

AGENDA

FLOWER MOUND TOWN COUNCIL REGULAR MEETING

10/15/2018

FLOWER MOUND TOWN HALL, 2121 CROSS TIMBERS ROAD
FLOWER MOUND, TEXAS

6:00 P.M.

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

Please silence or turn off all electronic devices in the Council Chambers.

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. PRESENTATIONS

1. Update from Veterans Liaison Doug Brown on current events
2. Proclamation and presentation of Hometown Hero banner to Charles Boettcher & Daniell Gage
3. Recognition of Flower Mound Police and Fire Department winners of USA TODAY's Law Enforcement Lip Sync Challenge Contest

E. PUBLIC COMMENT

To speak to Council during public comment, please fill out a [comment form](#).

- Turn in form by 6:10 p.m. to Town Secretary
- Speakers are limited to 3 minutes, a tone will sound at 30 seconds left and when time has expired
- Please state your name and address when speaking

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.

F. ANNOUNCEMENTS

1. Announce recent and upcoming civic and social events.

G. TOWN MANAGER'S REPORT

Update and discussion on:

1. Capital improvement projects
2. Economic Development projects
3. Boards and Commissions:
 - Presentations
 - Input

**Town Council Meeting Agenda
October 15, 2018
Page 2**

H. 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).

I. COORDINATION OF CALENDARS

1. A regular meeting is scheduled for Monday, November 5.

J. CONSENT AGENDA - Consent Items

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

1. **Minutes 10/1-** Consider approval of the minutes from a regular meeting of the Town Council held on October 1, 2018.
2. **TRAKiT Software Upgrade-** Consider approval of the TRAKiT Software upgrade agreement, through CentralSquare Technologies, in the amount not to exceed \$75,000.
3. **Citibot, Inc. service agreement-** Consider approval of a one year Service Agreement with Citibot, Inc. to provide SMS chatbot customer service platform, software, and services in the amount of \$16,900 with option to renew annually and authorization for the Mayor to execute same on behalf of the Town.
4. **Vehicle Purchase - Public Works-** Consider approval of the purchase of one (1) New 2017 Ford F-550 Lift-A-Loft Aerial Basket w/service body per Vendor Specifications/Quote from Sam Pack's Five Star Ford for the Public Works Department in the amount of \$92,843.00.
5. **Siren Maintenance-** Consider approval of an Annual Maintenance Contract with Mass Notification Services, Inc. for the Town's Outdoor Warning Siren System in the amount of \$15,660.00; and authorization for the Mayor to execute same on behalf of the Town.
6. **Medical Supplies-** Consider approval of the purchase of emergency medical supplies and pharmaceuticals from Bound Tree Medical LLC, through the City of Cedar Hill Contract.
7. **2018-19 CIP Amendment-** Consider approval of Amendment No. 1 to the Fiscal Year 2018-2019 Capital Improvement Program.
8. **Traffic Signal Equipment-** Consider approval of the purchase of new traffic signal detection equipment for the Traffic Detection Rehabilitation project, from Twincrest Technologies through the HGAC Buy program, in the amount of \$132,900.00.
9. **Engineering Standards Update-** Consider approval of updates to the Town of Flower Mound Design Criteria and Construction Standards, modifying fire hydrant painting requirements, and adding M&H Valve Company as an approved manufacturer of fire hydrants and water valves.
10. **Reimbursement Resolution-** Consider approval of a resolution declaring expectation to reimburse expenditures with proceeds of future debt and authorizing the preparation of the documents associated with the issuance, sale, and delivery of the debt obligations; and providing an effective date.

Town Council Meeting Agenda
October 15, 2018
Page 3

K. REGULAR ITEMS

11. **Public Hearing-ZPD-NEM Senior Living-** Public Hearing to consider a request for rezoning (ZPD17-0003 - NEM Senior Living) from Retail District-1 (R-1) to Planned Development District No. 154 (PD-154) with age-restricted, high-density residential use, and with certain modifications and exceptions to the Code of Ordinances, and to consider adopting an ordinance providing for said amendment, subject to the terms and conditions in the attached Development Agreement and authorization for Mayor to execute same on behalf of the Town. The property is generally located south of Rippy Road and east of Long Prairie Road. (The Planning and Zoning Commission recommended approval by a vote of 5 to 1 at its September 24, 2018, meeting.) (The Town Council postponed the item at its October 1, 2018, meeting.)
12. **Master Plan - Section 8.0, Water Plan-** Public Hearing to consider a request for a Master Plan Amendment (MPA18-0006) to amend Section 8.0, Water Plan, of the Master Plan to adopt the Lakeside Reuse Water Master Plan to meet the Town of Flower Mound's reuse water system infrastructure needs over the build-out of the system located within the Lakeside Business District, and to consider adopting an ordinance providing for said amendment. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its October 8, 2018, meeting.)
13. **Site Plan - Fire Station #7-** Consider a request for a Site Plan (SP18-0010 - Fire Station No. 7) to develop a fire station with certain waivers and exceptions to the Code of Ordinances. The property is generally located west of Skillern Road and north of Wichita Trail. (Planning & Zoning Commission recommended approval by a vote of 6 to 0 at its October 8, 2018, meeting.)
14. **Homestead Property Tax Exemption-** Consider approval of an ordinance providing for a residential homestead ad valorem (property) tax exemption..

L. 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, 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 as follows:
 1. Case numbers OGB18-0001; OGB18-0003; BOA18-0008 (Eagle Ridge Operating, LLC)

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 purchase, exchange, lease or value of real property for parks and/or other municipal purposes and all matters incident and related thereto.
- c. Discuss and consider economic development incentives, including retail centers, corporate relocation/expansion/retention, senior housing, hospitality projects, and performance related to certain incentive agreements.

Town Council Meeting Agenda

October 15, 2018

Page 4

M. 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.

N. 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: October 12, 2018, at 10:30 a.m., at least 72 hours prior to the scheduled time of said meeting.

Theresa Scott, Town Secretary

The Flower Mound Town Hall and Council Chambers 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: October 15, 2018

FROM: Theresa Scott, Town Secretary

ITEM: Consider approval of the minutes from a regular meeting of the Town Council held on October 1, 2018.

BACKGROUND INFORMATION: The Town Council held a regular meeting on October 1, 2018.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

Proposed Expenditure:

Account Number(s):

Finance Review by: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Draft minutes

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

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 1**

THE FLOWER MOUND TOWN COUNCIL REGULAR MEETING; TOWN OF FLOWER MOUND FIRE CONTROL, PREVENTION, AND EMERGENCY MEDICAL SERVICES DISTRICT SPECIAL MEETING; AND CRIME CONTROL AND PREVENTION DISTRICT SPECIAL MEETING HELD ON THE 1ST DAY OF OCTOBER 2018, 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
Jason Webb	Mayor Pro Tem
Claudio Forest	Deputy Mayor Pro Tem
Sandeep Sharma	Councilmember Place 2
Kevin Bryant	Councilmember Place 3
Jim Engel	Councilmember Place 4

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

Theresa Scott	Town Secretary
Bryn Meredith	Town Attorney
Jimmy Stathatos	Town Manager
Debra Wallace	Deputy Town Manager/CFO
Tommy Dalton	Assistant Town Manager
Chuck Russell	Town Planner
Bob Pegg	Engineering Manager

A. CALL REGULAR 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 Richard Plunk gave the invocation and Mayor Dixon led the pledges.

D. PRESENTATIONS

1. Special Recognition of German Exchange Students

Anja Jarboe, German Teacher, Marcus High School, provided background information about the exchange student program and Mayor Dixon presented each of the German exchange students with a Certificate of Recognition.

2. Check Presentation from Atmos for the purchase of an Underwater Remotely Controlled Vehicle

Jan Rugg, Manager, Public Affairs, Atmos Energy, presented Brandon Barth, Emergency Management Officer, with a check in the amount of \$11,000 for an underwater remotely controlled vehicle.

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018

PAGE 2

E. 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)
1.	Ben Tienor, 3609 Jennifer Dr	Liberty Park Development
2.	Barbara Etter, 4404 Trotter	Not identified
3.	Beth Dilley, 3100 Sagebrush Dr	Agenda item 10
4.	Bryan Webb, 4112 High Rd	Agenda item 10
5.	Alton Bowman, 6524 Orchard Dr	Agenda item 10
6.	Sweetie Bowman, 6524 Orchard Dr	Agenda item 10
7.	Nancy Wright, 2309 Dove Meadow Dr with donated time from: • Julie Kluthe, 2328 Whitman Ln	Agenda item 10
8.	Samantha Wood, 1605 Mistletoe Dr	Agenda item 15 (Sunset Point)

F. ANNOUNCEMENTS

Deputy Mayor Pro Tem Forest announced that the Outstanding Citizenship Award committee will soon be reviewing nominations for this prestigious award.

Councilmember Bryant announced that tomorrow is National Night Out and he stressed the importance of this event. He also announced that the Fire Department Open House is this Saturday.

Mayor Pro Tem announced Food Truck Fest scheduled for October 7th.

Councilmember Sharma announced that tomorrow is International Non-Violence Day. He also reported having learned about a Green Advisory Board from the City of Irving where they are doing "green" education programs for businesses and indicated there is an opportunity for collaboration with the Town.

Mayor Dixon congratulated the Flower Mound police officers that participated in the Chamber of Commerce Clay Shoot event. He also reported on a positive experience a citizen had with the Town's Fire Department.

G. TOWN MANAGER'S REPORT

Mr. Stathatos reported on the following projects:

1. Capital improvement projects
 - Skillern Road widening
 - o And he responded to questions from Council regarding:
 - Whether the road will be completely shut down from Skillern to Flower Mound Road or will there be limited mobility
 - Traffic signal at 377 @ Canyon Falls

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 3****2. Economic Development projects**

- Nektar juice bar now open
- Novel Coffee Roasters (new name – previously Trio Craft Coffee)
- Highlighted the following businesses that are celebrating their one year anniversary:
 - o Courtyard Marriott
 - o State Draft House
 - o Local Pint
 - o Mena's restaurant

H. FUTURE AGENDA ITEMS

1. There were no items requested for a future agenda.

I. COORDINATION OF CALENDARS

Mayor Dixon announced that the next Town Council regular meeting is scheduled for Monday, October 15, 2018 and confirmed attendance by members of Council.

Ms. Scott also asked for feedback on the dates of 10/29 and 10/30 for the purpose of providing Council with an overview of the equipment at the new town hall.

J. CONSENT ITEMS

1. Consider approval of the minutes from a regular meeting of the Town Council; Town of Flower Mound Fire Control, Prevention, and Emergency Medical Services District Special meeting held on September 17, 2018.
2. Consider approval of the minutes from a regular meeting of the Town Council held on September 18, 2018, and September 20, 2018.
3. For the Parks Board consider appointing Mr. Mark Mayer from Place 8 (alternate) to Place 6 (regular) and Mr. Daniel Cummings from Place 6 (regular) to Place 8 (alternate).
4. Consider approval for a carrier agnostic cell phone boosting system for the new Town Hall.
5. Consider approval of an agreement with Axon Enterprise, Inc., to purchase body worn camera products; and authorization for the Mayor to execute same on behalf of the Town.
6. Consider approval of the award of Bid No. 2018-124-B, to Bean Electric Inc., for the construction of the US 377 at Canyon Falls Drive – Traffic Signal Construction project, in the amount of \$85,082.55; and authorization for the Mayor to execute same on behalf of the Town.

7. Consider approval of the Professional Services Agreement with Mesa Design Associates, Inc., for the design services associated with the Canyon Falls Park project, in the amount of \$149,500.00; and authorization for the Mayor to execute same on behalf of the Town.
8. Consider approval of the Professional Services Agreement with Studio Outside Landscape Architecture, LLC., for the design services associated with the Rheudasil Park Improvements project, in the amount of \$136,700.00; and authorization for the Mayor to execute same on behalf of the Town.
9. Consider approval of the purchase of pavement marking services, in the estimated annual amount of \$300,000.00, from Stripe-A-Zone, through a City of Grand Prairie contract.

Councilmember Bryant moved to approve by consent Items 1 – 9, as presented in the agenda caption. Mayor Pro Tem Webb 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:

AYES: FOREST, ENGEL, BRYANT, WEBB, SHARMA

NAYS: NONE

Motion passed

K. REGULAR ITEMS

10. Consider approval of a Cultural Arts Master Plan for the Town.

Staff Presentation

Ms. Ridnour provided background information about the process that led to the creation of the Cultural Arts Master Plan, which included a timeline, goals for the cultural arts plan, and the hiring of The Cultural Planning Group (CPG).

The Town Council recessed at 6:55 p.m. due to technical difficulties and reconvened at 7:00 p.m.

Ron Miller, Chair, Cultural Arts Commission

Mr. Miller provided background information on the Cultural Arts Commission and the work that went into the creation of the Cultural Arts Master Plan.

Consultant Presentation

Martin Cohen, Cultural Planning Group

Mr. Cohen gave a presentation identifying or noting:

- Review of planning process
- Process overview
- Key findings

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 5**

- Plan development
- Overarching goals

Council Discussion:

- How it would have been nice to see a graphic that better describes the plan
- Somewhat concerned about the capital outlay
- Support for the implementation plan and importance of framing out what is actually needed for the Town
- Appreciation for everyone involved that worked on the plan
- Whether the Cultural Arts Plan is a want or a need for the Town
- How a “yes” vote does mean that dollars will need to be spent and Council will need to be responsible in making those decisions at that time
- Government’s role in the area of the arts
- How this is just one step in a larger plan
- Given the limited budget there would need to be a community partnership, and especially with local artist groups
- How cultural arts improves the quality of life
- If approved, Council will need to find ways to fund it and adjust priorities

Deputy Mayor Pro Tem Forest moved to approve as presented in the agenda caption. Mayor Pro Tem Webb seconded the motion.

VOTE ON MOTION:*Motion passed***AYES: SHARMA, WEBB, BRYANT, ENGEL, FOREST****NAYS: NONE**

- Public Hearing to consider a request for rezoning (ZPD17-0003 - NEM Senior Living) from Retail District-1 (R-1) to Planned Development District No. 154 (PD-154) with age-restricted, high-density residential use, and with certain modifications and exceptions to the Code of Ordinances, and to consider adopting an ordinance providing for said amendment, subject to the terms and conditions in the attached Development Agreement and authorization for Mayor to execute same on behalf of the Town. The property is generally located south of Rippy Road and east of Long Prairie Road. (The Planning and Zoning Commission recommended approval by a vote of 5 to 1 at its September 24, 2018, meeting.)

Staff Presentation

Mr. Russell provided background information about the item and indicated the request is to open the item and then postpone it to October 15th because the development agreement needs some additional work.

Mayor Pro Tem Webb moved to postpone this item, which includes the public hearing to consider a request for rezoning (ZPD17-0003 – NEM Senior Living), to the October 15, 2018, Town Council meeting. Deputy Mayor Pro Tem Forest seconded the motion.

VOTE ON MOTION:*Motion to postpone passed.***AYES: FOREST, ENGEL, BRYANT, WEBB, SHARMA****NAYS: NONE**

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 6**

Mayor Dixon opened items 12, 13, and 14 at the same time.

12. Public Hearing to consider a request for rezoning (ZPD18-0006 – Townlake East) from Agricultural District (A) to Planned Development District No. 166 (PD-166) for a cluster development with certain modifications and exceptions to the Code of Ordinances and to consider adopting an ordinance providing for said amendment, and acceptance of 13.11 acres of Park Land Dedication and a Park Development Fee credit in the amount of \$77,728 for extensions of the Town's eight-foot-wide Hike and Bike Trail System. The property is generally located south of Cross Timbers Road and east of Flower Mound Road. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its September 24, 2018, meeting.)

Staff Presentation

Mr. Russell gave a presentation for items 12, 13, and 14 identifying or noting:

- General and detailed location
- Land use and zoning
- Photos of the subject property
- Cross Timbers Conservation District overview
- Open space plan
- Concept plan
- Hardscape plan
- Specimen tree removal request
- Variance request as it relates to the gas well pad
- Subdivision overlay
- Record plat for Magnolia Park and stub out connection

Applicant Presentation

Mike Boswell, Director of Land Development, Toll Brothers

Mr. Boswell gave a presentation identifying or noting:

- Explanation and requirements within the Cross Timbers District area plan
- Townlake history east of Flower Mound Road
- Townlake application today includes the cluster development option
- Setbacks proposal
- Concept plan
- Variance request
- Open space plan
- Specimen tree removal request
- Landscape buffer
- Trail connectivity of the site
- Townlake East milestones (notifications and time line)

and he, Mr. Dalton, or Mr. Meredith, responded to the following questions from Council, and some of which were as a result of the Public Hearing:

- Clarification that the pad site access is off of Flower Mound Road and not within the subdivision

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 7**

- Trail plans within the development
- Is the future of the gas well known
- Will there be access within the 400' surrounding the gas well
- What does "maintained" mean for the 400' surrounding the gas well and who will maintain it
- Clarification that the variance approval by the Oil and Gas Board of Appeals was final and that no action from Council is necessary
- Clarification on the agricultural zoning as well as any requirement for a wall
- Roadway connection plans

Mr. Meredith provided an explanation as it relates to discretionary options for Council consideration.

Council Discussion

There was Council discussion regarding:

- Concerns regarding the potential use of Magnolia during construction and if language should be added in the PD that prevents thru traffic during construction
- How Council is not voting on a tennis center tonight and the vote is about zoning and how to handle that part of it
- Acknowledgement for the request of a tennis center from those who spoke
- How it is a rare occurrence where the Town gets 13.11 acres given to the Town, and interest in seeing that use be a tennis center in the future
- Will be getting 100 trees, losing 5, but all 5 will be mitigated on the property

Mayor Dixon opened the Public Hearing for items 12 and 13 at 7:53 p.m. Public comment was heard for companion item 14 at this same time.

The following individuals either spoke in support or opposition, or had questions / comments related to the item: *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.*

Support: Comments/Questions	Opposition: Comments/Questions	Question(s)/ Comments Only
Jim Linker, 2504 Cross Haven Dr (14)	Amy Canava, 4600 Darlington Dr (12 & 14)	None
Cale Balusek, 3705 Hillsdale Dr (14)		
Tom Hayden, 4213 Huntwick Ln (14) with donated time from: • Mandy Rhodes, 6501 Red Bud Dr • Katie Mayer, 3612 Burlington Dr		
Nancy Kleckner, 2608 Wisdom Creek Dr (12) With donated time from: • Lauren Dignam, 5204 Seville Ln		
Nancy Ramey, 3412 W Windsor Dr (14)*		
Tanya Balusek, 3705 Hillside*		
Tina Hennessey, 2100 Paradise Ln*		

*indicated did not wish to speak but would like to record their support (item 14)

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018

PAGE 8

Mayor Dixon closed the Public Hearing for items 12 and 13 at 8:25 p.m.

For item 12 Councilmember Bryant moved to approve a request for rezoning (ZPD18-0006 – Townlake East) from Agricultural District (A) to Planned Development District No. 166 (PD-166) for a cluster development with certain modifications and exceptions to the Code of Ordinances, and adopt an ordinance providing for said amendment, and acceptance of 13.11 acres of Park Land Dedication and a Park Development Fee credit in the amount of \$77,728 for extensions of the Town's eight-foot-wide Hike and Bike Trail System; and with the requirement of no construction thru traffic during construction through Magnolia Parkway. Deputy Mayor Pro Tem Forest seconded the motion.

ORDINANCE NO. 32-18

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 89.925 ACRES OF LAND SITUATED IN THE J. MALONE SURVEY, ABSTRACT NUMBER 857, AND THE M.E.P. & P.R.R. SURVEY, ABSTRACT NO. 935, FROM AGRICULTURAL DISTRICT (A) TO PLANNED DEVELOPMENT DISTRICT NO. 166 (PD-166) FOR SINGLE FAMILY RESIDENTIAL USES WITH CLUSTER DEVELOPMENT STANDARDS 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 IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

VOTE ON MOTION:*Motion passed***AYES: SHARMA, WEBB, BRYANT, ENGEL, FOREST****NAYS: NONE**

13. Public Hearing to consider an application for a tree removal permit for five (5) specimen trees on property proposed for development as Townlake East. The property is generally located south of Cross Timbers Road and east of Flower Mound Road. (The Environmental Conservation Commission recommended approval by a vote of 6-0-0 at its August 7, 2018 meeting).

Mayor Pro Tem Webb moved to approve item 13 as presented in the agenda caption. Deputy Mayor Pro Tem Forest seconded the motion.

VOTE ON MOTION:*Motion passed***AYES: FOREST, ENGEL, BRYANT, WEBB, SHARMA****NAYS: NONE**

14. Consider a request for a Development Plan (DP18-0005 - Townlake East) to develop a residential subdivision. The property is generally located south of Cross Timbers Road and east of Flower Mound Road. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its September 24, 2018, meeting.)

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 9**

Mayor Pro Tem Webb moved to approve item 14 as presented in the agenda caption. Councilmember Sharma seconded the motion.

VOTE ON MOTION:*Motion passed***AYES: SHARMA, WEBB, BRYANT, ENGEL, FOREST****NAYS: NONE**

15. Consider a request for a Development Plan (DP18-0003 - Sunset Point at Twin Coves, previously Ridge Bluff Estates) to develop a residential subdivision, subject to the terms and conditions in the attached Development Agreement and authorization for Mayor to execute same on behalf of the Town. The property is generally located west of Simmons Road and south of Holly Lane. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its September 24, 2018, meeting.)

Staff Presentation

Mr. Russell gave a presentation identifying or noting:

- General and detailed location of the subject property
- Land use and zoning
- Photos of the subject property
- Approved development plan
- Proposed development plan with the key points of
 - o 2012 DA in effect
 - o Automated fire sprinkler systems
 - o Upland habitat fees
- Preliminary sanitary sewer plan
- Landscape plan

and he, Mr. Meredith, or Mr. Dalton responded to the following questions from Council:

- Would there be an adjustment in the area of park fees since the calculations are from 2012
- What would be considered minor fill in for the steep slope areas (as noted in the letter of intent)

Applicant Presentation

Peter Edwards, Development Design Consultants

Mr. Edwards indicated he doesn't have a presentation; however, is available to answer any questions.

Mr. Edwards responded to the following questions from Council:

- What is different from the original plan as it relates to the emergency access to the Corp of Engineering land
- What is the need for the development to be gated

Council Discussion

- How this development was already approved once and some of the changes are outside of the applicant's control

FLOWER MOUND TOWN COUNCIL MEETING OF OCTOBER 1, 2018**PAGE 10**

Mayor Pro Tem Webb moved to approve a request for a Development Plan (DP18-0003 – Sunset Point at Twin Coves, previously Ridge Bluff Estates) to develop a residential subdivision, subject to the terms and conditions in the attached Development Agreement and authorization for Mayor to execute same on behalf of the Town. Councilmember Bryant seconded the motion.

VOTE ON MOTION:*Motion passed***AYES: FOREST, ENGEL, BRYANT, WEBB, SHARMA****NAYS: NONE****L. BOARDS/COMMISSIONS (Executive Conference Room)**

Discuss and consider resignations, appointments, or evaluations for the following boards or commissions: Animal Services Board, Cultural Arts Commission, Environmental Conservation Commission, Parks Board, SMARTGrowth Commission, Tax Increment Reinvestment Zone Number One (TIRZ #1), and Transportation Commission.

No action taken

M./N. CLOSED/OPEN MEETING

The Town Council did not convene into a closed meeting therefore no action was taken on the following items:

- a. Consultation with Attorney.
- b. Discuss and consider purchase, exchange, lease or value of real property for parks and/or other municipal purposes and all matters incident and related thereto.
- c. Discuss and consider resignations, appointments, or evaluations for the following boards or commissions: Board of Adjustment/Oil & Gas Board of Appeals, Community Development Corporation, and Planning and Zoning Commission.
- d. Discuss and consider economic development incentives, including retail centers, corporate relocation/expansion/retention, hospitality projects, and performance related to certain incentive agreements.

O. ADJOURN REGULAR MEETING

Mayor Dixon adjourned the meeting at 8:56 p.m. on October 1, 2018, and all were in favor.

TOWN OF FLOWER MOUND, TEXAS

STEVE DIXON, MAYOR**ATTEST:**

THERESA SCOTT, TOWN SECRETARY



TOWN COUNCIL AGENDA ITEM NO. 2

CONSENT ITEM

DATE: October 15, 2018

FROM: Gary Bertagnolli, IT Director

ITEM: Consider approval of the TRAKiT Software upgrade agreement, through CentralSquare Technologies, in the amount not to exceed \$75,000.

BACKGROUND INFORMATION: The Town's current version of TRAKiT is outdated and is no longer properly supported by CentralSquare Technologies. The latest version of TRAKiT is an online version which can be accessed by any internet browser.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: Not to Exceed \$75,000

Proposed Expenditure:	Account Number(s):
Not to exceed \$75,000	100-655-59100-2020

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

LEGAL REVIEW: Cara Leahy White, of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the agreement as to form and legality.

ATTACHMENTS:

1. TRAKiT Upgrade SOW
2. Amendment to Agreement

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



SUPERIOR

Statement of Work

Superior Community Development -TRAKiT

Document prepared for:
Town of Flower Mound, TX



Table of Contents

Table of Contents

Table of Contents	2
Executive Summary.....	3
Project Assumptions	3
Summary Overview	5
Scope of Services	6
1. Project Management and Governance.....	6
2. Installation.....	8
3. Data Migration and Conversion	9
4. Business Process Optimization (BPO)	10
5. Consulting and Training	11
6. Quality Assurance Testing	12
7. Report Development	12
8. Other.....	13
9. Project Closeout.....	14

Executive Summary

This document contains the approach and Statement of Work (SOW) for the definition, configuration, and deployment of the software and services for the implementation of Superior TRAKiT for the Town of Flower Mound, TX (Customer). Superior LLC (Superior) will assist the Customer with work outlined in this SOW.

This SOW defines the scope of work agreed upon by Superior and the Customer, as well as establishes responsibilities for each party related to the services furnished following execution of the specific Agreement. The Customer agrees that Superior will provide the services as described under this SOW at the cost and terms listed in the Agreement.

Project Assumptions

- Superior is implementing a Commercially Available Off-the-Shelf (COTS) solution.
- Customer and Superior will jointly finalize the detailed project plan, schedule. Any significant or material changes to the project, once the project plan is finalized, will follow the Change Control process as described in this SOW.
- The proposed project services in this SOW include project management, installation, implementation, training, consulting, and other services work necessary for the project as described in this SOW and representing a best good faith estimate based on knowledge at time of Agreement.
- Superior will provide services to assist the Customer in upgrading to TRAKiT. Customer is upgrading to TRAKiT to remain current on the software and to take advantage of added features and functionality available. Customer and Superior agree to work together to review any custom scripts or other custom development used today on TRAKiT.net. Customer and Superior will work to eliminate all custom scripts, stored procedures, and other customizations as part of the migration to TRAKiT. By doing so this will assist in streamlining this and software upgrades in the future.

Superior will make every effort to utilize 'Out-of-the-Box' feature/functionality, to replace any customization(s) in TRAKiT. Superior will utilize a portion of the 40 hours for High Level Consulting to conduct a Fit/Gap Analysis of the Agency's current system and customizations. Where Gaps exist, Superior will work closely with the Agency, to develop specifications, to be reviewed by the Superior Product Management team. If customization(s) are required to address identified gap(s), the Agency will be provided a separate quote and statement(s) of work, for the effort(s).

- The Customer will form an internal Project Team, including a project manager, and will make their Project Team members available for meetings, consulting and training sessions, discussions and conference calls, and other related project tasks or events upon request by Superior.
- The Customer will provide adequate breakout and conference room space as well as an adequate workspace for each onsite Superior consultant with access to a wireless network, telephone, and within close proximity to the Customer project team and site.
- Customer will provide adequate training space and computers for training throughout the project. The training rooms will include a Superior-specified number of fully functioning networked computers which meet the required Superior hardware standards. The Customer is responsible for ensuring training facilities are fully prepared for each training sessions. Superior offers additional Technical Support services and can amend this SOW to include them at the customer's request.

- Both the Customer and Superior will furnish resources with appropriate skills and experience to handle the roles and responsibilities outlined in this SOW.
- Superior is not responsible for quality of existing Customer data or for the correction or resolution of data quality issues unless previously agreed upon.
- Superior is not including any custom development in this SOW. If custom development is identified, Customer and Superior will follow our funded development process to determine if the requested work can be completed by Superior
- Customer understands that some functions/features are different or have been removed from previous versions of TRAKiT.
- Customer will test all normal business processes in the TRAKiT application after the training and prior to the final go live. Superior will support and troubleshoot issues with the Customer during this testing.

Summary Overview

Customer is currently using or has licensed the following modules and will be using or implementing in TRAKiT.

TRAKiT Application	Services Included	Services Not Included
☒ GeoTRAK (formerly LandTRAK)	• TRAKiT Install • Conversion & Migration of Data • Training • Report Development • Business Process Optimization • Testing Support • Analytics related configuration and Consulting (if Analytics included in proposal)	• Hardware Install (unless Superior Hosted) • Custom development
☒ PermitTRAK		
☒ ProjectTRAK		
☒ CodeTRAK		
☒ LicenseTRAK		
☐ CRM TRAK		
☐ GIS Standard		
☒ GIS Advanced		
☒ eTRAKiT		
☒ iTRAKiT		
☐ VoiceTRAK IVR		

Scope of Services

1. Project Management and Governance

Superion will provide a Remote Project Manager (RPM) who will manage the project and work closely with the Customer project lead to oversee the project. Throughout the project, the RPM will keep the project organized from the Superion perspective, on schedule and on budget.

Key Responsibilities

Superion:

- Lead Project
- Project Plan and Schedule
- Open Items Log
- Weekly Status Call with Agenda

Customer:

- Attend and participate in project kickoff
- Provide organization schedule for Superion PM to complete project plan
- Participate in weekly call with Superion PM
- Test and validate the system timely to provide feedback in weekly calls

Assumptions:

- The Customer and Superion Project Manager's will coordinate project team members, subject matter experts, and the overall implementation schedule.
- Both Superion and Customer will assign Project Manager's with the requisite skills and leadership authority within the organization to effectively accomplish the goals and complete the scope of the services in this SOW. Superion has included RPM hours to cover a 6-9-month project. If the project runs over the allotted RPM hours the Customer may contract for additional hours. If the Customer meets all of their deadlines, any delay caused by Superion will be at Superion's expense. If changes to the scope of work are made by the Customer, this will not be considered a delay caused by Superion.
- Customer will participate in weekly project team calls with Superion's Project Manager.
- Customer is responsible for completing the go-live checklist no less than 30 days before go live to ensure full testing has occurred and the customer organization is ready for go live.

The parties agree that the individuals designated in the final Project Schedule are essential to the services offered pursuant to this Agreement. To ensure expedient remediation of any issues that may arise during the implementation process, the Customer and Superion will use the following escalation procedure:

- All communication regarding the project directed to Superion's Project Manager and the Customer's Project Manager must remain consistent. Regularly scheduled project status meetings maintain open communication between the Superion Project Manager and Customer Project Manager.
- All issues or concerns are to be openly and actively discussed between Superion's Project Manager and the Customer's Program and Project Manager prior to any escalation.
- If issues begin to interfere with the progression of the implementation project, the Customer and/or Superion should escalate challenges to Superion management in the sequence below:

Superion

Escalation within Superion management is as follows:

Name and Role	Phone	Email
Courtney Putzel, Sr. Manager Services	407.304.3213	Courtney.putzel@superion.com
Mario Baldasserini, Sr. Director Services	407.304.3979	Mario.Baldasserini@superion.com
Sharon Love, VP Professional Services	407.304.3395	Sharon.Love@superion.com

Customer

Customer will provide escalation path to the Superion Project Manager as part of the project planning phase:

Name and Role	Phone	Email

Change Control and Change Request Process

The Customer and Superion may request a change to this scope of work by following the process outlined in this section.

Either party may request changes in scope. Such a request is honored by the parties only if it becomes a formal Change Order.

The change order will provide sufficient detail including the following.

- Specifications (if applicable)
- Implementation Plans (if applicable)
- Schedule for completion (if applicable)
- Verification and Approval criteria (if applicable)
- Impact on current milestones and payment schedule (if applicable)
- Additional milestones (if applicable)
- Impact on project goals and objectives (if applicable)
- Price and Superion quote (if applicable)

Either Superion or Customer management may propose a change by submittal of a Change Request to the other party. The other party has five (5) business days (or as mutually agreed upon) to determine whether it agrees to the Change Request. If both parties agree to the Change Request, the change will become a Change Order documented and signed by both parties.

2. Installation

Superion and Customer will conduct the following Installation as part of this project.

Tasks	Name	Description	Customer Role	Superion Role
1.	Installation	Initial Installation of TRAKiT	• Hardware Set Up • Completed Pre-Install Checklist • Attend Discovery Call • Review and Signoff on Completed SOW	• Pre-Install Checklist • Discovery Call • Complete install and data migration
2.	Test Account Creation	Test Account Creation is the creation of the test account which is cloned from the pre-production environment.	• Validate Account	• Discovery Call • Create Test Account •

Assumptions

- Superion will migrate all Customer data contained within TRAKiT and confirm that primary system functions are available.
- If Customer's hardware is on premise, Superion will provide the TRAKiT software and install it on a local server. Software installation will be done one (1) time.
- If Customer is hosted in the Cloud, Superion will install the TRAKiT software on a server and provide access to the Customer within Superion's cloud. A standard URL will be provided.
- Customer is responsible for the procurement and installation of hardware based upon Superion's Recommended Hardware Specifications.
- Superion will perform one initial data migration from TRAKiT.net, and one final data migration as part of the Agreement. Superion will create one (1) Production Account and one (1) Test Account as part of the Agreement. Additional accounts will require additional hours added to the Agreement by mutual written agreement at Superion's prevailing rates.
- Initial installation of TRAKiT is completed into one (1) pre-production environment. All configuration, training, and testing is completed in this environment. Prior to end user training a "testing" environment is created and the data from Pre-Production is copied over. This second environment called "test" is used to train end users and as a sand box for users to learn. Prior to final go live the Pre-Production environment is cleared out of data and the "final conversion" from production is completed. Pre-Production is now considered "production."

3. Data Migration and Conversion

Superion will migrate the Customer's existing TRAKiT database into the TRAKiT data structure. Price includes two (2) conversion routines:

1. The first data migration will occur at the initial delivery for Customer training and testing. Any issues with migrated data must be reported to Superion at the conclusion of the initial testing period, which will be defined by the Project Schedule that will be negotiated by the Customer and the Superion project manager.
2. The second data migration will occur at Go Live. The TRAKiT database must be provided to Superion by no later than 9:00 AM PST on the scheduled conversion date.

Any alterations made to the TRAKiT database by the Customer during migration will result in additional charges to correct.

Assumptions:

- Customer understands that the data migration is for the existing TRAKiT configuration as provided to Superion on date of install.
- Customer to fully test the system prior to go live per the project schedule.
- Customer will be responsible for providing remote network access to Superion.
- Any delays in the project schedule caused by the Customer may result in additional charges.
- The Customer must track any alterations made to their production TRAKiT database while testing TRAKiT9, and apply those changes (as needed) to the TRAKiT9 database with the guidance of Superion. Any alterations made to the TRAKiT database by the Customer during migration will result in additional charges should Superion need to correct.
- Customer will provide IT support, as requested by Superion, to affect changes to the Customer environment in support of this project.
- Any delays in the negotiated project schedule caused by the Customer may result in additional charges.

4. Business Process Optimization (BPO)

Based on the modules currently licensed Superior will provide a BPO to review current business processes. Superior includes 10 hours per module with 8 hours on site for the review and 2 hours to document the findings and recommendations post BPO. Modules consist of (Code, Permit, Project, and License.)

Name	Description	Customer Role	Superior Role
BPO	Business Process Optimization is an in-depth review of current organization business practices and processes within the use of TRAKiT. Superior will make best practice recommendations for business optimization and design to the organization based on best practice uses of TRAKiT. As part of the BPO, Superior consultants will review existing business processes with Customer staff. Consultants will facilitate a discussion to review recommendations and options for use of TRAKiT software. Additionally, Superior consultants will use government “best practices” in providing improvement options to the Customer. Superior will document the recommendations in a written deliverable organized by business process. Special focus will be given to reviewing any customizations the Customer has on TRAKiT.Net. The goal of moving to TRAKiT is to eliminate the current customizations by using the base software. Some of the customizations include scripting and stored procedures.	• Provide Current “As Is” Processes • Provide current customizations • Attend Interview Sessions per Schedule • Review BPR Recommendations • Signoff on Completed BPR • Determine Which Recommendations to be Implemented During Project	• Onsite BPR Interview Sessions • BPR Findings Document with Recommendations

Assumption:

- It is Superior and Customers goal to not bring forward any software customizations from TRAKiT.net to TRAKiT. Both parties will make a good faith effort to review customizations and to find a solution in the base TRAKiT software. Superior has included services in this agreement should no alternative in the base software be available for Superior to review the customization for adding it to the base software. The review of Customers customization will go through Superior’s funded development process for evaluation and cost. Superior is not making a commitment to add any customizations to the base software. Customizations will be evaluated based on the value of adding it to the base software. Should Superior

agree to move forward with the Customization it will be added to the base software and be included in a main release. This will allow for the customization to become part of the base software and available in future releases.

5. Consulting and Training

Superion will provide the following training as described in this SOW.

Power Users:

Superion will provide training to power users. These are power users in each core functional area. The goal of this training is to review new features, processes, and differences between TRAKiT.net and TRAKiT. Immediately after training the Customer should plan to put the knowledge to work by testing the TRAKiT application. Superion standard training provides 1-day totaling (8) hours per licensed module (Code, Permit, Project, and License.)

End Users:

Superion will provide training to end users. These are end users in each core functional area. The goal of this training is to train end users on the use of TRAKiT. This training will take place immediately prior to go live. Superion standard training provides 1-day totaling (8) hours per licensed module (Code, Permit, Project, and License.) An additional 1 day (8 hours) has been added for the Town of Flower Mound.

Go Live Support:

Superion will provide 2-day totaling (16) hours onsite go live support.

Consulting and Training Responsibilities

Superion:

- Agendas – One week prior to scheduled session.
- Trip/Distance Learning Log – Within one week of completion of training.
- Tracking and updating the project schedule and milestones

Customer:

- Attend Training
- Complete Homework (if applicable)
- Review and Sign Trip/Distance Learning Log
- Client Specific End User Guides (if applicable)

Assumptions:

- Training will be conducted onsite at the Client's location
- Power users will begin testing immediately after training
- One trainer to accommodate up to eight (8) students
- Provide eight (8) workstations/laptops for each individual to be trained
- Workstation environment must connect directly to the Customers pre-production database for training.
- Training will be broken into 4 hour (half-day) segments for each class. Students must be able to attend the full training session
- Students will have sufficient basic knowledge of Customers current business processes and use of TRAKiT.net

- Each class is restricted to 8-12 students max. If additional sessions are required due to more than 12 attendees, Customer will need to contract for additional training hours

6. Quality Assurance Testing

Superion provides services for one (1) round of testing review as part of this SOW. The intent of this support is to assist the Customer in resolving any items found during the testing of TRAKiT. Superion includes 2 hours testing support per licensed module (Code, Permit, Project, and License.)

Customer agrees and is responsible for completing testing of all aspects of Superion TRAKiT. This includes but is not limited to the following:

- All business processes including
- Reports
- Security
- Interfaces (if applicable)
- Forms

Responsibilities

Superion:

- Support Customer in testing
- Troubleshoot testing issues
- Resolve issues related to testing per support standards

Customer:

- Customer will define testing scenarios specific to Customer operations as needed for testing.
- Customer application owners will participate in testing activities.

Assumptions:

- Customer is expected to start the testing shortly after the power user training provided by Superion.

7. Report Development

Customer will have access to Superion's standard reports for TRAKiT. In addition, Superion has provided the following report development services to convert custom Crystal Reports to Superion SSRS.

Number of Custom Reports	Avg. Hours per report	Total Hours
18	4	72
Total		72

Assumptions:

- The (4) four hours per report is an estimate. It is understood that some reports will take longer and some reports will take less than the 4 hours estimated.
- Any reports which have been created to update the database will not be convert to a new report in TRAKiT. These reports should be evaluated as part of the BPO process.

- Customer has provided the correct number of custom reports which need to be converted.
- Customer will provide the list of reports within 10 days of the agreement being executed.
- Additional reports may incur additional fees
- Customer will test the reports within 5 days of completion and provide feedback to Superior PM and report developer
- Customer understands that the format/details of the TRAKiT reports may vary from the TRAKiT.Net reports.

8. Other

1. LicenseTRAK Conversion
Superior has included twenty (20) hours to convert LicenseTRAK to TRAKiT
2. Advanced Licensing Process (ALP)
Superior is providing the following services to assist the Customer in automating their license process via use of TRAKiT's Advanced License Processing (ALP).

Advanced License Processing	Hours
Workflow/ Process Discussion	4
Configuration	24
Training	4
Testing	8
Total	40

Assumptions:

- If Customer's license process is currently automated via TRAKiT's General License Renewal (GLR), these services will be used to convert to Advanced License Processing (ALP)
3. GeoTRAK Update Routine
Superior has included twelve (12) hours to assist the customer in updating their LicenseTRAK Update Routine for TRAKiT
 4. TRAKiT GIS
Superior has provided eight (8) hours to assist the customer in configuring and testing GIS on a new server

Go-Live planning starts at least 1 months prior to the scheduled Go-Live. Superior Customer will prepare a plan to delineate responsibilities, timelines for Go-Live tasks, and a communications plan specific to the Go-Live activities.

Responsibilities

Superior:

- Complete final data migration from production

- Create test account after go live
- Support Customer during the days after go live
- Assist in resolving issues as necessary

Customer:

- Train Customer End Users if required
- Complete final go live discovery call with Superior technician
- Complete data validation after final go live data migration

9. Project Closeout

The Superior Project Manager will conduct a project closeout call with the Customer and the Superior assigned Customer Success Manager. The project closeout will include a report summarizing the project and any remaining open issues. This should be no later than 30 days after Go-Live.

The report will include the following:

- Overall Summary of the project
- Summary of project budget
- Remaining tasks, training, or other deliverables (if applicable)
- Future implementation plans (if applicable)
- Superior recommendations for future application features (if applicable)
- Superior follow-up

Roles and Responsibilities

Superior:

- Superior will deliver a draft report to Customer
- Conduct closeout call with Customer Success Manager

Customer:

- Customer will review draft report from Superior and provide comment
- Sign final report
- Participate in closeout call with Superior

**AMENDMENT # 00007826 TO THE AGREEMENT FOR THE INSTALLATION AND USE OF
DEVELOPMENT SERVICES AND SOFTWARE SOLUTIONS**

Town of Flower Mound, TX
("Customer")

and

SUPERION, LLC
("Superion")

This Amendment (the "Amendment") amends the parties' Installation and use of Development Services and Software Solutions Agreement with an Execution Date of June 18, 2012 (the "Agreement") expressly as provided for in this Amendment.

The Execution Date of this Amendment is the latest date shown on the signature page of this Amendment.

Customer and Superion, intending to be legally bound, agree as follows:

1. Defined Terms. Except as otherwise set forth herein, each defined term in the Agreement has the meaning ascribed to that term in the Agreement when the term is used in this Amendment.

2. Amendment to and Modification of the Agreement.

The Agreement is amended and modified as follows:

(a) The following Application shall be deleted from the Agreement:

eMarkup Software

(b) The following Superion Applications and Support shall be added to the Agreement:

Bluebeam Server API for TRAKIT
Support fee of \$2,500 shall be due upon your annual support renewal

(c) The following Third Party Application and Support shall be added to the Agreement:

Bluebeam Standard License (Qty 20)
Support fee of \$2,620 shall be due upon your annual support renewal

(d) The following Professional Services shall be added as follows:

Professional Services

Installation & Configuration

Product Name	Amount
TRAKIT Community Development Installation	\$2,100.00
Bluebeam Server API for TRAKIT Services	\$3,500.00
Total	\$5,600.00

Development & Conversion

Product Name	Amount
T DB 2X, LT Conv, T GIS Reconfig, GTUR	\$16,000.00
Report Conv - SSRS	\$14,400.00
Total	\$30,400.00

Consulting

Product Name	Amount
TRAKIT Community Development Consulting	\$7,040.00
TRAKIT Public Administration-High Level Consulting Fee	\$9,000.00
Bluebeam Server API for TRAKIT Services	\$640.00
Total	\$16,680.00

Training

Product Name	Amount
TRAKIT Community Development Training	\$14,720.00
Total	\$14,720.00

Project Management

Product Name	Amount
TRAKIT Community Development Project Management	\$7,600.00
Total	\$7,600.00
Total Professional Services	\$75,000.00

Summary:

Professional Services (Not to Exceed) \$75,000.00

Superior Maintenance \$2,500.00

Third Party Maintenance \$2,620.00

Note: Travel and Living expenses are not included in the above fees and shall be billed monthly as incurred.

Professional Services Payment Terms:

Installation/Configuration Fees: Due upon completion.

Development, Conversion, Consulting and Project Management: Due upon Execution.

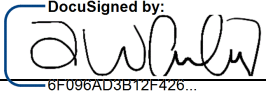
Training Fees: Due as incurred.

Special Terms Relating to the Bluebeam Standard License: 1.1 Bluebeam Software, Inc. owns the Bluebeam Third Party Products set forth in the Amendment herein ("Third Party Products"). To facilitate Customer's use of the Third Party Products, Bluebeam Software has agreed to allow Superior to provide the Third Party Products to Customer through its distributor Lifeboat Distribution. The Third Party Products shall be used in accordance with licensor's EULA terms and conditions and documentation for the Third Party Products. The EULA is located at www.bluebeam.com/us/license/eula.asp. 1.2 During the term of this Amendment, Superior shall use reasonable efforts to provide Customer the benefit of all indemnities and warranties granted to Superior by the licensor(s) of the Third Party Products, to the extent possible without additional cost to Superior, as and if permitted by Superior's agreement with the licensor of the Third Party Products, and to the extent such warranties and indemnities pertain to Customer's use of the Third Party Products hereunder. In the event of any defect in any Third Party Products supplied by Superior, Superior will use commercially reasonable efforts to replace or correct the Third Party Products without charge, unless it has been damaged or corrupted after supply by Superior (including, but not limited to, damage caused by incorrect use, incorrect voltage or attempts to modify Superior software or Third Party Product software). If such damage or corruption has occurred after supply by Superior, Superior reserves the right to refuse to replace or correct the Third Party Products or to impose charges for so doing. Provided that Superior complies with this provision, it shall face no further liability with respect to any defect in any Third Party Products. Unless as may be otherwise provided in the EULA, Superior shall provide Level 1 support of the Third Party Products. For purposes herein, Level 1 Support shall mean: Taking the first support call from Customer and qualifying the call priority, or if an existing case, obtaining case information; Gathering information about the case, defining and describing the problem, and determining if the Third Party Product(s) is the cause of the problem. Analyze problem symptoms, attempt to find root cause if appropriate and document result of such attempts. Determining if the problem is a known Third Party Product(s) problem by accessing third party online support resources; and if it is determined to be a Third Party Product problem, contacting the Third Party Product technical support. For new cases, opening a case and selecting a priority. For existing cases, providing the case number and information gathered to the Third Party Product support engineer. 1.3 Customer is hereby advised that the third party, and not Superior, assumes all responsibility for and liability in connection with

the Third Party Products set forth in the Amendment, and is solely responsible for delivering the Third Party Product(s) to Customer. Superion is not authorized to make any representations or warranties that are binding upon the third party or to engage in any other acts that are binding upon the third party, excepting specifically that Superion is authorized to represent the fees for the Third Party Products as the same is provided for in the Amendment and to accept payment of such amounts from Customer on behalf of the third party. 1.4 Disclaimer of Warranties. Except as may be provided in Section 1.2 above, Customer agrees and understands that SUPERION MAKES NO WARRANTIES WHATSOEVER, EXPRESSED OR IMPLIED, WITH REGARD TO THE THIRD PARTY PRODUCTS. ALL WARRANTIES (IF ANY) ARE PROVIDED TO CUSTOMER BY THE LICENSORS, MANUFACTURERS OR PROVIDERS OF SUCH THIRD PARTY PRODUCTS. SUPERION EXPLICITLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT FOR ITS OBLIGATION TO REMIT PAYMENT RECEIVED FROM CUSTOMER TO THE THIRD PARTY PURSUANT TO THIS AGREEMENT, SUPERION WILL HAVE NO LIABILITY WHATSOEVER IN CONNECTION WITH THE THIRD PARTY PRODUCTS.

3. Integration Provision. Except as expressly modified by this Amendment, the Agreement shall remain in full force and effect. As of the Execution Date, the Agreement, as further amended by this Amendment constitutes the entire understanding of the parties as regards the subject matter hereof and cannot be modified except by written agreement of the parties.

Superion, LLC

BY:  6F096AD3B12F426...

PRINT NAME: Tom Amburgey

PRINT TITLE: General Manager

DATE SIGNED: September 11, 2018

Town of Flower Mound, TX

BY: _____

PRINT NAME: _____

PRINT TITLE: _____

DATE SIGNED: _____



TOWN COUNCIL AGENDA ITEM NO. 3

CONSENT ITEM

DATE: October 15, 2018

FROM: Shelly Willson, Customer Relations Manager

ITEM: Consider approval of a one year Service Agreement with Citibot, Inc. to provide SMS chatbot customer service platform, software, and services in the amount of \$16,900 with option to renew annually and authorization for the Mayor to execute same on behalf of the Town.

BACKGROUND INFORMATION: Citibot provides an easy, quick way for citizens to interact with the Town. Citibot creates a simple form of two-way digital communication between residents and the Town to answer questions and resolve issues. Receiving assistance and reporting issues via text, or via existing chat apps, would allow residents more access to their local government without downloading any new apps or technology. Residents can receive help with any number of issues. Citibot records the communications and sets up work orders in a processing system for Customer Relations staff to access and track. Other features include: the ability to search the website quickly via Citibot, and receive a rapid response. If Citibot is unable to provide a response, the system allows the resident to send a direct message to staff through the work order processing system. Citibot can integrate with CityWorks, the existing work order software utilized by the Town, at an additional cost.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: Continue to communicate with citizens via our established communication methods.

FISCAL IMPACT: \$16,900 for the first year which includes implementation, training, and service.

Proposed Expenditure:	Account Number(s):
\$16,900	100-670-71000-5110

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

LEGAL REVIEW: Stacie White of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the agreement as to form and legality.

ATTACHMENTS:

1. Citibot, Inc. Service Agreement
2. Citibot, Inc. Proposal

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

CITIBOT, INC FLOWER MOUND, TX SUBSCRIPTION AGREEMENT

Effective Date: October 15, 2018

Subscriber: The Town of Flower Mound, TX

This Agreement, together with any other exhibits (including any schedules or attachments) attached hereto and incorporated herein by reference constitute the entire subscription agreement by and between Citibot and the above-named Subscriber and are hereinafter collectively referred to as the **"Subscription Agreement."**

1. **Definitions.** Capitalized terms used but not otherwise defined herein shall include the meanings ascribed thereto in the Terms of Service or Privacy Policy, as applicable.

"Service" collectively refers to the Citibot SMS chatbot customer service platform, software and/ or services made available to Subscriber. Both Parties will collectively decide which features of Citibot that will be included in Flower Mound Citibot.

"Content" collectively refers to any and all information, including any text, graphics, and and/ or other materials, submitted to or made available through the Service. Content submitted to the Service by Subscriber or any Authorized User is referred to as **"User Content,"** and all other Content of the Service is referred to as **"Citibot Content."**

"Subscription" refers to the right granted by Citibot to Subscriber to access and use the Service and the Content, subject to the terms and conditions of the Subscription Agreement.

"Authorized User" refers to each employee of Subscriber, citizens of Flower Mound, agents and/ or contractor of Subscriber authorized to access and use the Service and the Content.

2. **Term; Termination.**

a. **Term; Termination.** The initial term of the Subscription Agreement shall commence on the Effective Date (as set forth above) and continue in effect for one year with the option to renew at rates as specified in the post installation maintenance, hosting, support, and software as a service section as described below.

b. **Effect of Termination.** Upon the termination of the Subscription Agreement, the Subscription and all rights granted to Subscriber and the Authorized User(s) in the Subscription Agreement are immediately revoked, including, without limitation, all rights to use the Service, any portion thereof, and any Citibot Content obtained through the Service.

3. **Installation Fee; Subscription Fee; Payment.** Subscriber is responsible for payment of the Subscription Fee as described in in this Section. Payment shall be due to Citibot within thirty (30) days upon receipt of the Invoice.

Year 1

1. Upfront development and installation cost should consider the software cost as well as initial configuration and setup costs, initial license costs, training, implementation, and Trello Integration = \$4,900. Citibot will invoice Flower Mound for this fee on the date of execution of this Agreement.

•Breakdown: This Cost considers installation fees as well as all costs associated with training and implementation with the City staff.

2. **Post Installation maintenance, hosting, support, and software as a service costs = \$1000/mo. for year one of this agreement.**

- This cost includes 20,000 texts (SMS communications) per month, inbound or outbound. Any monthly overage of communications above 20,000 will be at a cost to Subscriber of \$0.02 per communication. It is not anticipated that a monthly overage would ever occur. Citibot will invoice this payment on the launch date and will invoice each succeeding month on the same day of the month as the launch date. For example, if the launch date is September 12, then Citibot will invoice for this fee on September 12, October 12, November 12, etc.
- Renewal option year two cost is \$1100/mo.
- Renewal option year three cost is \$1200/mo.

Once this contract is executed, Citibot can implement this product for Subscriber within 30 business days. If an integration is needed into another software system, Citibot will need to separately price that integration service.

4. **Representation and Warranty.** Each party represents and warrants to the other party that it has the full power to enter into the Subscription Agreement and to perform its obligations thereunder.

6. **Independent Contractor.** Citibot is an Independent Contractor to Subscriber. Thus, none of Citibot's employees shall be deemed employees of Subscriber.

7. **Venue/Jurisdiction.** This Agreement is governed by the laws of Texas and venue shall be in Denton County, Texas.

8. **Indemnity.** Each party will indemnify the other party for any claim arising out of this Agreement.

Town of Flower Mound, TX

Citibot, Inc.



Print Name: _____

Print Name: __W. Bratton Riley_____

Title: _____

Title: __CEO_____

Date: _____

Date: __October 15, 2018_____

Citibot utilizes text messaging, something almost everyone now is using. It's easy, conversational, and more efficiently notifies the city, allowing us to get the job done quicker"

North Charleston Mayor, Keith Summey

Flower Mound Proposal

October 2
2018

Citibot appreciates the opportunity to offer this proposal to Flower Mound as a primary component of its Customer Service Solution that's easy for citizens and efficient for Flower Mound staff.

Citibot

Flower Mound Proposal

Citibot

October 2, 2018

WHY CITIBOT?

- *We connect with citizens where they are already frequently communicating via text messaging and the social media messenger apps.*
- *Citibot is the easiest and quickest way for citizens to interact with their government.*
- *Since 50% of Americans did not download one app last year, but more Americans are texting (97%) than they are using their mobile phones to make phone calls (92%), let's encourage them to communicate to government via text!*
- *Citizens feel that instant gratification knowing that their government cares about them.*
- *Government does what it says it is going to do, like repair a pothole, and lets the citizen know when it is fixed – via text!*
- *Government executive team can track the communication and efficiency data analytics in real time.*
- *Our technology is open to connect in with other important software solutions.*

Citibot Plan for Implementation and How Citibot Works for Flower Mound

How Citibot Works: First, Flower Mound would select a phone number to promote to its citizens so that they can use Citibot. As an example, North Charleston selected 843.806.0204. Citizens could also connect with the Flower Mound Citibot through Facebook to interact with Citibot.

Our product offerings are below, and we use our Chicago demonstration as an example:

Flower Mound Proposal

Citibot

October 2, 2018

Citizen Texts "Hello" To Citibot and receives the Citibot Greeting Message



As can be seen in this greeting above, a citizen will be directed to search for information; report issues like potholes, broken stoplights broken garbage cans, or missed trash pickup; and send in a message as a catch-all so that citizens can message in whatever question that they have. If the Flower Mound wants to include more 311 types of issues to be reported, like abandoned vehicles and graffiti for example, Citibot can include them.

The records of these communications will be processed through a work order processing system and stored in a database for Flower Mound to access the data when needed.

Flower Mound Proposal

Citibot

October 2, 2018

A citizen types in search words to find relevant information about Flower Mound.

- **CitiSearch:** Enable your citizens to ask questions and get answers quickly. We get this done by quickly searching the Flower Mound website to find answers. Rather than having your citizens navigate your website on their mobile phone, taking minutes, let them ask questions directly, taking seconds, through text messaging! If it's on your website, we bring that content directly to your citizen, via text and the social media messenger apps.

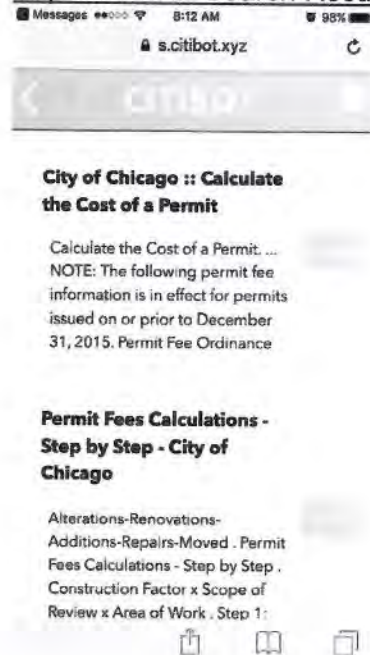


Flower Mound Proposal

Citibot

October 2, 2018

Top Screen of Search Results that Come Direct from the Flower Mound Website



Bottom Screen of Search Results w/Message Function at the Bottom of the Screen

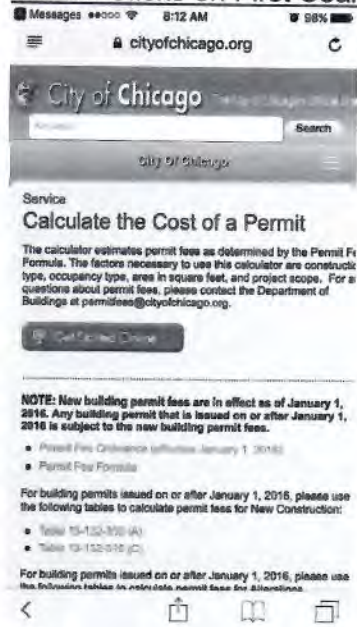


Flower Mound Proposal

Citibot

October 2, 2018

Citizen Clicks on First Search Result and Goes Straight to that Page on the Website in seconds!



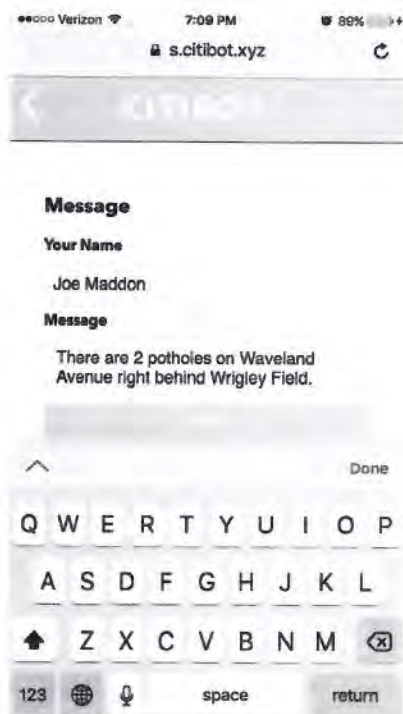
Flower Mound Proposal

Citibot

October 2, 2018

- CitiSearch and Messenger:** Your citizens can ask the questions, and if they cannot find the specific answer to their question -- because it is not answered through the content on your website -- let's have them send a message to your customer service staff so that their questions can be answered. Citibot accomplished this through a quick and easy connect into a message system that communicates directly with your designated staff into the work order processing system.

Citizen Clicks on the Message Button to Send in an Individualized Message

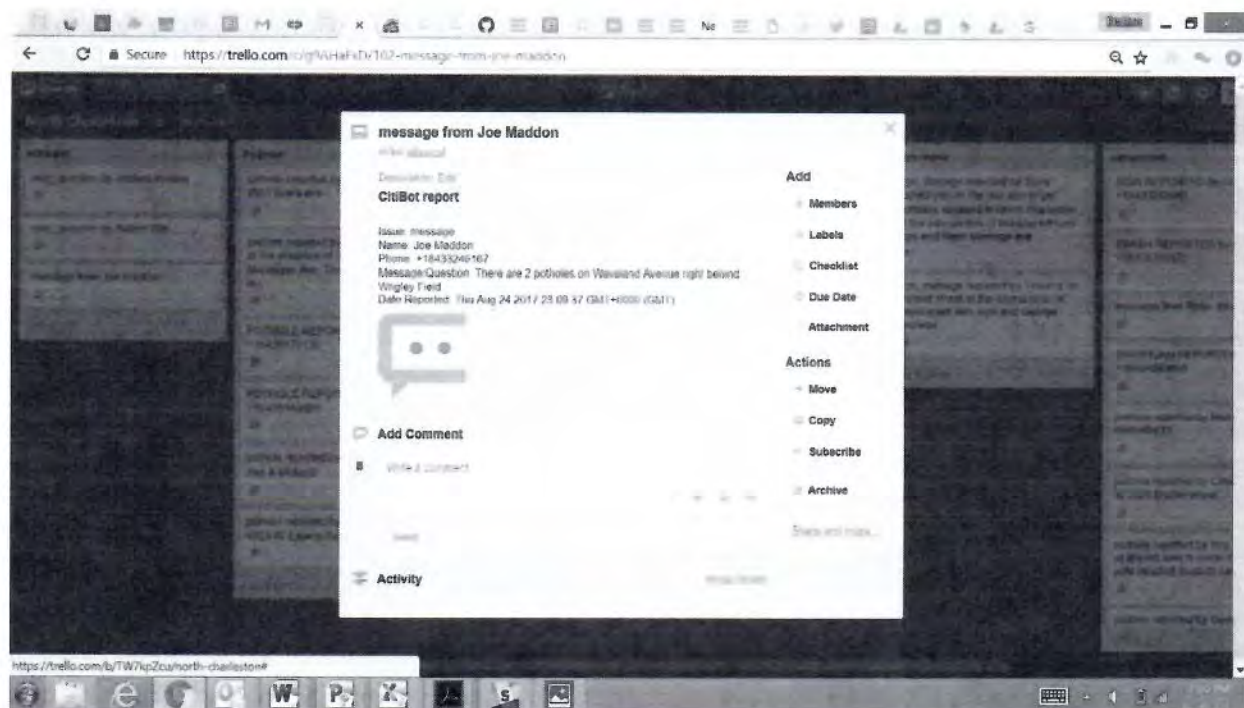


Flower Mound Proposal

Citibot

October 2, 2018

Message Comes in to Work Order Process System to be Responded to by Your Staff in the Way that the You Choose (text, phone call, email).



Citibot can integrate into the Flower Mound Work Order Management System through the Citibot API.

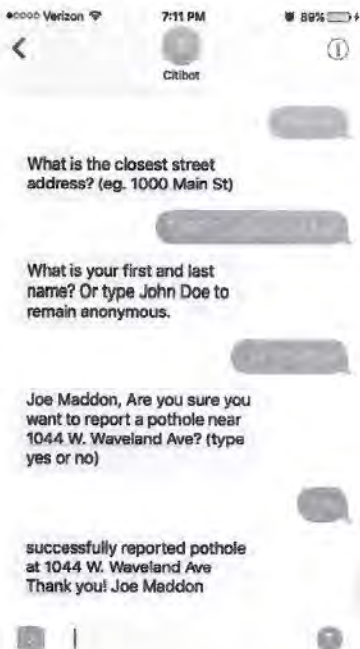
Flower Mound Proposal

Citibot

October 2, 2018

- CitiSearch/Messenger and 311 Report an Issue:** Citibot combines the CitiSearch/Messenger features with real time issue reporting so that your citizens can report potholes, missed trash pickups, street sign damage, ect. The City of Flower Mound fixes them and reports back to the citizen when complete.

Citizen Joe Maddon Reports a Pothole Through Citibot



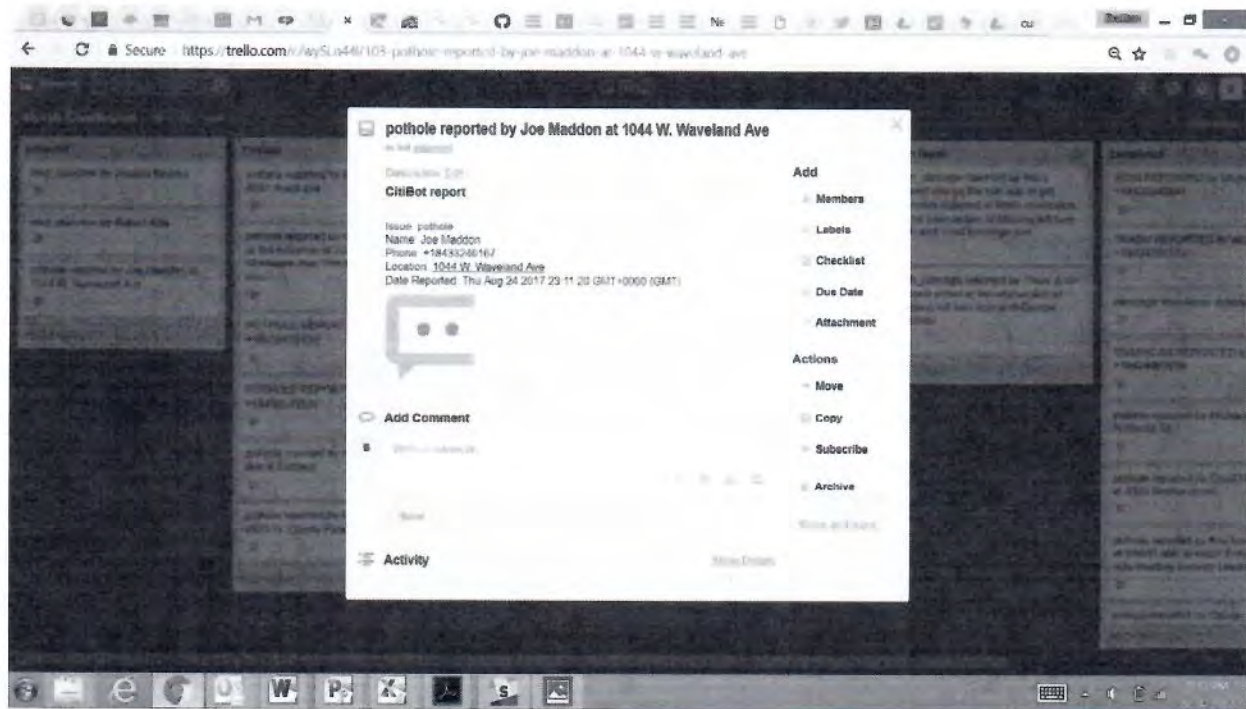
This sequence also illustrates how Citibot's Artificial Intelligence System runs the chat experience.

Flower Mound Proposal

Citibot

October 2, 2018

The Pothole Report Becomes a Work Order in the Work Order Processing System for Flower Mound Staff to Process and Fix.

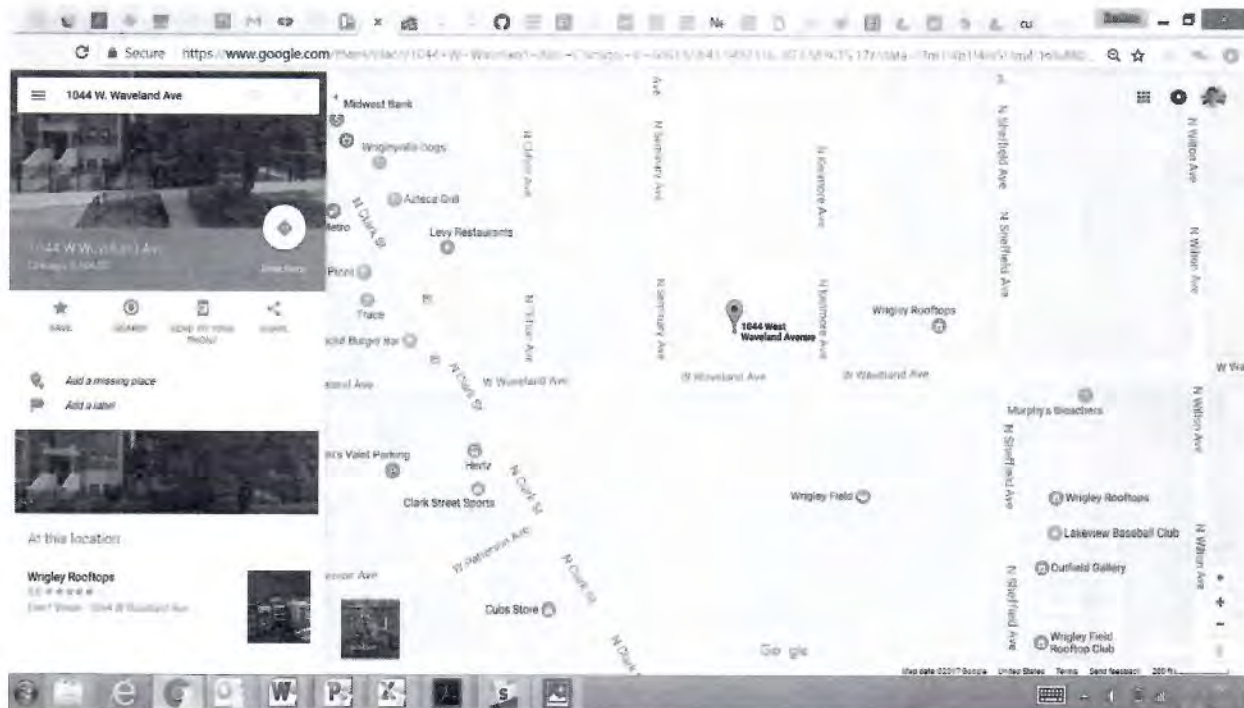


Flower Mound Proposal

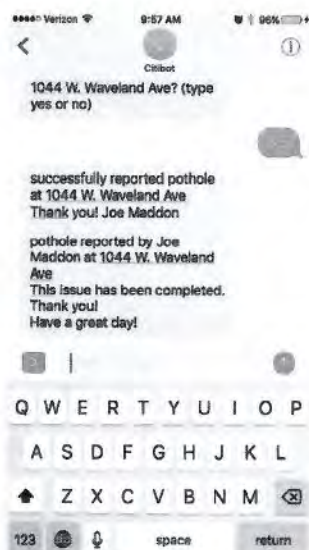
Citibot

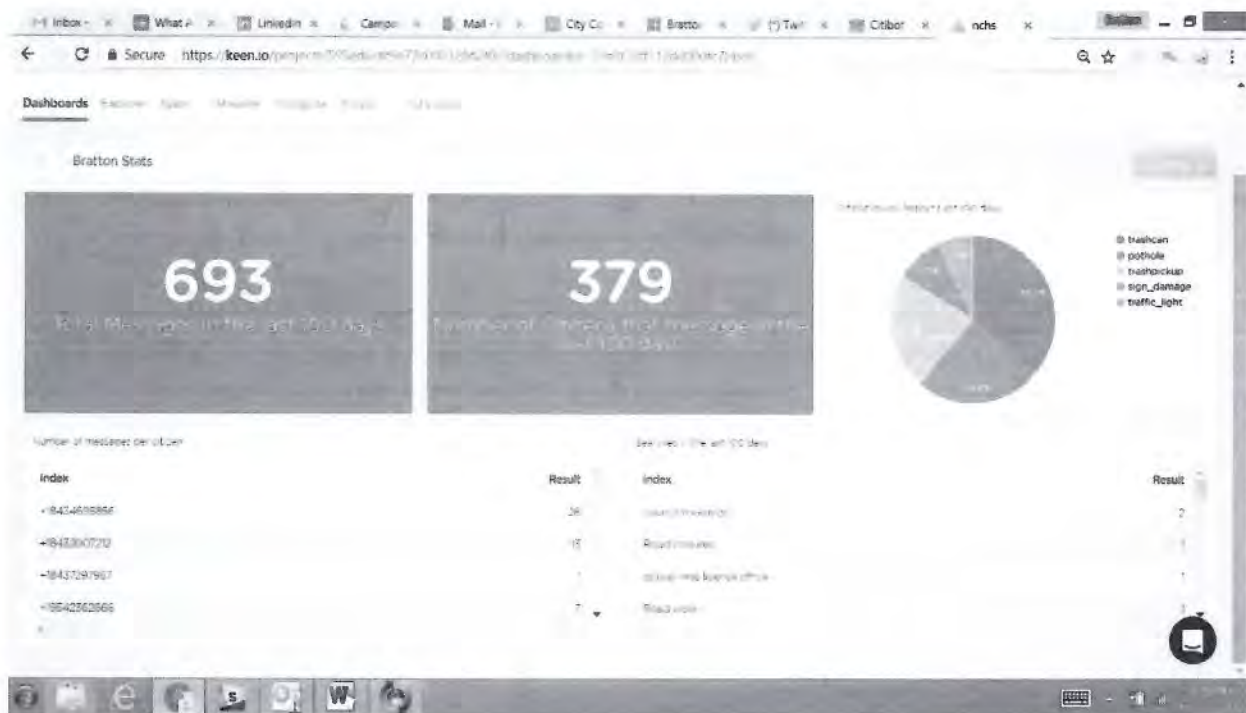
October 2, 2018

Flower Mound Customer Service Staff clicks on the “Location” in the previous screen, which locates the pothole on a Google Map so that Staff can begin to coordinate the repair – thinking about locational relationship between this pothole and others in Flower Mound that may need to be repaired.



When Flower Mound Fixes the Pothole, Joe Maddon Automatically Receives a “Thank You” Notification Confirming the Repair!





Flower Mound Proposal

Citibot

October 2, 2018

- **Integrations into other Flower Mound Software Systems:** Citibot can help with integrations into the Flower Mound software solutions like existing work order management systems or payment systems, for example, so that we can add to the citizen experience of engaging with the City through text and the messenger apps. For example, Citibot can integrate with Open Data Portals or Business License Payment Systems if they have an open API.
- **References:**
 1. [Here](#) is a feature on the Citibot solution.
 2. [Here](#) is a Citibot feature on Public Radio.
 3. [Here](#) is a feature on chatbots in general and the tech wave that is pushing them.
 4. [Here](#) is a feature on how AI Chatbots are replacing the app for governments.
 5. Please contact North Charleston Public Information Officer, Ryan Johnson, for the City's perspective on how Citibot is working. rjohnson@northcharleston.org and [843.740.2520](tel:843.740.2520).
 6. Other references are available upon request.

Flower Mound Proposal

Citibot

October 2, 2018

Citibot Software Cost

YEAR 1

1. Upfront development and installation cost should consider the software cost as well as initial configuration and setup costs, initial license costs, training, implementation, and Trello integration = \$4,900.
 - Breakdown: This Cost considers installation fees as well as all costs associated with training and implementation with the City Staff.
1. *Post Installation maintenance, hosting, support, and software as a service costs = \$1000/mo.*
 - This cost includes 10,000 texts (SMS communications) per month, inbound or outbound.

Once a contract is executed, Citibot can implement this product for Flower Mound within 30 days.

This offer is good for 60 days.

If an integration is needed, Citibot will need to separately price that integration service.

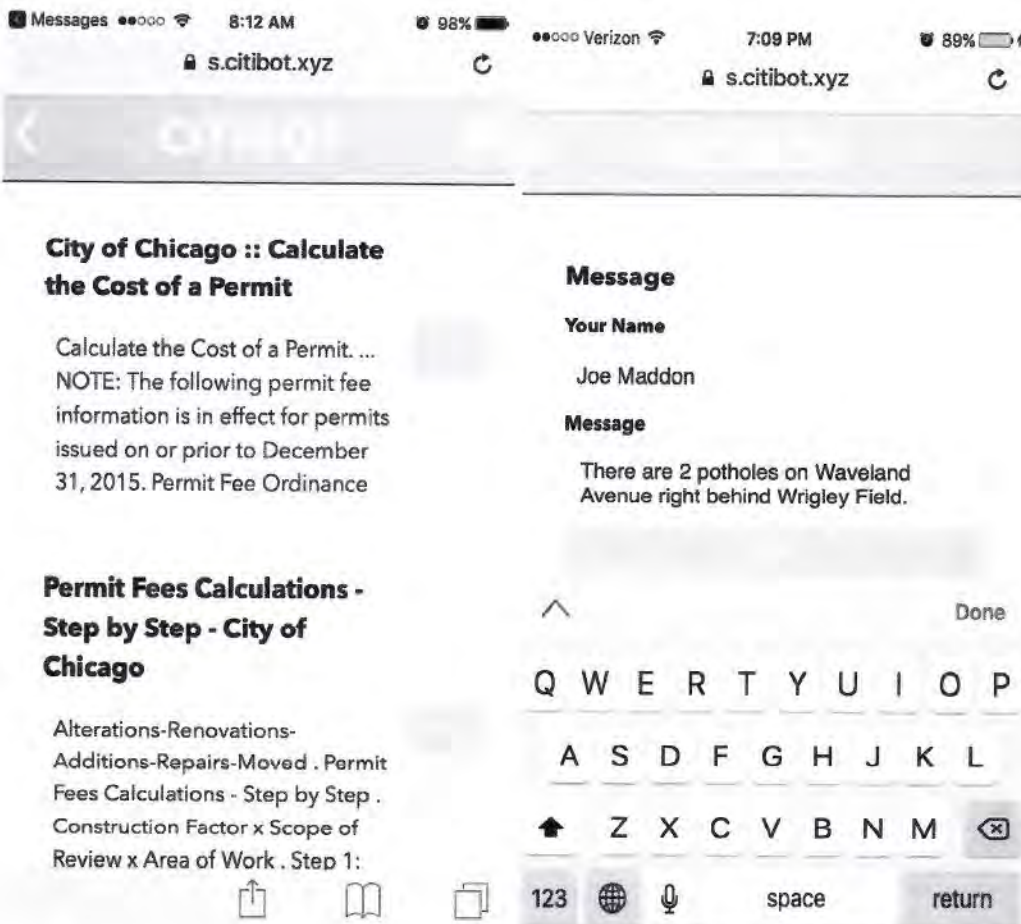
Flower Mound Proposal

Citibot

October 2, 2018

Revenue Opportunities that Citibot Presents to the City of Flower Mound

Citibot can help Flower Mound interact and engage with a 3rd party Google Ad Vendor where the City can directly earn ad revenue from ads that can be posted on the search and message screens. And Citibot can design these screens to accommodate the ads in the way what the City of Flower Mound chooses. For example, on the two screens below, Citibot can design the screen to accommodate an advertisement that shows prominently on the screen if it so chooses. Is so, the City can earn revenue based on the frequency that citizens may click on the ad.





TOWN COUNCIL AGENDA ITEM NO. 4

CONSENT ITEM

DATE: October 15, 2018

FROM: Sabrina Zadow, Purchasing Manager

ITEM: Consider approval of the purchase of one (1) New 2017 Ford F-550 Lift-A-Loft Aerial Basket w/service body per Vendor Specifications/Quote from Sam Pack's Five Star Ford for the Public Works Department in the amount of \$92,843.00.

BACKGROUND INFORMATION: The Public Works Department (Transportation Services Division) is requesting the purchase of one (1) New 2017 Ford F-550 Lift-A-Loft Aerial Basket w/service body from Sam Pack's Five Star Ford in the amount of \$92,843.00 to include all options listed on quote through State of Texas SmartBuy Contract 072-A1. This purchase is part of the approved Fiscal Year 2018-2019 Budget for a new addition to the Town's Fleet Inventory.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: \$92,843.00

Proposed Expenditure:	Account Number(s):
\$92,843.00	100-690-95100-6130

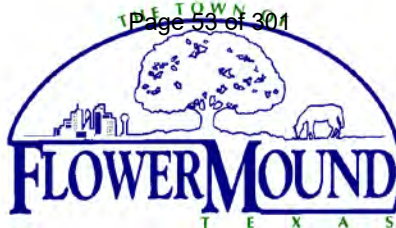
Finance Review by: Debra Wallace, Deputy Town Manager /CFO *DW*

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Fleet Manager's Bid Award Recommendation for Vehicle
2. Sam Pack's Five Star Ford Vehicle Quote with Specifications

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



Bid Award Recommendation

Co-op Contract:
Texas Smart Buy #072-A1

Date: 10-3-2018

Description: New 2017 Ford F-550 Lift-A-Loft Aerial Basket w/service body

Replaces: NEW

Bidder: Sam Pack's 5-Star Ford, Carrollton, Tx.

Item #1: bid: New 2017 Ford F-550 Lift-A-Loft Aerial Basket w/Service Body

*Per Attached Vendor specifications/Quote
 (to include all additional options listed on Quote)

*****THIS UNIT IS IN STOCK AT SAM PACK'S FIVE STAR
 FORD IN CARROLLTON, TX.**

Unit #1 TOTAL \$ 92,843.00

It is Fleet Services recommendation to award the bid to **Sam Pack 5-Star Ford** as the lowest responsible bidder in the amount of **\$ 92,843.00**.

H. Deats Stewart
 Fleet Services Manager

10-03-2018
 Date,



TOWN COUNCIL AGENDA ITEM NO. 5

CONSENT ITEM

DATE: October 15, 2018

FROM: Eric Greaser, Fire Chief *EG*

ITEM: Consider approval of an Annual Maintenance Contract with Mass Notification Services, Inc. for the Town's Outdoor Warning Siren System in the amount of \$15,660.00; and authorization for the Mayor to execute same on behalf of the Town.

BACKGROUND INFORMATION: Approval of the Annual Maintenance Contract will provide preventative annual maintenance of the Town's twenty-three outdoor warning sirens within the network including inspection of the equipment, cleaning of the sirens and associated cabinets and electronics including costs of parts and labor to repair the sirens.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: \$15,660.00

Proposed Expenditure:	Account Number(s):
\$15,660.00	100-660-64000-4100

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

LEGAL REVIEW: Stacie White of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the contract as to form and legality.

ATTACHMENTS:

1. Mass Notification Service, Inc. Contract

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

Contract No: FLOWERMOUND2018
 Release No: N/A
 Date: 10/01/2018



CONTRACT

Work Provided by:
 Mass Notification Services, Inc.
 1999 Bryan Street – STE 900
 Dallas, TX 75201

Work Provided for:
 Town of Flower Mound
 Attn: Brandon Barth
 3911 S. Broadway Ave.
 Flower Mound, TX 75028

Work Description: Annual Maintenance of Outdoor Mass Notification Siren System

Contract Start Date: October 01, 2018
Contract End Date: September 30, 2019

Total Contract: \$15,660.00
Terms: 30 Days from Executed Contract

THIS ORDER IS ACCEPTED IN ACCORDANCE WITH THE TERMS AND CONDITIONS CONTAINED HEREIN. MAIL A COPY OF THIS ORDER WITH YOUR ORIGINAL AUTHORIZED SIGNATURE TO THE CONTRACT ADMIN IDENTIFIED BELOW.

Town of Flower Mound

Mayor: _____

Printed Name: Steve Dixon

Date: _____ Phone: 972-874-6270

Mass Notification Services, Inc.

Auth. Signature _____

Printed Name _____

Date 10/3/18 Phone 856-484-4451

KEY CONTACTS

Name	Title	Agency/Company	Role
Brandon Barth	EM Officer	Town of Flower Mound	Customer POC
David Medford	Siren Technician	MNS Inc	Technician
Melanie Roe	Solution Care Manager	American Signal Corporation	Service Coordinator

Contract No: FLOWERMOUND2018
 Release No: N/A
 Date: 10/01/2018



BASE CONTRACT

This Agreement made this ____ day of October, 2018 by and between Mass Notification Services, Inc., hereinafter called the Contractor and the Town of Flower Mound, TX hereinafter called the Owner.

Witnesseth, that the Contractor and Owner for the considerations named agree as follows:

SCOPE OF WORK

PREVENTATIVE MAINTENANCE

The Contractor shall perform Annual Preventative Maintenance of the Mass Notification Siren System and applicable Control Points/Activation Stations.

Preventative maintenance will be performed once each contract year on each of the 23 ASC T-128 siren sites in the Mass Notification Siren System. The Contractor will schedule preventative maintenance cycle and submit this schedule to the Owner for review and comment.

