
10	44,166
Total	$ 441,663

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update, includes 1,036 of prepaid service units over the 10-year period
(3) Balances for this service area available as of July 31, 2020
(4) Per discussions with Town staff and Town files
(5) Per discussions with Town staff and Town files
(6) Per discussions with Town staff and Town files
(7) Per Kimley-Horn Impact Fee Update
(8) Assumes no new debt issued for projects
(9) Estimated interest cost provided by Town's Financial Advisor
(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

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expenses Summary
Appendix B - Impact Fee Calculation Assumptions
Prairie Vista

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service [1]
1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expenses Summary

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

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	$ -	$ 44,166	$ -	$ 56,104	$ (56,104)	44,166
2	-	44,166	-	57,694	(57,694)	44,166
3	-	44,166	-	44,146	(44,146)	44,166
4	-	44,166	-	44,173	(44,173)	44,166
5	-	44,166	-	44,182	(44,182)	44,166
6	-	44,166	-	41,886	(41,886)	44,166
7	-	44,166	-	41,376	(41,376)	44,166
8	-	44,166	-	40,717	(40,717)	44,166
9	-	44,166	-	37,345	(37,345)	44,166
10	-	44,166	-	35,347	(35,347)	44,166
11	-	-	-	35,331	-	35,331
12	-	-	-	34,493	-	34,493
13	-	-	-	33,157	-	33,157
14	-	-	-	30,729	-	30,729
15	-	-	-	27,376	-	27,376
16	-	-	-	22,079	-	22,079
17	-	-	-	19,067	-	19,067
18	-	-	-	15,804	-	15,804
19	-	-	-	12,468	-	12,468
20	-	-	-	10,929	-	10,929
21	-	-	-	2,933	-	2,933
22	-	-	-	-	-	-
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	-	-	-	-	-	-
	$ -	$ 441,663	$ -	$ 687,333	$ (442,969)	$ 686,028

(1) Appendix B - Denton Creek, Page 2; assumes no new debt issued for projects

(2) Appendix B - Denton Creek, Page 1

(3) Eligible Outstanding Debt Funded Projects Percent of Utility Self-Supported Debt Issuance times total outstanding utility self-supported annual debt service

(4) Appendix B - Denton Creek, Page 7

Town of Flower Mound 2020 Wastewater Impact Fee Update

Revenue Test

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Year	Impact Fee [1]	Service Units	Impact Fee Revenue [1]	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ 16,560
1	$ 456	145	$ 65,963	$ 44,166	$ 21,797	120	38,477
2	456	145	65,963	44,166	21,797	216	60,491
3	456	145	65,963	44,166	21,797	313	82,600
4	456	145	65,963	44,166	21,797	410	104,807
5	456	145	65,963	44,166	21,797	507	127,111
6	456	145	65,963	44,166	21,797	604	149,512
7	456	145	65,963	44,166	21,797	703	172,012
8	456	145	65,963	44,166	21,797	801	194,610
9	456	145	65,963	44,166	21,797	900	217,307
10	456	145	65,963	44,166	21,797	1,000	240,104
11	-	-	-	35,331	(35,331)	974	205,748
12	-	-	-	34,493	(34,493)	826	172,080
13	-	-	-	33,157	(33,157)	681	139,605
14	-	-	-	30,729	(30,729)	544	109,420
15	-	-	-	27,376	(27,376)	419	82,463
16	-	-	-	22,079	(22,079)	313	60,697
17	-	-	-	19,067	(19,067)	224	41,854
18	-	-	-	15,804	(15,804)	149	26,199
19	-	-	-	12,468	(12,468)	87	13,819
20	-	-	-	10,929	(10,929)	37	2,926
21	-	-	-	2,933	(2,933)	6	(0)
22	-	-	-	-	-	(0)	(0)
23	-	-	-	-	-	(0)	(0)
24	-	-	-	-	-	(0)	(0)
25	-	-	-	-	-	(0)	(0)
26	-	-	-	-	-	(0)	(0)
27	-	-	-	-	-	(0)	(0)
28	-	-	-	-	-	(0)	(0)
29	-	-	-	-	-	(0)	-
			659,634	686,028		9,834	

(1) Actual revenues could be closer to $190,000 due to prepaid service units.

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	145	164	44,166	50,025
2	28	1.1277	1.0000	145	163	44,166	49,807
3	27	1.1228	1.0000	145	162	44,166	49,590
4	26	1.1179	1.0000	145	162	44,166	49,373
5	25	1.1130	1.0000	145	161	44,166	49,158
6	24	1.1082	1.0000	145	160	44,166	48,944
7	23	1.1033	1.0000	145	159	44,166	48,730
8	22	1.0985	1.0000	145	159	44,166	48,518
9	21	1.0937	1.0000	145	158	44,166	48,306
10	20	1.0890	1.0000	145	157	44,166	48,095
11	19	1.0842	1.0000	-	-	35,331	38,306
12	18	1.0795	1.0000	-	-	34,493	37,235
13	17	1.0748	1.0000	-	-	33,157	35,636
14	16	1.0701	1.0000	-	-	30,729	32,883
15	15	1.0654	1.0000	-	-	27,376	29,167
16	14	1.0608	1.0000	-	-	22,079	23,421
17	13	1.0562	1.0000	-	-	19,067	20,138
18	12	1.0515	1.0000	-	-	15,804	16,618
19	11	1.0470	1.0000	-	-	12,468	13,053
20	10	1.0424	1.0000	-	-	10,929	11,392
21	9	1.0378	1.0000	-	-	2,933	3,044
22	8	1.0333	1.0000	-	-	-	-
23	7	1.0288	1.0000	-	-	-	-
24	6	1.0243	1.0000	-	-	-	-
25	5	1.0199	1.0000	-	-	-	-
26	4	1.0154	1.0000	-	-	-	-
27	3	1.0110	1.0000	-	-	-	-
28	2	1.0066	1.0000	-	-	-	-
29	1	1.0022	1.0000	-	-	-	-
					1,605	686,028	751,439

Total Escalated Expense for Entire Period	$	751,439
Total Escalated Service Units		1,605
Impact Fee for Denton Creek	**$**	**456**

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost [1]	Percent Recoverable [1]	Impact Fee Recoverable Cost [1]	Debt Funded [2] Existing	Debt Funded [2] Proposed	Non-Debt Funded[2]	Impact Fee Recoverable Cost
Wastewater Capital Improvements								
TRA System Contract	1	$ 3,366,818	27.0%	$ 909,041	$ 513,378	$ -	$ 395,663	$ 909,041
2020 Wastewater Master Plan and Impact Fee Updates	2	46,000	100.0%	46,000	-	-	46,000	46,000
Total		**$ 3,412,818**		**$ 955,041**	**$ 513,378**	**$ -**	**$ 441,663**	**$ 955,041**

(1) Per Kimley-Horn Impact Fee Update

(2) Based on Contributions by Project and Planned Future Debt Financing

Town of Flower Mound 2020 Wastewater Impact Fee Update

Credit Determination

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

2020 Service Units [1]	-	
Ten Year Growth in Service Units [1]	1,445	
	10	years
Annual Growth in Service Units	145	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 56,104	$ 57,694	$ 44,146	$ 44,173	$ 44,182	$ 41,886	$ 41,376	$ 40,717	$ 37,345	$ 35,347	$ 442,969
2020 Service Units Plus Prairie Vista Growth	145	289	434	578	723	867	1,012	1,156	1,301	1,445	
Total Debt Service Eligible for Impact Fees per Service Unit	$ 388.26	$ 199.63	$ 101.84	$ 76.42	$ 61.15	$ 48.31	$ 40.91	$ 35.22	$ 28.72	$ 24.46	
Annual Service Unit Growth in Prairie Vista (Cumulative)	145	289	434	578	723	867	1,012	1,156	1,301	1,445	
Annual Wastewater Utility Revenue Generated by Additional Service Units for Debt Service Eligible for Impact Fees	$ 56,104	$ 57,694	$ 44,146	$ 44,173	$ 44,182	$ 41,886	$ 41,376	$ 40,717	$ 37,345	$ 35,347	$ 442,969