- Preventive maintenance will be performed in accordance with Manufacturer Guidelines where available— if those guidelines are not available, a mutually agreed upon procedure will be developed in accordance with industry standards
- Preventive Maintenance will follow the attached Preventive Maintenance Check List that will be provided to the customer upon completion of the Preventive Maintenance Cycle along with recommendations and actions taken
- Preventive Maintenance includes tuning and adjusting of siren/control point equipment and does not include replacement or repair of components.
 - In the event minor parts/materials/batteries are needed to restore a siren site to Manufacturer Specifications and/or working order, those minor parts will be covered by this agreement at the above stated price.
 - Parts/Materials/Labor not covered in this agreement's pricing will include:
 - Motors of any kind
 - Utility Poles of any kind
 - Siren Head or Control/Battery Box Replacement
 - Any Repairs due to vandalism, misuse or Force Majeure Event
- Force Majeure Event means declared or undeclared war, sabotage, revolutions, riot or acts of terrorism or civil disobedience; acts or omissions of governmental agencies; accidents, fires or explosions; floods, earthquakes or other acts of God; strikes or labor disputes; shortages of materials; or any other event not within the control of Contractor or Owner and not caused by the negligence or intentional wrongful conduct of contractor or Owner.
- Light Environmental Maintenance will be performed on the Siren Site location – but is limited to any vegetation or growth that is in contact with or will be in contact with the Siren Pole or Siren Control/Battery Boxes. This agreement does not include removal of any tree or tree limb (change order and Sub-Contractor will be needed)
- Although this agreement does not cover any monitoring of the system for functionality or operability, it is

Contract No: FLOWERMOUND2018

Release No: N/A

Date: 10/01/2018



Contractor's suggestion that monthly or periodical meetings are held (either via conference call or in person) to establish an open forum to discuss continuous improvement of the system and any Owner concerns. These meetings are not necessary to fulfil the SOW and contractual obligations, and are offered as a mutually beneficial value-added service of this agreement

- Contractor will make best efforts to respond to Siren System and Control Point issues in a timely manner, but this agreement does not set forth a structured onsite response time – further agreements would need to be listed and agreed to by Contractor and Owner and will be added to this agreement as "Attachment A"

PROVISIONS

All work shall be completed in a workman-like manner in compliance with all building codes, software licensing and applicable laws.

To the extent required by law all work shall be performed by individuals duly licensed and authorized by law to perform said work. Contractor may at its discretion engage subcontractors to perform work hereunder, provided Contractor shall fully pay said subcontractor and in all instances remain responsible for the proper completion of this contract. Contractor shall furnish Owner appropriate releases or waivers of lien for all work performed or materials provided at the time the next periodic payment shall be due.

All change orders shall be in writing and signed by Owner and Contractor and shall be incorporated in and become part of the contract. Contractor warrants it is adequately insured for injury to its employees and others incurring loss or injury as a result of acts of the Contractor.

Contractor shall provide Owner a separate individual report for each event of maintenance or repair on a non-functioning siren was out of service, the maintenance or repair work performed to return the siren to working condition, and any future repairs or maintenance that may be required on that siren. Such report shall be provided to the Town within ten (10) days after the maintenance or repair work has been performed.

Should Owner authorize additional work/services which are beyond the scope of this contract, Contractor will perform the work at the hourly rate stated in attached Rate Sheet.

In the event that the Owner shall fail to pay periodic installment payments due hereunder, Contractor may cease work without breach pending payment resolution of any dispute.

This Contract is governed by the laws of Texas and venue shall be in Denton County, Texas.

Contractor shall not be liable for any delay due to circumstances due to Force Majeure.

Contract No: FLOWERMOUND2018

Release No: N/A

Date: 10/01/2018


**Mass Notification
Service Inc**

**Mass Notification
Service Inc**

Published Service Rate Sheet

EFFECTIVE January 2018

Labor	
Category	Rates
In House/Shop Labor	\$120/Hr
On-Site Labor	\$120/Hr
Travel Labor	\$65/Hr
Vehicle Hours (Travel + Onsite)	\$125/Hr
Holiday/Weekend On-Site Labor	\$175/Hr
Holiday/Weekend Travel Labor	\$100/Hr
Engineering Labor	\$175/Hr

Expenses	
Item	Pricing
Airfare	Cost plus 15% Round-trip
Hotel	Cost plus 15% Per Night
Per Diem-Food and Expense	\$50 Per Day
Equipment Rental (Vehicles, Buckets, Cranes, & Lifts, etc.)	Cost Plus 15%

Parts/Materials	
Availability	Pricing
All Stock Items	List Price - 15%
Non-Stock Items	Cost Plus 25%

Contract No: FLOWERMOUND2018
Release No: N/A
Date: 10/01/2018



Attachment A

Response Time

Contractor represents and warrants that it shall maintain an average of ninety percent (90%) operational status of the entire Owner outdoor warning siren system at all times. This requires that no more than three (3) sirens are down for repair at any given time.

The Owner shall provide written notice to Contractor of any siren which is not functioning properly. Contractor shall commence and complete any required maintenance or repair work to a non-functioning siren within ten (10) calendar days of its receipt of such written notice. In the event Contractor is not able to complete the maintenance or repairs needed to return the siren to functional status within that time frame, Contractor shall so notify the Owner in writing before the expiration of the ten (10) day period, including the reasons for the sirens inoperability, the maintenance or repair work needed, the reasons such work cannot be completed within the designated response time, and the estimated time to complete the work to restore the operability of the siren.

In the event that Contractor fails to maintain the average operational status set forth above, fails to timely repair an inoperable siren, or fails to provide the Owner with notice as to why it cannot be repaired within that time frame, an event of default will occur. In an event of default, Contractor will rebate to the Owner the pro-rated portion of Contractor's annual fee for the number days that such default continues to exist.



TOWN COUNCIL AGENDA ITEM NO. 6

CONSENT ITEM

DATE: October 15, 2018

FROM: Eric Greaser, Fire Chief *EG*

ITEM: **Consider approval of the purchase of emergency medical supplies and pharmaceuticals from Bound Tree Medical LLC, through the City of Cedar Hill Contract.**

BACKGROUND INFORMATION: To provide effective life-saving services, the Fire and Emergency Services Department needs an adequate, reliable source of emergency medical supplies. Bound Tree Medical, LLC provides medical supplies and pharmaceuticals to the Town through the City of Cedar Hill Contract No. ITB-19-0-2013/GCP. Medical supplies to stock the Department's medics and paramedic engines include basic and advanced life support items, oxygen, pediatric equipment, cardiac monitor parts, vascular access supplies, pharmaceuticals and other EMS-related medical supplies. These supplies are necessary to ensure a comprehensive response to medical emergencies.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: \$80,000.00

Proposed Expenditure:	Account Number(s):
\$80,000.00	100-660-61000-2090

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

LEGAL REVIEW: N/A

ATTACHMENTS:

1. City of Cedar Hill Contract

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

Donna Hill

From: Marquita Shamlin
Sent: Tuesday, January 30, 2018 9:31 AM
To: John Glover; Donna Hill
Cc: Sabrina Zadow; Marquita Shamlin; Kristi Salinas
Subject: City of Cedar Hill Bid No. EMS-Fire (TOFM Ref. No. 2013-37-I) - Extended for 1 year - EMS/Medical Supplies with Boundtree Medical
Attachments: City of Cedar Hill Bid No. EMS-Fire Signed Agreement - Extension thru 02-28-19.pdf

Good Morning, ☺

The following contract mentioned above that we utilize with the City Cedar Hill has been extended for another year. The contract extension documents are attached for your reference.

Our Contact Database has been updated & the Contract Summary is as follows:

Annual Contract No: 2013-37-I

Description: EMS/Medical Supplies (City of Cedar Hill Bid No. EMS-Fire)

Suppliers: Boundtree Medical

Contract Extension Date: 02/14/2018 thru 02/13/2019

Important Note: The extension also includes two (2) one-year renewal options.

Please let me know if you have any questions or need any additional information.

Thank you & have a great day!

Marquita

Marquita Shamlin

Town of Flower Mound - Purchasing Buyer

P: (972) 874-6006

F: (972) 874-6478

♥ "The only way to do great work is to love what you do." ♥



CITY OF CEDAR HILL
EMS / MEDICAL SUPPLIES

BID: ITB-19-0-2013/GCP

DUE - FEBRUARY 8, 2013 2:00PM



Making Precious Minutes Count...™

RUSH Order Policy

BOUND TREE MEDICAL SHIPS ORDERS WITHIN 48 HOURS OF RECEIPT. ORDERS REQUIRING EXPEDITED SHIPMENT WILL BE SHIPPED AS SOON AS POSSIBLE FOLLOWING THE REQUEST AT THE EXPENSE OF THE CUSTOMER UNLESS BOUND TREE MEDICAL HAS COMMITTED AN ERROR WHICH REQUIRES EXPEDITED SHIPMENT.

*Making Precious Minutes Count...™*

WARRANTY STATEMENT

THE MANUFACTURER'S REPRESENTATIONS AND WARRANTIES ACCOMPANYING THE PRODUCT ARE THE SOLE AND EXCLUSIVE REPRESENTATIONS AND WARRANTIES YOU WILL RECEIVE. BOUND TREE MEDICAL MAKES NO REPRESENTATIONS, WARRANTIES OR GUARANTEES OF ANY KIND WHATSOEVER; INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

INVITATION TO BID & BID SPECIFICATIONS

1. It is the intention of these specifications that the successful vendor shall furnish the City of Cedar Hill, Texas, with medical supplies covered by this Bid Specification which the City may require during the period of time specified. The products included in this bid represent many of the products ordered most frequently by the City and are listed for bid evaluation purposes only. Actual usage and quantities will vary and ordering will be based on actual requirements. The City of Cedar Hill (lead City) has an interlocal agreement with other cities including Duncanville, De Soto and Lancaster for the purchase of medical supplies. Additionally, approximately ten additional entities have expressed interest in participating in the said agreement. It is estimated that cities will expend approximately \$600,000 (annually) on medical supplies and approximately \$200,000 (annually) on pharmaceutical supplies. The City reserves the right to order such supplies that are necessary as may be required during the contract term.

1A) All participating cities will provide a list of authorized persons and authorized delivery destinations.

The City of Cedar Hill is desirous of the following. Please specify if your firm can provide the following:

	Yes	No
(1) Ability to order from a template over the Internet?	<u>x</u>	___
(2) Local sales representation within 100 miles?	<u>x</u>	___
(3) Ability to requisition to a central purchaser via internet?	<u>x</u>	___
(4) Ability to track product usage and cost for each requisitioning entity?	<u>x</u>	___
(5) Ability to deliver within 48 hours with no additional charges?	<u>x</u>	___
(6) Ability to ship to multiple delivery destinations?	<u>x</u>	___
(7) Ability to track up to 24 months of purchase history (monthly)?	<u>x</u>	___
(8) Can additional cities purchase "off" this contract?	<u>x</u>	___
(9) Ability to produce quarterly consumption reports?	<u>x</u>	___
(10) Please include your RUSH Order policy in your bid.	<u>See Attach</u>	

INVITATION TO BID & BID SPECIFICATIONS

2. The contract with the successful bidder will be awarded on the basis of a firm fixed price. The items included on the medical supplies requirement sheet represent many of the products ordered most frequently by the City and are listed for bid evaluation purposes. The City also desires to purchase from the successful bidder other medical supplies not listed on the requirement sheet. Bid award may be made in whole or part as deemed most advantageous to the City of Cedar Hill.

3. The contract awarded to the successful bidder shall be for a period of one (1) year beginning on or about March 1, 2013 and ending February 28, 2014, to include 3 additional one-year renewal options. The City of Cedar Hill reserves the right to renew this contract for the three (3) additional one-year periods under the same terms, conditions and prices (excluding the 2 percent allowance), should the City so desire and the current vendor agree.

4. Prices quoted shall remain firm for the period covered by this contract for 1 year. At the end of the one year obligation, if the City and successful vendor wish to renew, the vendor shall submit a letter, addressed to Greg Pervis, 285 Uptown Boulevard, Cedar Hill Texas, 75104, to address increases in excess of 2% and include the product/Excel number, please refer to Subsection A below.

A) 75 days, in advance, of contract termination, a bona-fide manufacturer's documents directed to the City of Cedar Hill Purchasing Agent, of price listing (itemized) reflecting the anticipated changes (both increases and decreases) in prices. Increase for the extension shall be limited to the actual cost increase to the current vendor.

5. Product acceptability will be at the sole discretion of the City of Cedar Hill. Any product delivered which does not meet the City's specifications, or otherwise found to be defective, will be returned at the vendor's expense for replacement or credit. All products shall be of condition and quality "TO MEET ACCEPTABLE STANDARDS OF CARE."

6. Any reference to requirements in the specifications that are brand or process specific is purely for the establishment of intended quality expectations and is not to be considered a disqualifying standard.

7. The successful bidder shall make delivery of ordered supplies within 48 hours of the time the order is placed. Delivery must be made during normal working hours, Monday through Friday, 8:00 a.m. to 5:00 p.m., F.O.B. Destination; City of Cedar Hill has specified delivery locations. All unit and extensions shall include freight and other delivery charges. No med shall be shipped with an expiration date that is less than one year from the month the med was shipped. There are no minimum purchase amounts for an order and no service charges/delivery will be applied. Failure to deliver as required will result in the purchase of said order from the next highest bidder. Delivery tickets must accompany each delivery. Invoices must be legibly prepared showing the full description and price of item(s) delivered

INVITATION TO BID & BID SPECIFICATIONS

CONDITIONS OF BIDDING

(Full compliance with the following conditions is necessary for consideration of this bid)

1. Signature: This bid must be signed by a company representative authorized to bind the offer contractually.
2. Unit Prices and Extensions: If there is a difference between unit price and their extensions, the unit price will govern.
3. Freight And Other Delivery Charges: All bids will be F.O.B. delivery address, freight prepaid. Charges will not be added after the bid is opened. The City of Cedar Hill 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.
4. Acceptance: The materials and/or services delivered under this bid/quote shall remain the property of the seller until a physical inspection and actual usage of these materials and/or services is accepted by the City and is to be in compliance with the terms herein, fully in accord with the specifications and of the highest quality. In the event the materials and/or services supplied to the City are found to be defective or do not conform to specifications, the City reserves the right to cancel the order upon written notice to the seller and return such product to the seller at the seller's expense.
5. Discount: Show rate, total amount, and latest day any discount will be allowed after receipt of article and correct invoice (per conditions of contract).
6. Payment: Net 30 days from acceptance of goods/services, receipt of original vendor invoice, and/or all other required documents required in the detailed specification of this bid/quote.
7. Firm Price: All prices quoted shall remain firm for the contract term.
8. Federal or State Taxes: The City is exempt from taxes by Federal Excise Registration # A-312726 and State Sales Permit # 75-6000-480.

INVITATION TO BID & BID SPECIFICATIONS

9. **Guarantees and Warranties:** Must be attached to the bid and may be considered in awarding the bid. Seller shall guarantee and warrant that the equipment or product offered will meet or exceed specifications identified in the bid invitation and are suitable for and will perform in accordance with their intended purpose. The seller shall, upon request, replace any equipment or product proved to be defective and make any and all adjustments necessary without any expense to the City. If at any time, the equipment or product cannot satisfactorily meet the requirements of the specifications, the Seller shall upon written request from the City, promptly remove such equipment or product without further expense to the City. At the City's request, the Vendor will provide evidence sufficient to demonstrate such equipment or product meets the foregoing.
10. **Delivery or Contract Completion Time:** Must be shown, as the date may, where time is of the essence, determines the contract award. Failure to state delivery time may cause bid to be rejected. Successful bidder shall notify the Purchasing Department immediately if delivery schedule cannot be met. If delay is foreseen, successful bidder shall give written notice to the Purchasing Agent. The City of Cedar Hill has the right to extend delivery time if reason appears valid. In the event delivery is not made within the stated time period (without acceptable reasons for delay and written consent from the City), the City reserves the right to place the order with the next available vendor and the successful bidder shall be liable for any increase in price as liquidated damages, it being agreed that said sum is a fair and reasonable estimate of actual damages the City will incur. Bidder will not be held liable for failure to make delivery because of strikes, conscriptions of property, governmental regulations, acts of God, or any other causes beyond its control; provided an extension of time is obtained from the Purchasing Department.
11. **Bid Closing & Bid Preparation:** Sealed bids received after the bid opening date and time will not be considered. It will be the SOLE RESPONSIBILITY of bidders to ensure bids are in the possession of the City of Cedar Hill Purchasing Department by the appointed date and time. The City will not be responsible for bids which are mismarked, delivered to the wrong place, or delayed in delivery. Electronic and Facsimile transmitted bids will not be accepted in the bid process. Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, his address, the name of the bid title, and bid number if any. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form and as above.
12. **Item Bid:** Each bidder shall describe (per specification requirements) each item bid as to Manufacture, Brand Name, Model, etc. Items shall be NEW unless stated otherwise in the City's specifications. Any reference to model and/or make/manufacture used in bid specifications is descriptive, not restrictive. It is used to indicate the type and quality desired. Bids on like quality will be considered.
13. **Samples:** Samples of items, when required, must be furnished free, and, if not called for within 30 days from date of bid opening, will be disposed of by the City.

INVITATION TO BID & BID SPECIFICATIONS

14. Alternates: Must clearly state "ALTERNATE" and shown on the bid form with complete information attached. Alternate bids may or may not be considered in the bid process in the sole discretion of the City of Cedar Hill.

15. Exceptions/Substitutions: All bids meeting the intent of this invitation to bid will be considered for award. Bidders taking exception to the specifications, or offering substitutions, shall state exceptions in the section provided or by attachment as part of the bid. The absence of such a list shall indicate that the bidder has not taken exceptions and City shall hold the bidder responsible to perform in strict accordance with the specifications of the invitation.

16. Ambiguity in Bids: Any ambiguity in any bid as the result of omission, error, lack of clarity, or non-compliance by the bidder with specification, instructions, and all conditions of bidding shall be construed in the light most favorable to the City.

17. Changes or Additions: No changes or additions will be allowed after bid opening. Changes or additions submitted prior to bid opening must be in accordance with paragraph 11 above.

18. Funding: Funds for payment have been provided through the requesting entity. The State of Texas statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved.

19. Trade Secrets, Confidential Information and the Texas Public Information Act: If you consider any portion of your bid to be privileged or confidential by statute or judicial decision, including trade secrets and commercial or financial information, clearly identify those portions. The City of Cedar Hill will honor your notations of trade secrets and confidential information and decline to release such information initially, but please note that the final determination of whether a particular portion of your bid is in fact a trade secret or commercial or financial information that may be withheld from public inspection will be made by the Texas Attorney General or a court of competent jurisdiction. In the event a public information request is received for a portion of your bid that you have marked as privileged or confidential information, you will be notified of such request and you will be required to justify your legal position in writing to the Texas Attorney General pursuant to Section 552.305 of the Government Code. In the event that it is determined by opinion or order of the Texas Attorney General or a court of competent jurisdiction that such information is in fact not privileged or confidential under Section 552.110 of the Government Code and Section 252.049 of the Local Government Code, then such information will be made available to the requester. Marking your entire bid CONFIDENTIAL/PROPRIETARY will not necessarily make it, or any part thereof, exempt from the public disclosure requirement of the Texas Public Information Act.

INVITATION TO BID & BID SPECIFICATIONS

20. HUBS: The City of Cedar Hill hereby notifies all bidders that in regard to any contract entered into pursuant to this Invitation to Bid; Historically Underutilized Businesses (HUB's) will be afforded equal opportunities to submit bids and will not be discriminated against on the grounds of race, color, sex, disability, or national origin in consideration of an award. HUB(s) are defined as certified businesses that are at least 51% owned, operated, and controlled by qualifying groups which include: Asian Pacific Americans, Black- Americans, Hispanic Americans, Native Americans, and women.

21. Any contract made, or purchase order issued, as a result of this Invitation to Bid, shall be governed under the laws of the State of Texas with performance and venue to be in Dallas County, Texas. In connection with the performance of work, the Bidder agrees to comply with the Fair Labor Standard Act, Equal Opportunity Employment Act, and all other applicable Federal, State, and Local laws, regulations, and executive orders to the extent that the same may be applicable.

22. Minimum Standards for Responsible Prospective Bidders: A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder must meet the following requirements:

1. Have adequate financial resources required, or the ability to obtain such resources as required;
2. Be able to comply with the required or proposed delivery schedule;
3. Have a satisfactory record of performance;
4. Have a satisfactory record of integrity and ethics;
5. Be otherwise qualified and eligible to receive an award.

23. Bidders may request withdrawal of a sealed proposal prior to the bid opening time provided the request for withdrawal is submitted to the City Purchasing Agent in writing.

24. Changes in specification or interpretations: If it becomes necessary for the City to revise any part of this bid, a written addendum will be provided to all bidders. The City is not bound by and all bidders shall not rely upon any oral representations, clarifications, or changes made in the provided written specifications by City employees, unless such clarification or change is provided to bidders in written addendum form from the City Purchasing Agent.

25. Collusion: Any evidence of agreement or collusion among bidders and prospective bidders acting to restrain freedom of competition by agreement to bid a fixed price, or otherwise, will render the bids of such bidders void.

26. All pages of this document packet, taken together comprise the Bid. Omission of or failure to complete or return any portion of the required documents, at the time of bid opening, may be cause to reject the entire bid.

INVITATION TO BID & BID SPECIFICATIONS

27. The City of Cedar Hill, as a governmental agency of the State of Texas, may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lowest bid submitted by a responsible resident bidder by an amount that is not less than the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident principal place of business is located. (Government Code, section 2252.002) Bidder shall make answer to the following questions by encircling the appropriate response or completing the blank provided:

1.) Is your principle place of business in the State of Texas Yes No

2.) If the answer to question (1) is "yes", no further information is necessary; if "no", please indicate:

a.) In which state is your principal place of business located? Ohio

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? N/A

*The State Purchasing and General Services Commission defines Principal Place of Business as follows:

28. Principal Place of Business means, for any type of business entity recognized in the State of Texas, that the business entity:

29. Has at least one permanent office located within the State of Texas, from which business activities other than submitting bids to governmental agencies are conducted and from which the bid is submitted, and has at least one employee who works in the Texas office.

30. Award: Unless stipulated in these bid specifications, the contract will be awarded to the lowest responsible bidder or to the bidder who provides the goods or services specified herein at the best value for the City.

31. Preference will be given to the vendor who is able to provide the most supplies/materials, at the most economical price.

32. Split Award: The City of Cedar Hill reserves the right to award a separate contract to separate vendors for each item/group or to award one contract for the entire bid. The vendor who is able to provide a large majority of items will be looked upon favorably.

INVITATION TO BID & BID SPECIFICATIONS

33. No Prohibited Interest: Bidder acknowledges and represents that they are aware of the laws, City Charter, and City Code of Conduct regarding conflicts of interest. The City Charter states that "No officer or employee of the City shall have a financial interest, direct or indirect, in any contract with the City, to the extent prohibited by state law, or shall be financially interested, directly or indirectly, in the sale to the City of any land, materials, supplies, or service where such financial interest is prohibited by state law.

34. Cooperative Purchasing: The City of Cedar Hill actively participates in cooperative purchasing opportunities. If it is determined to be in the best interest, the City reserves the right to reject any and all bids and purchase the services and/or goods through cooperative means.

35. Inter-local Agreement: Successful bidder agrees to extend prices to all entities that have entered into or will enter into joint purchasing interlocal cooperation agreements with the City of Cedar Hill. The City of Cedar Hill is a participating member of several interlocal cooperative purchasing agreements. As such, the City of Cedar Hill has executed inter-local Agreements, as permitted under Chapter 791 of the Texas Government Code, with certain other political subdivision, authorizing participation in a cooperative purchasing program. The successful vendor may be asked to provide products/services based on the bid price to any other participant. The City of Cedar Hill shall not be held responsible for any orders placed, deliveries made, or payment for materials ordered by these entities.

36. Insurance: The successful bidder shall agree to indemnify, save, hold harmless and defend the City, its officers, agents and employees with respect to any claims or demands, actions, damages, costs and expenses, including, without limitation, attorneys fees and costs of litigation, arising from the death or injury of any person whomsoever, or any loss, damage or destruction of any property whatsoever, resulting directly or indirectly from any intentional, negligent or grossly negligent act, error or omission of the successful bidder, its agents, servants, employees or other persons acting on the bidder's behalf and arising from or related to medical supplies provided by the bidder to the City.

The successful bidder shall also obtain and keep in force, at its sole cost and expense, throughout the term of the agreement with the City, and in a form and with a company satisfactory to the City, the following policies of insurance:

- A. Commercial General Liability insurance, including coverage for products liability, with combined single limits of not less than \$1,000,000.00;
- B. Contractual Liability insurance underwriting the indemnification, hold harmless and insurance provisions of the agreement with the City with combined single limits of not less than \$1,000,000.00;

INVITATION TO BID & BID SPECIFICATIONS

The successful bidder shall also have the City named as an additional insured on the Commercial General Liability policy, and such insurance shall contain provisions to the effect that the naming of the City as an additional insured shall not affect any recovery to which the City would be entitled under the policy if it were not so named and that the insurance is primary and shall be without contribution from any similar insurance available to the City.

Certificates of insurance verifying each of the above conditions and providing for thirty (30) days' prior written notice of cancellation or reduced coverage shall be submitted to the City within thirty (30) days of the execution of the award of the contract.

37. Bid Security/Bond Requirements: If required, bid security shall be submitted with bids. Any bid submitted without bid bond, or cashiers/certified check, if required, shall be considered non-responsive, and will not be considered for award. Performance and/or payment bonds, when required, shall be submitted to the City, prior to commencement of any work pursuant to the agreement provisions.

38. Termination for Default: The City of Cedar Hill 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 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;

(2) Perform in accordance with these specifications and/or;

(3) Transfers, assigns or conveys any or all of its obligations or duties to another. Breach of contract or default authorizes the City to, among other things, award to another bidder, or purchase elsewhere.

THE CITY OF CEDAR HILL RESERVES THE RIGHT TO ACCEPT OR REJECT IN PART OR IN WHOLE ANY BID SUBMITTED, AND TO WAIVE ANY TECHNICALITIES DEEMED TO BE IN THE BEST INTEREST OF THE CITY.

THE UNDERSIGNED HEREBY CERTIFIES THAT HE/SHE UNDERSTANDS THE SPECIFICATIONS, HAS READ THE DOCUMENT IN ITS ENTIRETY AND THAT THE BID PRICES CONTAINED IN THE BID HAVE BEEN CAREFULLY REVIEWED AND ARE SUBMITTED AS CORRECT AND FINAL. BIDDER FURTHER CERTIFIES AND AGREES TO FURNISH ANY OR ALL PRODUCTS/SERVICES UPON WHICH PRICES ARE EXTENDED AT THE PRICE OFFERED, AND UPON CONDITIONS CONTAINED IN THE SPECIFICATIONS OF THE INVITATION FOR BID.

INVITATION TO BID & BID SPECIFICATIONS

**THE FOLLOWING INFORMATION MUST BE FILLED OUT IN ITS ENTIRETY FOR
YOUR BID TO BE CONSIDERED:**

1) Company Name:

Bound Tree Medical, LLC

2) Address of Principal Place of Business:

5000 Tuttle Crossing Blvd. Dublin, Ohio 43016

3) Phone/Fax of Principle Place of Business:

800-533-0523 ext. 5370 / 877-311-24374) Address/Phone/Fax Number of Majority
Owner Principal Place of Business:Bems Holdings, LLC 5000 Tuttle Crossing Blvd. Dublin, Ohio 43016

5) E-mail Address of Representative:

Valia.Way@Boundtree.com

6) Authorized Representative:


SignatureMark Dougherty - chief Financial Officer

Printed Name

2/06/2013

Date

INVITATION TO BID & BID SPECIFICATIONS

7) Vendor shall "fill in" all 125 required supplies, as well as, 542 items on the pharmaceuticals list. If a vendor is unable to obtain a particular item, please denote that item with a "N/A."

8) Please provide a pricing for quantities of:

- Box,
- Case.

8A) Please specify your definition of "box" (10, 15, 20) etc. in the "Vendor's Comment Section."

8B) Please specify your definition of "Case" (10, 15, 20) etc. in the "Vendor's Comment Section."

9) A Pre-Bid Conference will be held at the Cedar Hill Fire Station #1, 1212 Bellline, Cedar Hill, Texas 75106 (Training Room @ 9:00 AM). This will allow vendors the opportunity to ask questions and obtain clarity.

#	DAY	DATE	ACTIVITY	COMMENTS
1	Tuesday	January 1, 2013	Master List is FINALIZED	
2	Friday	January 25, 2013	Bid is Advertised (Week #1)	
3	Tuesday	January 29, 2013	Pre-Bid Meeting (Optional)	Station #1 (9:00 AM)
4	Friday	February 1, 2013	Bid is Advertised (Week #2)	
5	Friday	February 8, 2013	Bids are Due	2:00 (Central)
6	Week	February 11-15, 2013	Evaluation Process	1 Week
7	Monday	February 18, 2013	Fire's Formal Recommendation	
8	Tuesday	February 26, 2013	City Council Agenda	

	MEDICATION	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	CITY'S COMMENTS
1	LACTATED RINGERS 1000CC (Baxter) 14 CASE	1.20			141.20	14.00	Per Clarify Issues Doc 1/30/2013 / BTM # 602324X	Brand Specific
2	NORMAL SALINE 0.9% 1000cc (Baxter) 14 Case	0.97			140.97	14.00	BTM# 601324X	Brand Specific
3	NORMAL SALINE 0.9% 500cc (Baxter) 24 Case	0.90			21.60	24.00	BTM# 601323	Brand Specific
4	NORMAL SALINE 0.9% 250cc (Baxter)	0.650			30.60	36.00	BTM# 601322	Brand Specific
5	ACETAMINOPHEN SUSPENSION 32MG/ML	0.680	68.00	100.00			BTM# 381015	
6	ACTIDOSE - Actidose Aqua Suspension 50gm/240ml	24.87			298.44	12.00	BTM# 901102	
7	ADENOSINE - 12 mg/ml 4 ml (Adenocard) prefilled	28.00	280.00	10.00			BTM# 0301-76	
8	ADENOSINE - 6 mg/ml 2 ml (Adenocard) prefilled	19.70	197.00	10.00			BTM# 0301-72	
9	ADENOSINE 12MG/4ML VIAL	10.05	100.50	10.00			BTM# 301-04	
10	ADENOSINE 6mg/2 ml vial	6.15					BTM# 25021-301-02	
11	ALBUTEROL - 2.5 mg in 3 ml solution	0.15	3.87	25.00			BTM# 9501.25	
12	AMIODORONE 150mg vial	1.71					BTM# 0616-03	
13	AMIODORONE HCL 150mg/3ml (3ml PFS Luer Jet Syringe)	N/A					Item no longer manufactured	(if able to bid)
14	AMINOPHYLLINE 500MG/20ML Vial	2.05					BTM# 5922-01	
15	AMINOPHYLLINE 250/10ML Vial	1.50					BTM# 5921-01	
16	Anzemet (Dolasetron) 20mg/ml .625ml 12.5mg SDV	21.32					BTM# 1208-06	
17	ASPIRIN - 81 mg Tabs CHEWABLE	0.75					BTM# 911316	
18	ATIVAN (LORAZEPAM) - 2 mg/1ml (VIAL)	1.15	11.50	10.00			BTM# 371100	
19	ATIVAN (LORAZEPAM) - 2mg/1ml	3.33	33.28	10.00			BTM# 371102	CARPUJECT
20	ATIVAN (LORAZEPAM) - 4mg/1ml VIAL	2.11	21.05	10.00			BTM# 376779	
21	ATIVAN (LORAZEPAM) - 4mg/1ml	2.99	29.90	10.00			BTM# 1539-31	CARPUJECT
22	ATROPINE - 1 mg/10 ml pre-filled	8.88					BTM# 374911	LIFESHIELD SYRINGE
23	ATROPINE - 1 mg/10 ml pre-filled	4.23					BTM# AB1630-10	ANSYR PFS
24	ATROPINE - 1 mg/10 ml pre-filled	2.66	26.60	10.00			BTM# 371006	LUERJET
25	ATROVENT - 5mg/2.5 ml 0.02%	0.18	4.42	25.00			BTM# 9801-25	
26	BENADRYL 50MG Luer locking Carpuject	1.550					BTM# 374402	CARPUJECT
27	BENADRYL - 50 mg vial	0.900	22.50	25.00			BTM# 0376-25	
28	CALCIUM CHLORIDE 1gm 10ml	3.99					BTM# 371631	LIFESHIELD SYRINGE
29	CALCIUM CHLORIDE 1gm/10ml	2.98					BTM# 373304	IMS
30	CALCIUM CHLORIDE 1gm/10ml vial	2.98					BTM# 372710	
31	CALCIUM GLUCONATE 10% 10ML	3.20					BTM# 373311	
32	CAPTOPRIL 25mg/SL Tab Blister	0.12	12.03	100.00			BTM# 0864.20	
33	DIAZEPAM 10 MG (valium) 5mg/ml (2ml Pre-filled Carpuject Luer)	9.40	94.00	10.00			BTM# 371104	CARPUJECT
34	D-50 DEXTROSE 50ml	5.58					BTM# 377515	ANSYR SYRINGE
35	D50-DEXTROSE 50% 25gm pre-filled	10.20					BTM# 0074490201	LIFESHIELD SYRINGE

	MEDICATION	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	CITY'S COMMENTS
36	D50-DEXTROSE 50% 25gm pre-filled	3.75					BTM# 373301	LUERJET
37	D25-DEXTROSE 25% (pedi)	5.85					BTM# 371775	
38	DEXTROSE 5% IN Water 100cc bag	1.29	5.15	4.00	32.19	25.00	BTM# 350089	
39	DILTIAZEM 25mg/5ml	1.25	12.50	10.00			BTM# 1171-01EA	
40	DOPAMINE - 400mg/250 cc bag	10.03			180.54	18.00	BTM# 118-280842EA	
41	DOPAMINE 800mg/500 cc bag	15.13			181.56	12.00	BTM# 118-280843EA	
42	DOPAMINE - 400mg/10cc vial	0.86					BTM# 379104	
43	DOBUTAMINE 250mg/250 cc bag				68.45	12.00	BTM# 2346-32	
44	DUONEB	0.36	10.80	30.00			BTM# 0201-01	0.5mg / 0.3mg, 3ml Vial
45	EPINEPHRINE 1:1,000 - 30 ml Vial	3.90					BTM# 3001-05	
46	EPINEPHRINE 1:1,000 ampule	1.16					BTM# 0641142035	
47	EPI (Racemic) 1 12mg/.5cc	1.57					BTM# 375901	
48	EPINEPHRINE 1/10000	2.550					BTM# 374921	LIFESHIELD SYRINGE
49	EPINEPHRINE 1/10000	2.300					BTM# 373316	LUERJET
50	EPI Pen (2 pack)	126.00	252.00	2.00			BTM# 375002	ADULT
51	EPI PEN	126.00	252.00	2.00			BTM# 375012	PEDI
52	ENALAPRIL 1.25MG vial	4.00					BTM# 370010	
53	ETOMIDATE 40MG/20cc (Amidate)	9.24					BTM# 6695-02	
54	FENTANYL 100mcg 100mcg/2cc 25/box Vial	0.98	24.50	25.00			BTM# 379094	
55	FENTANYL 100mcg Carpuject 10/box	1.65	16.47	10.00			BTM# 371276	
56	GEODON 20mg (10 to a box)	19.95	199.46	10.00			BTM# 3920-83	
57	GLUCAGEN Diagnostic Kit 1mg/1ml (2050)	132.00					BTM# 372050	
58	GLUCAGON- 1mg LILY Red Box	152.53					BTM# 000002145001	
59	GLUCOSE-INSTANT 15gm tubes (3pkg)	1.83	5.50	3.00	66.00	36.00	BTM# 0030-37	
60	GLUCOSE-INSTANT 15gm packets (3pkg)	1.83	5.50	3.00	66.00	36.00	BTM# 0030-51	Orange or Vanilla
61	HALDOL - 5 mg/Vial	2.55					BTM# 373474	
62	HYDROMORPHONE 2mg/1ml	1.11	27.64	25.00			BTM# 0121-25	Specify vial or cpit
63	HYDROXOCOBALAMIN 5gms/250cc	785.00					BTM# 0370-01	CYNO KIT
64	KETAMINE 200mg vial	N/A					N/A	
65	KETAMINE 500mg/5ml vial		101.57	10.00			BTM# 2051-05	
66	LABETALOL 20mg Carpuject	3.64					BTM# 372339	
67	LABETALOL 100mg/vial	1.92					BTM# 2267-20	
68	LASIX 40mg/4ml Vial	0.73					BTM# 6102-04	
69	LASIX - 100 mg pre-filled	9.95					BTM# 379631	ANSYR SYRINGE
70	LASIX - 40 mg/4 ml pre-filled	6.800					BTM# 0186063501	ANSYR SYRINGE

	MEDICATION	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	CITY'S COMMENTS
71	LEVOPHED - 1 mg/1 ml 4 mg	9.000					BTM# 372067	
72	Udocaine 1% 200mg/20cc vial	0.78	19.50	25.00			BTM# 4276-01S	For digital blocks
73	UDOCAINE 2% 100mg 5ml 1026c	2.65					BTM# 0074490301	ANSYR SYRINGE
74	UDOCAINE 2% 100mg 5ml 1026A	2.98					BTM# 374904	LIFESHIELD SYRINGE
75	Udocaine 2%	2.45	24.50	10.00			BTM# 373390	IMS SYRINGE
76	UDOCAINE 4% - 1 gm/250 ml D5W pre-mixed bag (each)	8.38			201.12	24.00	BTM# 9594-20	
77	UDOCAINE 4% - 2 gm/500 ml D5W pre-mixed bag (each)	4.20			100.80	24.00	BTM# 5876	
78	MAGNESIUM SULFATE 1gram / 2 ml pre-filled syringe	N/A					N/A	
79	MAGNESIUM SULFATE 1gm/2ml SDV 0064-02	1.05	26.25	25.00	105.00	100.00	BTM# 0064-02	
80	MAGNESIUM SULFATE 5gm/10ml sdv	1.31	32.75	25.00	131.00	100.00	BTM# 0064-10EA	
81	MAGNESIUM SULFATE 1gm/2ml	1.05	26.25	25.00	105.00	100.00	BTM# 0064-02	
82	MAGNESIUM SULFATE 5gm/10ml	N/A					N/A	ANSYR SYRINGE
83	METOPROLOL 5mg/5ml	3.90	39.00	10.00			BTM# 303-05	
84	MORPHINE SULFATE - 10 mg/1ml 25 per box vial	1.07	26.75	25.00			BTM# 6070-25	
85	MORPHINE SULFATE - 10 mg/1ml Carpujel (10/box)	1.99	19.89	10.00			BTM# 1893-01	
86	NARCAN 1mg/1ml 2ml	14.94					BTM# 373369	LUERJEL
87	NARCAN 4mg/10ml vial	58.10					BTM# 371219	
88	NITRO SPRAY - Nitroglycerin spray	190.00			2280.00	12.00	BTM# 00300-65	60 COUNT DOSE
89	NITRO SPRAY - Nitroglycerin spray	155.00					BTM# 0410-04	90 COUNT DOSE
90	NITRO SPRAY - Nitroglycerin spray	299.54			3594.48	12.00	BTM# 0300-20	200 COUNT DOSE
91	NITRO SPRAY - Nitroglycerin spray	290.95					BTM# 0410-08	230 COUNT DOSE
92	NITRO TABS 0.4%	10.520					BTM# 0418-13	25 TO A BOTTLE
93	Nitro premix 25mg/250cc	7.110			85.32	12.00	BTM# 118-1A0692EA	
94	PHENERGAN 25mg/1ml amps	1.40	35.00	25.00			BTM# 3157-83	
95	PHENERGAN 25mg/vial	1.38	34.50	25.00			BTM# 0928-25	
96	PROPACARINE 0.5% 15ml	6.20					BTM# 370016	
97	PULMICORT (0.5mg) 2ml ampoule	13.04	391.07	50.00			BTM# 417543	
98	REGLAN (10mg/2ml) vial	0.82					BTM# 3414-01	
99	ROCURON UM (100mg/10ml) vial	9.00	90.00	10.00			BTM# 0228-10	
100	SALINE BULLETS 0.9% 3ml	0.11	11.00	100.00	110.00	1000.00	BTM# NS5251	
101	SALINE IIR - 0.9% saline 250cc	1.30			31.20	24.00	BTM# 007122	
102	SIMVASTATIN 80 mg	27.31					BTM# 0268-30	
103	SODIUM BICARB-7.5% 50 ML 44.6 meq pre-filled -	9.52					BTM# 371634	
104	SODIUM BICARB-8.4% 50 ML 50 meq	2.98	29.80	10.00			BTM# 371035	
105	SODIUM BICARB-8.4% 10 ML 10 Meq	10.15					BTM# 0074490009	Pack Lifeshield

	MEDICATION	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	CITY'S COMMENTS
105	SODIUM BICARB-4.2% 10 ML 5 meq (Injani) pre-filled -	5.16					BTM# 0074553401	
107	SODIUM CHLORIDE INJECTIBLE - 0.9% 30 ml vial	0.69	17.25	25.00			BTM# 607045	
108	SODIUM CHLORIDE 0.9% 10cc Flush	0.40	40.00	100.00	480.00	1200.00	BTM# 1921-13576	Prefilled
109	TERBUTALINE 1mg	1.60	16.00	10.00			BTM# 9746-10EA	
110	SOLU-MEDROL 125mg/2ml	5.93	148.25	25.00			BTM# 0347-22	Specify if generic
111	STERILE WATER Irrigation 100ml 25/cs				24.85	25.00	BTM# 04-AL4100	
112	STERILE WATER (IRRIGATION) 250ml	1.10			26.40	24.00	BTM# 607112	
113	Sterile Water Irrigation 500ml	0.97			17.46	18.00	BTM# 607113	
114	SUCCINYLCHOLINE (ANECTINE) 200mg/10ml	2.450					BTM# 375204	
115	TERBUTALINE 1mg/ml	1.600	16.00	10.00			BTM# 9746-10EA	
116	TETRACAINE 0.5% ophthalmic solution BTM 15ml bottle	8.50					BTM# 372121	
117	THIAMINE 200 mg MDV	11.50					BTM# 371651	
118	VASOPRESSIN 20units/1ml MDV	2.30					BTM# 373020	
119	VECURNIUM 10mg/10ml vial W/O Diluent	5.35	53.50	10.00			BTM# 0657-10	
120	VERSED (MIDAZOLAM) 10mg/2ml	1.01	10.10	10.00			BTM# 371113	
121	VERSED (MIDAZOLAM) 5mg/1ml	1.79	17.93	10.00			BTM# 371109	
122	XOPENEX (levalbuterol) 1.25mg 3ml	5.17	124.00	24.00			BTM# 666993-0023-27	
123	XYLOCAINE/UBOCAINE JELLY - 2% 100 mg/5 ml tube Type	5.50					BTM# 370711	
124	ZOFRAN (Ondansetron) 4MG 4mg/2cc Vial	1.47	14.70	10.00	147.00	100.00	BTM# 1120-12	
125	ZOFRAN (Ondansetron) 4mg/pill ODT unit dose	0.32	9.60	30.00			BTM# 5265-64	ODT

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
1	ADC #603BK	21.91			219.10	10.00	BTM# 170600	
2	ADC Aneroid Sphygmomanometer (Adult) Size 11	44.00			880.00	20.00	BTM# 540003	#703
3	ADC BP handle	32.27					BTM# 540104	#804
4	ADC BP Cuff/Sphygmomanometer	10.03			200.60	20.00	BTM# 170775	775-11A
5	Alcohol Preps	0.007	1.35	200.00	27.00	4000.00	BTM# 276-852BX	generic
6	Alcohol Preps	0.007	1.48	200.00	29.60	4000.00	BTM# 1330-05750	Kendall
7	Aluminum Oxygen Bottles-D size	42.98					BTM# D4150	
8	Aluminum Oxygen Bottles-E size	51.54					BTM# D4152	
9	Ambu 1.5" Center Snap Electrodes	0.94	5.64	6.00	56.40	60.00	BTM# 2741-01019	10aka
10	Ambu 1.5" Center Snap Electrodes	5.17	258.50	50.00			BTM# 2741-05019	50 pka
11	Ambu EID TubeCheck Butb type	1.93			38.60	20.00	BTM# 065-000172002EA	
12	Ambu Permii Ace C-Color	4.39			131.70	30.00	BTM# 260281	Adult
13	Ambu Permii Ace C-Color	4.39			131.70	30.00	BTM# 260280	Ped
14	Ambu Permii ACE C-collar & head wedge CID combo (30cs)	9.17			275.00	30.00	BTM# 000281152	2 Straps
15	Ambu Spur (child) BVM	9.80			117.60	12.00	BTM# 530-213	Spur - II
16	Ambu Spur (infant) BVM	9.80			117.60	12.00	BTM# 065-540212000EA	Spur - II Ambu Part #540212000
17	Ambu Spur (adult) BVM	8.54			102.48	12.00	BTM# 520-211	Spur - II
18	Ambu Spur (combo infant/child)	13.89			166.68	12.00	BTM# 2442-21502	Ambu Part # 5302150008 (in box)
19	Ambu type Rescue Pump	40.00					BTM# 590276	
20	Ammonia INCH (Inhalant) noxious ammonia	0.21	2.10	10.00			BTM# 7546	10 to a box
21	Antimicrobial diaphragms for stethoscopes (Adult)	0.91	181.71	200.00			BTM# 171056	Safety Seal
22	Backboard Biohazard Bags	1.45			72.50	50.00	BTM# 296589	
23	Backboard Iron Duck Base Board (yellow)	92.08					BTM# 35850Y	Without Pins
24	Backboard Iron Duck Base Board (yellow)	104.56					BTM# 35850YP	With Pins
25	Backboard Iron Duck Base Board (blue)	92.08					BTM# 78188L	Without pins
26	Backboard Iron Duck Base Board (blue)	104.56					BTM# 78188L	With pins
27	Backboard LSP HDx Plastic (blue)	81.35					BTM# 267160	Without pins
28	Backboard LSP HDx Plastic (blue)	96.27					BTM# 267161	With Pins
29	Backboard XTRA	81.35					BTM# 268150	With pins
30	Backboard XTRA	96.27					BTM# 265014	Without pins
31	Backboard Straps Nylon 2 piece S' whoop ends and push button buckle (orange)	2.10			75.60	36.00	BTM# 80124	
32	Backboard Straps 3 pka (disposable)	2.23	4.68	3.00			BTM# 533-MS-ST696-3	Orange
33	Backboard Straps single Sll two piece Plastic buckle	2.24					BTM# 533-MS-ST694	Red
34	Bandage Rap Self Adherent Fully Stretched (Blue)	1.75			63.00	36.00	BTM# F925602	Coban 2" x 5 yards
35	Bandage Rap Self Adherent Fully Stretched (Tan)	0.63			22.68	36.00	BTM# 276-80251EA	Generic 2"x5 yards
36	Bandage Shears - 7.25 with plastic handle	0.74					BTM# 41158K	
37	Bandage Roll	0.60			60.00	100.00	BTM# 080645	4.5" x 147 Stretched Sterile
38	Band Aids (childrens)	0.13	2.63	20.00			BTM# 12618	
39	Band-Aids (100 TO A BOX)	0.02	1.50	100.00	36.00	2400.00	BTM# 083602	1 Inch-Sheer
40	Band-Aids (100 TO A BOX)	0.03	1.58	50.00	37.92	1200.00	BTM# M233772	1 Inch-Plastic
41	Band-Aids (100 TO A BOX)	0.02	2.00	100.00	48.00	2400.00	BTM# F165200	1 Inch-Flexible Cloth
42	BD Syringes Blunt Cannula 1cc-						Per Clarify Issues Doc 1/30/2013	
43	BD Syringes Blunt Cannula 3cc	0.33	33.00	100.00	264.00	800.00	BTM# 353346	
44	BD Syringes Blunt Cannula 5cc	0.39	39.00	100.00	156.00	400.00	BTM# G4108	
45	BD Syringes Blunt Cannula 10cc	0.41	41.00	100.00	164.00	400.00	BTM# 623404	
46	Beck Airway Airtlow Monitor (BAAM)	6.10			610.00	100.00	BTM# 021410	
47	Bed Pan (plastic disposable)	0.87			43.50	50.00	BTM# 721-H100-05EA	
48	Bemis System II Suction Canister Replacements (blue)	2.71			108.40	40.00	BTM# 591375	1200 CC with lids
49	Bemis System II Suction Canister Replacements (green)	3.25			156.00	48.00	BTM# 596041	1200 CC with lids
50	Benzoin Tinctures	0.19	9.44	50.00	94.40	500.00	BTM# 541231	Swabsick
51	Betadine Swabs / Pads	0.04	3.52	100.00	35.20	1000.00	BTM# 609153	
52	Biohazard Disposal Bags	0.08			40.00	500.00	BTM# 290116	7-10 gallon F116
53	Biohazard Disposal Bags	0.11			27.50	250.00	BTM# R2024	16 gallon
54	Biohazard Sharps Container (1qt stackable with clear lid)	1.88			188.00	100.00	BTM# 298900	8500-SA
55	Biohazard Sharps Container (3.3qt 9.5x6 x 5.25)	3.66			87.84	24.00	BTM# 295488	305488
56	Biohazard Sharps Container 1 gallon (9x7x6)	7.50			300.00	40.00	BTM# R1008	61000-40
57	Biohazard Sharps Container 2 gallon (11x9x6)	9.19			220.56	24.00	BTM# R1009	62000-024
58	Biohazard sharps container 5qt in room	4.32			86.40	20.00	BTM# 2985075A	Sage #85095A
59	Biohazard Sharps Container 3gallon red (15.25x13.5x6)	9.18			91.80	10.00	BTM# F012602	Becton-Dickson #305436
60	Bio Hoop Hazardous Waste Bags (with hook)	1.35	16.20	12.00	648.00	480.00	BTM# 440101	Bio Hoop (Hartwell Medical)
61	Blue Sensor EKG Electrodes (SP-00-S)	1.22	152.50	175.00	305.00	250.00	BTM# 230008	4pk

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
62	Blue Sensor EKG Electrodes (SP-10-S)	2.41	241.00	100.00	482.00	200.00	BTM# 230005	10 pkg
63	Blue Sensor EKG Electrodes (SP-50-S)	10.74	214.80	20.00	429.60	40.00	BTM# 230503	50pks
64	Board Splint-padded	2.04			306.00	150.00	BTM# 660012	15"
65	Board Splint-padded	3.48					BTM# 660016	24"
66	Board Splint-padded	3.64			273.00	75.00	BTM# 660013	36"
67	Board Splint-padded	5.15			257.50	50.00	BTM# 660014	54"
68	Bougie style tracheal tube introducer	5.37	53.70	10.00	0.00		BTM# 9-01212-70	
69	Bougie (pocket)	N/A					BTM# NoBd	
70	BVM - Adult	9.15			109.80	12.00	BTM# L840044	Generic
71	BVM - Child	9.15			109.80	12.00	BTM# L840034	Generic
72	BVM - Infant	9.15			109.80	12.00	BTM# 485-845031	Generic
73	Carry Case for Still Neck Extrication Collars	24.75			0.00		BTM# 260207	Royal Blue
74	Compuject Injector	0.02			0.00		BTM# D250	
75	Cas Medical Safe Cuff Disposable blood pressure cuffs to be used with LP 12/LP-15	7.04			35.20	5.00	BTM# US1320ML-05	Ultrack
76	Cas Medical Safe Cuff Disposable blood pressure cuffs to be used with LP-12/LP-15	8.32			41.60	5.00	BTM# US1826ML-05	Ultrack
77	Cas Medical Safe Cuff Disposable blood pressure cuffs to be used with LP-12/LP-15	10.96			54.80	5.00	BTM# US3242ML-05	Ultrack
78	Cavicide Disinfectant spray	8.25			99.00	12.00	BTM# 290024	24oz bottle
79	Chlorhexidine Preps	0.15	15.09	100.00	150.84	1000.00	BTM# B10800	Chlorascrub B10800
80	Child O2 Mask-NRB	1.00			50.00	50.00	BTM# 411011	Partial
81	Child O2 Mask-NRB	0.71			35.50	50.00	BTM# 87-2202EA	Total
82	Cold Packs 6x9	0.27			6.48	24.00	BTM# F03520	
83	Color-Coded Airways (blue)-50mm	0.14	7.00	50.00			BTM# 76-121850EA	Teleflex Medical
84	Color-Coded Airways (black)-60mm	0.14	7.00	50.00			BTM# 021002	Teleflex Medical
85	Color-Coded Airways (white)-70mm	0.14	7.00	50.00			BTM# D4244	Teleflex Medical
86	Color-Coded Airways (green)-80mm	0.14	7.00	50.00			BTM# 021003	Teleflex Medical
87	Color-Coded Airways (yellow)-90mm	0.14	7.00	50.00			BTM# 021004	Teleflex Medical
88	Color-Coded Airways (red)-100mm	0.14	7.00	50.00			BTM# 021005	Teleflex Medical
89	Combi-Carrier Backboard Split Litter	N/A					BTM# NoBd	without Speed Clips
90	Combi-Carrier Backboard Split Litter	631.63					BTM# 3245-20016	With Speed Clips
91	Combine Abdominal Pads 5x9 25/Tray	0.10	2.55	25.00	40.80	400.00	BTM# 085590	
92	CAT Tourniquet (Black)	29.20					BTM# 1850-13022	Combat Application-Tourniquet
93	ConMed Huggable Pedi ECG Electrodes	0.15	4.56	30.00	91.20	600.00	BTM# 231620	
94	ConMed Veni-Gard IV securing device	0.38	37.90	100.00	189.50	500.00	BTM# 354431	Brand Specific (4431)
95	Convince Bag - vomit/wine	1.02			244.80	240.00	BTM# J2250	
96	Cook Critical Meltier Emergency Cricothyrotomy Catheter Set (special operations) Size 14fr 5.0mm	149.90					BTM# 62106	
97	Cook Critical Retrograde Intubation Set	115.15					BTM# 62104	
98	Cook Pneumothorax Kit	99.36					BTM# 62101	8.5 French C-IPIS
99	Col Sheets -Heavy Duty filled disposable	1.14			58.18	50.00	BTM# 3271-61202	
100	Col Sheets -Heavy Duty non-filled disposable	0.66			32.93	50.00	BTM# 3271-61002	
	COT SHEET POLY-PRO FITTED 50/CS 367025 (30 X 72)	0.77			38.64	50.00	Per Clarity Issues Doc 1/30/2013	
101	Cuffed Resuscitator Mask Disposable	1.90			38.00	20.00	BTM# 530252	Neonate
102	Cuffed Resuscitator Mask Disposable	1.90			38.00	20.00	BTM# D6442	Infant
103	Cuffed Resuscitator Mask Disposable	1.90			38.00	20.00	BTM# D6444	Child
104	Cuffed Resuscitator Mask Disposable	1.90			38.00	20.00	BTM# D6446	Adult
105	Cuffed Resuscitator Mask Disposable	1.90			38.00	20.00	BTM# D6450	Large Adult
106	Democel tape J&J hypo-allergenic 1"	0.68	8.13	12.00	97.56	144.00	BTM# 080110	Dukal - 110-Silk
107	Democel tape hypo-allergenic 2"	1.36	8.13	6.00	97.56	72.00	BTM# 080210	Dukal 210 Silk
108	Democel tape hypo-allergenic 3"	2.03	8.13	4.00	97.56	48.00	BTM# 080310	Dukal - 310 Silk
109	Disckle Ultra Disinfecting Towellettes 160 6x6 .75 Towellettes/Canister	0.06	9.12	160.00	109.44	1920.00	BTM# 200060	
110	Disposable Blankets	0.62			31.02	50.00	BTM# 11929	Paper 54x80
111	Disposable Blankets	3.97			71.46	18.00	BTM# 118043	Poly Foam 54x80
112	Disposable Scalpel #11	0.47	4.70	10.00	47.00	100.00	BTM# 400012	
113	Disposable Polyester Blanket 50x80	4.10			32.80	8.00	BTM# 118116	
114	Easy Cap CO2 Detector	9.29			222.96	24.00	BTM# 530024	Adult
115	Easy Cap CO2 Detector	9.43			226.32	24.00	BTM# 530025	Pedi
116	Emergent CPAP Circuit	32.92			329.20	10.00	BTM# 531900	CPAPs Generator Circuit
117	Emergent CPAP Control Unit	999.99					BTM# 531501	
118	Emergent CPAP Mask (small)	7.66			383.00	50.00	BTM# 1900-222	Adult Small
119	Emergent CPAP Mask (adult)	6.49			324.50	50.00	BTM# 1900-333	Adult Medium

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
120	Emergent CPAP Mask (large)	9.89			494.50	50.00	BTM# 1900-444	Adult Large
121	Emesis Basin -10 plastic	0.10			25.00	250.00	BTM# 721-H300-05EA	
122	Envirocide	5.73			68.76	12.00	BTM# 200008	8oz bottle
	Envirocide 24 Oz	9.26			111.12	12.00	Per Clarity Issues Doc 1/30/2013	
123	Evac-U-Splint (small)	64.83					BTM# 560101	Hartwell Medical
124	Evac-U-Splint (medium)	83.50					BTM# 560102	Hartwell Medical
125	Evac-U-Splint (large)	113.08					BTM# 560103	Hartwell Medical
126	Evac-U-Splint (Extremity Kit)	213.30					BTM# F59000RC	Hartwell Medical
127	Evac-U-Splint (small) disposable						Per Clarity Issues Doc 1/30/2013	Hartwell Medical
	Evac-U-Splint (medium) disposable						Per Clarity Issues Doc 1/30/2013	Hartwell Medical
128	Evac-U-Splint (large) disposable						Per Clarity Issues Doc 1/30/2013	Hartwell Medical
129	Evac-U-Splint (Extremity Kit) (disposable)						Per Clarity Issues Doc 1/30/2013	Hartwell Medical
130							Per Clarity Issues Doc 1/30/2013	
131	F.A.S.T. 1 Stomal I/O System	134.57			281.60	10.00	BTM# 622270	
132	Fast Splint kits and Singles	9.66			192.30	10.00	BTM# 3011-20916	Splint
133	Fast Splint kits and Singles	128.79			157.00	10.00	BTM# F59000RCPL	Kit with pump
134	Fast Splint kits and Singles	33.91					BTM# 3113-12016	Pump Solo
135	Fast Splint kits and Singles (Large)	28.16					BTM# 560803	Splint
136	Fast Splint kits and Singles (Medium)	19.23					BTM# 560802	Splint
137	Fast Splint kits and Singles (Small)	15.70					BTM# 560801	Splint
138	Foil Baby Bunting	3.11					BTM# 444006	
139	Forceps—5 1/2 curved Kelly	0.91					BTM# 400304	
140	French Style Suction Catheter 8fr	0.17			8.50	50.00	BTM# S33-MS-SC08EA	8 French
141	French Style Suction Catheter 12fr	0.17			8.50	50.00	BTM# S33-MS-SC12EA	16 French
142	French Style Suction Catheter 16fr	0.17			8.50	50.00	BTM# S33-MS-SC16EA	18 French
143	Gauze 3x3 sterile	0.06	2.83	50.00	67.92	1200.00	BTM# J2542	Duka
144	Gauze 4x4 non-sterile	0.01	2.45	200.00	53.00	4000.00	BTM# 276-8509BG	
145	Gauze 4x4 non-sterile	0.02	3.21	200.00	64.20	4000.00	BTM# 084084	Duka
146	Gauze 4x4 sterile	0.07	1.74	25.00	41.76	600.00	BTM# 276-85031Y	
147	Gauze 4x4 sterile	0.09	2.20	25.00	52.80	600.00	BTM# J2544	Duka
148	Glucometer - Precision						BTM# 179837	Extra
149	Glucometer - Precision Test Strips Box of 50	0.47	23.40	50.00	280.80	600.00	BTM# E6251	Test Strips
150	Glucometer-Contour	0.01					BTM# 2761-P5563	Boyer
151	Glucometer-Contour Test Strips	0.40	20.00	50.00	480.00	1200.00	BTM# 2763-09950	Boyer
152	Glucometer-Free Style Test Strips-Box of 100	0.41	41.47	100.00	248.82	600.00	BTM# 2763-80116	Test Strips
153	Graham Medical 170-500 Professional Towels	0.04			20.00	500.00	BTM# 44200357	3 ply 13x18
154	Guedel Airway	0.45	4.50	10.00			BTM# 792-1-1504-50EA	50mm
155	Guedel Airway	0.45	4.50	10.00			BTM# 792-1-1504-60EA	60mm
156	Guedel Airway	0.45	4.50	10.00			BTM# 792-1-1504-70EA	70mm
157	Guedel Airway	0.45	4.50	10.00			BTM# 792-1-1504-80EA	80mm
158	Guedel Airway	0.49	4.90	10.00			BTM# 792-1-1504-90EA	90mm
159	Guedel Airway	0.49	4.90	10.00			BTM# 792-1-1504-99EA	100mm
160	HeadBed II CID	4.00			400.00	100.00	BTM# 260209	
161	Head Immobilizer-Stay Blocks	4.15			124.50	30.00	BTM# 260975	
162	Health Protective Gowns	0.37	3.66	10.00	18.30	50.00	BTM# 276-3018G	Protective Gowns
163	Heat Packs 4"x9"	0.30			7.14	24.00	BTM# 9501301	
164	Huber Needles	3.43			68.64	20.00	BTM# 519-471720	20ga x 1 inch
	Huber Needles	2.50			50.00	20.00	Per Clarity Issues Doc 1/30/2013	20ga x 1 inch Winged
165							BTM# 020007	
166	Hudson Emergency Lifesaver Oral Airway	28.94					BTM# 0200000	#0
167	Hudson Oral Airways Catheter Guide	1.30	13.00	10.00			BTM# 020001	#1
168	Hudson Oral Airways Catheter Guide	1.00	12.00	12.00	48.00	48.00	BTM# 020002	#2
169	Hudson Oral Airways Catheter Guide	1.00	12.00	12.00	48.00	48.00	BTM# 020003	#3
170	Hudson Oral Airways Catheter Guide	1.00	12.00	12.00	48.00	48.00	BTM# 020004	#4
171	Hudson Oral Airways Catheter Guide	1.00	12.00	12.00	48.00	48.00	BTM# 020005	#5
172	Hudson Oral Airways Catheter Guide	1.00	12.00	12.00	48.00	48.00	BTM# 1641-12018	
173	Hydrogen Peroxide 3% 16oz bottle	0.88			10.56	12.00	BTM# 1641-S2721	
174	Hypodermic Needles 18ga x 1.5"	0.02	2.42	100.00	24.20	1000.00	BTM# 412640	Partial
175	Hypodermic Needles 21ga x 1.5"	0.02	2.42	100.00	24.20	1000.00		
176	Infant NR3.02 Mask	1.24			62.00	50.00		

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
177	Infant O2 Mask -Simple-Portial	3.97					BIM# 41395493	Hudson or Rusch
178	Interlink System "I" connector Baxter	3.57	178.50	50.00	714.00	200.00	BIM# 353327	#2N3327
179	Interlink System "I" connector Baxter	1.52	152.00	100.00			BIM# SG471949	or Similar
180	Iron Duck Ultra Breaksaver	289.94					BIM# 694018R8	Ultra Blue
181	IV Boards - pedi	0.70			35.00	50.00	BIM# 56-1005EA	3" X 17.5 (Disposable)
182	I-Gel Intubation	14.64			366.00	25.00	BIM# 2114-08203	3
183	I-Gel Intubation	14.64			366.00	25.00	BIM# 2114-08204	4
184	I-Gel Intubation	14.64			366.00	25.00	BIM# 2114-08205	5
185	IV Catheters Terumo 14ga	0.75	37.50	50.00	150.00	200.00	BIM# 6014511	2 inch (#1451)
186	IV Drip set 10qtls with 10 inch extension	4.12			206.00	50.00	BIM# 1712-00402	
187	IV Drip Set	1.53			76.50	50.00	BIM# 35108306	Amsino Needleless IV10qtl
188	IV Drip Set	1.71			85.50	50.00	BIM# 35608306	Amsino Needleless IV 60 qtl
189	IV Drip Set (see comments)	5.64			270.72	48.00	BIM# 352230	Select 3 3inl needlless
190	IV Extension Set 10in 24hr w/removable bravo24 clamp rotating luer	1.37			68.50	50.00	BIM# 39900-297	
191	IV Flow Control Set 12in	4.09			245.40	60.00	BIM# 350212	ConMed
192	IV Start Kits -Includes tsumiquet, alcohol prep, iodine prep, veniguard	1.00			100.00	100.00	BIM# 1840-25310	LATEX FREE
193	J&J Eye Pads (oval eye pads)	0.09	4.30	50.00	51.40	600.00	BIM# F165624	
194	Jamshidi Intraosseous needles - 15 G size	9.57			95.70	10.00	BIM# 621515	NOT Sherwood
195	KED-Kendrick extrication device	56.25					BIM# 533-MS-ED2253	
196	Kendall Combitube-Rollup Kit	45.06			180.24	4.00	BIM# 0218441	41 F
197	Kendall Combitube-Rollup Kit	45.06			180.24	4.00	BIM# 0218437	37 F
198	Kendall Monoject 18 1 1/2 ga needle	0.06	5.92	100.00	59.20	1000.00	BIM# 6218112	
199	Kendall Monoject 21 1 1/2 ga needle	0.04	5.92	100.00	59.20	1000.00	BIM# 6221112	
200	Karl's Sterile 4.5in x 4.1 yards	1.24			124.00	100.00	BIM# 150031	Dukal
201	Kid02's Feed - Aerosol-102 Delivery						Per Clarity Issues Doc 1/30/2013	
202	King Airway						Per Clarity Issues Doc 1/30/2013	Pedi-Kit
203	King Airway	29.40			147.00	5.00	BIM# 477-KLID2125EA	Pedi-Tube Only
204	King Airway LT-D	29.20			146.00	5.00	BIM# 477-KLID213EA	Size 3-Kit
205	King Airway LT-D						Per Clarity Issues Doc 1/30/2013	See 3-Tube-Only
206	King Airway LT-D	29.20			146.00	5.00	BIM# 477-KLID214EA	Size 4 Kit
207	King Airway LT-D						Per Clarity Issues Doc 1/30/2013	Size 4-Tube-Only
208	King Airway LT-D	29.20			146.00	5.00	BIM# 477-KLID215EA	Size 5-Kit
209	King Airway LT-D						Per Clarity Issues Doc 1/30/2013	Size 5-Tube-Only
210	King Airway LTS-D	31.20					BIM# 477-KLSD413EA	Yellow Size 3 Tube Only
211	King Airway LTS-D	31.20					BIM# 477-KLSD414EA	Red Size 4 Tube Only
212	King Airway LTS-D	31.20					BIM# 477-KLSD415EA	Purple Size 5 Tube Only
213	King 4"x 4.1yds roll (Duxa)	0.57			57.00	100.00	BIM# 080545	Non-sterile
214	KY Jelly or Surgilube 3 gm packages	0.05	7.20	144.00	86.40	1728.00	BIM# 14903	
215	Laerdal Disposable Pocket Mask	5.34			53.40	10.00	BIM# RS014	
216	Lancets 21g (Haemolancet)	0.18	17.88	100.00			BIM# 2764-12107	
217	Laryngoscope Handle-Standard Handle	7.64					BIM# 7896	C Cell type
218	Laryngoscope Handle-Standard Handle	7.64					BIM# 7897	AA cell type
219	LP-12/15 EKG Paper	1.72	8.62	5.00	172.40	100.00	BIM# 492-12394PK	108mm x 23mm
220	LSP-Guffed-Mask-for-Nikonex						Per Clarity Issues Doc 1/30/2013	LSP-L099-005 (Adult)
221	LSP-Guffed-Mask-for-Nikonex						Per Clarity Issues Doc 1/30/2013	LSP-L099-002 (Pediatric)
222	Lubricating Jelly	0.04	8.12	144.00	97.44	1728.00	BIM# 440128	
223	MAD (Mucosal Atomization Device)	3.54			354.00	100.00	BIM# 400125	
224	MAD (Mucosal Atomization Device) with syringe	4.04			404.00	100.00	BIM# 400124	
225	Magill Forceps	3.66					BIM# 0129	Adult
226	Magill Forceps	2.75					BIM# 0128	Child
227	Mechanical Advantage Tourniquet	27.63	2763.00	100.00			BIM# 150051	(MAT)
228	Mechanism Aspirator	4.33	173.20	40.00			BIM# 590101	
229	MDI EMS Immobile-Vac Splint System	240.32					BIM# 5670001	Complete Kit
230	Medline Yankauer Suction Tip with tubing	1.05			21.00	20.00	BIM# 533-MS-YK20EA	With tubing
231	Medline Yankauer Suction Tip without tubing	0.42			21.00	50.00	BIM# 533-MS-YK10EA	Without tubing
232	Medline/Emergency linen Quality fitted disposable cot sheets	0.77			38.64	50.00	BIM# 80035	Standard Weight

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
233	Medtronic or similar 160mm paper for						Per Clarify Issues Doc 1/30/2013	LP-12
234	Mega Mover	16.67			166.70	10.00	BTM# 111500	1500 40x80
235	Molrex Cavicide Disinfectant spray	8.25			99.00	12.00	BTM# 290024	24oz bottle
236	Molrex Vlonex No-Rinse Hand Sanitizer	3.72			89.28	24.00	BTM# 200014	
237	Micro Flex Neopro ER Gloves-Extended Cuff	0.18	9.03	50.00	90.30	500.00	BTM# 290141	Medium
238	Micro Flex Neopro ER Gloves-Extended Cuff	0.18	9.03	50.00	90.30	500.00	BTM# 290142	Large
239	Micro Flex Neopro ER Gloves-Extended Cuff	0.18	9.03	50.00	90.30	500.00	BTM# 290143	Extra Large
240	Micro Flex Safe Grip Exam Gloves	0.21	10.63	50.00	106.30	500.00	BTM# 290375	Small
241	Micro Flex Safe Grip Exam Gloves	0.21	10.63	50.00	106.30	500.00	BTM# 290376	Medium
242	Micro Flex Safe Grip Exam Gloves	0.21	10.63	50.00	106.30	500.00	BTM# 290377	Large
243	Micro Flex Safe Grip Exam Gloves	0.21	10.63	50.00	106.30	500.00	BTM# 290378	Extra Large
244	Micro Flex Ultra 1 exam gloves-	0.21	10.40	50.00	104.00	500.00	BTM# 290315	Small
245	Micro Flex Ultra 1 exam gloves	0.21	10.40	50.00	104.00	500.00	BTM# 290316	Medium
246	Micro Flex Ultra 1 exam gloves	0.21	10.40	50.00	104.00	500.00	BTM# 290317	Large
247	Micro Flex Ultra 1 exam gloves	0.21	10.40	50.00	104.00	500.00	BTM# 290318	X-Large
248	Micro Flex UltraSense EC Gloves	0.10	9.75	100.00	97.50	1000.00	BTM# 1015-88001	Small
249	Micro Flex UltraSense EC Gloves	0.10	9.75	100.00	97.50	1000.00	BTM# 1015-88002	Medium
250	Micro Flex UltraSense EC Gloves	0.10	9.75	100.00	97.50	1000.00	BTM# 1015-88003	Large
251	Micro Flex UltraSense EC Gloves	0.10	9.75	100.00	97.50	1000.00	BTM# 1015-88004	X-Large
252	Micro Flex UltraSense EC Gloves	0.10	9.75	100.00	97.50	1000.00	BTM# 1015-88005	XX-Large
253	Micro Flex UltraSense EC Gloves	N/A					BTM# No Bid	3X-Large
254	Mucosal Atomization Device with 3ml syringe	4.04			404.00	100.00	BTM# 400124	MADD
255	Multi-Trouma Dressing	0.76			38.00	50.00	BTM# 536-NON21459EA	10" X 30"
256	N100 Mask Respirator	4.72	23.58	5.00	141.48	30.00	BTM# 576-2730N100BX	Medium
257	N100 Mask Respirator	4.72	23.58	5.00	141.48	30.00	BTM# 576-2730N100BX	Large
258	N95 Particulate Masks	0.83	16.60	20.00	132.80	160.00	BTM# 576-1517BX	Medium
259	N95 Particulate Masks	0.57	20.12	35.00	120.72	210.00	BTM# 299174	Small
260	N95 Particulate Masks	0.57	20.12	35.00	120.72	210.00	BTM# 299170	Large
261	N95 Particulate Masks	1.29					BTM# 13554	Extra Large
262	N95 Particulate Masks	0.73	14.52	20.00	290.40	400.00	BTM# 2351 57095	One Size Fits All
263	N95 Particulate Mask with eye protection	0.52	18.20	35.00	109.20	210.00	BTM# B618	
264	Nail Polish Remover	0.04	3.75	100.00	37.50	1000.00	BTM# 607120	
265	Nasal Cannula O2	0.27			13.50	50.00	BTM# 14645	Generic 5-7ft o2 tubing
266	Nasal Cannula O2 Mask-Hudson #1104	0.32			16.00	50.00	BTM# D6132	Hudson
267	Nebulizer Adult Mask	0.55			27.50	50.00	BTM# A911211	Hudson
268	Nebulizer with Adult Mask	0.84			42.00	50.00	BTM# 301-202EA	Generic
269	Nebulizer with Child/Pedi Mask	0.85			42.50	50.00	BTM# 301 203EA	Generic
270	Nebulizer Pediatric Mask-with spike puppy mask	1.39			69.50	50.00	BTM# 410312	WESTMED
271	Nebulizer Tee (CPAP)	0.28			19.00	50.00	BTM# 36-1639EA	
272	Nellcor Durasensor DS-100A	130.04					BTM# D5219	
273	Nellcor EC-4 Sensor Extension Cable	44.22					BTM# D5224	
274	Nellcor N-25 Pulse-Ox Probes	19.54			468.96	24.00	BTM# 172250	Disposable
275	Nellcor Ox sensor II D-20 Disposable Pedi Pulse Oximeter Probe	13.98			335.52	24.00	BTM# D5214	
276	Nellcor Ox sensor II D-25	14.59			349.92	24.00	BTM# 172500	
277	Nellcor OXI-A/N Adult/Neonatal Sensor	118.94					BTM# D5215	
278	Nellcor OXI-P/L Pediatric/Infant Sensor	121.92					BTM# D5216	
279	Newborn Insulating Material (Foil type)	3.11					BTM# 444006	
280	Nitrile Gloves Defender (100 box)	0.09	9.11	100.00	91.10	1000.00	BTM# 291010	Small (10 inch)
281	Nitrile Gloves Defender (100 box)	0.09	9.11	100.00	91.10	1000.00	BTM# 290102	Medium (10 inch)
282	Nitrile Gloves Defender (100 box)	0.09	9.11	100.00	91.10	1000.00	BTM# 290103	Large (10 inch)
283	Nitrile Gloves Defender (100 box)	0.09	9.11	100.00	91.10	1000.00	BTM# 290104	X-Large (10 inch)
284	Nitrile Gloves Defender (100 box)	0.10	9.11	90.00	91.10	900.00	BTM# 290105	2X-Large (10 inch)
285	Nitrile Gloves Defender (50 box)	0.15	7.57	50.00	75.70	500.00	BTM# 291201	Small (12 inch)
286	Nitrile Gloves Defender (50 box)	0.15	7.57	50.00	75.70	500.00	BTM# 291202	Medium (12 inch)
287	Nitrile Gloves Defender (50 box)	0.15	7.57	50.00	75.70	500.00	BTM# 291203	Large (12 inch)
288	Nitrile Gloves Defender (50 box)	0.15	7.57	50.00	75.70	500.00	BTM# 291204	X-Large (12 inch)
289	Nitrile Safe Skin Purple Nitrile Extra Gloves	0.16	8.13	50.00	81.30	500.00	BTM# 295061	Small (12 inch)
290	Nitrile Safe Skin Purple Nitrile Extra Gloves	0.16	8.13	50.00	81.30	500.00	BTM# 295062	Medium (12 inch)
291	Nitrile Safe Skin Purple Nitrile Extra Gloves	0.16	8.13	50.00	81.30	500.00	BTM# 295063	Large (12 inch)
292	Nitrile Safe Skin Purple Nitrile Extra Gloves	0.16	8.13	50.00	81.30	500.00	BTM# 295064	X Large
293	NRB 02 Mask (Partial)	0.71			35.50	50.00	BTM# 87-2101EA	Generic Adult
294	NRB 02 Mask (Partial)	0.71			35.50	50.00	BTM# 87 2202EA	Generic Pedi

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
295	NRB 02 Mask (Total)	0.28			37.00	50.00	BTM# 533-MS-25060EA	Generic Adult
296	NRB 02 Mask (Total)	1.12			56.00	50.00	BTM# 533-MS-25058EA	Generic-Pedi
297	NRB 02 Mask - Hudson #1060 (Adult)	1.25			62.50	50.00	BTM# D6144	Hudson
298	OB-Kit Self-Pack Sterile OB-Kit with Sensors						Per Clarity Issues Doc 7/30/2013	
299	OB-Kit Sealed Standard	4.85					BTM# 540-1721EA	
300	Occlusive Dressing 3"x9" Vaseline gauze	0.59	29.50	50.00	118.00	200.00	BTM# 150066K1	40mm
301	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 76-121850EA	50mm
302	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 021002	60mm
303	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# D4244	70mm
304	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 021003	80mm
305	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 021004	90mm
306	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 021005	100mm
307	Oral Airways Rusch Berman	0.14	7.00	50.00			BTM# 021006	110mm
308	PAWS Antimicrobial Wipes	0.04	4.15	100.00	41.50	1000.00	BTM# 2034400	
309	Pedi Traction Spint -Hare/Ferno Trac	139.29					BTM# 566512	
310	PEEP disposable valves	3.25			65.00	20.00	BTM# 87-VP703EA	
	Pelican Case-1500	248.85					Combination of part BTM# 6815041 & BTM# 683040	With Inserts/ALS Drug Inserts
311							BTM# 680503	With Inserts/ALS Drug Inserts
312	Pelican Case-1550	289.64					BTM# 6815541	With Bottom Dividers Only
313	Pelican Case-1500	181.10					BTM# 683040	Ud Insert for Hard Drug Case
314	Pelican 1500	122.00					BTM# K4036	Disposable
315	Penlight	0.60			180.00	300.00	BTM# 25711	16 Ounce bottle
316	Peroxide 16oz bottle	0.88			10.56	12.00	BTM# 989803138181	
317	Philips Paper Mtx paper	3.66	36.60	10.00	306.80	80.00	BTM# 2742-ATM3713A	
318	Philips Mtx Pads-Adult	19.81	198.10	10.00			BTM# M3717A	
319	Philips Mtx Pads-Pedi	21.65	108.25	5.00			Per Clarity Issues Doc 1/30/2013	
	Philips AED-pads						BTM# 351-48766	Disposable
320							BTM# 206-089-7010EA	Disposable (16 X 23 minimum)
321	Pillow Cases	0.27			26.71	100.00	BTM# 206-089-7015EA	16 X 23
322	Pillows	2.16			25.92	12.00	BTM# D2302	Without DISS
323	Pillows Moisture Proof	2.43					BTM# D2300	With DISS
324	PMX -MX Pro Black Oxygen Regulator	58.44					BTM# 540047	Golfoni
325	PMX -MX Pro Black Oxygen Regulator	63.64					BTM# 477-P10008AG1	Infu-Surg Disposable Pressure Infuser
326	Prep Razors	0.34	17.00	50.00	85.00	250.00	BTM# 353048	
327	Pressure Infuser Bag	14.13			141.25	10.00	BTM# 353042	
328	Protective IV Cath 14ga	1.61	80.50	50.00	322.00	200.00	BTM# 353055	
329	Protective IV Cath 16ga	1.61	80.50	50.00	322.00	200.00	BTM# 353056	
330	Protective IV Cath 18ga	1.61	80.50	50.00	322.00	200.00	BTM# 353050	
331	Protective IV Cath 20ga	1.61	80.50	50.00	322.00	200.00	BTM# 353053	
332	Protective IV Cath 22ga	1.61	80.50	50.00	322.00	200.00	BTM# 353068	
333	Protective IV Cath 24ga	1.61	80.50	50.00	322.00	200.00	BTM# 353065	
334	Protective Plus IV Cath 14ga	1.69	84.50	50.00	338.00	200.00	BTM# 353066	
335	Protective Plus IV Cath 16ga	1.69	84.50	50.00	338.00	200.00	BTM# 353060	
336	Protective Plus IV Cath 18ga	1.69	84.50	50.00	338.00	200.00	BTM# 353063	
337	Protective Plus IV Cath 20ga	1.69	84.50	50.00	338.00	200.00	BTM# 44200357	Graham Medical 3 Pty
338	Protective Plus IV Cath 22ga	1.69	84.50	50.00	338.00	200.00	BTM# 5800-50	Extremity Kit/With collar
339	Protective Plus IV Cath 24ga	1.69	84.50	50.00	338.00	200.00	BTM# 020040	Adult
340	Professional Iowels 1 case	0.04			20.00	500.00	BTM# 020041	Child
341	Pro-Spint Kit MedSpec	161.64					BTM# 590277	Ambru
342	Quick Trach System	128.57					BTM# 400010	Ring Cutter
343	Quick Trach System	128.57					BTM# 400011	Replacement Blade for Ring Cutter
344	Rescue pump refills/cartridges	7.31			73.10	0.00	BTM# 150300	Fabric Type (312)
345	Ring Cutter and Replacement Blades	5.51					BTM# F0737	Woven type (514)
346	Ring Cutter and Replacement Blades	1.34	5.36	4.00			BTM# 024801	Mac (1)
347	Roehampton Bum Sheets 66"x99" Sterile	5.49			131.76	24.00	BTM# 024802	Mac (2)
348	Roehampton Bum Sheets 66"x99" Sterile Linen	16.18			194.16	12.00	BTM# 024803	Mac (3)
349	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00			BTM# 024804	Mac (4)
350	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00			BTM# 024850	Miller (0)
351	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00			BTM# 024851	Miller (1)
352	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00				
353	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00				
354	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00				

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
355	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00			BTM# 024852	Miller (2)
356	Rusch - Lite Disposable Laryngoscope Blades	3.38	400.00	20.00			BTM# 024853	Miller (3)
357	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10325	2.5 (Uncuffed)
358	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10330	3 (Uncuffed)
359	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10335	3.5 (Uncuffed)
360	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10340	4 (Uncuffed)
361	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10345	4.5 (Uncuffed)
362	Rusch Flex-set ET Tubes	1.44	14.40	10.00	144.00	100.00	BTM# 2113-10350	5 (Uncuffed)
363	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10250	5 (Cuffed)
364	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10255	5.5 (Cuffed)
365	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10260	6 (Cuffed)
366	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10265	6.5 (Cuffed)
367	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10270	7 (Cuffed)
368	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10275	7.5 (Cuffed)
369	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10280	8 (Cuffed)
370	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10285	8.5 (Cuffed)
371	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10290	9 (Cuffed)
372	Rusch Flex-set ET Tubes	1.70	17.00	10.00	170.00	100.00	BTM# 2113-10290	Sick Set/Cuff
373	Rusch Nasopharyngeal Airway - Nasal Trumpet	2.27	22.70	10.00			BTM# 023312	12 French
374	Rusch Nasopharyngeal Airway - Nasal Trumpet	2.06	20.60	10.00			BTM# 2021-14630	14 French
375	Rusch Nasopharyngeal Airway - Nasal Trumpet	2.06	20.60	10.00			BTM# 2021-14635	16 French
376	Rusch Nasopharyngeal Airway - Nasal Trumpet	2.06	20.60	10.00			BTM# 2021-14640	18 French
377	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027620	20 French
378	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027622	22 French
379	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027624	24 French
380	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027626	26 French
381	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027628	28 French
382	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027630	30 French
383	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027632	32 French
384	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027634	34 French
385	Rusch Nasopharyngeal Airway - Nasal Trumpet	1.92	19.20	10.00			BTM# 027636	36 French
386	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58400	Mac (0)
387	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58401	Mac (1)
388	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58402	Mac (2)
389	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58403	Mac (3)
390	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58404	Mac (4)
391	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58600	Miller (0)
392	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58601	Miller (1)
393	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58602	Miller (2)
394	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58603	Miller (3)
395	Rusch Non-Disposable Laryngoscope Blades	10.28					BTM# 2142-58604	Miller (4)
396	Rusch-Lite Disposable Laryngoscope Blades	10.28					BTM# 2142-58500	Miller (1)
397	Salotec Antiseptic 60 hand cleaner	1.08			25.92	24.00	BTM# R3119	4oz
398	Safety Goggles with clear lens	0.95	11.40	12.00			BTM# 29605	
399	Safety Goggles Safety glasses	5.36	53.60	10.00			BTM# 290129	U Vex Astropsec-3000
400	Safe Seal Latex Gloves	0.22	11.08	50.00	110.80	500.00	BTM# 290911	Small
401	Safe Seal Latex Gloves	0.22	11.08	50.00	110.80	500.00	BTM# 290912	Medium
402	Safe Seal Latex Gloves	0.22	11.08	50.00	110.80	500.00	BTM# 290913	Large
403	Safe Seal Latex Gloves	0.22	11.08	50.00	110.80	500.00	BTM# 290914	X Large
404	Safe Seal Latex Gloves	0.22	11.08	50.00	110.80	500.00	BTM# SY-911XXL	XX Large
405	Sam Seal	18.09	904.50	50.00			BTM# 1216-01104	
	Sam Seal Non Vented	22.46	1123.00	50.00			Per Clarity Issues Doc 1/30/2013	
406	Sam Spint (Flex All Spint)	5.28					BTM# 533-MS-SPLINT	Generic Sam Spint
407	Sam Spint	6.34			380.40	60.00	BTM# 661121	Original
408	Sam Spint Pe vic Immobilizer	57.46					BTM# 665566	
409	Sharps Shuttle	1.55			1.55	24.00	BTM# 290970	case of 24
410	Silver Swaddler Gdotlight Newborn Blanket	2.97					BTM# 0345	Aluminum
411	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021525	2.5
412	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021530	3
413	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021535	3.5
414	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021540	4
415	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021545	4.5
416	Sick Set ET Tubes	3.94	39.40	10.00			BTM# 021550	5