Credit Amount **$ 442,969**

(1) Per Kimley-Horn Impact Fee Update, which includes 1,036 of prepaid service units per Town staff

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation Assumptions

Appendix B - Impact Fee Calculation Assumptions

Lakeside

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	311
Available Existing Fund Balance [3]	1,619,658

Portion of Projects Funded by Existing Debt [4]	$ 4,087,215
Non-debt Funded Project Cost [5]	2,709,378
Project Cost Funded Through New Debt [6]	1,885,463
Total Recoverable Project Cost [7]	$ 8,682,056

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ -	4.00%	20
2	-	4.00%	20
3	-	4.00%	20
4	986,538	4.00%	20
5	-	4.00%	20
6	179,785	4.00%	20
7	179,785	4.00%	20
8	179,785	4.00%	20
9	179,785	4.00%	20
10	179,785	4.00%	20
Total	$ 1,885,463		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 270,938
2	270,938
3	270,938
4	764,207
5	764,207
6	360,830
7	450,723
8	450,723
9	450,723
10	540,615
Total	$ 4,594,841

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Balances for this service area available as of July 31, 2020
(4) Per discussions with Town staff and Town files
(5) Per discussions with Town staff and Town files
(6) Per discussions with Town staff and Town files
(7) Per Kimley-Horn Impact Fee Update
(8) Assumes new debt issued in equal annual amounts, unless specified in Town CIP
(9) Estimated interest cost provided by Town's Financial Advisor
(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

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expense Summary
Appendix B - Impact Fee Calculation Assumptions
Lakeside

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	72,591	-	-	-	-	-	-	72,591
5	-	-	-	72,591	-	-	-	-	-	-	72,591
6	-	-	-	72,591	-	13,229	-	-	-	-	85,820
7	-	-	-	72,591	-	13,229	13,229	-	-	-	99,049
8	-	-	-	72,591	-	13,229	13,229	13,229	-	-	112,278
9	-	-	-	72,591	-	13,229	13,229	13,229	13,229	-	125,507
10	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
11	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
12	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
13	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
14	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
15	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
16	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
17	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
18	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
19	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
20	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
21	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
22	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
23	-	-	-	72,591	-	13,229	13,229	13,229	13,229	13,229	138,736
24	-	-	-	-	-	13,229	13,229	13,229	13,229	13,229	66,145
25	-	-	-	-	-	13,229	13,229	13,229	13,229	13,229	66,145
26	-	-	-	-	-	-	13,229	13,229	13,229	13,229	52,916
27	-	-	-	-	-	-	-	13,229	13,229	13,229	39,687
28	-	-	-	-	-	-	-	-	13,229	13,229	26,458
29	-	-	-	-	-	-	-	-	-	13,229	$ 13,229
	$ -	$ -	$ -	$ 1,451,823	$ -	$ 264,578	$ 264,578	$ 264,578	$ 264,578	$ 264,578	$ 2,774,714

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expense Summary
Appendix B - Impact Fee Calculation Assumptions
Lakeside

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	$ -	$ 270,938	$ -	$ 446,666	$ (47,857)	669,747
2	-	270,938	-	459,326	(88,902)	641,362
3	-	270,938	-	351,463	(93,034)	529,366
4	72,591	764,207	(986,538)	351,681	(137,602)	64,340
5	72,591	764,207	-	351,752	(159,128)	1,029,422
6	85,820	360,830	(179,785)	333,469	(175,516)	424,819
7	99,049	450,723	(179,785)	329,412	(195,601)	503,797
8	112,278	450,723	(179,785)	324,162	(213,766)	493,612
9	125,507	450,723	(179,785)	297,319	(219,544)	474,220
10	138,736	540,615	(179,785)	281,408	(229,169)	551,805
11	138,736	-	-	281,281	-	420,017
12	138,736	-	-	274,612	-	413,348
13	138,736	-	-	263,977	-	402,712
14	138,736	-	-	244,646	-	383,382
15	138,736	-	-	217,951	-	356,687
16	138,736	-	-	175,782	-	314,518
17	138,736	-	-	151,801	-	290,536
18	138,736	-	-	125,821	-	264,557
19	138,736	-	-	99,260	-	237,995
20	138,736	-	-	87,011	-	225,746
21	138,736	-	-	23,347	-	162,083
22	138,736	-	-	-	-	138,736
23	138,736	-	-	-	-	138,736
24	66,145	-	-	-	-	66,145
25	66,145	-	-	-	-	66,145
26	52,916	-	-	-	-	52,916
27	39,687	-	-	-	-	39,687
28	26,458	-	-	-	-	26,458
29	13,229	-	-	-	-	13,229
	$ 2,774,714	$ 4,594,841	$ (1,885,463)	$ 5,472,147	$ (1,560,118)	$ 9,396,120

(1) Appendix B - Denton Creek, Page 2
(2) Appendix B - Denton Creek, Page 1
(3) Eligible Outstanding Debt Funded Projects Percent of Utility Self-Supported Debt Issuance times total outstanding utility self-supported annual debt service
(4) Appendix B - Denton Creek, Page 7

Town of Flower Mound 2020 Wastewater Impact Fee Update

Revenue Test

Appendix B - Impact Fee Calculation Assumptions

Lakeside

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ 1,619,658
1	$ 2,428	311	$ 755,841	$ 669,747	$ 86,095	7,283	1,713,035
2	2,428	311	755,841	641,362	114,479	7,754	1,835,268
3	2,428	311	755,841	529,366	226,475	8,534	2,070,278
4	2,428	311	755,841	64,340	691,501	10,582	2,772,361
5	2,428	311	755,841	1,029,422	(273,580)	11,544	2,510,325
6	2,428	311	755,841	424,819	331,023	11,720	2,853,068
7	2,428	311	755,841	503,797	252,044	13,048	3,118,160
8	2,428	311	755,841	493,612	262,230	14,232	3,394,622
9	2,428	311	755,841	474,220	281,621	15,485	3,691,729
10	2,428	311	755,841	551,805	204,036	16,617	3,912,381
11	-	-	-	420,017	(420,017)	16,216	3,508,580
12	-	-	-	413,348	(413,348)	14,462	3,109,695
13	-	-	-	402,712	(402,712)	12,739	2,719,721
14	-	-	-	383,382	(383,382)	11,073	2,347,412
15	-	-	-	356,687	(356,687)	9,501	2,000,226
16	-	-	-	314,518	(314,518)	8,072	1,693,780
17	-	-	-	290,536	(290,536)	6,782	1,410,027
18	-	-	-	264,557	(264,557)	5,597	1,151,066
19	-	-	-	237,995	(237,995)	4,520	917,591
20	-	-	-	225,746	(225,746)	3,525	695,370
21	-	-	-	162,083	(162,083)	2,691	535,978
22	-	-	-	138,736	(138,736)	2,044	399,286
23	-	-	-	138,736	(138,736)	1,445	261,995
24	-	-	-	66,145	(66,145)	1,003	196,853
25	-	-	-	66,145	(66,145)	717	131,426
26	-	-	-	52,916	(52,916)	460	78,970
27	-	-	-	39,687	(39,687)	259	39,543
28	-	-	-	26,458	(26,458)	115	13,200
29	-	-	-	13,229	(13,229)	29	-
			7,558,414	9,396,120		218,048	

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation

Appendix B - Impact Fee Calculation Assumptions

Lakeside

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	311	353	669,747	758,589
2	28	1.1277	1.0000	311	351	641,362	723,271
3	27	1.1228	1.0000	311	350	529,366	594,369
4	26	1.1179	1.0000	311	348	64,340	71,926
5	25	1.1130	1.0000	311	346	1,029,422	1,145,768
6	24	1.1082	1.0000	311	345	424,819	470,770
7	23	1.1033	1.0000	311	343	503,797	555,857
8	22	1.0985	1.0000	311	342	493,612	542,244
9	21	1.0937	1.0000	311	340	474,220	518,670
10	20	1.0890	1.0000	311	339	551,805	600,896
11	19	1.0842	1.0000	-	-	420,017	455,389
12	18	1.0795	1.0000	-	-	413,348	446,203
13	17	1.0748	1.0000	-	-	402,712	432,827
14	16	1.0701	1.0000	-	-	383,382	410,254
15	15	1.0654	1.0000	-	-	356,687	380,023
16	14	1.0608	1.0000	-	-	314,518	333,634
17	13	1.0562	1.0000	-	-	290,536	306,851
18	12	1.0515	1.0000	-	-	264,557	278,194
19	11	1.0470	1.0000	-	-	237,995	249,172
20	10	1.0424	1.0000	-	-	225,746	235,317
21	9	1.0378	1.0000	-	-	162,083	168,218
22	8	1.0333	1.0000	-	-	138,736	143,359
23	7	1.0288	1.0000	-	-	138,736	142,734
24	6	1.0243	1.0000	-	-	66,145	67,754
25	5	1.0199	1.0000	-	-	66,145	67,458
26	4	1.0154	1.0000	-	-	52,916	53,731
27	3	1.0110	1.0000	-	-	39,687	40,123
28	2	1.0066	1.0000	-	-	26,458	26,632
29	1	1.0022	1.0000	-	-	13,229	13,258
					3,457	9,396,120	10,233,487

Total Escalated Expense for Entire Period	$	10,233,487
Total Escalated Service Units		3,457
Impact Fee for Denton Creek	**$**	**2,428**

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Lakeside

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost [1]	Percent Recoverable [1]	Impact Fee Recoverable Cost [1]	Debt Funded [2] Existing	Debt Funded [2] Proposed	Non-Debt Funded [2]	Impact Fee Recoverable Cost
Wastewater Capital Improvements								
Lakeside Lift Station and Force Main	1	$ 2,499,099	75%	$ 1,874,324	$ 750,000	$ -	$ 1,124,324	$ 1,874,324
Southside Force Main Extension	2	2,020,000	75%	1,515,000	-	750,000	765,000	1,515,000
Southside Pump Upgrade	3	530,000	75%	397,500	-	236,538	160,962	397,500
Southside Gravity Main Improvements	4	1,570,000	77%	1,208,900	-	898,926	309,974	1,208,900
2020 Wastewater Master Plan and Impact Fee Updates	5	46,000	100%	46,000	-	-	46,000	46,000
2001 Wastewater Treatment Plant Improvements	6	19,191,263	19%	3,575,332	3,337,215	-	238,117	3,575,332
2020 Wastewater Master Plan Update	7	65,000	100%	65,000	-	-	65,000	65,000
Total		**$ 25,921,362**		**$ 8,682,056**	**$ 4,087,215**	**$ 1,885,463**	**$ 2,709,378**	**$ 8,682,056**

(1) Per Kimley-Horn Impact Fee Update

(2) Based on Contributions by Project and Planned Future Debt Financing

Town of Flower Mound 2020 Wastewater Impact Fee Update

Credit Determination

Appendix B - Impact Fee Calculation Assumptions

Lakeside

2020 Service Units [1]	2,594	
Ten Year Growth in Service Units [1]	3,113	
	10	years
Annual Growth in Service Units	311	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 446,666	$ 459,326	$ 351,463	$ 424,273	$ 424,343	$ 419,289	$ 428,461	$ 436,440	$ 422,826	$ 420,144	$ 4,233,230
2020 Service Units Plus Lakeside Growth	2,905	3,217	3,528	3,839	4,150	4,462	4,773	5,084	5,396	5,707	
Total Debt Service Eligible for Impact Fees per Service Unit	$ 153.74	$ 142.80	$ 99.63	$ 110.51	$ 102.24	$ 93.98	$ 89.77	$ 85.84	$ 78.37	$ 73.62	
Annual Service Unit Growth in Lakeside (Cumulative)	311	623	934	1,245	1,556	1,868	2,179	2,490	2,802	3,113	
Annual Wastewater Utility Revenue Generated by Additional Service Units for Debt Service Eligible for Impact Fees	$ 47,857	$ 88,902	$ 93,034	$ 137,602	$ 159,128	$ 175,516	$ 195,601	$ 213,766	$ 219,544	$ 229,169	$ 1,560,118

Credit Amount	**$ 1,560,118**

(1) Per Kimley-Horn Impact Fee Update

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation Assumptions

Appendix B - Impact Fee Calculation Assumptions

Long Prairie

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	137
Available Existing Fund Balance [3]	3,828,736

Portion of Projects Funded by Existing Debt [4]	$ 5,012,795
Non-debt Funded Project Cost [5]	1,114,708
Project Cost Funded Through New Debt [6]	473,800
Total Recoverable Project Cost [7]	$ 6,601,303

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ -	4.00%	20
2	-	4.00%	20
3	148,800	4.00%	20
4	-	4.00%	20
5	-	4.00%	20
6	-	4.00%	20
7	-	4.00%	20
8	-	4.00%	20
9	-	4.00%	20
10	-	4.00%	20
Total	$ 148,800		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 111,471
2	111,471
3	185,871
4	185,871
5	111,471
6	111,471
7	111,471
8	111,471
9	111,471
10	111,471
Total	$ 1,263,508

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update
(3) Balances for this service area available as of July 31, 2020
(4) Per discussions with Town staff and Town files
(5) Per discussions with Town staff and Town files
(6) Per discussions with Town staff and Town files
(7) Per Kimley-Horn Impact Fee Update
(8) Assumes new debt issued in equal annual amounts unless specified in Town CIP
(9) Estimated interest cost provided by Town's Financial Advisor
(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

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expense Summary
Appendix B - Impact Fee Calculation Assumptions
Long Prairie

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	10,949	-	-	-	-	-	-	-	10,949
4	-	-	10,949	-	-	-	-	-	-	-	10,949
5	-	-	10,949	-	-	-	-	-	-	-	10,949
6	-	-	10,949	-	-	-	-	-	-	-	10,949
7	-	-	10,949	-	-	-	-	-	-	-	10,949
8	-	-	10,949	-	-	-	-	-	-	-	10,949
9	-	-	10,949	-	-	-	-	-	-	-	10,949
10	-	-	10,949	-	-	-	-	-	-	-	10,949
11	-	-	10,949	-	-	-	-	-	-	-	10,949
12	-	-	10,949	-	-	-	-	-	-	-	10,949
13	-	-	10,949	-	-	-	-	-	-	-	10,949
14	-	-	10,949	-	-	-	-	-	-	-	10,949
15	-	-	10,949	-	-	-	-	-	-	-	10,949
16	-	-	10,949	-	-	-	-	-	-	-	10,949
17	-	-	10,949	-	-	-	-	-	-	-	10,949
18	-	-	10,949	-	-	-	-	-	-	-	10,949
19	-	-	10,949	-	-	-	-	-	-	-	10,949
20	-	-	10,949	-	-	-	-	-	-	-	10,949
21	-	-	10,949	-	-	-	-	-	-	-	10,949
22	-	-	10,949	-	-	-	-	-	-	-	10,949
23	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	$ -
	$ -	$ -	$ 218,979	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 218,979

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expense Summary
Appendix B - Impact Fee Calculation Assumptions
Long Prairie

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	$ -	$ 111,471	$ -	$ 547,817	$ (2,884)	656,403
2	-	111,471	-	563,344	(5,901)	668,914
3	10,949	185,871	(148,800)	431,054	(6,909)	472,165
4	10,949	185,871	-	431,322	(9,169)	618,973
5	10,949	111,471	-	431,409	(11,405)	542,424
6	10,949	111,471	-	408,986	(12,925)	518,480
7	10,949	111,471	-	404,009	(14,825)	511,604
8	10,949	111,471	-	397,571	(16,595)	503,395
9	10,949	111,471	-	364,649	(17,078)	469,991
10	10,949	111,471	-	345,136	(17,900)	449,656
11	10,949	-	-	344,980	-	355,929
12	10,949	-	-	336,800	-	347,749
13	10,949	-	-	323,756	-	334,705
14	10,949	-	-	300,048	-	310,997
15	10,949	-	-	267,308	-	278,257
16	10,949	-	-	215,589	-	226,538
17	10,949	-	-	186,177	-	197,126
18	10,949	-	-	154,314	-	165,263
19	10,949	-	-	121,738	-	132,687
20	10,949	-	-	106,715	-	117,664
21	10,949	-	-	28,634	-	39,583
22	10,949	-	-	-	-	10,949
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	-	-	-	-	-	-
	$ 218,979	$ 1,263,508	$ (148,800)	$ 6,711,356	$ (115,591)	$ 7,929,452