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
417	Slick Set ET Tubes	3.94	39.40	10.00			BIM# 021555	5.5
	Slick Set ET Tubes	4.46	44.60	1.00			BIM# 021750	5.0 cuffed
	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021755	5.5 cuffed
418	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021760	6
419	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021765	6.5
420	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021770	7
421	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021775	7.5
422	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021780	8
423	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021785	8.5
424	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021790	9
425	Slick Set ET Tubes	4.46	44.60	10.00			BIM# 021795	9.5
426	Sodium Chloride 0.9% for irrigation 250ml	0.85			30.60	36.00	BIM# 601322	
427	Self-pack Q&R Kit						Per Clarity Issues Doc 1/30/2013	Obstetrical Kit
	3M Blade Model 9660	3.98			199.00	50.00	Per Clarity Issues Doc 1/30/2013	
428	Splint 15" padded board splint	2.04			306.00	150.00	BIM# 660012	Wood
429	Splint 18" padded disposable cardboard	1.26			31.50	25.00	BIM# 56-1530	Cardboard with Foam
430	Splint 18" padded	3.24					BIM# 56-1618	Wood with Full Foam
431	Splint 24" padded board splint	3.48					BIM# 660016	Wood with Full Foam
432	Splint 36" disposable cardboard leg/ankle splint 34"	2.39			117.11	49.00	BIM# 660004	
433	Splint 36" padded board splint	3.64			273.00	75.00	BIM# 660013	
434	S-Scarf III Portable Suction Unit (complete)	506.10					BIM# 594400	
435	S-Scarf III Replacement Battery	32.05					BIM# 2223-05598	
436	S-Scarf 9	730.00					BIM# 592109	
437	S-Scarf Model 2310	945.00					BIM# 592310BV	VX2 Variable Regulator with Bracket
438	S-Scarf Model 2310	N/A					BIM# NoBid	VX2 Portable with 2 position Regulator
439	S-Scarf Model 2310	N/A					BIM# NoBid	VX2 2 Position Regulator/Bracket
440	S-Scarf Model 2310	720.21					BIM# 592310V	VX2 Portable with Variable Regulator
441	Stat Pads II (AED Plus)	51.07					BIM# 230802	Adult
442	Stat Pads II (AED Plus)	114.12					BIM# 230810	Pedi
443	Stethoscope - Adscope 609	12.61					BIM# 5400-609FG	Frosted Glacier
444	Stethoscope	68.54					BIM# 172205	Ullmann Classic II S.E. (Navy)
445	Sterile Gloves (non-latex)	1.05	26.25	25.00	105.00	100.00	BIM# 15007	Small
446	Sterile Gloves (non-latex)	1.05	26.25	25.00	105.00	100.00	BIM# 15008	Medium
447	Sterile Gloves (non-latex)	1.05	26.25	25.00	105.00	100.00	BIM# 15009	Large
448	Sterile Gloves (non-latex)	3.79			189.64	50.00	BIM# 30885	XX-Large
449	Sterile Gloves (non-latex)	3.57			178.64	50.00	BIM# 30890	
450	Stylette 14 French for use with 7mm-10mm ET	1.60			32.00	20.00	BIM# 533-MS-ETS400EA	
451	Suction Bulb	0.60			30.00	50.00	BIM# 044-AS00533SEA	
452	Suction Cath 10fr	0.35			17.50	50.00	BIM# 320010	
453	Suction Catheter Set (BIG YANK)	10.48				10.00	BIM# 218-0034920UEA	Con-Med
454	Suction Easy Disp. Suction unit with adapter and catheter	23.67					BIM# 590412A	
455	Suction Tip Big Slick	1.50			75.00	50.00	BIM# 594241	
456	Suction Tubing 9/32 - 6ft	0.95			47.50	50.00	BIM# 3243200	
457	Sun-Med Green Line D (Medium)	35.12					BIM# 021100	Macintosh 1
458	Sun-Med Green Line D (Medium)	35.12					BIM# 022220	Macintosh 2
459	Sun-Med Green Line D (Medium)	35.12					BIM# 023300	Macintosh 3
460	Sun-Med Green Line D (Medium)	35.12					BIM# 024400	Macintosh 4
461	Sun-Med Green Line D (Medium)	35.12					BIM# 025000	Miller 0
462	Sun-Med Green Line D (Medium)	35.12					BIM# 026100	Miller 1
463	Sun-Med Green Line D (Medium)	35.12					BIM# 027200	Miller 2
464	Sun-Med Green Line D (Medium)	35.12					BIM# 028300	Miller 3
465	Sun-Med Green Line D	N/A					BIM# NoBid	Vinyl Zipper Case
466	Sun-Med Green Line D Fiber Optic Disposable Blade	52.25					BIM# 5-5333-57	Kit including Case
467	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83020EA	Macintosh 2
468	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83030EA	Macintosh 3
469	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83040EA	Macintosh 4
470	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83100EA	Miller 0
471	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83110EA	Miller 1
472	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83120EA	Miller 2
473	Sun-Med Green Line D Fiber Optic Disposable Blade (Medium)	3.70			74.00	20.00	BIM# 301-83130EA	Miller 3
474	Green Line D Fiber Optic Disposable Blade (Generic)	3.27			65.80	20.00	BIM# 004551002	Macintosh 2
475	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004551003	Macintosh 3

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
476	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004551004	Macintosh 4
477	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004550000	Miller 0
478	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004550001	Miller 1
479	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004550002	Miller 2
480	Green Line D Fiber Optic Disposable Blade (Generic)	3.29			65.80	20.00	BIM# 004550003	Miller 3
481	Sun-Med Green Line Fiber Optic Handle (Medium)	39.24					BIM# 024111	C Batteries
482	Surgical Dressing 5x9 sterile gauze	0.10	2.55	25.00	40.60	400.00	BIM# 085590	
483	Surgical Dressing 8x10 sterile gauze	0.17	3.35	20.00	53.60	320.00	BIM# 085810	
484	Surgical Hair Clipper (3M) Disposable Shaver Head	56.84					BIM# 179661	
485	Surgical Hair Clipper 3M (9661) with charger	112.54					BIM# J2260	
486	Surgical Hair Clipper Charger	56.84					BIM# 179662	
487	Syringe 10cc luer lock without needle	0.11	11.44	100.00	91.52	800.00	BIM# 420266	
488	Syringe 10cc luer lip with needle	0.17	16.50	100.00	132.00	800.00	BIM# 626253	21ga 1 1/2 inch
489	Syringe 10cc with needle	N/A					BIM# NoBid	InviroSnap 21ga with 1 1/2 ga
490	Syringe 1cc TB with needle	0.24	23.54	100.00			BIM# 446-100019BX	InviroSnap
491	Syringe 1cc TB syringe	0.09	9.00	100.00	144.00	1600.00	BIM# 1631-42225	W25ga 5/8 Needle
492	Syringe 35cc luer lock without needle	0.39	19.50	50.00	97.50	250.00	BIM# 1633-29030	
493	Syringe 3cc luer lock without needle	0.05	5.00	100.00	120.00	2400.00	BIM# 1633-30303	
494	Syringe 3cc with 21 gauge needle	0.08	7.50	100.00	120.00	1600.00	BIM# 1631-30921	1 1/2 inch (100 to a box)
495	Syringe 5cc luer lock without needle	0.08	8.00	100.00	160.00	2000.00	BIM# 1633-05305	
496	Syringe 5cc luer lip with needle (bid only with 21ga needle)	0.59	29.64	50.00	237.12	400.00	BIM# G4006	21 gauge 1 1/2 inch
497	Syringe 5cc with needle	N/A					BIM# NoBid	InviroSnap-21ga 1 1/2 inch
498	Syringe 60cc luer lip without needle	0.42	10.54	25.00	63.24	150.00	BIM# 620300	21 gauge 1 1/2 inch
499	System 5 B/P Cuff Kit (ADC)	98.25					BIM# 740LF	Blue
500	Technol Fluid Shield Surgical Masks with face shield- slip over the ear type	0.55	13.72	25.00	109.76	200.00	BIM# 276-1560BX	25 box
501	Tegaderm IV Dressing .3m	0.31	30.95	100.00	123.80	400.00	BIM# 081624	2.375 x 2.75
502	Temp Probe Covers (Welch Allyn Sure Temp)	0.04	1.02	25.00	40.80	1000.00	BIM# 175031	
503	Therma Scan Protective covers	0.07	13.33	200.00	53.32	800.00	BIM# 170800	
504	Therma Scan Thermometer--electronic digital type handheld with all accessories	174.99					BIM# 04000-200	Pro-4000
505	Thermometer-Welch Allyn Sure Temp 690	258.12					BIM# 179400	With Wall Holder
506	Thomas SI ET Tube Stabilizer	2.53			253.00	100.00	BIM# 020500	Adult
507	Thomas SI-ET Tube Stabilizer	2.53			253.00	100.00	BIM# 020400	Child
508	TigerStraps	34.12	68.23	2.00			BIM# IS101	Laerdal
509	Toumiquet Latex Free 3/4 x 19	6.55	32.75	5.00	131.00	20.00	BIM# 1880-42523	
510	Tracheostomy O2 Mask	1.32			64.00	50.00	BIM# 355-245-EEA	
511	Tracton SpInl	240.64					BIM# 5423316	Hare Femo Kit Adult/Child
512	Tracton SpInl	259.30					BIM# 560300	Sager Bilateral S-304
513	Tracton SpInl	139.29					BIM# 566512	Child
514	Tracton SpInl	139.29					BIM# 566514	Adult
515	Trauma Dressing 10X30	0.76			38.00	50.00	BIM# 536-NON21459EA	
516	Triage Tags (Std Field Tag)	0.76	38.00	50.00			BIM# 600001	
517	Triangular Bandages Jumbo	0.26			62.40	240.00	BIM# 533-MS-TR140EA	40 X 40 X 56
518	Unistick Safety Lance! (100 box)	0.21	20.57	100.00			BIM# 675-A11042	A11042
519	Urinol - disposable	0.44			22.00	50.00	BIM# 721-H140H-01EA	1000cc Capacity
520	Utility Blanket 60x90	4.85			38.80	8.00	BIM# 3272-53578	
521	Vacuum Mattress (Pediatric)	169.64					BIM# 562044	
522	Vacuum Mattress Deluxe (Large)	749.69					BIM# 563000	Hartwell
523	Vacuum Mattress Strap	32.46					BIM# M113A	Hartwell
524	Vacuum Mattress with Pump (Pediatric)	135.64					BIM# 560012	Hartwell
525	Ventilation circuit	4.98			74.70	15.00	BIM# 533764	Cardinal Health 100367
526	V-Vac Adapter Tips	5.39	21.54	4.00			BIM# 590300	(sold 4 to a pkg)
527	V-Vac Replacement Cartridge	16.55			1324.00	80.00	BIM# 590200	
528	V-Vac Suction Catheters	2.54	10.15	4.00			BIM# 590400	
529	V-Vac Suction Kit	67.17			1007.55	15.00	BIM# 590100	Complete
530	Whistle Tip Suction Catheter	0.17			8.50	50.00	BIM# 533-MS-SC08EA	8 French
531	Whistle Tip Suction Catheter	0.17			8.50	50.00	BIM# 533-MS-SC16EA	16 French
532	Yankauer-Suction Tip	0.45			22.50	50.00	BIM# 197-005-2001CEA	
533	Yankauer - suction catheter w/control vent and tubing	1.05			21.00	20.00	BIM# 533-MS-YK20EA	
534	Zell-1400/1800-M-Series-Battery						Per Clarity Issues Doc 1/30/2013	

	MEDICAL SUPPLIES	EACH	BOX	BOX QUANTITY	CASE	CASE QUANTITY	VENDOR'S COMMENTS	City Comments
535	Zo4 M Series EKG Paper						Per Clarity Issues Doc 1/30/2013	50mm
536	Zo4 M Series EKG Paper						Per Clarity Issues Doc 1/30/2013	80mm
537	Zo7 Multi-Function Electrodes						Per Clarity Issues Doc 1/30/2013	Adult
538	Zo7 Multi-Function Electrodes						Per Clarity Issues Doc 1/30/2013	Pedi
539	Zo7 Pacing Pads						Per Clarity Issues Doc 1/30/2013	Adult
540	Zo7 Pacing Pads						Per Clarity Issues Doc 1/30/2013	Pedi
541	Zo7 Podi-Pads (Electrodes Multi-Function)						Per Clarity Issues Doc 1/30/2013	
542	Zo7 Peds/Adult Airway Adapter						Per Clarity Issues Doc 1/30/2013	
543	Zo7 Stet-Pods Adult						Per Clarity Issues Doc 1/30/2013	

EMERGENCY MEDICAL SERVICE SUPPLIES AGREEMENT

This Emergency Medical Service Supplies Agreement (herein "Agreement") is made and entered into by and between the City of Cedar Hill, Texas, a Texas home rule municipal corporation (herein "City"), and Bound Tree Medical, LLC, an Ohio limited liability company (herein "Bound Tree") and shall be effective as of the date of execution set forth herein.

WITNESSETH

WHEREAS, Bound Tree is a distributor of medical and pharmaceutical supplies; and

WHEREAS, the City operates an emergency medical service ("EMS") by and through its Fire Department; and

WHEREAS, the City's EMS requires the use of certain medical and pharmaceutical supplies ("medical supplies") to preserve and protect the public health and safety of the City's residents visitors; and

WHEREAS, Bound Tree bid on and was awarded a contract by the City under which Bound Tree agreed to sell medical supplies to the City's EMS for the period of March 1, 2013 through February 28, 2014 (the Original Agreement); and

WHEREAS, the Original Agreement was renewed for each of three optional one-year renewal terms; and

WHEREAS, the final renewal term of the Original Agreement ends on February 28, 2017; and

WHEREAS, the City desires to continue to procure medical supplies, by and through the City's EMS, to preserve and protect the public health and safety of its residents and visitors; and

WHEREAS, Bound Tree desires and agrees to continue supply the City's EMS with medical supplies subject to the terms of this Agreement.

NOW, THEREFORE, in consideration of the premises and covenants and conditions herein, the City and Bound Tree agree as follows:

1. Purchase and Sale of Medical Supplies. Bound Tree agrees to sell, and City agrees to purchase, medical supplies for the City's EMS pursuant to all of the terms and conditions of the Contract Documents as defined herein. In exchange for the City's use of Bound Tree as the City's medical supplies vendor, when said medical supplies can be delivered timely, Bound Tree will provide requested medical supplies to the City's EMS at the agreed-upon price and in the agreed-upon quantities as set forth in the Contract Documents.

EMERGENCY MEDICAL SERVICE
SUPPLIES AGREEMENT

Page 1

2. Contract Documents. The Contract Documents referenced in and made part of this Agreement shall consist of the following:

- a. this Agreement
- b. the Invitation to Bid & Bid Specifications
- c. Bound Tree's Bid Quotation
- d. any written modifications or change orders agreed to by the City and Bound Tree.

The Invitation to Bid and Bid Specifications along with Bound Tree's Bid Quotation are attached hereto as Exhibit A and incorporated herein for all purposes.

3. Term. The term of this Agreement shall be one year beginning on March 1, 2017 and ending on February 28, 2018. This Agreement includes three (3) optional one-year renewal terms. The City shall have the right to renew this Agreement for any or all of the optional renewal terms under the same terms and conditions of this Agreement.

4. Termination. Notwithstanding the provisions in Section 3 above, the City may terminate this Agreement for any reason or no reason at all by providing Bound Tree with ninety (90) days prior written notice.

5. Payments. The City agrees to pay Bound Tree per the terms of the Contract Documents for orders from and delivered to the City's EMS.

6. Delivery. The City and Bound Tree agree that the City is not obligated to order a specific quantity of medical supplies and cannot supply Bound Tree with a forecast of the volume of medical supplies that the City's EMS will order. The City will, upon reasonable request from Bound Tree, and without the City binding itself in any way, provide short-term estimates of needed medical supplies to Bound Tree.

7. Acceptance of Medical Supplies. Acceptance or approval by the City or the City's EMS of any medical supplies under this Agreement shall not in any way relieve Bound Tree of responsibility for the any technical accuracy or quality of the fulfillment of any order for medical supplies from the City's EMS. The City's review, approval or acceptance of or payment for any medical supplies shall not be construed to operate as a waiver of any of the City's rights under this Agreement or any cause of action arising out of the performance or non-performance of this Agreement.

8. Indemnification. Bound Tree shall indemnify, save, and hold harmless the City and the City's EMS, its officials, officers, agents and employees with respect to any claims or demands, actions, damages, costs and expenses, including, without limitation, attorneys' fees and costs of litigation, arising from the death or injury of any person whomsoever, or any loss,

damage or destruction of any property whatsoever, resulting directly or indirectly from any intentional, negligent or grossly negligent act, error or omission of the Bound Tree, its agents, servants, employees or other persons acting on Bound Tree's behalf and arising from or related to Bound Tree's performance under this Agreement. This indemnity shall not be terminated or otherwise affected by reason of the termination or expiration of this Agreement.

9. Relationship of Parties. Bound Tree will use its own means and manner to perform its obligations under this Agreement and shall be deemed an independent contractor of the City. In no event shall this Agreement or any performance thereunder be deemed or interpreted as creating a principal-agent or joint venture relationship between the parties hereto. Neither party shall hold itself out as an agent of the other party, nor shall a party incur any indebtedness or obligations in the name of, or which shall be binding upon, the other party.

10. Notices. All notices and communications under this Agreement to be mailed or delivered to the City shall be sent to the address of the City EMS as follows, unless and until Bound Tree is otherwise notified:

EMS Chief
Cedar Hill Fire Department
1212 W. Belt Line Rd.
Cedar Hill, Texas 75104

All notices and communications under this Agreement to be mailed or delivered to Bound Tree shall be sent to the address of the Bound Tree as follows, unless and until the City is otherwise notified:

Bound Tree Medical, LLC
P.O. Box 8023
5000 Tuttle Crossing Blvd.
Dublin, OH 43016

11. Assignment. This Agreement shall not be assignable in whole or in part without the written consent of the City.

12. Dispute Resolution. If a dispute arises between the parties relating to this Agreement, the parties agree to use the following procedure prior to either party pursuing other available remedies:

a. A meeting shall be held promptly between the parties, attended by individuals with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute.

b. If, within thirty (30) days after such meeting, the parties have not succeeded in

negotiating a resolution of the dispute, they will appoint a mutually-acceptable mediator and agree to attend one, half day mediation with said mediator in an attempt to resolve the dispute. The parties shall share the fees of the mediator equally.

13. WAIVER OF RIGHT TO TRIAL BY JURY. BOUND TREE AND CITY AGREE THAT ALL DISPUTES ARISING FROM OR RELATED TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY AND ALL REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, IF ANY, WHICH CANNOT BE RESOLVED THROUGH INFORMAL NEGOTIATIONS OR MEDIATION AS SET FORTH IN SECTION 12 ABOVE, SHALL BE RESOLVED BY WAY OF A TRIAL BEFORE A JUDGE OF A COURT OF COMPETENT JURISDICTION. BOUND TREE AND CITY EACH HEREBY WAIVE ANY AND ALL RIGHTS TO A TRIAL BY JURY. BOUND TREE AND CITY EACH HEREBY ACKNOWLEDGE AND REPRESENT THAT THEY HAVE KNOWINGLY AND VOLUNTARILY WAIVED THEIR RESPECTIVE RIGHTS TO A JURY TRIAL WITH RESPECT TO ANY LEGAL MATTER OR DISPUTE ARISING FROM OR RELATED TO THIS AGREEMENT.

14. Severability. Should any word, phrase, sentence, paragraph or other provision or portion of this Agreement be construed to be unlawful or unenforceable by a court of competent jurisdiction, such circumstance shall not affect the validity of the remaining portions of this Agreement which shall remain in full force and effect.

15. Binding Effect. This Agreement shall be binding upon and enure to the benefit of the parties hereto and their respective permitted successors and permitted assigns.

16. Governing Law and Venue. This Agreement shall be governed by, and its provisions construed in accordance with, the laws of the State of Texas. Venue for any action arising from or related to this Agreement shall be the State District Courts of Dallas County, Texas.

17. Amendment and Waiver. No amendment or waiver of any provision of this Agreement, and no consent to any departure herefrom, shall be effective or binding unless and until set forth in a writing signed by each party, and then any such waiver or consent shall be effective only in a specific instance and for the specific purpose for which it was given. No notice or any other communication given by one party to the other party shall be construed to be or constitute an approval or ratification by the other party of any matter contained or referred to in such notice, unless the same be consented to by the other party in writing.

18. Entire Agreement. This Agreement constitutes the entire agreement between the

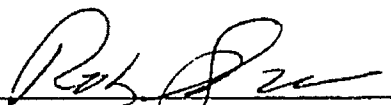
EMERGENCY MEDICAL SERVICE
SUPPLIES AGREEMENT

parties, and there exist no other written or oral understandings, agreements or assurances with respect to any matters except as set forth herein. Unless expressly stated, this Agreement confers no rights to or upon any person or entity that is not a party hereto.

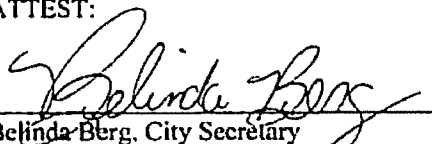
19. Legal Construction. Unless the context requires otherwise, words of the masculine gender shall be construed to include correlative words of feminine and neuter genders and vice versa, and words of the singular number shall be construed to include correlative words of the plural number and vice versa. The parties agree that this Agreement or any provision of this Agreement shall not be construed in favor of or against any party on the basis that the party did or did not author this Agreement or any provision hereto. This Agreement and all of the terms and provisions herein shall be liberally construed to effectuate the purposes set forth herein and to sustain the validity of this Agreement.

EXECUTED this 24 day of January, 2017.

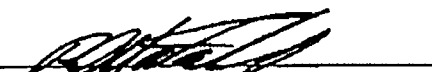
CITY OF CEDAR HILL, TEXAS:

By: 
Rob Franke, Mayor

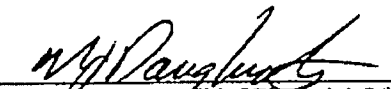
ATTEST:


Belinda Berg, City Secretary

APPROVED AS TO FORM:


Ron G. MacFarlane, Jr., City Attorney

BOUND TREE MEDICAL, LLC:

By: 
Mark Dougherty, Chief Financial Officer

EMERGENCY MEDICAL SERVICE
SUPPLIES AGREEMENT

Page 5



TOWN COUNCIL AGENDA ITEM NO. 7

CONSENT ITEM

DATE: October 15, 2018

FROM: Tiffany Bruce, P.E., Executive Director of Public Works, Town Engineer

ITEM: Consider approval of Amendment No. 1 to the Fiscal Year 2018-2019 Capital Improvement Program.

BACKGROUND INFORMATION: The Fiscal Year (FY) 2018-2019 Capital Improvement Program (CIP) was approved by Town Council on September 17, 2018. Amendment No. 1 is proposed to increase funding to the General Capital budget and to the Utility Capital budget. The proposed CIP Amendment No. 1 for FY 2018-2019 would increase the currently adopted General Capital budget expenditures from \$24,292,000 to \$25,502,000, and the Utility Capital budgeted expenditures will increase expenditures from \$27,500,000 to \$27,685,000.

FISCAL IMPACT:

Proposed CIP:

FY 2018-2019:	General Capital Projects	\$25,502,000
	Utility Capital Projects	\$27,685,000

Five-Year CIP Plan:	General Capital Projects	\$202,357,085
	Utility Capital Projects	\$168,462,690

Proposed Funding: Upon approval of this item, transfers will be required to adjust the project funding as shown on the attached FY 2018-2019 CIP Amendment No. 1 Changes.

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

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Project Modification Listing
2. CIP Amendment 1 Changes
3. CIP Amendment 1

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

Project Modification Listing
CIP Amendment 1

Attachment 1
Oct 15, 2018

Street

- Morriss Road Improvements – **\$155,000** FY2018-19
 - o Add Morriss Road Improvements (Turn lane, North of FM1171) to the existing Morriss Road Improvements CIP project for implementation, \$155,000 of General Funds from 2018-19 Decision Package. The approved decision package provides intersection improvements at Valley Ridge Blvd. and Morriss Road. This includes lengthening the southbound left turn lane and the addition of a second westbound through lane. It also includes pedestrian crosswalk enhancements at Kirkpatrick Lane and Morriss Road.
- Peters Colony - Quail Run Roundabout – **\$200,000** FY2018-19, \$500,000 FY2019-20
 - o Convert the existing Peters Colony/Quail Run/Auburn intersection to a modern roundabout. The conversion will provide a safer trail crossing at this intersection due to the visibility issues of the existing intersection. This conversion will also provide for additional traffic flow through this intersection and make for safer turning movements. \$200,000 Project Savings, and \$500,000 of Debt.
- Transportation Model Update and Level of Services (LOS) Mapping – **\$75,000** FY 2018-19
 - o Consulting firm to perform the town wide traffic analysis including existing and projected traffic counts; and Level of Service Analysis along the Town's Thoroughfare streets and update the Town's Transportation Model.

Street Recon

- Old Gerault Road Reconstruction – **\$120,000** FY 2018-19
 - o Add an additional \$120,000 of Street Reconstruction funds, to purchase Right Of Way along the south side of the Lakeside Ranch Business Park Addition. The additional ROW allows for continuous paved access to the PPG Building and the Villas of Southgate Phase III developments and provides for sufficient ROW for the eventual improvement of the Gerault Road and Old Gerault Road intersection.

Facilities

- Fire Station No. 1 Facility Upgrades – **\$520,000** FY 2018-19
 - o Add additional funds to award higher than expected bid responses for Phase 2 of the project, with \$520,000 of approved Decision Packages.
- Town Hall – **\$140,000** FY2018-19
 - o Add additional funds to cover the cost the Town Hall Cellular Service Boosters, and the Emergency Radio Response System, \$140,000 of Project Savings.

Water

- Bruton Orand Elevated Storage Tank Chloramine System – **\$150,000** FY2018-19
 - o New project to add a Chloramine System to the water tank, with a Budget of \$150,000 of Project Savings.
- Lakeside Bus Dist. Water Reuse Design – **\$10,000** FY2018-19
 - o Project Savings to cover additional costs of Design, for Engineering Design Firm to attend and support the Town at Public Hearings.
- Woodbine Water Line Replacement – **\$25,000** FY2018-19
 - o Address required Water Line Improvements.

Page 99 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STREET PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's		AUTHORIZED UNISSUED GO's		NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028									2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Aberdeen Drive Phase I (2 Lanes FM 2499 to Lake Forest) **	\$ 1,650,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,650,000	\$ 1,300,000	0,2,5	\$ 350,000		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Aberdeen Drive Phase II (2 additional Lanes FM 2499 to 700 ft. North of Spinks) **	-	-	-	-	2,463,000	-	-	2,463,000	1,063,000	0,2,5	-		-		1,400,000	-	-	-	-	1,400,000	-
ADA Transition Plan and Implementation **	648,000	500,000	150,000	150,000	150,000	150,000	-	1,748,000	13,000	2	635,000		-		1,100,000	500,000	150,000	150,000	150,000	150,000	-
Churchill Drive (FM 2499 to Yucca) **	1,000,000	-	-	-	-	-	-	1,000,000	1,000,000	0,2,7	-		-		-	-	-	-	-	-	-
Cowboy Lane **	-	-	-	-	-	-	433,337	433,337	193,337	3	-		-		240,000	-		-	-	-	240,000
Denton Creek Boulevard Bridge (Graham Branch crossing)	310,000	6,590,000	-	-	-	-	-	6,900,000	1,150,000	0,1,2	-		-		5,750,000	5,750,000	-	-	-	-	-
Firewheel Drive (complete 4 lane gap, to 340 feet north of Garden Rd) **	555,000	-	-	-	-	-	-	555,000	555,000	0,2	-		-		-	-	-	-	-	-	-
FM 1171 at FM 2499 Eastbound Right Turn Lane **	885,000	-	-	-	-	-	-	885,000	785,000	2,7	100,000		-		-	-	-	-	-	-	-
FM 1171 at FM 2499 Westbound Right Turn Lane **	998,000	-	-	-	-	-	-	998,000	998,000	2,7	-		-		-	-	-	-	-	-	-
FM 1171 at River Walk Dr Intersection Improvements **	350,000	600,000	-	-	-	-	-	950,000	350,000	0,2,3,5,7	-		-		600,000	600,000	-	-	-	-	-
FM 2499 at FM 407 Intersection Improvements **	-	400,000	1,300,000	-	-	-	-	1,700,000	1,400,000	1,2	300,000		-		-	-	-	-	-	-	-
FM 2499 at Lakeside North Right Turn Lane **	100,000	200,000	-	-	-	-	-	300,000	200,000	0,2	100,000		-		-	-	-	-	-	-	-
FM 2499 at Waketon Intersection Improvements	-	360,000	1,240,000	-	-	-	-	1,600,000	1,000,000	2,7	-		-		600,000	-	600,000	-	-	-	-
FM 2499 Roadway, Traffic Signal, and Drainage	8,200,000	-	-	-	-	-	-	8,200,000	7,000,000	1,2	1,200,000		-		-	-	-	-	-	-	-
Garden Ridge Through Lane (at FM 3040)	-	60,000	550,000		-	-	-	610,000	60,000	0,2	-		-		550,000	-	550,000		-	-	-
I 35W Interchange at Denton Creek	-	-	-	-	-	-	5,000,000	5,000,000	5,000,000	0,1,5	-		-		-	-	-	-	-	-	-
Impact Fee Update	-	-	120,000	-	-	-	-	120,000	120,000	0	-		-		-	-	-	-	-	-	-
Kirkpatrick Lane Phase III (South of FM 1171)	-	-	-	-	800,000	7,918,000	-	8,718,000	4,975,000	0,1,2	-		-		3,743,000	-	-	-	-	3,743,000	-
Lake Forest Boulevard Roadway Improvements	2,000,000	-	-	-	-	-	-	2,000,000	600,000	0,2	1,400,000		-		-	-	-	-	-	-	-
Lakeside Dual Left turn Lane at Gerault **	-	-	-	200,000	-	-	-	200,000	100,000	0,2,5	-		-		100,000	-		100,000	-	-	-
Lakeside Parkway Capacity Improvements **	-	-	-	540,000	6,840,000	-	-	7,380,000	7,380,000	0,1,2	-		-		-	-		-	-	-	-
Lusk/Red Oak East-West Connector	-	-	-	-	-	-	7,232,000	7,232,000	732,000	0,2	-		-		6,500,000	-	-	-	-	-	6,500,000
Morriss Road Improvements **	650,000	125,000	-	-	-	-	-	775,000	650,000	0,1,2	-		-		125,000	125,000	-	-	-	-	-
Morriss Road Improvements **	650,000	280,000	-	-	-	-	-	930,000	805,000	0,1,2,4	-		-		125,000	125,000	-	-	-	-	-
Peters Colony Roundabout ** - NEW	-	200,000	500,000	-	-	-	-	700,000	200,000	2	-		-		500,000	-	-	500,000	-	-	-
Rippy Road (Waketon to FM 2499)**	800,000	350,000	2,650,000	-	-	-	-	3,800,000	2,115,000	2,7	-		-		1,685,000	-	1,685,000	-	-	-	-
Roadway Amenities	388,083	90,000	90,000	90,000	90,000	90,000	-	838,083	193,083	2,4	195,000		-		450,000	90,000	90,000	90,000	90,000	90,000	-
Sidewalk Links **	961,000	150,000	-	-	-	-	-	1,111,000	1,111,000	2,4	-		-		-	-	-	-	-	-	-
Skillern Road (Flower Mound Rd to Riverhill) **	905,000	-	-	-	-	-	-	905,000	85,561	2,3	819,440		-		-	-	-	-	-	-	-
Stonecrest Road (500 ft. North of Canyon Falls Dr. to Town Limit) **	1,050,000	-	-	-	-	-	-	1,050,000	150,000	2,5	900,000		-		-	-	-	-	-	-	-
Transportation Model Update and LOS Mapping - NEW	-	75,000	-	-	-	-	-	75,000	75,000	2	-		-		-	-	-	-	-	-	-
Waketon Road **	5,500,000	460,000	-	-	-	-	-	5,960,000	4,670,000	2,3,5,7	830,000		-		460,000	460,000	-	-	-	-	-
Windsor Roundabout Connection	-	200,000	-	-	-	-	-	200,000	200,000	2,4	-		-		-	-	-	-	-	-	-
SUBTOTAL	\$ 26,950,083	\$ 10,085,000	\$ 6,100,000	\$ 980,000	\$ 10,343,000	\$ 8,158,000	\$ 12,665,337	\$ 75,281,420	\$ 45,148,981		\$ 6,829,440		\$ -		\$ 23,303,000	\$ 7,525,000	\$ 3,075,000	\$ 340,000	\$ 240,000	\$ 5,383,000	\$ 6,740,000
SUBTOTAL	\$ 26,950,083	\$ 10,515,000	\$ 6,600,000	\$ 980,000	\$ 10,343,000	\$ 8,158,000	\$ 12,665,337	\$ 76,211,420	\$ 45,578,981		\$ 6,829,440		\$ -		\$ 23,803,000	\$ 7,525,000	\$ 3,075,000	\$ 840,000	\$ 240,000	\$ 5,383,000	\$ 6,740,000

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 100 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

SIGNAL PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's		AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028								2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
College Parkway at Timber Creek	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	250,000	\$ 250,000	0,2,4	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruton Orand at Kenwood	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-		-	-	-	-	-	-	-	-
Bruton Orand at Quail Run	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-		-	-	-	-	-	-	-	-
FM 1171 at Canyon Falls Blvd	-	-	250,000	-	-	-	-	250,000	50,000	0,2	-		-	200,000	-	200,000	-	-	-	-
FM 2499 at College Parkway	340,000	-	-	-	-	-	-	340,000	340,000	0,2,7	-		-	-	-	-	-	-	-	-
FM 2499 at Silveron	240,000	-	-	-	-	-	-	240,000	240,000	0,2	-		-	-	-	-	-	-	-	-
FM 407 at Browning - Reconstruction	25,000	300,000	-	-	-	-	-	325,000	25,000	2,4	-		-	300,000	300,000	-	-	-	-	-
Garden Ridge at Forest Vista	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-		-	-	-	-	-	-	-	-
Garden Ridge at Kirkpatrick	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-		-	-	-	-	-	-	-	-
Lakeside at Silveron	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4,5	-		-	-	-	-	-	-	-	-
Morriss at Eaton	-	-	-	250,000	-	-	-	250,000	250,000	2,4	-		-	-	-	-	-	-	-	-
Peters Colony at Churchill	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-		-	-	-	-	-	-	-	-
Traffic Detection Rehabilitation	500,000	125,000	125,000	125,000	125,000	125,000	-	1,125,000	-	2	500,000		-	625,000	125,000	125,000	125,000	125,000	125,000	-
Traffic Signal Rehabilitation	-	-	-	-	-	-	500,000	500,000	-	2	-		-	500,000	-	-	-	-	-	500,000
U.S 377 at Canyon Falls Drive	275,000	-	-	-	-	-	-	275,000	275,000	0,2,4	-		-	-	-	-	-	-	-	-
SUBTOTAL	\$ 1,380,000	\$ 425,000	\$ 375,000	\$ 375,000	\$ 125,000	\$ 125,000	\$ 2,250,000	\$ 5,055,000	\$ 2,930,000		\$ 500,000		\$ -	\$ 1,625,000	\$ 425,000	\$ 325,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 500,000

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STREET RECONSTRUCTION PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's		AUTHORIZED UNISSUED GO's		NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028										2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Flower Mound Road Reconstruction Phase II (Old Settlers to Bruton Orand) **	-	-	-	-	-	-	2,344,000	2,344,000	2,344,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Forest Vista Reconstruction Phase II (Morris to Chancellor) **	-	335,000	2,400,000	-	-	-	-	2,735,000	2,735,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Forest Vista Reconstruction Phase III (Chancellor to Lake Shore) **	-	-	-	-	350,000	2,300,000	-	2,650,000	2,650,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Grady Court Reconstruction (Homestead to Culdesac)	-	675,000	-	-	-	-	-	675,000	675,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Lopo Road Reconstruction (River oak to 330-ft west of Garden Ridge) **	-	-	950,000	-	-	-	-	950,000	950,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Morris Road Panel Replacement (FM 3040 to FM 1171) **	-	4,040,000	-	-	-	-	-	4,040,000	4,040,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Old Gerault Road Reconstruction	-	250,000	-	-	-	-	1,200,000	1,450,000	1,450,000	8.2	-	-	-	-	-	-	-	-	-	-	-	-
Old Gerault Road Reconstruction	-	370,000	-	-	-	-	1,200,000	1,570,000	1,570,000	8.2	-	-	-	-	-	-	-	-	-	-	-	-
Old Long Prairie Road Reconstruction **	1,100,000	-	-	-	-	-	-	1,100,000	1,100,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase II (5000 Timbercreek Rd. to Homestead St.) **	-	-	250,000	2,000,000	-	-	-	2,250,000	2,250,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase III (Homestead St. to Kirkpatrick Ln.) **	-	-	-	300,000	2,925,000	-	-	3,225,000	3,225,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase IV (Timber Creek Bridge to Eaton) **	-	-	-	-	-	-	3,600,000	3,600,000	3,600,000	8	-	-	-	-	-	-	-	-	-	-	-	-
West Windsor and Mulberry Connection **	100,000	-	-	-	-	-	-	100,000	100,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Woodbine Street Reconstruction (Timber Creek to Hieden Ct.) **	1,350,000	-	-	-	-	-	-	1,350,000	1,350,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Wood Creek Circle Reconstruction (Wood Creek Dr to end of Cul-de-Sac) **	-	-	400,000	-	-	-	-	400,000	400,000	8	-	-	-	-	-	-	-	-	-	-	-	-
Yucca Drive Reconstruction (Sagebrush to 700 ft South of FM 1171) **	1,300,000	-	-	-	-	-	-	1,300,000	1,300,000	8	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 3,850,000	\$ 5,300,000	\$ 4,000,000	\$ 2,300,000	\$ 3,275,000	\$ 2,300,000	\$ 7,144,000	\$ 28,169,000	\$ 28,169,000		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL	\$ 3,850,000	\$ 5,420,000	\$ 4,000,000	\$ 2,300,000	\$ 3,275,000	\$ 2,300,000	\$ 7,144,000	\$ 28,289,000	\$ 28,289,000		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

FACILITY PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's	AUTHORIZED UNISSUED GO's	NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028								2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Fire and Police Training Center (West Flower Mound)	-	-	-	150,000	2,085,000	-	-	2,235,000	-	2	-	-	2,235,000		-	-	150,000	2,085,000	-	-
Fire Station No. 1 Facility Upgrades **	1,223,375	150,000	-	-	-	-	-	1,373,375	243,375	2,4	980,000	-	150,000		150,000	-	-	-	-	-
Fire Station No. 1 Facility Upgrades **	1,223,375	670,000	-	-	-	-	-	1,893,375	763,375	2,4	980,000	-	150,000		150,000	-	-	-	-	-
Fire Station No. 6 and Apparatus (West Flower Mound) **	-	-	-	300,000	6,500,000	-	-	6,800,000	-	2	-	-	6,800,000		-	-	300,000	6,500,000	-	-
Fire Station No. 7 and Apparatus (Wichita Trail) **	2,070,000	4,450,000	-	-	-	-	-	6,520,000		2	2,070,000	-	4,450,000		4,450,000	-	-	-	-	-
Library Expansion**	12,400,000	-	-	-	-	-	-	12,400,000	-	2,7	12,400,000	-	-		-	-	-	-	-	-
Gibson-Grant Log Cabin Reconstruction	51,593	507,000	307,000	710,000	-	-	-	1,575,593	1,068,593	1,2	-	-	507,000		507,000	-	-	-	-	-
Mechanical Screen Wall (Police Dept.)	90,000	-	-	-	-	-	-	90,000	90,000	1,2	-	-	-		-	-	-	-	-	-
Police and Courts Facility Upgrades **	3,331,000	-	-	-	-	-	-	3,331,000	1,571,000	2,4	1,760,000	-	-		-	-	-	-	-	-
Storage Warehouse	650,000	1,100,000	-	-	-	-	-	1,750,000	1,100,000	2,4	650,000	-	-		-	-	-	-	-	-
Town Hall **	18,919,000	-	-	-	-	-	-	18,919,000	719,000	2,7	18,200,000	-	-		-	-	-	-	-	-
Town Hall **	18,919,000	140,000	-	-	-	-	-	19,059,000	859,000	2,7	18,200,000	-	-		-	-	-	-	-	-
SUBTOTAL	\$ 38,734,968	\$ 6,207,000	\$ 307,000	\$ 1,160,000	\$ 8,585,000	\$ -	\$ -	\$ 54,993,968	\$ 4,791,968		\$ 36,060,000	\$ -	\$ 14,142,000		\$ 5,107,000	\$ -	\$ 450,000	\$ 8,585,000	\$ -	\$ -
SUBTOTAL	\$ 38,734,968	\$ 6,867,000	\$ 307,000	\$ 1,160,000	\$ 8,585,000	\$ -	\$ -	\$ 55,653,968	\$ 5,451,968		\$ 36,060,000	\$ -	\$ 14,142,000		\$ 5,107,000	\$ -	\$ 450,000	\$ 8,585,000	\$ -	\$ -

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 103 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

Attachment 2

PARK PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's	AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028							2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
2018-19 Playground Replacements (Lakewood, Stone Creek, Thrush West, & Gerault parks) **	-	1,000,000	-	-	-	-	-	1,000,000	1,000,000	8	-	-	-	-	-	-	-	-	-
2019-20 Playground Replacements (Chinn Chapel, and Pecan Orchard) **	-	-	350,000	-	-	-	-	350,000	350,000	8	-	-	-	-	-	-	-	-	-
2020-21 Playground Replacements (Bluebonnet, Colony, and Lakewood) **	-	-	-	425,000	-	-	-	425,000	425,000	8	-	-	-	-	-	-	-	-	-
2020-21 Playground Replacements (Grand, Courterdera, Wilkerson, Possum) **	-	-	-	1,000,000	-	-	-	1,000,000	1,000,000	8	-	-	-	-	-	-	-	-	-
2021-22 Playground Replacements (Peacock) **	-	-	-	-	250,000	-	-	250,000	250,000	8	-	-	-	-	-	-	-	-	-
Bakersfield Park Improvements Phase I	-	-	-	-	1,100,000	-	-	1,100,000	1,100,000	8	-	-	-	-	-	-	-	-	-
Bakersfield Park Improvements Phase 2	-	-	-	-	-	1,200,000	-	1,200,000	1,200,000	8	-	-	-	-	-	-	-	-	-
Bakersfield Park Restroom & Concrete Walkway **	-	500,000	-	-	-	-	-	500,000	500,000	8	-	-	-	-	-	-	-	-	-
Bella Lago Park Master Plan	-	50,000	-	-	-	-	-	50,000	50,000	8	-	-	-	-	-	-	-	-	-
Canyon Falls Park Design	-	150,000	-	-	-	-	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-
Canyon Falls Park Development	-	-	2,500,000	-	-	-	-	2,500,000	2,500,000	2,6	-	-	-	-	-	-	-	-	-
Chinn Chapel Lighting Improvements	-	-	-	-	-	-	250,000	250,000	250,000	8	-	-	-	-	-	-	-	-	-
Comunity Activity Center Improvements	257,000	-	-	-	-	-	-	257,000	-	2	257,000	-	-	-	-	-	-	-	-
Courtadera Park Improvements (Loop Trail, Irrigation, Fence & Basketball Court Improvements)	-	200,000	-	-	-	-	-	200,000	200,000	8	-	-	-	-	-	-	-	-	-
Dixon Park (add Pavilion and Amenities)	-	-	-	-	-	150,000	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-
Dunham Ranch Master Plan	-	-	-	-	-	150,000	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-
Equestrian (Trail Head & Trails)	-	-	-	-	-	-	900,000	900,000	900,000	8	-	-	-	-	-	-	-	-	-
Green Acres Memorial Farm	-	-	-	-	-	-	2,200,000	2,200,000	2,200,000	8	-	-	-	-	-	-	-	-	-
Gerault Park Update (Pavilion, Electrical, Grills & Trash)	-	-	-	-	-	250,000	-	250,000	250,000	8	-	-	-	-	-	-	-	-	-
Gleenwick Park Upgrade (Lighting for Baseball/Tennis, Landscaping, and Irrigation)	-	-	-	-	200,000	-	-	200,000	200,000	8	-	-	-	-	-	-	-	-	-
Heritage Park (Lighting Improvements, Restroom at Dog Park, Upgrade Srufaces)	-	-	-	800,000	-	-	-	800,000	800,000	8	-	-	-	-	-	-	-	-	-
Heritage Park of Flower Mound Phase III	2,181,000	-	-	-	-	-	-	2,181,000	2,181,000	8	-	-	-	-	-	-	-	-	-
Heritage Park of Flower Mound Phase IV	2,400,000	-	-	-	-	-	-	2,400,000	2,400,000	8	-	-	-	-	-	-	-	-	-
Individual Park Improvements (Shadow Ridge, Grand, Culwell, and Paker Square) **	-	-	-	-	300,000	-	-	300,000	300,000	8	-	-	-	-	-	-	-	-	-
Lakewood Park - Pavilion	-	75,000	-	-	-	-	-	75,000	75,000	8	-	-	-	-	-	-	-	-	-
Leonard Johns Park Upgrade (Lighting for Tennis)**	-	-	-	-	185,000	-	-	185,000	185,000	8	-	-	-	-	-	-	-	-	-
Park and Trail Amenities	510,000	50,000	50,000	50,000	50,000	50,000	-	760,000	760,000	2,6,8	-	-	-	-	-	-	-	-	-
Peters Colony Memorial Park Master Plan	-	50,000	-	-	-	-	-	50,000	50,000	2,8	-	-	-	-	-	-	-	-	-
Pink Evening Primrose Trails (Section 1 & 3)	800,000	-	-	-	-	-	-	800,000	800,000	2,6	-	-	-	-	-	-	-	-	-
Rheudasil Park Improvements	200,000	200,000	1,600,000	-	-	-	-	2,000,000	2,000,000	2,8	-	-	-	-	-	-	-	-	-
Rheudasil, Wilkerson, & Cortadera Parks Pond Dredging and Bank Stabilization	3,429,696	-	-	-	-	-	-	3,429,696	1,379,696	8	2,050,000	-	-	-	-	-	-	-	-
Tealwood Oaks Park Upgrade (Lighting for Tennis)**	-	-	-	-	-	350,000	-	350,000	350,000	8	-	-	-	-	-	-	-	-	-
Tennis Center (Master Plan, Design, Construction)	-	-	-	-	-	-	5,560,000	5,560,000	5,560,000	8	-	-	-	-	-	-	-	-	-
Trail Connections (Bluebonnet,Indian Blanket, Pink Evening Primrose, Purple Coneflower, Texas Yellow Star, & White Lazy Daisy Trails)	-	-	-	-	-	-	4,700,000	4,700,000	4,700,000	8	-	-	-	-	-	-	-	-	-
Trails Master Plan	-	-	300,000	-	-	-	-	300,000	300,000	2,8	-	-	-	-	-	-	-	-	-
Wilkerson Park Upgrade (Lighting, Landscaping, and Irrigation)	-	-	-	-	175,000	-	-	175,000	175,000	2,8	-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 9,777,696	\$ 2,275,000	\$ 4,800,000	\$ 2,275,000	\$ 2,260,000	\$ 2,150,000	\$ 13,610,000	\$ 37,147,696	\$ 34,840,696		\$ 2,307,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GRAND TOTAL GENERAL FUND - OLD	\$ 80,692,748	\$ 24,292,000	\$ 15,582,000	\$ 7,090,000	\$ 24,588,000	\$ 12,733,000	\$ 35,669,337	\$ 200,647,085	\$ 115,880,645		\$ 45,696,440	\$ -	\$ 39,070,000	\$ 13,057,000	\$ 3,400,000	\$ 915,000	\$ 8,950,000	\$ 5,508,000	\$ 7,240,000
GRAND TOTAL GENERAL FUND - NEW	\$ 80,692,748	\$ 25,502,000	\$ 16,082,000	\$ 7,090,000	\$ 24,588,000	\$ 12,733,000	\$ 35,669,337	\$ 202,357,085	\$ 117,090,645		\$ 45,696,440	\$ -	\$ 39,570,000	\$ 13,057,000	\$ 3,400,000	\$ 1,415,000	\$ 8,950,000	\$ 5,508,000	\$ 7,240,000

** Project Includes ADA Improvements

1,210,000 500,000 1,710,000

Other Sources

0. Impact Fees

1. Grant and Interlocal Funds

2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)

3. Escrow

4. Decision Package

5. Developer Agreement(s)

6. Park Development Fund

7. Tax Increment Reinvestment Zone (TIRZ)

8. Dedicated Sales Tax

9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

WATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT	AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028							2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Aberdeen Water Line (FM 2499 to Lake Forest)	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 190,000	0.2	\$ 110,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruton Orand Elevated Storage Tank Chloramine System - NEW	-	150,000	-	-	-	-	-	150,000	150,000	0.2	-	-	-	-	-	-	-	-	-
Canyon Falls 20-Inch Water Line	2,000,000	-	660,000	-	-	-	-	2,660,000	400,000	0.2	1,700,000	-	560,000	-	560,000	-	-	-	-
Cowboy Lane Water Line	-	-	-	-	-	-	670,000	670,000	140,000	0.3	-	-	530,000	-	-	-	-	-	530,000
Denton Creek Boulevard 12-Inch Water Line	200,000	-	1,300,000	-	-	-	-	1,500,000	620,000	0.5	-	-	880,000	-	880,000	-	-	-	-
Denton Creek District - Water Reuse Master Plan	100,000	-	-	-	-	-	-	100,000	100,000	0.2	-	-	-	-	-	-	-	-	-
Denton Creek Reuse Pump Station and Ground Storage Tanks	-	-	-	-	-	-	7,600,000	7,600,000	-	0.2	-	-	7,600,000	-	-	-	-	-	7,600,000
Denton Creek Reuse Pipe Distribution Network	-	-	-	-	-	-	16,400,000	16,400,000	-	0.2	-	-	16,400,000	-	-	-	-	-	16,400,000
Denton Creek Spine Road 12-inch Water Line	100,000	200,000	2,100,000	-	-	-	-	2,400,000	100,000	0.2	-	-	2,300,000	200,000	2,100,000	-	-	-	-
Denton Creek District - Reuse Waterlines	100,000	100,000	225,000	975,000	-	-	-	1,400,000	1,400,000	0.2	-	-	-	-	-	-	-	-	-
FM 1171 to Hwy. 377 Water Line Phase II	-	-	-	-	-	-	5,880,000	5,880,000	290,000	0.2	-	-	5,590,000	-	-	-	-	-	5,590,000
FM 1171 12-inch Water Line (Karnes Rd. to Churchill Dr.)	-	-	-	-	-	-	210,000	210,000	210,000	0.2	-	-	-	-	-	-	-	-	-
FM 2499 12-Inch Water Line Phase I (Dixon to South of FM 1171)	600,000	2,600,000	-	-	-	-	-	3,200,000	2,300,000	0.2,7	-	-	900,000	900,000	-	-	-	-	-
Freeman 12-Inch Water Line (Water Tower to 1,600 Feet North)	-	50,000	-	-	-	-	-	50,000	50,000	2	-	-	-	-	-	-	-	-	-
Garden Ridge Blvd. Ph. II Water Line	-	-	950,000	-	-	-	-	950,000	390,000	0.2	-	-	560,000	-	-	560,000	-	-	-
Glenview 12 Inch Water Line (Patriot Way to Old Gerault Rd)	-	40,000	-	-	-	-	-	40,000	40,000	2	-	-	-	-	-	-	-	-	-
Grady Court Water Line	-	-	150,000	-	-	-	-	150,000	150,000	2	-	-	-	-	-	-	-	-	-
High Road Water Line Replacement Phase I	2,250,000	-	-	-	-	-	-	2,250,000	-	2	2,250,000	-	-	-	-	-	-	-	-
High Road Water Line Replacement Phase II	-	650,000	2,850,000	-	-	-	-	3,500,000	-	2	-	-	3,500,000	650,000	2,850,000	-	-	-	-
Highway 377/UPRR Water Line Phase II	137,620	-	-	-	-	-	2,310,000	2,447,620	87,620	0.2	50,000	-	2,310,000	-	-	-	-	-	2,310,000
Impact Fee Update	-	-	80,000	-	-	-	-	80,000	80,000	0.2	-	-	-	-	-	-	-	-	-
Kirkpatrick Lane 12-Inch Water Line Phase II (Valley Ridge - FM 1171)	700,000	700,000	-	-	-	-	-	1,400,000	700,000	0.2	-	-	700,000	700,000	-	-	-	-	-
Kirkpatrick Lane 12-Inch Water Line Phase III (South of FM1171)	-	-	-	-	-	-	320,000	320,000	320,000	0.2	-	-	-	-	-	-	-	-	-
Lake Forest 12-inch Water Line (Bridge Gap)	135,000	-	-	-	-	-	-	135,000	135,000	0.2	-	-	-	-	-	-	-	-	-
Lake Forest 12-inch Water Line (FM 3040 to Spinks)	-	-	-	-	-	-	1,380,000	1,380,000	500,000	0.2	-	-	880,000	-	-	-	-	-	880,000
Lakeside Business District - Water Reuse Master Plan	120,000	-	-	-	-	-	-	120,000	120,000	0.2	-	-	-	-	-	-	-	-	-
Lakeside Business District - Water Reuse Master Plan	120,000	10,000	-	-	-	-	-	130,000	130,000	0.2	-	-	-	-	-	-	-	-	-
Lusk/Red Oak East-West Connector	-	-	-	-	-	-	3,240,000	3,240,000	240,000	0.2	-	-	3,000,000	-	-	-	-	-	3,000,000
Morriss Road Water Lines Phase I	100,000	900,000	-	-	-	-	-	1,000,000	100,000	2	-	-	900,000	900,000	-	-	-	-	-
Morriss Road Water Lines Phase II	-	-	350,000	2,650,000	-	-	-	3,000,000	-	2	-	-	3,000,000	-	350,000	2,650,000	-	-	-
Morriss Road Water Lines Phase III	-	-	-	400,000	4,500,000	-	-	4,900,000	2,200,000	0.2,7	-	-	2,700,000	-	-	-	2,700,000	-	-
Pintail Pump Station (Auxiliary Power & Upgrades)	720,000	1,130,000	-	-	-	-	-	1,850,000	400,000	0.2,5	320,000	-	1,130,000	1,130,000	-	-	-	-	-
Pressure Reducing Valves	-	-	-	-	-	-	560,000	560,000	300,000	0.2	-	-	260,000	-	-	-	-	-	260,000
Red Bud Point Water Service Relocation	-	775,000	-	-	-	-	-	-	-	2	-	-	775,000	775,000	-	-	-	-	-
Rippy Road Water line Improvements (FM 2499-Waketon)	750,000	-	-	-	-	-	-	750,000	350,000	0.2	400,000	-	-	-	-	-	-	-	-
Scenic Drive Water Line (South of FM 1171 to River Hill Dr.)	-	-	-	-	-	-	1,490,000	1,490,000	490,000	0.2	-	-	1,000,000	-	-	-	-	-	1,000,000
Shady Point Acres Water Line Replacement	1,300,000	-	-	-	-	-	-	1,300,000	-	2	1,300,000	-	-	-	-	-	-	-	-
Stonecrest Pump Station Phase I (Auxiliary Power)	-	-	2,120,000	-	-	-	-	2,120,000	300,000	0.2	-	-	1,820,000	-	-	1,820,000	-	-	-
Stonecrest Pump Station Phase II	-	-	-	-	-	-	5,140,000	5,140,000	250,000	0.2	-	-	4,890,000	-	-	-	-	-	4,890,000
Stonecrest Pump Station Phase III	-	-	-	-	-	-	840,000	840,000	-	2	-	-	840,000	-	-	-	-	-	840,000
Stonehill Pump Station 10MG Ground Storage Tank Modification	-	-	350,000	-	-	-	-	350,000	-	1.2	50,000	-	300,000	-	300,000	-	-	-	-
Stonehill 10MG Ground Storage Tank Rehabilitation	40,000	600,000	-	-	-	-	-	640,000	40,000	2	-	-	600,000	600,000	-	-	-	-	-
Stonehill Pump Station Discharge Valve Replacement	-	-	60,000	500,000	-	-	-	560,000	60,000	2	-	-	500,000	-	500,000	-	-	-	-
Timber Creek 20-inch Water Line	-	-	-	-	-	-	370,000	370,000	250,000	2	-	-	120,000	-	-	-	-	-	120,000
Trailwood Terrace 12-inch Water Line	400,000	-	-	-	-	-	-	400,000	400,000	0.2	-	-	-	-	-	-	-	-	-
Utility Asset Management & Utility Replacement	300,000	300,000	300,000	300,000	300,000	300,000	-	1,800,000	-	2	300,000	-	1,500,000	300,000	300,000	300,000	300,000	300,000	-
Water Master Plan	-	-	150,000	-	-	-	-	150,000	150,000	0.2	-	-	-	-	-	-	-	-	-
Water System Leak Detection & Repair	700,000	-	50,000	50,000	50,000	50,000	-	900,000	-	2	700,000	-	200,000	-	50,000	50,000	50,000	50,000	-
Water System Model Update	152,285	5,000	5,000	5,000	5,000	5,000	-	177,285	177,285	0.2	-	-	-	-	-	-	-	-	-
West Side Water Lines (East)	-	-	-	-	-	-	2,610,000	2,610,000	300,000	0.2	-	-	2,310,000	-	-	-	-	-	2,310,000
West Side Water Lines (South)	-	-	-	-	-	-	3,440,000	3,440,000	350,000	0.2	-	-	3,090,000	-	-	-	-	-	3,090,000
West Side Water Lines (West)	-	-	-	-	-	-	1,390,000	1,390,000	150,000	0.2	-	-	1,240,000	-	-	-	-	-	1,240,000
Western Operations and Maintenance Facility (Buildout)	-	-	-	-	100,000	-	-	100,000	100,000	2	-	-	-	-	-	-	-	-	-
Woodbine Water Line Replacement	410,000	-	-	-	-	-	-	410,000	410,000	2	-	-	-	-	-	-	-	-	-
Woodbine Water Line Replacement	410,000	25,000	-	-	-	-	-	435,000	410,000	2	25,000	-	-	-	-	-	-	-	-
Yucca Drive Utilities (Sagebrush to 700 ft South of FM 1171)	870,000	-	-	-	-	-	-	870,000	220,000	2	650,000	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 12,484,905	\$ 8,050,000	\$ 11,700,000	\$ 4,880,000	\$ 4,955,000	\$ 355,000	\$ 53,850,000	\$ 96,274,905	\$ 15,559,905		\$ 7,830,000	\$ -	\$ 72,885,000	\$ 6,155,000	\$ 7,890,000	\$ 5,380,000	\$ 3,050,000	\$ 350,000	\$ 50,060,000
SUBTOTAL	\$ 12,484,905	\$ 8,235,000	\$ 11,700,000	\$ 4,880,000	\$ 4,955,000	\$ 355,000	\$ 53,850,000	\$ 96,459,905	\$ 15,719,905		\$ 7,855,000	\$ -	\$ 72,885,000	\$ 6,155,000	\$ 7,890,000	\$ 5,380,000	\$ 3,050,000	\$ 350,000	\$ 50,060,000

** Project Includes ADA Improvements

Other Sources

- 0. Impact Fees
- 1. Grant and Interlocal Funds
- 2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
- 3. Escrow
- 4. Decision Package
- 5. Developer Agreement(s)
- 6. Park Development Fund
- 7. Tax Increment Reinvestment Zone (TIRZ)
- 8. Dedicated Sales Tax
- 9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STORMWATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT		AUTHORIZED UNISSUED GO's		NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028										2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Bakers Branch Stabilization at Cedar Bluff (Strait Lane)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000	\$ -	\$ 75,000	\$ 75,000	2	\$ -		\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bakers Branch Stabilization at 621 Somerset Drive	150,000	175,000	-	-	-	-	-	325,000	325,000	2	-		-		-		-	-	-	-	-	-
Bakers Branch Stabilization at 1600 & 1612 Strait Lane	-	-	-	-	200,000	-	-	200,000	200,000	2	-		-		-		-	-	-	-	-	-
Creek Bank Stabilization at 1104 & 1108 Big Canyon Drive	-	-	175,000	200,000	-	-	-	375,000	375,000	2	-		-		-		-	-	-	-	-	-
Creek Bank Stabilizatn at 1540 Echo Bluff	-	-	-	-	-	75,000	-	75,000	75,000	2	-		-		-		-	-	-	-	-	-
Creek Bank Stabilization at 3100 River Hill Court	100,000	-	-	-	-	-	-	100,000	100,000	2	-		-		-		-	-	-	-	-	-
East Waketon Road Drainage Improvements	50,000	470,000	890,000	1,670,000	-	-	-	3,080,000	520,000	1,2,7	-		-		2,560,000		-	890,000	1,670,000	-	-	-
FM 2499 Roadway, Traffic Signal, and Drainage	500,000	-	-	-	-	-	-	500,000	500,000	1,3	-		-		-		-	-	-	-	-	-
McKamy Creek Stabilization & Drop Structure at 1900 Winding Creek Blvd	-	-	50,000	-	-	-	-	50,000	50,000	1,4	-		-		-		-	-	-	-	-	-
Pecan Acres Drainage Improvements	-	-	-	-	-	75,000	425,000	500,000	500,000	1,5	-		-		-		-	-	-	-	-	-
Timber Creek Stabilization at Timber Creek Rd (North & South Bridges)	-	-	-	-	-	-	400,000	400,000	400,000	1,6	-		-		-		-	-	-	-	-	-
SUBTOTAL	\$ 800,000	\$ 645,000	\$ 1,115,000	\$ 1,870,000	\$ 200,000	\$ 225,000	\$ 825,000	\$ 5,680,000	\$ 3,120,000		\$ -		\$ -		\$ 2,560,000		\$ -	\$ 890,000	\$ 1,670,000	\$ -	\$ -	\$ -

** Project Includes ADA Improvements

Other Sources

- 0. Impact Fees
- 1. Grant and Interlocal Funds
- 2. Other Sources (Proj. Sav., Fund Bal., Interest Inc.)
- 3. Escrow
- 4. Decision Package
- 5. Developer Agreement(s)
- 6. Park Development Fund
- 7. Tax Increment Reinvestment Zone (TIRZ)
- 8. Dedicated Sales Tax
- 9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

WASTEWATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT		AUTHORIZED UNISSUED GO's	NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028									2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Bakers Branch Collector Phase II (Lexington to Gerault)	1,850,000	-	-	-	-	-	-	1,850,000	350,000	0.2	1,500,000		-	-	-	-	-	-	-	-	-
Impact Fee Update	-	-	80,000	-	-	-	-	80,000	80,000	0.2	0		-	-	-	-	-	-	-	-	-
Inflow-Infiltration/Evaluation and Repair	2,230,000	-	250,000	250,000	250,000	250,000	-	3,230,000	130,000	2	2,100,000		-	1,000,000	-	250,000	250,000	250,000	250,000	-	-
Justin Road Lift Station Outfall (Justin Rd. to Cottage Ln.)	850,000	-	-	-	-	-	-	850,000	400,000	0.2	450,000		-	-	-	-	-	-	-	-	-
Lift Station Improvements and Decommissioning	1,825,000	-	-	-	-	-	-	1,825,000	100,000	2	1,725,000		-	-	-	-	-	-	-	-	-
Long Prairie Interceptor (North of Woodway Drive)	-	-	-	-	-	330,000	-	330,000	-	0.2	-		-	330,000	-	-	-	-	330,000	-	-
Lower Timber Interceptor (Teakwood to Pintail Park)	-	-	810,000	-	-	-	-	810,000	-	0.2	-		-	810,000	-	810,000	-	-	-	-	-
Oak Street Lift Station and Force Main Phase IV	-	-	1,500,000	-	-	-	-	1,500,000	150,000	0.2			-	1,350,000	-	-	1,350,000	-	-	-	-
Oak Street Lift Station and Force Main Phase V	-	-	-	-	-	-	2,500,000	2,500,000		0.2			-	2,500,000	-	-	-	-	-	-	2,500,000
Riverwalk Collector (Morrisr Rd. to Windsor Dr.)	-	-	-	430,000	-	-	-	430,000	230,000	0.2	-		-	200,000	-	-	-	-	200,000	-	-
Southside Force Main Extension	-	-	300,000	2,100,000	-	-	-	2,400,000	1,400,000	0.2	-		-	1,000,000	-	1,000,000	-	-	-	-	-
Southside Gravity Improvements	-	-	-	-	-	-	3,900,000	3,900,000	1,000,000	0.2,3,5	-		-	2,900,000	-	-	-	-	-	-	2,900,000
Southside Pump Upgrade	-	-	90,000	1,012,000	-	-	-	1,102,000	452,000	0.2	-		-	650,000	-	650,000	-	-	-	-	-
Upper Timber Creek Interceptor (South of College Pkw.)	-	-	-	-	300,000	-	-	300,000		0.2	-		-	300,000	-	-	-	-	300,000	-	-
Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)	960,000	1,700,000	-	-	-	-	-	2,660,000	410,000	0.2	550,000		-	1,700,000	1,700,000	-	-	-	-	-	-
Upper Timber Creek Interceptor Phase IV (Hidden Forest Drive to Oak Street Lift Station)	350,000	3,350,000	-	-	-	-	-	3,700,000		2	350,000		-	3,350,000	3,350,000	-	-	-	-	-	-
Wastewater Master Plan	-	-	150,000	-	-	-	-	150,000	150,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater System Model Update	205,785	5,000	5,000	5,000	5,000	5,000	-	230,785	230,785	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Capacity Study	75,000	-	-	-	-	-	-	75,000	75,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Expansion	-	-	-	-	-	-	150,000	150,000	150,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Final Clarification Rehabilitation	780,000	-	-	-	-	-	-	780,000	430,000	2	350,000		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase IV (Dewatering, B&L)	5,540,000	-	-	-	-	-	-	5,540,000	780,000	2	4,760,000		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase V (Sludge Holding and Thickening)	800,000	11,000,000	-	-	-	-	-	11,800,000	-	2	800,000		-	11,000,000	11,000,000	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase VI (Thermal Drying)	-	-	-	-	-	-	13,000,000	13,000,000	-	2	-		-	13,000,000	-	-	-	-	-	-	13,000,000
Wastewater Treatment Plant Rehabilitation Phase VII (Phosphorus Removal)	-	-	-	-	-	-	1,000,000	1,000,000	-	2	-		-	1,000,000	-	-	-	-	-	-	1,000,000
Wastewater Treatment Plant Ultraviolet System Update	250,000	2,750,000	-	-	-	-	-	3,000,000	250,000	2	-		-	2,750,000	2,750,000	-	-	-	-	-	-
Wellington Interceptor Phase IV Section I (Vail Lane to Oak Street Lift Station)	-	-	420,000	-	-	-	-	420,000	95,000	0.2	-		-	325,000	-	325,000	-	-	-	-	-
Wellington Interceptor Phase V (Ridgemere Dr. to Woodway Dr.)	-	-	-	-	720,000	-	-	720,000		0.2	-		-	720,000	-	-	-	-	720,000	-	-
Wellington Interceptor (Fieldcrest Rd. to FM 3040)	-	-	-	-	410,000	-	-	410,000		0.2	-		-	410,000	-	-	-	-	410,000	-	-
Wichita Trail Lift Station Improvements	-	-	-	-	780,000	-	-	780,000		0.2	-		-	780,000	-	-	-	-	780,000	-	-
Woodbine Street Sewer Line	800,000	-	-	-	-	-	-	800,000	200,000	2	600,000		-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 16,515,785	\$ 18,805,000	\$ 3,605,000	\$ 3,797,000	\$ 2,465,000	\$ 585,000	\$ 20,550,000	\$ 66,322,785	\$ 7,062,785		\$ 13,185,000		\$ -	\$ 46,075,000	\$ 18,800,000	\$ 3,035,000	\$ 1,600,000	\$ 250,000	\$ 2,990,000	\$ 19,400,000	
GRAND TOTAL UTILITY FUND - OLD	\$ 29,800,690	\$ 27,500,000	\$ 16,420,000	\$ 10,547,000	\$ 7,620,000	\$ 1,165,000	\$ 75,225,000	\$ 168,277,690	\$ 25,742,690		\$ 21,015,000		\$ -	\$ 121,520,000	\$ 24,955,000	\$ 11,815,000	\$ 8,650,000	\$ 3,300,000	\$ 3,340,000	\$ 69,460,000	
GRAND TOTAL UTILITY FUND - NEW	\$ 29,800,690	\$ 27,685,000	\$ 16,420,000	\$ 10,547,000	\$ 7,620,000	\$ 1,165,000	\$ 75,225,000	\$ 168,462,690	\$ 25,902,690		\$ 21,040,000		\$ -	\$ 121,520,000	\$ 24,955,000	\$ 11,815,000	\$ 8,650,000	\$ 3,300,000	\$ 3,340,000	\$ 69,460,000	

** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 107 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STREET PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's	AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE						
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028							2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028	
Aberdeen Drive Phase I (2 Lanes FM 2499 to Lake Forest) **	\$ 1,650,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,650,000	\$ 1,300,000	0,2,5	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Aberdeen Drive Phase II (2 additional Lanes FM 2499 to 700 ft. North of Spinks) **	-	-	-	-	2,463,000	-	-	2,463,000	1,063,000	0,2,5	-	-	1,400,000	-	-	-	-	1,400,000	-	-
ADA Transition Plan and Implementation **	648,000	500,000	150,000	150,000	150,000	150,000	-	1,748,000	13,000	2	635,000	-	1,100,000	500,000	150,000	150,000	150,000	150,000	-	-
Churchill Drive (FM 2499 to Yucca) **	1,000,000	-	-	-	-	-	-	1,000,000	1,000,000	0,2,7	-	-	-	-	-	-	-	-	-	-
Cowboy Lane **	-	-	-	-	-	-	433,337	433,337	193,337	3	-	-	240,000	-	-	-	-	-	-	240,000
Denton Creek Boulevard Bridge (Graham Branch crossing)	310,000	6,590,000	-	-	-	-	-	6,900,000	1,150,000	0,1,2	-	-	5,750,000	5,750,000	-	-	-	-	-	-
Firewheel Drive (complete 4 lane gap, to 340 feet north of Garden Rd) **	555,000	-	-	-	-	-	-	555,000	555,000	0,2	-	-	-	-	-	-	-	-	-	-
FM 1171 at FM 2499 Eastbound Right Turn Lane **	885,000	-	-	-	-	-	-	885,000	785,000	2,7	100,000	-	-	-	-	-	-	-	-	-
FM 1171 at FM 2499 Westbound Right Turn Lane **	998,000	-	-	-	-	-	-	998,000	998,000	2,7	-	-	-	-	-	-	-	-	-	-
FM 1171 at River Walk Dr Intersection Improvements **	350,000	600,000	-	-	-	-	-	950,000	350,000	0,2,3,5,7	-	-	600,000	600,000	-	-	-	-	-	-
FM 2499 at FM 407 Intersection Improvements **	-	400,000	1,300,000	-	-	-	-	1,700,000	1,400,000	1,2	300,000	-	-	-	-	-	-	-	-	-
FM 2499 at Lakeside North Right Turn Lane **	100,000	200,000	-	-	-	-	-	300,000	200,000	0,2	100,000	-	-	-	-	-	-	-	-	-
FM 2499 at Waketon Intersection Improvements	-	360,000	1,240,000	-	-	-	-	1,600,000	1,000,000	2,7	-	-	600,000	-	600,000	-	-	-	-	-
FM 2499 Roadway, Traffic Signal, and Drainage	8,200,000	-	-	-	-	-	-	8,200,000	7,000,000	1,2	1,200,000	-	-	-	-	-	-	-	-	-
Garden Ridge Through Lane (at FM 3040)	-	60,000	550,000	-	-	-	-	610,000	60,000	0,2	-	-	550,000	-	550,000	-	-	-	-	-
I 35W Interchange at Denton Creek	-	-	-	-	-	-	5,000,000	5,000,000	5,000,000	0,1,5	-	-	-	-	-	-	-	-	-	-
Impact Fee Update	-	-	120,000	-	-	-	-	120,000	120,000	0	-	-	-	-	-	-	-	-	-	-
Kirkpatrick Lane Phase III (South of FM 1171)	-	-	-	-	800,000	7,918,000	-	8,718,000	4,975,000	0,1,2	-	-	3,743,000	-	-	-	-	3,743,000	-	-
Lake Forest Boulevard Roadway Improvements	2,000,000	-	-	-	-	-	-	2,000,000	600,000	0,2	1,400,000	-	-	-	-	-	-	-	-	-
Lakeside Dual Left turn Lane at Gerault **	-	-	-	200,000	-	-	-	200,000	100,000	0,2,5	-	-	100,000	-		100,000	-	-	-	-
Lakeside Parkway Capacity Improvements **	-	-	-	540,000	6,840,000	-	-	7,380,000	7,380,000	0,1,2	-	-	-	-	-	-	-	-	-	-
Lusk/Red Oak East-West Connector	-	-	-	-	-	-	7,232,000	7,232,000	732,000	0,2	-	-	6,500,000	-	-	-	-	-	-	6,500,000
Morriss Road Improvements **	650,000	280,000	-	-	-	-	-	930,000	805,000	0,1,2,4	-	-	125,000	125,000	-	-	-	-	-	-
Peters Colony Roundabout **	-	200,000	500,000	-	-	-	-	700,000	200,000	2	-	-	500,000	-	-	500,000	-	-	-	-
Rippy Road (Waketon to FM 2499)**	800,000	350,000	2,650,000	-	-	-	-	3,800,000	2,115,000	2,7	-	-	1,685,000	-	1,685,000	-	-	-	-	-
Roadway Amenities	388,083	90,000	90,000	90,000	90,000	90,000	-	838,083	193,083	2,4	195,000	-	450,000	90,000	90,000	90,000	90,000	90,000	-	-
Sidewalk Links **	961,000	150,000	-	-	-	-	-	1,111,000	1,111,000	2,4	-	-	-	-	-	-	-	-	-	-
Skillern Road (Flower Mound Rd to Riverhill) **	905,000	-	-	-	-	-	-	905,000	85,561	2,3	819,440	-	-	-	-	-	-	-	-	-
Stonecrest Road (500 ft. North of Canyon Falls Dr. to Town Limit) **	1,050,000	-	-	-	-	-	-	1,050,000	150,000	2,5	900,000	-	-	-	-	-	-	-	-	-
Transportation Model Update and LOS Mapping	-	75,000	-	-	-	-	-	75,000	75,000	2	-	-	-	-	-	-	-	-	-	-
Waketon Road **	5,500,000	460,000	-	-	-	-	-	5,960,000	4,670,000	2,3,5,7	830,000	-	460,000	460,000	-	-	-	-	-	-
Windsor Roundabout Connection	-	200,000	-	-	-	-	-	200,000	200,000	2,4	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 26,950,083	\$ 10,515,000	\$ 6,600,000	\$ 980,000	\$ 10,343,000	\$ 8,158,000	\$ 12,665,337	\$ 76,211,420	\$ 45,578,981		\$ 6,829,440	\$ -	\$ 23,803,000	\$ 7,525,000	\$ 3,075,000	\$ 840,000	\$ 240,000	\$ 5,383,000	\$ 6,740,000	

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

SIGNAL PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's	AUTHORIZED UNISSUED GO's	NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028								2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
College Parkway at Timber Creek	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	250,000	\$ 250,000	0,2,4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruton Orand at Kenwood	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-	-	-	-	-	-	-	-	-	-
Bruton Orand at Quail Run	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-	-	-	-	-	-	-	-	-	-
FM 1171 at Canyon Falls Blvd	-	-	250,000	-	-	-	-	250,000	50,000	0,2	-	-	200,000	-	-	200,000	-	-	-	-
FM 2499 at College Parkway	340,000	-	-	-	-	-	-	340,000	340,000	0,2,7	-	-	-	-	-	-	-	-	-	-
FM 2499 at Silveron	240,000	-	-	-	-	-	-	240,000	240,000	0,2	-	-	-	-	-	-	-	-	-	-
FM 407 at Browning - Reconstruction	25,000	300,000	-	-	-	-	-	325,000	25,000	2,4	-	-	300,000	-	300,000	-	-	-	-	-
Garden Ridge at Forest Vista	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-	-	-	-	-	-	-	-	-	-
Garden Ridge at Kirkpatrick	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-	-	-	-	-	-	-	-	-	-
Lakeside at Silveron	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4,5	-	-	-	-	-	-	-	-	-	-
Morriiss at Eaton	-	-	-	250,000	-	-	-	250,000	250,000	2,4	-	-	-	-	-	-	-	-	-	-
Peters Colony at Churchill	-	-	-	-	-	-	250,000	250,000	250,000	0,2,4	-	-	-	-	-	-	-	-	-	-
Traffic Detection Rehabilitation	500,000	125,000	125,000	125,000	125,000	125,000	-	1,125,000	-	2	500,000	-	625,000	-	125,000	125,000	125,000	125,000	125,000	-
Traffic Signal Rehabilitation	-	-	-	-	-	-	500,000	500,000	-	2	-	-	500,000	-	-	-	-	-	-	500,000
U.S 377 at Canyon Falls Drive	275,000	-	-	-	-	-	-	275,000	275,000	0,2,4	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 1,380,000	\$ 425,000	\$ 375,000	\$ 375,000	\$ 125,000	\$ 125,000	\$ 2,250,000	\$ 5,055,000	\$ 2,930,000		\$ 500,000	\$ -	\$ 1,625,000		\$ 425,000	\$ 325,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 500,000

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 109 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STREET RECONSTRUCTION PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES	ISSUED DEBT GO's & CO's	AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028						2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Flower Mound Road Reconstruction Phase II (Old Settlers to Bruton Orand) **	-	-	-	-	-	-	2,344,000	2,344,000	2,344,000	8	-	-	-	-	-	-	-	-
Forest Vista Reconstruction Phase II (Morriss to Chancellor) **	-	335,000	2,400,000	-	-	-	-	2,735,000	2,735,000	8	-	-	-	-	-	-	-	-
Forest Vista Reconstruction Phase III (Chancellor to Lake Shore) **	-	-	-	-	350,000	2,300,000	-	2,650,000	2,650,000	8	-	-	-	-	-	-	-	-
Grady Court Reconstruction (Homestead to Culdesac)	-	675,000	-	-	-	-	-	675,000	675,000	8	-	-	-	-	-	-	-	-
Lopo Road Reconstruction (River oak to 330-ft west of Garden Ridge) **	-	-	950,000	-	-	-	-	950,000	950,000	8	-	-	-	-	-	-	-	-
Morriss Road Panel Replacement (FM 3040 to FM 1171) **	-	4,040,000	-	-	-	-	-	4,040,000	4,040,000	8	-	-	-	-	-	-	-	-
Old Gerault Road Reconstruction	-	370,000	-	-	-	-	1,200,000	1,570,000	1,570,000	8.2	-	-	-	-	-	-	-	-
Old Long Prairie Road Reconstruction **	1,100,000	-	-	-	-	-	-	1,100,000	1,100,000	8	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase II (5000 Timbercreek Rd. to Homestead St.) **	-	-	250,000	2,000,000	-	-	-	2,250,000	2,250,000	8	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase III (Homestead St. to Kirkpatrick Ln.) **	-	-	-	300,000	2,925,000	-	-	3,225,000	3,225,000	8	-	-	-	-	-	-	-	-
Timber Creek Road Reconstruction Phase IV (Timber Creek Bridge to Eaton) **	-	-	-	-	-	-	3,600,000	3,600,000	3,600,000	8	-	-	-	-	-	-	-	-
West Windsor and Mulberry Connection **	100,000	-	-	-	-	-	-	100,000	100,000	8	-	-	-	-	-	-	-	-
Woodbine Street Reconstruction (Timber Creek to Hieden Ct.) **	1,350,000	-	-	-	-	-	-	1,350,000	1,350,000	8	-	-	-	-	-	-	-	-
Wood Creek Circle Reconstruction (Wood Creek Dr to end of Cul-de-Sac) **	-	-	400,000	-	-	-	-	400,000	400,000	8	-	-	-	-	-	-	-	-
Yucca Drive Reconstruction (Sagebrush to 700 ft South of FM 1171) **	1,300,000	-	-	-	-	-	-	1,300,000	1,300,000	8	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 3,850,000	\$ 5,420,000	\$ 4,000,000	\$ 2,300,000	\$ 3,275,000	\$ 2,300,000	\$ 7,144,000	\$ 28,289,000	\$ 28,289,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

*General Obligation Bonds
** Project Includes ADA Improvements

Other Sources

0. Impact Fees

1. Grant and Interlocal Funds

2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)

3. Escrow

4. Decision Package

5. Developer Agreement(s)

6. Park Development Fund

7. Tax Increment Reinvestment Zone (TIRZ)

8. Dedicated Sales Tax

9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

FACILITY PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's		AUTHORIZED UNISSUED GO's		NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028										2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Fire and Police Training Center (West Flower Mound)	-	-	-	150,000	2,085,000	-	-	2,235,000	-	2	-	-	-	2,235,000	-	-	-	-	150,000	2,085,000	-	-
Fire Station No. 1 Facility Upgrades **	1,223,375	670,000	-	-	-	-	-	1,893,375	763,375	2,4	980,000	-	-	150,000	150,000	-	-	-	-	-	-	-
Fire Station No. 6 and Apparatus (West Flower Mound) **	-	-	-	300,000	6,500,000	-	-	6,800,000	-	2	-	-	-	6,800,000	-	-	-	-	300,000	6,500,000	-	-
Fire Station No. 7 and Apparatus (Wichita Trail) **	2,070,000	4,450,000	-	-	-	-	-	6,520,000	-	2	2,070,000	-	-	4,450,000	4,450,000	-	-	-	-	-	-	-
Library Expansion**	12,400,000	-	-	-	-	-	-	12,400,000	-	2,7	12,400,000	-	-	-	-	-	-	-	-	-	-	-
Gibson-Grant Log Cabin Reconstruction	51,593	507,000	307,000	710,000	-	-	-	1,575,593	1,068,593	1,2	-	-	-	507,000	507,000	-	-	-	-	-	-	-
Mechanical Screen Wall (Police Dept.)	90,000	-	-	-	-	-	-	90,000	90,000	1,2	-	-	-	-	-	-	-	-	-	-	-	-
Police and Courts Facility Upgrades **	3,331,000	-	-	-	-	-	-	3,331,000	1,571,000	2,4	1,760,000	-	-	-	-	-	-	-	-	-	-	-
Storage Warehouse	650,000	1,100,000	-	-	-	-	-	1,750,000	1,100,000	2,4	650,000	-	-	-	-	-	-	-	-	-	-	-
Town Hall **	18,919,000	140,000	-	-	-	-	-	19,059,000	859,000	2,7	18,200,000	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 38,734,968	\$ 6,867,000	\$ 307,000	\$ 1,160,000	\$ 8,585,000	\$ -	\$ -	\$ 55,653,968	\$ 5,451,968		\$ 36,060,000	\$ -		\$ 14,142,000	\$ 5,107,000	\$ -	\$ 450,000	\$ 8,585,000	\$ -	\$ -		