(1) Appendix B - Denton Creek, Page 2
(2) Appendix B - Denton Creek, Page 1
(3) Eligible Outstanding Debt Funded Projects Percent of Utility Self-Supported Debt Issuance times total outstanding utility self-supported annual debt service
(4) Appendix B - Denton Creek, Page 7

Town of Flower Mound 2020 Wastewater Impact Fee Update

Revenue Test

Appendix B - Impact Fee Calculation Assumptions

Long Prairie

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ 3,828,736
1	$ 2,863	137	$ 392,535	$ 656,403	$ (263,868)	16,192	3,581,060
2	2,863	137	392,535	668,914	(276,379)	15,080	3,319,761
3	2,863	137	392,535	472,165	(79,630)	14,366	3,254,497
4	2,863	137	392,535	618,973	(226,438)	13,759	3,041,818
5	2,863	137	392,535	542,424	(149,889)	12,995	2,904,924
6	2,863	137	392,535	518,480	(125,945)	12,448	2,791,426
7	2,863	137	392,535	511,604	(119,069)	11,966	2,684,323
8	2,863	137	392,535	503,395	(110,860)	11,515	2,584,977
9	2,863	137	392,535	469,991	(77,456)	11,153	2,518,673
10	2,863	137	392,535	449,656	(57,121)	10,907	2,472,459
11	-	-	-	355,929	(355,929)	10,050	2,126,580
12	-	-	-	347,749	(347,749)	8,553	1,787,385
13	-	-	-	334,705	(334,705)	7,096	1,459,775
14	-	-	-	310,997	(310,997)	5,713	1,154,491
15	-	-	-	278,257	(278,257)	4,447	880,681
16	-	-	-	226,538	(226,538)	3,361	657,504
17	-	-	-	197,126	(197,126)	2,448	462,826
18	-	-	-	165,263	(165,263)	1,665	299,229
19	-	-	-	132,687	(132,687)	1,020	167,562
20	-	-	-	117,664	(117,664)	476	50,374
21	-	-	-	39,583	(39,583)	134	10,925
22	-	-	-	10,949	(10,949)	24	0
23	-	-	-	-	-	0	0
24	-	-	-	-	-	0	0
25	-	-	-	-	-	0	0
26	-	-	-	-	-	0	0
27	-	-	-	-	-	0	0
28	-	-	-	-	-	0	0
29	-	-	-	-	-	0	-
			3,925,349	7,929,452		175,366	

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation

Appendix B - Impact Fee Calculation Assumptions

Long Prairie

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	137	155	656,403	743,475
2	28	1.1277	1.0000	137	155	668,914	754,341
3	27	1.1228	1.0000	137	154	472,165	530,143
4	26	1.1179	1.0000	137	153	618,973	691,947
5	25	1.1130	1.0000	137	153	542,424	603,730
6	24	1.1082	1.0000	137	152	518,480	574,563
7	23	1.1033	1.0000	137	151	511,604	564,471
8	22	1.0985	1.0000	137	151	503,395	552,991
9	21	1.0937	1.0000	137	150	469,991	514,044
10	20	1.0890	1.0000	137	149	449,656	489,658
11	19	1.0842	1.0000	-	-	355,929	385,903
12	18	1.0795	1.0000	-	-	347,749	375,390
13	17	1.0748	1.0000	-	-	334,705	359,734
14	16	1.0701	1.0000	-	-	310,997	332,795
15	15	1.0654	1.0000	-	-	278,257	296,462
16	14	1.0608	1.0000	-	-	226,538	240,307
17	13	1.0562	1.0000	-	-	197,126	208,195
18	12	1.0515	1.0000	-	-	165,263	173,782
19	11	1.0470	1.0000	-	-	132,687	138,918
20	10	1.0424	1.0000	-	-	117,664	122,652
21	9	1.0378	1.0000	-	-	39,583	41,082
22	8	1.0333	1.0000	-	-	10,949	11,314
23	7	1.0288	1.0000	-	-	-	-
24	6	1.0243	1.0000	-	-	-	-
25	5	1.0199	1.0000	-	-	-	-
26	4	1.0154	1.0000	-	-	-	-
27	3	1.0110	1.0000	-	-	-	-
28	2	1.0066	1.0000	-	-	-	-
29	1	1.0022	1.0000	-	-	-	-
					1,523	7,929,452	8,705,897

Total Escalated Expense for Entire Period	$	8,705,897
Less Future Value of Initial Fund Balance		4,346,094
Net Escalated Expense for Entire Period	$	4,359,803
Total Escalated Service Units		1,523
Impact Fee for Denton Creek	**$**	**2,863**

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Long Prairie

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost [1]	Percent Recoverable [1]	Impact Fee Recoverable Cost [1]	Debt Funded [2] Existing	Debt Funded [2] Proposed	Non-Debt Funded [2]	Impact Fee Recoverable Cost
Wastewater Capital Improvements								
Bakers Branch Collector Phase I (Gerault to Lower Timber Interceptor)	1	$ 607,181	19%	$ 115,364	$ 115,364	$ -	$ -	$ 115,364
Bakers Branch Wastewater Collector Phase II (Lexington Ave to Gerault Rd)	2	1,351,217	23%	310,780	251,984	-	58,796	310,780
Oak Street Lift Station Ph 3 and Force Main	3	5,833,654	29%	1,691,760	1,671,460	-	20,300	1,691,760
Oak Street Lift Station and Force Main Phase IV	4	3,400,000	10%	340,000	-	325,000	15,000	340,000
Upper Timber Creek Interceptor Phase I (FM 2499 to Morriss Rd and Buckthorn Ct to FM 1171)	5	1,525,872	26%	396,727	215,767	-	180,960	396,727
Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)	6	2,448,208	37%	905,837	766,216	-	139,622	905,837
Upper Timber Interceptor (College Parkway to Pecan Drive)	7	480,000	31%	148,800	-	148,800	-	148,800
Wellington Interceptor Improvements (Sections I and II)	8	1,345,254	50%	672,627	492,677	-	179,950	672,627
Riverwalk Collector (Morris Road to Windsor Drive)	9	530,000	57%	302,100	-	-	302,100	302,100
2020 Wastewater Master Plan and Impact Fee Updates	10	46,000	100%	46,000	-	-	46,000	46,000
2001 Wastewater Treatment Plant Improvements	11	19,191,263	8%	1,606,309	1,499,329	-	106,980	1,606,309
2020 Wastewater Master Plan Update	12	65,000	100%	65,000	-	-	65,000	65,000
Total		**$ 36,823,649**		**$ 6,601,303**	**$ 5,012,795**	**$ 473,800**	**$ 1,114,708**	**$ 6,601,303**

(1) Per Kimley-Horn Impact Fee Update

(2) Based on Contributions by Project and Planned Future Debt Financing

Town of Flower Mound 2020 Wastewater Impact Fee Update

Credit Determination

Appendix B - Impact Fee Calculation Assumptions

Long Prairie

2020 Service Units [1]	25,903	
Ten Year Growth in Service Units [1]	1,371	
	10	years
Annual Growth in Service Units	137	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 547,817	$ 563,344	$ 442,003	$ 442,271	$ 442,358	$ 419,935	$ 414,958	$ 408,520	$ 375,598	$ 356,084	$ 4,412,888
2020 Service Units Plus Long Prairie Growth	26,040	26,177	26,314	26,451	26,589	26,726	26,863	27,000	27,137	27,274	
Total Debt Service Eligible for Impact Fees per Service Unit	$ 21.04	$ 21.52	$ 16.80	$ 16.72	$ 16.64	$ 15.71	$ 15.45	$ 15.13	$ 13.84	$ 13.06	
Annual Service Unit Growth in Long Prairie (Cumulative)	137	274	411	548	686	823	960	1,097	1,234	1,371	
Annual Wastewater Utility Revenue Generated by Additional Service Units for Debt Service Eligible for Impact Fees	$ 2,884	$ 5,901	$ 6,909	$ 9,169	$ 11,405	$ 12,925	$ 14,825	$ 16,595	$ 17,078	$ 17,900	$ 115,591

Credit Amount	**$ 115,591**

(1) Per Kimley-Horn Impact Fee Update

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation Assumptions

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

I. General Assumptions

Annual Interest Rate on Deposits [1]	0.438%
Annual Service Unit Growth [2]	145
Available Existing Fund Balance [3]	16,560

Portion of Projects Funded by Existing Debt [4]	$ 513,378
Non-debt Funded Project Cost [5]	441,663
Project Cost Funded Through New Debt [6]	-
Total Recoverable Project Cost [7]	$ 955,041

II. New Debt Issues Assumptions

Year	Principal [8]	Interest [9]	Term
1	$ -	4.00%	20
2	-	4.00%	20
3	-	4.00%	20
4	-	4.00%	20
5	-	4.00%	20
6	-	4.00%	20
7	-	4.00%	20
8	-	4.00%	20
9	-	4.00%	20
10	-	4.00%	20
Total	$ -		

III. Capital Expenditure Assumptions

Year	Annual Capital Expenditures [10]
1	$ 44,166
2	44,166
3	44,166
4	44,166
5	44,166
6	44,166
7	44,166
8	44,166
9	44,166
10	44,166
Total	$ 441,663

(1) Town's current earnings rate as of June 30, 2020
(2) Per Kimley-Horn Impact Fee Update, includes 1,036 of prepaid service units over the 10-year period
(3) Balances for this service area available as of July 31, 2020
(4) Per discussions with Town staff and Town files
(5) Per discussions with Town staff and Town files
(6) Per discussions with Town staff and Town files
(7) Per Kimley-Horn Impact Fee Update
(8) Assumes no new debt issued for projects
(9) Estimated interest cost provided by Town's Financial Advisor
(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

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expenses Summary
Appendix B - Impact Fee Calculation Assumptions
Prairie Vista

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service [1]
1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Town of Flower Mound 2020 Wastewater Impact Fee Update

Debt Service and Expenses Summary
Appendix B - Impact Fee Calculation Assumptions
Prairie Vista

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	$ -	$ 44,166	$ -	$ 56,104	$ (56,104)	44,166
2	-	44,166	-	57,694	(57,694)	44,166
3	-	44,166	-	44,146	(44,146)	44,166
4	-	44,166	-	44,173	(44,173)	44,166
5	-	44,166	-	44,182	(44,182)	44,166
6	-	44,166	-	41,886	(41,886)	44,166
7	-	44,166	-	41,376	(41,376)	44,166
8	-	44,166	-	40,717	(40,717)	44,166
9	-	44,166	-	37,345	(37,345)	44,166
10	-	44,166	-	35,347	(35,347)	44,166
11	-	-	-	35,331	-	35,331
12	-	-	-	34,493	-	34,493
13	-	-	-	33,157	-	33,157
14	-	-	-	30,729	-	30,729
15	-	-	-	27,376	-	27,376
16	-	-	-	22,079	-	22,079
17	-	-	-	19,067	-	19,067
18	-	-	-	15,804	-	15,804
19	-	-	-	12,468	-	12,468
20	-	-	-	10,929	-	10,929
21	-	-	-	2,933	-	2,933
22	-	-	-	-	-	-
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	-	-	-	-	-	-
	$ -	$ 441,663	$ -	$ 687,333	$ (442,969)	$ 686,028

(1) Appendix B - Denton Creek, Page 2; assumes no new debt issued for projects
(2) Appendix B - Denton Creek, Page 1
(3) Eligible Outstanding Debt Funded Projects Percent of Utility Self-Supported Debt Issuance times total outstanding utility self-supported annual debt service
(4) Appendix B - Denton Creek, Page 7

Town of Flower Mound 2020 Wastewater Impact Fee Update

Revenue Test

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Year	Impact Fee [1]	Service Units	Impact Fee Revenue [1]	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							$ 16,560
1	$ 456	145	$ 65,963	$ 44,166	$ 21,797	120	38,477
2	456	145	65,963	44,166	21,797	216	60,491
3	456	145	65,963	44,166	21,797	313	82,600
4	456	145	65,963	44,166	21,797	410	104,807
5	456	145	65,963	44,166	21,797	507	127,111
6	456	145	65,963	44,166	21,797	604	149,512
7	456	145	65,963	44,166	21,797	703	172,012
8	456	145	65,963	44,166	21,797	801	194,610
9	456	145	65,963	44,166	21,797	900	217,307
10	456	145	65,963	44,166	21,797	1,000	240,104
11	-	-	-	35,331	(35,331)	974	205,748
12	-	-	-	34,493	(34,493)	826	172,080
13	-	-	-	33,157	(33,157)	681	139,605
14	-	-	-	30,729	(30,729)	544	109,420
15	-	-	-	27,376	(27,376)	419	82,463
16	-	-	-	22,079	(22,079)	313	60,697
17	-	-	-	19,067	(19,067)	224	41,854
18	-	-	-	15,804	(15,804)	149	26,199
19	-	-	-	12,468	(12,468)	87	13,819
20	-	-	-	10,929	(10,929)	37	2,926
21	-	-	-	2,933	(2,933)	6	(0)
22	-	-	-	-	-	(0)	(0)
23	-	-	-	-	-	(0)	(0)
24	-	-	-	-	-	(0)	(0)
25	-	-	-	-	-	(0)	(0)
26	-	-	-	-	-	(0)	(0)
27	-	-	-	-	-	(0)	(0)
28	-	-	-	-	-	(0)	(0)
29	-	-	-	-	-	(0)	-
			659,634	686,028		9,834	

(1) Actual revenues could be closer to $190,000 due to prepaid service units.

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Calculation

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Year	Number of Years to End of Period	Future Value Escalation Interest Rate Factor	Recovery Fee Factor	Annual Service Units Actual	Annual Service Units Escalated	Annual Expense Actual	Annual Expense Escalated
Prev							
1	29	1.1326	1.0000	145	164	44,166	50,025
2	28	1.1277	1.0000	145	163	44,166	49,807
3	27	1.1228	1.0000	145	162	44,166	49,590
4	26	1.1179	1.0000	145	162	44,166	49,373
5	25	1.1130	1.0000	145	161	44,166	49,158
6	24	1.1082	1.0000	145	160	44,166	48,944
7	23	1.1033	1.0000	145	159	44,166	48,730
8	22	1.0985	1.0000	145	159	44,166	48,518
9	21	1.0937	1.0000	145	158	44,166	48,306
10	20	1.0890	1.0000	145	157	44,166	48,095
11	19	1.0842	1.0000	-	-	35,331	38,306
12	18	1.0795	1.0000	-	-	34,493	37,235
13	17	1.0748	1.0000	-	-	33,157	35,636
14	16	1.0701	1.0000	-	-	30,729	32,883
15	15	1.0654	1.0000	-	-	27,376	29,167
16	14	1.0608	1.0000	-	-	22,079	23,421
17	13	1.0562	1.0000	-	-	19,067	20,138
18	12	1.0515	1.0000	-	-	15,804	16,618
19	11	1.0470	1.0000	-	-	12,468	13,053
20	10	1.0424	1.0000	-	-	10,929	11,392
21	9	1.0378	1.0000	-	-	2,933	3,044
22	8	1.0333	1.0000	-	-	-	-
23	7	1.0288	1.0000	-	-	-	-
24	6	1.0243	1.0000	-	-	-	-
25	5	1.0199	1.0000	-	-	-	-
26	4	1.0154	1.0000	-	-	-	-
27	3	1.0110	1.0000	-	-	-	-
28	2	1.0066	1.0000	-	-	-	-
29	1	1.0022	1.0000	-	-	-	-
					1,605	686,028	751,439