*General Obligation Bonds
** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 111 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

PARK PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT GO's & CO's		AUTHORIZED UNISSUED GO's		NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028									2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
2018-19 Playground Replacements (Lakewood, Stone Creek, Thrush West, & Gerault parks) **	-	1,000,000	-	-	-	-	-	1,000,000	1,000,000	8	-	-	-	-	-	-	-	-	-	-	-
2019-20 Playground Replacements (Chinn Chapel, and Pecan Orchard) **	-	-	350,000	-	-	-	-	350,000	350,000	8	-	-	-	-	-	-	-	-	-	-	-
2020-21 Playground Replacements (Bluebonnet, Colony, and Lakewood) **	-	-	-	425,000	-	-	-	425,000	425,000	8	-	-	-	-	-	-	-	-	-	-	-
2020-21 Playground Replacements (Grand, Courterdera, Wilkerson, Possum) **	-	-	-	1,000,000	-	-	-	1,000,000	1,000,000	8	-	-	-	-	-	-	-	-	-	-	-
2021-22 Playground Replacements (Peacock) **	-	-	-	-	250,000	-	-	250,000	250,000	8	-	-	-	-	-	-	-	-	-	-	-
Bakersfield Park Improvements Phase I	-	-	-	-	1,100,000	-	-	1,100,000	1,100,000	8	-	-	-	-	-	-	-	-	-	-	-
Bakersfield Park Improvements Phase 2	-	-	-	-	-	1,200,000	-	1,200,000	1,200,000	8	-	-	-	-	-	-	-	-	-	-	-
Bakersfield Park Restroom & Concrete Walkway **	-	500,000	-	-	-	-	-	500,000	500,000	8	-	-	-	-	-	-	-	-	-	-	-
Bella Lago Park Master Plan	-	50,000	-	-	-	-	-	50,000	50,000	8	-	-	-	-	-	-	-	-	-	-	-
Canyon Falls Park Design	-	150,000	-	-	-	-	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-	-	-
Canyon Falls Park Development	-	-	2,500,000	-	-	-	-	2,500,000	2,500,000	2,6	-	-	-	-	-	-	-	-	-	-	-
Chinn Chapel Lighting Improvements	-	-	-	-	-	-	250,000	250,000	250,000	8	-	-	-	-	-	-	-	-	-	-	-
Comunity Activity Center Improvements	257,000	-	-	-	-	-	-	257,000	-	2	257,000	-	-	-	-	-	-	-	-	-	-
Courtadera Park Improvements (Loop Trail, Irrigation, Fence & Basketball Court Improvements)	-	200,000	-	-	-	-	-	200,000	200,000	8	-	-	-	-	-	-	-	-	-	-	-
Dixon Park (add Pavilion and Amenities)	-	-	-	-	-	150,000	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-	-	-
Dunham Ranch Master Plan	-	-	-	-	-	150,000	-	150,000	150,000	8	-	-	-	-	-	-	-	-	-	-	-
Equestrian (Trail Head & Trails)	-	-	-	-	-	-	900,000	900,000	900,000	8	-	-	-	-	-	-	-	-	-	-	-
Green Acres Memorial Farm	-	-	-	-	-	-	2,200,000	2,200,000	2,200,000	8	-	-	-	-	-	-	-	-	-	-	-
Gerault Park Update (Pavilion, Electrical, Grills & Trash)	-	-	-	-	-	250,000	-	250,000	250,000	8	-	-	-	-	-	-	-	-	-	-	-
Gleenwick Park Upgrade (Lighting for Baseball/Tennis, Landscaping, and Irrigation)	-	-	-	-	200,000	-	-	200,000	200,000	8	-	-	-	-	-	-	-	-	-	-	-
Heritage Park (Lighting Improvements, Restroom at Dog Park, Upgrade Srufaces)	-	-	-	800,000	-	-	-	800,000	800,000	8	-	-	-	-	-	-	-	-	-	-	-
Heritage Park of Flower Mound Phase III	2,181,000	-	-	-	-	-	-	2,181,000	2,181,000	8	-	-	-	-	-	-	-	-	-	-	-
Heritage Park of Flower Mound Phase IV	2,400,000	-	-	-	-	-	-	2,400,000	2,400,000	8	-	-	-	-	-	-	-	-	-	-	-
Individual Park Improvements (Shadow Ridge, Grand, Culwell, and Paker Square) **	-	-	-	-	300,000	-	-	300,000	300,000	8	-	-	-	-	-	-	-	-	-	-	-
Lakewood Park - Pavilion	-	75,000	-	-	-	-	-	75,000	75,000	8	-	-	-	-	-	-	-	-	-	-	-
Leonard Johns Park Upgrade (Lighting for Tennis)**	-	-	-	-	185,000	-	-	185,000	185,000	8	-	-	-	-	-	-	-	-	-	-	-
Park and Trail Amenities	510,000	50,000	50,000	50,000	50,000	50,000	-	760,000	760,000	2,6,8	-	-	-	-	-	-	-	-	-	-	-
Peters Colony Memorial Park Master Plan	-	50,000	-	-	-	-	-	50,000	50,000	2,8	-	-	-	-	-	-	-	-	-	-	-
Pink Evening Primrose Trails (Section 1 & 3)	800,000	-	-	-	-	-	-	800,000	800,000	2,6	-	-	-	-	-	-	-	-	-	-	-
Rheudasil Park Improvements	200,000	200,000	1,600,000	-	-	-	-	2,000,000	2,000,000	2,8	-	-	-	-	-	-	-	-	-	-	-
Rheudasil, Wilkerson, & Cortadera Parks Pond Dredging and Bank Stabilization	3,429,696	-	-	-	-	-	-	3,429,696	1,379,696	8	2,050,000	-	-	-	-	-	-	-	-	-	-
Tealwood Oaks Park Upgrade (Lighting for Tennis)**	-	-	-	-	-	350,000	-	350,000	350,000	8	-	-	-	-	-	-	-	-	-	-	-
Tennis Center (Master Plan, Design, Construction)	-	-	-	-	-	-	5,560,000	5,560,000	5,560,000	8	-	-	-	-	-	-	-	-	-	-	-
Trail Connections (Bluebonnet,Indian Blanket, Pink Evening Primrose, Purple Coneflower, Texas Yellow Star, & White Lazy Daisy Trails)	-	-	-	-	-	-	4,700,000	4,700,000	4,700,000	8	-	-	-	-	-	-	-	-	-	-	-
Trails Master Plan	-	-	300,000	-	-	-	-	300,000	300,000	2,8	-	-	-	-	-	-	-	-	-	-	-
Wilkerson Park Upgrade (Lighting, Landscaping, and Irrigation)	-	-	-	-	175,000	-	-	175,000	175,000	2,8	-	-	-	-	-	-	-	-	-	-	-

SUBTOTAL	\$ 9,777,696	\$ 2,275,000	\$ 4,800,000	\$ 2,275,000	\$ 2,260,000	\$ 2,150,000	\$ 13,610,000	\$ 37,147,696	\$ 34,840,696		\$ 2,307,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
----------	--------------	--------------	--------------	--------------	--------------	--------------	---------------	---------------	---------------	--	--------------	------	------	------	------	------	------	------	------	------

GRAND TOTAL GENERAL FUND	\$ 80,692,748	\$ 25,502,000	\$ 16,082,000	\$ 7,090,000	\$ 24,588,000	\$ 12,733,000	\$ 35,669,337	\$ 202,357,085	\$ 117,090,645		\$ 45,696,440	\$ -	\$ 39,570,000	\$ 13,057,000	\$ 3,400,000	\$ 1,415,000	\$ 8,950,000	\$ 5,508,000	\$ 7,240,000
--------------------------	---------------	---------------	---------------	--------------	---------------	---------------	---------------	----------------	----------------	--	---------------	------	---------------	---------------	--------------	--------------	--------------	--------------	--------------

** Project Includes ADA Improvements

Other Sources

- 0. Impact Fees
- 1. Grant and Interlocal Funds
- 2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)
- 3. Escrow
- 4. Decision Package
- 5. Developer Agreement(s)
- 6. Park Development Fund
- 7. Tax Increment Reinvestment Zone (TIRZ)
- 8. Dedicated Sales Tax
- 9. SH 121 Regional Toll Revenue (RTR)

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

WATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES	ISSUED DEBT	AUTHORIZED UNISSUED GO's	NEW DEBT	DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028						2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Aberdeen Water Line (FM 2499 to Lake Forest)	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 190,000	0.2	\$ 110,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruton Orand Elevated Storage Tank Chloramine System	-	150,000	-	-	-	-	-	150,000	150,000	0.2	-	-	-	-	-	-	-	-
Canyon Falls 20-Inch Water Line	2,000,000	-	660,000	-	-	-	-	2,660,000	400,000	0.2	1,700,000	-	-	560,000	-	-	-	-
Cowboy Lane Water Line	-	-	-	-	-	-	670,000	670,000	140,000	0.3	-	-	530,000	-	-	-	-	530,000
Denton Creek Boulevard 12-inch Water Line	200,000	-	1,300,000	-	-	-	-	1,500,000	620,000	0.5	-	-	880,000	-	880,000	-	-	-
Denton Creek District - Water Reuse Master Plan	100,000	-	-	-	-	-	-	100,000	100,000	0.2	-	-	-	-	-	-	-	-
Denton Creek Reuse Pump Station and Ground Storage Tanks	-	-	-	-	-	-	7,600,000	7,600,000	-	0.2	-	-	7,600,000	-	-	-	-	7,600,000
Denton Creek Reuse Pipe Distribution Network	-	-	-	-	-	-	16,400,000	16,400,000	-	0.2	-	-	16,400,000	-	-	-	-	16,400,000
Denton Creek Spine Road 12-inch Water Line	100,000	200,000	2,100,000	-	-	-	-	2,400,000	100,000	0.2	-	-	2,300,000	200,000	2,100,000	-	-	-
Denton Creek District - Reuse Waterlines	100,000	100,000	225,000	975,000	-	-	-	1,400,000	1,400,000	0.2	-	-	-	-	-	-	-	-
FM 1171 to Hwy. 377 Water Line Phase II	-	-	-	-	-	-	5,880,000	5,880,000	290,000	0.2	-	-	5,590,000	-	-	-	-	5,590,000
FM 1171 12-inch Water Line (Karnes Rd. to Churchill Dr.)	-	-	-	-	-	-	210,000	210,000	210,000	0.2	-	-	-	-	-	-	-	-
FM 2499 12-Inch Water Line Phase I (Dixon to South of FM 1171)	600,000	2,600,000	-	-	-	-	-	3,200,000	2,300,000	0.2,7	-	-	900,000	900,000	-	-	-	-
Freeman 12-Inch Water Line (Water Tower to 1,600 Feet North)	-	50,000	-	-	-	-	-	50,000	50,000	2	-	-	-	-	-	-	-	-
Garden Ridge Blvd. Ph. II Water Line	-	-	950,000	-	-	-	-	950,000	390,000	0.2	-	-	560,000	-	-	560,000	-	-
Glenview 12 Inch Water Line (Patriot Way to Old Gerault Rd)	-	40,000	-	-	-	-	-	40,000	40,000	2	-	-	-	-	-	-	-	-
Grady Court Water Line	-	-	150,000	-	-	-	-	150,000	150,000	2	-	-	-	-	-	-	-	-
High Road Water Line Replacement Phase I	2,250,000	-	-	-	-	-	-	2,250,000	-	2	2,250,000	-	-	-	-	-	-	-
High Road Water Line Replacement Phase II	-	650,000	2,850,000	-	-	-	-	3,500,000	-	2	-	-	3,500,000	650,000	2,850,000	-	-	-
Highway 377/UPRR Water Line Phase II	137,620	-	-	-	-	-	2,310,000	2,447,620	87,620	0.2	50,000	-	2,310,000	-	-	-	-	2,310,000
Impact Fee Update	-	-	80,000	-	-	-	-	80,000	80,000	0.2	-	-	-	-	-	-	-	-
Kirkpatrick Lane 12-Inch Water Line Phase II (Valley Ridge - FM 1171)	700,000	700,000	-	-	-	-	-	1,400,000	700,000	0.2	-	-	700,000	700,000	-	-	-	-
Kirkpatrick Lane 12-Inch Water Line Phase III (South of FM1171)	-	-	-	-	-	-	320,000	320,000	320,000	0.2	-	-	-	-	-	-	-	-
Lake Forest 12-inch Water Line (Bridge Gap)	135,000	-	-	-	-	-	-	135,000	135,000	0.2	-	-	-	-	-	-	-	-
Lake Forest 12-inch Water Line (FM 3040 to Spinks)	-	-	-	-	-	-	1,380,000	1,380,000	500,000	0.2	-	-	880,000	-	-	-	-	880,000
Lakeside Business District - Water Reuse Master Plan	120,000	10,000	-	-	-	-	-	130,000	130,000	0.2	-	-	-	-	-	-	-	-
Lusk/Red Oak East-West Connector	-	-	-	-	-	-	3,240,000	3,240,000	240,000	0.2	-	-	3,000,000	-	-	-	-	3,000,000
Morriess Road Water Lines Phase I	100,000	900,000	-	-	-	-	-	1,000,000	100,000	2	-	-	900,000	900,000	-	-	-	-
Morriess Road Water Lines Phase II	-	-	350,000	2,650,000	-	-	-	3,000,000	-	2	-	-	3,000,000	-	350,000	2,650,000	-	-
Morriess Road Water Lines Phase III	-	-	-	400,000	4,500,000	-	-	4,900,000	2,200,000	0.2,7	-	-	2,700,000	-	-	2,700,000	-	-
Pintail Pump Station (Auxiliary Power & Upgrades)	720,000	1,130,000	-	-	-	-	-	1,850,000	400,000	0.2,5	320,000	-	1,130,000	1,130,000	-	-	-	-
Pressure Reducing Valves	-	-	-	-	-	-	560,000	560,000	300,000	0.2	-	-	260,000	-	-	-	-	260,000
Red Bud Point Water Service Relocation	-	775,000	-	-	-	-	-	775,000	-	2	-	-	775,000	775,000	-	-	-	-
Rippy Road Water line Improvements (FM 2499-Waketon)	750,000	-	-	-	-	-	-	750,000	350,000	0.2	400,000	-	-	-	-	-	-	-
Scenic Drive Water Line (South of FM 1171 to River Hill Dr.)	-	-	-	-	-	-	1,490,000	1,490,000	490,000	0.2	-	-	1,000,000	-	-	-	-	1,000,000
Shady Point Acres Water Line Replacement	1,300,000	-	-	-	-	-	-	1,300,000	-	2	1,300,000	-	-	-	-	-	-	-
Stonecrest Pump Station Phase I (Auxiliary Power)	-	-	2,120,000	-	-	-	-	2,120,000	300,000	0.2	-	-	1,820,000	-	-	1,820,000	-	-
Stonecrest Pump Station Phase II	-	-	-	-	-	-	5,140,000	5,140,000	250,000	0.2	-	-	4,890,000	-	-	-	-	4,890,000
Stonecrest Pump Station Phase III	-	-	-	-	-	-	840,000	840,000	-	2	-	-	840,000	-	-	-	-	840,000
Stonehill Pump Station 10MG Ground Storage Tank Modification	-	-	350,000	-	-	-	-	350,000	-	1.2	50,000	-	300,000	-	300,000	-	-	-
Stonehill 10MG Ground Storage Tank Rehabilitation	40,000	600,000	-	-	-	-	-	640,000	40,000	2	-	-	600,000	600,000	-	-	-	-
Stonehill Pump Station Discharge Valve Replacement	-	-	60,000	500,000	-	-	-	560,000	60,000	2	-	-	500,000	-	500,000	-	-	-
Timber Creek 20-inch Water Line	-	-	-	-	-	-	370,000	370,000	250,000	2	-	-	120,000	-	-	-	-	120,000
Trailwood Terrace 12-inch Water Line	400,000	-	-	-	-	-	-	400,000	400,000	0.2	-	-	-	-	-	-	-	-
Utility Asset Management & Utility Replacement	300,000	300,000	300,000	300,000	300,000	300,000	-	1,800,000	-	2	300,000	-	1,500,000	300,000	300,000	300,000	300,000	-
Water Master Plan	-	-	150,000	-	-	-	-	150,000	150,000	0.2	-	-	-	-	-	-	-	-
Water System Leak Detection & Repair	700,000	-	50,000	50,000	50,000	50,000	-	900,000	-	2	700,000	-	200,000	-	50,000	50,000	50,000	-
Water System Model Update	152,285	5,000	5,000	5,000	5,000	5,000	-	177,285	177,285	0.2	-	-	-	-	-	-	-	-
West Side Water Lines (East)	-	-	-	-	-	-	2,610,000	2,610,000	300,000	0.2	-	-	2,310,000	-	-	-	-	2,310,000
West Side Water Lines (South)	-	-	-	-	-	-	3,440,000	3,440,000	350,000	0.2	-	-	3,090,000	-	-	-	-	3,090,000
West Side Water Lines (West)	-	-	-	-	-	-	1,390,000	1,390,000	150,000	0.2	-	-	1,240,000	-	-	-	-	1,240,000
Western Operations and Maintenance Facility (Buildout)	-	-	-	-	100,000	-	-	100,000	100,000	2	-	-	-	-	-	-	-	-
Woodbine Water Line Replacement	410,000	25,000	-	-	-	-	-	435,000	410,000	2	25,000	-	-	-	-	-	-	-
Yucca Drive Utilities (Sagebrush to 700 ft South of FM 1171)	870,000	-	-	-	-	-	-	870,000	220,000	2	650,000	-	-	-	-	-	-	-

SUBTOTAL	\$ 12,484,905	\$ 8,235,000	\$ 11,700,000	\$ 4,880,000	\$ 4,955,000	\$ 355,000	\$ 53,850,000	\$ 96,459,905	\$ 15,719,905	\$ 36	\$ 7,855,000	\$-	\$-	\$ 72,885,000	\$-	\$ 6,155,000	\$ 7,890,000	\$ 5,380,000	\$ 3,050,000	\$ 350,000	\$ 50,060,000
----------	---------------	--------------	---------------	--------------	--------------	------------	---------------	---------------	---------------	-------	--------------	-----	-----	---------------	-----	--------------	--------------	--------------	--------------	------------	---------------

** Project Includes ADA Improvements
Other Sources
0. Impact Fees
1. Grant and Interlocal Funds
2. Other Sources (Proj. Sav., Fund Bal., Interest Inc.)
3. Escrow
4. Decision Package
5. Developer Agreement(s)
6. Park Development Fund
7. Tax Increment Reinvestment Zone (TIRZ)
8. Dedicated Sales Tax
9. SH 121 Regional Toll Revenue (RTR)

Page 113 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

STORMWATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT		AUTHORIZED UNISSUED GO's		NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028										2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Bakers Branch Stabilization at Cedar Bluff (Strait Lane)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000	\$ -	\$ 75,000	\$ 75,000	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Bakers Branch Stabilization at 621 Somerset Drive	150,000	175,000	-	-	-	-	-	325,000	325,000	2	-	-	-	-	-	-	-	-	-	-	-	
Bakers Branch Stabilization at 1600 & 1612 Strait Lane	-	-	-	-	200,000	-	-	200,000	200,000	2	-	-	-	-	-	-	-	-	-	-	-	
Creek Bank Stabilization at 1104 & 1108 Big Canyon Drive	-	-	175,000	200,000	-	-	-	375,000	375,000	2	-	-	-	-	-	-	-	-	-	-	-	
Creek Bank Stabilizaton at 1540 Echo Bluff	-	-	-	-	-	75,000	-	75,000	75,000	2	-	-	-	-	-	-	-	-	-	-	-	
Creek Bank Stabilization at 3100 River Hill Court	100,000	-	-	-	-	-	-	100,000	100,000	2	-	-	-	-	-	-	-	-	-	-	-	
East Waketon Road Drainage Improvements	50,000	470,000	890,000	1,670,000	-	-	-	3,080,000	520,000	1,2,7	-	-	-	2,560,000	-	890,000	1,670,000	-	-	-	-	
FM 2499 Roadway, Traffic Signal, and Drainage	500,000	-	-	-	-	-	-	500,000	500,000	1,3	-	-	-	-	-	-	-	-	-	-	-	
McKamy Creek Stabilization & Drop Structure at 1900 Winding Creek Blvd	-	-	50,000	-	-	-	-	50,000	50,000	1,4	-	-	-	-	-	-	-	-	-	-	-	
Pecan Acres Drainage Improvements	-	-	-	-	-	75,000	425,000	500,000	500,000	1,5	-	-	-	-	-	-	-	-	-	-	-	
Timber Creek Stabilization at Timber Creek Rd (North & South Bridges)	-	-	-	-	-	-	400,000	400,000	400,000	1,6	-	-	-	-	-	-	-	-	-	-	-	
SUBTOTAL	\$ 800,000	\$ 645,000	\$ 1,115,000	\$ 1,870,000	\$ 200,000	\$ 225,000	\$ 825,000	\$ 5,680,000	\$ 3,120,000		\$ -	\$ -	\$ 2,560,000	\$ -	\$ 890,000	\$ 1,670,000	\$ -	\$ -	\$ -	\$ -	\$ -	

** Project Includes ADA Improvements

Other Sources

0. Impact Fees

1. Grant and Interlocal Funds

2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)

3. Escrow

4. Decision Package

5. Developer Agreement(s)

6. Park Development Fund

7. Tax Increment Reinvestment Zone (TIRZ)

8. Dedicated Sales Tax

9. SH 121 Regional Toll Revenue (RTR)

Page 114 of 301

TOWN OF FLOWER MOUND
SUMMARY OF FIVE YEAR CIP PLAN
FY 2018-2019
10/15/2018
Amendment 1

WASTEWATER PROJECTS	PRIOR FISCAL YEARS	CONSTRUCTION SCHEDULE						TOTAL PROJECT COSTS	OTHER SOURCES		ISSUED DEBT		AUTHORIZED UNISSUED GO's	NEW DEBT		DEBT SCHEDULE					
		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028									2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2028
Bakers Branch Collector Phase II (Lexington to Gerault)	1,850,000	-	-	-	-	-	-	1,850,000	350,000	0.2	1,500,000		-	-	-	-	-	-	-	-	-
Impact Fee Update	-	-	80,000	-	-	-	-	80,000	80,000	0.2	0		-	-	-	-	-	-	-	-	-
Inflow-Infiltration/Evaluation and Repair	2,230,000	-	250,000	250,000	250,000	250,000	-	3,230,000	130,000	2	2,100,000		-	1,000,000	-	250,000	250,000	250,000	250,000	-	-
Justin Road Lift Station Outfall (Justin Rd. to Cottage Ln.)	850,000	-	-	-	-	-	-	850,000	400,000	0.2	450,000		-	-	-	-	-	-	-	-	-
Lift Station Improvements and Decommissioning	1,825,000	-	-	-	-	-	-	1,825,000	100,000	2	1,725,000		-	-	-	-	-	-	-	-	-
Long Prairie Interceptor (North of Woodway Drive)	-	-	-	-	-	330,000	-	330,000	-	0.2	-		-	330,000	-	-	-	-	330,000	-	-
Lower Timber Interceptor (Teakwood to Pintail Park)	-	-	810,000	-	-	-	-	810,000	-	0.2	-		-	810,000	-	810,000	-	-	-	-	-
Oak Street Lift Station and Force Main Phase IV	-	-	1,500,000	-	-	-	-	1,500,000	150,000	0.2			-	1,350,000	-	-	1,350,000	-	-	-	-
Oak Street Lift Station and Force Main Phase V	-	-		-	-	-	2,500,000	2,500,000		0.2			-	2,500,000	-	-	-	-	-	2,500,000	-
Riverwalk Collector (Morris Rd. to Windsor Dr.)	-	-	-	430,000	-	-	-	430,000	230,000	0.2	-		-	200,000	-	-	-	-	200,000	-	-
Southside Force Main Extension	-	-	300,000	2,100,000	-	-	-	2,400,000	1,400,000	0.2	-		-	1,000,000	-	1,000,000	-	-	-	-	-
Southside Gravity Improvements	-	-	-	-	-	-	3,900,000	3,900,000	1,000,000	0.2,3,5	-		-	2,900,000	-	-	-	-	-	2,900,000	-
Southside Pump Upgrade	-	-	90,000	1,012,000	-	-	-	1,102,000	452,000	0.2	-		-	650,000	-	650,000	-	-	-	-	-
Upper Timber Creek Interceptor (South of College Pkw.)	-	-	-	-	300,000	-	-	300,000		0.2	-		-	300,000	-	-	-	-	300,000	-	-
Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)	960,000	1,700,000	-	-	-	-	-	2,660,000	410,000	0.2	550,000		-	1,700,000	1,700,000	-	-	-	-	-	-
Upper Timber Creek Interceptor Phase IV (Hidden Forest Drive to Oak Street Lift Station)	350,000	3,350,000	-	-	-	-	-	3,700,000		2	350,000		-	3,350,000	3,350,000	-	-	-	-	-	-
Wastewater Master Plan	-	-	150,000	-	-	-	-	150,000	150,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater System Model Update	205,785	5,000	5,000	5,000	5,000	5,000	-	230,785	230,785	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Capacity Study	75,000	-	-	-	-	-	-	75,000	75,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Expansion	-	-	-	-	-	-	150,000	150,000	150,000	0.2	-		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Final Clarification Rehabilitation	780,000	-	-	-	-	-	-	780,000	430,000	2	350,000		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase IV (Dewatering, B&L)	5,540,000	-	-	-	-	-	-	5,540,000	780,000	2	4,760,000		-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase V (Sludge Holding and Thickening)	800,000	11,000,000	-	-	-	-	-	11,800,000	-	2	800,000		-	11,000,000	11,000,000	-	-	-	-	-	-
Wastewater Treatment Plant Rehabilitation Phase VI (Thermal Drying)	-	-	-	-	-	-	13,000,000	13,000,000	-	2	-		-	13,000,000	-	-	-	-	-	13,000,000	-
Wastewater Treatment Plant Rehabilitation Phase VII (Phosphorus Removal)	-	-	-	-	-	-	1,000,000	1,000,000	-	2	-		-	1,000,000	-	-	-	-	-	1,000,000	-
Wastewater Treatment Plant Ultraviolet System Update	250,000	2,750,000	-	-	-	-	-	3,000,000	250,000	2	-		-	2,750,000	2,750,000	-	-	-	-	-	-
Wellington Interceptor Phase IV Section I (Vail Lane to Oak Street Lift Station)	-	-	420,000	-	-	-	-	420,000	95,000	0.2	-		-	325,000	-	325,000	-	-	-	-	-
Wellington Interceptor Phase V (Ridgemere Dr. to Woodway Dr.)	-	-	-	-	720,000	-	-	720,000		0.2	-		-	720,000	-	-	-	-	720,000	-	-
Wellington Interceptor (Fieldcrest Rd. to FM 3040)	-	-	-	-	410,000	-	-	410,000		0.2	-		-	410,000	-	-	-	-	410,000	-	-
Wichita Trail Lift Station Improvements	-	-	-	-	780,000	-	-	780,000		0.2	-		-	780,000	-	-	-	-	780,000	-	-
Woodbine Street Sewer Line	800,000	-	-	-	-	-	-	800,000	200,000	2	600,000		-	-	-	-	-	-	-	-	-
SUBTOTAL	\$ 16,515,785	\$ 18,805,000	\$ 3,605,000	\$ 3,797,000	\$ 2,465,000	\$ 585,000	\$ 20,550,000	\$ 66,322,785	\$ 7,062,785		\$ 13,185,000		\$ -	\$ 46,075,000	\$ 18,800,000	\$ 3,035,000	\$ 1,600,000	\$ 250,000	\$ 2,990,000	\$ 19,400,000	
GRAND TOTAL UTILITY FUND	\$ 29,800,690	\$ 27,685,000	\$ 16,420,000	\$ 10,547,000	\$ 7,620,000	\$ 1,165,000	\$ 75,225,000	\$ 168,462,690	\$ 25,902,690		\$ 21,040,000		\$ -	\$ 121,520,000	\$ 24,955,000	\$ 11,815,000	\$ 8,650,000	\$ 3,300,000	\$ 3,340,000	\$ 69,460,000	

** Project Includes ADA Improvements

Other Sources

0. Impact Fees

1. Grant and Interlocal Funds

2. Other Sources (Proj. Sav.,Fund Bal.,Interest Inc.)

3. Escrow

4. Decision Package

5. Developer Agreement(s)

6. Park Development Fund

7. Tax Increment Reinvestment Zone (TIRZ)

8. Dedicated Sales Tax

9. SH 121 Regional Toll Revenue (RTR)



TOWN COUNCIL AGENDA ITEM NO. 8

CONSENT ITEM

DATE: October 15, 2018

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

ITEM: Consider approval of the purchase of new traffic signal detection equipment for the Traffic Detection Rehabilitation project, from Twincrest Technologies through the HGAC Buy program, in the amount of \$132,900.00.

BACKGROUND INFORMATION: This item includes the purchase of the detection hardware, mounting equipment and wiring for 5 traffic signal locations.

These items are a HGAC Buy purchase from Twincrest Technologies. This equipment will be used to replace obsolete detection systems in the field that are no longer available for purchase or repair.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: \$132,900.00

Proposed Expenditure:	Account Number(s):
\$132,900.00	531-220-78027-6200

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

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Quote from Twincrest Technologies

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

HGACBuy		CONTRACT PRICING WORKSHEET For Catalog & Price Sheet Type Purchases		Contract No.:	PE05-17	Date Prepared:	9/19/2018
<i>This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents <u>MUST</u> be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.</i>							
Buying Agency:	Town of Flower Mound	Contractor:	Twincrest Technologies				
Contact Person:	David Stallings	Prepared By:	Jackie Jameson				
Phone:	972-874-6415	Phone:	817-539-2200				
Fax:		Fax:	817-539-2201				
Email:	david.stallings@flower-mound.com	Email:	jjameson@twincresttech.com				
Catalog / Price Sheet Name:	Wavetronix						
General Description of Product:	Smartsensor Matrix System - Quote # 4344-JJ						
A. Catalog / Price Sheet Items being purchased - Itemize Below - Attach Additional Sheet If Necessary							
Quantity	Description	Unit Pr	Total				
INTERSECTION #1							
1	WX-SS-225-4AC-656 4 Approach Matrix AC Power Package w/Click 656 SDLC Interface Module	17450	17450				
2	WX-SS-200V SmartSensor 10.525GHz Advance Detection System	3640	7280				
6	WX-SS-704-020' Sensor Pigtail with Molded Connector - 20'	140	840				
2	WX-SS-611 Heavy Duty Sensor Mount - 6" - 2 axis aluminum bracket	175	350				
1000	WX-SS-705 Matrix/Advance Cable	1.65	1650				
INTERSECTION #2							
1	WX-SS-225-4AC-656 4 Approach Matrix AC Power Package w/Click 656 SDLC Interface Module	17450	17450				
2	WX-SS-200V SmartSensor 10.525GHz Advance Detection System	3640	7280				
6	WX-SS-704-020' Sensor Pigtail with Molded Connector - 20'	140	840				
2	WX-SS-611 Heavy Duty Sensor Mount - 6" - 2 axis aluminum bracket	175	350				
1000	WX-SS-705 Matrix/Advance Cable	1.65	1650				
INTERSECTION #3							
1	WX-SS-225-4AC-656 4 Approach Matrix AC Power Package w/Click 656 SDLC Interface Module	17450	17450				
2	WX-SS-200V SmartSensor 10.525GHz Advance Detection System	3640	7280				
6	WX-SS-704-020' Sensor Pigtail with Molded Connector - 20'	140	840				
2	WX-SS-611 Heavy Duty Sensor Mount - 6" - 2 axis aluminum bracket	175	350				
INTERSECTION #4							
1	WX-SS-225-4AC-656 4 Approach Matrix AC Power Package w/Click 656 SDLC Interface Module	17450	17450				
2	WX-SS-200V SmartSensor 10.525GHz Advance Detection System	3640	7280				
6	WX-SS-704-020' Sensor Pigtail with Molded Connector - 20'	140	840				
2	WX-SS-611 Heavy Duty Sensor Mount - 6" - 2 axis aluminum bracket	175	350				

Quantity	Description	Unit Pr	Total
	INTERSECTION #5		
1	WX-SS-225-4AC-656 4 Approach Matrix AC Power Package w/Click 656 SDLC Interface Module	17450	17450
2	WX-SS-200V SmartSensor 10.525GHz Advance Detection System	3640	7280
6	WX-SS-704-020' Sensor Pigtail with Molded Connector - 20'	140	840
2	WX-SS-611 Heavy Duty Sensor Mount - 6" - 2 axis aluminum bracket	175	350
Total From Other Sheets, If Any:			
Subtotal A:			132900.00
B. Unpublished Options, Accessory or Service items - Itemize Below - Attach Additional Sheet If Necessary			
(Note: Unpublished Items are any which were not submitted and priced in contractor's bid.)			
Quan	Description	Unit Pr	Total
			0
			0
			0
Total From Other Sheets, If Any:			
Subtotal B:			0
Check: Total cost of Unpublished Options (B) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).		For this transaction the percentage is:	0%
C. Other Allowances, Discounts, Trade-Ins, Freight, Make Ready or Miscellaneous Charges			
Subtotal C:			0
Delivery Date: 30-45 days ARO		D. Total Purchase Price (A+B+C):	
		132900.00	



TOWN COUNCIL AGENDA ITEM NO. 9

CONSENT ITEM

DATE: October 15, 2018

FROM: Robert Pegg, P.E., Development Engineering Manager

ITEM: **Consider approval of updates to the Town of Flower Mound Design Criteria and Construction Standards, modifying fire hydrant painting requirements, and adding M&H Valve Company as an approved manufacturer of fire hydrants and water valves.**

BACKGROUND INFORMATION: Two updates are being requested to the Town of Flower Mound Design Criteria and Construction Standards; one revises the color that fire hydrants are required to be painted and one adds an additional manufacturer, M&H Valve Company, to the list of approved manufacturers for fire hydrants and water valves.

The Town's Construction Standards currently requires that fire hydrant barrels be painted silver and bonnets be painted according to a color-coded system related to the water main size. In order to simplify their maintenance requirements, the Town's Fire Department has requested the elimination of the color-coded bonnet requirement and proposes the requirement be updated to paint both the barrel and the bonnet silver. Public Works has reviewed the request change and determined that the color-coded system is no longer necessary and, therefore, support the requested change.

In addition to the Fire Department change, the Public Works Department has requested that the Construction Standards be revised to add M&H Valve Company as an approved fire hydrant and water valve manufacturer.

Attachment 1 provides detail on the locations in the Design Criteria and Construction Standards that will be updated, Attachments 2 and 3 are the edited pages for each Volume.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

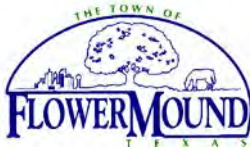
FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Construction Standards I & II Updates
2. Design Criteria (Volume I of II) edited pages
3. Construction Standards (Volume II of II) edited pages

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



Construction Standards Vol. I & II Updates

Volume I Updates

1. Coversheet
 - Revised amended date to October 2018
2. Fire Hydrants
 - Removed text pertaining to hydrant paint.
 - Replaced text with “powder coated silver from the manufacturer.”
 - Added third bullet under Manufacturers, “M&H Valve Company”
3. Valves
 - Added fourth bullet under Manufacturers, “M&H Valve Company”
4. Water Construction Standards Details
 - Updated revision date of W-3 to October, 2018
 - Added W-3 sheet 2 “Deep Fire Hydrant Installation”

Volume II Updates

1. Coversheet
 - Revised amended date to October 2018
2. Water Construction Standards
 - Updated revision date of W-3 to October 2018
 - Added W-3 sheet 2 “Deep Fire Hydrant Installation”
3. Fire Hydrant Installation W-3 1 of 2
 - Revised note 11 to “Both the fire hydrant body and the bonnet shall be silver in color. The silver finish must be a powder coated product installed by the manufacturer. Painted finishes of any color are not acceptable.”
 - Revised revision date to October, 2018
4. Deep Fire Hydrant Installation W-3 2 of 2
 - Revised note 12 to “Both the hydrant body and the bonnet shall be silver in color. The silver finish must be a powder coated product installed by the manufacturer. Painted finishes of any color are not acceptable.”
 - Updated revision date to October, 2018

Town of Flower Mound Engineering Services

DESIGN CRITERIA *(Volume I of II)*



April 2010



C. Fire Hydrants

1. The centerline of the hydrants shall be located in the parkway, 3'6" behind the back of curb with a splash pad provided from edge of pavement to the fire hydrant.
2. Fire hydrant lead shall have a gate valve at the connection to the main. Fire hydrants in commercial and industrial areas shall generally be at street intersections and so located that there will be a fire hydrant every three hundred (300) feet. Fire hydrants in a residential area shall be generally located on street intersections (or on property line at locations other than street intersections) and not over five hundred (500) feet apart. Fire hydrants in a multi-family complex shall be generally located on street intersections and not over three hundred (300) feet apart.
3. Materials
 - a. Fire hydrants shall be manufactured in accordance with AWWA C-502, dry-barrel fire hydrants.
 - b. Hydrants shall be manufactured such that all maintenance and adjustments can be performed without excavation and such that hydrants may be faced in any direction in relation to base.
 - c. Each fire hydrant shall have one (1) 4 1/2" pumper connection and two (2) 2 1/2" hose connections. Threads for hose connections shall be National Standard Threads. The hydrant shall open counter clockwise.
 - d. **Painting**
 - i) **The fire hydrant bonnet and body shall be powder coated silver from the manufacturer.**



4. Manufacturers

- i) Mueller (Super Centerlon 200)
- ii) American Darling (8-84-B)
- iii) M&H Valve Company

5. Installation

a. General

- i) Installation shall be in accordance with AWWA M-17. The use of a 90° anchor or flange fitting shall be required unless otherwise approved by the Town Manager or his designee.
- ii) Fire hydrants shall have a maximum buried depth of 7 feet including extension.

b. Location Markers

- i) The location marker shall be placed in the center of the roadway opposite the fire hydrant. The installation of this reflector shall be in accordance with the manufacturer's recommendation. Location markers shall be Stemsonite 1-88-55A or approved equal (reflective and blue in color).

D. Valves

1. Resilient seated gate valves shall be used for all sizes of water lines. Butterfly valves shall only be used when approved by the Town Manager or his designee.
2. Valves of approved design shall be installed at the intersections of all water mains so as to provide for proper maintenance and operation of the system and to provide a means of shutting off the supply to portions of the system for repairs. Valves shall be spaced such that only one fire hydrant is out of service at any one time. Four valves shall be used on a four way water line intersection and three valves shall be used on a three way intersection. Main line valves shall also be placed on each side of main where fire vault is connected.

3. In-line valves shall be added to each side of main where fire vault is connected.

4. Materials

a. Resilient Seated Gate Valves

- i) Resilient seated gate valves 6" through 20" shall meet or exceed the latest revisions of AWWA C509 and shall meet or exceed the requirements of these standards.



an integral shaft seal protecting the valve bearings and packing from any line debris. Seats vulcanized to cartridge inserts in the valve body and seats on the disc are not acceptable.

- vi) Valve shaft bearings shall be non-metallic and permanently lubricated.
- vii) Unless otherwise specified, exterior and interior metallic surfaces of each valve shall be shop painted per the latest revision of AWWA C504.
- viii) Bolt, hex head and nut shall be Steel ASTM A307 Gr. B, Zinc Plat per ASTM B633, SC3 for non-buried service and for 4" through 12" valves. Bolt, hex head and nut shall be 316 Stainless Steel for buried service valves. If a standard valve box is used with buried service, the valve box lid shall be painted safety blue. The paint shall be Glidden or approved equal.
- ix) T-Bolts shall be high strength low alloy Cor-Ten or approved equal.
- x) Valves larger than 24" shall be approved by the Town Manager or his designee.

5. Manufacturers

- i) American Flow Control
- ii) Clow
- iii) Mueller
- iv) M&H Valve Company

6. Installation

a. General

- i) Valves shall be furnished with extensions, such that the working nut is a maximum of 48" below grade.
- ii) Adjustable valve boxes shall be furnished and set on each valve in accordance with these standards. Valves that are deeper than 48", AWWA C900 PVC pipe shall be used for stacks, as long as the adjustable valve box is used at the top.
- iii) After the final clean-up and alignment has been complete, the contractor shall cast in place a concrete block, 24" x 24" x 6" around all valve box tops at the finish grade, with geodetic marker.
- iv) Valves located within a right-of-way shall be indicated on the face of the curb, or where curbs do not exist, on a conspicuous location adjacent to the valve location. Markings are to be the saw cutting of a four (4) inch high letter "V" with the point of the "V" pointing towards the valve location.



Water Construction Standards Details

(Provided for Reference – Included in Volume II)

Title	Detail No.	Sheet	Revision Date
9.5' Parkway Water Line Location with Std. Inlet	W-1	1	October, 2009
Standard Water Line Embedment and Backfill	W-2	1	July, 2002
Standard Water Line Embedment and Backfill	W-2	2	October, 2009
Fire Hydrant Installation	W-3	1	October, 2018
Deep Fire Hydrant Installation	W-3	2	October, 2018
Gate Valve Installation	W-4	1	October, 2009
5/8" x 3/4"-2" Water Service Assembly	W-5	1	July, 2015
Branch Service Installation	W-6	1	October, 2009
Flushing Valve Installation	W-7	1	October, 2009
Horizontal Blocking	W-8	1	October, 2009
Horizontal and Vertical Restraint Length	W-9	1	February, 2016
Reducer and Tee Restraint Length	W-9	2	February, 2016
Concrete Cradle at Vertical Bends	W-10	1	October, 2009
Typical Ring Connection	W-11	1	February, 1999
2" Compound and Larger Meters	W-12	1	October, 2009
Valve Markers	W-13	1	October, 2009
Sampling Station	W-14	1	October, 2009
Air Release Valve RBX	W-15	1	July, 2015
Combination Air Vacuum Release Valve	W-15	2	July, 2015
Water Meter Box	W-16	1, 2	October, 2009

Town of Flower Mound Engineering Services

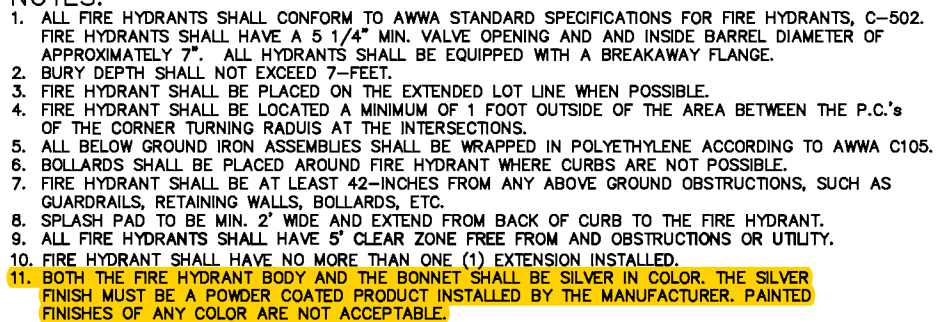
CONSTRUCTION STANDARDS *(Volume II of II)*

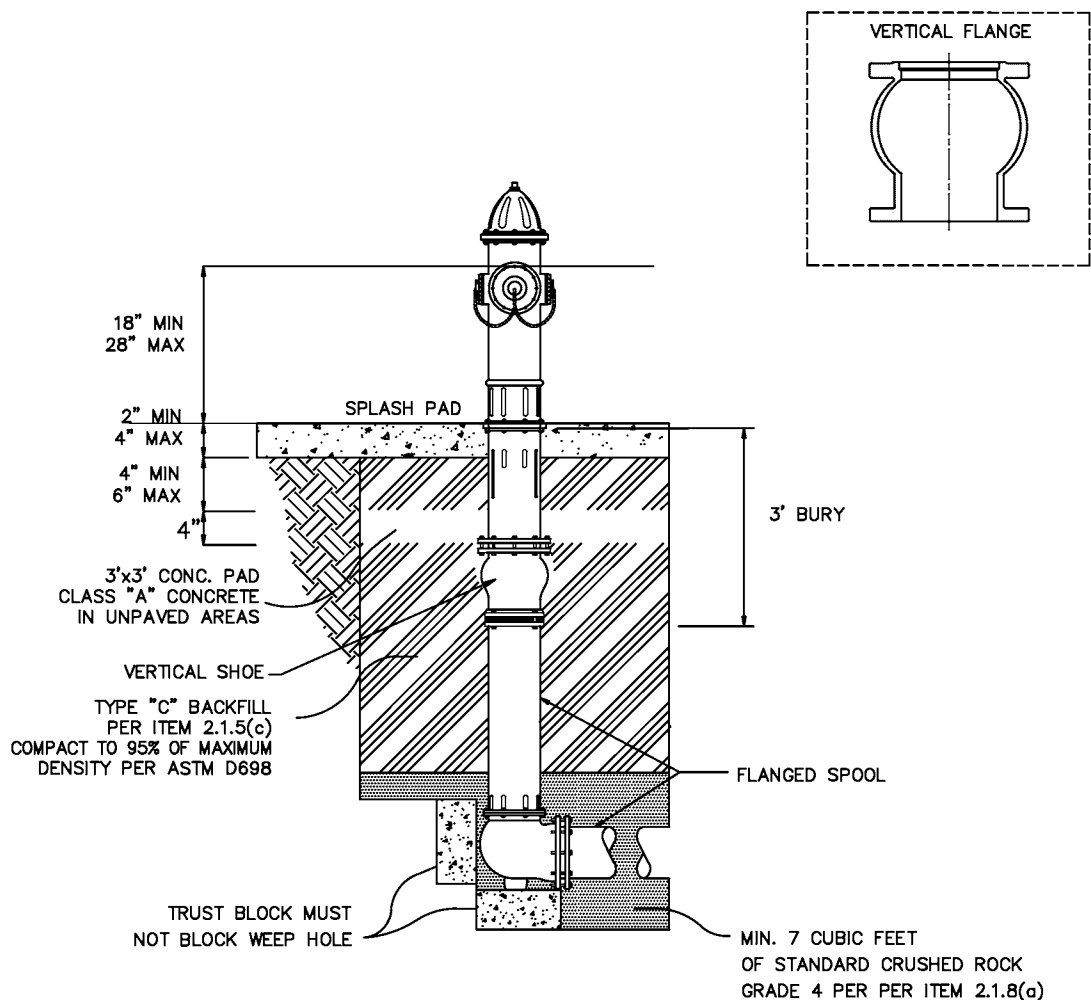


April 2010

Amended October 2018

SHEET: W-3





* SEE W-3 SHEET 1 FOR DETAILS ON VALVE

NOTES:

1. FIRE HYDRANT SHALL BE 3 FEET BURY
2. THE HYDRANT SHOE SHALL BE FLANGED
3. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND AN INSIDE BARREL DIAMETER OF APPROXIMATELY 7". ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
4. FIRE HYDRANT SHALL BE PLACED ON THE EXTENDED LOT LINE WHEN POSSIBLE.
5. FIRE HYDRANT SHALL BE LOCATED A MINIMUM OF 1 FOOT OUTSIDE OF THE AREA BETWEEN THE P.C.'s OF THE CORNER TURNING RADIUS AT THE INTERSECTIONS.
6. ALL BELOW GROUND IRON ASSEMBLIES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
7. BOLLARDS SHALL BE PLACED AROUND FIRE HYDRANT WHERE CURBS ARE NOT POSSIBLE.
8. FIRE HYDRANT SHALL BE AT LEAST 42-INCHES FROM ANY ABOVE GROUND OBSTRUCTIONS, SUCH AS GUARDRAILS, RETAINING WALLS, BOLLARDS, ETC.
9. SPLASH PAD TO BE MIN. 2' WIDE AND EXTEND FROM BACK OF CURB TO THE FIRE HYDRANT.
10. ALL FIRE HYDRANTS SHALL HAVE 5' CLEAR ZONE FREE FROM OBSTRUCTIONS OR UTILITY.
11. FIRE HYDRANT SHALL HAVE NO MORE THAN ONE (1) EXTENSION INSTALLED.
12. BOTH THE FIRE HYDRANT AND THE BONNET SHALL BE SILVER IN COLOR. THE SILVER FINISH MUST BE A POWDER COATED PRODUCT INSTALLED BY THE MANUFACTURER. PAINTED FINISHES OF ANY COLOR ARE NOT ACCEPTABLE.



WATER SYSTEM CONSTRUCTION DETAILS
DEEP FIRE HYDRANT
INSTALLATION

DATE: OCT 2018

SHEET 2 OF 2

SHEET: W-3



Water Construction Standards

Title	Detail No.	Sheet No.	Revision Date
9.5' Parkway Water Line Location with Std. Inlet	W-1	1	October, 2009
Standard Water Line Embedment and Backfill	W-2	1	July, 2002
Standard Water Line Embedment and Backfill	W-2	2	October, 2009
Fire Hydrant Installation	W-3	1	October, 2018
Deep Fire Hydrant Installation	W-3	2	October, 2018
Gate Valve Installation	W-4	1	October, 2009
5/8" x 3/4" - 2" Water Service Assembly	W-5	1	July, 2015
Branch Service Installation	W-6	1	October, 2009
Flushing Valve Installation	W-7	1	October, 2009
Horizontal Blocking	W-8	1	October, 2009
Horizontal and Vertical Restraint Length	W-9	1	February, 2016
Reducer and Tee Restraint Length	W-9	2	February, 2016
Concrete Cradle at Vertical Bends	W-10	1	October, 2009
Typical Ring Connection	W-11	1	February, 1999
2" Compound and Larger Meters	W-12	1	October, 2009
Valve Markers	W-13	1	October, 2009
Sampling Station	W-14	1	October, 2009
Air Release Valve RBX	W-15	1	July, 2015
Combination Air Vacuum Release Valve	W-15	2	July, 2015
Water Meter Box	W-16	1, 2	October, 2009

*******SEE VOLUME I FOR DESIGN CRITERIA *******



TOWN COUNCIL AGENDA ITEM NO. 10

CONSENT ITEM

DATE: October 15, 2018

FROM: Julie Taylor, Director of Treasury Operations *Jat*

ITEM: Consider approval of a resolution declaring expectation to reimburse expenditures with proceeds of future debt and authorizing the preparation of the documents associated with the issuance, sale, and delivery of the debt obligations; and providing an effective date.

BACKGROUND INFORMATION: The procurement process requires that 100% of funding be available before funds can be encumbered for the award of contracts. This reimbursement resolution will allow staff to satisfy the funding requirements prior to the issuance of debt under federal tax law.

The Town plans to issue debt during fiscal year 2018-2019 to fund improvements to streets, signals, facilities, and to the water and wastewater system within the Town and fund the costs of issuance of the debt. In order to begin this project prior to the issuance of debt, it is necessary to pass this resolution declaring intent to reimburse expenditures. The proposed reimbursement resolution provides the funding source to satisfy the procurement requirements for the projects as included on the fiscal year 2018-2019 Five-Year Capital Improvement Program ("CIP").

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: \$38,585,000

Proposed Expenditure:	Account Number(s):
\$38,585,000	To satisfy the funding requirements and begin the capital project prior to the issuance of debt under federal tax law.

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

LEGAL REVIEW: The Town's Bond Counsel, Norton Rose Fulbright US LLP, prepared the proposed resolution. This standard reimbursement resolution was approved in the past by Taylor, Olson, Adkins, Sralla, & Elam L.L.P. No alteration to the legal content of this form document was made in preparation of this document.

ATTACHMENTS:

1. 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, DECLARING EXPECTATION TO REIMBURSE EXPENDITURES WITH PROCEEDS OF FUTURE DEBT, AND AUTHORIZING THE PREPARATION OF THE DOCUMENTS ASSOCIATED WITH THE ISSUANCE, SALE AND DELIVERY OF THE DEBT OBLIGATIONS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Flower Mound, Texas (the "Town"), intends to issue debt for the construction and improvement of the projects listed on Exhibit A (collectively, the "Projects"); and

WHEREAS, the Town further intends to make certain capital expenditures with respect to the Projects and currently desires and expects to reimburse the capital expenditures with proceeds of such debt; and

WHEREAS, under Treas. Reg. § 1.150-2 (the "Regulation"), to fund such reimbursement with proceeds of tax-exempt obligations, the Town must declare its expectation to make such reimbursement; and

WHEREAS, the Town desires to preserve its ability to reimburse the capital expenditures with proceeds of tax-exempt obligations.

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, and they are hereby approved and incorporated into the body of this Resolution as if copied in their entirety.

SECTION 2

The Town reasonably expects to reimburse capital expenditures with respect to the Projects with proceeds of debt hereafter to be incurred by the Town, and this Resolution shall constitute a declaration of official intent under the Regulation. The maximum principal amount of obligations expected to be issued for the Projects is \$38,585,000.

SECTION 3

Hilltop Securities Inc. is hereby authorized and directed to prepare, or cause to be prepared, any and all documents including, but not limited to, an official statement or other offering document associated with the issuance, sale and delivery of the obligations, the proceeds of which will provide financing of the Projects.

SECTION 4

This Resolution shall take effect from and after the date of its passage.

RESOLUTION NO. _____

PAGE 2

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER
MOUND, TEXAS, ON THIS 15th DAY OF OCTOBER 2018.

APPROVED:

Steve Dixon, MAYOR

ATTEST:

Theresa Scott, TOWN SECRETARY

RESOLUTION NO. _____**EXHIBIT A****General Capital Projects****Street Projects:**

ADA Transition Plan and Implementation

Denton Creek Boulevard Bridge (Graham Brank Crossing)

FM 1171 at River Walk Drive Intersection Improvements

Morris Road Improvements

Roadway Amenities

Waketon Road

\$ 7,525,000**Signal Projects:**

FM 407 at Browning - Reconstruction

Traffic Detection Rehabilitation

\$ 425,000**Facility Projects:**

Fire Station No. 1 Facility Upgrades

Fire Station No. 7 and Apparatus (Wichita Trail)

Gibson-Grant Log Cabin Reconstruction

\$ 5,107,000**Total General****\$ 13,057,000****Utility Capital Projects****Water Projects:**

Denton Creek Spine Road 12-Inch Water Line

FM 2499 12-Inch Water Line Phase I (Dixon to South of FM 1171)

High Road Water Line Replacement Phase II

Kirkpatrick Lane 12-Inch Water Line Phase II (Valley Ridge - FM 1171)

Morris Road Water Lines Phase I

Pintail Pump Station (Auxiliary Power & Upgrades)

Red Bud Point Water Service Relocation

Stonehill 10MG Ground Storage Tank Rehabilitation

Utility Asset Management & Utility Replacement

\$ 6,155,000**Wastewater Projects:**

Upper Timber Creek Interceptor Phase III (FM 1171 to Hidden Forest Drive)

Upper Timber Creek Interceptor Phase IV (Hidden Forest Drive to Oak Street Lift Station)

Wastewater Treatment Plant Rehabilitation Phase V (Sludge, Holding and Thickening)

Wastewater Treatment Plant Ultraviolet System Update

\$ 18,800,000**Total Utility****\$ 24,955,000****Estimated financing costs**\$ 373,000**Grand Total of Debt Issuance****\$ 38,385,000**



TOWN COUNCIL AGENDA ITEM NO. 11

REGULAR ITEM

DATE: October 15, 2018

FROM: Poornima Kashyap, Senior Planner

ITEM: **Public Hearing to consider a request for rezoning (ZPD17-0003 - NEM Senior Living) from Retail District-1 (R-1) to Planned Development District No. 154 (PD-154) with age-restricted, high-density residential use, and with certain modifications and exceptions to the Code of Ordinances, and to consider adopting an ordinance providing for said amendment, subject to the terms and conditions in the attached Development Agreement and authorization for Mayor to execute same on behalf of the Town. The property is generally located south of Rippy Road and east of Long Prairie Road. *(The Planning and Zoning Commission recommended approval by a vote of 5 to 1 at its September 24, 2018, meeting.) (The Town Council postponed the item at its October 1, 2018, meeting.)***

BACKGROUND INFORMATION: Attached is the Planning and Zoning Commission report and backup for this item. No changes or new information has been received since that meeting. This item was postponed at the October 1, 2018 Town Council meeting in order to allow adequate time for the developer and the Town staff to finalize the terms of the development agreement. For this same reason the applicant has requested and staff recommends that the item be postponed once again, and to the November 5, 2018, Town Council meeting, including the public hearing in order to satisfy the notification requirements.

ATTACHMENTS:

1. Planning and Zoning Commission Staff Report
2. Draft Ordinance
3. Placeholder - Draft Development Agreement

LEGAL REVIEW: Bryn Meredith, of Taylor, Olson, Adkins, Sralla, & Elam L.L.P., has reviewed the ordinance and development agreement as to form and legality.

DRAFT MOTION: Move to postpone a request for rezoning (ZPD17-0003 – NEM Senior Living), including the public hearing, to the November 5, 2018, Town Council meeting.



PLANNING AND ZONING COMMISSION AGENDA ITEM NO: 5

DATE: September 24, 2018

FROM: Poornima Kashyap, Senior Planner

ITEM: **Public Hearing to consider a request for rezoning (ZPD17-0003 - NEM Senior Living) from Retail District-1 (R-1) to Planned Development District No. 154 (PD-154) with age-restricted, high-density residential use, and with certain modifications and exceptions to the Code of Ordinances. The property is generally located south of Rippy Road and east of Long Prairie 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 exception/modification requests to the Town's regulations which necessitate special consideration by the Commission (see Analysis below).

This application will require final action by the Town Council.

II. APPLICATION ANALYSIS

The purpose of this request is to rezone approximately 9.149 acres in order to create a planned development district with age-restricted, high-density residential uses in compliance with the provisions listed within Ordinance No. 07-17 for Senior Housing. The property is currently zoned for Retail District-1 (R-1) uses and master-planned for Retail uses.

On March 6, 2017, the Town Council approved a Master Plan Amendment to create an overlay district to address demand for affordable, high-quality, senior housing options for persons 55 years of age or older. The Senior Housing Overlay District was created as a result of immediate need to address the demand for affordable and diverse housing options with quality amenities and services. The adopted Senior Housing ordinance identifies the overlay district to include sites located 2,500 feet on either side of Long Prairie Road (FM 2499) from Justin Road (FM 407) down to the northern boundary of the Lakeside Business District, but not including the Lakeside Business District. The ordinance also allows Senior Housing uses to be considered within any land use category if the property falls within the identified overlay boundary, thus avoiding the need for a Master Plan amendment. The subject site is located within the overlay boundary.

The link to the March 6, 2017, Town Council meeting is:
<https://flowermoundtx.swagit.com/play/03062017-1232>

For the purposes of this overlay, Senior Housing is defined as a high quality retirement or active living residential facility designed for persons 55 years of age or older.

- *This use includes independent living facilities with high quality amenities, services, and programs.*
- *Any project proposing such a use shall include deed restrictions on the property limiting residents of the project to 55 years or older in accordance with the Fair Housing Act.*
- *Any project shall include industry building accessibility standards for the targeted demographic.*
- *Any project should have easy access to arterial and collector streets, and convenient access to signalized intersections is preferred.*
- *Any project shall demonstrate appropriate transition to existing land uses. Factors to be considered include building height, setbacks, screening and landscaping, use of open space, among other factors.*
- *This use does not include “convalescent and nursing homes, hospice care, assisted living, and related institutions.”*

The accompanying concept plan depicts one four-story, 242,000-square-foot building (Building A) with 178 units and four two-story out-buildings with garages on the first floor and living units on the second floor. Building A includes a fully enclosed courtyard and contains a community pool, cabana, gazebo, outdoor grill, and seating areas. Other indoor and outdoor amenities include a clubhouse with game room, lounge area, kitchen and dining, salon, dog spa, dog park and covered parking areas.

The primary access to the proposed facility is from Long Prairie Road and secondary access is provided from a mutual access easement that connects the subject site to a retail development on the south end. The Town’s parking code does not provide parking requirements for a senior multi-family housing development. The applicant has provided a parking analysis (see Attachment A(3)) from similar projects around the Dallas/Fort Worth metroplex and from two out-of-state facilities to determine the parking requirement for a senior housing facility. The site is parked at a ratio of 1.2 spaces per dwelling unit providing a total of 222 parking spaces to serve 182 units.

The conceptual landscape plan provides for required landscape buffer along Long Prairie frontages, street yard landscaping, and parking lot trees. The site plan/landscape plan also depicts 1.287 acres of floodplain/open space located at the northeast portion of the site and approximately 1.18 acres of floodplain/open space located along the east portion of the site. The building materials for the building facade predominantly consist of stone and stucco and meet the Town’s Urban Design Plan.

III. REQUESTED MODIFICATIONS

As a part of the request, the applicant is requesting certain modifications to the minimum and maximum dimensional regulations for the Multi-Family District (MF) and certain exceptions to the Town standards.

Development Standard	Required MF standards	Proposed (PD-154) MF standards
Min. Lot Area	2,800	N/A
Min. Lot Width	60 ft.	60ft.
Min. Front Yard	60 ft.	60ft.
Min. Rear Yard	Compatibility	Exception
Min. Side Yard	10 ft./8 ft./Compatibility	Exception
Max. Lot Coverage	40%	50%
Min. Floor Area	700 sf	500 sf w/average of 850 sf.
Max. Height	3/35 ft.	4/60 ft.

A. Exception to Section 82-302, Compatibility Buffer

The residential compatibility standards apply when a nonresidential or multi-family development is proposed adjacent to an existing residential use or zoning, or designated for residential use on the comprehensive master plan. The proposed development shares a majority of the northern boundary with an existing Town Park that is zoned Agricultural and eastern boundary with property zoned for Agricultural uses.

A brick wall or masonry wall with stucco or mortar wash finish, both exterior finishes being the same, shall be constructed along the property line. Such walls shall have no vehicular access point into or from an alley and shall be a minimum of six feet in height, except that the first 25 feet in from the street line may be stepped down to a minimum height of four feet. For nonresidential and multi-family development (except for churches or schools), the landscaped setback shall consist of a minimum 25-foot landscaped buffer. Understory plants shall be provided in order to achieve a continuous dense six-foot screen. Native shade trees, a minimum of three-inch caliper each, shall be provided at a ratio of one tree per 400 square feet of buffer area.

Due to the location of floodplain along northern and eastern property lines, the applicant is requesting a complete waiver to the compatibility buffer requirements along both the northern and eastern property lines.

B. Exception to Section 82-303, Compatibility Setback

One-story, nonresidential or multifamily buildings, main or accessory, shall be set back from the property adjacent to an existing or proposed residential use 60 feet. Nonresidential or multifamily buildings, more than one story, main or accessory, shall be set back from the property line adjacent to an existing or proposed residential use five feet for every one foot of building height. As noted above (Compatibility Buffer exception) the zoning of the property to the north and east requires a compatibility setback.

The applicant is proposing a 20-foot setback from the northern and eastern property boundaries.

Refer to the applicant's letter of intent [Attachment A(2)] for an explanation of both referenced exceptions.

C. Exception to Section 90-423, Underground Utilities

Approximately 26 linear feet of an existing guy wire that supports the overhead utility lines is located within the subject property boundary along Long Prairie Road. The applicant is requesting an exception to Section 90-423, Underground utilities, of the Code of Ordinances to allow the existing guy wire to remain in the existing location.

D. Exception to Section 90-403, Fully Developed FEMA Floodplain

Per the flood study analysis that is underway, nearly one third of the subject property is located within the Town-defined floodplain. Per the applicant's letter of intent, an exception to Section 90-403 to allow construction within a portion of the fully developed floodplain is required to provide adequate parking and on-site detention. However, the plan does not propose work within the FEMA floodplain.

E. Topographical Slope Exception

According to the Town Code, no development application or project shall be approved that proposes development on any existing topographical slopes of 12 percent or greater, or that proposes to alter any existing topographical slopes that are less than 12 percent but equal to or greater than five percent then available (other than within five feet of the footprint of the proposed structure or structures). The purpose of this criterion is to ensure that development is respectful of and appropriately integrated with the natural physical geography of the land in Flower Mound by requiring environmentally sensitive development techniques to eliminate "scrape and build."

Section 98-147 "Topographical slope protection" allows for an applicant to request an exception to these standards as follows:

Exception. An exception to this requirement may be approved by the town council by the affirmative vote of at least three-fourths super majority vote of all members of the town council, for any development that keeps the character of the natural topography, and integrates the development into and maintains the overall integrity of the natural topography.

- 1. Detailed drawings that illustrate the impact of the proposed development on the natural topography and the manner by which the development is integrated into, reflects and maintains the overall integrity of the natural topography.*
- 2. The identification of those specific best management practices (BMPs) that will be used to maintain and responsibly integrate the development into the natural topography together with an explanation regarding their use within the*

plans for such development. The BMPs to be used shall include, but are not limited to, those BMPs found within the town's engineering design and construction standards.

3. *While recognized as a potential BMP, the use of retaining walls should be kept to a minimum. Any retaining wall four-foot or greater in height shall be designed by a professional engineer licensed by the State of Texas. Retaining walls exceeding eight feet in height are discouraged.*

In considering an exception to this criterion, the town shall, in addition to the foregoing, consider the effects of granting an exception on other environmental features such as trees, habitats, floodplains, scenic vistas, ridgelines, and other environmental features as well as adjacency to established developments and neighborhoods.

The applicant is requesting an exception to Section 98-147. However, this exception shall be limited to the proposed driveway located at the southwest corner of the site over an area of approximately 0.029 acres. This mutual access driveway connects the subject site to the property located to the south, thus providing a second point of ingress/agrees to and from this development.

On June 7, 2018, the Parks Board recommended approval to Town Council that cash, in the amount of \$770,515.20 be accepted in lieu of the otherwise required Park Land Dedication, and Park Development Fees in the amount of \$252,616.00 for the subject project. The item will be forwarded to the Town Council for consideration at the same time as the subject project.

The link to the June 7, 2018, Parks Board meeting is:
<https://flowermoundtx.swagit.com/play/06072018-904>

Per Ordinance No. 07-17 for Senior Housing, a senior housing development that is located within the overlay district is eligible for a reduction in the Park Fee requirement subject to compliance with the section below.

Due to the nature of Senior Housing, a developer may request potential exemption from the Town's parkland dedication and park development fee requirements in order to reinvest those funds into the project. Such a request shall be considered by the Town Council concurrent with a zoning PD application.

The applicant is requesting the Town Council consider reductions of the Town's park fees as authorized by the Senior Overlay. The developer is offering to design and build a pedestrian bridge that spans the floodplain located between the northern boundary of the subject site and Gaston Park; and construct a trail extension to College Parkway through Gaston Park. These Town trail improvements are offered as consideration for reduced park fees, along with internal and external amenity enhancements to the property.

IV. 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 rezoning requests. At the time this report was written,

the Town had received one correspondence in support and no correspondence in opposition to the request. All correspondence was sent directly to the Planning and Zoning Commission according to the new public communication process.

V. ATTACHMENTS

A. Background Information

1. Vicinity Map
2. Letter of Intent
3. Parking Study

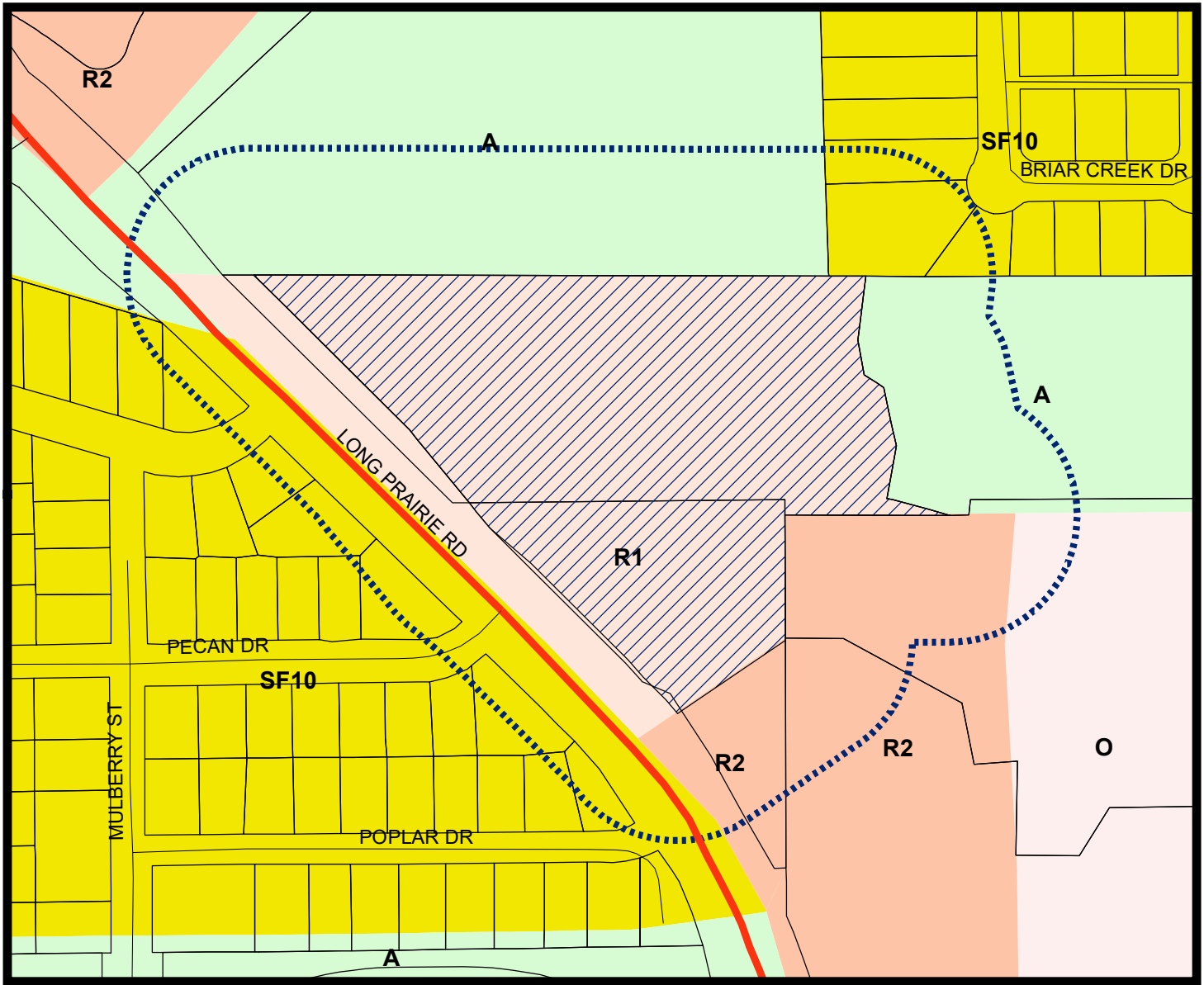
B. Application Details

1. Zoning Planned Development Package
2. Draft Development Standards

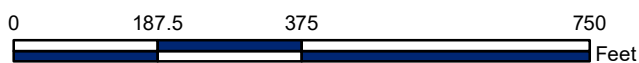
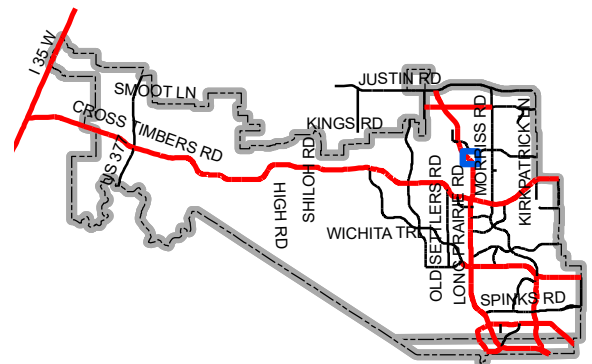
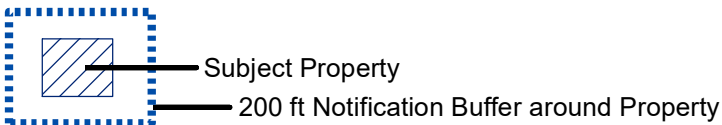


Vicinity Map

Reference Project: ZPD17-0003



LEGEND



Map Location



LETTER OF INTENT > NE DEVELOPMENT, LLC

September 18, 2018

Mr. Chuck Russell
Town Planner
Town of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028

RE: Zoning Change Request – NEM Senior Living Planned Development
Letter of Intent
G&A Job No. 17026

Mr. Russell:

Please accept this letter, on behalf of the NE Development, LLC, as an explanation of the proposed Zoning Change Request for approximately nine acres of land located just north of Timber Creek Medical Office Plaza along FM 2499 and south of Timber Creek. This property is currently owned by Minassian Properties, LC. It has a land use designation of Retail and it is currently zoned as Retail – 1 (R-1).

PROJECT DESCRIPTION:

In March of 2017, the Town Council amended the Land Use Plan to create a Senior Housing Overlay District in order to attract development to meet the high demand for this type of living option for the Town's senior population. The Overlay ordinance incentivizes senior housing development by allowing developers to request certain waivers from the Town's SMARTGrowth policy and exemptions from the Town's parkland requirements. Additionally, the presentation of the Overlay ordinance focused on the FM 2499 corridor or areas close to shopping, offices and medical uses as an ideal location for senior housing.

Senior housing options are in demand in the majority of cities throughout the metroplex. As the population ages, baby boomers are looking for low-maintenance living options close to their kids and grandkids with access to nearby shopping and services. NE Development has done several successful senior multi-family projects in this region. The average age of their typical resident is 72. The average time span for leases is between five to eight years. An example of one of their projects is Atlas Point at Prestonwood in Carrollton.

NEM Senior Living will include a four-story building and four outbuildings that are two-story with garages below and one living unit above. Building A will have an internal, fully enclosed courtyard that will feature the community pool, cabanas, gazebos, outdoor grill, and seating areas. The building footprint is approximately 60,700 square feet and the gross floor area of 242,000 square feet. The main entrance will be covered with a portico and will have direct access to the clubhouse area. The proposed amenities and services in the clubhouse include a game room, lounge



LETTER OF INTENT > NE DEVELOPMENT, LLC

areas, and a full kitchen. Building's B1-B4 will each have four garages for residents and the second story will be a three-bedroom unit.

There will be 182 units within the development, with several of them overlooking the courtyard area or the existing creek and open space areas to the east and northwest. Approximately 66% of the units will be one-bedroom and the remaining 34% will be two or three-bedroom. That breaks down to be 118 one-bedroom units, 60 two-bedroom units, and 4 three-bedroom units. Units will be accessed via an internal corridor system that connects to the clubhouse and ingress/egress points of the building.

Other onsite amenities include a community pool, a coffee bar, dining area, theater/TV lounge, salon, grilling station, dog spa, scheduled activities and events, covered parking areas, seating areas, shade structures, open space, access to the Town's trail system.

The community will be gated to provide additional security for residents. Cross access to the proposed development to the south will be open to motorist; however, the parking areas will be gated. We are proposing a total of 222 parking spaces which will be adequate for residents, guests, and employees. A parking study has been submitted to the Town that details the anticipated parking demand and the adequate number of spaces that will serve this type of development.

Additionally, we are proposing a pedestrian connection to the north to Gaston Park. This will require a bridge to cross Timber Creek in order to access the park and our client has agreed to provide that per the proposed Developer's Agreement. This link provides the missing piece for pedestrians to access River Walk and Timber Trails Park from College Parkway.

PROPOSED ZONING:

The purpose of this application is to request a zoning change to be a Planned Development (PD) with Multi-Family (MF) as the base zoning. Development standards have been drafted and submitted with this request. Additional permitted uses have been added to the PD such as garages and carports/covered parking. The regulations also establish the minimum area per unit at 500 square feet and an average area per unit at 850 square feet. The proposed density is 20.2 du/ac which equals 183 total units. As part of the requested zoning, site amenities for senior living communities are required and our PD will require the amenities described above.

The property is bordered by floodplain and it acts as a natural buffer to the adjacent land uses. To the north is Gaston Park which sits on the other side of Timber Creek. To the east is a 6-acre residential lot that is zoned Agricultural. To the south is Timber Creek Medical Office Park that is zoned as a PD for retail, restaurant, and office uses. This is an ideal location for senior housing due to the proximity of the Senior Center, which sits just across FM 2499 on West Windsor, and the Flower Mound Hospital, which is just south in the River Walk.



LETTER OF INTENT > NE DEVELOPMENT, LLC

EXCEPTIONS:**Compatibility Buffer and Setback:**

Section 82-302, Compatibility Buffer requires a 25-foot buffer and masonry screening wall along the eastern and northern property lines. Since these areas directly abut land that will be deeded over to the Town for a public park, the buffer and screening are not necessary. The existing vegetation and floodplain provide adequate buffering.

Section 82-303, Compatibility Setback, requires a multi-story building to be setback from adjacent residential property at a ratio of five feet for every one foot of building height. Since the proposed building is a little over 58 feet in height, that would require the setback to be 300 feet. The building is approximately 180 feet from the eastern property line and is separated by Timber Creek. Therefore, we would like to request an exception to the Compatibility Setback requirement.

Town-Defined Floodplain:

We have conducted a detailed flood analysis of the subject property and nearly one-third is inundated with the Town-defined floodplain. Although the floodplain is one of the features that make this site a desirable location for senior housing, it can also be challenge to the development potential of the property especially since the Town has its own definition of floodplain. In order to provide adequate parking and on-site detention, we are proposing to impact portions of the Town-defined floodplain – a little over a half acre.

Overhead Utilities:

We are also requesting an exception to the Town's requirement to bury overhead utilities. There are no utility poles on the subject property, however the guy wires from one of the poles extend over the property line. Therefore, we would like to seek an exception.

Slope Exception:

We are also requesting an exception to the Town's 12% slope protection requirement. There is a small portion of the property along the drainage channel, approximately 0.029 Acres, from FM 2499 to Timber Creek that will be impacted by the required connection to the adjacent property. The area impacted will be for the construction of underground drainage and the fire lane.

CONCLUSION:

We are very excited to have the opportunity to bring one of the first senior housing projects to the Town of Flower Mound. This location is the ideal spot for this use and the project will be beneficial to the Town and its residents.



LETTER OF INTENT > NE DEVELOPMENT, LLC

Thank you in advance for your consideration. Please do not hesitate to contact me with any questions or comments regarding this application.

Sincerely,

G&A | McADAMS

Scott Minnis, EIT
Project Manager

cc: Mr. Robert J. Dollak, Jr. P.E., G&A | McAdams
Mr. Charlie Moussa, NE Development

Z:\2017\17026\PDFs & Submittals\Zoning\6th submittal\2018-7-11 PD LOI.doc

NEM SENIOR LIVING

Parking Study

Prepared by: Robert J. Dollak, Jr., P.E. # 86898



Summary:

NEM Senior Living is a 9.149-acre site generally located east of FM 2499/Long Prairie Road across from Pecan Drive. The site is planned to be a multifamily residential senior living facility with various amenities throughout the property, including 183 residential units and 222 proposed parking spaces. The Concept Plan is included as Exhibit "A" to this study.

Base Code Parking Requirements:

The Town of Flower Mound does not have parking requirements for a multifamily independent senior living within their current parking requires. We have therefore, researched and analyzed similar projects within the North Texas Metroplex, as well as a couple of similar projects around the country. Seven developments varying in size from 93 units to 202 units were analyzed to help determine a standard parking ratio for independent senior living projects that can be used on the proposed project.

The table below represents the projects mentioned above compared to NEM Senior Living.

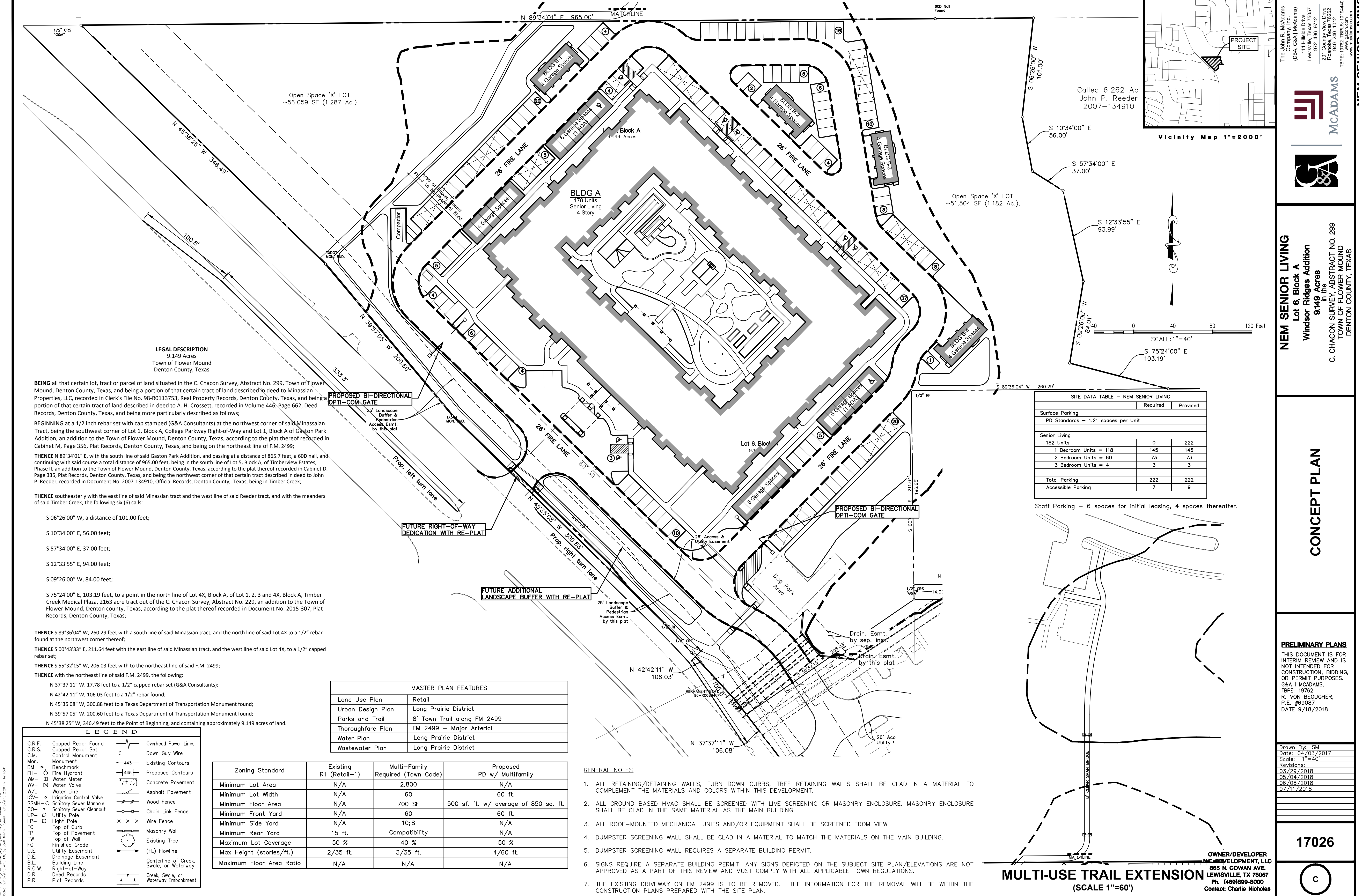
Project Name	Location	# of Spaces	# of Units	Parking Ratio
Artistry Senior Residence At Craig Ranch	McKinney, TX	188	163	1.15
Gala At Melissa	Melissa, TX	110	93	1.18
Artistry Senior Residences At Edgestone	Frisco, TX	257	188	1.37
Aspens At Wade Park	Frisco, TX	176	162	1.06
Overlook At Prestonwood	Carrollton, TX	228	183	1.25
Aspen At Bedford Falls	Raleigh, NC	199	182	1.09
The Aspens At Mariposa Point	Gilbert, AZ	244	202	1.21
		1402	1173	1.20
<i>Proposed - NEM Senior Living</i>	<i>Town of Flower Mound, TX</i>	222	183	1.21

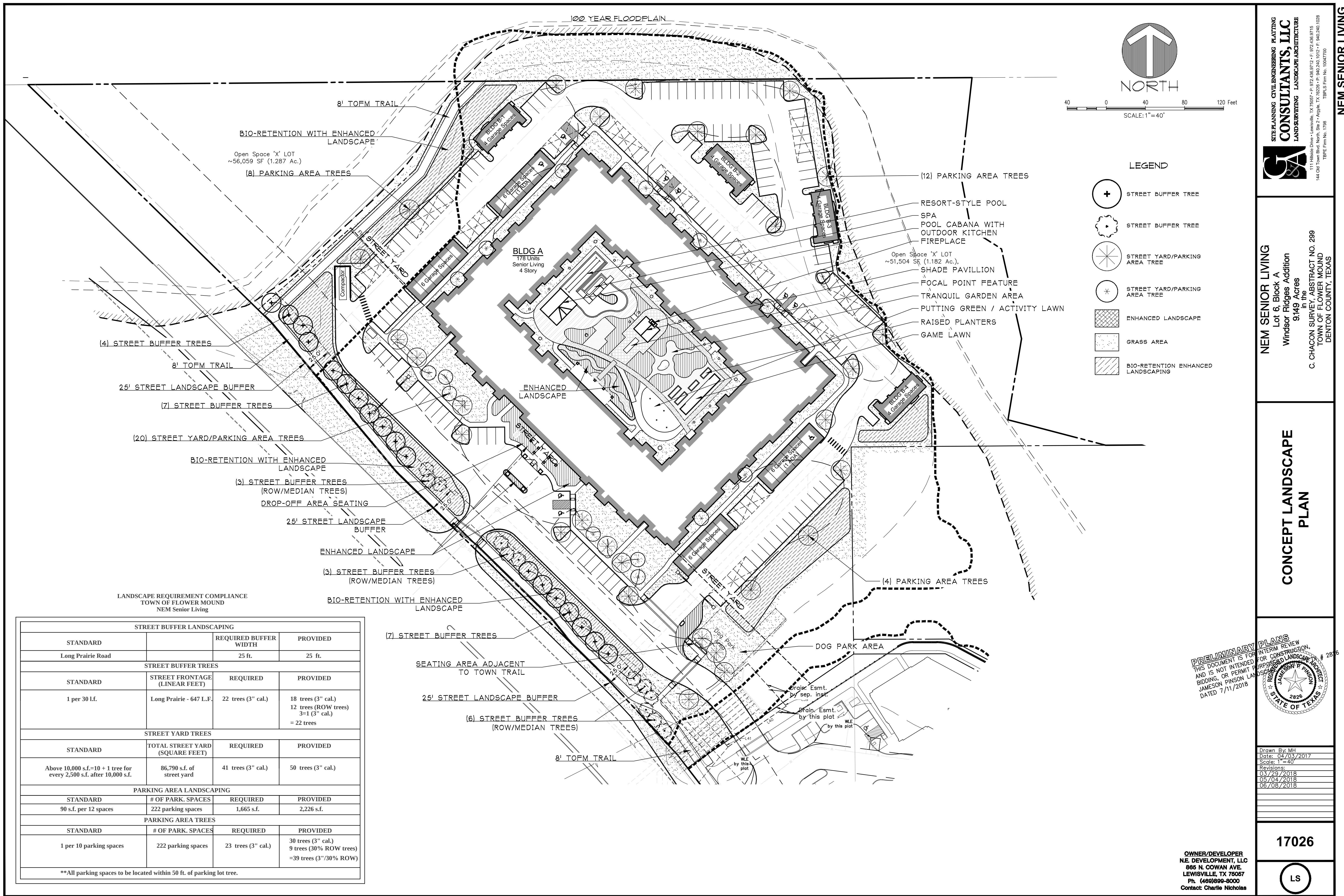
As illustrated in the table above, the parking ratios for the properties analyzed vary from 1.06 to 1.37, with an overall average of 1.21. NEM Senior Living proposes a parking ratio of 1.2 which virtually identical to the oval average.

Conclusion:

In addition to the available parking for residents and guests, there will be a courtesy van available for guest use. The van will be available for transportation to and from doctor's offices, shopping, retail area, restaurants and other areas.

The proposed ratio of 1.21 and the availability of the courtesy shuttle will provide adequate parking for the NEW Senior Living project.







ARCHITECT:
CROSS ARCHITECTS, PLLC
1255 W. 15TH STREET, SUITE 125
PLANO, TEXAS 75075
P: 972.398.6644
F: 972.312.8666
WWW.CROSSARCHITECTS.COM

SENIOR LIVING
FLOWER MOUND, TEXAS

DATE:

08/07/2017

PROJECT NUMBER:

17127

REVISIONS

NO DATE

DRAWINGS ISSUED FOR:

SCHEMATIC

SHEET NUMBER

A3.4

BUILDING A
EXTERIOR ELEVATIONS

COPYRIGHT © 2015

MATERIAL PERCENTAGES TABLE (WEST)		
	SQ. FT	PERCENTAGE
TOTAL FACADE	10,541	
FACADE (NO DOORS & WIN.)	6,771	
DOOR & WINDOWS S.F.	3,770	
NATURAL STONE	3,985	59%
STUCCO	2,786	41%



04 **BUILDING TYPE 'A' WEST ELEVATION**
SCALE: 1/16" = 1'-0"

MATERIAL PERCENTAGES TABLE (NORTH)		
	SQ. FT	PERCENTAGE
TOTAL FACADE	15,731	
FACADE (NO DOORS & WIN.)	10,351	
DOOR & WINDOWS S.F.	5,380	
NATURAL STONE	4,741	46%
STUCCO	5,610	54%



03 **BUILDING TYPE 'A' NORTH ELEVATION**
SCALE: 1/16" = 1'-0"

MATERIAL PERCENTAGES TABLE (EAST)		
	SQ. FT	PERCENTAGE
TOTAL FACADE	11,261	
FACADE (NO DOORS & WIN.)	7,360	
DOOR & WINDOWS S.F.	3,901	
NATURAL STONE	4,204	45%
STUCCO	5,088	55%



02 **BUILDING TYPE 'A' EAST ELEVATION**
SCALE: 1/16" = 1'-0"

MATERIAL PERCENTAGES TABLE (SOUTH)		
	SQ. FT	PERCENTAGE
TOTAL FACADE	16,547	
FACADE (NO DOORS & WIN.)	11,740	
DOOR & WINDOWS S.F.	4,807	
NATURAL STONE	5,650	48%
STUCCO	6,090	52%



01 **BUILDING TYPE 'A' SOUTH ELEVATION**
SCALE: 1/16" = 1'-0"



EXTERIOR FINISHES	
STUCCO	60%
STONE	40%
TOTAL	100%

04 **BUILDING 'B' - REAR ELEVATION**
SCALE: 1/4" = 1'-0"



03 **BUILDING 'B' - LEFT ELEVATION**
SCALE: 1/4" = 1'-0"



02 **BUILDING 'B' - RIGHT ELEVATION**
SCALE: 1/4" = 1'-0"



EXTERIOR FINISHES	
STUCCO	60%
STONE	40%
TOTAL	100%

01 **BUILDING 'B' - FRONT ELEVATION**
SCALE: 1/4" = 1'-0"

PRELIMINARY
DRAWINGS
NOT FOR CONSTRUCTION

Cross
architects

ARCHITECT:
CROSS ARCHITECTS, PLLC
1255 W. 15TH STREET, SUITE 125
PLANO, TEXAS 75075
P: 972.398.6644
F: 972.312.8666
WWW.CROSSARCHITECTS.COM

SENIOR LIVING
FLOWER MOUND, TEXAS

DATE:
08/07/2017

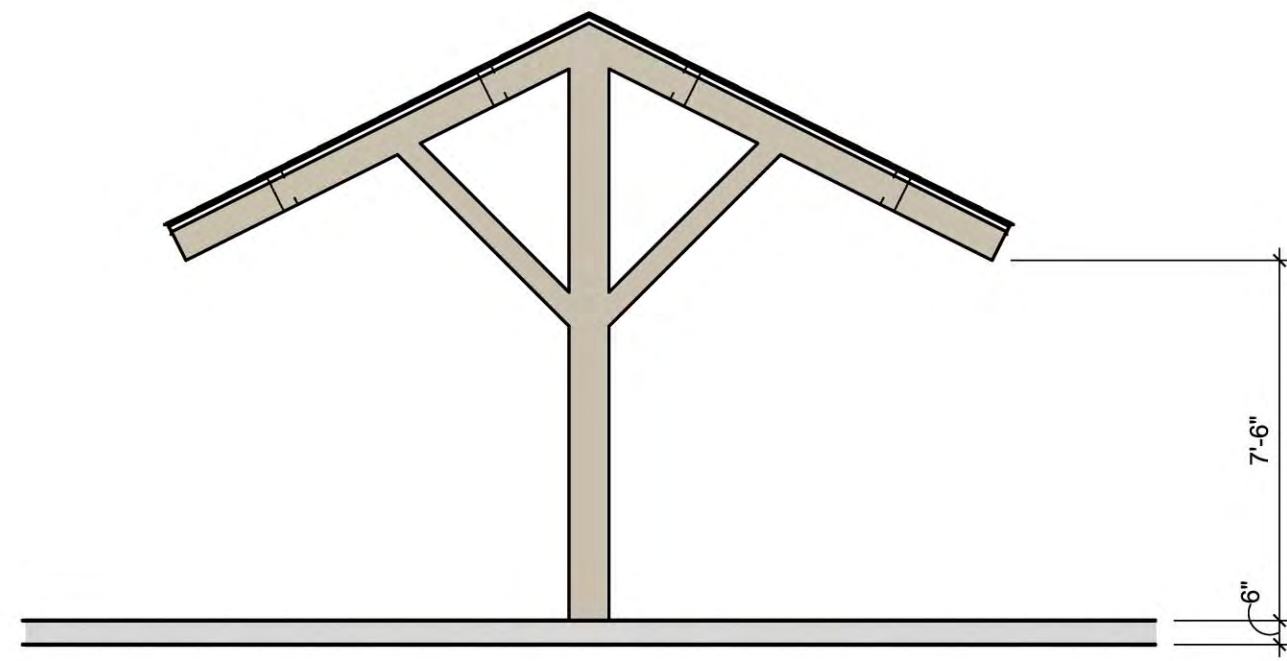
PROJECT NUMBER:
16721

REVISIONS
NO DATE

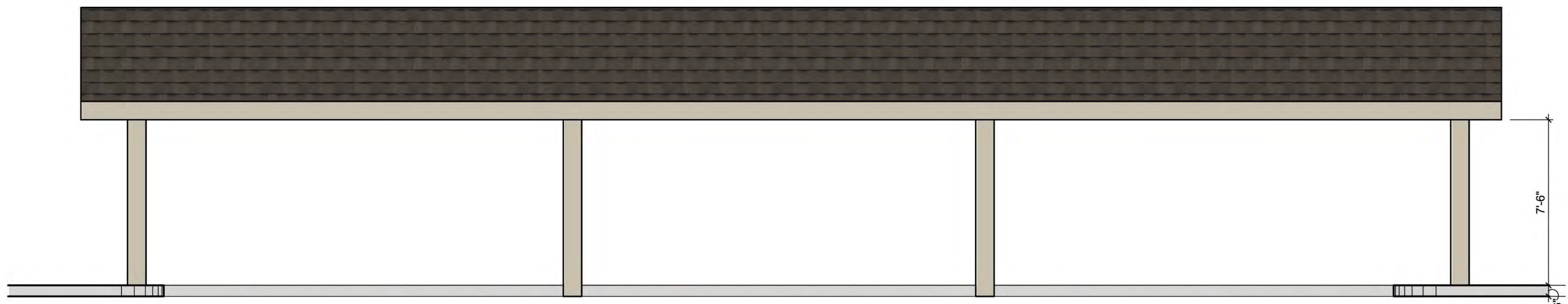
DRAWINGS ISSUED FOR:
SCHEMATIC

SHEET NUMBER
A4.1
BUILDING 'B'
ELEVATIONS

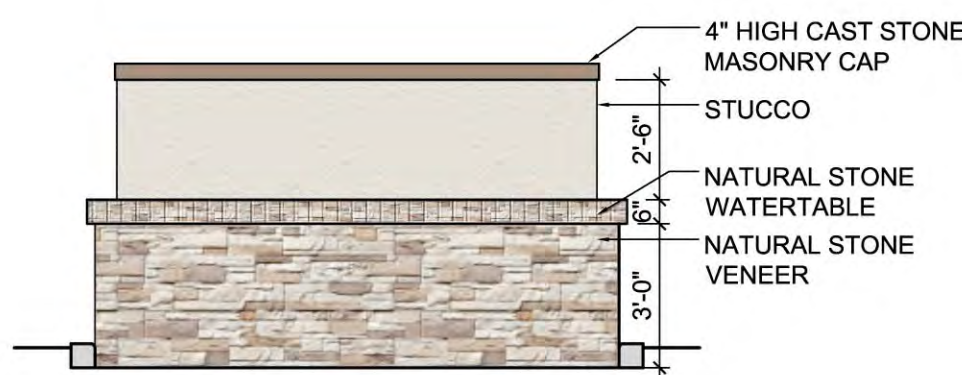
COPYRIGHT © 2015



09 6-BAY CARPORT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



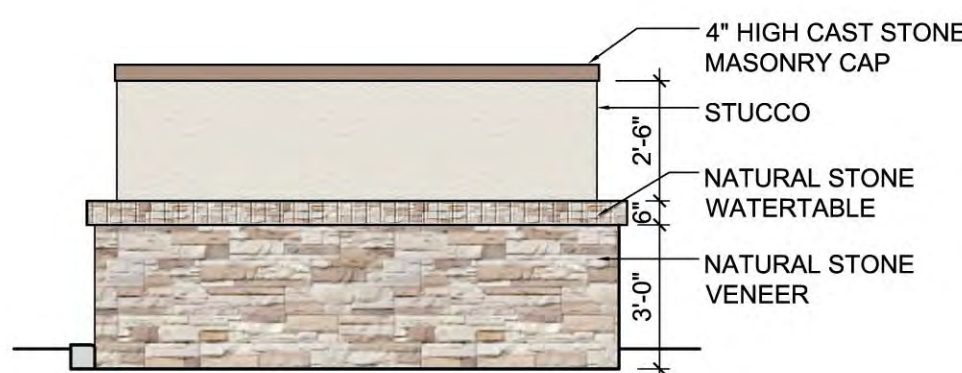
08 6-BAY CARPORT FRONT/REAR ELEVATION
SCALE: 1/4" = 1'-0"



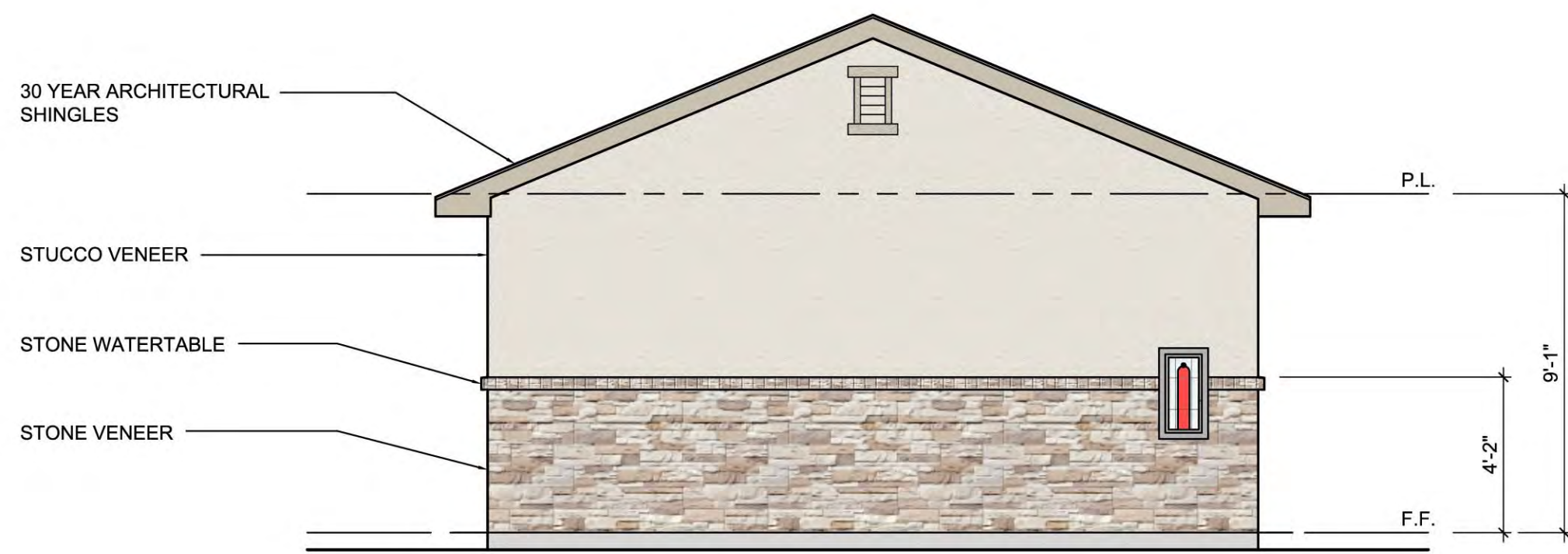
07 DUMPSTER ENCLOSURE ELEVATION - REAR
1/4" = 1'-0"



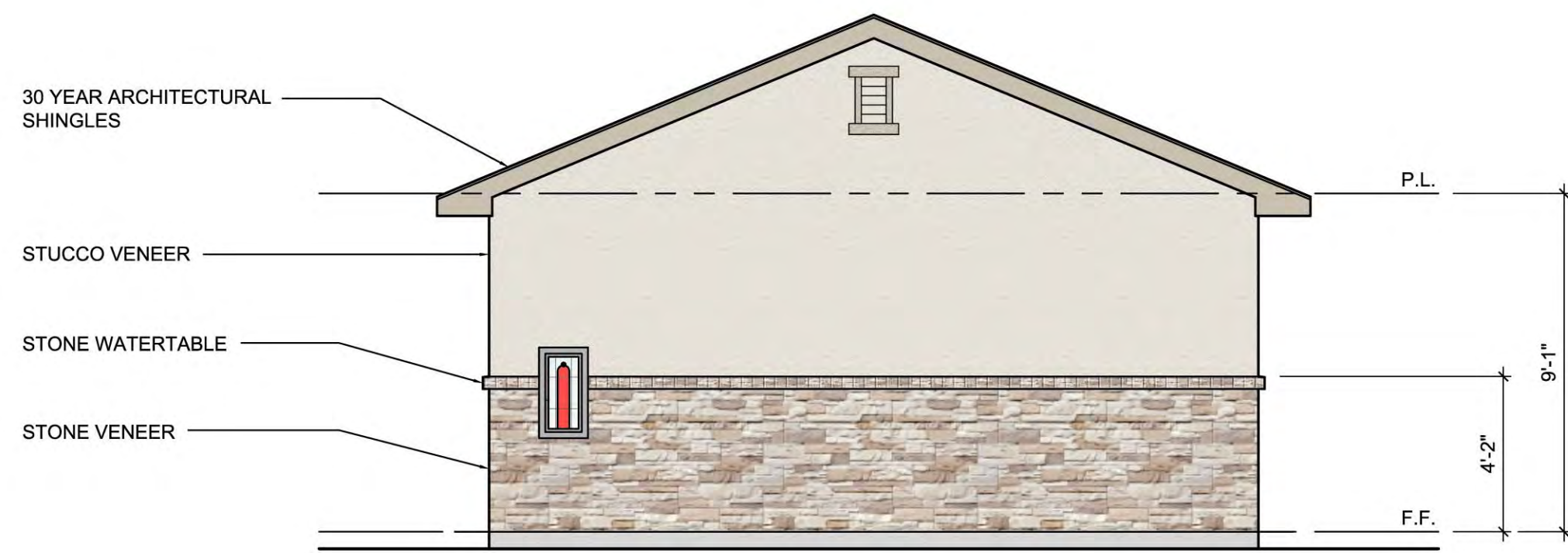
06 6-BAY GARAGE REAR ELEVATION
1/4" = 1'-0"



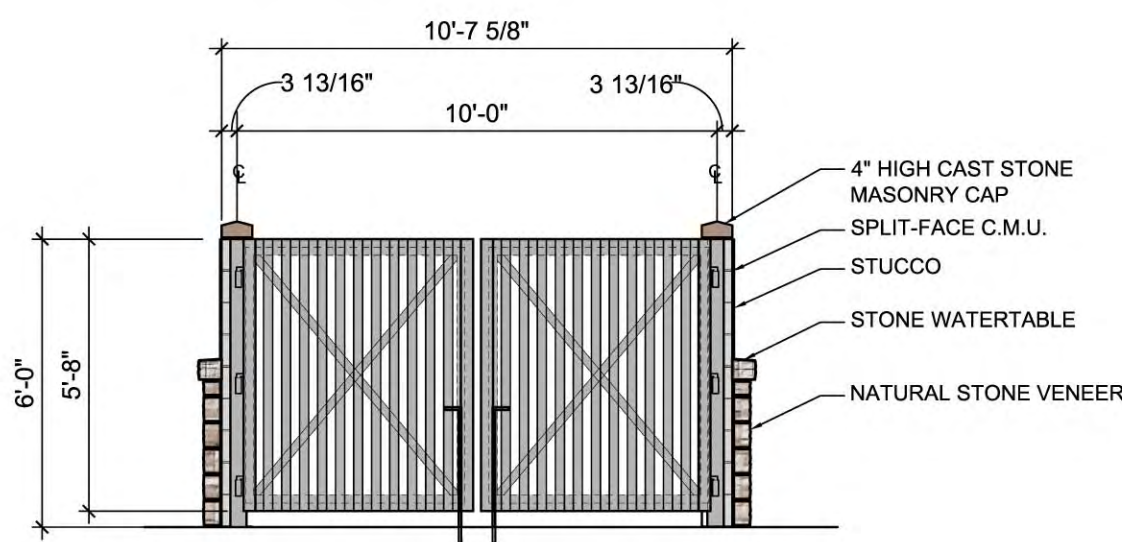
05 DUMPSTER ENCLOSURE ELEVATION - SIDE
1/4" = 1'-0"



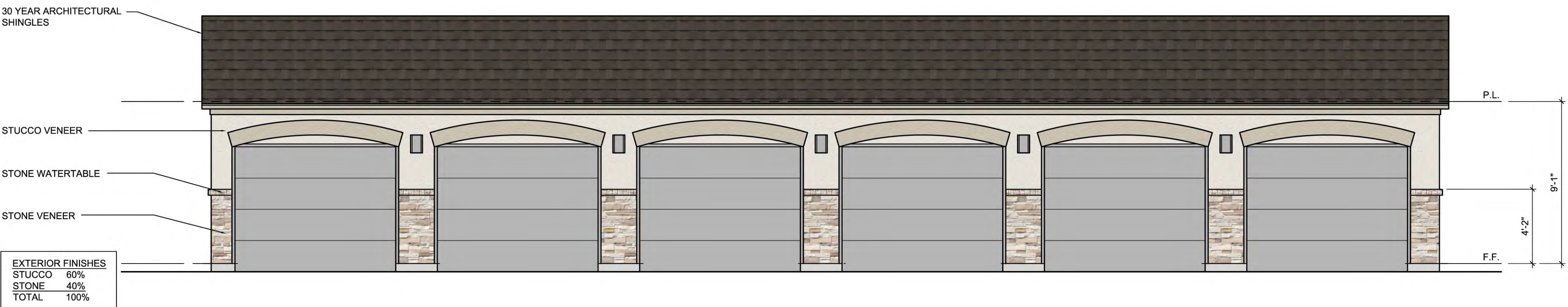
04 6-BAY GARAGE SIDE ELEVATION
1/4" = 1'-0"



03 6-BAY GARAGE SIDE ELEVATION
1/4" = 1'-0"



02 DUMPSTER ENCLOSURE ELEVATION - FRONT
1/4" = 1'-0"



01 6-BAY GARAGE FRONT ELEVATION
1/4" = 1'-0"

PRELIMINARY
DRAWINGS
NOT FOR CONSTRUCTION

Cross
architects

ARCHITECT:
CROSS ARCHITECTS, PLLC
1255 W. 15TH STREET, SUITE 125
PLANO, TEXAS 75075
P: 972.398.6644
F: 972.312.8666
WWW.CROSSARCHITECTS.COM

SENIOR LIVING
FLOWER MOUND, TEXAS

DATE:
08/07/2017

PROJECT NUMBER:
16721

REVISIONS
NO DATE

DRAWINGS ISSUED FOR:
SCHEMATIC
SHEET NUMBER

A4.2
6-BAY GARAGE/
CARPORT
ELEVATIONS
COPYRIGHT © 2015

**Exhibit “B”
Development Standards**

**Planned Development District - 154 (PD-154)
NEM Senior Living**

The development on the property comprising approximately 9.149 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. PERMITTED USES. The following uses listed herein may be Permitted Uses:

1. Accessory use, general, subject to section 98-972
2. Church or rectory
3. Dwelling, multifamily, subject to Ordinance No. 07-17 for Senior Housing
4. Off-street parking, accessory
5. Park or playground, public
6. Swimming pool, private, subject to section 98-996

In addition to the Permitted Uses, the following accessory uses may also be permitted:

1. Carports/covered parking
2. Garages

B. SPECIFIC USES. The uses listed as Specific Uses in Multifamily District (MF) in the Town’s Zoning Ordinance shall be prohibited.

C. TEMPORARY USES. The uses listed as Temporary Uses in the Multifamily District (MF) in the Town’s Zoning Ordinance may be permitted 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”.

D. DIMENSIONAL REGULATIONS. The dimensional regulations listed for Multifamily District (MF) in the Town’s Zoning Ordinance shall be required for this Planned Development except as otherwise listed herein:

1. Minimum lot area per dwelling. There shall be no minimum lot area per dwelling.
2. Minimum floor area per unit. The minimum floor area per unit shall be 500 square feet. There shall be an average minimum floor area per unit of 850 square feet.
3. Minimum front yard. There shall be a minimum front yard of 60 feet along FM 2499.
4. Minimum side yard. There shall be no minimum side yard, subject to Compatibility setback.
5. Minimum rear yard. There shall be no minimum rear yard, subject to Compatibility setback.
6. Maximum height. There shall be a maximum height of 4 stories or 60 feet.

E. AMENITIES. The following amenities shall be required for this Planned Development:

1. Community pool with a minimum area of 1,000 square feet
2. A minimum of 5,000 square feet of indoor amenities to include:

- a. Clubhouse/Amenity Center
- b. Bistro
- c. Private dining area
- d. Beauty salon with barber shop
- e. TV Lounge/Theater
- f. Fitness center
- g. Dog spa
3. Access to public trails.
4. A minimum of two seating areas outside of the courtyard area consisting of at least two benches each; and a minimum of three seating areas inside the courtyard..
5. A minimum of three shade structures within the courtyard with a minimum area of 200 square feet for each structure.
6. Enhanced landscaping that includes seasonal plantings, groundcover, and/or shrubs with a minimum planting area of 7,000 square feet within the courtyard and a minimum planting area of 600 square feet outside the courtyard area.
7. Dog Park with a minimum area of 3,000 square feet.
8. The pool cabana shade structure shall include a grilling station/outdoor kitchen and seating areas.
9. Putting Green with a minimum area of 1,500 square feet.
10. Bocce Ball Court or some similar activity with a minimum area of 300 square feet.

F. LANDSCAPE STANDARDS.

1. Landscaping shall comply with the approved Concept Landscape Plan (Exhibit "D").

G. ARCHITECTURAL STANDARDS.

1. Building Elevation Profiles and roof form shall comply with the approved Concept Elevations (Exhibit "E").
2. Building elevations shall be articulated to meet or exceed the Town of Flower Mound's Urban Design Plan.

H. MISCELLANEOUS STANDARDS. This Planned Development shall be subject to the following parking standards:

1. The required parking shall be 1.21 parking spaces per unit.
2. The community shall be gated with private access and public access shall be provided to the adjacent property to the south.
3. With the first Site Plan or Replat application for any residential development, the Developer shall submit Covenants, Conditions and Restrictions ("Deed Restrictions") to the Town for the Town's review and approval that restrict the age of the residents within the development to persons age 55 or older in accordance with the provisions of the Housing for Older Persons Act of 1995, as amended, ("HOPA") established in the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, as amended, 42 U.S.C. 3601-3619)("FHA").
4. The development is subject to an approved developer's agreement.
5. Prior to the Planning and Zoning Commission's consideration of the replat application for the subject property, a flood study shall be approved by the Town staff in accordance with Sec. 90-403 and the fully developed floodplain shall be depicted on the plat and dedicated as a drainage/floodplain easement with a note regarding

perpetual maintenance of the said easement to be the responsibility of the property management company.

- I. EXCEPTIONS. The following exceptions to the Town's Ordinances shall apply to this Planned Development.
1. Compatibility Buffer - Section 82-302. The compatibility buffer and the masonry wall requirements shall not apply along the eastern and northern property lines.
 2. Compatibility Setback – Section 82-303. The compatibility setback for two or more stories requirement shall not apply to the buildings. However, a minimum 20-foot setback measured from the eastern PD boundary and a minimum 20-foot setback measured from the northern PD boundary shall be required.
 3. Overhead Utilities. Approximately 26 linear feet of an existing guy wire that supports the overhead utility lines along FM 2499 shall not be required to be buried.
 4. Fully Developed Floodplain - Section 90-403. Construction shall be permitted in a portion of the fully developed floodplain, but not within the FEMA floodplain.
 5. Topographic Slope Protection - Section 98-147. This exception shall be limited to the proposed driveway located at the southwest corner of the site over an area approximately 0.029 acre and that no exception is granted for any other portions of the subject property.

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 9.149 ACRES OF LAND SITUATED IN THE C. CHACON SURVEY, ABSTRACT NO. 299, FROM RETAIL DISTRICT-1 (R-1) TO PLANNED DEVELOPMENT DISTRICT NO. 154 (PD-154) WITH AGE-RESTRICTED, HIGH-DENSITY RESIDENTIAL 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 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 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 owner of the property described as approximately 9.149 acres of land situated in the C. Chacon Survey, Abstract No. 299, has filed an application for a Zoning Planned Development amendment to change the zoning from Retail District-1 (R-1) to Planned Development District No. 154 (PD-154) with age-restricted, high-density residential uses; and,

WHEREAS, the Planning and Zoning Commission of the Town of Flower Mound, Texas held a public hearing on September 24, 2018, and the Town Council of the Town of Flower Mound, Texas, held a public hearing on October 1, 2018, with respect to the proposed planned development district 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 planned development district on the property;

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

ORDINANCE NO. _____**Page 2**

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 9.149 acres of land situated in the C. Chacon Survey, Abstract No. 299, Denton County, Texas, and more fully described in Exhibit "A" hereto.

Planned Development District No. 154 (PD-154) with age-restricted, high-density residential uses.

SECTION 2

The development standards, conceptual site plan, conceptual landscape plan, and conceptual elevations of the proposed Planned Development District No. 154 (PD-154), 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. 154 (PD-154).

SECTION 3

The official map of the Town of Flower Mound is amended and the Executive Director of Development Services is directed to revise the official zoning map to reflect the approved Planned Development District No. 154 (PD-154), as set forth above.

SECTION 4

The use of the property described above shall be subject to all restrictions, terms and conditions contained in "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.

ORDINANCE NO. _____**Page 3****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 _____ DAY OF
_____, 2018.**

APPROVED:

Steve Dixon, **MAYOR****ATTEST:**

Theresa Scott, **TOWN SECRETARY**

EXHIBIT "A"**LEGAL DESCRIPTION**

9.149 Acres

Town of Flower Mound

Denton County, Texas

BEING all that certain lot, tract or parcel of land situated in the C. Chacon Survey, Abstract No. 299, Town of Flower Mound, Denton County, Texas, and being a portion of that certain tract of land described in deed to Minassian Properties, LLC, recorded in Clerk's File No. 98-R0113753, Real Property Records, Denton County, Texas, and being a portion of that certain tract of land described in deed to A. H. Crossett, recorded in Volume 446, Page 662, Deed Records, Denton County, Texas, and being more particularly described as follows;

BEGINNING at a 1/2 inch rebar set with cap stamped (G&A Consultants) at the northwest corner of said Minassian Tract, being the southwest corner of Lot 1, Block A, College Parkway Right-of-Way and Lot 1, Block A of Gaston Park Addition, an addition to the Town of Flower Mound, Denton County, Texas, according to the plat thereof recorded in Cabinet M, Page 356, Plat Records, Denton County, Texas, and being on the northeast line of F.M. 2499;

THENCE N 89°34'01" E, with the south line of said Gaston Park Addition, and passing at a distance of 865.7 feet, a 60D nail, and continuing with said course a total distance of 965.00 feet, being in the south line of Lot 5, Block A, of Timberview Estates, Phase II, an addition to the Town of Flower Mound, Denton County, Texas, according to the plat thereof recorded in Cabinet D, Page 335, Plat Records, Denton County, Texas, and being the northwest corner of that certain tract described in deed to John P. Reeder, recorded in Document No. 2007-134910, Official Records, Denton County, Texas, being in Timber Creek;

THENCE southeasterly with the east line of said Minassian tract and the west line of said Reeder tract, and with the meanders of said Timber Creek, the following six (6) calls:

S 06°26'00" W, a distance of 101.00 feet;

S 10°34'00" E, 56.00 feet;

S 57°34'00" E, 37.00 feet;

S 12°33'55" E, 94.00 feet;

S 09°26'00" W, 84.00 feet;

S 75°24'00" E, 103.19 feet, to a point in the north line of Lot 4X, Block A, of Lot 1, 2, 3 and 4X, Block A, Timber Creek Medical Plaza, 2163 acre tract out of the C. Chacon Survey, Abstract No. 229, an addition to the Town of Flower Mound, Denton county, Texas, according to the plat thereof recorded in Document No. 2015-307, Plat Records, Denton County, Texas;

THENCE S 89°36'04" W, 260.29 feet with a south line of said Minassian tract, and the north line of said Lot 4X to a 1/2" rebar found at the northwest corner thereof;

THENCE S 00°43'33" E, 211.64 feet with the east line of said Minassian tract, and the west line of said Lot 4X, to a 1/2" capped rebar set;

THENCE S 55°32'15" W, 206.03 feet with to the northeast line of said F.M. 2499;

THENCE with the northeast line of said F.M. 2499, the following:

N 37°37'11" W, 17.78 feet to a 1/2" capped rebar set (G&A Consultants);

N 42°42'11" W, 106.03 feet to a 1/2" rebar found;

N 45°35'08" W, 300.88 feet to a Texas Department of Transportation Monument found;

N 39°57'05" W, 200.60 feet to a Texas Department of Transportation Monument found;

N 45°38'25" W, 346.49 feet to the Point of Beginning, and containing approximately 9.149 acres of land.

Exhibit “B”
Development Standards

Planned Development District - 154 (PD-154)
NEM Senior Living

The development on the property comprising approximately 9.149 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. PERMITTED USES. The following uses listed herein may be Permitted Uses:

1. Accessory use, general, subject to section 98-972
2. Church or rectory
3. Dwelling, multifamily, subject to Ordinance No. 07-17 for Senior Housing
4. Off-street parking, accessory
5. Park or playground, public
6. Swimming pool, private, subject to section 98-996

In addition to the Permitted Uses, the following accessory uses may also be permitted:

1. Carports/covered parking
2. Garages

B. SPECIFIC USES. The uses listed as Specific Uses in Multifamily District (MF) in the Town’s Zoning Ordinance shall be prohibited.

C. TEMPORARY USES. The uses listed as Temporary Uses in the Multifamily District (MF) in the Town’s Zoning Ordinance may be permitted 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”.

D. DIMENSIONAL REGULATIONS. The dimensional regulations listed for Multifamily District (MF) in the Town’s Zoning Ordinance shall be required for this Planned Development except as otherwise listed herein:

1. Minimum lot area per dwelling. There shall be no minimum lot area per dwelling.
2. Minimum floor area per unit. The minimum floor area per unit shall be 500 square feet. There shall be an average minimum floor area per unit of 850 square feet.
3. Minimum front yard. There shall be a minimum front yard of 60 feet along FM 2499.
4. Minimum side yard. There shall be no minimum side yard, subject to Compatibility setback.
5. Minimum rear yard. There shall be no minimum rear yard, subject to Compatibility setback.
6. Maximum height. There shall be a maximum height of 4 stories or 60 feet.

E. AMENITIES. The following amenities shall be required for this Planned Development:

1. Community pool with a minimum area of 1,000 square feet
2. A minimum of 5,000 square feet of indoor amenities to include:

- a. Clubhouse/Amenity Center
- b. Bistro
- c. Private dining area
- d. Beauty salon with barber shop
- e. TV Lounge/Theater
- f. Fitness center
- g. Dog spa
- 3. Access to public trails.
- 4. A minimum of two seating areas outside of the courtyard area consisting of at least two benches each; and a minimum of three seating areas inside the courtyard..
- 5. A minimum of three shade structures within the courtyard with a minimum area of 200 square feet for each structure.
- 6. Enhanced landscaping that includes seasonal plantings, groundcover, and/or shrubs with a minimum planting area of 7,000 square feet within the courtyard and a minimum planting area of 600 square feet outside the courtyard area.
- 7. Dog Park with a minimum area of 3,000 square feet.
- 8. The pool cabana shade structure shall include a grilling station/outdoor kitchen and seating areas.
- 9. Putting Green with a minimum area of 1,500 square feet.
- 10. Bocce Ball Court or some similar activity with a minimum area of 300 square feet.

F. LANDSCAPE STANDARDS.

- 1. Landscaping shall comply with the approved Concept Landscape Plan (Exhibit "D").

G. ARCHITECTURAL STANDARDS.

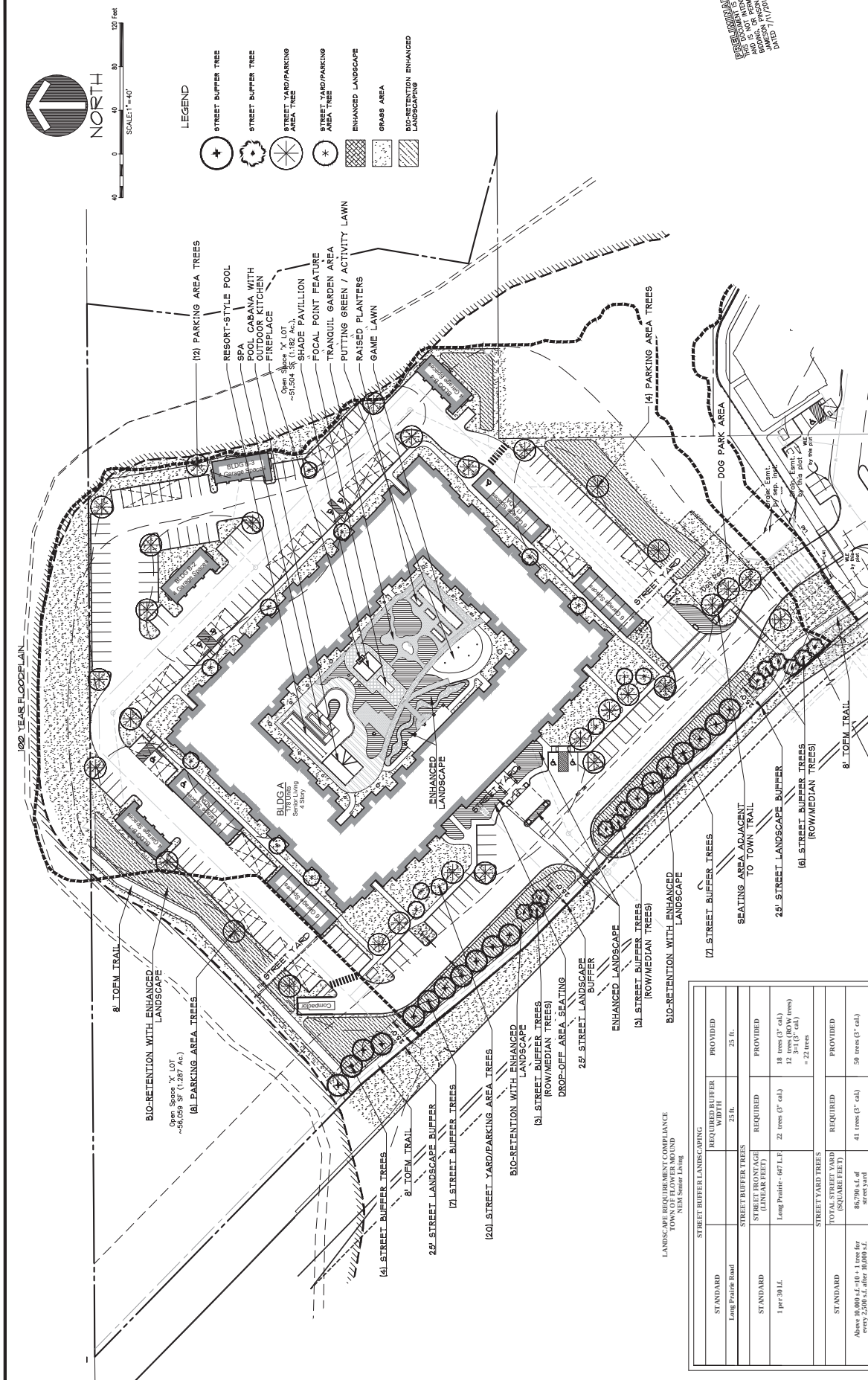
- 1. Building Elevation Profiles and roof form shall comply with the approved Concept Elevations (Exhibit "E").
- 2. Building elevations shall be articulated to meet or exceed the Town of Flower Mound's Urban Design Plan.

H. MISCELLANEOUS STANDARDS. This Planned Development shall be subject to the following standards:

- 1. The required parking shall be 1.21 parking spaces per unit.
- 2. The community shall be gated with private access and public access shall be provided to the adjacent property to the south.
- 3. With the first Site Plan or Replat application for any residential development, the Developer shall submit Covenants, Conditions and Restrictions ("Deed Restrictions") to the Town for the Town's review and approval that restrict the age of the residents within the development to persons age 55 or older in accordance with the provisions of the Housing for Older Persons Act of 1995, as amended, ("HOPA") established in the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, as amended, 42 U.S.C. 3601-3619)("FHA").
- 4. The development is subject to an approved developer's agreement.
- 5. Prior to the Planning and Zoning Commission's consideration of the replat application for the subject property, a flood study shall be approved by the Town staff in accordance with Sec. 90-403 and the fully developed floodplain shall be depicted on the plat and dedicated as a drainage/floodplain easement with a note regarding

perpetual maintenance of the said easement to be the responsibility of the property management company.

- I. EXCEPTIONS. The following exceptions to the Town's Ordinances shall apply to this Planned Development.
1. Compatibility Buffer - Section 82-302. The compatibility buffer and the masonry wall requirements shall not apply along the eastern and northern property lines.
 2. Compatibility Setback – Section 82-303. The compatibility setback for two or more stories requirement shall not apply to the buildings. However, a minimum 20-foot setback measured from the eastern PD boundary and a minimum 20-foot setback measured from the northern PD boundary shall be required.
 3. Overhead Utilities. Approximately 26 linear feet of an existing guy wire that supports the overhead utility lines along FM 2499 shall not be required to be buried.
 4. Fully Developed Floodplain - Section 90-403. Construction shall be permitted in a portion of the fully developed floodplain, but not within the FEMA floodplain.
 5. Topographic Slope Protection - Section 98-147. This exception shall be limited to the proposed driveway located at the southwest corner of the site over an area approximately 0.029 acre and that no exception is granted for any other portions of the subject property.



STREET BUFFER LANDSCAPING					
STANDARD	Long Prairie Road		REQUIRED BUFFER WIDTH	25 ft.	PROVIDED
STANDARD	1 per 30 L	STREET PLANTING TREES (LINEAR FEET)	REQUIRED		PROVIDED
		Long Prairie: 667 LF	23 trees (5" cal.)		18 trees (5" cal.) 12 trees (80W trees) 3+1 (5" cal.) = 23 trees
STREET YARD TREES					
STANDARD	Above 10,000 sq. ft. - 1 tree for every 2,500 sq. ft. of lot area	TOTAL STREET YARD (SQUARE FEET)	REQUIRED	41 trees (5" cal.)	PROVIDED
		96,796 sq. ft. of street yard			50 trees (5" cal.)
PARKING AREA LANDSCAPING					
STANDARD	90 x 14 ft parking spaces	# OF PARK SPACES	REQUIRED	PROVIDED	
		PARKING SPACES	1,640 sq. ft.	2,240 sq. ft.	
STANDARD	1 per 10 parking spaces	# OF PARK SPACES	REQUIRED	PROVIDED	
		222 parking spaces	23 trees (5" cal.)		30 trees (5" cal.) 9 trees (30% ROW trees) ~39 trees (0-750sq. ROW)

**All parking spaces to be located within 50 ft. of parking lot trees.

[illegible]



MATERIAL PERCENTAGES TABLE (WEST)		
	SQ. FT.	PERCENTAGE
TOTAL FACADE	10,541	
FACADE (NO DOORS & WNS)	9,771	
DOOR & WINDOWS S.F.	3,770	36%
NATURAL STONE	3,386	32%
STUCCO	2,786	41%



MATERIAL PERCENTAGES TABLE (NORTH)		
	SQ. FT.	PERCENTAGE
TOTAL FACADE	10,771	
FACADE (NO DOORS & WNS)	10,303	
DOOR & WINDOWS S.F.	3,369	46%
NATURAL STONE	4,741	54%
STUCCO	5,610	52%



MATERIAL PERCENTAGES TABLE (EAST)		
	SQ. FT.	PERCENTAGE
TOTAL FACADE	10,541	
FACADE (NO DOORS & WNS)	7,200	
DOOR & WINDOWS S.F.	3,561	46%
NATURAL STONE	4,234	50%
STUCCO	5,086	48%



MATERIAL PERCENTAGES TABLE (SOUTH)		
	SQ. FT.	PERCENTAGE
TOTAL FACADE	10,547	
FACADE (NO DOORS & WNS)	11,240	
DOOR & WINDOWS S.F.	4,807	46%
NATURAL STONE	5,660	53%
STUCCO	6,086	57%

SENIOR LIVING
FLOWER MOUND, TEXAS

ARCHITECT:
CROSS ARCHITECTS, PLLC
1255 W. 15TH STREET, SUITE 125
PLANO, TEXAS 75075
P: 972.398.6644
F: 972.312.8666
WWW.CROSSARCHITECTS.COM

Cross
architects

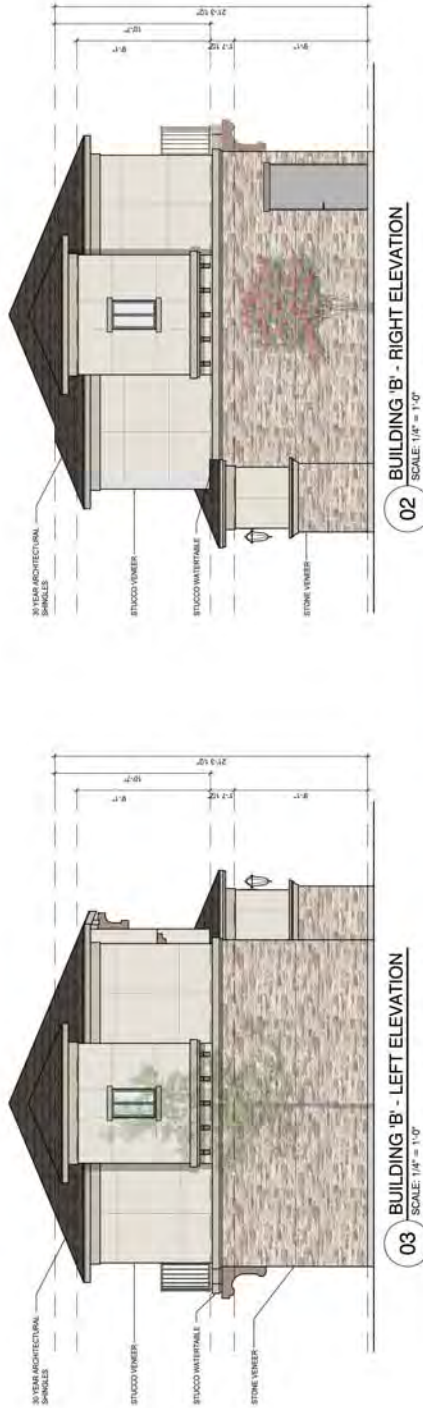
PRELIMINARY
DRAWINGS
NOT FOR CONSTRUCTION

DATE: 08/07/2017
PROJECT NUMBER: 16721

REVISIONS
NO. DATE

Attachment 2 - Draft Ordinance

DRAWING BASED FOR:
SCHEMATIC
SHEET NAME:
A4.1
BUILDING DEPT.
ELEVATIONS
COPYRIGHT ©





ARCHITECT:
CROSS ARCHITECTS, PLLC
PLANO, TEXAS 75075
P: 972.312.8666
F: 972.312.8666
WWW.CROSSARCHITECTS.COM

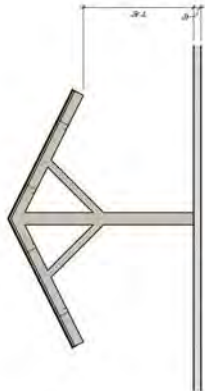
SENIOR LIVING FLOWER MOUND, TEXAS

DATE: 08/07/2017
PROJECT NUMBER: 16721

REVISIONS
NO. DATE

SCHEMATIC
SHEET NUMBER

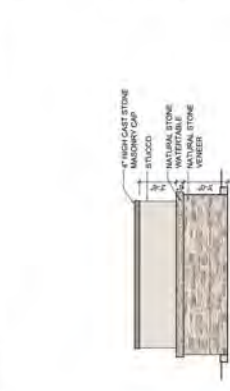
A4.2
6-BAY GARAGE/
CARPORT
ELEVATIONS
COMPILED BY



09 6-BAY CARPORT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



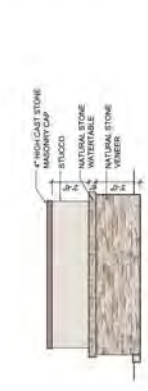
08 6-BAY CARPORT FRONT/REAR ELEVATION
SCALE: 1/4" = 1'-0"



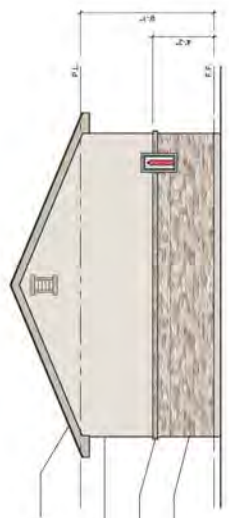
07 DUMPSTER ENCLOSURE ELEVATION - REAR
SCALE: 1/4" = 1'-0"



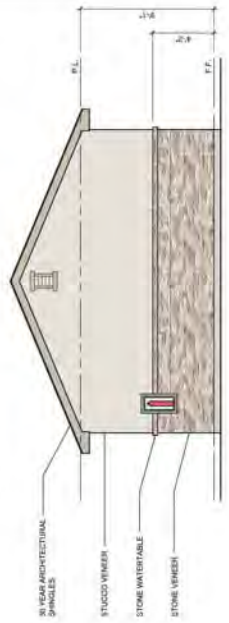
06 6-BAY GARAGE REAR ELEVATION
SCALE: 1/4" = 1'-0"



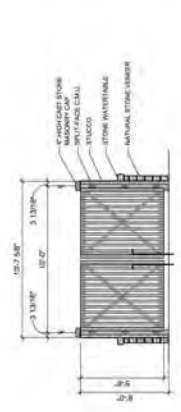
05 DUMPSTER ENCLOSURE ELEVATION - SIDE
SCALE: 1/4" = 1'-0"



04 6-BAY GARAGE SIDE ELEVATION
SCALE: 1/4" = 1'-0"



03 6-BAY GARAGE SIDE ELEVATION
SCALE: 1/4" = 1'-0"



02 DUMPSTER ENCLOSURE ELEVATION - FRONT
SCALE: 1/4" = 1'-0"



01 6-BAY GARAGE FRONT ELEVATION
SCALE: 1/4" = 1'-0"

PLACEHOLDER



TOWN COUNCIL AGENDA ITEM NO. 12

REGULAR ITEM

DATE: October 15, 2018

FROM: Brian Waltenburg, P.E., CIP Engineering Manager

ITEM: **Public Hearing to consider a request for a Master Plan Amendment (MPA-0006) to amend Section 8.0, Water Plan of the Master Plan to adopt the Lakeside Reuse Water Master Plan to meet the Town of Flower Mound's reuse water system infrastructure needs, over the build-out of the system located within the Lakeside Business District and to consider adopting an ordinance providing for said amendment. (The Planning and Zoning Commission recommended approval by a vote of 6 to 0 at its October 8, 2018, meeting.)**

BACKGROUND INFORMATION: A draft of the Lakeside Reuse Water Master Plan was presented to the Town Council at the Work Session on September 20, 2018. The Lakeside Reuse Water Master Plan was presented at a Public Hearing presentation at the October 8, 2018, P&Z Commission meeting.

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: The attached ordinance has been reviewed as to form and legality by Alicia K. Kreh with Taylor, Olson, Sralla, & Elam L.L.P., on September 27, 2018.

ATTACHMENTS:

1. Planning and Zoning Commission Staff Report
2. Ordinance, with Exhibit A (Lakeside Reuse Water Master Plan)

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



PLANNING AND ZONING COMMISSION AGENDA ITEM NO: 4

DATE: October 8, 2018

FROM: Brian Waltenburg, P.E., CIP Engineering Manager

ITEM: **Public Hearing to consider a request for a Master Plan Amendment (MPA18-0006) to amend Section 8.0, Water Plan, of the Master Plan to adopt the Lakeside Reuse Water Master Plan to meet the Town of Flower Mound's reuse water system infrastructure needs over the build-out of the system located within the Lakeside Business District.**

I. ITEM SUMMARY

A summary of the draft Lakeside Reuse Water Master Plan was presented to Town Council at the July 17, 2018, Strategic Planning Session. An additional presentation was made to the Town Council at the September 20, 2018, Work Session which included additional information related to financial payback period, funding, and next steps. A public hearing and final consideration by Town Council for a Master Plan Amendment to amend Section 8.0 of the Water Master Plan of the Master Plan and to adopt the Lakeside Reuse Water Master Plan is scheduled for the October 15, 2018, Town Council Meeting.

This application will require final action by the Town Council.

II. APPLICATION ANALYSIS

The purpose of this request is to amend Section 8.0, of the Water Master Plan of the Master Plan, to include the Lakeside Reuse Water Master Plan. This will allow reuse water to be utilized for irrigation within the Lakeside Business District.

III. CORRESPONDENCE

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.

IV. ATTACHMENTS

1. Proposed Lakeside Reuse Water Master Plan

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 BY ADDING A PROVISION RELATED TO THE ADOPTION OF THE LAKESIDE REUSE WATER MASTER PLAN; ADOPTING THE LAKESIDE REUSE 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 engaged Alan Plummer Associates, Inc. to present analyses, findings, and recommendations for implementing a plan to meet the Town of Flower Mound's reuse water system infrastructure needs over the build-out of the system needed for future water supply needs; and,

WHEREAS, the Lakeside Reuse Water Master Plan addresses these concerns; and,

WHEREAS, the Planning and Zoning Commission of the Town of Flower Mound, Texas, held a public hearing on October 8, 2018, and the Town Council of the Town of Flower Mound, Texas, held a public hearing on October 15, 2018, with respect to the Master Plan Amendment described herein to consider adoption of the Lakeside Reuse Water Master Plan; and,

WHEREAS, the Town has complied with all publication and procedural requirements for the approval of a Master Plan Amendment;

WHEREAS, the Town Council finds that an amendment to the Master Plan as outlined herein and adoption of the Lakeside Reuse Water Plan as a component of the Water Plan in Section 8.0 of the Master Plan 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; and,

WHEREAS, the Town Council finds it necessary to fix grammatical errors within Section 8.0 of the Master Plan.

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:

“The existing and proposed physical components of the water system were evaluated in detail and are included in the 2009 Water Master Plan. In 2015, the Town adopted updates to the 2009 Water Master Plan based on water demands in 2015, 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 update to the 2009 Water Master Plan. The 2009 Water Master Plan Update and the 2015 Water Master Plan Amendments provide 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.

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 16 million gallons (MG) of ground storage and is constructing a 5 MG tank at the Stonecrest Pump Station site. The new ground storage tank should be operational by summer 2015 and will bring the total ground storage to 21 MG.

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 2013, the Town served 21,967 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 two pumping stations: Stonehill and Pintail. A third pumping station, Stonecrest, is currently under construction and will be operational by summer 2015. The Stonehill pump station has a firm capacity of 28,000 gallons per minute (gpm) and the Pintail pump station has a firm capacity of 11,600 gpm. The initial phase of the Stonecrest pump station will have a firm capacity of 12,000 gpm with an ultimate firm capacity of 24,000 gpm. Once the Stonecrest pump station is placed into service the Lusk Lane booster pump station will be removed from service.

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. 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 to the Low Pressure Plane 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 through the Middle Pressure Plane: 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.

Lakeside Reuse Water Master Plan

The Lakeside Reuse Water Master Plan prepared by Alan Plummer Associates, Inc. is hereby adopted 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."

SECTION 3

From and after the effective date of this Ordinance, the Lakeside Reuse Water Master Plan prepared by Alan Plummer Associates, Inc. is hereby adopted as a component of Section 8.0, Water Plan, of the Master Plan. The Lakeside Reuse Water Master Plan prepared by Alan Plummer 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

Ordinance No. _____

Page 5

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 15th DAY OF OCTOBER, 2018.

APPROVED:

Steve Dixon, MAYOR

ATTEST:

Theresa Scott, TOWN SECRETARY

APPROVED AS TO FORM AND LEGALITY:

Bryn D. Meredith, TOWN ATTORNEY

Ordinance No. _____

Page 6

EXHIBIT A

Lakeside Reuse Water Master Plan
Prepared by Alan Plummer Associates, Inc.



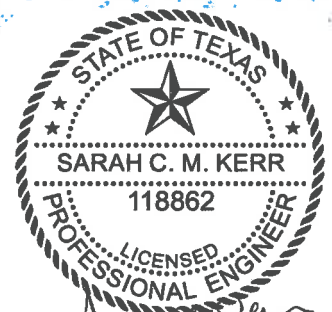
Town of Flower Mound

LAKE SIDE REUSE WATER MASTER PLAN

October 2018



Ellen T. McDonald
10/2/18



Sarah C. M. Kerr
10.2.18

Submitted by:



ALAN PLUMMER
ASSOCIATES, INC.

ENVIRONMENTAL
ENGINEERS AND SCIENTISTS



Table of Contents

1	Executive Summary	1
2	Introduction	5
2.1	Projected Population and Water Demands	7
3	Reclaimed Water Demand Analysis	9
3.1	Existing Reclaimed Water Demand	11
3.2	Estimated Future Demand	18
3.3	Irrigation Customer Communication.....	21
4	Reclaimed Water Supply and Required Storage	22
4.1	Required Reclaimed Water Storage	23
5	Hydraulic Evaluation	26
5.1	Model Development	26
5.2	Performance Criteria	29
5.3	Model Pressure Results	29
5.4	Model Water Age Results	31
5.4.1	Flushing Device Considerations	34
6	Wastewater Treatment Plant Effluent Quality.....	35
6.1	Wastewater Treatment Plant Information.....	35
6.2	Reclaimed Water Quality Requirements	35
6.3	Evaluation of Historical WWTP Effluent Quality	36
6.4	Recommended Wastewater Treatment Plant Improvements.....	39
6.4.1	Treatment Improvements	41
6.4.2	Infrastructure Additions.....	42
7	Implementation Plan and Costs	45
7.1	Prior to Phase 1	45
7.2	Phase 1	48
7.3	Phase 2.....	48
7.4	Phase 3.....	48
7.5	Phase 4.....	49
7.6	Phase 5.....	49



Lakeside Reuse Water Master Plan

7.7 Phase Costs..... 50

8 Financial Evaluation 53

8.1 Financing Strategies and Funding Opportunities 53

8.2 Federal and State Funding Programs 53

8.3 Debt Repayment and Operations and Maintenance Financing..... 55

8.4 Projected Payback Period for Lakeside Reuse System 55

8.5 Potential Impact of Financial Assumptions 58

9 Summary and Recommendations 60



List of Figures

Figure 1: Lakeside Business District Location	6
Figure 2: Irrigation Meter Locations	10
Figure 3: Available Monthly Consumption Data by Year	13
Figure 4: Historical Peak Months by Irrigation Meter	14
Figure 5: Average Irrigation by Hour on a Peak Day	17
Figure 6: Existing and Future Irrigation Service Zones	20
Figure 7: Daily Effluent Flow from Town WWTP	22
Figure 8: Hourly Effluent Flow from Town WWTP	23
Figure 9: Required Volume of Reclaimed Water Storage	24
Figure 10: Modeled Reclaimed Water Distribution System	28
Figure 11: Model Results for Existing Meters	30
Figure 12: Model Results for Water Age Including Future Demand	32
Figure 13: Model Results for Water Age Not Including Future Demand	33
Figure 14: Monthly Average Effluent Quality– CBOD ₅ and <i>E. coli</i>	37
Figure 15: Daily Maximum Effluent Quality – <i>E. coli</i>	38
Figure 16: Daily Effluent Quality – Turbidity	39
Figure 17: Wastewater Treatment Plant Site Plan	40
Figure 18: Recommended WWTP Improvements	41
Figure 19: Lakeside Reuse System Implementation Plan	47
Figure 20: Projected Annual Reuse Water Demand	57
Figure 21: Reclaimed Water System Financial Analysis	58
Figure 22: Cumulative Difference for Several Scenarios	59



List of Tables

Table 1: Projected Population, Demand, and Supply from Regional Plan.....	7
Table 2: Simplified Zoning Divisions.....	9
Table 3: Existing Reclaimed Water System Demands	12
Table 4: Summary of Historical Hourly Data	15
Table 5: Hourly Irrigation Data during High Flow Days.....	16
Table 6: Summary of Existing Lakeside Reclaimed Water System Demands.....	18
Table 7: Summary of Lakeside Reuse System Existing and Future Demands	19
Table 8: Estimated Future Demand for the Lakeside Business District.....	21
Table 9: Selected Survey Responses	21
Table 10: Town WWTP Daily Effluent Flow Summary	23
Table 11: Required Storage using Historical Effluent Flow	25
Table 12: Summary of Modeled Demands	27
Table 13: Performance Criteria	29
Table 14: Reclaimed Water System Pipeline Diameters.....	29
Table 15: WWTP TPDES Discharge Requirements.....	35
Table 16: Type I Reclaimed Water Quality Limits	36
Table 17: Implementation Plan Summary	51
Table 18: Lakeside Reuse System Demand Summary by Phase	51
Table 19: Preliminary Implementation Plan Schedule	52
Table 20: Financing Assumptions	56



List of Acronyms and Abbreviations

ac-ft/yr	acre-feet per year
AMI	Automated Meter Infrastructure
APAI	Alan Plummer Associates, Inc.
CBOD ₅	five-day carbonaceous biochemical oxygen demand
DMR	Discharge Monitoring Report
EPS	extended period simulation
ft	feet
gal	gallons
gpcd	gallons per capita per day
gpd	gallons per day
gph	gallons per hour
gpm	gallons per minute
lbs	pounds
LF	linear feet
MG	million gallons
MGD	million gallons per day
NCTCOG	North Central Council of Governments
O&M	operating and maintenance
OPCC	opinion of probable construction cost
psi	pounds per square inch
SBR	sequencing batch reactor
SRF	State Revolving Fund
SWD	side water depth
SWIFT	State Water Implementation Fund for Texas
TCEQ	Texas Commission on Environmental Quality
Town	Town of Flower Mound
TPDES	Texas Pollutant Discharge Elimination System
TWDB	Texas Water Development Board
UV	ultraviolet
VFD	variable frequency drive
WSE	water surface elevation
WWTP	wastewater treatment plant



List of Appendices

Appendix A – Lakeside Business District Zoning Map

Appendix B – Top Irrigation Users Contact Information and Surveys

Appendix C – Current Irrigation Meters and Demands in the Study Area

Appendix D – Future Demand Included in Hydraulic Model

Appendix E – Water Age Phase Model Results

Appendix F – Flower Mound Reclaimed Water Authorization

Appendix G – Financial Evaluation



1 Executive Summary

The Lakeside Reuse Water Master Plan report presents the findings and recommendations for providing reclaimed water to irrigation customers in the Lakeside Business District area of the Town of Flower Mound (Town) from the nearby wastewater treatment plant (WWTP).

The Town provided Alan Plummer Associates, Inc. with a list of 106 potable water irrigation meters throughout the Lakeside Business District for connection to a future reclaimed water distribution system. A map of the proposed distribution system is shown in Figure 10. Historical monthly meter consumption data were collected and analyzed to develop average and peak demands for the area. A hydraulic model was used to perform an evaluation of the proposed distribution system based on the peak demands calculated from the historical data and future build-out demands estimated from current zoning for the area. A summary of the estimated existing and future system demands is shown in Table E-1 and Figure E-1.

Table E-1: Summary of Existing and Future Reclaimed Water Demand in the Lakeside Business District

Demand Type	Units	Existing	Future	Total Build-Out Demand
Peak Day Demand	MGD	3.79	2.76	6.56
Peak Hour Demand	MGD	12.1	8.84	21.0
Average Demand	MGD	0.46	0.34	0.80

The hydraulic evaluation of the proposed reclaimed water distribution system was performed using the Innovyze InfoWater® hydraulic model to appropriately size pipelines in the proposed reclaimed water system while maintaining water pressure between 40 psi and 100 psi. The reclaimed water system is shown in Figure 11. It includes approximately 15 miles of pipeline ranging in diameter from 2 inches to 30 inches.

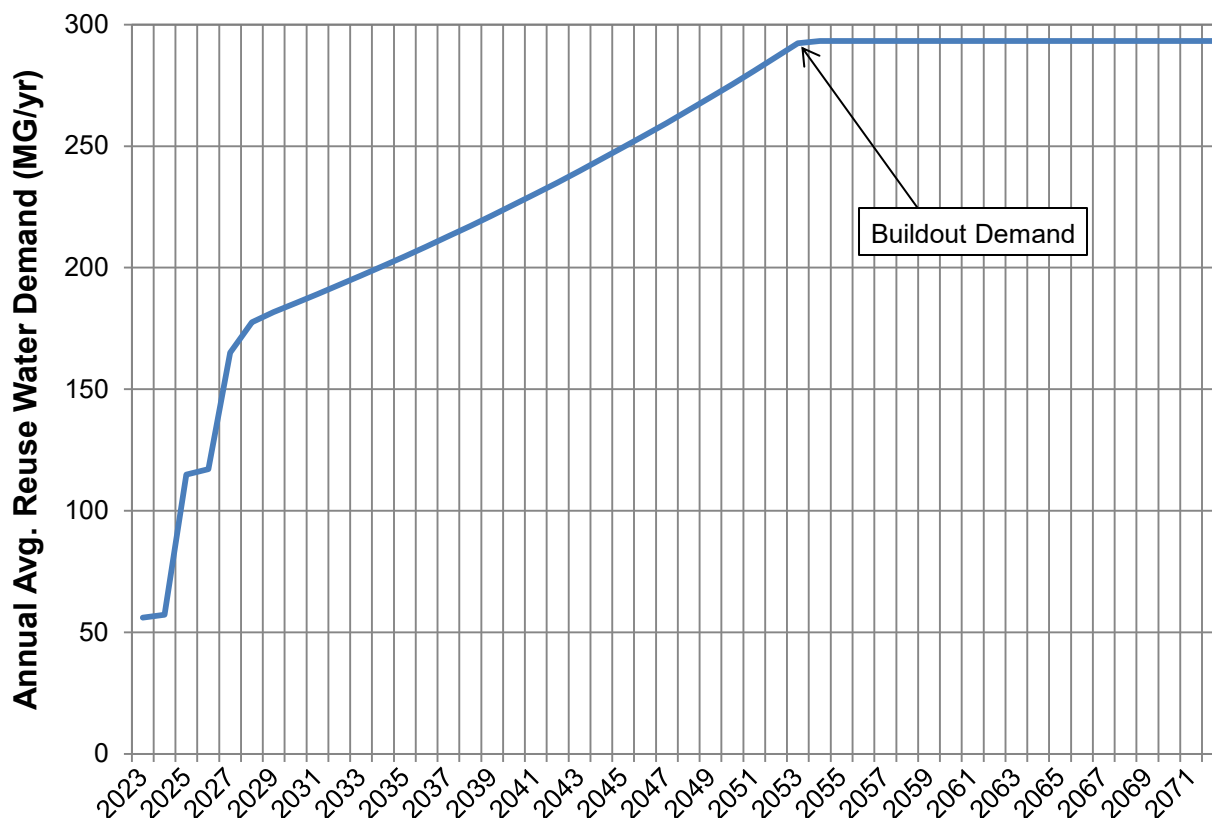


Figure E-1 – Lakeside Business District Average Reclaimed Water Demand

In addition to pipeline infrastructure, several improvements are recommended at the WWTP. These improvements include a new ultraviolet disinfection system, a transfer pump station, two 1 million gallon (MG) storage tanks, a sodium hypochlorite feed system, and a reuse pump station.

A phased implementation plan is proposed for the reuse system to manage capital costs and maximize revenue from the reuse system. The phases were established based on proximity to the WWTP and amount of reclaimed water demand. Meters located close to the WWTP with high demand will be connected to the reuse system in the early phases, and meters located far from the WWTP in undeveloped areas will be connected during later phases.

Irrigation meters near the WWTP along Spinks Road will be the first meters connected to the reclaimed water system in Phase 1. These meters are primarily used for irrigation



of open spaces at Gerault Park, Heritage Park, and Bakersfield Park. The system would be expanded in Phase 2 to include Irrigation meters on commercial properties generally located along Lakeside Parkway, east of Gerault Road. The third phase would expand the reclaimed water system to additional properties along Lakeside Parkway and Spinks Road between Gerault Road and Long Prairie Road. Phase 4 of the implementation plan would extend reclaimed water service along Long Prairie Road between Silveron Boulevard and Gerault Road, and will also connect to three dead ends created in Phases 2 and 3 to form a looped system. The fifth and final phase of the implementation plan would provide service To the residential properties located along Lakeside Parkway, west of Long Prairie Road. A summary of the proposed implementation plan is provided in Table E-2.

Table E-2: Reclaimed Water Implementation Plan

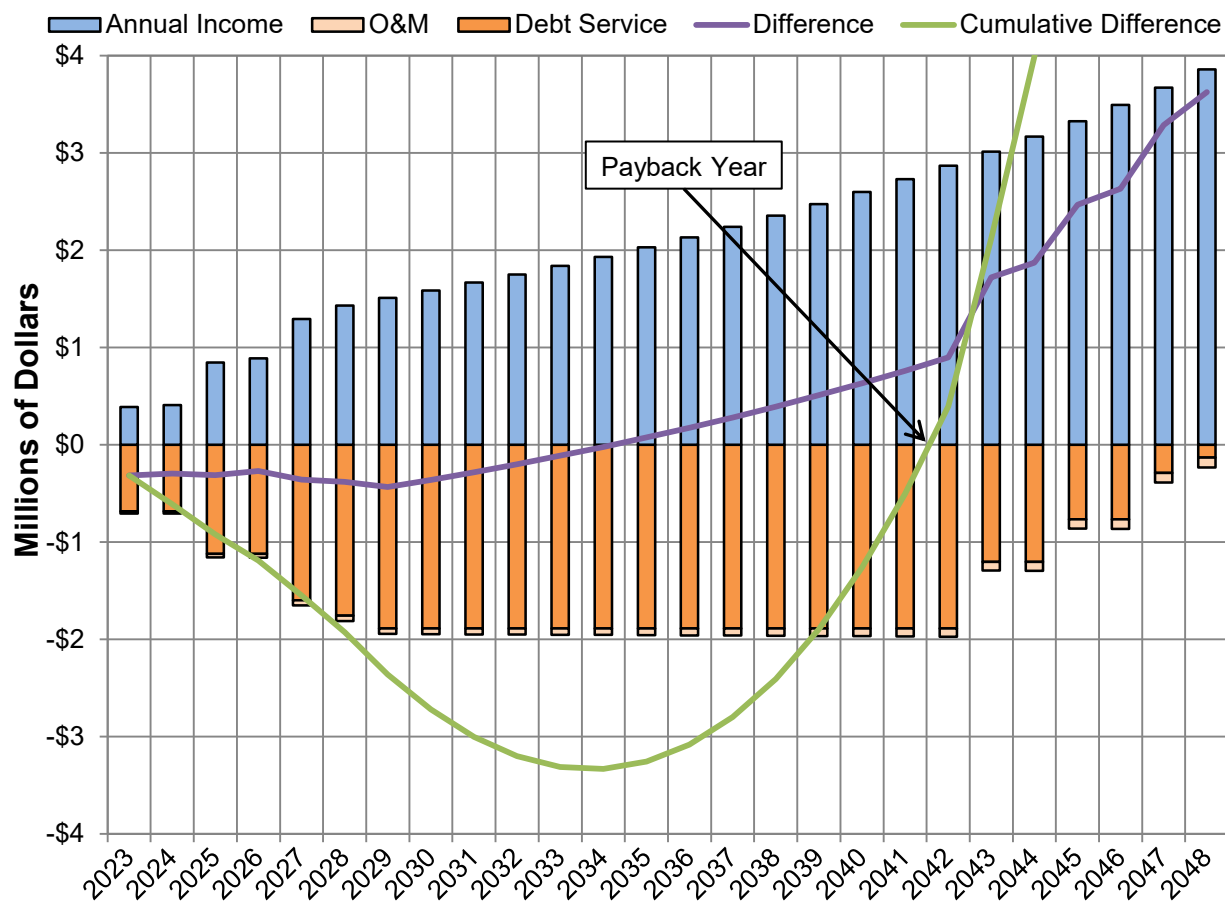
Phase	Improvements at WWTP	LF of Pipe Installed	OPCC (million) ¹
1	Transfer pump station Temporary storage tanks Reuse pump station Sodium hypochlorite feed system	14,900	\$9.03
2	1 MG storage tank	20,800	\$5.45
3	1 MG storage tank	18,900	\$5.63
4	-	9,900	\$1.44
5	-	12,900	\$1.80
Total System		77,400	\$23.35

A preliminary financial evaluation was conducted for the proposed reclaimed water system to estimate the financial impact that the reclaimed water system would have on the Town. A payback period of approximately 19 years was estimated (Figure E-2).

The financial evaluation is significantly impacted by a number of factors such as loan term, loan interest rate, and the Town's reclaimed water rate. It is also important to note that these calculations do not include loss in revenue by replacing potable water for irrigation with reclaimed water. They also do not include benefits associated with



reduction of peak demands on the potable water system. Therefore, it is recommended that the Town conduct a formal financial evaluation and rate study prior to moving forward with development of the reclaimed water system.



Financing Assumptions shown in Table 20

Figure E-2: Reclaimed Water System Financial Analysis

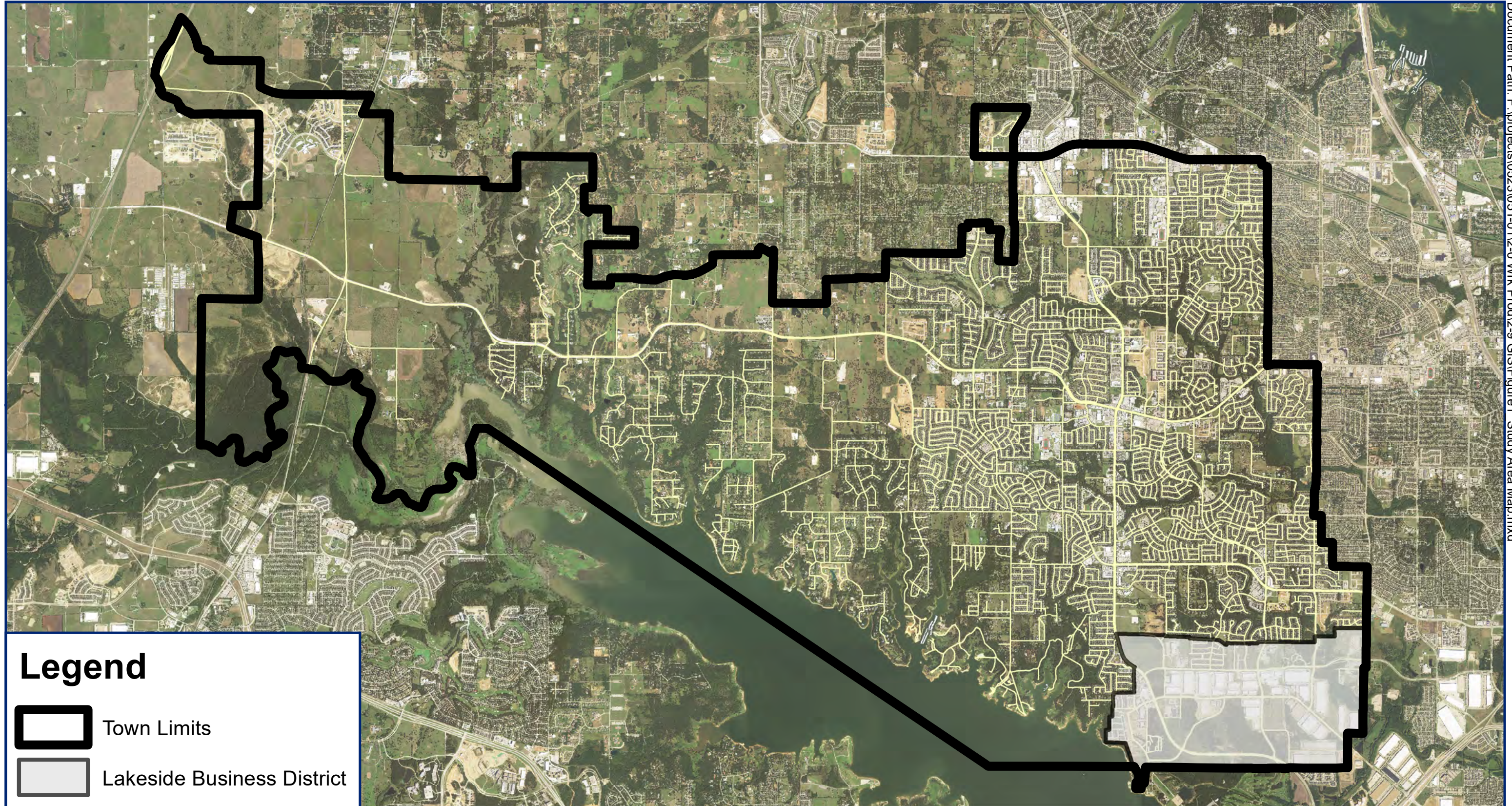


2 Introduction

In response to current and projected population increases and the associated increased demands on existing water infrastructure, the Town of Flower Mound (Town), located in Denton County, Texas, is proposing a project to provide reclaimed water from the Town's Wastewater Treatment Plant (WWTP) to the Lakeside Business District area, identified in Figure 1. Reclaimed water can be used for many beneficial purposes, including irrigation of landscaped areas and evaporation makeup water for ponds. This project would reduce the demands on the Town's potable water system by replacing potable water currently used for irrigation with reclaimed water. Potential irrigation areas in the Lakeside Business District include recreational sports facilities, parks, road medians, boulevards, parkways, commercial buildings with landscaped areas, multi-use areas, and others. Grapevine Golf Course is also near the Lakeside Business District, but was not included as a potential irrigation area in this report, as directed by the Town.

The Town retained the services of Alan Plummer Associates, Inc. (APAI) to develop the Lakeside Reuse Water Master Plan. The purpose of this reuse master plan is to evaluate the feasibility of providing reclaimed water to irrigation customers in the Lakeside Business District area. The contents of the master plan include:

- Identification of irrigation customers in the Lakeside Business District and estimated demands.
- Evaluation of reclaimed water supply available from the Town's WWTP.
- Proposed reclaimed water distribution system route and hydraulic evaluation.
- Reclaimed water quality requirements and recommended WWTP improvements.
- Proposed implementation plan and opinions of probable construction costs.



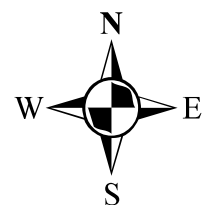
Legend



Town Limits



Lakeside Business District



0 0.3 0.6 1.2 1.8 2.4 3 Miles

DATE: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 1: Lakeside Business District Location



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



2.1 PROJECTED POPULATION AND WATER DEMANDS

The Town of Flower Mound serves potable water to an estimated retail customer population of approximately 72,000, a population that increased by 27.5% between 2000 and 2010. The Town is located in the Texas Water Development Board (TWDB) water planning Region C, which contains 16 counties in North Central Texas and most of the upper half of the Trinity River Basin. According to the 2016 Region C Water Plan, the Town's population is expected to reach a buildout population of 93,000 by 2030. However, a second projection developed in 2016 by the North Central Texas Council of Governments (NCTCOG) predicts that the Town's population will reach 109,739 by 2040. The NCTCOG estimated the Town's 2017 population to be 71,850.

The corresponding estimated total water demand is projected to grow to approximately 23,000 acre-feet per year by 2030 and then remain relatively stable after that time (Table 1).

Table 1: Projected Population, Demand, and Supply from Regional Plan

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population	75,555	93,000	93,000	93,000	93,000	93,000
Projected Water Demand						
Municipal Demand	19,049	23,148	23,022	22,948	22,924	22,922
Total Projected Demand	19,049	23,148	23,022	22,948	22,924	22,922
Currently Available Water Supplies						
UTRWD	10,477	11,297	8,763	6,929	6,162	5,401
Dallas Water Utilities	6,166	6,166	6,166	6,166	5,817	5,540
Total Current Supplies	16,643	17,462	14,929	13,094	11,979	10,941
Need (Demand - Current Supply)	2,407	5,686	8,093	9,854	10,945	11,981
Water Management Strategies						
Water Conservation	349	597	691	765	841	917
Additional Water from Upper Trinity Regional Water District	0	2,685	5,082	6,825	7,529	8,243
Additional Water from Dallas Water Utilities and additional pipeline	2,249	2,404	2,320	2,264	2,574	2,822
Total Water Management Strategies	2,589	5,686	8,093	9,854	10,945	11,981
Reserve (Shortage)	192	0	0	0	0	0

*From TWDB 2016 Region C Water Plan: Table 5D.101

*Lakeside Reuse Water Master Plan*

Flower Mound is committed to supporting sustainable water conservation and efficiency practices. The Town's water conservation ordinance has identified wastewater recycling and reuse as a promising strategy to reduce potable water demands. Implementation of this water reuse project would allow the Town to replace potable water used for irrigation with reclaimed water to preserve current water supplies.



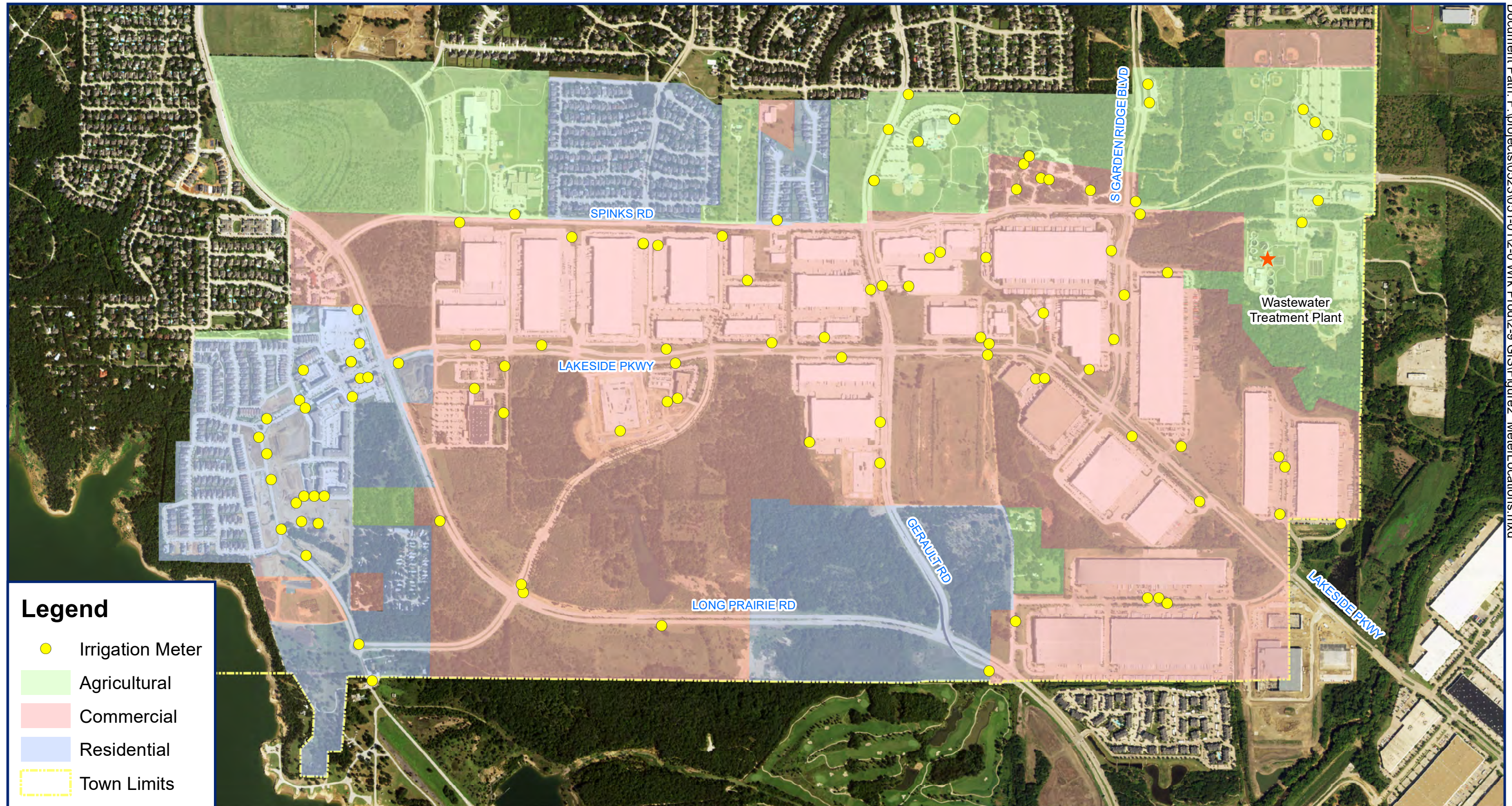
3 Reclaimed Water Demand Analysis

The Town provided APAI with a list of 106 potable water irrigation meters throughout the Lakeside Business District for connection to a future reclaimed water distribution system. While the majority of land within the Lakeside Business District is zoned as either commercial or industrial, significant areas in or near the District are zoned for recreational facilities or residential areas. A detailed zoning map for the Lakeside Business District is provided in Appendix A. For simplicity, the zones have been combined into three categories: Agricultural, Commercial, and Residential, as shown in Table 2. The land area and number of irrigation meters in each zone are also presented in the table. Locations of the irrigation meters and the simplified zones are presented in Figure 2.