Total Escalated Expense for Entire Period	$	751,439
Total Escalated Service Units		1,605
Impact Fee for Denton Creek	**$**	**456**

Town of Flower Mound 2020 Wastewater Impact Fee Update

Impact Fee Project Funding

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

Impact Fee Project Name[1]	Impact Fee Project No.[1]	Total Project Cost [1]	Percent Recoverable [1]	Impact Fee Recoverable Cost [1]	Debt Funded [2] Existing	Debt Funded [2] Proposed	Non-Debt Funded[2]	Impact Fee Recoverable Cost
Wastewater Capital Improvements								
TRA System Contract	1	$ 3,366,818	27.0%	$ 909,041	$ 513,378	$ -	$ 395,663	$ 909,041
2020 Wastewater Master Plan and Impact Fee Updates	2	46,000	100.0%	46,000	-	-	46,000	46,000
Total		**$ 3,412,818**		**$ 955,041**	**$ 513,378**	**$ -**	**$ 441,663**	**$ 955,041**

(1) Per Kimley-Horn Impact Fee Update

(2) Based on Contributions by Project and Planned Future Debt Financing

Town of Flower Mound 2020 Wastewater Impact Fee Update

Credit Determination

Appendix B - Impact Fee Calculation Assumptions

Prairie Vista

2020 Service Units [1]	-	
Ten Year Growth in Service Units [1]	1,445	
	10	years
Annual Growth in Service Units	145	

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	$ 56,104	$ 57,694	$ 44,146	$ 44,173	$ 44,182	$ 41,886	$ 41,376	$ 40,717	$ 37,345	$ 35,347	$ 442,969
2020 Service Units Plus Prairie Vista Growth	145	289	434	578	723	867	1,012	1,156	1,301	1,445	
Total Debt Service Eligible for Impact Fees per Service Unit	$ 388.26	$ 199.63	$ 101.84	$ 76.42	$ 61.15	$ 48.31	$ 40.91	$ 35.22	$ 28.72	$ 24.46	
Annual Service Unit Growth in Prairie Vista (Cumulative)	145	289	434	578	723	867	1,012	1,156	1,301	1,445	
Annual Wastewater Utility Revenue Generated by Additional Service Units for Debt Service Eligible for Impact Fees	$ 56,104	$ 57,694	$ 44,146	$ 44,173	$ 44,182	$ 41,886	$ 41,376	$ 40,717	$ 37,345	$ 35,347	$ 442,969

Credit Amount **$ 442,969**

(1) Per Kimley-Horn Impact Fee Update, which includes 1,036 of prepaid service units per Town staff

Appendix C: Construction Cost Projections

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Southside Force Main Extension**	**Project:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1	LS	$2,499,099.00	$ 2,499,099
	Basis for Cost Projection:	**Total:**			$ 2,499,099
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Lakeside Lift Station and Force Main**	**Project:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$50,000.00	$50,000
2	18" Ductile Iron Force Main	4,600	LF	$200.00	$920,000
3	Bore with 36" Steel Casing	400	LF	$800.00	$320,000
4	Connect to Headwork	1	EA	$5,000.00	$5,000
5	Trench Safety	4,600	LF	$2.00	$9,200
6	Seeding, Fertilizer and Erosion Control	4,600	EA	$5.00	$23,000
7	Air Release/Vacuum Valve	2	EA	$20,000.00	$40,000
8	Connect to Existing 18" Force Main	1	EA	$15,000.00	$15,000
9	Cathodic Protection	1	EA	$55,000.00	$55,000

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:			$ 1,437,200
Eng/Survey Fees (+/- %):	15		$ 216,000
Contingency (+/- %):	25		$ 366,800
Prop Acquisition:			$ -
Total:			$ 2,020,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Southside Pump Upgrade**	**Project:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$20,000.00	$20,000
2	1,500 GPM Submersible Pump and 85 HP Motor	2	EA	$120,000.00	$240,000
3	Electrical / SCADA	1	LS	$12,500.00	$12,500
4	Mechanical Piping	1	LS	$50,000.00	$50,000
5	Variable Frequency Drives	2	EA	$65,000.00	$130,000
6	Remove Existing Pumps	2	EA	$10,000.00	$20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$	472,500
Eng/Survey Fees (+/- %):	15	$	71,000
Contingency (+/- %):	25	$	136,500
Prop Acquisition:		$	-
Total:		$	680,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Southside Gravity Main Improvements**	**Project:**	**4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$40,000.00	$40,000
	Eastern Improvements				
2	15" Wastewater Main	2,970	LF	$ 155.00	$460,350
3	4' Manhole (8" - 18" Main)	9	EA	$ 10,000.00	$90,000
4	Concrete Pavement Repair	267	SY	$ 110.00	$29,333
5	Bore with 36" Steel Casing	380	LF	$ 850.00	$323,000
6	Seeding, Fertilizer & Erosion Control	2,390	LF	$ 10.00	$23,900
7	Trench Safety	2,590	LF	$ 2.00	$5,180
8	TV Inspection	2,970	LF	$ 2.00	$5,940
9	Vacuum Testing of Sanitary Sewer Manholes	11	EA	$ 500.00	$5,500
10	Connect to Existing Manhole	2	EA	$ 9,000.00	$18,000
	Subtotal				*$961,203*
	Western Improvements				
9	12" Wastewater Main	620	LF	$ 130.00	$80,600
10	4' Manhole (8" - 18" Main)	2	EA	$ 10,000.00	$20,000
11	Seeding, Fertilizer & Erosion Control	620	LF	$ 10.00	$6,200
12	Trench Safety	620	LF	$ 2.00	$1,240
13	TV Inspection	620	LF	$ 2.00	$1,240
14	Vacuum Testing of Sanitary Sewer Manholes	4	EA	$ 500.00	$2,000
15	Connect to Existing Manhole	2	EA	$ 9,000.00	$18,000
	Subtotal				*$111,280*