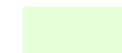
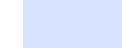
Table 2: Simplified Zoning Divisions

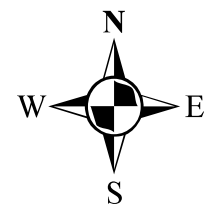
Simplified Zones	Number of Irrigation Meters	Land Area (acres)	Flower Mound Zoning Map
Agricultural	24	425	Agricultural
Commercial	56	1,110	Commercial Industrial
Residential	26	418	Combined Use Multi-Family Mobile Homes Mixed Use Retail Single Family
Combined	106	1,953	-

The Lakeside Business District is not yet fully developed and future development could significantly increase the reclaimed water demand. The following sections estimate the reclaimed water demand for existing areas currently serviced by a dedicated irrigation meter and future areas not yet serviced.



Legend

-  Irrigation Meter
-  Agricultural
-  Commercial
-  Residential
-  Town Limits



0 0.1 0.2 0.4 0.6 0.8 Miles

DATE: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 2: Irrigation Meter Locations



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



3.1 EXISTING RECLAIMED WATER DEMAND

Historical monthly meter consumption data were collected for the 106 irrigation meters and analyzed to estimate the future reclaimed water demand. Monthly consumption data can be used to estimate the average monthly demand for the reclaimed water system, but do not provide information regarding changes in demand throughout the month or within a given day. The reclaimed water conveyance equipment and infrastructure will be designed to meet the Peak Hour and Peak Day Demand. Further data analysis and assumptions are required to estimate the peak hour demand from monthly consumption data. The following definitions are used to quantify demands:

Peak Month: The historical month with the greatest total water demand.

Peak Month Demand: Total water demand during the Peak Month. This value is available from monthly consumption data provided by the Town.

Peak Day: The day in the Peak Month with the greatest water demand.

Peak Day Demand: Total water demand during the Peak Day.

Peak Day Factor: Peak Day Demand divided by the Peak Month Demand.

Peak Hour: The hour in the Peak Day with the greatest water demand.

Peak Hour Demand: Total water demand for the Peak Hour. The conveyance infrastructure will be designed to operate at the peak hour demand.

Peak Hour Factor: Peak Hour Demand divided by Peak Day Demand.

Peak Month Demand for the future reclaimed water system was estimated using the monthly consumption data provided by the Town. Available monthly consumption data since 2007 was evaluated for each meter. The Peak Month Demand per meter was assumed to be equal to the highest month of consumption from historical data. The Peak Month Demand for each meter was added together to estimate the Peak Month Demand for the entire reclaimed water system (Table 3). Available monthly data for each meter were averaged together to calculate an average demand per meter. The

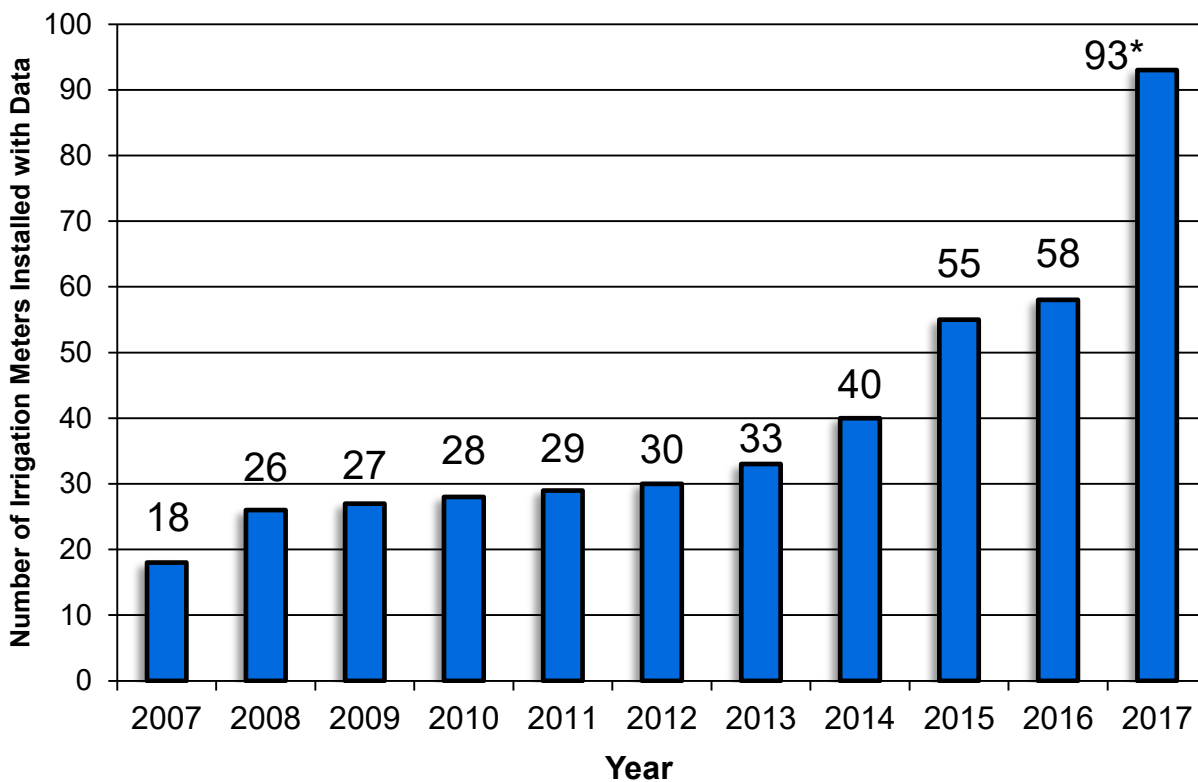


average demands for each meter were added together to determine the estimated average demand for the entire reclaimed water system (Table 3). The conveyance infrastructure will be designed to meet peak demands, but the average demands can be used to estimate system revenues and operational costs.

Table 3: Existing Reclaimed Water System Demands

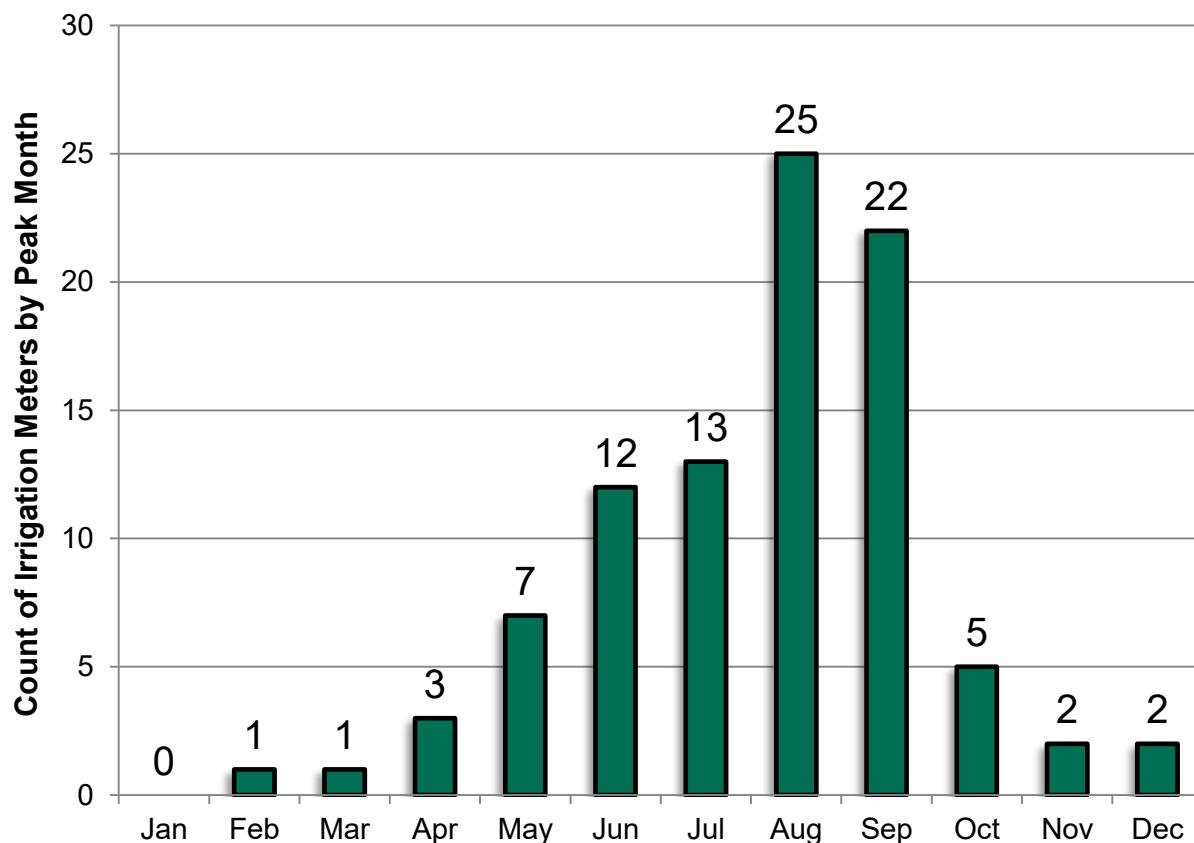
Value	MGD
Peak Day Demand	3.79
Average Demand	0.46

Figure 3 displays the number of irrigation meters in the Lakeside Business District with available monthly consumption data by year. The highest month of consumption (peak month) for each irrigation meter was found regardless of which year it occurred, and Figure 4 displays the summary of peak months by irrigation meter. This summary demonstrates that the highest irrigation demand in the Lakeside Business District area occurs in August and September. Thirteen of the 106 irrigation meters did not have any recorded monthly consumption data at the time of this master plan.



*Thirteen of the 106 meters are newly installed and do not have any available consumption data at the time of this master plan.

Figure 3: Available Monthly Consumption Data by Year



*Thirteen of the 106 meters are newly installed and do not have any available consumption data at the time of this master plan.

Figure 4: Historical Peak Months by Irrigation Meter

In addition to monthly consumption data, daily and hourly consumption data were also available since the Town has replaced their existing manual meters with Automated Meter Infrastructure (AMI). Hourly consumption data between July 15, 2017 and October 19, 2017 were evaluated for three of the largest irrigation users in the Lakeside Business District. The Peak Day and Peak Hour Demands and associated Peak Day and Peak Hour Factors were obtained from this data set and are presented in Table 4.

**Table 4: Summary of Historical Hourly Data**

Meter Number	55-0165-99	86-2995-99	86-9210-99	Combined
Peak Month¹	8/2017	9/2017	8/2017	9/2017
Peak Month Demand¹ (gpd)	20,939	23,550	5,829	46,477
Peak Day	8/9/2017	9/1/2017	8/21/2017	9/1/2017
Peak Day Demand² (gpd)	46,042	51,685	31,329	79,749
Calculated Peak Day Factor	2.20	2.19	5.37	1.72
Peak Day Demand² (gph)	1,918	2,154	1,305	3,323
Peak Hour	10 am	7 pm	8 pm	11 pm
Peak Hour Demand² (gph)	4,837	4,493	3,910	11,199
Calculated Peak Hour Factor	2.52	2.09	3.00	3.37

1. Only monthly consumption data collected between 7/15/2017 and 10/19/2017 was evaluated.

2. Based on hourly consumption data collected between 7/15/2017 and 10/19/2017.

The purpose of the Peak Day Factor is to calculate the Peak Day Demand from the Peak Month Demand by accounting for the fact that irrigation likely does not occur every day in a month. A simplified assumption would be that an individual user might irrigate their property every other day during a low precipitation, high temperature period of time. Irrigating every other day would represent a Peak Day Factor of 2.0. This assumption is confirmed by the hourly data displayed in Table 4, where the combined Peak Day Factor for the three meters was 1.72. Peaking factors can vary by the type of irrigation (such as golf course, parks and rec, commercial, residential, etc.) but typically range between 1.0 and 3.0². A Peak Day Factor of 2.0 was selected for this evaluation. Using this factor, the assumed Peak Day Demand for the entire system is 3.79 million gallons per day (MGD)³.

In a similar manner, the purpose of the Peak Hour Factor is to calculate the Peak Hour Demand from the Peak Day Demand, knowing that an irrigation user does not typically irrigate their property for all 24 hours in a day. Rather, irrigation may be accomplished in an 8 hour window, which would represent a Peak Hour Factor of 3.0. Hourly data from

² Direct, Non-Potable Reuse Guidance Document, Prepared for Region C Water Planning Group, Alan Plummer Associates, Inc. and Freese and Nichols, Inc., April 2009. Table 5-1.

³ Equal to the Peak Month Demand of 1.89 MGD times the Peak Day Factor of 2.0.



the three meters show Peak Hour Factors that range between 2.09 and 3.37 (Table 4). Hourly data for a full 24 hours from a number of peak flow days is shown in Table 5. An irrigation pattern can be estimated from this data.

Table 5: Hourly Irrigation Data during High Flow Days

Hour	Sum of 3 Irrigation Meters (gal)				Hourly Flow to Daily Peak Flow Ratio			
	8/21/17	9/18/17	9/25/17	10/2/17	8/21/17	9/18/17	9/25/17	10/2/17
0	8,704	9,651	8,158	9,409	0.76	0.87	0.82	0.86
1	11,419	11,150	9,996	10,518	1.00	1.00	1.00	0.96
2	6,659	7,631	7,180	7,319	0.58	0.68	0.72	0.67
3	7,118	7,371	7,453	7,627	0.62	0.66	0.75	0.70
4	7,380	3,692	3,382	3,593	0.65	0.33	0.34	0.33
5	4,218	3,443	3,342	3,476	0.37	0.31	0.33	0.32
6	4,516	3,643	3,594	3,803	0.40	0.33	0.36	0.35
7	2,149	1,369	1,997	1,839	0.19	0.12	0.20	0.17
8	980	74	1,058	78	0.09	0.01	0.11	0.01
9	951	71	1,033	68	0.08	0.01	0.10	0.01
10	891	58	606	65	0.08	0.01	0.06	0.01
11	984	70	152	74	0.09	0.01	0.02	0.01
12	973	81	175	104	0.09	0.01	0.02	0.01
13	932	71	167	82	0.08	0.01	0.02	0.01
14	929	65	129	90	0.08	0.01	0.01	0.01
15	922	62	221	134	0.08	0.01	0.02	0.01
16	983	71	175	84	0.09	0.01	0.02	0.01
17	1,038	89	210	85	0.09	0.01	0.02	0.01
18	957	72	82	85	0.08	0.01	0.01	0.01
19	1,349	796	300	586	0.12	0.07	0.03	0.05
20	2,771	2,922	1,326	2,328	0.24	0.26	0.13	0.21
21	4,568	6,033	3,835	4,469	0.40	0.54	0.38	0.41
22	10,275	8,114	9,455	10,234	0.90	0.73	0.95	0.93
23	10,796	9,872	9,647	10,958	0.95	0.89	0.97	1.00

Demand throughout these days (normalized by the peak hour demand) is displayed in Figure 5. It can be seen from this figure that the data from all four days demonstrate a similar trend. The single hour with the highest demand (Peak Hour) occurred between 11 pm and 2 am on all four days. Additionally, demand decreased to almost zero during the daytime hours of 9 am to 6 pm. This trend is consistent with typical irrigation practices of irrigating during the evening when pedestrian activity and evaporation is at a minimum. An approximated irrigation pattern (shown in Figure 5) to be used for the reclaimed water system analysis was developed based on the historical trends from these four days.

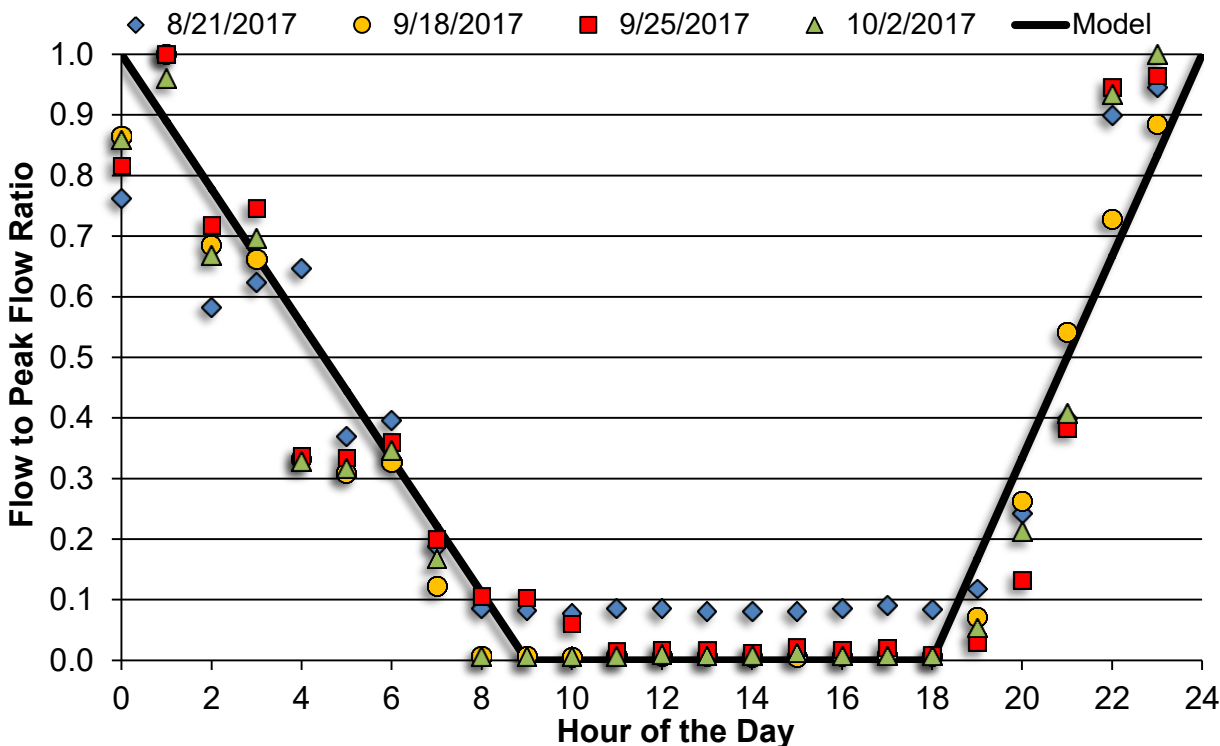


Figure 5: Average Irrigation by Hour on a Peak Day

The Peak Hour Demand and Peak Hour Factor can be calculated from the geometry of the modeled irrigation pattern by determining the percentage of the day that irrigation actually occurs:

$$\text{Peak Hour Factor} = \frac{\text{Peak Hour Demand}}{\text{Peak Day Demand}} = \frac{24 \text{ hours}}{\frac{(1.0 * 9 \text{ hours})}{2} + \frac{(1.0 * 6 \text{ hours})}{2}} = 3.2$$

The Peak Hour Factor of 3.2 calculated from the shape of the approximated irrigation pattern is within the range of historical peaking factors presented in Table 4, where an average of 3.37 was calculated. Peak Hour Factors generally range between 1.0 and 6.0 depending on the entity accomplishing irrigation⁴. A Peak Hour Factor of 3.2 was selected for this evaluation based on the historical data presented in Figure 5. Using the

⁴ Direct, Non-Potable Reuse Guidance Document, Prepared for Region C Water Planning Group, Alan Plummer Associates, Inc. and Freese and Nichols, Inc., April 2009. Table 5-1.



peaking factors defined above, the estimated Peak Hour Demand for the entire existing system is 12.1 MGD⁵. The average demand was calculated to be 0.46 MGD. A summary of the assumed existing reclaimed water demands used in this evaluation is presented in Table 6.

Table 6: Summary of Existing Lakeside Reclaimed Water System Demands

Demand Type	Value
Peak Monthly Demand	1.89 MGD
Month to Day Factor	2.0
Peak Daily Demand	3.79 MGD
Day to Hour Factor	3.2
Peak Hourly Demand	12.1 MGD
Average Demand	0.46 MGD

3.2 ESTIMATED FUTURE DEMAND

The Lakeside Business District has rapidly developed in recent years, and is anticipated to continue growing. The reclaimed water demand could significantly increase in the coming years as more businesses and developments are constructed. Future demands in the Lakeside area were estimated by calculating current peak hour unit demands (gpm/acre) and applying them to areas not yet serviced with dedicated irrigation meters.

Current peak hour unit demands were calculated for each of the simplified zones (agricultural, commercial, residential), acknowledging that land zoned differently may have different irrigation demands. These peak hour unit demands were multiplied by the total area available for future development, by zone, to estimate future irrigation demand.

A few areas in the Lakeside Business District were not included in the future demand calculation because development in these areas is not anticipated. The land south and west of the WWTP was deemed not available for development since it lies within the

⁵ Peak Hour Demand = Peak Day Demand (3.79 MGD) times Peak Hour Factor of 3.2.

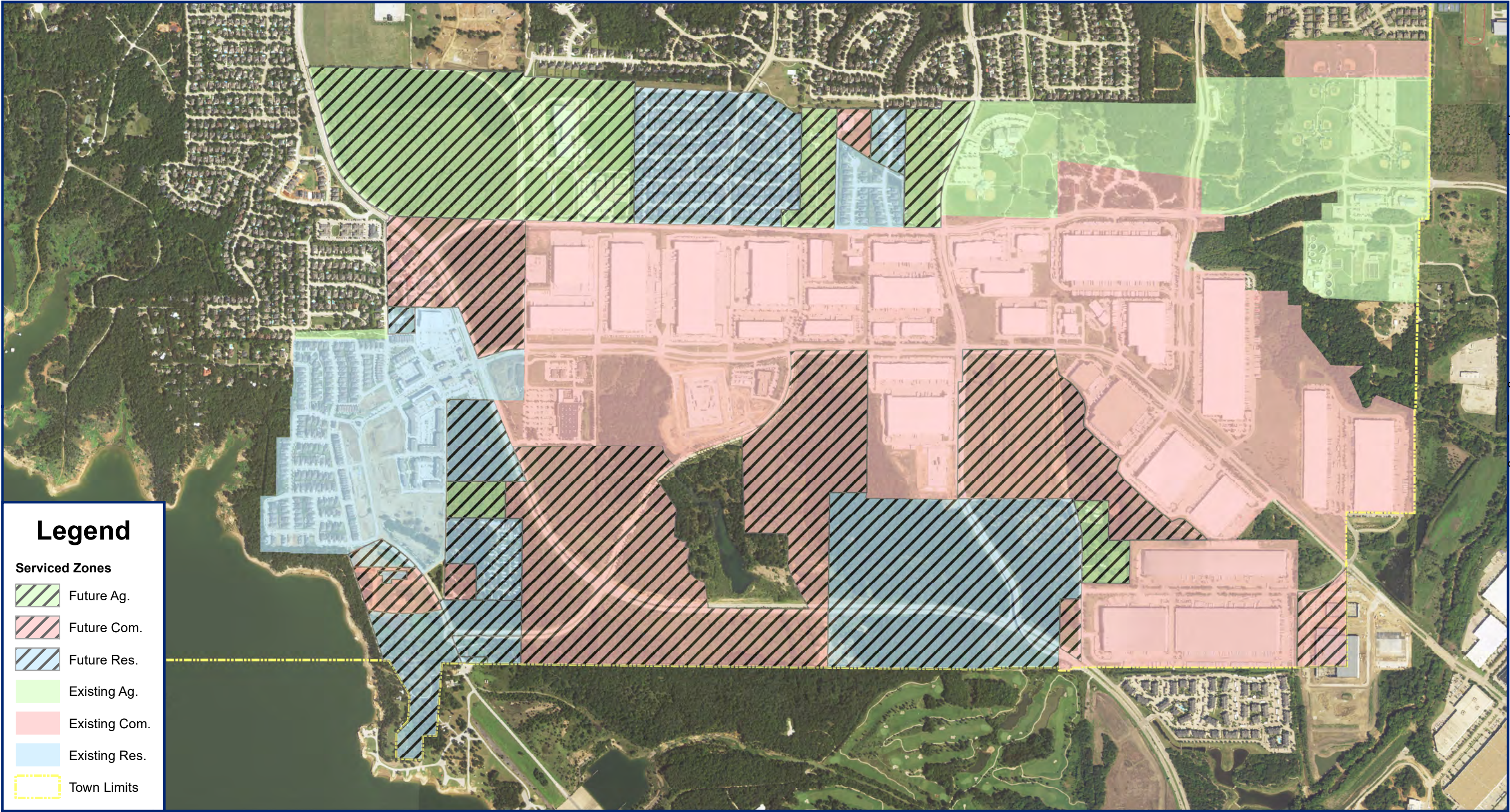


100-year floodplain. Additionally, an on-channel pond exists south of Silveron Boulevard and north of Long Prairie Rd. This pond may be considered “waters of the United States” which would require environmental permitting and mitigation to disturb the area.

Figure 6 displays area already serviced by irrigation meters in the Lakeside Business District along with area available for future service, by zone, and area not available for future service. The Peak Day Demand in the Lakeside Business District is anticipated to increase from 3.79 MGD to 6.56 MGD after the area becomes fully serviced (Table 7). Table 8 provides a detailed summary of existing and future demands.

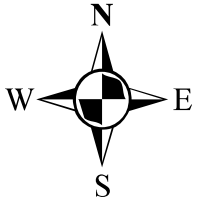
Table 7: Summary of Lakeside Reuse System Existing and Future Demands

Demand Type	Units	Existing	Future	Total
Peak Day Demand	MGD	3.79	2.76	6.56
Peak Hour Demand	MGD	12.1	8.84	21.0
Average Demand	MGD	0.46	0.34	0.80



Legend

- Serviced Zones**
- Future Ag.
 - Future Com.
 - Future Res.
 - Existing Ag.
 - Existing Com.
 - Existing Res.
 - Town Limits



0 0.1 0.2 0.4 0.6 0.8 Miles

DATE: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 6: Existing and Future Irrigation Service Zones



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536

**Table 8: Estimated Future Demand for the Lakeside Business District**

Item No.	Parcel/Zone Type	Units	Ag.	Com.	Res.	Total
[1]	Existing Peak Hour Demand	MGD	0.77	9.7	1.65	12.1
[2]	Area Currently Serviced	acres	194	686	145	1,024
[3]=[1] / [2]	Estimated Peak Hour Unit Demand	gpm/acre	2.76	9.82	7.90	-
[4]	Future Area Available for Service	acres	187	352	278	817
[5]	Area Not Available for Service	acres	37	72	2	111
[6]=[3]x[4]	Additional Future Peak Hour Demand	MGD	0.74	4.98	3.16	8.88
[7]=[1]+[6]	Total Future Peak Hour Demand	MGD	1.51	14.7	4.81	21.0

3.3 IRRIGATION CUSTOMER COMMUNICATION

The five largest existing irrigation users in the Lakeside Business District were contacted to obtain information about their irrigation system and to inform them of the goals of this study. A standard survey was distributed to each of the five customers with specific questions regarding the user's irrigation system. Two of the five users returned the survey.

The survey responses confirm the assumption that irrigators in the Lakeside Business District typically irrigate every other day between 6 pm and 9 am. Selected responses from the two surveys received are summarized in Table 9. The two completed surveys and contact information for the top five irrigation users are provided in Appendix B.

Table 9: Selected Survey Responses

Survey Number	Minimum System Pressure (psi)	Maximum System Pressure (psi)	Irrigation Schedule	Irrigation Window
1	40	100	Every Other Day	10 pm – 5 am
2	-	80	Every Other Day	8 pm – 5 am



4 Reclaimed Water Supply and Required Storage

The Town owns and operates a WWTP, serving the eastern part of the Town, which will supply reclaimed water for the future Lakeside Business District reuse system. The plant has a permitted annual average capacity of 10 MGD and a two-hour peak capacity of 33.3 MGD. Historical effluent flow data collected between 2015 and 2017 were analyzed to determine the amount of reclaimed water currently available. Figure 7 and Table 10 demonstrate that the WWTP produces 5.22 MG of reclaimed water per day on average, and at least 4.43 MG each day 95% of the time. However, the plant uses a non-continuous treatment process (sequencing batch reactor (SBR)) which causes the effluent flow to vary significantly throughout the day depending on the status of the SBR, as seen in Figure 8. The minimum effluent flow during the day represents the limitation for supplying reclaimed water to the distribution system if no storage is constructed. A simplified approximation of diurnal changes in effluent flow throughout the day, discounting the effects of the SBR, is also shown in Figure 8.

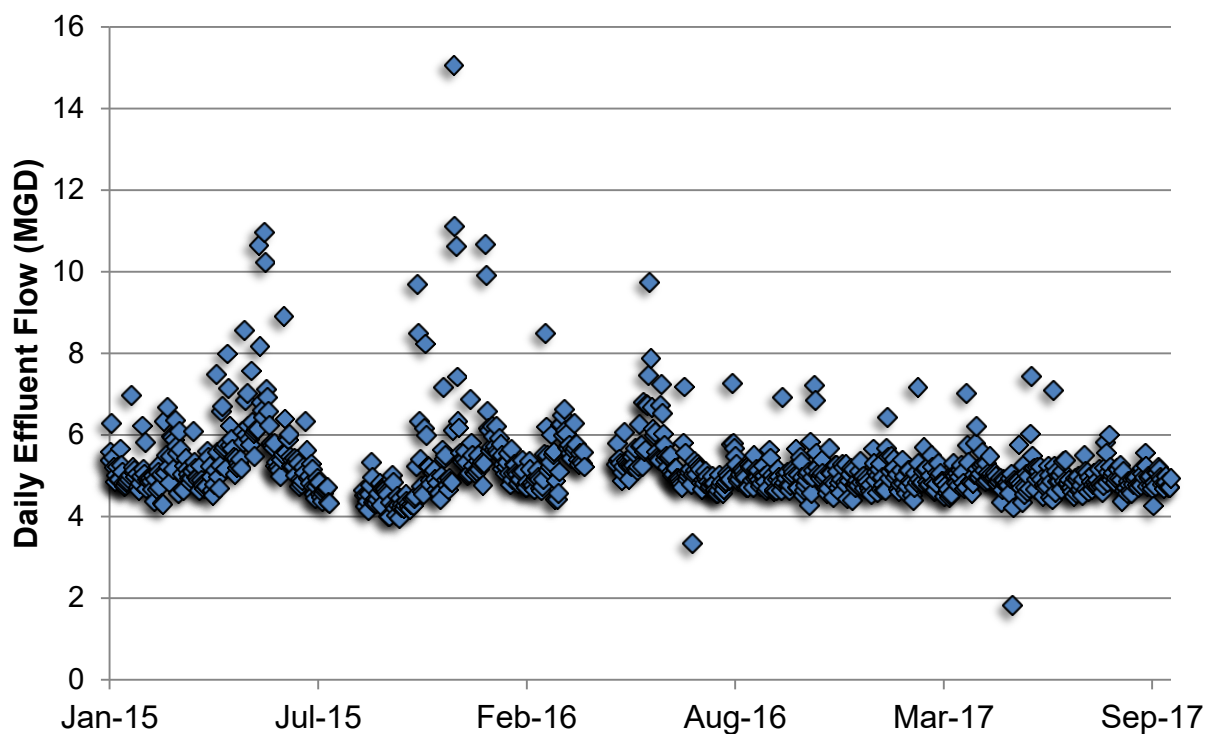
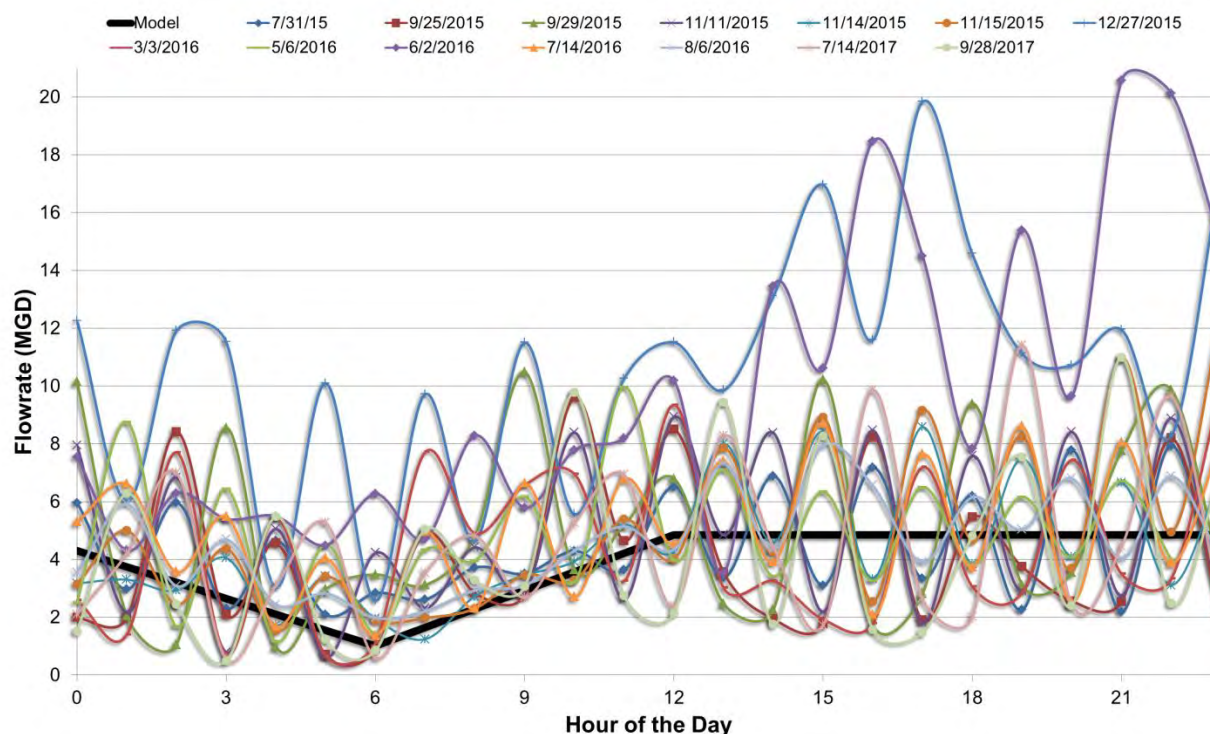


Figure 7: Daily Effluent Flow from Town WWTP

**Table 10: Town WWTP Daily Effluent Flow Summary**

Description	Value ¹ (MGD)
Minimum	1.81
5 th Percentile	4.43
Average	5.22
Maximum	15.1

1. Daily effluent flow data from 1/1/15 to 10/15/17

**Figure 8: Hourly Effluent Flow from Town WWTP**

4.1 REQUIRED RECLAIMED WATER STORAGE

The estimated Peak Day Demand of 3.79 MGD for the existing 106 irrigation meters is well below the amount of water produced by the WWTP on a typical day. In fact, of the 958 days of effluent flow data available, there were only two days where the WWTP produced less than 3.79 MGD of reclaimed water. However, as discussed in Section 3.1, irrigation demand is not consistent throughout the day, but increases to a maximum around midnight and reduces to no demand during the daytime. The historical hourly effluent data displayed in Figure 8 demonstrates that there were few days where hourly



effluent flow was greater than the reclaimed water Peak Hour Demand of 12.1 MGD. Therefore, storage will be required at the WWTP to meet the reclaimed water demand.

The hourly reclaimed water demand pattern approximation was compared against the hourly reclaimed water supply approximation to initially calculate the minimum volume of storage required (Figure 9). It is estimated from this calculation that approximately 2 MG of storage would be required to meet the existing reclaimed water demand on a day where the WWTP produces a Peak Day Demand of at least 3.79 MG in a day, which was achieved on 99.8% of days from historical data. For confirmation, the calculation was repeated using historical hourly flow instead of the approximated effluent diurnal flow. The calculated required storage ranged from 0.25 MG to 2.00 MG (Table 11), confirming the calculation initially performed.

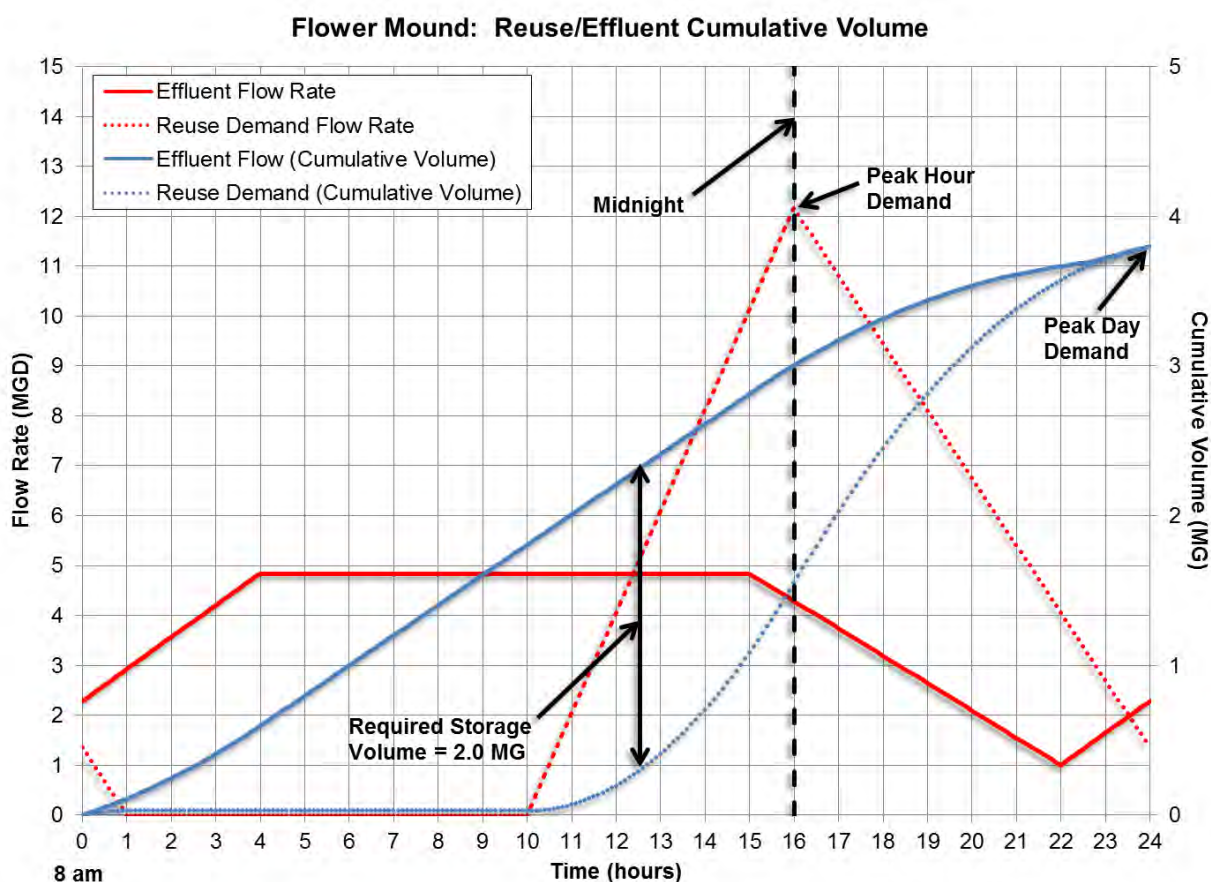


Figure 9: Required Volume of Reclaimed Water Storage

**Table 11: Required Storage using Historical Effluent Flow**

Date	Daily Effluent Flow (MG)	Peak Hour Effluent Flow Rate (MGD)	Minimum Required Storage Volume (MG)
7/31/2015	4.32	7.94	1.71
9/25/2015	4.00	9.62	2.00
9/29/2015	5.00	10.48	1.39
11/11/2015	4.83	8.93	1.62
11/14/2015	4.43	8.58	1.89
11/15/2015	5.00	12.47	1.50
12/27/2015	10.68	19.85	0.25
3/3/2016	4.41	9.98	1.79
5/6/2016	4.88	9.97	1.51
6/2/2016	9.74	20.57	0.74
7/14/2016	5.04	8.71	1.42
8/6/2016	4.57	7.95	1.72
7/14/2017	4.49	11.41	1.78
9/28/2017	4.26	10.99	1.89

It is recommended that the Town construct 2 MG of storage at the WWTP to meet the existing Peak Day Demand of 3.79 MGD and the existing Peak Hour Demand of 12.1 MGD.

The required storage volume is calculated from existing demands only and does not account for future growth in the Lakeside Business District area. As additional users beyond the 106 meters initially identified are connected to the distribution system, it is recommended that the required storage volume be reevaluated. Additional storage may be necessary to accommodate future demand. However, as the Lakeside Business District area grows, wastewater flows to the WWTP will also rise, increasing the supply of reclaimed water and dampening the effect that additional growth will have on storage requirements. Additionally, reclaimed water users could be placed on an irrigation schedule in the future to manage peak demands and reduce storage requirements.



5 Hydraulic Evaluation

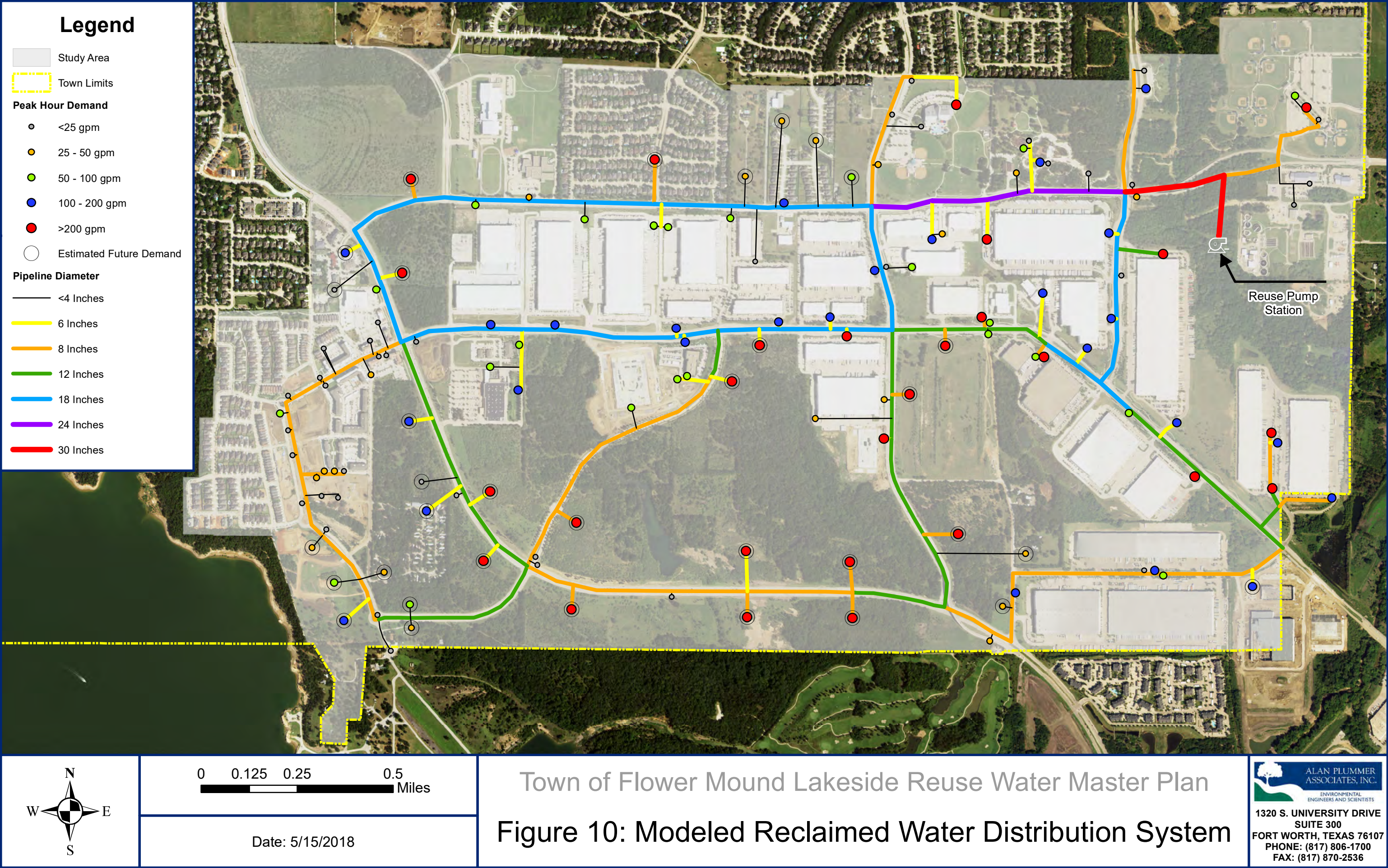
A hydraulic evaluation of the proposed reclaimed water distribution system was performed using the Innovyze InfoWater® hydraulic model. A Peak Day Demand scenario was created as an extended period simulation (EPS) with a duration of 24 hours. This simulation contains the Peak Hour Demand condition occurring at midnight, as indicated by historical data presented in Figure 5. The hydraulic modeling was conducted to appropriately size pipelines in the reclaimed water distribution system and to determine the resulting water pressure throughout the system. A second hydraulic model, using an average demand scenario, was created to evaluate the water age within the system. This second model was created as an EPS with a duration of 168 hours (1 week). Water age can be used as an indicator to evaluate the water quality deterioration within a distribution system. This simulation assumes the same irrigation pattern as the Peak Day Demand scenario but uses the average demand within the system instead of Peak Day Demand, to be conservative. The following sections describe the model development, performance criteria, and model results.

5.1 MODEL DEVELOPMENT

The hydraulic model contains both existing and estimated future demands. The Peak Hour Demand for each of the existing meters was placed in the model and assigned the approximated irrigation pattern displayed in Figure 5. Appendix C contains information for all 106 existing irrigation meters, including their Peak Hour Demand and average consumption. Estimated future demand was also included in the model. Appendix D contains a map showing the location of future demand added to the model and a table specifying the amount of demand per location. A summary of the existing and future Peak Hour and average demands included in the hydraulic model are displayed in Table 12. Standard hydraulic roughness coefficients based on PVC pipe were used in the model. The Peak Hour Demands included in the hydraulic model and the modeled pipeline sizes are presented in Figure 10.

**Table 12: Summary of Modeled Demands**

Description	Value
Existing Peak Hour Demand, MGD	12.1
Additional Future Peak Hour Demand, MGD	8.84
Total Future Peak Hour Demand, MGD	21.0
Existing Average Demand, MGD	0.46
Additional Future Average Demand, MGD	0.34
Total Future Average Demand, MGD	0.80





5.2 PERFORMANCE CRITERIA

A number of model performance criteria were developed in conjunction with the Town (Table 13). These criteria specify the minimum/maximum allowable water pressure at irrigation meters and maximum allowable unit headloss through pipelines in the system.

Table 13: Performance Criteria

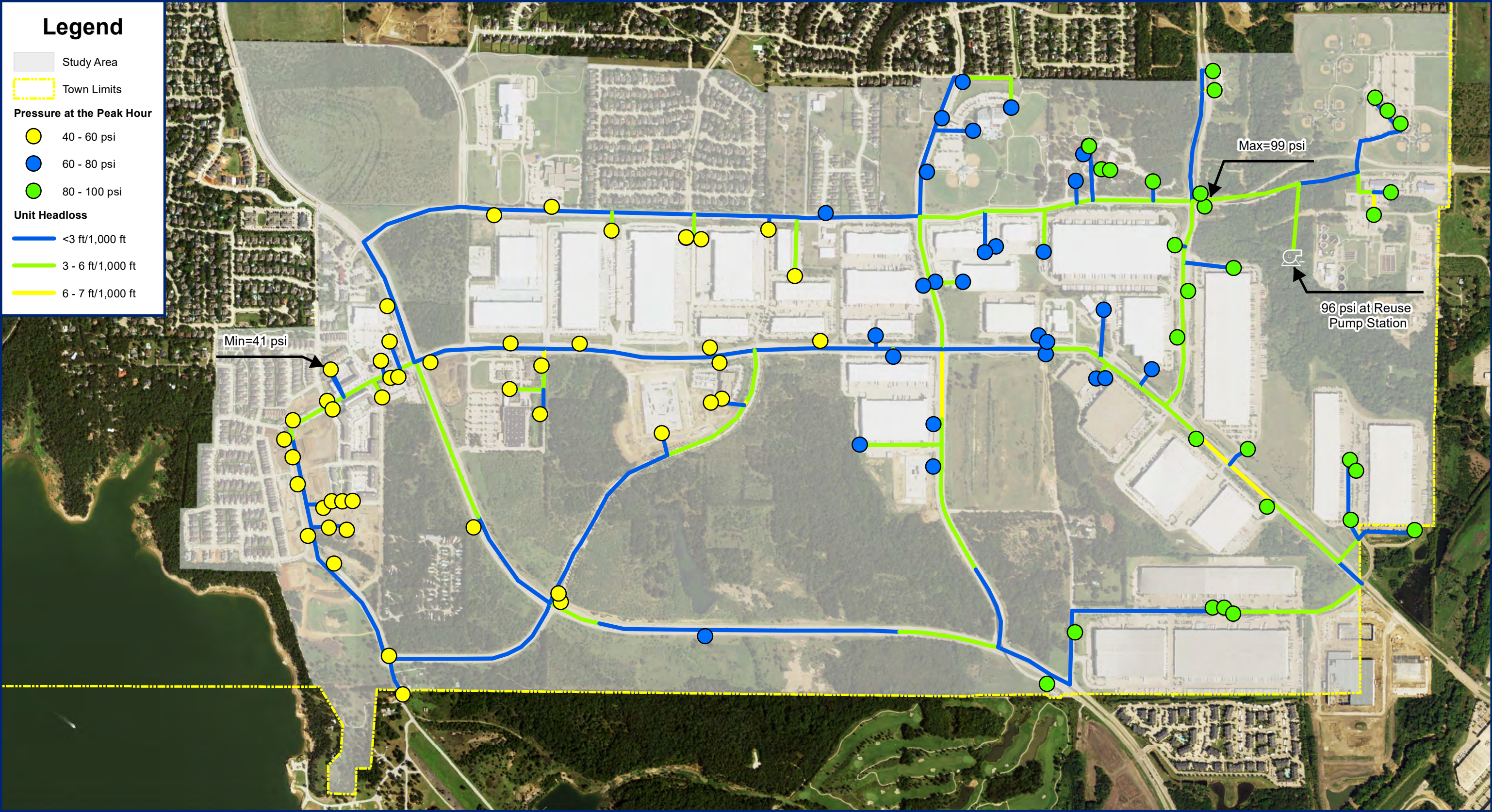
Performance Criteria	Value
Minimum Pressure at Irrigation Meter	40 psi
Maximum Pressure at Irrigation Meter	100 psi
Maximum Unit Headloss	7 feet per 1,000 feet of pipe

5.3 MODEL PRESSURE RESULTS

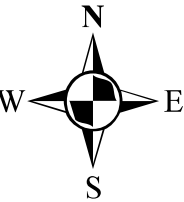
The hydraulic model was used to evaluate the performance of the system based on the criteria defined in Table 13. Meters near the WWTP are only slightly under 100 psi while the meters at the western edge of the Lakeside area are only slightly above 40 psi (Figure 11). These differences are partly due to the variation in elevation throughout the Lakeside Business District. The elevation at the western edge of the Lakeside area is approximately 100 ft higher than the eastern edge, resulting in a pressure reduction of 43 psi due to static headloss alone. The remaining difference in pressure can be attributed to frictional losses in the pipelines. A summary of pipeline length by diameter is shown in Table 14. The combined length of all pipelines is approximately 15 miles.

Table 14: Reclaimed Water System Pipeline Diameters

Diameter (inches)	Total Length (ft)
30	1,861
24	2,949
18	16,888
14	1,250
12	13,184
10	2,181
8	23,108
6	5,872
4	2,806
3	3,663
2	3,661
Total	77,423



Document Path: F:\projects\0523\051-01\2-0 Wrk Prod\2-9 GIS\Figure11 ModelResultsForExistingMeters.mxd



0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 11: Model Results for Existing Meters

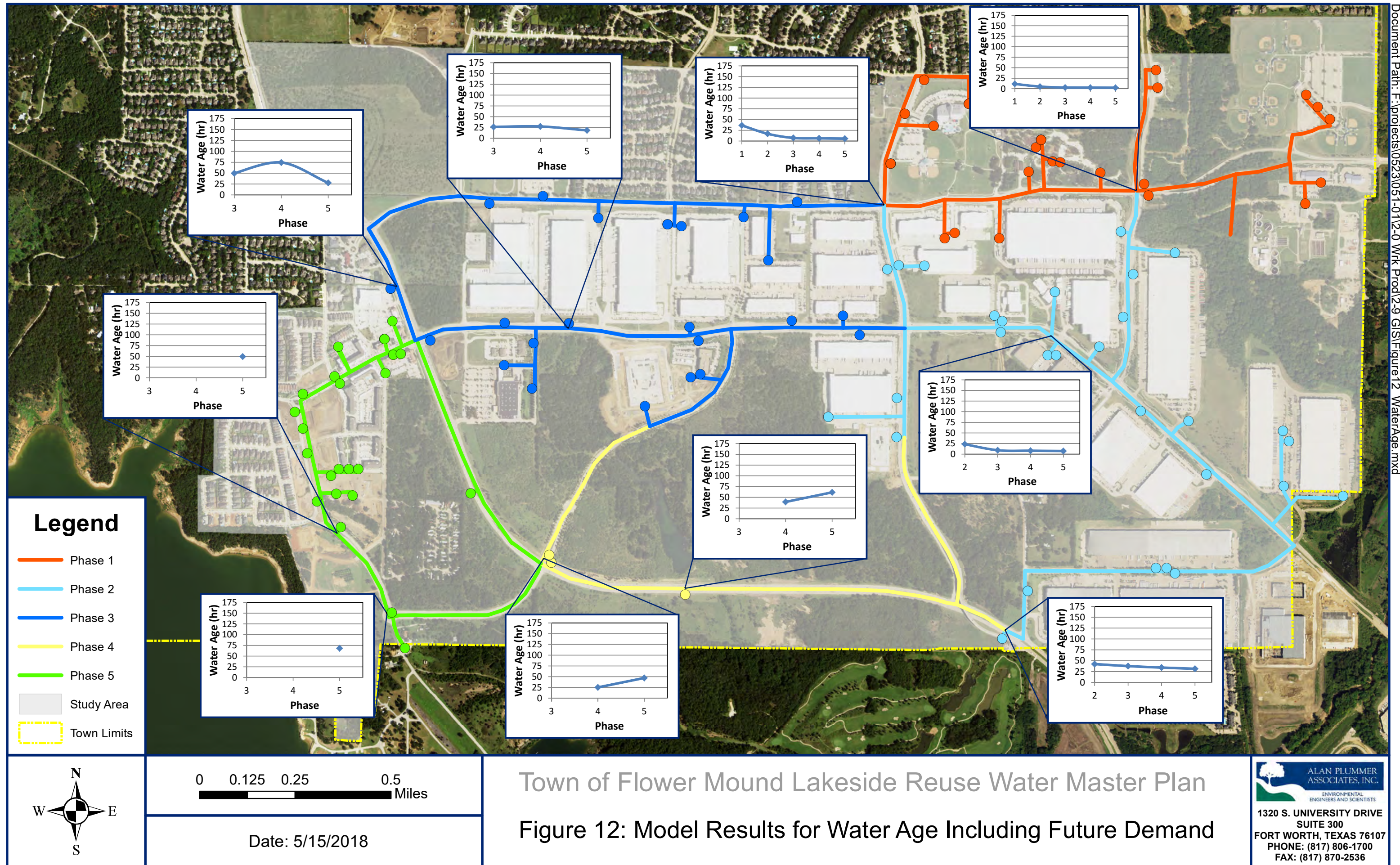
 **ALAN PLUMMER ASSOCIATES, INC.**
ENVIRONMENTAL ENGINEERS AND SCIENTISTS
1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536

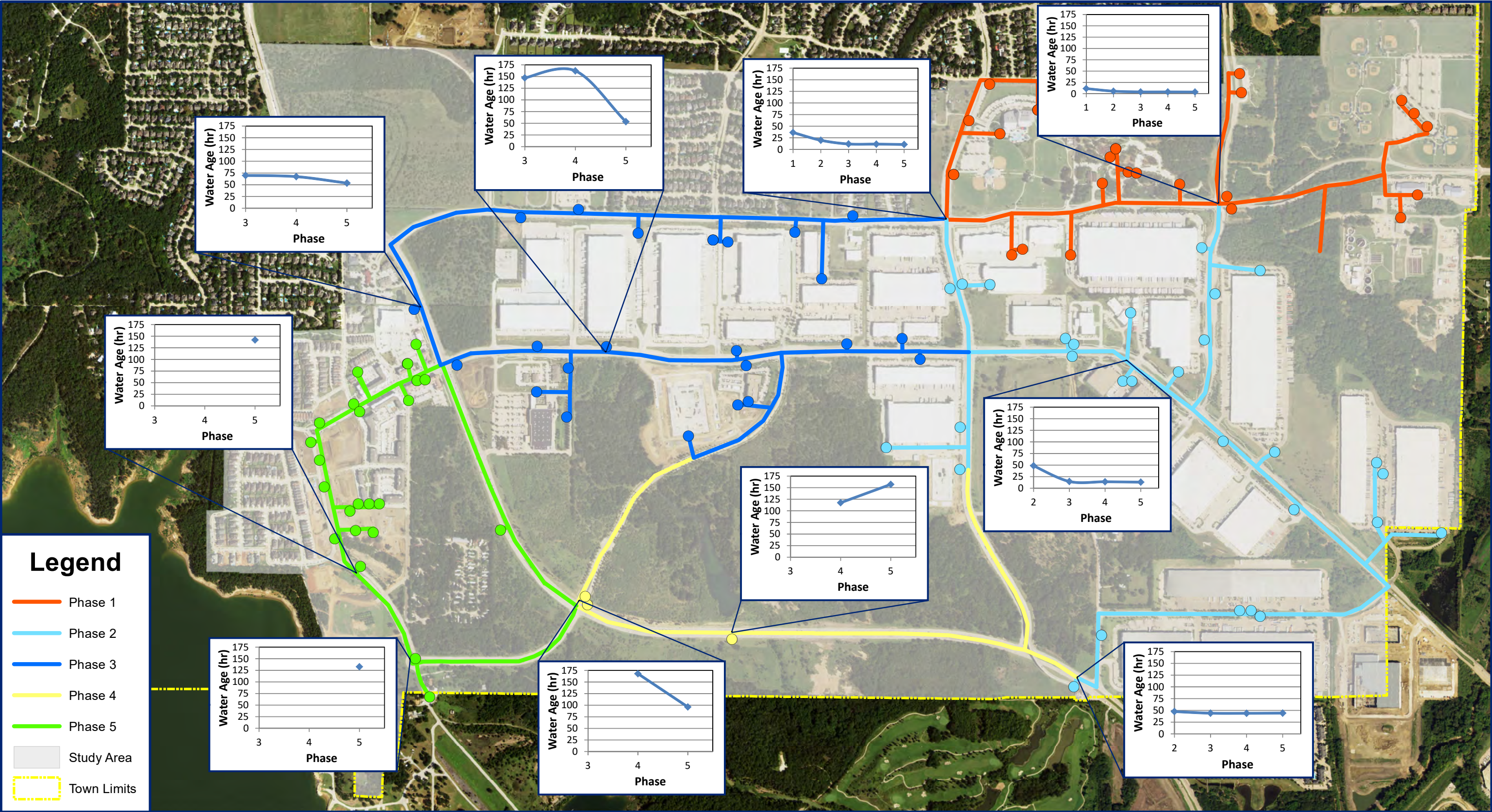


5.4 MODEL WATER AGE RESULTS

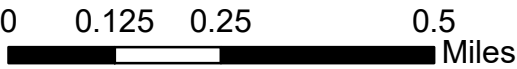
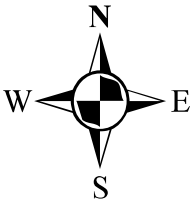
In addition to water pressure on a peak day, the hydraulic model was also used to simulate the anticipated water age in the system on an average day. Water age can be used as an indicator of water quality conditions. Higher water age (older water) may be more susceptible to chlorine residual decay and potential water quality issues. Water age is a helpful metric in reclaimed water systems to identify regions of the network that may be prone to biological growth in the pipeline and residual decay.

The results of the water age model for areas of interest across the distribution system are shown in Figure 12 and Figure 13. Two different simulations were conducted using the water age model, one including estimated future demands (Figure 12) and one that does not include estimated future demands (Figure 13). The model, in both scenarios, indicates that as more phases are brought online the overall water age within the system decreases. As expected, the northeast area of the system has much lower water age than the southwest area due to the distance from the source and because there is less demand in the southwest area. When this area begins to fully develop and customers are added on to the system, the water age significantly decreases. Model results for water age throughout the system during each phase, and in each scenario, are presented in Appendix E. The southwest area is shown to have very high water age if future demand is not included, which again reinforces the recommendation of building Phases 4 and 5 once the area is more developed.





Document Path: F:\projects\0523\051-01\2-0 Wrk Prod\2-9 GIS\Figure13 WaterAge NotFutureDemands.mxd



Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 13: Model Results for Water Age Not Including Future Demand

ALAN PLUMMER
ASSOCIATES, INC.
ENVIRONMENTAL
ENGINEERS AND SCIENTISTS

1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



5.4.1 Flushing Device Considerations

It is recommended that the Town install a flushing device to periodically flush out stagnant water within the system during seasons of low demand. Periods of low irrigation, such as winter months or periods with significant rainfall, can cause water age within the system to increase since little to no irrigation will occur during these times. The flushing device would evacuate water from the reclaimed water system and deposit it into a manhole connected to the Town's sewer collection system.

Possible locations for the flushing device, located in conjunction with sewer lines and manholes, are shown in Appendix E. The locations shown in Appendix E represent the possible location for each respective phase. The flushing device would be relocated after the completion of each phase. The possible locations presented in Appendix E were selected based on the following criteria:

1. Located near a major sewer line (> 12 inches);
2. Located on a major reclaimed water line (> 12 inches); and
3. Located on the fringes of the reclaimed system.

The locations presented in Appendix E are preliminary. The Town should confirm the capacity of the sewer lines prior to selecting a location during each phase to ensure that the collection system would be able to handle the additional volume of water added during a flushing event.



6 Wastewater Treatment Plant Effluent Quality

The Texas Commission on Environmental Quality (TCEQ) has water quality requirements for reclaimed water used for non-potable purposes. In the following sections, effluent quality from the Town's WWTP is compared with regulated reclaimed water quality requirements and improvements to the plant are recommended.

6.1 WASTEWATER TREATMENT PLANT INFORMATION

The Town's WWTP has been in operation since 1972. The WWTP is authorized to discharge treated wastewater into Baker's Branch under the Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0011321001. The original plant was expanded in 1985 to 2 MGD, and in 1993, was expanded from 2 to 5 MGD. The plant consists of a conventional activated sludge treatment process including primary clarifiers (currently decommissioned), aeration basins, and final clarifiers. In 2001, the WWTP was expanded to its current treatment capacity of 10 MGD by the addition of a parallel 5 MGD activated sludge treatment train that uses sequencing batch reactors (SBRs). Secondary effluent from each of the parallel treatment processes is combined and filtered through cloth media filters. Finally, filtered effluent is disinfected using ultraviolet (UV) irradiation prior to discharge at the plant outfall. The Town's TPDES permit limits are presented in Table 15.

Table 15: WWTP TPDES Discharge Requirements

Effluent Characteristic	Units	Daily Average	7-day Average	Daily Max	Single Grab
CBOD ₅	mg/L (lbs/day)	10 (834)	15	25	35
TSS	mg/L (lbs/day)	15 (1251)	25	40	60
NH ₃ -N	mg/L (lbs/day)	2 (167)	5	10	15
<i>E. coli</i>	MPN/100 mL	126	N/A	399	N/A

6.2 RECLAIMED WATER QUALITY REQUIREMENTS

The TCEQ's water quality requirements for reclaimed water are stricter than the Town's TPDES discharge limits. The TCEQ has two categories for reclaimed water depending



on the use of reclaimed water (Type I and Type II), and they each have different limits. Type I reclaimed water can be used for irrigation in areas with the potential for public contact with the water, such as public parks or athletic fields. Type II reclaimed water, on the other hand, can only be used in areas where public contact is unlikely, such as land with restricted access. Therefore, Type I reclaimed water has stricter water quality limits than Type II. Due to the public nature of land to be irrigated in the Lakeside Business District, reclaimed water produced from the Town's WWTP would need to meet the Type I quality limits, which are presented in Table 16. While the Town does not currently provide reclaimed water to any customer, they have already obtained the necessary authorization from the TCEQ to produce and distribute Type I reclaimed water. The Town's reclaimed water authorization is included in Appendix F.

Table 16: Type I Reclaimed Water Quality Limits

Parameter	Unit	Quality Limit ¹
CBOD ₅	mg/L	5
Turbidity	NTU	3
<i>E. coli</i> or Fecal Coliform	CFU/100 mL	20 ²
		75 ³

1. Measured as 30-day average, unless otherwise noted

2. 30-day geometric mean

3. Single grab sample

6.3 EVALUATION OF HISTORICAL WWTP EFFLUENT QUALITY

Effluent water quality data from the Town's WWTP were collected and analyzed to determine if treatment improvements would be required to meet Type I reclaimed water quality limits. Monthly Discharge Monitoring Reports (DMRs) indicate that the average effluent concentrations of five-day carbonaceous biochemical oxygen demand (CBOD₅) and *E. coli* have not exceeded their respective Type I average limits over the past three years (Figure 14). However, the May 2017 DMR had a reported daily maximum *E. coli* concentration of 108 CFU/100 mL. While this single value did not exceed the WWTP's TPDES limit, it would have exceeded the Type I reclaimed water single grab limit for *E. coli*. May 2017 was the only month in the past three years where this single grab sample limit was exceeded (Figure 15).

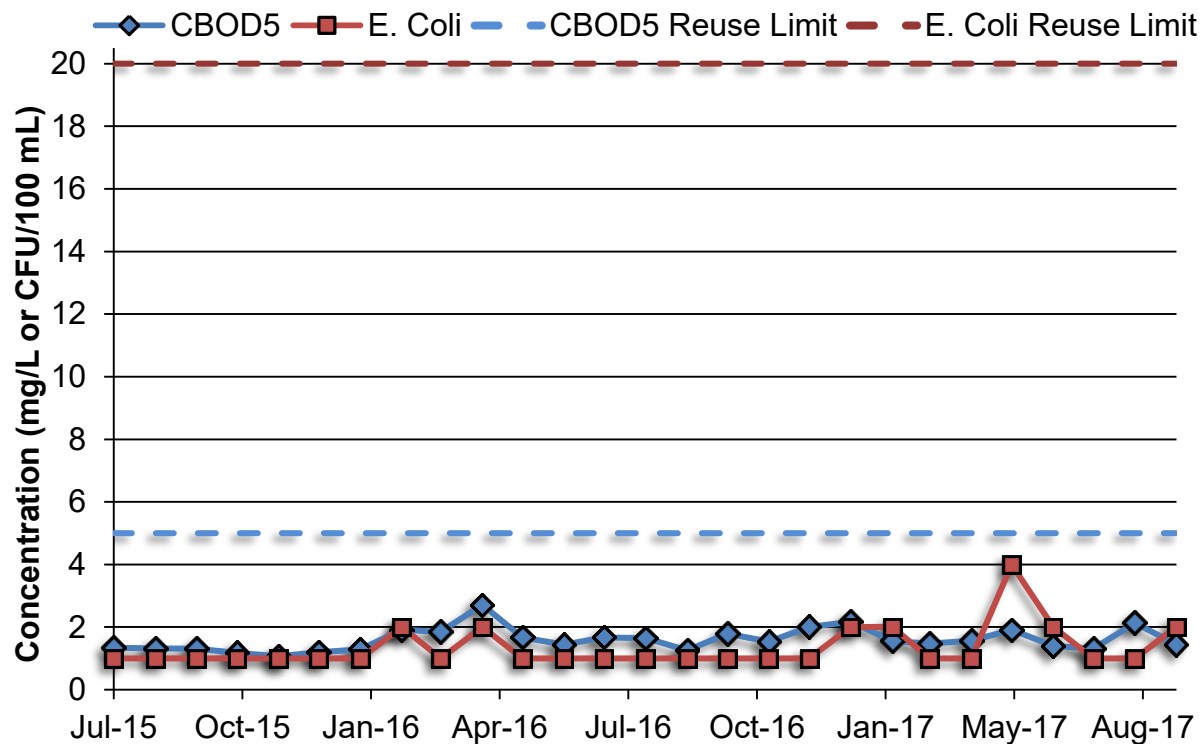


Figure 14: Monthly Average Effluent Quality– CBOD₅ and *E. coli*

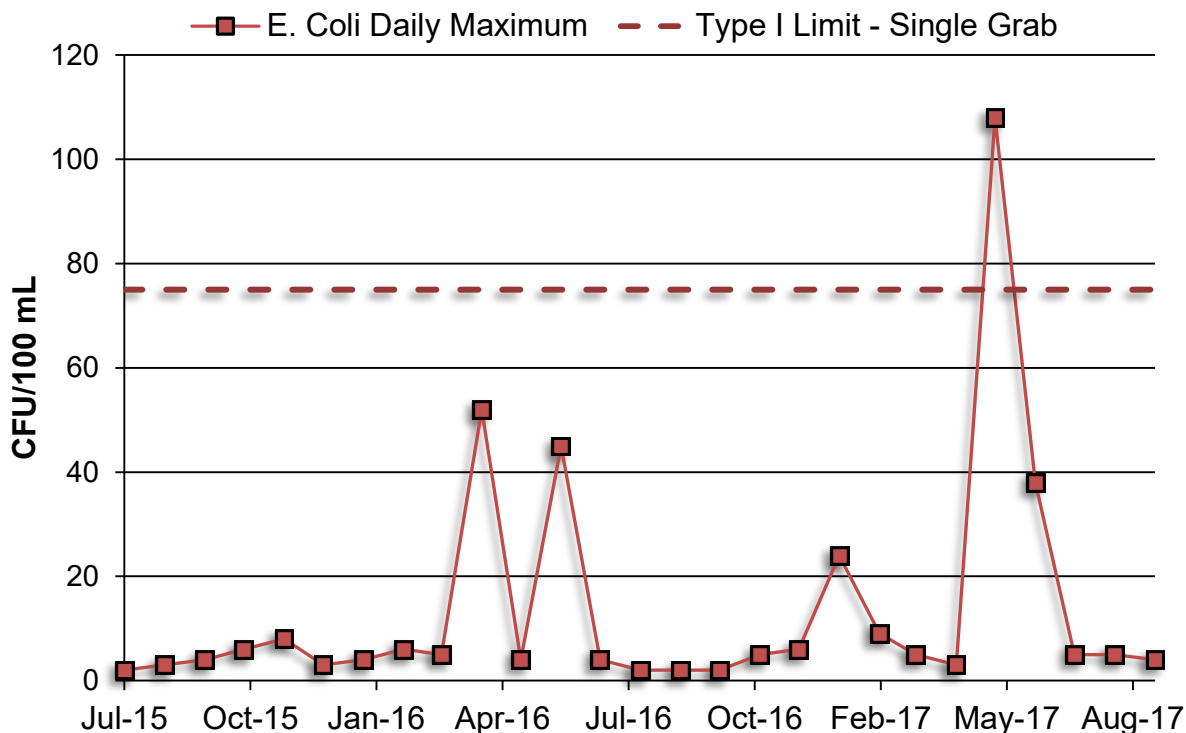


Figure 15: Daily Maximum Effluent Quality – *E. coli*

The TCEQ requires turbidity of Type I reclaimed water to be less than 3 NTU on a 30-day average. However, turbidity data is not routinely collected at the WWTP since it is not included as a requirement in the TPDES permit. The Town began collecting turbidity data in November 2017 to determine if treatment improvements would be required to meet Type I quality requirements. The limited effluent turbidity data collected indicates that the existing WWTP treatment processes are adequate to meet the Type I turbidity limit, and no improvements are anticipated to be necessary (Figure 16).

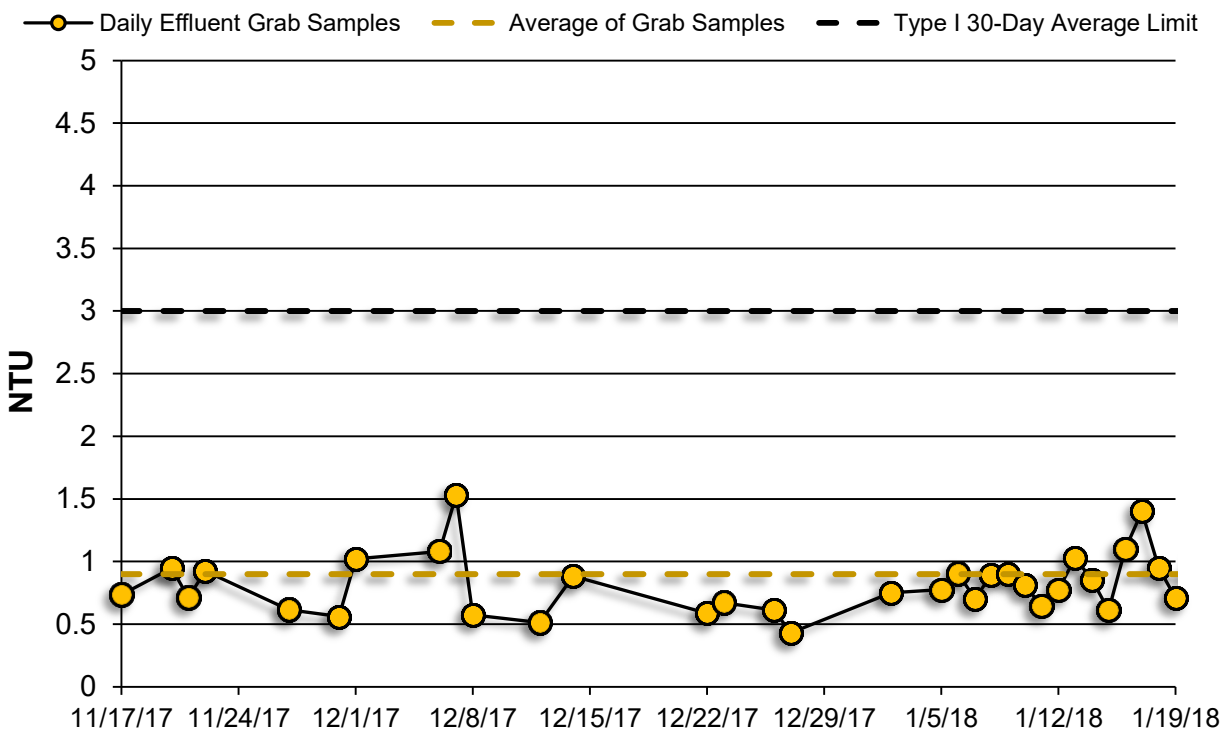
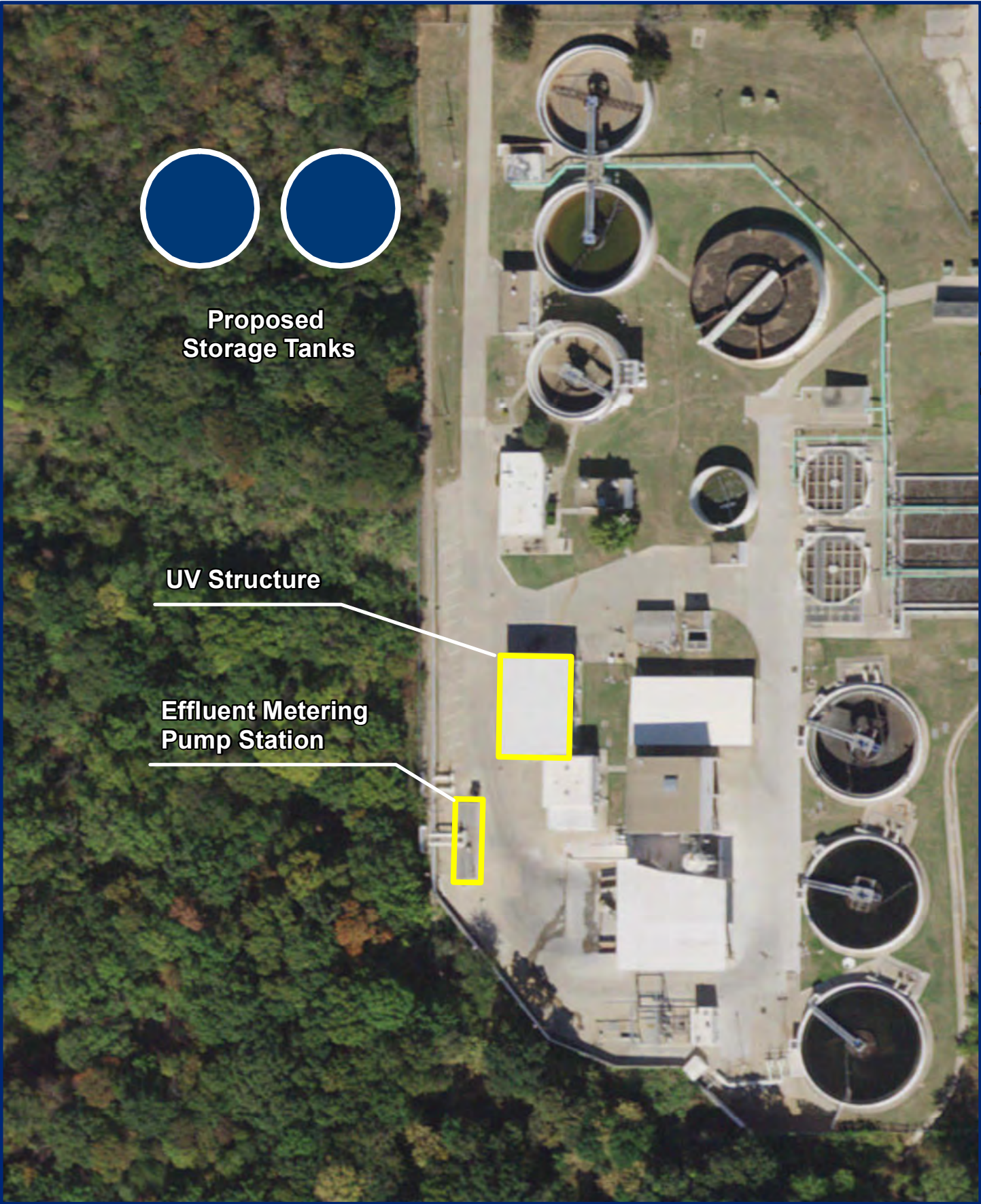


Figure 16: Daily Effluent Quality – Turbidity

6.4 RECOMMENDED WASTEWATER TREATMENT PLANT IMPROVEMENTS

This section summarizes the WWTP improvements recommended to implement water reuse in the Lakeside Business District. The recommended improvements are grouped into two categories: treatment improvements and infrastructure additions. The treatment improvements include a new UV system, and sodium hypochlorite feed system. The infrastructure additions include a Transfer Pump Station, two storage tanks, and a Reuse Pump Station. A site plan and process flow diagram depicting the recommended improvement and infrastructure additions at the WWTP are displayed in Figure 17 and Figure 18, respectively. The Transfer and Reuse Pump Stations are not shown on the site plan. The locations of these pump stations will be determined at a later date.



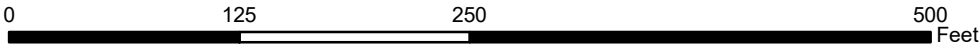
**Proposed
Storage Tanks**

UV Structure

**Effluent Metering
Pump Station**



Town of Flower Mound Lakeside Reuse Water Master Plan
Figure 17: Wastewater Treatment Plant Site Plan



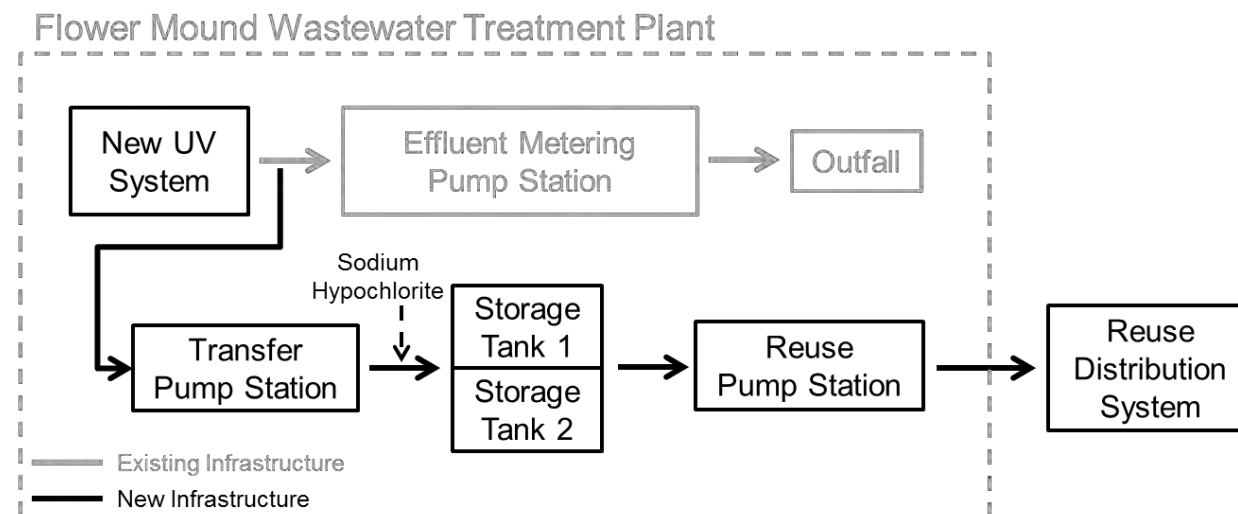


Figure 18: Recommended WWTP Improvements

6.4.1 Treatment Improvements

The effluent quality data summarized in Section 5.3 indicate that the existing treatment processes at the WWTP are adequate to meet the Type I requirements for CBOD₅ and turbidity. However, the *E. coli* data suggest a potential need for improvements to the disinfection process. Replacing the plant's UV disinfection system is recommended for the following reasons:

1. The existing UV disinfection equipment is a Trojan 3000 system, which the manufacturer no longer sells or services. It is recommended that the existing UV system be replaced with a newer system that will be supported by the manufacturer.
2. The single grab sample for *E. coli* collected in May 2017 would have exceeded the Type I maximum limit of 75 CFU/100mL. In general, UV systems used in reuse applications are designed to deliver a higher dose than UV systems used at WWTPs that discharge to a stream or lake due to the stricter quality restrictions placed on reuse water. The existing system is designed to deliver 40 mJ/cm² using the *Bacillus Subtilis* indicator organism. New UV systems are designed using the male-specific-2 (MS2) bacteriophage as the indicator organism, instead, which is more resistant to UV than *Bacillus Subtilis*. In this



application, it is recommended that the replacement UV system be designed to deliver a dose of 40 mJ/cm^2 (using the MS2 bacteriophage) to reclaimed water used for irrigation. However, final effluent discharged to Baker's Branch would not need to be disinfected at this high dosage. A UV dosage of only 30 mJ/cm^2 (MS2 bacteriophage) would be necessary to meet the plant's TPDES discharge requirements. To save capital and operating expenses, the plant's future UV system could be designed to deliver 30 mJ/cm^2 in peak flow conditions, but 40 mJ/cm^2 during normal conditions. Reclaimed water used for irrigation would always be given a dose of 40 mJ/cm^2 .

In addition to a replacement UV system, a chemical feed system is also recommended. While the UV system alone will provide adequate disinfection to meet the Type I bacterial requirements, it will not provide a disinfection residual for the distribution system. Although a disinfection residual is not directly required by TCEQ regulations, it is recommended in order to control biological growth within the distribution system. A sodium hypochlorite disinfection system is recommended and would be added to the reclaimed water prior to entering the storage tanks. The sodium hypochlorite disinfection system would be sized for the reuse flow rate from the plant.

6.4.2 Infrastructure Additions

Beyond treatment improvements, there are a number of infrastructure additions required at the WWTP. These include two storage tanks and two pump stations.

6.4.2.1 Storage Tanks

As explained in Section 4.1, storage will be required at the WWTP to provide water to the reclaimed water system when demands exceed the supply produced by the WWTP. The analysis suggests that a total storage of 2 MG will be required to supply the Peak Day Demand to the existing irrigation meters on a low flow day at the WWTP.

Reclaimed water storage can be provided using either ponds or constructed storage tanks. The Town's reclaimed water authorization (Section II of Appendix F) provides



guidance for the construction of holding ponds designed to store Type I reclaimed water. While open ponds are typically less costly than storage tanks, water stored in ponds is more susceptible to negative changes in water quality. Specifically, the turbidity and *E. coli* limits may be difficult to meet after storage in an open pond. Therefore, covered ground storage tanks are recommended at the WWTP.

It is recommended that two 1 MG covered ground storage tanks be constructed instead of a single 2 MG tank. This will allow the Town to reduce the capital cost burden by delaying construction of the second tank until a later date, since the reclaimed water system will be constructed in phases. Additionally, two parallel tanks will provide more operational flexibility than a single tank since one tank could be taken offline for maintenance without discontinuing service to the reclaimed water system. The tanks will be conceptually located west of the decommissioned primary clarifiers, across the road and will be approximately 92 feet in diameter with a side water depth (SWD) of 20 feet. The existing primary clarifiers at the Town's WWTP have been decommissioned and it may be possible to locate the storage tanks in the same footprint of the clarifiers. However, the Town directed APAI to conceptually locate the tanks west of the primary clarifiers.

The Town may want to consider installing a potable water line to the storage tanks to fill them with potable water in the event that the supply of reclaimed water is disrupted.

6.4.2.2 Pump Station

Two pump stations will be required to deliver reclaimed water to the Lakeside Business District area from the existing WWTP. The first will be a Transfer Pump Station to convey final effluent downstream of the new UV system to the proposed reclaimed water storage tanks. Water will need to be lifted approximately 50 feet from the water surface elevation (WSE) at the UV structure to the WSE at the proposed tanks.

The Reuse Pump Station will be constructed downstream of the storage tanks and will supply reclaimed water to the distribution system. Vertical turbine pumps with variable frequency drives (VFD) are recommended in this application to allow the adjustment of

*Lakeside Reuse Water Master Plan*

flows to more closely match the variable demand. These pumps will need to provide approximately 250 feet of head. A hydropneumatic tank will also be required downstream of the pump station to maintain pressure in the distribution system when the pumps are not operational.



7 Implementation Plan and Costs

A phased implementation plan is proposed for the reuse system to manage capital costs and maximize revenue from the reuse system. The phases were established based on proximity to the WWTP and amount of reclaimed water demand. Meters located close to the WWTP with high demand will be connected to the reuse system in the early phases, and meters located far from the WWTP in undeveloped areas will be connected during later phases. While the Lakeside area is rapidly developing, there remain some areas that may not be developed for a number of years. It would be advantageous to the Town to wait until a significant demand is present in those areas before extending the reuse system to them.

The proposed Lakeside Reuse System Implementation Plan consists of five phases, with each phase expanding the reuse system to a new area of the Lakeside Business District. The proposed implementation plan is shown in Figure 19, and the following sections describe the scope of each phase.

7.1 PRIOR TO PHASE 1

The UV disinfection system at the WWTP requires replacement prior to the first phase of the implementation plan. As noted earlier, the plant's existing UV system is no longer supported by the manufacturer. Additionally, the bacterial requirements are stricter for Type I reclaimed water than the plant's existing TPDES discharge permit, which will require a UV system with a higher disinfection dose.

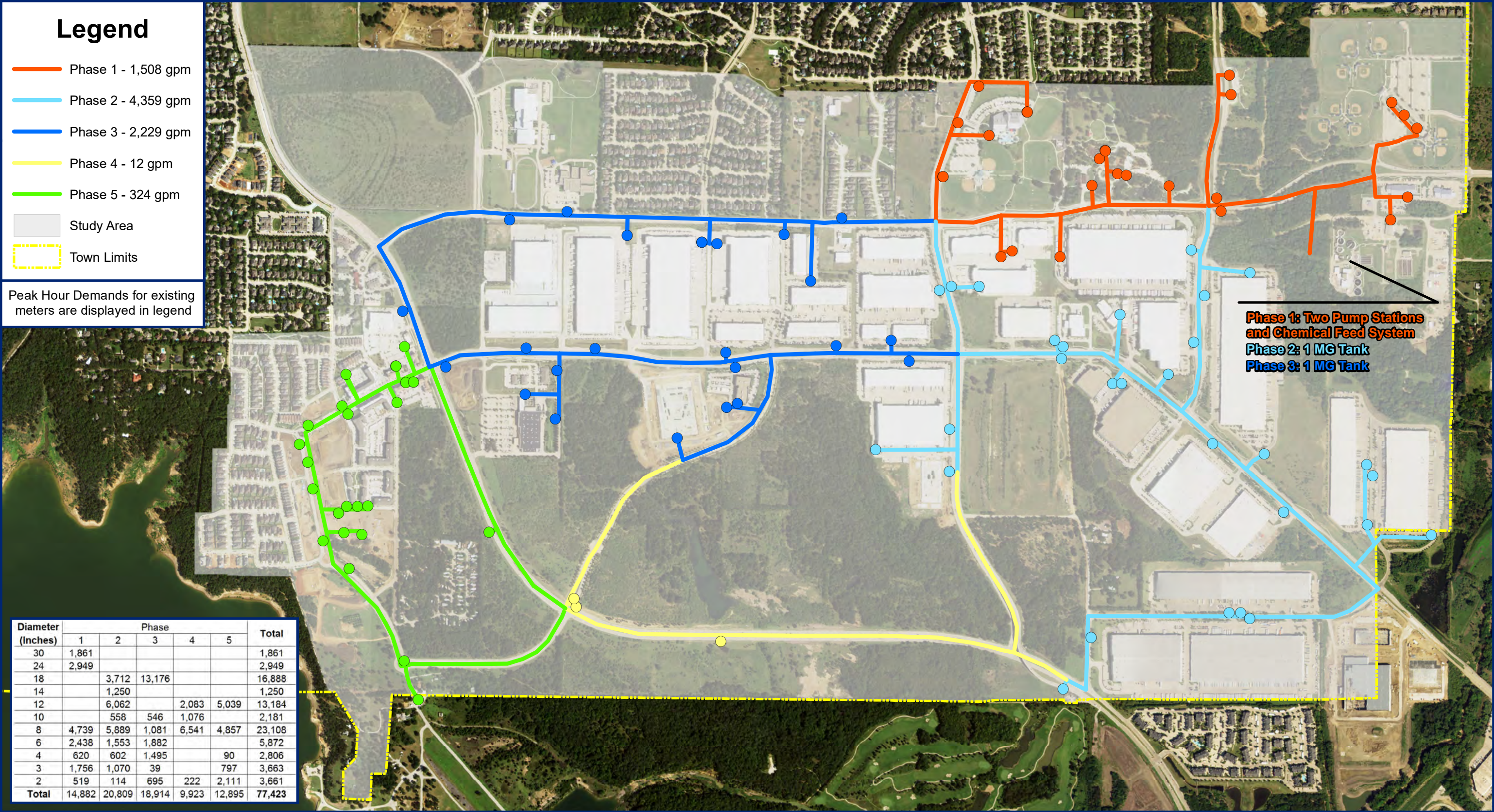
It is also recommended that the Town develop a number of administrative documents and financial evaluations prior to Phase 1 that will be required to provide reclaimed water. These administrative documents and financial evaluations include:

1. Rate Study: A financial evaluation to determine the rate structure for reclaimed water.
2. Standard Contract for Customer: A contract between the Town and each customer will be required. A standard contract can be developed before Phase 1

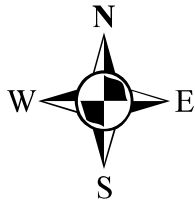


that will be used for all customers who will connect to the reclaimed water system. The contract may include items such as: prohibited uses of reclaimed water, price of reclaimed water, compliance with TCEQ rules and regulations, delivery of reclaimed water, quality of water to be provided, obligation of the parties, etc.

3. Reclaimed Water Policies and Procedures: Policies and procedures typically addressed by a reclaimed water program include technical design specifications, cross-connection control requirements, funding sources and rules, rate structure, site inspection authority, enforcement policies, reclaimed water user manual, and an emergency response plan.
4. Reclaimed Water Operating and Maintenance Plan: A reclaimed water O&M plan is required by the TCEQ in the Town's reclaimed water authorization (Appendix F). The O&M plan must present a labeling and separation plan for the prevention of cross connections, procedures for monitoring reclaimed water, schedules for routine maintenance, and other times.
5. Development of Town Reclaimed Water Ordinance: Several aspects of the reclaimed water program may require modification of existing ordinances or creation of new ordinances. Some possible considerations relative to Town ordinances include: establishment of pricing structure, potential restrictions on the use of potable water for irrigation within the Lakeside Business District area, or requirements for developers to install dual distribution systems for new developments in the Lakeside Business District.
6. Public Outreach Program/Materials: It is recommended that the Town identify a public relations coordinator to develop a public awareness campaign for the reclaimed water system. Possible marketing efforts may include: stakeholder workshops, news media articles, informational website, public television announcements, or public presentations at community events.



Document Path: F:\projects\0523\051-01\2-0 Wrk Prod\2-9 GIS\Figure19 ImplementationPlan.mxd



0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

Figure 19: Lakeside Reuse System Implementation Plan



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



7.2 PHASE 1

Phase 1 will include further upgrades to the WWTP along with approximately 15,000 linear feet (LF) of reclaimed water piping to connect to 26 existing irrigation meters near the WWTP. The 26 meters connected in Phase 1 are primarily Town meters irrigating parks along Spinks Road including Gerault Park, Heritage Park, and Bakersfield Park.

The Peak Hour Demand for the meters connected in Phase 1 is estimated to be low enough to not necessitate the construction of a large storage tank. However, three temporary 10,000 gallon storage tanks are recommended to maintain operational consistency for the pumps between the different phases.

The WWTP improvements constructed in Phase 1 will include the transfer pump station, sodium hypochlorite feed system, temporary polyethylene storage tanks, and the reuse pump station. The pump stations will be constructed with space to accommodate additional pumps required in subsequent phases.

7.3 PHASE 2

The reclaimed water system will be expanded in Phase 2 to include irrigation meters on commercial properties generally located along Lakeside Parkway, east of Gerault Road. Twenty nine existing irrigation meters will be connected in Phase 2 and the Peak Hour Demand will significantly increase from 2.2 MGD in Phase 1 to a cumulative demand of 8.5 MGD. This increase in demand will necessitate additional storage at the WWTP. The temporary storage tanks installed during Phase 1 will be replaced in Phase 2 with the first 1 MG covered storage tank. Additional pumps will be installed at the Transfer and Reuse Pump Stations in Phase 2, and approximately 20,800 LF of pipeline will be added in the distribution system.

7.4 PHASE 3

The third phase will expand the reclaimed water system to additional properties along Lakeside Parkway and Spinks Road between Gerault Road and Long Prairie Road.



Approximately 18,900 LF of pipe will be added to the system to include 24 additional irrigation meters. The expansion of the system will necessitate construction of the second 1 MG covered storage tank at the WWTP and will provide additional pumping capacity at the Reuse Pump Station. It is recommended that the required storage be reevaluated in Phase 3 to account for any changes in reclaimed water demand or supply. The cumulative Peak Hour Demand will increase from 8.5 MGD in Phase 2 to 11.6 MGD.

7.5 PHASE 4

The fourth phase of the implementation plan will extend reclaimed water service along Long Prairie Road between Silveron Boulevard and Gerault Road, and will also connect to three dead ends created in Phases 2 and 3 to form water loops. This area is predominantly undeveloped. There are three existing irrigation meters in this area; together they only increase the Peak Hour Demand by 0.02 MGD. However, significant growth is anticipated in this area. It is recommended that the Town delay implementation of Phase 4 until significant demand is present in the service area to generate revenue following construction of the expansion.

7.6 PHASE 5

Reclaimed water service to the residential properties located along Lakeside Parkway, west of Long Prairie Road will be included in the fifth and final phase. Approximately 12,900 LF of pipeline will be added in this phase to include 24 additional irrigation meters, but the Peak Hour Demand will only increase by approximately 0.5 MGD. This area of the Lakeside Business District has room for development and it is anticipated that future growth will increase the reclaimed water demand in this area. However, it is recommended that the Town delay construction of Phase 5 until the area is further developed and demand has increased.



7.7 PHASE COSTS

Opinions of probable construction cost (OPCC) and annual operating and maintenance costs (O&M) were created for each phase of the implementation plan. The scope and cost of each phase is summarized in Table 17 with demands summarized in Table 18. A preliminary implementation plan schedule has been developed, assuming that the Town will construct one phase each year (Table 19). However, it is recommended that construction of Phases 4 and 5 be delayed until additional reclaimed water demand is present in those areas.

**Table 17: Implementation Plan Summary**

Phase	Improvements at WWTP	LF of Pipe Installed	Existing Irrigation Meters Connected	OPCC (million) ¹	Cumulative Annual O&M ¹
1	Transfer pump station Temporary storage tanks Reuse pump station Sodium hypochlorite feed system	14,900	26	\$9.03	\$42,000
2	1 MG storage tank ²	20,800	29	\$5.45	\$53,000
3	1 MG storage tank ²	18,900	24	\$5.63	\$62,000
4	-	9,900	3	\$1.44	\$64,000
5	-	12,900	24	\$1.80	\$63,000
Total System		77,400	106	\$23.4	-

1. Costs are presented in December 2017 dollars

2. Storage requirements based on estimated demand for existing 106 irrigation meters.

Table 18: Lakeside Reuse System Demand Summary by Phase

Phase	Average Demand (MGD)				Peak Day Demand (MGD)			
	Existing	Future	Total	Cumulative	Existing	Future	Total	Cumulative
1	0.15	0.00	0.15	0.15	0.68	0.00	0.68	0.68
2	0.16	0.04	0.19	0.34	1.96	0.38	2.34	3.02
3	0.13	0.18	0.31	0.65	1.00	0.98	1.98	5.00
4	0.03	0.09	0.11	0.76	0.15	0.98	1.13	6.13
5	0.002	0.04	0.04	0.80	0.01	0.42	0.43	6.56
Total	0.46	0.34	0.80	-	3.79	2.76	6.56	-

**Table 19: Preliminary Implementation Plan Schedule**

Phase	Year of Completion
1	2023
2	2025
3	2027
4	TBD ¹
5	TBD ¹

1. It is recommended that construction of Phases 4 and 5 be delayed until the reclaimed water demand increases in the areas serviced in those phases.



8 Financial Evaluation

The Town requested that a preliminary financial evaluation be conducted for the proposed reclaimed water system. The financial evaluation includes an assessment of the cost to the Town for the overall system based on the construction and operations and maintenance costs shown in Table 17. This financial evaluation is only preliminary and it is recommended that the Town conduct a formal rate study prior to implementing the reclaimed water program. This section begins with a discussion of available financial strategies and funding opportunities and then concludes by presenting the financial evaluation.

8.1 FINANCING STRATEGIES AND FUNDING OPPORTUNITIES

As a consequence of the increased appreciation of the benefits of reclaimed water, there are several funding opportunities that may be available to cities and utilities who seek to implement reuse programs. There are generally three methods of financing these sorts of projects, which are often employed in combination: federal or state grants, federal or state loans, and rate/fee restructuring. In most cases, a combination of federal and state grants and loans fund the up-front capital expenditures. With these sorts of sources, eligibility requirements have to be met, and most of these programs explicitly state that funds cannot be employed for any O&M needs. Water and wastewater revenue bonds can also serve to spread the capital costs over a considerable amount of time. The following sections examine some of the more common federal and state programs used to finance capital costs of reuse projects.

8.2 FEDERAL AND STATE FUNDING PROGRAMS

The Bureau of Reclamation may provide funding through Title XVI water reuse grants, which finance project construction in the 17 western states. The award to construct reclaimed water facilities is often preceded by funding for appropriate studies and research regarding the best reuse program for the area. These monies are given to economically and environmentally sound projects that are not eligible for other types of federal funding.



Texas has developed several programs to facilitate the implementation of reuse projects, many of which are sponsored by the Texas Water Development Board (TWDB). One program available through the TWDB is the State Participation Program, which enables the TWDB to assume a temporary ownership interest in regional projects when the local sponsors are unable to assume debt for the optimally sized facility. While this program has typically been used for water system construction, the TWDB has indicated that it can also be applied to reuse projects if excess capacity is provided in the reuse facilities to meet anticipated future demands. The goal of this program is to allow for the “right sizing” of projects in consideration of future growth. For new water supply projects, the TWDB will fund up to 80% of the costs and for other projects up to 50% of the costs. Only excess capacity can be funded through this program.

Another program available through the TWDB is the State Water Implementation Fund for Texas (SWIFT). Funding through SWIFT is used specifically for recommended water management strategy projects within the most recently adopted state water plan, and only components included in the plan are eligible. Types of eligible projects include conservation and reuse, desalinating groundwater and seawater, building new pipelines, developing reservoirs and well fields, and purchasing water rights. The TWDB offers a variety of financing options through SWIFT including low-interest loans, deferred loans, and board participation to accommodate the diversity of projects included in the state water plan. Funds can be used for planning, design, acquisition, and construction costs, and SWIFT also has the ability to provide multi-year commitments for entities that have project funding needs spanning several years.

Aside from TWDB’s initiatives, the EPA guides the management of another state-managed source of financing, the State Revolving Fund (SRF). Under this program, low-interest loans, 80% of which are federally funded, are offered to entities for use in upgrading existing facilities, installing water-efficient devices, and supporting tax incentives for water conservation programs. Under the broader umbrella of the SRF are the Clean Water SRF and the Drinking Water SRF; the former focuses more on improvements for wastewater projects, while the latter funds are intended for water improvements that address health and compliance issues for existing water utilities.



SRF funds can also be used for development of water conservation plans or the development of water conservation regulations. Water reuse projects can be funded under either the Clean Water SRF or Drinking Water SRF.

8.3 DEBT REPAYMENT AND OPERATIONS AND MAINTENANCE FINANCING

Debt recovery and operations and maintenance costs can be recovered through monthly water or sewer rates and/or through direct charges for the reclaimed water. Many utilities have struggled with how to set volume rates for reclaimed water. Often, in order to insure that the water is marketable, the reclaimed water rate is set as a percentage of the potable water rate. In other instances, elimination of effluent discharges to receiving streams was the goal of the program and reclaimed water was provided to customers at a very minimal cost. However, as experience with reclaimed water rate systems develops, it is becoming recognized that the best method of allocating costs is through a cost-of-service evaluation that is consistent and defensible. Often sharing costs among the wastewater, water and reclaimed water users is justified and can minimize the burden on any one group of users.

8.4 PROJECTED PAYBACK PERIOD FOR LAKESIDE REUSE SYSTEM

The projected payback period for the Lakeside Reuse System project was evaluated based on the project phasing in Table 19. The payback period is defined as the time elapsed between the initial capital investment in the project and the break-even year, i.e. when the total cumulative revenue from the project is equal to the total cumulative expenditures (including debt service and operation and maintenance costs). It should be noted that the estimated payback period is very sensitive to financing assumptions, such as principal forgiveness of the construction cost, interest rate of the loan, and inflation. The assumptions used in this evaluation are shown in Table 20. The Town indicated that an interest rate of 3.5% should be used in the financial analysis.

**Table 20: Financing Assumptions**

Financial Variable	Value
Capital Recovery Period	20 Years
Project Life	50 Years
Annual Interest Rate	3.5%
Annual Inflation Rate	3.0%
Percent of Total Capital Cost Funded by Grant Funding Program	10%
Reclaimed Water Rate (Percentage of Potable Water Rate)	85%

The annual average reuse water demand assumed for this evaluation is shown in Figure 20. A summary of the analysis is shown in Figure 21, and the calculated payback year would occur in 2042. If the Town were to charge 85% of the current 2018 potable rate for reuse water, the top 10 average monthly consumers would have an average bill reduction of 14%.⁶ The overall current customer base would see an average bill reduction of 11%. A more detailed customer analysis is shown in Appendix G. This evaluation does not take into account the loss of revenue caused by replacing potable water sales with reclaimed sales, since reclaimed water will be sold at a lower rate than potable water.

⁶ This calculation assumes that the base charge for a reclaimed water meter remains the same as the base charge for a potable water meter. Only the consumptive use rates for reclaimed water would be reduced.

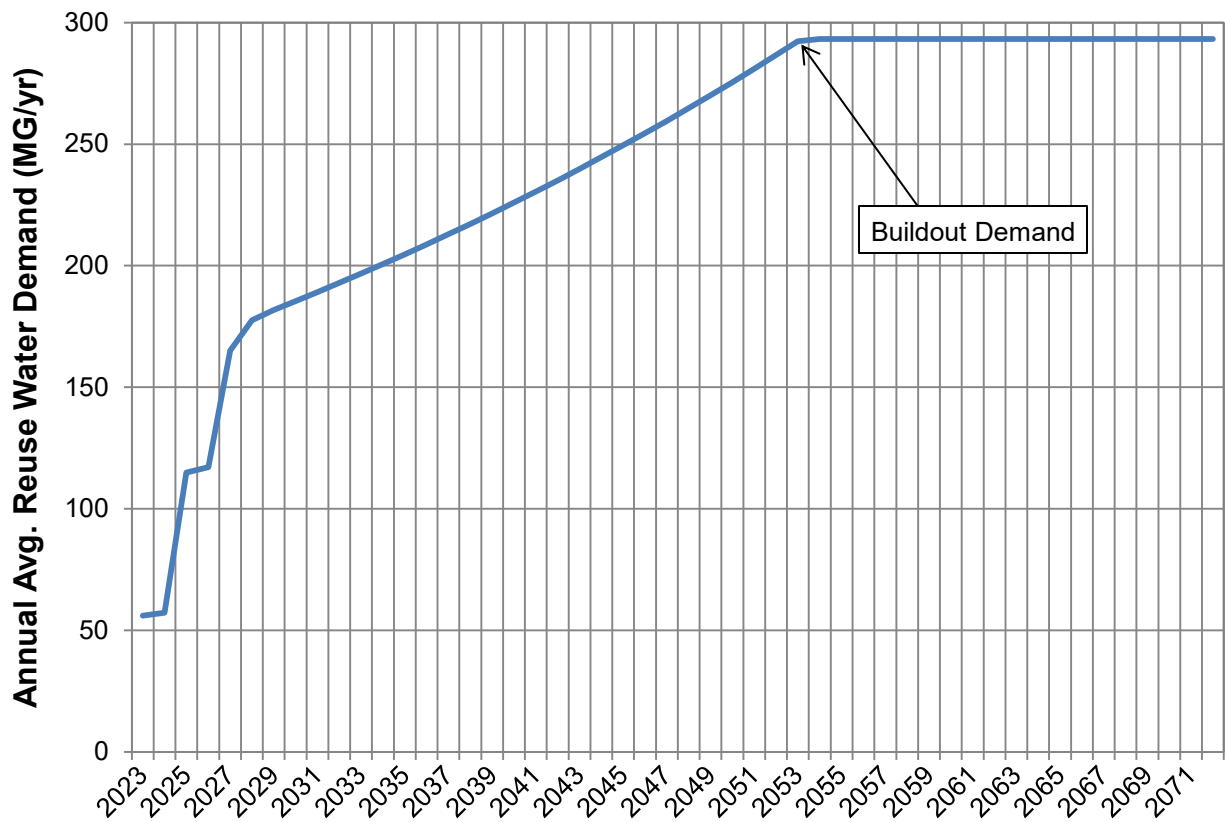


Figure 20: Projected Annual Reuse Water Demand

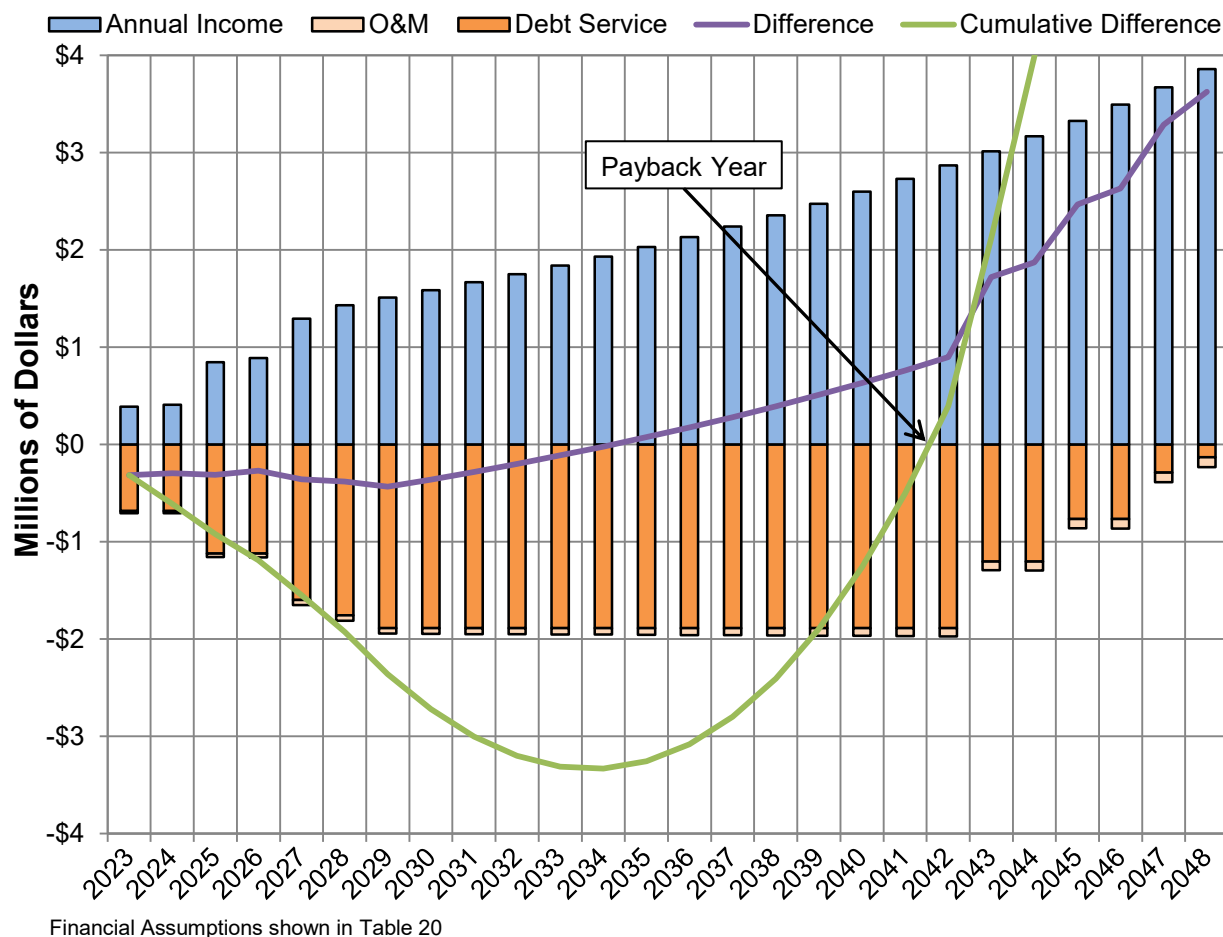


Figure 21: Reclaimed Water System Financial Analysis

8.5 POTENTIAL IMPACT OF FINANCIAL ASSUMPTIONS

A sensitivity analysis was performed to evaluate the impacts that principal forgiveness (from grants, or other entities), annual finance interest rate, and the rate charged for reuse water could have on the payback period for the Town. The payback year of the reuse water system as a whole was computed across a range for all three variables, principal forgiveness, interest rate, and reuse water charge. The principal forgiveness ranged from 0 to 30% of the total capital cost of all phases; the interest rate varied between 1.5%, 2.0%, and 3.5%, and reuse water rate ranged from 75% to 90% of the projected potable water rates charged. The cumulative difference between estimated net costs and net profits were evaluated and the respective payback year was



calculated in each scenario. Best and worst case scenarios along with a few other scenarios are summarized in Figure 22. The payback year ranges from 2025 in the best case scenario to 2047 in the worst case scenario. The rest of the evaluated scenarios used to calculate payback periods are included in Appendix G.

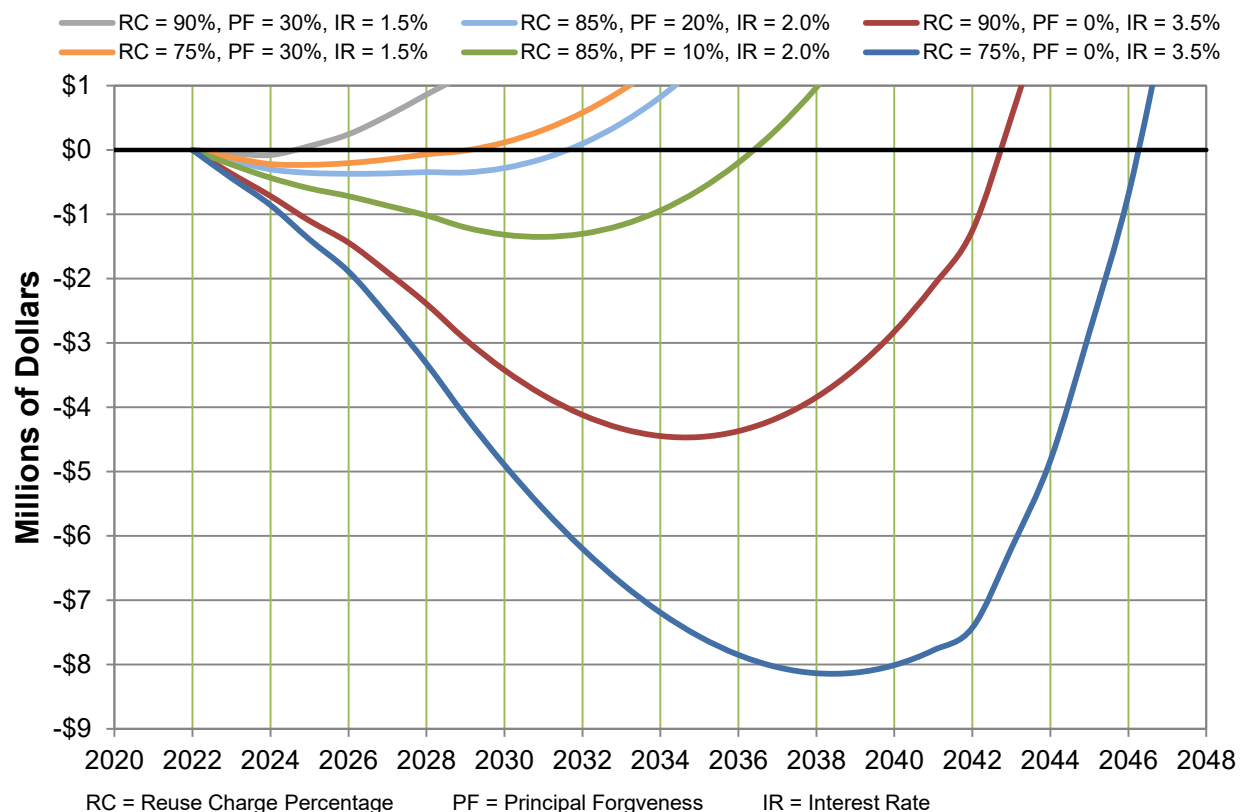


Figure 22: Cumulative Difference for Several Scenarios



9 Summary and Recommendations

As the Town expands and potable water demands increase, irrigating with reclaimed water instead of potable water is an effective conservation strategy available to the Town. The proximity of the Lakeside Business District to the Town's WWTP and its current irrigation demand make reclaimed water irrigation an attractive option for the area. Furthermore, future development in this area is anticipated to increase the amount of potable water used for irrigation.

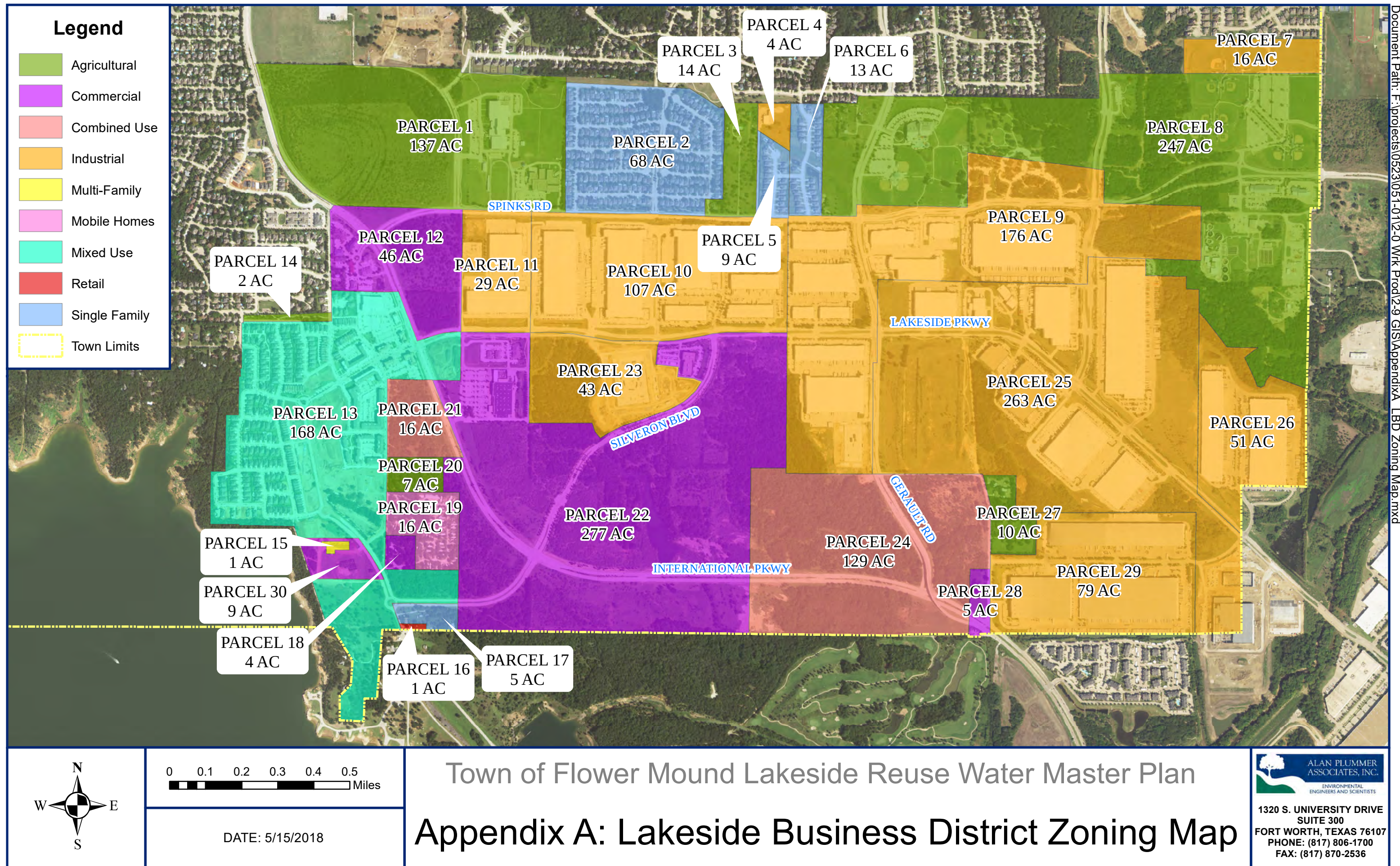
However, significant infrastructure will be required to deliver reclaimed water to irrigation meters throughout the Lakeside Business District including: two pump stations, two storage tanks, a chemical feed system, and an updated UV system at the WWTP, along with approximately 15 miles of pipeline.

A detailed economic evaluation was not included in the scope of this master plan. If the Town desires to continue pursuing development of a reclaimed water system in the Lakeside Business District, it is recommended that a rate study be completed to determine a rate structure for reclaimed water. Additional economic factors should be considered when determining the economic feasibility of constructing this Lakeside Reuse System. For example, state and federal agencies have developed low interest loan programs that are specifically reserved for projects that promote water conservation by using reclaimed water. In some instances, grant funds are also available through these same programs.

The following initial actions are recommended:

- Launch a public outreach program;
- Develop a reclaimed water ordinance;
- Develop a standard contract for reclaimed water customers;
- Perform a rate study for the Lakeside Reuse System;
- Pursue State and Federal funding opportunities; and
- Replace the UV System.

Appendix A – Lakeside Business District Zoning Map

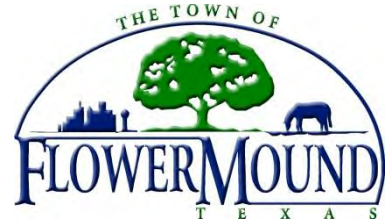


Appendix B – Top Irrigation Users Contact Information and Surveys

Meter Number	Average Monthly Consumption (gallons)	Contact Name	Phone Number	Email Address
86-2995-99	342,244	Riley Hastings	469-763-2403	Riley.Hastings@stryker.com
86-9210-99	314,926	Daniel Davila	512-826-2727	ddavila@exeterpg.com
86-3445-99	287,230	Christy Walters	972-361-6725	Christy.walters@dukerealty.com
86-3260-99	282,990	Greg Simnacher	214-267-0457	greg.simnacher@streamrealty.com
86-5971-99	281,499	Michael Johnson	214-232-8579	-

Reclaimed Water Use Survey

Property Name: Stryker Communications
 Contact Person: Ryley Hastings
 Title: Facilities Lead
 Phone Number: 469-470-4134
 Email Address: Ryley.Hastings@Stryker.com
 Mailing Address: 571 Silveron Blvd Flower Mound, TX 75028
 Meter Number: 86-2995-99



System Information

Does the system have a separate irrigation meter?	☒ Yes ☐ No
Are there any other connections to the irrigation system for uses other than irrigation?	☐ Complex Pools ☐ Drinking Fountains ☐ Decorative Fountains ☐ Hose Bibs ☐ Dumpster Wash Down ☐ Car Washing ☐ Ponds ☐ Water Features ☐ Cooling Towers ☐ Other _____
Do you have any onsite storage or booster pumping for your irrigation system?	☐ Yes ☒ No
How many acres are irrigated?	Approximately 12 Acres
How many zones does this irrigation system have?	77
If known, what is the flow rate (in gpm) needed to serve each zone or alternatively, what is the estimated maximum flow rate required during any irrigation period?	Approximately 68gpm per zone average, 204 max for 3 simultaneous zones.
How many irrigation zones are typically irrigated simultaneously?	3
How many irrigation heads are in each zone?	14 Avg.
What is the approximate flowrate per irrigation head?	4.8 gpm (1.6gpm sprays, 8gpm rotors)
What is the maximum/minimum operating pressure on the system?	40/100
What is the irrigation system water window (E.G. Number of hours to water the property)?	5 During growing season
Is there a preference for the time of day the irrigation system should be operated?	22:00-05:00
How many days per week do you irrigate during peak summer period (in the absence of drought restrictions)?	☒ Monday ☐ Tuesday ☒ Wednesday ☐ Thursday ☒ Friday ☐ Saturday ☒ Sunday
Would you be willing to change the watering schedule if needed?	☒ Yes ☐ No
To convert to reclaimed water, all valve boxes and other exposed piping or controls will need to be designated with purple covers, tape, etc. Identify the number of such exposed elements (E.G. Ten 6" Round, Fifteen 14x19 Rectangular, ETC.).	17x30" Jumbo Valve Box - 19 10" Round Valve Box - 67 6" Round Valve Box - 22
Do you foresee any connection or retrofit issues with your system if you were to convert to reclaimed water? What would they be?	None foreseen

Reclaimed Water Use Survey

Property Name: SCG Lakeside
Commerce Center
1410 Lakeside Pkwy
Flower Mound, Tx



Contact Person: Michael Johnson, Lawnscape of Dallas, LTD.

Title:

Phone Number: 214-232-8579

Email Address:

Mailing Address:

System Information

Does the system have a separate irrigation meter?	☒ Yes ☐ No
Are there any other connections to the irrigation system for uses other than irrigation?	☐ Complex Pools ☐ Drinking Fountains ☐ Decorative Fountains ☐ Hose Bibs ☐ Dumpster Wash Down ☐ Car Washing ☐ Ponds ☐ Water Features ☐ Cooling Towers ☐ Other <u>No</u>
Do you have any onsite storage or booster pumping for your irrigation system?	☐ Yes ☒ No
How many acres are irrigated?	<u>0.1-2</u>
How many zones does this irrigation system have?	<u>37</u>
If known, what is the flow rate (in gpm) needed to serve each zone or alternatively, what is the estimated maximum flow rate required during any irrigation period?	<u>356 GPM - 55 GPM</u>
How many irrigation zones are typically irrigated simultaneously?	<u>1</u>
How many irrigation heads are in each zone?	<u>18-20</u>
What is the approximate flowrate per irrigation head?	<u>Spray 1.5 GPM Rotor 4 GPM</u>
What is the maximum/minimum operating pressure on the system?	<u>80 PSI</u>
What is the irrigation system water window (E.G. Number of hours to water the property)?	<u>16 hr 6:00 PM - 10:00 AM</u>
Is there a preference for the time of day the irrigation system should be operated?	<u>8:00 PM - 5:00 AM</u>
How many days per week do you irrigate during peak summer period (in the absence of drought restrictions)?	☒ Monday ☐ Tuesday ☒ Wednesday ☐ Thursday ☒ Friday ☐ Saturday ☒ Sunday
Would you be willing to change the watering schedule if needed?	☒ Yes ☐ No
To convert to reclaimed water, all valve boxes and other exposed piping or controls will need to be designated with purple covers, tape, etc. Identify the number of such exposed elements (E.G. Ten 6" Round, Fifteen 14x19 Rectangular, ETC.).	<u>40 10" round</u> <u>7 12x15 rectangular</u>
Do you foresee any connection or retrofit issues with your system if you were to convert to reclaimed water? What	

1

- ① Will the spray heads and rotors need to be retrofitted
- ② Will a master valve be required
- ③ Will a whole system filter be needed
- ④ Are there dissolved solids or chemicals that would stain or affect stucco walls or stone facades
- ⑤ Backflow requirements; DCVA or RPZ



Appendix C – Current Irrigation Meters and Demands in the Study Area

Customer	Meter Number	Phase	Use Type ¹	Months of Data	Peak Month	Max Month (gal)	Max Month (gpm)	Peak Hour (gpm)	Average Consumption (gal per month)
TOWN METER	55-0265-99	1	A	5	Aug-17	1,679,000	38.33	245.33	959,900
TOWN METER	55-0055-99	1	A	5	Aug-17	2,039,500	46.56	298.01	886,700
TOWN METER	55-0165-99	1	A	5	Jun-17	687,700	15.70	100.49	527,080
TOWN METER	86-0380-99	1	C	5	Jun-17	685,000	15.64	100.09	450,400
CHI / SILVERON LP ²	86-2995-99	3	C	7	Sep-17	706,500	16.13	103.23	385,025
BIG BOX PROPERTY OWNER ²	86-9210-99	2	C	40	Sep-16	2,844,000	64.93	415.56	314,926
DUKE REALTY LMTD PARTNERSHIP ²	86-3445-99	2	C	111	Nov-13	2,353,500	53.73	343.89	287,230
LIT INDUSTRIAL LIMITED ²	86-3260-99	2	C	80	Jul-08	1,596,000	36.44	233.21	282,990
SCG LAKESIDE COMMERCE CENTER ²	86-5971-99	3	C	120	Sep-07	945,500	21.59	138.16	281,499
THE HOME DEPOT	86-5962-99	3	C	123	Sep-12	1,071,300	24.46	156.54	280,593
LIT HW1 LP	86-6024-99	2	C	103	Sep-07	1,107,500	25.29	161.83	267,978
TOWN METER	86-0326-99	2	C	2	Sep-17	1,078,000	24.61	157.52	267,500
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4026-99	3	C	37	Jul-15	1,533,900	35.02	224.13	258,997
NATIONAL INDUSTRIAL HOLDINGS	86-5215-99	2	C	83	Jul-09	1,177,500	26.88	172.05	246,925
TOWN METER	55-0185-99	1	A	5	Aug-17	729,100	16.65	106.54	246,440
TOWN METER	86-0320-99	2	C	4	May-17	597,500	13.64	87.31	242,500
STACY FAMILIES ENTERPRISES	86-6040-99	2	C	67	Aug-09	1,346,500	30.74	196.75	231,533
CHI / SILVERON LP	86-2990-99	3	C	9	May-17	429,800	9.81	62.80	231,211
LMEG WIRELESS LLC	86-2890-99	2	C	10	Apr-17	1,391,000	31.76	203.25	230,960
MI WINDOWS AND DOORS	86-9870-99	3	C	29	Jun-16	596,100	13.61	87.10	229,340
KOHLER CO	86-3470-99	1	C	101	Aug-07	1,739,000	39.70	254.10	222,077
WAYFAIR LLC	86-9880-99	3	C	18	Jul-16	1,052,500	24.03	153.79	221,124
TOWN METER	55-0085-99	1	A	5	Jun-17	443,000	10.11	64.73	208,920
SCG LAKESIDE COMMERCE CENTER	86-4260-99	3	C	102	May-09	757,500	17.29	110.68	200,576
EASTGROUP PROPERTIES	86-9920-99	3	R	25	Oct-15	774,200	17.68	113.13	195,496
TOWN METER	55-0195-99	1	A	4	Jul-17	355,300	8.11	51.92	194,740
IPT LAKESIDE CORPORATE CENTER	86-9220-99	2	C	112	Aug-15	806,500	18.41	117.84	192,540
IPT LAKESIDE CORPORATE CENTER	86-9240-99	3	C	110	Jul-13	815,500	18.62	119.16	189,992
BEST BUY STORES LP	86-6033-99	2	C	108	Sep-14	684,000	15.62	99.95	184,385
SPEARS MANUFACTURING	86-3855-99	2	C	102	Feb-11	2,519,500	57.52	368.15	184,188
BIG BOX PROPERTY OWNER	86-4116-99	2	C	34	Aug-15	617,900	14.11	90.29	180,805
TOWN METER	55-0285-99	1	A	5	Sep-17	264,000	6.03	38.58	179,300
KOHLER CO	86-3505-99	2	C	90	Aug-15	976,000	22.28	142.61	178,883
AZURE LAKESIDE	86-0945-99	4	R	24	Jun-16	563,610	12.87	82.35	169,383
WIFPIR PROPERTIES LLC	86-8860-99	3	C	98	Sep-14	887,500	20.26	129.68	164,847
HEAT AND CONTROL INC	86-3830-99	2	C	116	Jul-13	871,800	19.90	127.39	160,305
MI WINDOWS AND DOORS	86-9865-99	3	C	28	Jul-15	687,500	15.70	100.46	154,287
DUKE REALTY LMTD PARTNERSHIP	86-3455-99	2	C	103	Nov-13	990,500	22.61	144.73	153,472
EASTGROUP PROPERTIES	86-9900-99	2	C	25	Sep-16	495,500	11.31	72.40	151,472

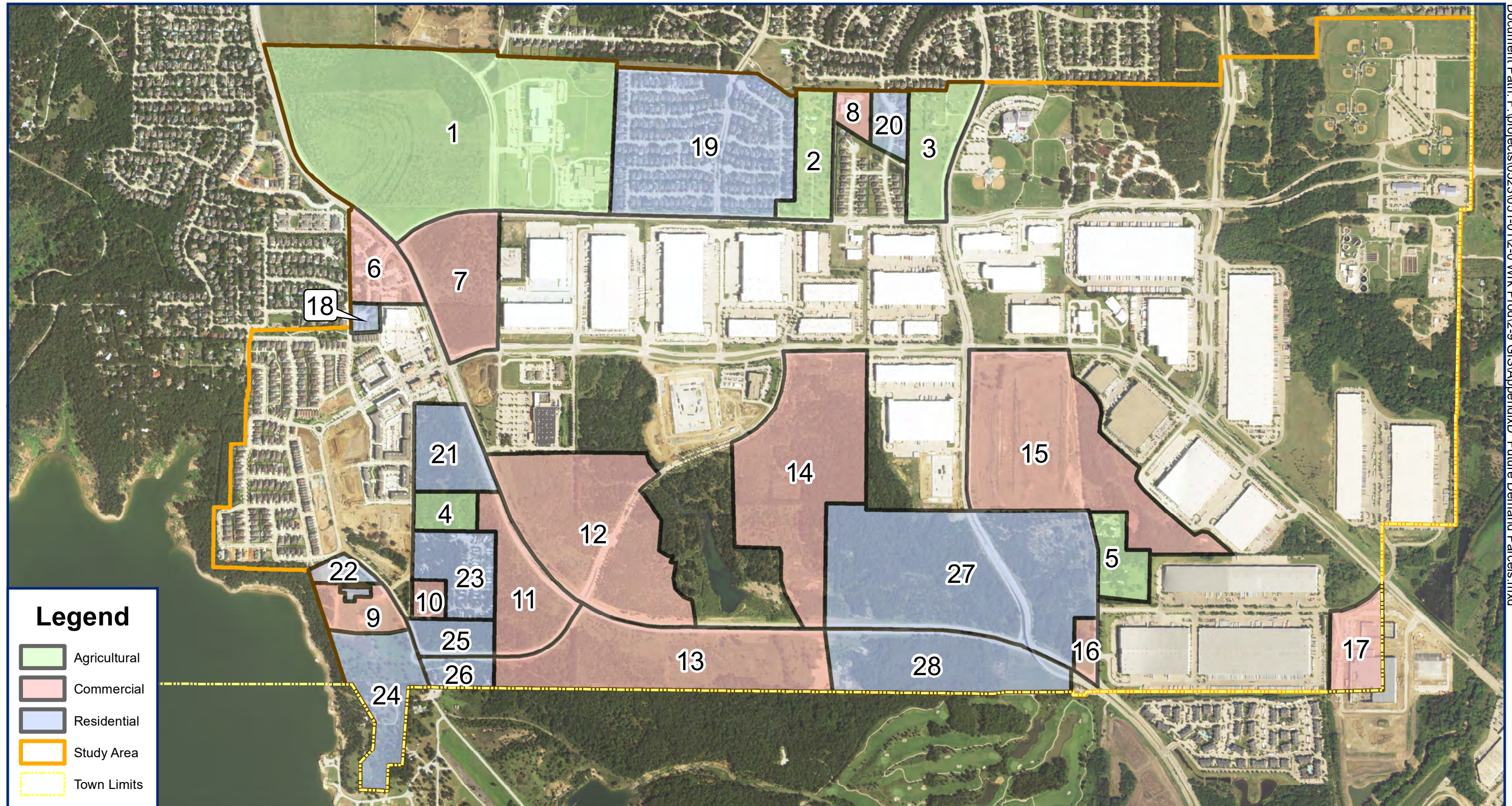
Customer	Meter Number	Phase	Use Type ¹	Months of Data	Peak Month	Max Month (gal)	Max Month (gpm)	Peak Hour (gpm)	Average Consumption (gal per month)
IPT LAKESIDE CORPORATE CENTER	86-5265-99	3	C	42	Oct-15	545,300	12.45	79.68	143,542
LISANTI FOODS	86-9890-99	3	C	19	Mar-16	424,500	9.69	62.03	132,476
COMMUNICATIONS TEST DESIGN INC	86-9205-99	2	C	80	Sep-13	2,870,500	65.54	419.43	132,229
LIT INDUSTRIAL LIMITED	86-3285-99	2	C	96	Jun-08	825,000	18.84	120.55	131,404
MORTGAGE FINANCIAL SERVICES	86-8825-99	3	C	92	May-11	476,500	10.88	69.63	130,964
TOWN METER	55-0365-99	1	A	4	Aug-17	214,000	4.89	31.27	130,760
TOWN METER	86-0390-99	2	C	5	Jul-17	187,000	4.27	27.32	128,400
IPT LAKESIDE CORPORATE CENTER	86-5230-99	3	C	47	Aug-13	633,100	14.45	92.51	128,125
WIFPIR PROPERTIES LLC	86-8855-99	3	C	95	Aug-09	429,000	9.79	62.68	120,187
TOWN METER	55-0245-99	1	A	5	Jun-17	190,500	4.35	27.84	120,000
MORTGAGE FINANCIAL SERVICES	86-4705-99	3	C	78	Aug-11	570,500	13.03	83.36	113,193
IPT LAKESIDE CORPORATE CENTER	86-5270-99	3	C	39	Oct-15	551,300	12.59	80.56	113,113
LIT INDUSTRIAL LIMITED	86-3290-99	2	C	94	Jun-08	811,900	18.54	118.63	110,442
LIT INDUSTRIAL LIMITED	86-3270-99	2	C	98	Jun-08	2,175,900	49.68	317.94	105,934
AZURE LAKESIDE	86-3515-99	4	R	34	Aug-15	238,370	5.44	34.83	102,419
EASTGROUP PROPERTIES	86-9910-99	1	C	25	Oct-15	261,600	5.97	38.22	102,184
TOWN METER	55-0215-99	1	A	5	Jul-17	151,100	3.45	22.08	95,700
GREYSTAR DEV	86-3391-99	4	R	1	Sep-17	182,930	4.18	26.73	91,465
CCA	86-5145-99	2	C	49	Sep-13	536,600	12.25	78.41	90,411
MOVIE HOUSE & EATERY	86-3590-99	3	R	25	Sep-15	670,200	15.30	97.93	82,624
TOWN METER	55-0105-99	1	A	5	Jun-17	107,000	2.44	15.63	77,700
TOWN METER	55-0135-99	1	A	5	Jun-17	135,000	3.08	19.73	75,900
TOWN METER	55-0315-99	1	A	5	Aug-17	118,300	2.70	17.29	74,520
TITAN CORRUGATED INC	86-9195-99	2	C	94	Oct-07	417,000	9.52	60.93	72,027
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4042-99	2	C	35	Aug-15	223,600	5.11	32.67	69,022
AZURE LAKESIDE	86-3566-99	4	R	27	Sep-15	260,840	5.96	38.11	68,085
TOWN METER	55-0225-99	1	A	4	Aug-17	125,900	2.87	18.40	67,160
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4041-99	2	C	35	Dec-14	265,700	6.07	38.82	66,189
TOWN METER	86-0430-99	5	C	5	Jul-17	83,500	1.91	12.20	63,200
SCG LAKESIDE COMMERCE CENTER	86-4270-99	3	C	104	May-12	396,500	9.05	57.94	56,408
AZURE LAKESIDE	86-3520-99	4	R	34	Aug-17	128,040	2.92	18.71	47,556
AZURE LAKESIDE	86-0940-99	4	R	23	Apr-16	187,190	4.27	27.35	45,386
TOWN METER	86-0385-99	2	C	5	Jul-17	65,030	1.48	9.50	42,508
GREYSTAR DEV	86-0970-99	4	R	22	Apr-16	138,580	3.16	20.25	39,614
TOWN METER	55-0345-99	1	A	2	Sep-17	158,300	3.61	23.13	37,580
TOWN METER	86-0631-99	4	R	5	Aug-17	67,640	1.54	9.88	28,546
ONCOR ELECTRIC DELIVERY	86-3915-99	3	A	66	Sep-08	204,000	4.66	29.81	26,967
LAKESIDE DFW RETAIL	86-3186-99	4	R	16	Jul-16	37,670	0.86	5.50	24,747
AZURE LAKESIDE	86-3573-99	4	R	28	Aug-15	130,740	2.98	19.10	23,948

Customer	Meter Number	Phase	Use Type ¹	Months of Data	Peak Month	Max Month (gal)	Max Month (gpm)	Peak Hour (gpm)	Average Consumption (gal per month)
TOWN METER	86-0570-99	4	R	5	May-17	28,500	0.65	4.16	23,000
TOWN METER	86-0655-99	4	R	5	Aug-17	32,710	0.75	4.78	18,526
AZURE LAKESIDE	86-3574-99	4	R	24	Aug-15	78,580	1.79	11.48	17,689
TOWN METER	86-0410-99	4	C	5	Sep-17	17,500	0.40	2.56	15,900
GREYSTAR DEV	86-5480-99	4	R	2	Sep-17	28,290	0.65	4.13	15,030
AZURE LAKESIDE	86-3246-99	4	R	30	Sep-17	53,710	1.23	7.85	13,986
KOHLER CO	86-3510-99	1	A	79	Dec-10	229,500	5.24	33.53	13,793
GREYSTAR DEV	86-5470-99	4	R	2	Aug-17	22,270	0.51	3.25	12,603
IPT LAKESIDE CORPORATE CENTER	86-5973-99	3	C	44	Sep-11	98,000	2.24	14.32	6,757
AZURE LAKESIDE	86-3370-99	4	R	31	May-16	22,460	0.51	3.28	4,820
TOWN METER	55-0035-99	1	A	3	Jun-17	4,500	0.10	0.66	2,300
TOWN METER	55-0255-99	1	A	5	Aug-17	2,000	0.05	0.29	1,300
TOWN METER (NEW)	55-0735-99	1	A	1	Sep-17	200	0.00	0.03	200
TOWN METER	55-0325-99	1	A	1	Aug-17	180	0.00	0.03	36
LIT HW1 LP	86-6017-99	2	C	2	Aug-15	400	0.01	0.06	4
GREYSTAR DEV	86-3523-99	4	R	0	-	0	0.00	0.00	0
TOWN METER (NEW)	55-0725-99	1	A	0	-	0	0.00	0.00	0
TOWN METER	86-0585-99	4	R	0	-	0	0.00	0.00	0
TOWN METER	55-0145-99	1	A	0	-	0	0.00	0.00	0
TOWN METER	86-0420-99	3	R	0	-	0	0.00	0.00	0
TOWN METER	55-0175-99	1	A	0	-	0	0.00	0.00	0
TOWN METER	86-0405-99	5	C	0	-	0	0.00	0.00	0
TOWN METER	86-0395-99	5	C	0	-	0	0.00	0.00	0
TOWN METER	86-0580-99	4	R	0	-	0	0.00	0.00	0
GREYSTAR DEV	86-3521-99	4	R	0	-	0	0.00	0.00	0
TOWN METER	86-0322-99	2	C	0	-	0	0.00	0.00	0
GREYSTAR DEV	86-3393-99	4	R	0	-	0	0.00	0.00	0
GREYSTAR DEV	86-3394-99	4	R	0	-	0	0.00	0.00	0

¹A=Agricultural; C=Commercial; R=Residential²Contacted customer to inform of reclaimed water master plan

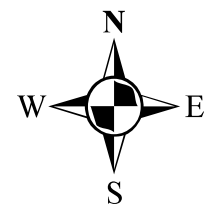
Total 8,433 14,055,096

Appendix D – Future Demand Included in Hydraulic Model



Legend

- Agricultural
- Commercial
- Residential
- Study Area
- Town Limits



0 0.075 0.15 0.3 0.45 0.6 0.75 Miles

DATE: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan

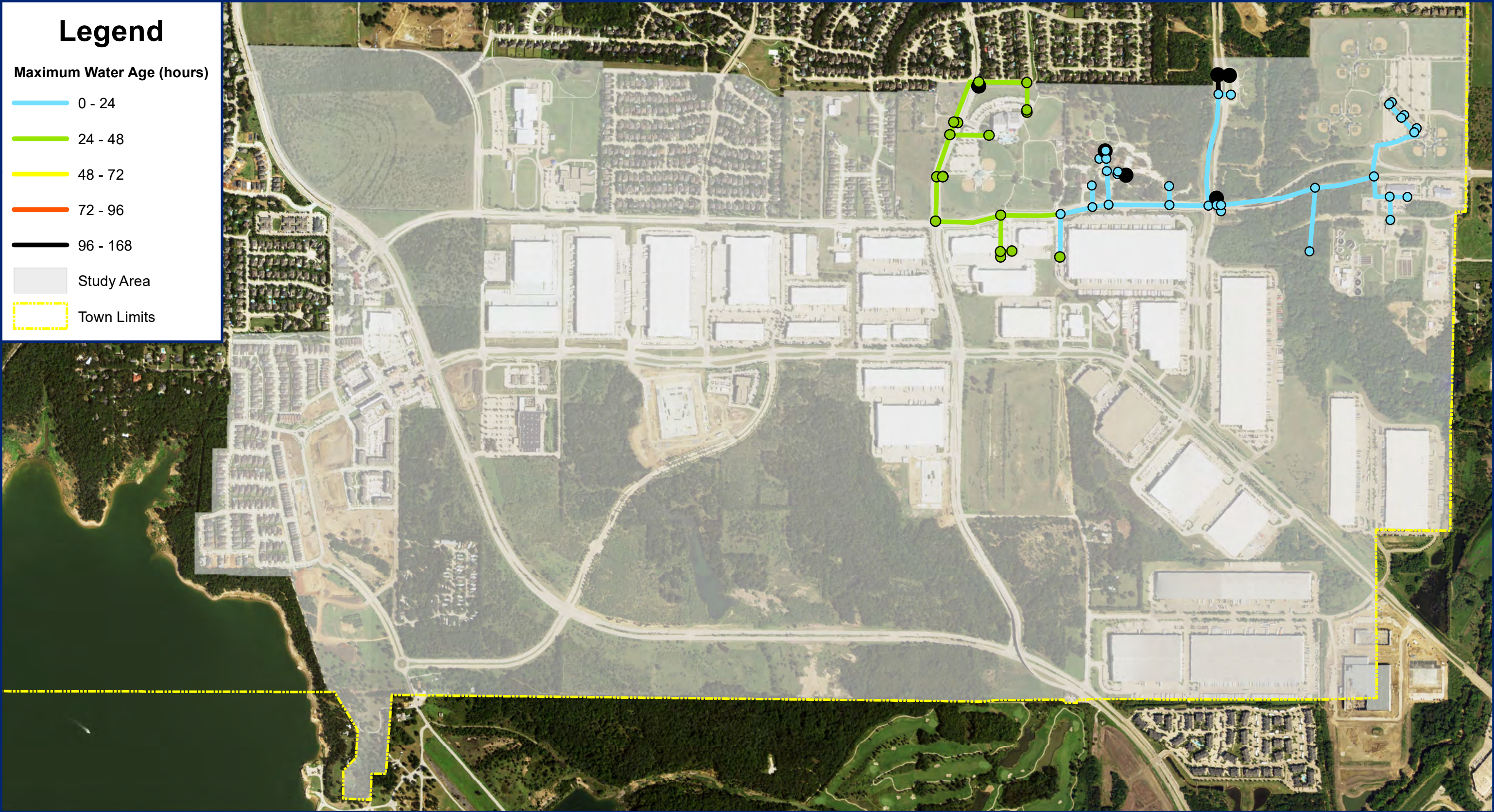
Appendix D: Future Demand Included in Hydraulic Model



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536

Parcel Type	Parcel ID #	Acres	Unit Peak Hour Demand (gpm/Acre)	Peak Hour Demand (gpm)
Agricultural	1	141.17	2.76	389.62
Agricultural	2	14.17	2.76	39.11
Agricultural	3	18.52	2.76	51.11
Agricultural	4	6.75	2.76	18.63
Agricultural	5	10.23	2.76	28.23
Total		191	-	527
Commercial	6	12.77	9.82	125.39
Commercial	7	28.97	9.82	284.45
Commercial	8	4.19	9.82	41.16
Commercial	9	9.17	9.82	90.08
Commercial	10	3.54	9.82	34.75
Commercial	11	22.56	9.82	221.51
Commercial	12	61.56	9.82	604.57
Commercial	13	53.87	9.82	529.04
Commercial	14	64.22	9.82	630.68
Commercial	15	69.80	9.82	685.39
Commercial	16	3.80	9.82	37.36
Commercial	17	12.60	9.82	123.76
Total		347	-	3,408
Residential	18	2.26	7.90	17.86
Residential	19	69.33	7.90	547.74
Residential	20	6.28	7.90	49.64
Residential	21	16.22	7.90	128.12
Residential	22	4.62	7.90	36.48
Residential	23	16.08	7.90	127.06
Residential	24	21.86	7.90	172.71
Residential	25	8.23	7.90	65.00
Residential	26	5.80	7.90	45.82
Residential	27	92.35	7.90	729.54
Residential	28	36.07	7.90	284.93
Total		279	-	2,205

Appendix E – Water Age Phase Model Results



Legend

Maximum Water Age (hours)

0 - 24

24 - 48

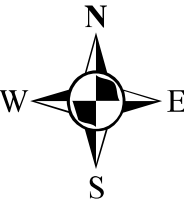
48 - 72

72 - 96

96 - 168

Study Area

Town Limits



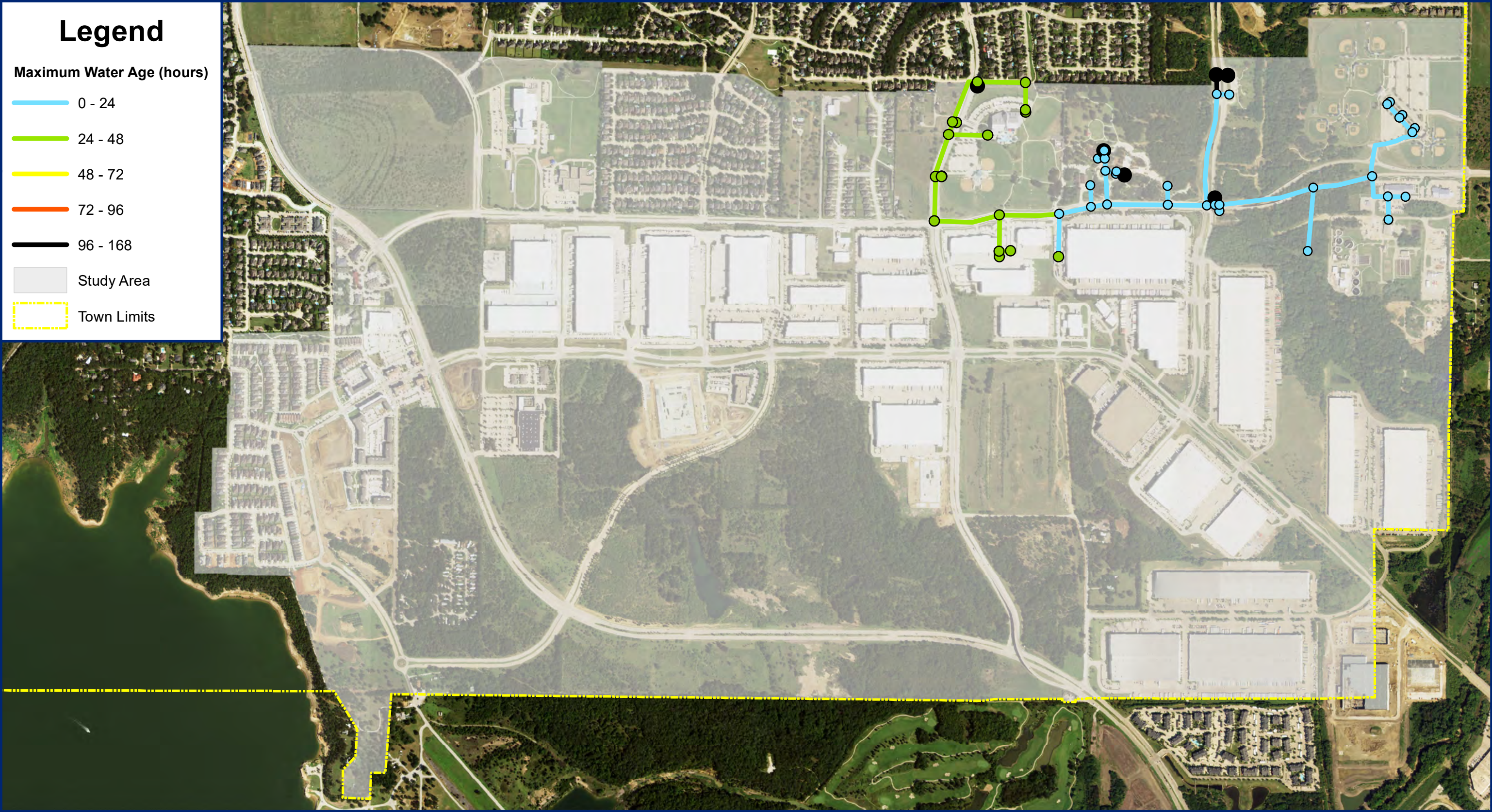
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan
Appendix E: Lakeside Reuse System Maximum Water Age
Including Future Demand - Phase 1



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536

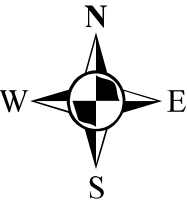


Legend

Maximum Water Age (hours)

- 0 - 24
- 24 - 48
- 48 - 72
- 72 - 96
- 96 - 168

- Study Area
- Town Limits



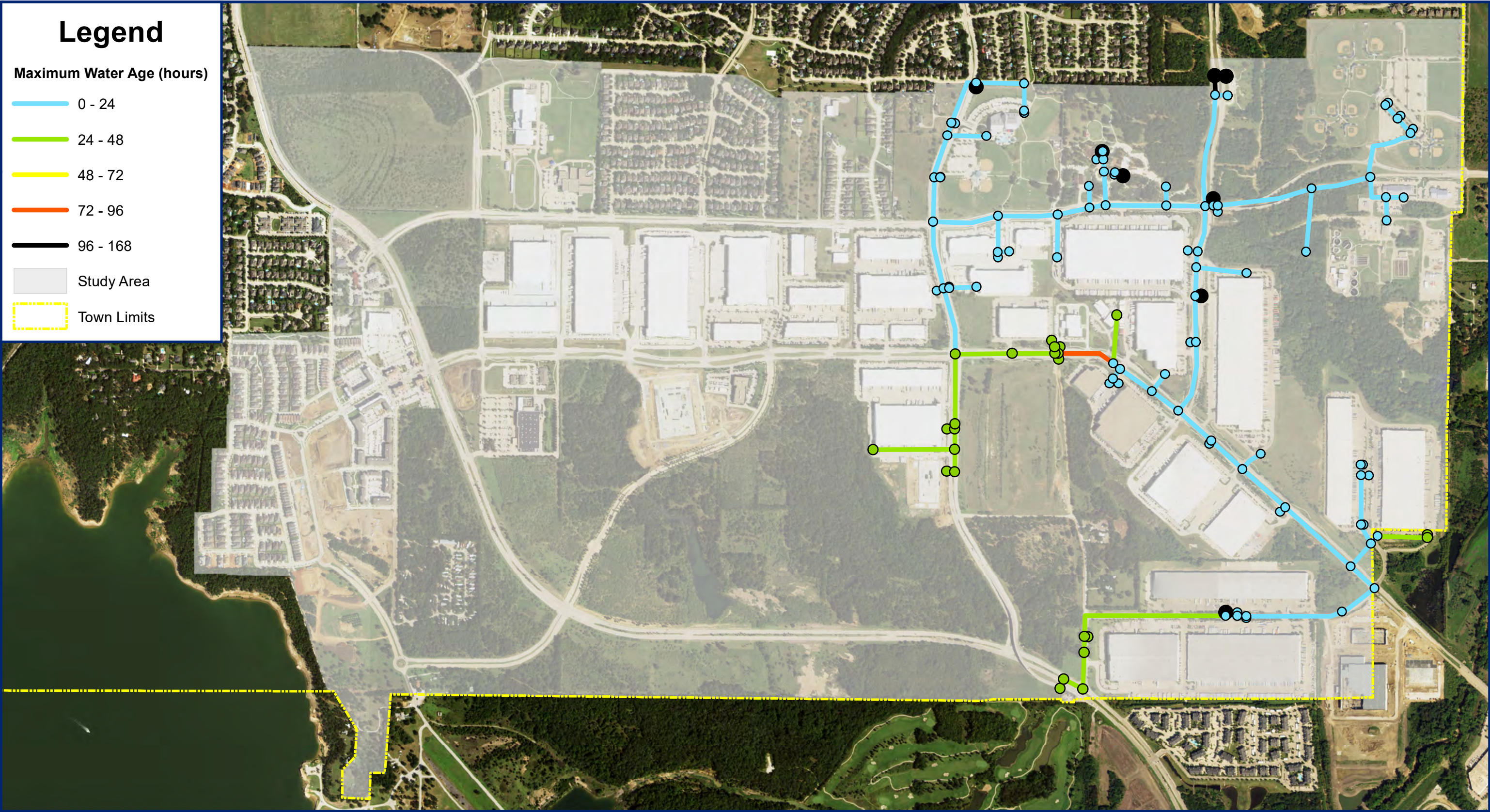
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan
Appendix E: Lakeside Reuse System Maximum Water Age
Not Including Future Demand - Phase 1



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Legend

Maximum Water Age (hours)

0 - 24

24 - 48

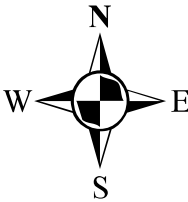
48 - 72

72 - 96

96 - 168

Study Area

Town Limits



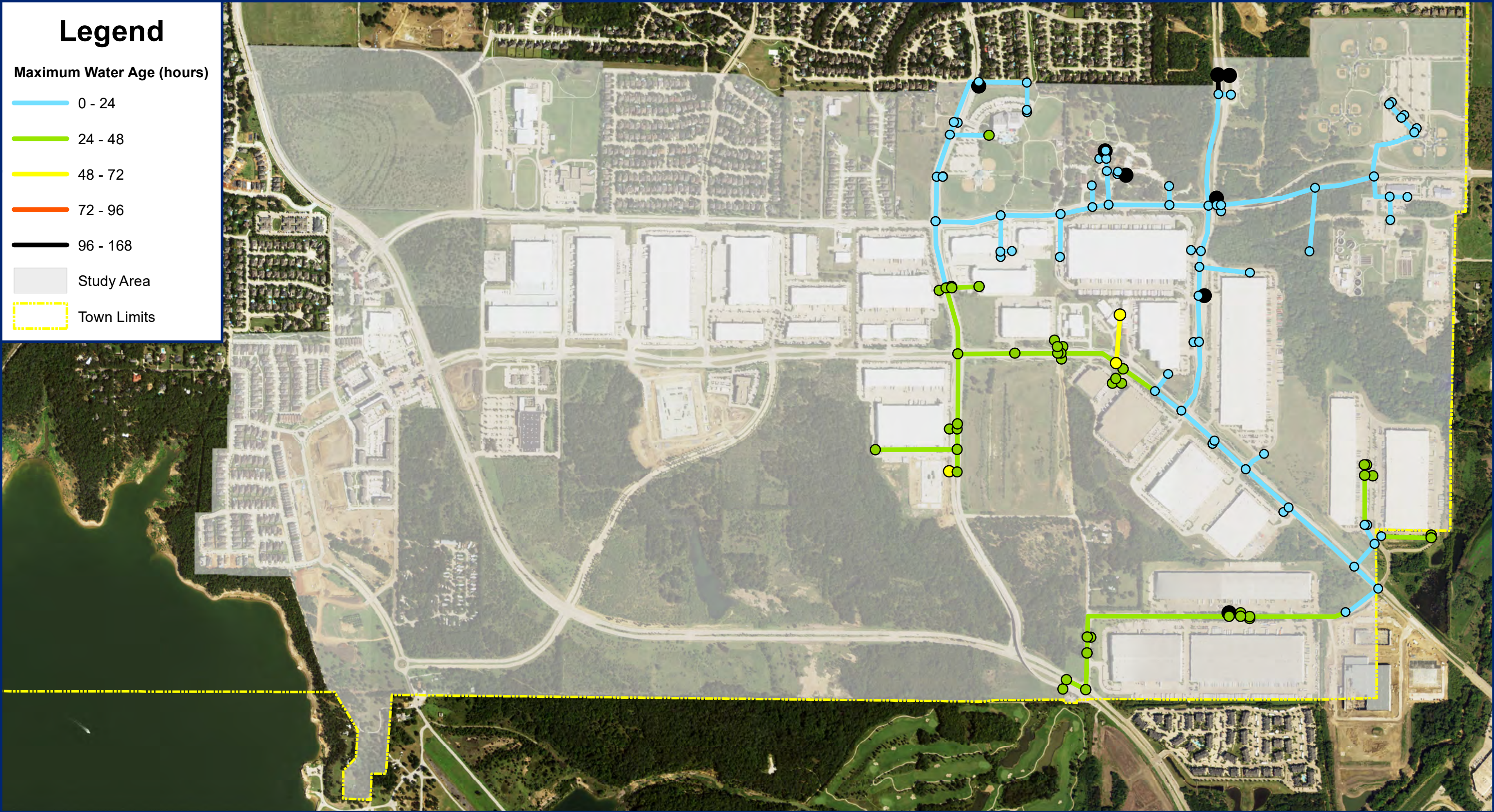
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan Appendix E: Lakeside Reuse System Maximum Water Age Including Future Demand - Phase 2



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Legend

Maximum Water Age (hours)

0 - 24

24 - 48

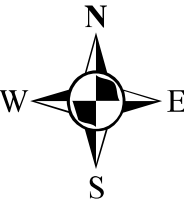
48 - 72

72 - 96

96 - 168

Study Area

Town Limits



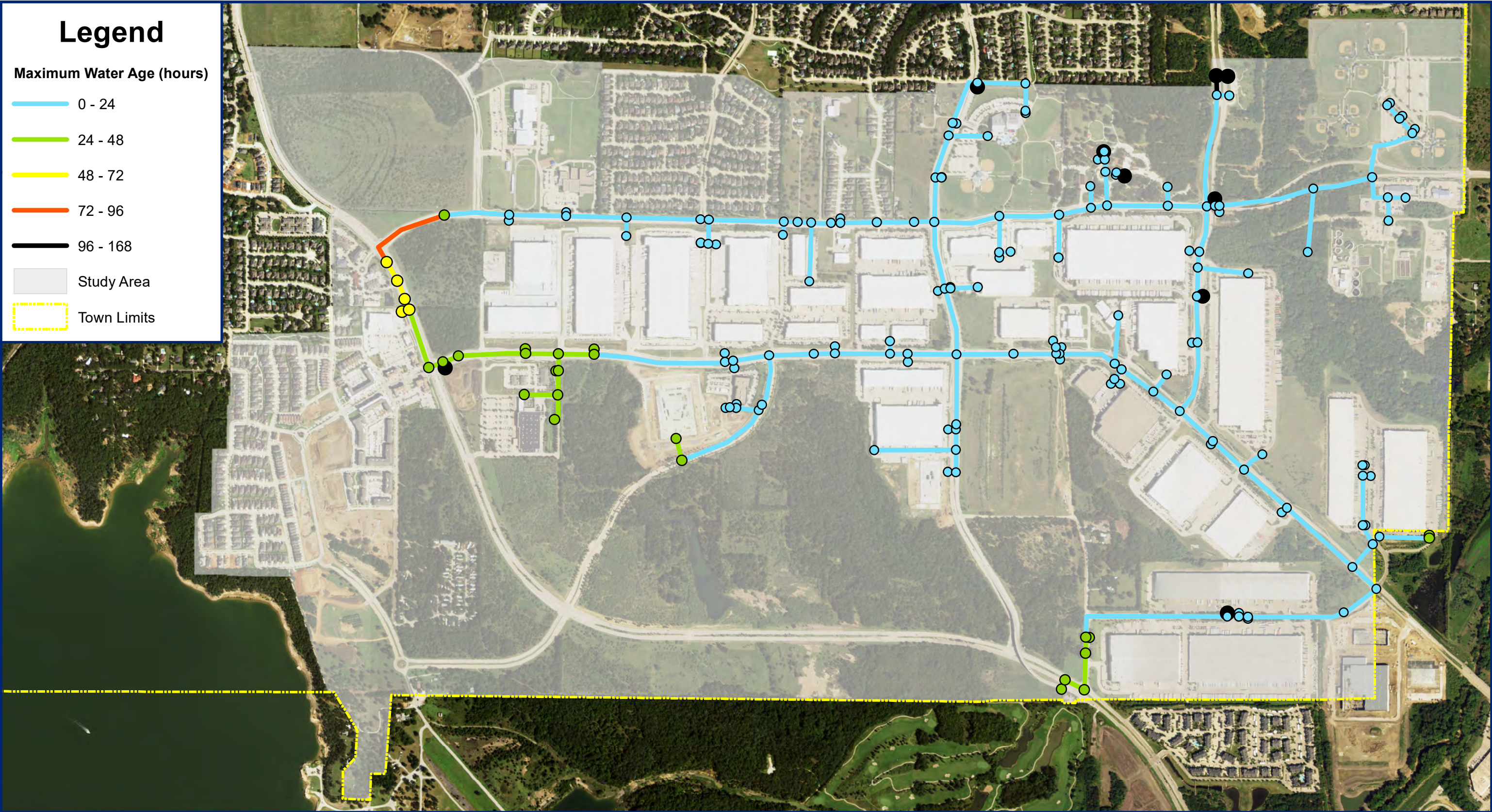
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

Town of Flower Mound Lakeside Reuse Water Master Plan Appendix E: Lakeside Reuse System Maximum Water Age Not Including Future Demand - Phase 2



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Legend

Maximum Water Age (hours)

0 - 24

24 - 48

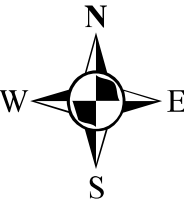
48 - 72

72 - 96

96 - 168

Study Area

Town Limits



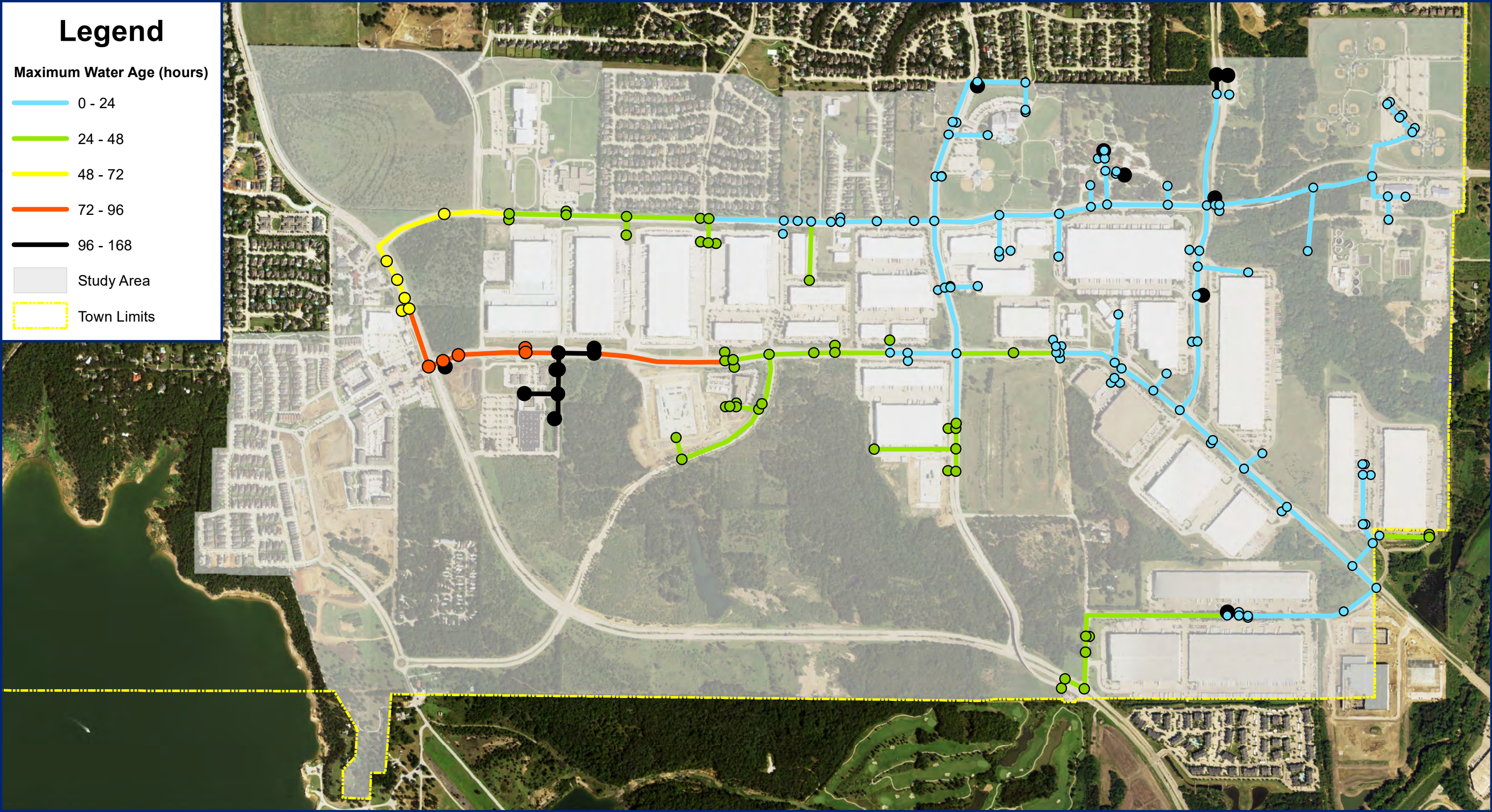
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