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 1,112,483
Eng/Survey Fees (+/- %):	15		$ 167,000
Contingency (+/- %):	25		$ 290,517
Prop Acquisition:			$ -
Total:			$ 1,570,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2001 Wastewater Treatment Plant Improvements**	**Project:**	**5**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.00	LS	$ 19,191,263.00	$ 19,191,263
	Basis for Cost Projection:	**Total:**			$ 19,191,263
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2020 Wastewater Mater Plan and Impact Fee Updates**	**Project:**	**6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Per KH Engineering Contract	0.25	LS	$ 184,000.00	$ 46,000
	Basis for Cost Projection:	**Total:**			$ 46,000
	KH Engineering Contract with Town				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Lakeside**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Wastewater Treatment Plant Master Plan**	**Project:**	**7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	0.5	LS	$ 130,000.00	$ 65,000
	Basis for Cost Projection:	**Total:**			$ 65,000
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Bakers Branch Collector Phase I (Gerault to Lower Timber Interceptor)**	**Project:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 607,181.00	$ 607,181
	Basis for Cost Projection:	**Total:**			$ 607,181
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Bakers Branch Collector Phase II (Lexington Ave to Gerault Rd)**	**Project:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 1,351,217.00	$ 1,351,217
	Basis for Cost Projection:	**Total:**			$ 1,351,217
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Oak Street Lift Station and Force Main Phase III**	**Project:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 5,833,653.62	$ 5,833,654
	Basis for Cost Projection:	**Total:**			$ 5,833,654
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Oak Street Lift Station and Force Main Phase IV** **Project:** **4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization Bonds and Insurance	1	LS	$ 90,000.00	$ 90,000
	MECHANICAL				
2	7,000 gpm Submersible Pump and 215 HP Motor	1	EA	$ 230,000.00	$ 230,000
3	20"x12" Stainless Steel Reducing Elbow	3	EA	$ 15,000.00	$ 45,000
4	20" Stainless Steel Mechanical Piping	45	LF	$ 1,000.00	$ 45,000
5	20" Check Valve with Oil Cushion	3	EA	$ 25,000.00	$ 75,000
6	20" Harnessed Coupling	6	EA	$ 5,000.00	$ 30,000
7	20" Isolation Valve	3	EA	$ 20,000.00	$ 60,000
8	2" Air Release/Vacuum Valve	3	EA	$ 5,000.00	$ 15,000
9	Stainless Steel Pump Guide Rails	3	EA	$ 10,000.00	$ 30,000
10	Relocation of Existing 215 HP Pumps	2	EA	$ 40,000.00	$ 80,000
11	Remove and Dispose Existing Piping/Valves/Pump	1	LS	$ 30,000.00	$ 30,000
	YARD PIPING				
12	Bypass Pumping	1	LS	$ 350,000.00	$ 350,000
13	30" Discharge Header	60	LF	$ 1,000.00	$ 60,000
14	24" Gravity Line	30	LF	$ 700.00	$ 21,000
15	30" Gravity Line	30	LF	$ 900.00	$ 27,000
16	Connect to Existing Force Main	1	EA	$ 10,000.00	$ 10,000
17	Connect to Existing Gravity Main	2	EA	$ 10,000.00	$ 20,000
	SITE				
18	Splitter Box	1	EA	$ 150,000.00	$ 150,000
19	Grading, Erosion Control, Site Restoration	1	LS	$ 50,000.00	$ 50,000
20	Demolish Existing Electrical Building	1	LS	$ 25,000.00	$ 25,000
21	Move Equipment to New Electrical Building	1	LS	$ 50,000.00	$ 50,000
22	Remove Existing Hoist	1	LS	$ 5,000.00	$ 5,000
23	Install 5 Ton Bridge Crane	1	LS	$ 75,000.00	$ 75,000
24	Driveway Improvements	1	LS	$ 15,000.00	$ 15,000
	ELECTRICAL/SCADA				
20	Misc Electrical/SCADA/HVAC	1	LS	$ 100,000.00	$ 100,000
21	Motor Control Center	1	LS	$ 100,000.00	$ 100,000
22	Variable Frequency Drive	1	EA	$ 75,000.00	$ 75,000
23	400 KW Genset	1	EA	$ 175,000.00	$ 175,000
24	Automatic Transfer Switch and Switchgear Mods	1	LS	$ 100,000.00	$ 100,000
25	Temporary Power/Controls	1	LS	$ 100,000.00	$ 100,000
	STRUCTURAL				
26	New Electrical Building and Foundation	600	SF	$ 300.00	$ 180,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:			$ 2,418,000
Eng/Survey Fees (+/- %):	15		$ 363,000
Contingency (+/- %):	25		$ 619,000
Prop Acquisition:			$ -
Total			$ 3,400,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Upper Timber Creek Interceptor Phase I (FM 2499 to Morriss Rd and Buckthorn Ct to FM 1171)**	**Project:**	**5**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 1,525,872.30	$ 1,525,872
	Basis for Cost Projection:	**Total:**			$ 1,525,872
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)**	**Project:**	**6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 2,448,208.40	$ 2,448,208
	Basis for Cost Projection:	**Total:**			$ 2,448,208
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Upper Timber Interceptor (College Parkway to Pecan Drive)** **Project:** **7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000.00
2	15" Wastewater Main	1,240	LF	$ 155.00	$ 192,200
3	4' Manhole (8" - 18" Main)	5	EA	$ 10,000.00	$ 50,000
4	Seeding, Fertilizer & Erosion Control	1,180	LF	$ 10.00	$ 11,800
5	Concrete Pavement Repair	5	SY	$ 110.00	$ 550
6	Bore with 30" Steel Casing	60	LF	$ 750.00	$ 45,000
7	Trench Safety	1,180	LF	$ 2.00	$ 2,360
8	Vacuum Testing of Sanitary Sewer Manholes	7	EA	$ 500.00	$ 3,500
9	TV Inspection	1,240	LF	$ 2.00	$ 2,480
10	Connect to Existing Manhole	2	EA	$ 9,000.00	$ 18,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 335,890
Eng/Survey Fees (+/- %):	15	$ 51,000
Contingency (+/- %):	25	$ 93,110
Prop Acquisition:		$ -
Total:		$ 480,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Wellington Interceptor Improvements (Sections I and II)**	**Project:**	**8**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.0	LS	$ 1,345,253.80	$ 1,345,254
	Basis for Cost Projection:	**Total:**			$ 1,345,254
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title: **Riverwalk Collector (Morris Road to Windsor Drive)** **Project:** **9**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000.00
2	15" Wastewater Main	1,430	LF	$ 155.00	$ 221,650
3	4' Manhole (8" - 18" Main)	6	EA	$ 10,000.00	$ 60,000
4	Seeding, Fertilizer & Erosion Control	800	LF	$ 10.00	$ 8,000
5	Concrete Pavement Repair	420	SY	$ 110.00	$ 46,200
6	Trench Safety	1,430	LF	$ 2.00	$ 2,860
7	TV Inspection	1,430	LF	$ 2.00	$ 2,860
8	Vacuum Testing of Sanitary Sewer Manholes	8	EA	$ 500.00	$ 4,000
9	Connect to Existing Manhole	2	EA	$ 9,000.00	$ 18,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 373,570
Eng/Survey Fees (+/- %):	15	$ 57,000
Contingency (+/- %):	25	$ 99,430
Prop Acquisition:		$ -
Total:		$ 530,000

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2001 Wastewater Treatment Plant Improvements**	**Project:**	**10**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	1.00	LS	$ 19,191,263.00	$ 19,191,263
	Basis for Cost Projection:	**Total:**			$ 19,191,263
	Constructed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2020 Wastewater Mater Plan and Impact Fee Updates**	**Project:**	**11**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Per KH Engineering Contract	0.25	LS	$ 184,000.00	$ 46,000
	Basis for Cost Projection:	**Total:**			$ 46,000
	KH Engineering Contract with Town				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Long Prairie**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**Wastewater Treatment Plant Master Plan**	**Project:**	**12**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Provided by Town	0.5	LS	$ 130,000.00	$ 65,000
	Basis for Cost Projection:	**Total:**			$ 65,000
	Project Completed				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Denton Creek**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**TRA System Contract**	**Project:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	TRA System Contract	0.62	LS	$8,860,048.00	$ 5,493,230
	Basis for Cost Projection:	**Total:**			$ 5,493,230
	Existing Contract between TRA and Town				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Denton Creek**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2020 Wastewater Mater Plan and Impact Fee Updates**	**Project:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Per KH Engineering Contract	0.25	LS	$ 184,000.00	$ 46,000
	Basis for Cost Projection:	**Total:**			$ 46,000
	KH Engineering Contract with Town				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Prairie Vista**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**TRA System Contract**	**Project:**	**1**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	TRA System Contract	0.38	LS	$8,860,048.00	$ 3,366,818
	Basis for Cost Projection:	**Total:**			$ 3,366,818
	Existing Contract between TRA and Town				

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Flower Mound**	**Date:**	**10/20/2020**
Project:	**Wastewater Impact Fee Updates - Prairie Vista**	**Prepared By:**	**LMB**
KHA No.:	**061000201**	**Checked By:**	**MAS**

Title:	**2020 Wastewater Mater Plan and Impact Fee Updates**	**Project:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Project Cost Per KH Engineering Contract	0.25	LS	$ 184,000.00	$ 46,000
	Basis for Cost Projection:	**Total:**			$ 46,000
	KH Engineering Contract with Town				

TOWN OF FLOWER MOUND, TEXAS

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, AMENDING THE CODE OF ORDINANCES OF THE TOWN OF FLOWER MOUND, TEXAS, BY AMENDING CHAPTER 42, "IMPACT FEES," TO ADOPT UPDATED LAND USE ASSUMPTIONS AND UPDATED CAPITAL IMPROVEMENTS PLANS; PROVIDING AN UPDATE TO CERTAIN PROVISIONS REGARDING THE IMPOSITION OF IMPACT FEES; AMENDING APPENDIX A "FEE SCHEDULE" OF THE CODE OF ORDINANCES OF THE TOWN OF FLOWER MOUND, TEXAS RELATIVE TO CHAPTER 42 IMPACT FEES; MAKING FINDINGS; PROVIDING FOR THE REPEAL OF CONFLICTING ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound ("Town") is a home-rule municipality possessing the full power of local self-government pursuant to Article II, Section 5 of the Texas Constitution, Section 51.072 of the Texas Local Government Code and its home rule charter; and

WHEREAS, the Town has previously adopted ordinances in compliance with Chapter 395 of the Texas Local Government Code regarding the calculation, assessment and collection of impact fees for roadways, water and wastewater facilities; and

WHEREAS, the Impact Fees Ordinance has been codified in Chapter 42 of the Code of Ordinances, Town of Flower Mound, Texas; and

WHEREAS, Texas Local Government Code Section 395.052 requires a municipality imposing an impact fee to update the land use assumptions and capital improvements plan at least once every five (5) years; and

WHEREAS, the Town provided notice as required by law and held a public hearing regarding updated Land Use Assumptions, updated Capital Improvements Plans and updates to the manner of imposing impact fees before the Capital Improvements Advisory Committee ("CIAC") on or about November 9, 2020; and

WHEREAS, the CIAC recommended approval of the updated Land Use Assumptions, updated Capital Improvements Plans and updates to the manner of imposing impact fees; and

WHEREAS, the Town Council finds that the Town has complied with Chapter 395 of the Texas Local Government Code in the amendment of the land use assumptions, capital improvements plan, and imposition of impact fees; and

WHEREAS, after public notice and public hearing as required by law, and upon due deliberation and consideration of the recommendation of the Capital Improvements

Advisory Committee, the Town Council of the Town of Flower Mound, Texas, has determined that the proposed amendments to adopt the updated Land Use Assumptions and updated Capital Improvement Plans and to amend certain provisions regarding the manner of imposing impact fees to assure the availability of adequate roadway, water and wastewater facilities and services in order to serve new development consistent with the policies set forth in the Town's Master Plan, as amended are in the best interest and in support of the health, safety, morals and general welfare of the citizens of Flower Mound and the public;

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, THAT:

SECTION 1

All the above premises are hereby found to be true and correct and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2

That Section 42-1, "Capital Improvement Plans Adopted," of the Code of Ordinances of the Town of Flower Mound, Texas, is hereby repealed and replaced with a new Section 42-1 entitled "Land Use Assumptions and Capital Improvement Plans Adopted" to read as follows:

> **"Sec. 42-1. Land Use Assumptions And Capital Improvement Plans Adopted.**
>
> **(a) The Town Council hereby adopts the Land Use Assumptions as set forth in the 2020 Land Use Assumptions for Impact Fee Update dated November 2020, attached hereto as Exhibit A and incorporated herein for all purposes allowed by law.**
>
> **(b) The Town Council hereby adopts the Water System Capital Improvement Plan as set forth in the Water Impact Fee Update Report for 2020 dated November 2020, attached hereto as Exhibit B and incorporated herein for all purposes allowed by law.**
>
> **(c) The Town Council hereby adopts the Wastewater System Capital Improvements Plan as set forth in the Wastewater Impact Fee Update Report for 2020 dated November 2020, attached hereto as Exhibit C and incorporated herein for all purposes allowed by law.**
>
> **(d) The Town Council hereby adopts the Roadway System Capital Improvement Plan as set forth in the Roadway Impact**

Fee Update Report for 2020 dated November 2020, attached hereto as Exhibit D and incorporated herein for all purposes allowed by law."

SECTION 3

That existing Exhibits A, B, C, and D to Chapter 42 "Impact Fees" of the Code of Ordinances of the Town of Flower Mound, Texas, are hereby repealed in their entirety and replaced with Exhibits A, B, C, and D adopted herein.

SECTION 4

That Appendix A, "Fee Schedule" of the Code of Ordinances of the Town of Flower Mound, Texas, is hereby amended by the deletion of the existing provisions, charts, and tables regarding Chapter 42 "Impact Fees" contained therein and the replacement thereof with Exhibits E and F attached to this Ordinance.

SECTION 5

This Ordinance shall be cumulative of all provisions of ordinances of the Town of Flower Mound, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 6

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since same would have been enacted by the Town Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section, and said remaining portions shall remain in full force and effect.

SECTION 7

This Ordinance shall take effect and be in full force from and after its passage, as provided by the Revised Civil Statutes of the State of Texas and the Home Rule Charter of the Town of Flower Mound, Texas.

DULY PASSED, APPROVED AND ADOPTED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS, BY A VOTE OF _____TO_____, ON THIS THE 7th DAY OF DECEMBER 2020.

APPROVED:

_____
Steve Dixon, MAYOR

ATTEST:

_____
Theresa Scott, TOWN SECRETARY

APPROVED AS TO FORM AND LEGALITY:

_____
Bryn D. Meredith, TOWN ATTORNEY

EXHIBIT A

Land Use Assumptions
November 2020

EXHIBIT B

Water Impact Fee Update
November 2020

EXHIBIT C

Wastewater Impact Fee Update
November 2020

EXHIBIT D

Roadway Impact Fee Update
November 2020

EXHIBIT E

Water and Wastewater Impact Fees

EXHIBIT F

Road Impact Fees

Town Council Future Agenda Items

SCHEDULED	**1/4/2021**	Board/Commission	Discuss and consider appointment of Chair to the Tax Increment Reinvestment Zone (TIRZ).
		Consent	Consider approval of an ordinance to reappoint Municipal Judge Jeff Tasker for the period of January 1, 2020, through December 31, 2022.
		Consent	FM 1171 UPRR Quiet Zone Agreement
		Consent	Rheudasil Park - Construction Award
		Consent	Bruton-Orand @ FM 1171 Right Turn Lane - Construction Award
		Consent	Lift Station Improvements and Decommissioning Phase III - Design Award
		Consent	Oak Street Lift Station and Force Main Phase IV – Design Award
		Consent	Placeholder: appoint new Veterans Liaison members
		Consent	Impact Fee Adoption
		Consent	Morriss Road Water Line Phase II (Milford to Eaton) Construction
		Consent	Concrete Services Annual Contract
		Consent	Impact Fee Rate Adoption
		Regular	Public Hearing to consider an ordinance amending the Town's Code of Ordinances (LDR20-0005 – Development Fees) by adding section 32-4 requiring permits and permit fees for site development construction, by amending various portions of Chapter 78, "Administration," to add a new section 78-2 regarding inactive projects, to repeal section 78-124 in its entirety, and to add a new article VII regarding amendments to approved plans; and by amending appendix A entitled "fee schedule," to amend various fees related to land development within the town. (The Planning and Zoning Commission recommended approval/denial by a vote of 0 to 0 at its December 14, 2020, meeting.)
		Regular	Public Hearing to consider approval of a Chapter 380 Agreement with Communications Test Design, Inc. for the economic development of Flower Mound, and authorization for the Mayor to execute same on behalf of Town.

SCHEDULED	**1/4/2021**	Regular	Consider approval of an ordinance amending Appendix A “Fee Schedule,” referenced in Chapter 14, “Buildings and Building Regulations,” Section 14-1, “Building, plumbing, mechanical and electrical permit fees,” of the Code of Ordinances of the Town of Flower Mound, Texas, by revising various building permit fees.
	2/1/2021	Consent	Placeholder: Call May 1, 2021 Election
		Consent	Morriss Road Water Line Phase II (Milford to Eaton) Testing
		Consent	Rheudasil Park - Testing Award
		Consent	Morriss Road Water Line Phase III (Eaton to Waketon)
	3/1/2021	Regular	Consider approval of an ordinance amending the Town of Flower Mound’s Annual Budget for the fiscal year beginning October 1, 2020, and ending on September 30, 2021, as adopted by Ordinance No. xx-xx for adjustments to the General Fund