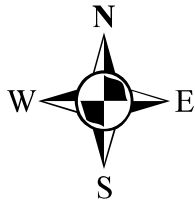
Town of Flower Mound Lakeside Reuse Water Master Plan
Appendix E: Lakeside Reuse System Maximum Water Age
Including Future Demand - Phase 3



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Document Path: F:\projects\0523\051-012-0 Wk Prod\2-9 GIS\AppendixE WaterAgePhases3 NoFuture.mxd



0 0.125 0.25 0.5 Miles

Date: 5/15/2018

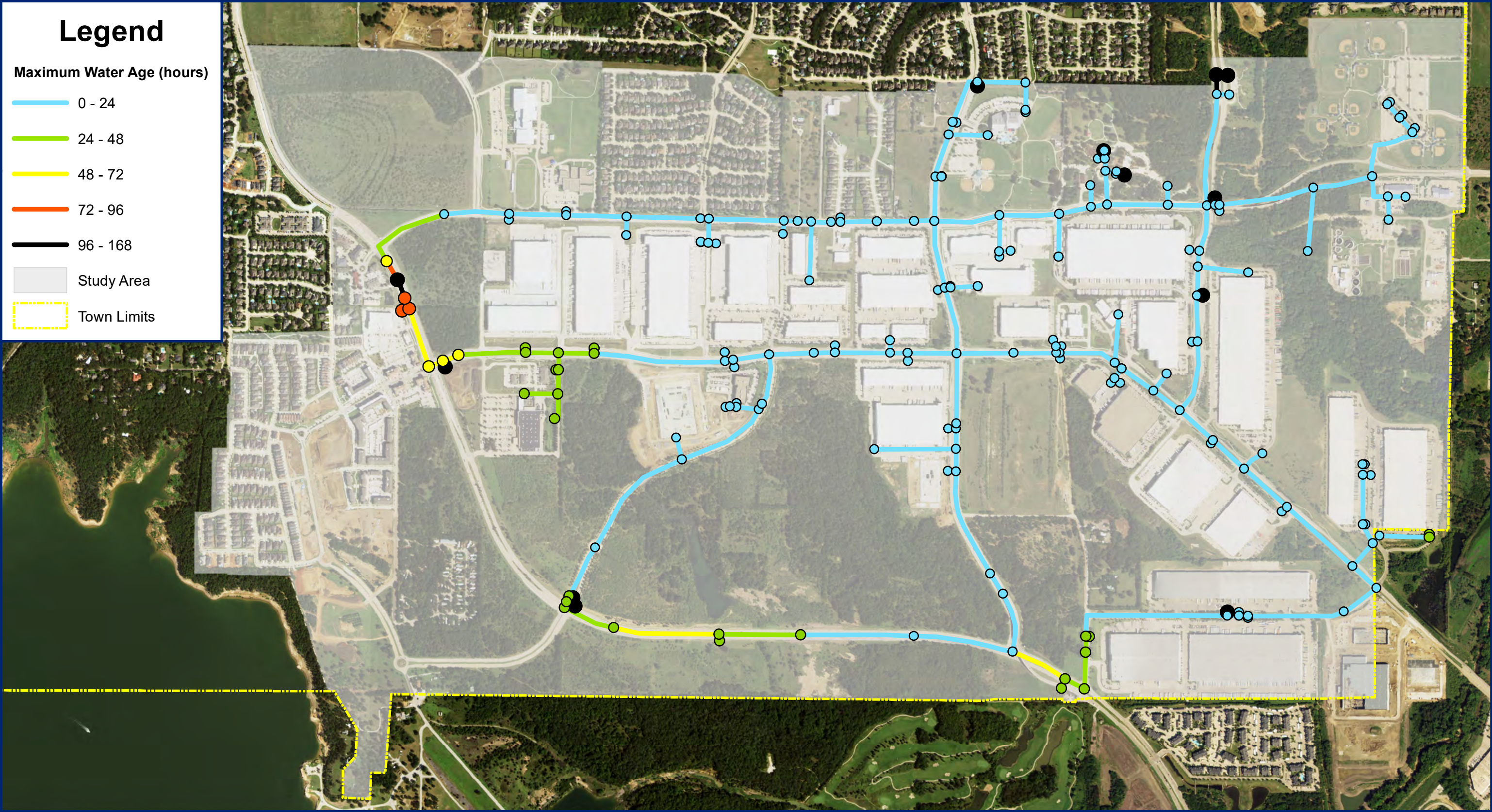
Town of Flower Mound Lakeside Reuse Water Master Plan

Appendix E: Lakeside Reuse System Maximum Water Age

Not Including Future Demand - Phase 3



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Legend

Maximum Water Age (hours)

0 - 24

24 - 48

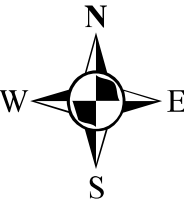
48 - 72

72 - 96

96 - 168

Study Area

Town Limits



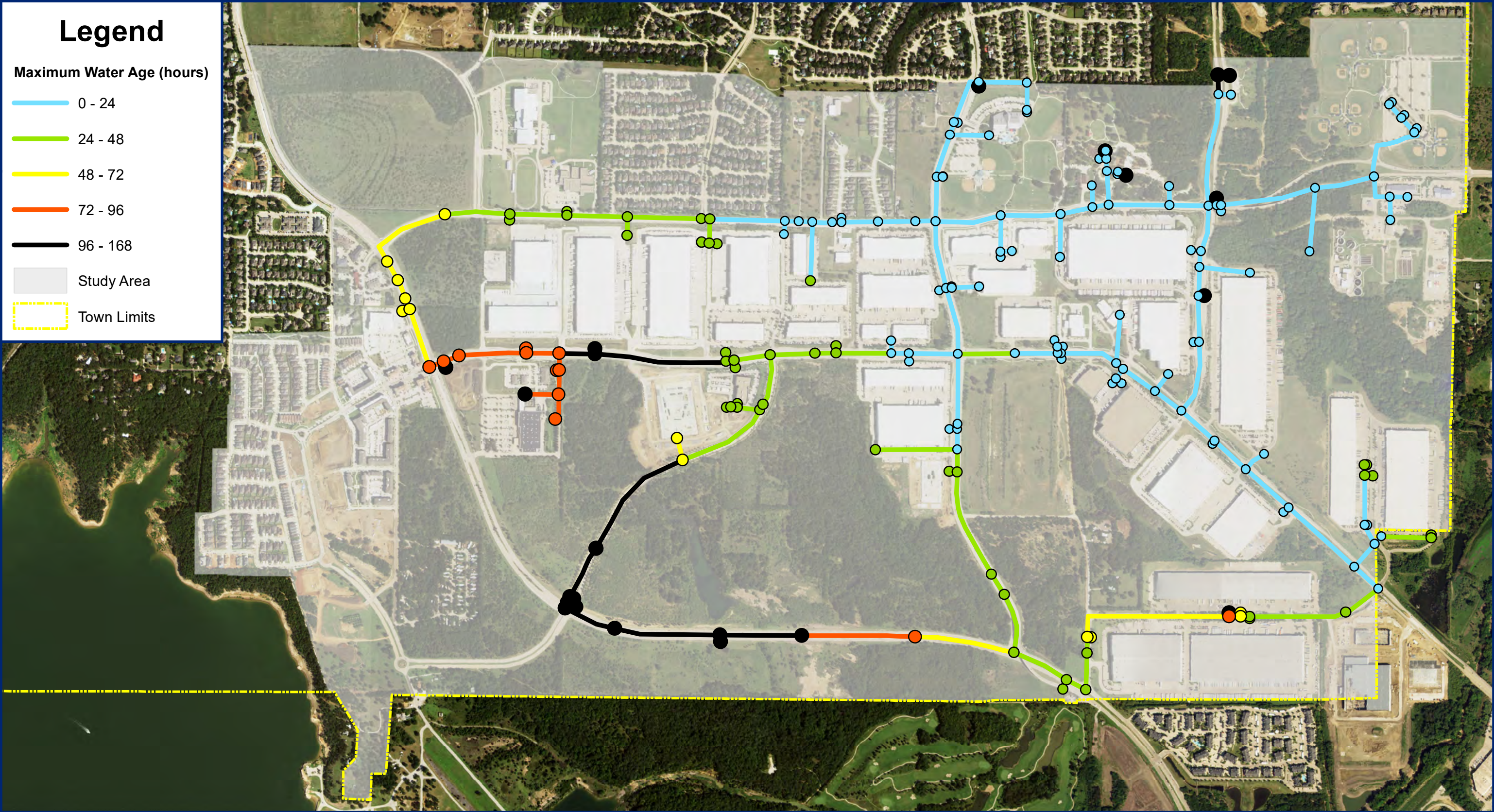
0 0.125 0.25 0.5 Miles

Date: 5/15/2018

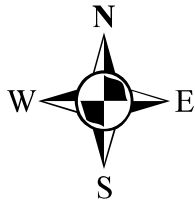
Town of Flower Mound Lakeside Reuse Water Master Plan Appendix E: Lakeside Reuse System Maximum Water Age Including Future Demand - Phase 4



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Document Path: F:\projects\0523\051-012-0 Wk Prod\2-9 GIS\AppendixE WaterAgePhase4 NoFuture.mxd



0 0.125 0.25 0.5 Miles

Date: 5/15/2018

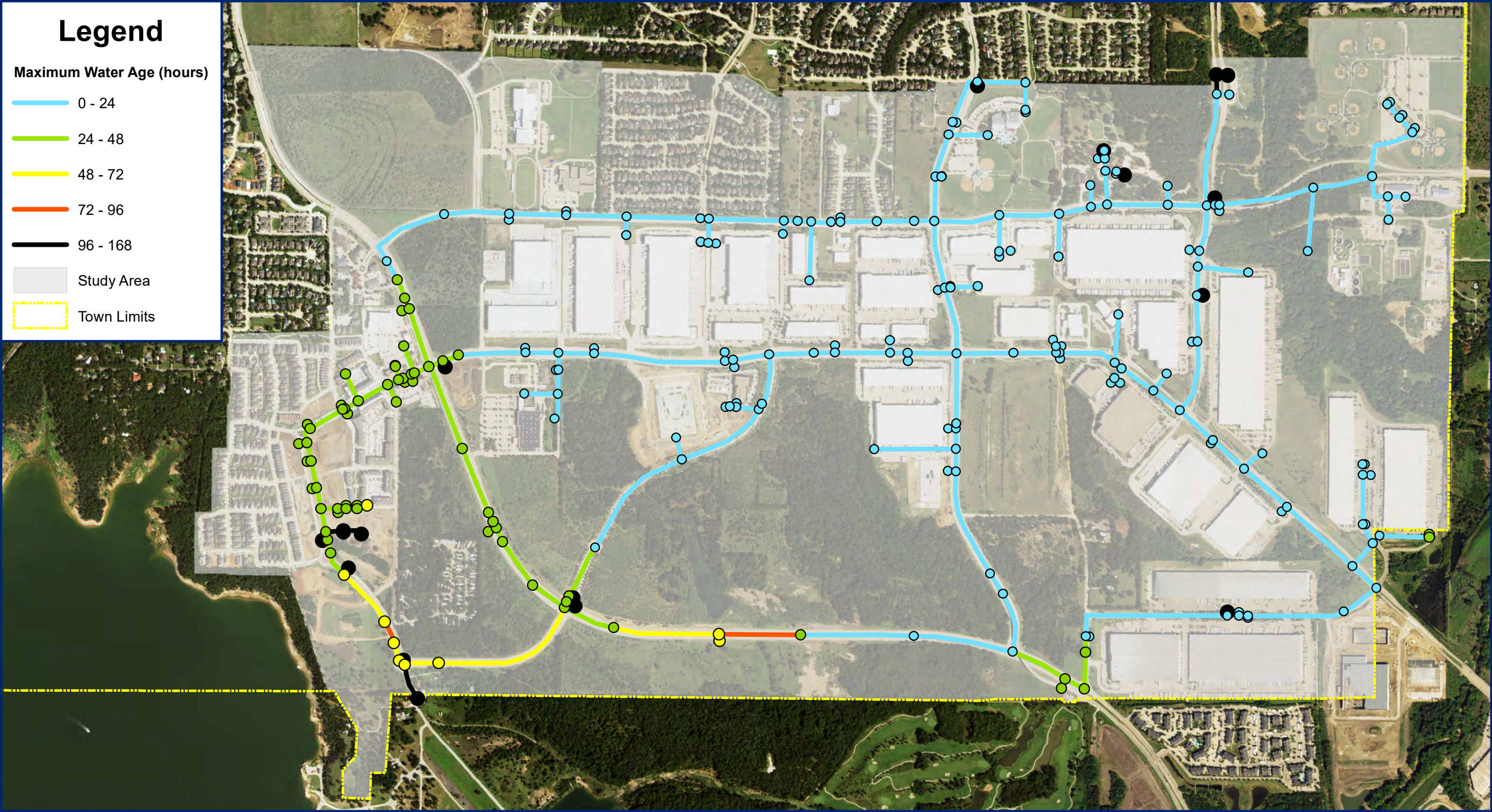
Town of Flower Mound Lakeside Reuse Water Master Plan

Appendix E: Lakeside Reuse System Maximum Water Age

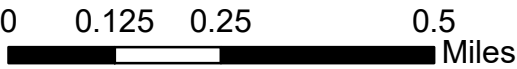
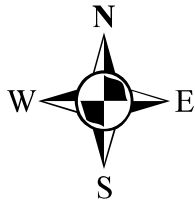
Not Including Future Demand - Phase 4



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Document Path: F:\projects\0523\051-012-0 Wk Prod\2-9 GIS\AppendixE WaterAgePhases5.mxd

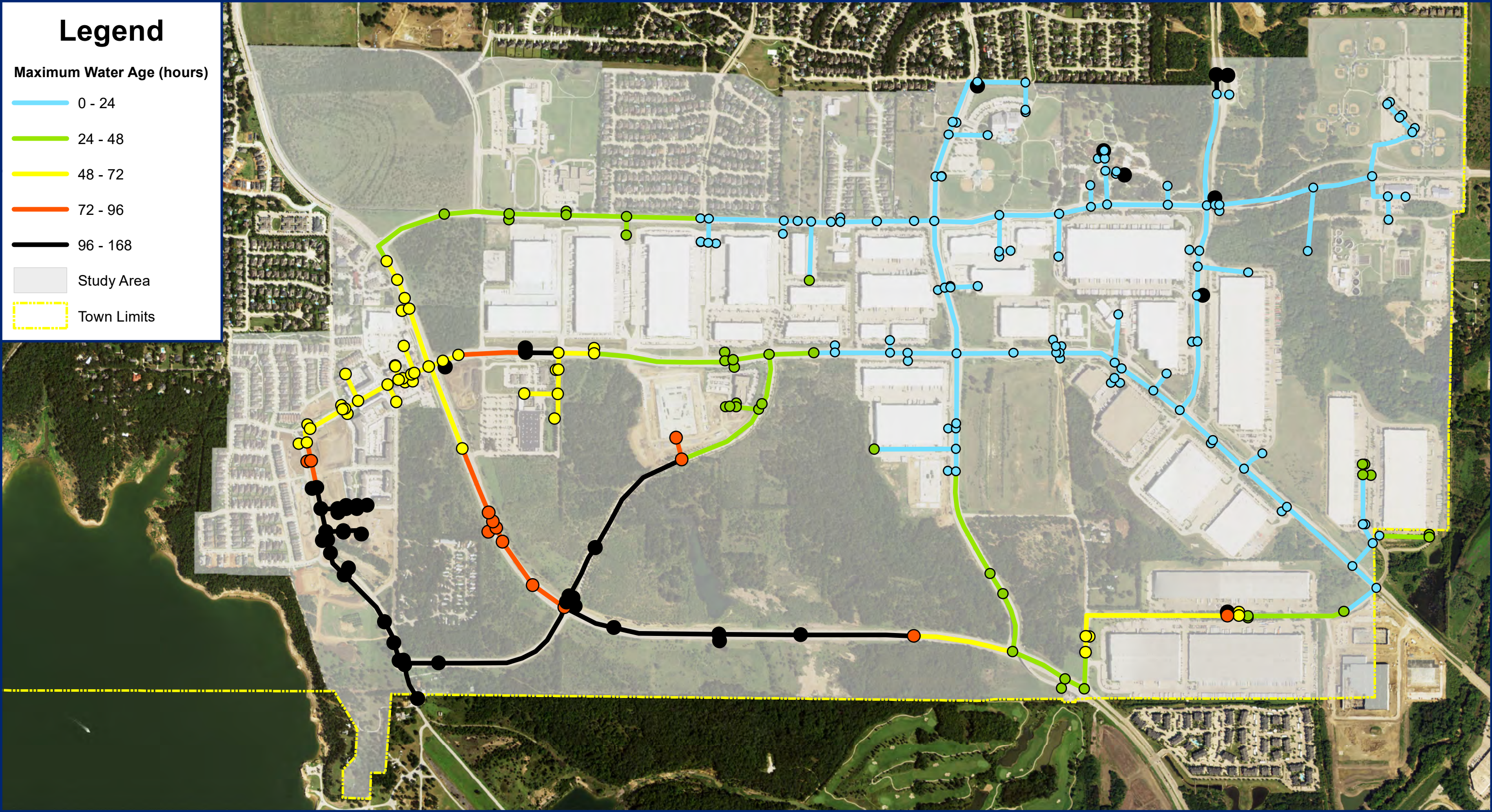


Date: 5/15/2018

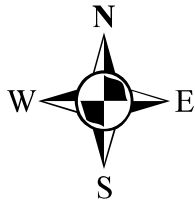
Town of Flower Mound Lakeside Reuse Water Master Plan
Appendix E: Lakeside Reuse System Maximum Water Age
Including Future Demand - Phase 5



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Document Path: F:\projects\0523\051-012-0 Wk Prod\2-9 GIS\AppendixE WaterAgePhases5 NoFuture.mxd



0 0.125 0.25 0.5 Miles

Date: 5/15/2018

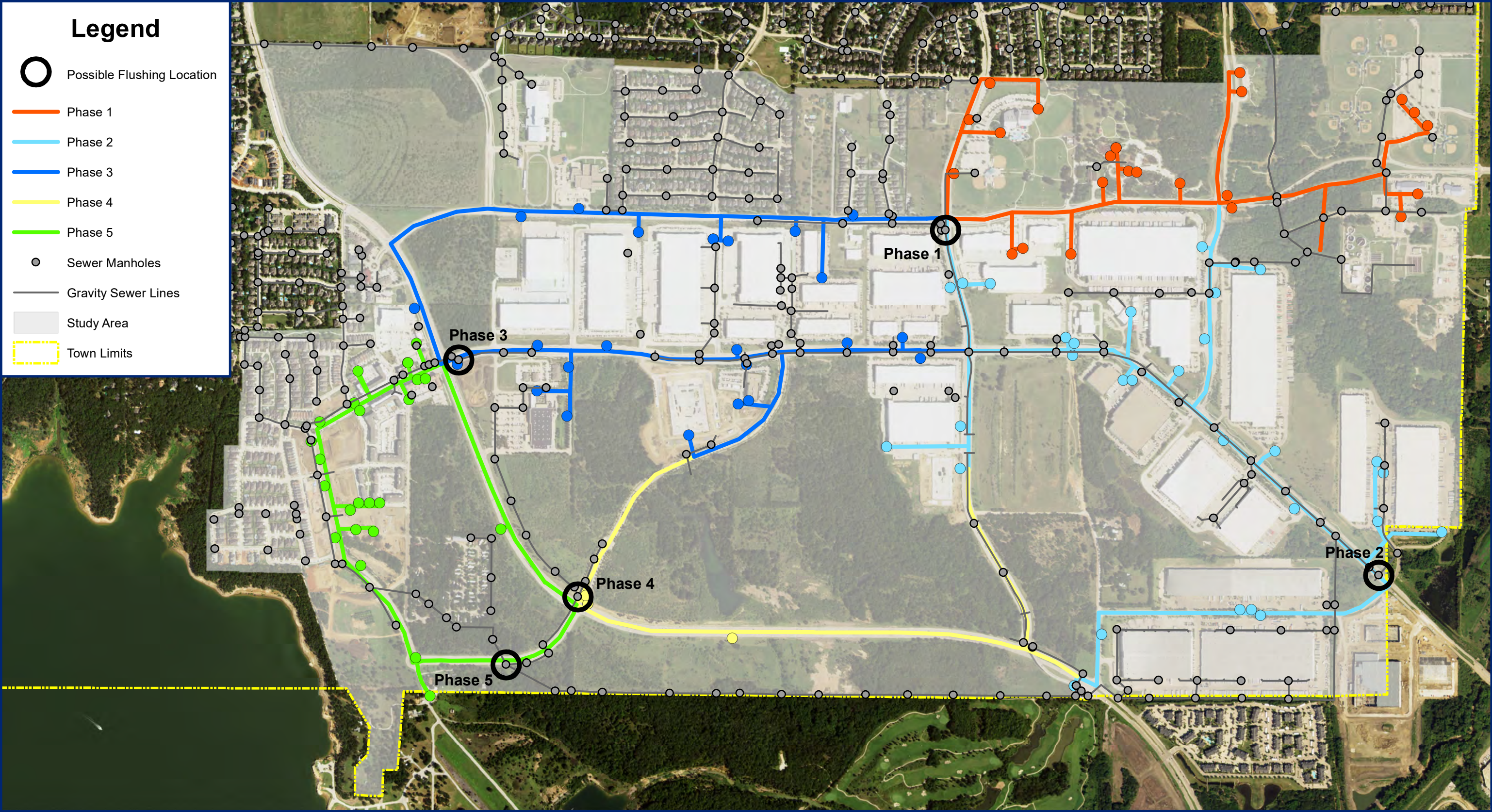
Town of Flower Mound Lakeside Reuse Water Master Plan

Appendix E: Lakeside Reuse System Maximum Water Age

Not Including Future Demand - Phase 5



1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536



Document Path: F:\projects\0523\051-01\2-0 Wrk Prod\2-9 GIS\AppendixE WaterAgeFlushing.mxd

Town of Flower Mound Lakeside Reuse Water Master Plan

Appendix E: Possible Flushing Device Locations

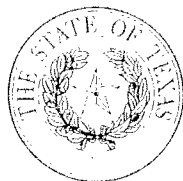


1320 S. UNIVERSITY DRIVE
SUITE 300
FORT WORTH, TEXAS 76107
PHONE: (817) 806-1700
FAX: (817) 870-2536

Date: 5/15/2018

Appendix F – Flower Mound Reclaimed Water Authorization

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Glenn Shankle, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 5, 2006

Mr. Brian K. McDonald, P.E.
Alan Plummers Associates, Inc.
7524 Mosier View Court
Suite 200
Fort Worth, Texas 76118

Re: Reclaimed Water Project - Town of Flower Mound
Texas Commission on Environmental Quality (TCEQ) Permit No. R11321-001
WWPR R11321-001
Denton County, Texas
CN600639835 RN101251619

Dear Mr. McDonald:

We are updating above-referenced authorization. I am enclosing is a copy of the updated authorization. The authorization consists of the reuse of wastewater effluent from the Town of Flower Mound Wastewater Treatment Plant (TCEQ Permit No. R11321-001).

The treated effluent will be used for: residential irrigation, including landscape irrigation at individual homes; urban uses, including irrigation of public parks, golf courses, school yards, or athletic fields; use of reclaimed water for fire protection, either in internal sprinkler systems or external fire hydrants; maintenance of impoundments or natural water bodies; toilet or urinal flush water; other similar activities where the potential for unintentional human exposure may occur; cooling tower makeup water; irrigation of sod farms, silviculture, limited access highway rights of way; and soil compaction or dust control in construction areas.

The enclosure for this letter indicates the approved sites and conditions that apply to this approval. If you have any questions please contact me at (512) 239-4552.

Sincerely,

A handwritten signature in black ink, appearing to read "Louis C. Herrin, III".

Louis C. Herrin, III, P.E.
Wastewater Permitting Section
Water Quality Division

cc: Town of Flower Mound, w/attachments
TCEQ Region 4 Office, w/attachments
TCEQ Water Quality Application Review and Processing Team (MC 148) , w/attachments



Authorization No. R11321-001
This authorization supersedes
and replaces WWPR R11321-001
approved April 10, 2003

AUTHORIZATION FOR RECLAIMED WATER

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

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

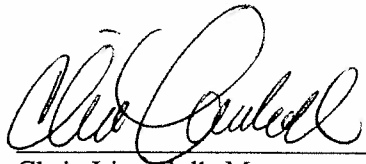
Users: The Users that the Town of Flower Mound, permitted as distributors and bulk users of the reclaimed water.

Location: The plant site is located at 1101 Duncan Lane, approximately two miles east and one mile south of the intersection of Farm-to-Market Road 2499 and Farm-to-Market Road 3040, in the Town of Flower Mound, in Denton County, Texas.

Authorization: Reclaimed water from the Town of Flower Mound's Wastewater Treatment Plant (Permit No. R11321-001), to be used for residential irrigation, including landscape irrigation at individual homes; urban uses, including irrigation of public parks, golf courses, school yards, or athletic fields; use of reclaimed water for fire protection, either in internal sprinkler systems or external fire hydrants; maintenance of impoundments or natural water bodies; toilet or urinal flush water; other similar activities where the potential for unintentional human exposure may occur; cooling tower makeup water; irrigation of sod farms, silviculture, limited access highway rights of way; and soil compaction or dust control in construction areas. The service area is shown on Attachment A.

This authorization contained the conditions that apply for the uses of the reclaimed water.

Issued Date: April 5, 2006


Chris Linendoll, Manager
Wastewater Permitting Section
Water Quality Division

Limitations: The authorization is subjected to the following requirements:

I. General Requirements.

- (a) No wastewater treatment plant operator (producer) shall transfer to a user reclaimed water without first notifying the commission.
- (b) Irrigation with untreated wastewater is prohibited.
- (c) Food crops that may be consumed raw by humans shall not be spray irrigated. Food crops including orchard crops that will be substantially processed prior to human consumption may be spray irrigated. Other types of irrigation that avoid contact of reclaimed water with edible portions of food crops are acceptable.
- (d) There shall be no nuisance conditions resulting from the distribution, the use, and/or storage of reclaimed water.
- (e) Reclaimed water shall not be utilized in a way that degrades ground water quality to a degree adversely affecting its actual or potential uses.
- (f) Reclaimed water managed in ponds for storage must be prevented from discharge into waters in the state, except for discharges directly resulting from rainfall events, in accordance with a permit issued by the commission, or as authorized under the Town of Flower Mound's Wastewater Treatment Plant (Permit No. 11321-001). All other discharges are unauthorized. If any unauthorized overflow of a holding pond occurs causing discharge into or adjacent to waters in the state, the user or provider, as appropriate, shall report any noncompliance. A written submission of such information shall also be provided to the commission regional office and to the Austin Office, Water Enforcement Section (MC-149), within five (5) working days of becoming aware of the overflow. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and, steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- (g) Unless otherwise provided in this authorization, there shall be no off-site discharge, either airborne or surface runoff, of reclaimed water from the user's property except to a wastewater treatment system or wastewater treatment collection system unless the reclaimed water user applies for and obtains a permit from the commission which authorizes discharge of the water.
- (h) Signs in both English and Spanish shall be posted at storage areas, hose bibs and faucets reading "Reclaimed Water, Do Not Drink" or similar warnings. Alternately, the area may be secured to prevent access by the public.
- (i) All new reclaimed water piping shall be separated from potable water piping when trenched by a distance of at least nine feet. All new exposed piping, hose bibs and faucets shall be painted purple and designed to prevent connection to a standard water hose. All piping shall be stenciled with a warning reading "NON-POTABLE WATER".
- (j) The design of any new distribution systems which will convey reclaimed water to a user shall be approved by the executive director. Materials shall be submitted for approval by the executive director in accordance with the Texas Engineering Practice Act (Article 3271a, Vernon's Annotated Texas Statutes). The plans and specifications for any new distribution systems constructed pursuant to this authorization must be approved pursuant to state law, and failure to secure approval before commencing construction of such works or making a transfer of reclaim water therefrom is a violation of this authorization, and each day of a transfer is an additional violation until approval has been secured.

- (k) Nothing in this authorization modifies any requirements of the Texas Department of Health found in Title 25 Texas Administrative Code (TAC), Chapter 337.
- (l) Major changes from a prior notification for use of reclaimed water must be approved by the executive director. A major change includes:
 - (1) A change in the boundary of the approved service area not including the conversion of individual lots within a subdivision to reclaimed water use;
 - (2) The addition of a new producer;
 - (3) Major changes in the intended use, such as conversion from irrigation of a golf course to residential irrigation; or
 - (4) Changes from either Type I or Type II uses to the other.
- (m) The reclaimed water producer and user shall maintain on the sites a current operation and maintenance plan. The operation and maintenance plan which shall contain, as a minimum the following:
 - (1) A labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines;
 - (2) The measures that will be implemented to prevent unauthorized access to reclaimed water facilities (eg., secured valves);
 - (3) Procedures for monitoring reclaimed water;
 - (4) A plan for how reclaimed water use will be scheduled to minimize the risk of inadvertent human exposure;
 - (5) Schedules for routine maintenance;
 - (6) A plan for worker training and safety; and
 - (7) Contingency plan for system failure or upsets.

II. Storage Requirements for Reclaimed Water

- (a) All initial holding ponds designed to contain Type I effluent shall conform to the following requirements:
 - (1) The ponds, whether constructed of earthen or other impervious materials, shall be designed and constructed so as to prevent groundwater contamination;
 - (2) Soils used for pond lining shall be free from foreign material such as paper, brush, trees, and large rocks;
 - (3) All soil liners must be of compacted material having a permeability less than or equal to 1×10^{-4} cm/sec, at least 24 inches thick, compacted in lifts no greater than 6 inches each;
 - (4) Synthetic membrane linings shall have a minimum thickness of 40 mils. In situ liners at least 24 inches thick meeting a permeability less than or equal to 1×10^{-4} cm/sec are acceptable alternatives;
 - (5) Certification shall be furnished by a Texas Registered Professional Engineer that the pond lining meets the appropriate criteria prior to utilization of the facilities; and
 - (6) Soil embankment walls shall have a top width of at least five feet. The interior and exterior slopes of soil embankment walls shall be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are utilized. All soil embankment walls shall be protected by a vegetative cover or other stabilizing material to prevent erosion. Erosion stops and water seals shall be installed on all piping penetrating the embankments.
 - (7) An alternative method of pond lining which provides equivalent or better water quality protection than provided under this section may be utilized with the prior approval of the executive director.

- (8) A specific exemption may be obtained from the executive director if, after the review of data submitted by the reclaimed water provider or user, as appropriate, the executive director determines containment of the reclaimed water is not necessary, considering:
- (A) Soil and geologic data, and ground water data, including its quality, uses, quantity and yield; and
 - (B) Adequate demonstration that impairment of ground water for its actual or potential use will be prevented.
- (b) Reclaimed water may be stored in leak-proof, fabricated tanks.
- (c) Subsequent holding ponds utilized for the receipt and storage of reclaimed water of a quality that could cause or causes a violation of a surface water quality standard or impairment of ground water for its actual or intended use will be also subject to the storage requirements of this section.

III. Specific Uses and Quality Standards for Reclaimed Water

Numerical parameter limits pertaining to specific reclaimed water use categories are contained in this section. These limits apply to reclaimed water before discharge to initial holding ponds or a reclaimed water distribution system. It shall be the responsibility of the reclaimed water producer to establish that the reclaimed water meets the quality limits at the sample point for the intended use in accordance with the monitoring requirements identified in Section IV relating to Sampling and Analysis.

- (a) Any new construction shall conform to Type I use which includes irrigation or other uses where the public is not present during the time when irrigation activities occur or other uses where the public would not come in contact with the reclaimed water.
- (b) Type I Reclaimed Water Use. The type of use where the public will not come in contact with the reclaimed water. The following use is allowed by this authorization: residential irrigation, including landscape irrigation at individual homes; urban uses, including irrigation of public parks, golf courses, school yards, or athletic fields; use of reclaimed water for fire protection, either in internal sprinkler systems or external fire hydrants; maintenance of impoundments or natural water bodies; toilet or urinal flush water; other similar activities where the potential for unintentional human exposure may occur; cooling tower makeup water; irrigation of sod farms, silviculture, limited access highway rights of way; and soil compaction or dust control in construction areas.
- (b) The following conditions apply to this type of use of reclaimed water. At a minimum, the reclaimed water producer shall only transfer reclaimed water of the following quality as described for Type I reclaimed water use, reclaimed water on a 30-day average shall have a quality of:

CBOD ₅	5 mg/l
Turbidity	3 NTU
Fecal Coliform	20 CFU/100 ml*
Fecal Coliform (not to exceed)	75 CFU/100 ml**
* geometric mean	
** single grab sample	

IV. Sampling and Analysis.

The reclaimed water producer shall sample the reclaimed water prior to distribution to user to assure that the water quality is in accord with the intended contracted use. Analytical methods shall be in accord with those specified in Chapter 319 (relating to Monitoring and Reporting). The

minimum sampling and analysis frequency for Type I reclaimed water is twice per week.

The monitoring shall be done after the final treatment unit. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least five years.

V. Record Keeping and Reporting.

- (a) The reclaimed water provider and user shall maintain records on site for a period of five years.
 - (1) Records to be maintained by the provider include:
 - (A) Copies of notifications made to the commission concerning reclaimed water projects.
 - (B) As applicable, copies of contracts made with each reclaimed water user (this requirement does not include reclaimed water users at residences that have separate distribution lines for potable water).
 - (C) Records of volume of water delivered to each reclaimed water user per delivery (this requirement does not apply to reclaimed water users at residences that have separate distribution lines for potable water).
 - (D) Reclaimed water quality analyses.
 - (2) The reclaimed water producer shall report to the commission on a monthly basis the following information on forms furnished by the executive director. Such reports are due to the commission by the 20th day of the month following the reporting period.
 - (A) Volume of reclaimed water delivered to provider.
 - (B) Quality of reclaimed water delivered to a user or provider reported as a monthly average for each quality criteria except those listed as "not to exceed" which shall be reported as individual analyses.

VI. Transfer of Reclaimed Water.

Reclaimed water transferred from a provider to a user shall be done on a demand only basis. This means that the reclaimed water user may refuse delivery of such water at any time. All reclaimed water transferred to a user must be of at least the treatment quality specified in Section IV. Transfer shall be accomplished via pipes or tank trucks.

VII. General Prohibitions.

Except for on-channel ponds, storage facilities for retaining reclaimed water prior to use shall not be located within the floodway and shall be protected from the 100-year flood.

VIII. Restrictions.

This authorization does not convey any property right and does not grant any exclusive privilege.

IX. Responsibilities and Contracts.

- (a) The producer of reclaimed water will not be liable for misapplication of reclaimed water by users, except as provided in this section. Both the reclaimed water provider and user

have, but are not limited to, the following responsibilities:

- (1) The reclaimed water producer shall:
 - (A) Transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;
 - (B) Sample and analyze the reclaimed water and report such analyses in accordance with Sections IV and V relating to Sampling and Analysis and Record keeping and Reporting, respectively; and
 - (C) Notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval.
- (2) The reclaimed water provider shall:
 - (A) Assure construction of reclaimed water distribution lines/systems in accordance with 30 TAC Chapter 317 and in accordance with approved plans and specifications;
 - (B) Transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;
 - (C) Notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval; and
 - (D) Not be found in violation of this chapter for the misuse of the reclaimed water by the user if transfer of such water is shut off promptly upon knowledge of misuse regardless of contract provisions.
- (3) The reclaimed water user shall:
 - (A) Use the reclaimed water in accordance with this authorization; and
 - (B) Maintain and provide records as required by Section III relating to Record Keeping and Reporting.

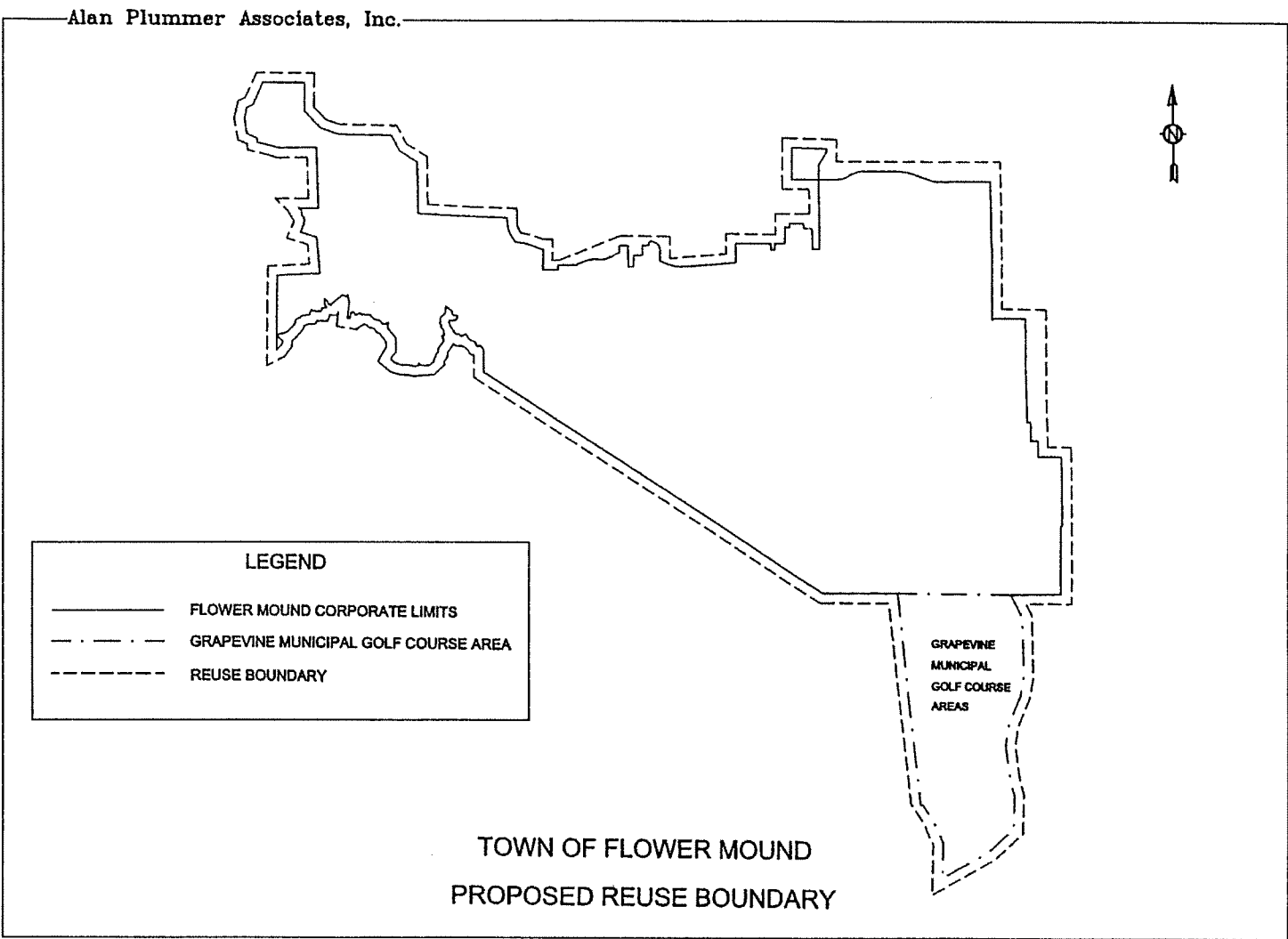
X. Enforcement.

If the producer, provider and/or user fails to comply with the terms of this authorization, the executive director may take enforcement action provided by the Texas Water Code, §§26.019 and 26.136.

XI. STANDARD PROVISIONS:

- (a) This authorization is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.
- (b) Acceptance of this authorization constitutes an acknowledgment and agreement that the provider and user will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this authorization and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this authorization.

Attachment “A”



Appendix G – Financial Evaluation

Customer	Meter Number	Average Consumption (gal per month)	Meter Size (inch)	Est. Avg Potable Monthly Water Bill (2018 \$)	75% of Potable Charge	80% of Potable Charge	85% of Potable Charge		90% of Potable Charge
					Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	% Decrease	Est. Avg Reuse Monthly Water Bill (2018 \$)
TOWN METER	55-0265-99	959,900	2.00	\$6,347	\$4,794	\$5,105	\$5,415	14.7%	\$5,726
TOWN METER	55-0055-99	886,700	4.00	\$6,115	\$4,682	\$4,969	\$5,256	14.1%	\$5,542
TOWN METER	55-0165-99	527,080	2.00	\$3,516	\$2,671	\$2,840	\$3,009	14.4%	\$3,178
TOWN METER	86-0380-99	450,400	2.00	\$3,015	\$2,295	\$2,439	\$2,583	14.3%	\$2,727
CHI / SILVERON LP	86-2995-99	385,025	2.00	\$2,587	\$1,974	\$2,097	\$2,220	14.2%	\$2,342
BIG BOX PROPERTY OWNER	86-9210-99	314,926	2.00	\$2,129	\$1,631	\$1,730	\$1,830	14.0%	\$1,930
DUKE REALTY LMTD PARTNERSHIP	86-3445-99	287,230	2.00	\$1,948	\$1,495	\$1,585	\$1,676	14.0%	\$1,766
LIT INDUSTRIAL LIMITED	86-3260-99	282,990	2.00	\$1,920	\$1,474	\$1,563	\$1,652	13.9%	\$1,742
SCG LAKESIDE COMMERCE CENTER	86-5971-99	281,499	2.00	\$1,910	\$1,467	\$1,555	\$1,644	13.9%	\$1,733
THE HOME DEPOT	86-5962-99	280,593	2.00	\$1,904	\$1,462	\$1,551	\$1,639	13.9%	\$1,727
LIT HW1 LP	86-6024-99	267,978	2.00	\$1,822	\$1,400	\$1,485	\$1,569	13.9%	\$1,653
TOWN METER	86-0326-99	267,500	2.00	\$1,819	\$1,398	\$1,482	\$1,566	13.9%	\$1,650
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4026-99	258,997	2.00	\$1,763	\$1,356	\$1,438	\$1,519	13.8%	\$1,600
NATIONAL INDUSTRIAL HOLDINGS	86-5215-99	246,925	2.00	\$1,684	\$1,297	\$1,374	\$1,452	13.8%	\$1,529
TOWN METER	55-0185-99	246,440	2.00	\$1,681	\$1,295	\$1,372	\$1,449	13.8%	\$1,526
TOWN METER	86-0320-99	242,500	2.00	\$1,655	\$1,275	\$1,351	\$1,427	13.8%	\$1,503
STACY FAMILIES ENTERPRISES	86-6040-99	231,533	2.00	\$1,583	\$1,221	\$1,294	\$1,366	13.7%	\$1,439
CHI / SILVERON LP	86-2990-99	231,211	2.00	\$1,581	\$1,220	\$1,292	\$1,364	13.7%	\$1,437
LMEG WIRELESS LLC	86-2890-99	230,960	2.00	\$1,580	\$1,219	\$1,291	\$1,363	13.7%	\$1,435
MI WINDOWS AND DOORS	86-9870-99	229,340	1.50	\$1,525	\$1,167	\$1,239	\$1,310	14.1%	\$1,382
KOHLER CO	86-3470-99	222,077	2.00	\$1,522	\$1,175	\$1,244	\$1,314	13.7%	\$1,383
WAYFAIR LLC	86-9880-99	221,124	1.50	\$1,472	\$1,127	\$1,196	\$1,265	14.1%	\$1,334
TOWN METER	55-0085-99	208,920	4.00	\$1,683	\$1,358	\$1,423	\$1,488	11.6%	\$1,553
SCG LAKESIDE COMMERCE CENTER	86-4260-99	200,576	2.00	\$1,381	\$1,070	\$1,132	\$1,194	13.5%	\$1,256
EASTGROUP PROPERTIES	86-9920-99	195,496	2.00	\$1,348	\$1,045	\$1,105	\$1,166	13.5%	\$1,227
TOWN METER	55-0195-99	194,740	2.00	\$1,343	\$1,041	\$1,101	\$1,162	13.5%	\$1,222
IPT LAKESIDE CORPORATE CENTER	86-9220-99	192,540	2.00	\$1,328	\$1,030	\$1,090	\$1,150	13.5%	\$1,209
IPT LAKESIDE CORPORATE CENTER	86-9240-99	189,992	2.00	\$1,312	\$1,018	\$1,077	\$1,135	13.4%	\$1,194

Customer	Meter Number	Average Consumption (gal per month)	Meter Size (inch)	Est. Avg Potable Monthly Water Bill (2018 \$)	75% of Potable Charge	80% of Potable Charge	85% of Potable Charge		90% of Potable Charge
					Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	% Decrease	Est. Avg Reuse Monthly Water Bill (2018 \$)
BEST BUY STORES LP	86-6033-99	184,385	2.00	\$1,275	\$990	\$1,047	\$1,104	13.4%	\$1,161
SPEARS MANUFACTURING	86-3855-99	184,188	2.00	\$1,274	\$989	\$1,046	\$1,103	13.4%	\$1,160
BIG BOX PROPERTY OWNER	86-4116-99	180,805	2.00	\$1,252	\$973	\$1,028	\$1,084	13.4%	\$1,140
TOWN METER	55-0285-99	179,300	3.00	\$1,358	\$1,082	\$1,137	\$1,192	12.2%	\$1,248
KOHLER CO	86-3505-99	178,883	2.00	\$1,239	\$963	\$1,018	\$1,074	13.4%	\$1,129
AZURE LAKESIDE	86-0945-99	169,383	1.00	\$1,097	\$837	\$889	\$941	14.2%	\$993
WIFPIR PROPERTIES LLC	86-8860-99	164,847	2.00	\$1,147	\$894	\$945	\$996	13.2%	\$1,046
HEAT AND CONTROL INC	86-3830-99	160,305	1.00	\$1,038	\$792	\$841	\$890	14.2%	\$939
MI WINDOWS AND DOORS	86-9865-99	154,287	1.50	\$1,035	\$799	\$846	\$893	13.7%	\$940
DUKE REALTY LMTD PARTNERSHIP	86-3455-99	153,472	2.00	\$1,073	\$839	\$885	\$932	13.1%	\$979
EASTGROUP PROPERTIES	86-9900-99	151,472	2.00	\$1,060	\$829	\$875	\$921	13.1%	\$967
IPT LAKESIDE CORPORATE CENTER	86-5265-99	143,542	2.00	\$1,008	\$790	\$834	\$877	13.0%	\$921
LISANTI FOODS	86-9890-99	132,476	1.50	\$892	\$692	\$732	\$772	13.5%	\$812
COMMUNICATIONS TEST DESIGN INC	86-9205-99	132,229	2.00	\$934	\$734	\$774	\$814	12.8%	\$854
LIT INDUSTRIAL LIMITED	86-3285-99	131,404	2.00	\$929	\$730	\$770	\$810	12.8%	\$849
MORTGAGE FINALCIAL SERVICES	86-8825-99	130,964	2.00	\$926	\$728	\$768	\$807	12.8%	\$847
TOWN METER	55-0365-99	130,760	2.00	\$924	\$727	\$767	\$806	12.8%	\$846
TOWN METER	86-0390-99	128,400	1.00	\$829	\$636	\$674	\$713	14.0%	\$752
IPT LAKESIDE CORPORATE CENTER	86-5230-99	128,125	2.00	\$907	\$714	\$753	\$791	12.8%	\$830
WIFPIR PROPERTIES LLC	86-8855-99	120,187	2.00	\$855	\$675	\$711	\$747	12.6%	\$783
TOWN METER	55-0245-99	120,000	1.50	\$810	\$631	\$667	\$703	13.3%	\$739
MORTGAGE FINALCIAL SERVICES	86-4705-99	113,193	2.00	\$809	\$641	\$675	\$708	12.5%	\$742
IPT LAKESIDE CORPORATE CENTER	86-5270-99	113,113	2.00	\$809	\$641	\$674	\$708	12.5%	\$742
LIT INDUSTRIAL LIMITED	86-3290-99	110,442	2.00	\$792	\$628	\$660	\$693	12.4%	\$726
LIT INDUSTRIAL LIMITED	86-3270-99	105,934	2.00	\$762	\$605	\$637	\$668	12.3%	\$699
AZURE LAKESIDE	86-3515-99	102,419	1.00	\$659	\$508	\$538	\$569	13.7%	\$599
EASTGROUP PROPERTIES	86-9910-99	102,184	2.00	\$737	\$587	\$617	\$647	12.2%	\$677
TOWN METER	55-0215-99	95,700	2.00	\$695	\$555	\$583	\$611	12.1%	\$639

Customer	Meter Number	Average Consumption (gal per month)	Meter Size (inch)	Est. Avg Potable Monthly Water Bill (2018 \$)	75% of Potable Charge	80% of Potable Charge	85% of Potable Charge		90% of Potable Charge
					Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	% Decrease	Est. Avg Reuse Monthly Water Bill (2018 \$)
GREYSTAR DEV	86-3391-99	91,465	1.00	\$587	\$454	\$481	\$508	13.6%	\$534
CCA	86-5145-99	90,411	2.00	\$661	\$529	\$556	\$582	11.9%	\$608
MOVIE HOUSE & EATERY	86-3590-99	82,624	2.00	\$610	\$491	\$515	\$538	11.7%	\$562
TOWN METER	55-0105-99	77,700	2.00	\$577	\$467	\$489	\$511	11.5%	\$533
TOWN METER	55-0135-99	75,900	2.00	\$566	\$458	\$480	\$501	11.4%	\$523
TOWN METER	55-0315-99	74,520	2.00	\$557	\$451	\$472	\$493	11.3%	\$514
TITAN CORRUGATED INC	86-9195-99	72,027	2.00	\$540	\$439	\$459	\$480	11.2%	\$500
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4042-99	69,022	1.50	\$477	\$381	\$400	\$419	12.1%	\$438
AZURE LAKESIDE	86-3566-99	68,085	1.00	\$434	\$340	\$359	\$378	13.1%	\$397
TOWN METER	55-0225-99	67,160	2.00	\$508	\$415	\$434	\$453	11.0%	\$471
TAF DALLAS INDUSTRIAL PORTIFOLIO LP	86-4041-99	66,189	1.50	\$458	\$367	\$385	\$403	12.0%	\$422
TOWN METER	86-0430-99	63,200	2.00	\$483	\$396	\$413	\$431	10.8%	\$448
SCG LAKESIDE COMMERCE CENTER	86-4270-99	56,408	2.00	\$438	\$362	\$378	\$393	10.4%	\$408
AZURE LAKESIDE	86-3520-99	47,556	0.75	\$280	\$219	\$231	\$243	13.2%	\$255
AZURE LAKESIDE	86-0940-99	45,386	0.75	\$267	\$209	\$221	\$232	13.1%	\$244
TOWN METER	86-0385-99	42,508	1.00	\$273	\$218	\$229	\$240	11.9%	\$251
GREYSTAR DEV	86-0970-99	39,614	1.00	\$256	\$206	\$216	\$226	11.7%	\$236
TOWN METER	55-0345-99	37,580	2.00	\$324	\$277	\$286	\$296	8.7%	\$305
TOWN METER	86-0631-99	28,546	1.00	\$191	\$157	\$164	\$171	10.6%	\$178
ONCOR ELECTRIC DEELIVERY	86-3915-99	26,967	2.00	\$262	\$230	\$237	\$243	7.2%	\$249
LAKESIDE DFW RETAIL	86-3186-99	24,747	1.00	\$169	\$141	\$146	\$152	10.1%	\$158
AZURE LAKESIDE	86-3573-99	23,948	1.00	\$164	\$137	\$143	\$148	9.9%	\$153
TOWN METER	86-0570-99	23,000	2.00	\$239	\$213	\$218	\$223	6.5%	\$228
TOWN METER	86-0655-99	18,526	1.00	\$133	\$113	\$117	\$121	8.7%	\$125
AZURE LAKESIDE	86-3574-99	17,689	0.75	\$106	\$88	\$92	\$95	10.2%	\$99
TOWN METER	86-0410-99	15,900	2.00	\$197	\$182	\$185	\$188	4.7%	\$191
GREYSTAR DEV	86-5480-99	15,030	0.75	\$91	\$76	\$79	\$82	9.4%	\$85
AZURE LAKESIDE	86-3246-99	13,986	0.75	\$85	\$72	\$75	\$77	9.0%	\$80

Customer	Meter Number	Average Consumption (gal per month)	Meter Size (inch)	Est. Avg Potable Monthly Water Bill (2018 \$)	75% of Potable Charge	80% of Potable Charge	85% of Potable Charge		90% of Potable Charge
					Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	Est. Avg Reuse Monthly Water Bill (2018 \$)	% Decrease	Est. Avg Reuse Monthly Water Bill (2018 \$)
KOHLER CO	86-3510-99	13,793	2.00	\$186	\$173	\$176	\$178	4.1%	\$181
GREYSTAR DEV	86-5470-99	12,603	0.75	\$78	\$67	\$69	\$71	8.5%	\$74
IPT LAKESIDE CORPORATE CENTER	86-5973-99	6,757	2.00	\$154	\$149	\$150	\$151	1.8%	\$152
AZURE LAKESIDE	86-3370-99	4,820	0.75	\$45	\$42	\$43	\$43	3.7%	\$44
TOWN METER	55-0035-99	2,300	4.00	\$384	\$384	\$384	\$384	0.0%	\$384
TOWN METER	55-0255-99	1,300	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER (NEW)	55-0735-99	200	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	55-0325-99	36	0.75	\$34	\$34	\$34	\$34	0.0%	\$34
LIT HW1 LP	86-6017-99	4	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
GREYSTAR DEV	86-3523-99	0	1.00	\$56	\$56	\$56	\$56	0.0%	\$56
TOWN METER (NEW)	55-0725-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	86-0585-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	55-0145-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	86-0420-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	55-0175-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	86-0405-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	86-0395-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
TOWN METER	86-0580-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
GREYSTAR DEV	86-3521-99	0	1.00	\$56	\$56	\$56	\$56	0.0%	\$56
TOWN METER	86-0322-99	0	2.00	\$136	\$136	\$136	\$136	0.0%	\$136
GREYSTAR DEV	86-3393-99	0	1.00	\$56	\$56	\$56	\$56	0.0%	\$56
GREYSTAR DEV	86-3394-99	0	1.00	\$56	\$56	\$56	\$56	0.0%	\$56

Payback Year, Interest Rate 1.5%					
		Percent of Potable Charge for Reuse Water			
		75%	80%	85%	90%
Principal Forgiveness - Over Entire Project Capital	0%	2043	2041	2039	2037
	5%	2042	2039	2037	2035
	10%	2040	2037	2035	2033
	20%	2035	2033	2030	2027
	30%	2030	2027	2026	2025

Payback Year, Interest Rate 2.0%					
		Percent of Potable Charge for Reuse Water			
		75%	80%	85%	90%
Principal Forgiveness - Over Entire Project Capital	0%	2044	2043	2041	2039
	5%	2043	2041	2039	2037
	10%	2042	2039	2037	2035
	20%	2037	2035	2032	2029
	30%	2032	2028	2027	2026

Payback Year, Interest Rate 3.5%					
		Percent of Potable Charge for Reuse Water			
		75%	80%	85%	90%
Principal Forgiveness - Over Entire Project Capital	0%	2047	2046	2044	2043
	5%	2046	2045	2043	2042
	10%	2045	2044	2042	2040
	20%	2043	2040	2038	2035
	30%	2038	2035	2032	2029



TOWN COUNCIL AGENDA ITEM NO. 13

REGULAR ITEM

DATE: October 15, 2018

FROM: Chuck Russell, Town Planner

ITEM: **Consider a request for a Site Plan (SP18-0010 - Fire Station No. 7) to develop a fire station with certain waivers and exceptions to the Code of Ordinances. The property is generally located west of Skillern Road and north of Wichita Trail. (*The Planning and Zoning Commission recommended approval by a vote of 6-0 at its October 8, 2018, meeting.*)**

BACKGROUND INFORMATION: Attached is the Planning and Zoning Commission (P&Z) report and backup for this item. In consideration of concerns raised during the public hearing, the P&Z recommendation included amending the landscape plan to increase the number of evergreen buffer trees. The revised landscape plan incorporating these trees is included as Attachment 2.

ATTACHMENTS:

1. Planning and Zoning Commission Staff Report
2. Updated Landscape Plan

LEGAL REVIEW: N/A

DRAFT MOTION: Move to approve as presented in the agenda caption with the inclusion of the updated Landscape Plan depicted in Attachment 2.



PLANNING AND ZONING COMMISSION AGENDA ITEM NO: 3

DATE: October 8, 2018

FROM: Chuck Russell, Town Planner

ITEM: **Consider a request for a Site Plan (SP18-0010 - Fire Station No. 7) to develop a fire station with certain waivers and exceptions to the Code of Ordinances. The property is generally located west of Skillern Road and north of Wichita Trail.**

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 waiver and exception requests to the Town's regulations which necessitates special consideration by the Commission (see Analysis below).

This application will require final action by the Town Council.

II. APPLICATION ANALYSIS

The purpose of this request is to obtain site plan approval for the Town's Fire Station No. 7. The subject property contains 1.02 acres and is zoned Single-Family Estate (SF-E) and is located on a platted lot (Lot 40, Block F of the River Oaks Estates Subdivision). There are single family residential uses to the west, north and east of the site across Skillern Road. Coram Deo School is located south of the site.

The applicant is proposing to construct a 9,870 square foot fire station with two points of access on Skillern Road (see driveway spacing waiver request below). The maximum permitted height within the SF-E district is 35 feet measured to highest point of the flat roof surface or to the mid-point of a pitched roof. The facility contains a pitched roof with a peak height of 37.5 feet. The mid-point of the pitch is 30 feet in height which is in compliance with the Town's regulations. The applicant is requesting an exception to Section 82-303, "Compatibility setback" of the Code of Ordinances (see below)

The Town's Code of Ordinances does not have a standard parking requirement for fire stations. Required parking for a fire station is therefore determined by Town staff, which is 14 spaces in this case (14 spaces are being provided). The landscape plan depicts required number of buffer trees, parking lot trees and street yard trees. However, the applicant is requesting an exception to Section 82-302, "Compatibility buffer" of the Code of Ordinances (see below). The building materials and architecture meet the architectural standards outlined in the Urban Design Plan.

A. Exception to Section 82-302, Compatibility Buffer

The residential compatibility standards apply when a nonresidential or multi-family development is proposed adjacent to an existing residential use or zoning, or designated for residential use on the comprehensive master plan. The proposed development shares a boundary with property zoned for single family uses on three sides (north, west and south).

A brick wall or masonry wall with stucco or mortar wash finish, both exterior finishes being the same, is required to be constructed along the property line. Such walls shall have no vehicular access point into or from an alley and shall be a minimum of six feet in height, except that the first 25 feet in from the street line may be stepped down to a minimum height of four feet. For nonresidential and multi-family development (except for churches or schools), the landscaped setback shall consist of a minimum 25-foot landscaped buffer. Understory plants shall be provided in order to achieve a continuous dense six-foot screen. Native shade trees, a minimum of three-inch caliper each, shall be provided at a ratio of one tree per 400 square feet of buffer area.

Due to the size of the site and operational requirements of the facility, the applicant is requesting a complete waiver to the compatibility buffer requirements along the southern property line adjacent to Coram Deo School. The applicant is proposing to located portions of the HVAC unit and retaining walls within the western buffer area as well as not planting any understory plants. Finally, the applicant is proposing to construct driveway paving, portions of parking spaces and retaining walls within the northern buffer area.

B. Exception to Section 82-303, Compatibility Setback

One-story, nonresidential or multifamily buildings, main or accessory, shall be set back from the property adjacent to an existing or proposed residential use 60 feet. Nonresidential or multifamily buildings, more than one story, main or accessory, shall be set back from the property line adjacent to an existing or proposed residential use five feet for every one foot of building height. As noted above (Compatibility Buffer exception) the zoning of the property to the north and east requires a compatibility setback.

Due to the size of the site and operational requirements of the facility, the applicant is proposing a 40-foot setback from the western property boundary.

C. Exception to Chapter 32, Access Management Policy and Criteria

The Engineering Design Criteria and Construction Standards adopted through Chapter 32 of the Code of Ordinances requires driveway spacing along Skillern Road (Rural Collector) to be a minimum 250 feet between drive approaches (inside edge to inside edge). The requested exception is needed for the distance between the facilities' two driveways (proposed distance is 180 feet) as well as the distance between the proposed southern driveway and the driveway to Coram Deo School to the south (approximately 230 feet).

On September 12, 2018, the Board of Adjustment held a public hearing and approved a request from The Town of Flower Mound for a variance from Sec. 98-1026, "Minimum front yard setback" and Section 98-1142, "Front Yard Fence Height and Visibility," of the Code of Ordinances. The first variance allows the proposed fire station to encroach over the required 40-foot front setback by 10 feet. The second variance allows a 6-foot-tall tall masonry screen wall, gate, and wood fence to be constructed within the required front yard (fence height is limited to 4-feet-tall within the front yard).

The link to the September 12, 2018, Board of Adjustment meeting is:

<http://flowermoundtx.swagit.com/play/09122018-1228/5/>

III. CORRESPONDENCE

As required by the Town Code, a notice was sent to all adjacent property owners and adjacent homeowners' associations no less than ten days prior to the consideration of a site plan containing a modification or waiver of the compatibility buffer and compatibility setback requirements. At the time this report was written, the Town had not received any correspondence or phone calls regarding the requests. All correspondence received will be sent directly to the Planning and Zoning Commission according to the new public communication process.

IV. ATTACHMENTS

A. Background Information

1. Vicinity Map
2. Letter of Intent

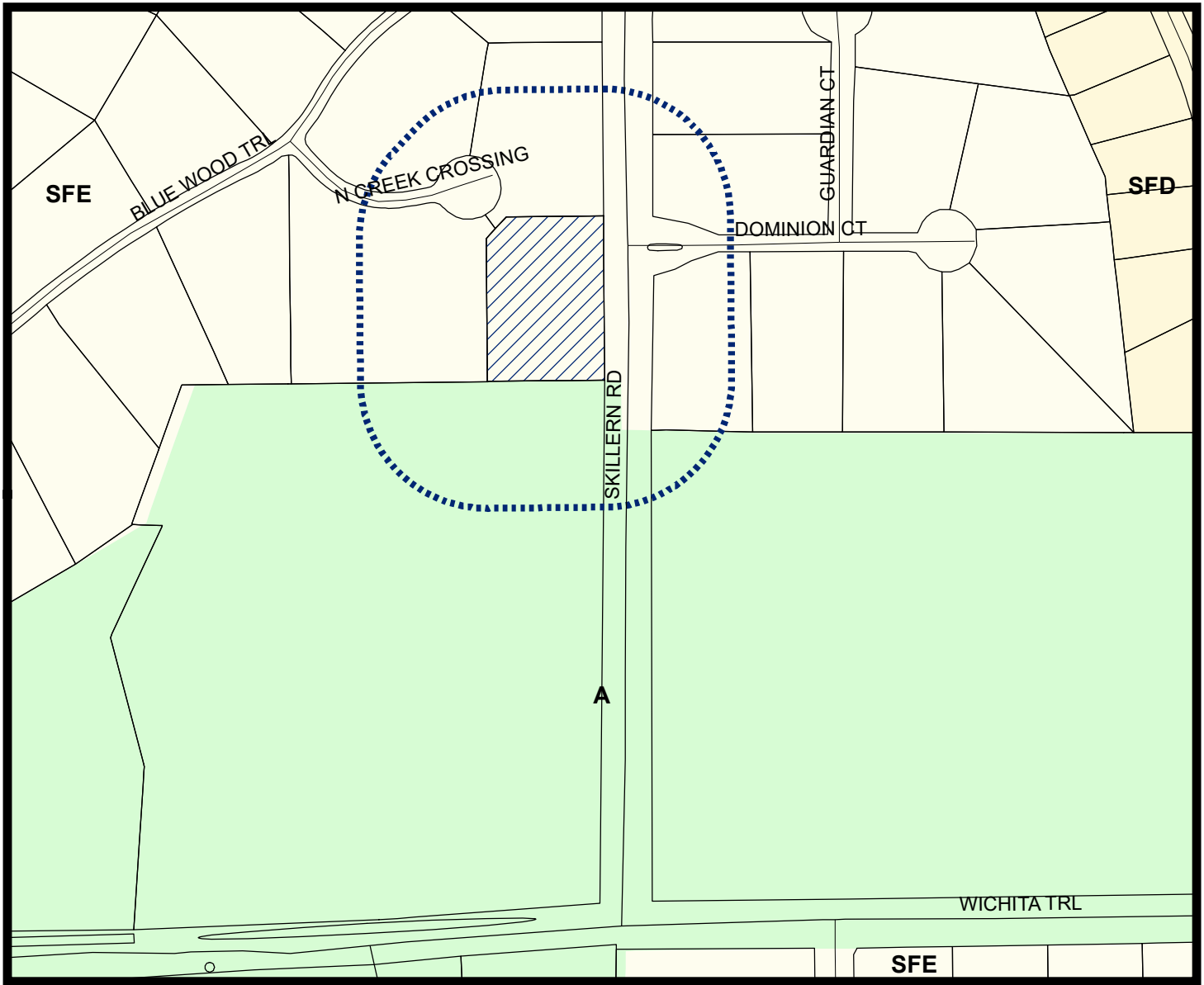
B. Application Details

1. Site Plan Package



Vicinity Map

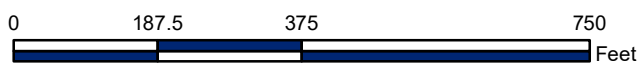
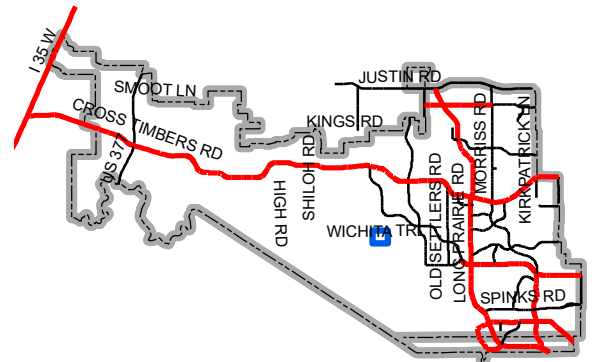
Reference Project: SP18-0010



LEGEND

- Agriculture
- Single Family Density
- Single Family Estate

- Subject Property
- 200 ft Notification Buffer around Property



Map Location

Attachment A(2): Letter of Intent

BROWN REYNOLDS WATFORD
ARCHITECTS



3535 TRAVIS STREET
SUITE 250
DALLAS, TEXAS 75204
214-528-8704
WWW.BRWARCH.COM

LETTER OF INTENT

DATE: July 13, 2018
TO: Town of Flower Mound
Planning Services Division
FROM: Carol Kesler, AIA
Project Architect
RE: Flower Mound Fire Station 7
BRW PROJECT NO: 218008.00

CC: David Bauer
File

MESSAGE:

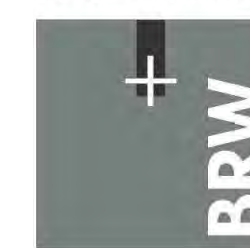
The proposed new Fire Station for the flower mound Fire Department at 2701 Skillern Boulevard includes:

- Existing Zoning District: Single Family Estates (SFE). No change proposed.
- Property Acreage: 1.02 acre
- Operations: Single use - Flower Mound Fire Station No. 7
- Proposed Building Area: First Floor – 9,120 SF, Mezzanine – 750 SF
- Development Phasing: No phasing planned
- Exceptions requested include:
 1. The distance between driveways is currently at 180' from the inside edge of each driveway. 200' is not obtainable with the required driveway widths.
 2. Proposed building is 7' within 40' front setback. Due to the existing slope of the site, and the required minimal paving slope for the fire apparatus, being closer to the street enables area for the terraced gravity retaining walls at the west side of the site while minimizing the amount of fill and paving required.
 3. Paving is included within the 25' required landscape buffer at the north parking lot. Refer to Sheet AS1.1 for required turning radius for fire apparatus.
 4. The existing 6' masonry wall with a maintenance easement is being retained, so the 6' perimeter landscape shrubs are being excluded.

Thank you,


Carol Kesler, AIA

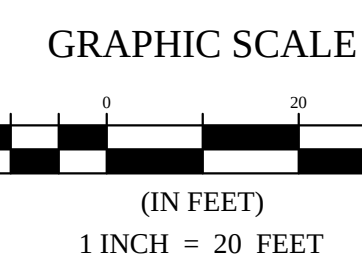
**BROWN REYNOLDS WATFORD
ARCHITECTS**
3535 TRAVIS STREET
SUITE 250
DALLAS, TEXAS 75204
214-528-8704
WWW.BRWARCH.COM



**TOWN OF FLOWER
MOUND
FIRE STATION NO 7**
2701 SKILLERN BLVD.
FLOWER MOUND, TX 75028

[illegible]

C1.01



LEGEND

Legend:

- BOUNDARY / PROPERTY LINE
- EASEMENT LINE
- BUILDING SETBACK
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- PROPOSED FIRE LANE

PROJECT SUMMARY

PROJECT NAME:	FIRE STATION NO. 7
LLEGAL DESCRIPTION:	LOT 40, BLOCK F, RIVER OAK ESTATES
SITE ADDRESS:	2701 SKILLERN BOULEVARD, FLOWER MOUND, TEXAS
ZONING:	SINGLE FAMILY ESTATES (SFE)
PROPOSED USE:	FIRE STATION
GROSS LOT AREA:	1.02 ACRES
PROPOSED BUILDING FOOTPRINT:	8,974 SQ.FT.
FIRST FLOOR:	9,120 SQ.FT.
MEZZANINE:	750 SQ.FT.
TOTAL BUILDING AREA:	9,870 SQ.FT.
BUILDING HEIGHT:	30 FEET
BUILDING STORIES	1 STORY
IMPERVIOUS SURFACE	8,974 SF (20.2% LOT)

PARKING SUMMARY

PROVIDED PARKING = 14 SPACES
REQUIRED ACCESSIBLE SPACES = 2 SPACES
PROVIDED ACCESSIBLE SPACES = 2 SPACES

NOTES

1. ALL DIMENSIONS ARE TO PROPERTY LINE, EASEMENT LINE, BUILDING FACE, OR FACE OF CURB UNLESS NOTED OTHERWISE.
2. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
3. MECHANICAL AND ELECTRICAL EQUIPMENT, INCLUDING AIR CONDITIONING UNITS, SHALL BE DESIGNED, INSTALLED AND OPERATED TO MINIMIZE NOISE IMPACT ON SURROUNDING PROPERTIES. ALL SUCH EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW.
4. ALL RETAINING/DRAINAGE WALLS, TURN-DOWN CURBS, TREE RETAINING WALLS SHALL BE MADE OF MATERIAL TO COMPLEMENT THE MATERIALS AND COLORS WITHIN THIS DEVELOPMENT.
5. ALL GROUND BASED HVAC SHALL BE SCREENED WITH LINE SCREENING OR MASONRY ENCLOSURE. ALL MASONRY ENCLOSURE SHALL BE CLAD IN THE SAME MATERIAL AS THE MAIN BUILDING.
6. ALL ROOF-MOUNTED MECHANICAL UNITS AND/OR EQUIPMENT SHALL BE SCREENED FROM VIEW.
7. SIGNS REQUIRE A SEPARATE BUILDING PERMIT. ANY SIGNS DEPICTED ON THE SUBJECT SITE PLAN/ELEVATIONS ARE NOT APPROVED AS A PART OF THIS REVIEW AND MUST COMPLY WITH ALL APPLICABLE REGULATORY REQUIREMENTS.

REV.	REV. DATE	DESCRIPTION	SCALE	AS SHOWN
			DESIGNED BY: MAC	
			DRAWN BY: JYM	
			CHECKED BY: JYM	
			DATE: SEPTEMBER 28, 2018	
			PROJECT NO.: 14-09-00	

PLANT LIST						
QUANTITY	COMMON NAME	BOTANICAL NAME	CAL.	HT.	SPREAD	CONT.
CANOPY TREES						
5	CEDAR ELM	ULMUS CRASSIFOLIA	3"	12' MIN.	10'-12'	1MB / CONT.
5	RED OAK	QUERCUS TEXANA	3"	12' MIN.	10'-12'	1MB / CONT.
5	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	3"	12' MIN.	10'-12'	1MB / CONT.
5	TEXAS ASH	FRAXINUS TEXENSIS	3"	12' MIN.	10'-12'	1MB / CONT.
5	LACEBARK ELM	ULMUS PARVIFOLIA	3"	12' MIN.	10'-12'	1MB / CONT.
ORNAMENTAL TREES						
3	TEXAS REDBUD	CERCIS CANADENSIS VAR. TEXENSIS	-	6" MIN.	9'-7'	1MB / CONT.
SHRUBS / PERENNIALS						
20	AUTUMN SAGE	SALVIA DREGGII	-	18"-24"	18"-24"	3 GAL.
56	THUNDER CLOUD™ TEXAS SAGE	DISCOTRIELUM CANADICUM THUNDER CLOUD™	-	18"-24"	18"-24"	5 GAL.
12	PROSTRATE ROSEMARY	ROSEMARINUS PROSTRATUS	-	12"	12"	3 GAL.
7	BRAKELIGHTS YUCCA	HESPERALOE PARVIFLORA YUCCA PLANT PATENT #21,129	-	6"-9"	18"	5 GAL.
11	DWARF CRAFTSMYRTLE	LACERNA INDICA "SACRAMENTO"	-	18"-24"	18"-24"	5 GAL.

GROUND COVER						
804	BIG BLUE LIRIOPE	LIRIOPE MUSCARI 'BIG BLUE'	-	-	-	1 GAL.
6	SALVIA	SALVIA X SYLVESTRIS 'MAY NIGHT'	-	2'-9"	12"	1 GAL.
TURF GRASS						
10,135 SF	COMMON BERMAUDA GRASS SOD	CYNODON DACTYLON	HAND-LAID SOD PANELS			
OTHER						
250 LF	BED EDGING	STEEL	GREEN			INSTALL 1" ABOVE ADJACENT GRADE
4,721 SF	RIVER COBBLE	BRAZOS RIVER ROCK				
1,399 SF	RIVER COBBLE	TEXAS COBBLE BASKETS				
1,546 SF	HARDWOOD MULCH					
321 SF	DECOMPOSED GRANITE					

PLANT SYMBOL LEGEND

CANOPY TREES

- TEXAS RED OAK
- SOUTHERN LIVE OAK
- TEXAS ASH
- CEDAR ELM
- LACEBARK ELM

ACCENT TREES

- TEXAS REDBUD

TURF

- BERMUDA GRASS SOD

GROUND COVER

- BIG BLUE LIRIOPE

SHRUBS & PERENNIALS

- AUTUMN SAGE
- DWARF CRAFTSMYRTLE
- TEXAS SAGE
- ROSEMARY
- SALVIA

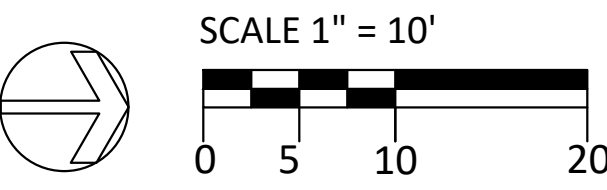
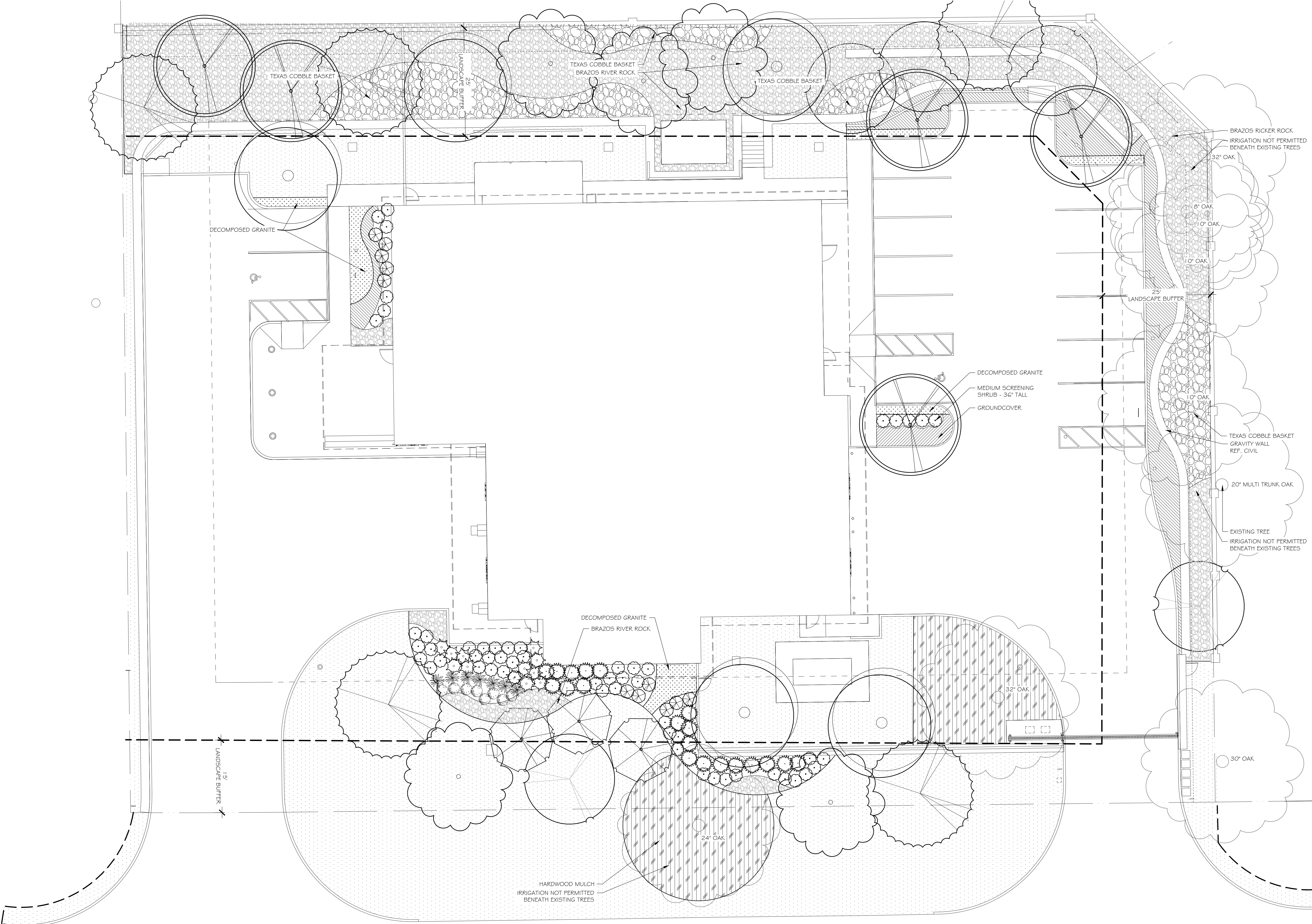
OTHER

- BRAZOS RIVER ROCK
- TEXAS COBBLE BASKETS
- DECOMPOSED GRANITE
- HARDWOOD MULCH
- LANDSCAPE EDGE

GENERAL LANDSCAPE NOTES

- CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.
- LANDSCAPE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES. THE LANDSCAPE CONTRACTOR SHALL PROTECT ALL LANDSCAPE MATERIALS FROM DAMAGE. DAMAGED PLANT MATERIAL SHALL BE REPLACED WITH SIMILAR VARIETIES AND SIZES IF DAMAGED, DESTROYED, OR LOST.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THE DRAWINGS.
- ALL SHRUB, GROUND COVER, PERENNIAL & SEASONAL BEDS SHALL HAVE A 2" THICK SHREDED HARDWOOD MULCH LAYER, UNLESS OTHERWISE NOTED. FINISHED LEVEL OF MULCH TO SIT 1" BELOW ADJOINING FINISHED HARDSCAPE AND LAWN LEVEL.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION, AND MUST BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE IF UNHEALTHY, DAMAGED, DESTROYED, OR OTHERWISE REMOVED.
- STRUCTURAL AND HARDSCAPE WORK SHALL BE INSTALLED PRIOR TO PLANTING INSTALLATION.
- LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS AT ALL TIMES DURING CONSTRUCTION.
- PLANT SPACING IS AS INDICATED ON THE 'PLANT SCHEDULE' UNLESS OTHERWISE NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE REMARKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT AN INDEPENDENT TAKE-OFF TO VERIFY SIZES AND QUANTITIES OF PLANT MATERIALS SHOWN.
- AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO IRRIGATE ALL TURF AND LANDSCAPE BED AREAS AND SHALL BE OPERATIONAL AT THE TIME OF PLANT MATERIAL INSTALLATION. OVERSPRAY ON STREETS AND WALKS IS PROHIBITED. ALL WORK ON THE IRRIGATION SYSTEM, INCLUSIVE OF HYDROSTATIC COVERAGE AND OPERATIONAL TESTS SHALL BE COMPLETED PRIOR TO PLANTING INSTALLATION.
- ALL TREES PLANTED NEAR CURBS SHALL BE PLACED AT LEAST 6' CLEAR FROM THE CURB FACE UNLESS OTHERWISE NOTED. REFERENCE CITY LANDSCAPE NOTES FOR OTHER REQUIREMENTS.
- ALL EXISTING LANDSCAPE TO BE REMOVED WHERE PROPOSED LANDSCAPE IS SHOWN UNLESS NOTED ON PLANS.
- SOLID SOD ALL AREAS DISTURBED BY CONSTRUCTION.
- REFER TO ARCHITECTURE SHEETS FOR MASONRY SCREEN WALL DETAILS.
- REFER TO ARCHITECTURE SHEETS FOR PROPOSED GRADING.

STREET YARD LANDSCAPING			
STANDARD	AREA / MEASUREMENT	REQUIRED	PROVIDED
MIN. 20% OF STREET YARD	8,661 SF	1,732 SF	5,727 SF OR 66%
STREET YARD LANDSCAPING			
<10,000 SF = 1 PER 1,000 SF	8,661 SF	9 TREES	9 TREES
STREET BUFFER LANDSCAPING			
SKILLERN BLVD.	NA	15'	15'
STREET BUFFER TREES			
1 PER 30 LF	250 LF	8 TREES	8 TREES
PARKING AREA LANDSCAPING			
90 SF PER 12 SPACES	14 SPACES	90 SF	713 SF
PARKING AREA TREES			
1 PER 10 PARKING SPACES	14 SPACES	1 TREE	1 TREE
ALL PARKING SPACES ARE LOCATED WITHIN 50 FT OF A TREE			
COMPATIBILITY BUFFER LANDSCAPING			
CONTINUOUS LANDSCAPE SCREEN ADJACENT TO RESIDENTIAL LOTS	NA	NA	NA
COMPATIBILITY BUFFER TREES			
1 SHADE TREE PER 400 SF OF BUFFER AREA	8,904 SF	22 TREES	22 TREES



LANDSCAPE PLAN

SITE PLAN

BROWN REYNOLDS WATFORD ARCHITECTS
3533 TRAVIS STREET
SUITE 250 TEXAS 76204
214.278.8704
WWW.BRWARCH.COM

INTERIM REVIEW DOCUMENTS
NOT INTENDED FOR BIDDING OR CONSTRUCTION PURPOSES

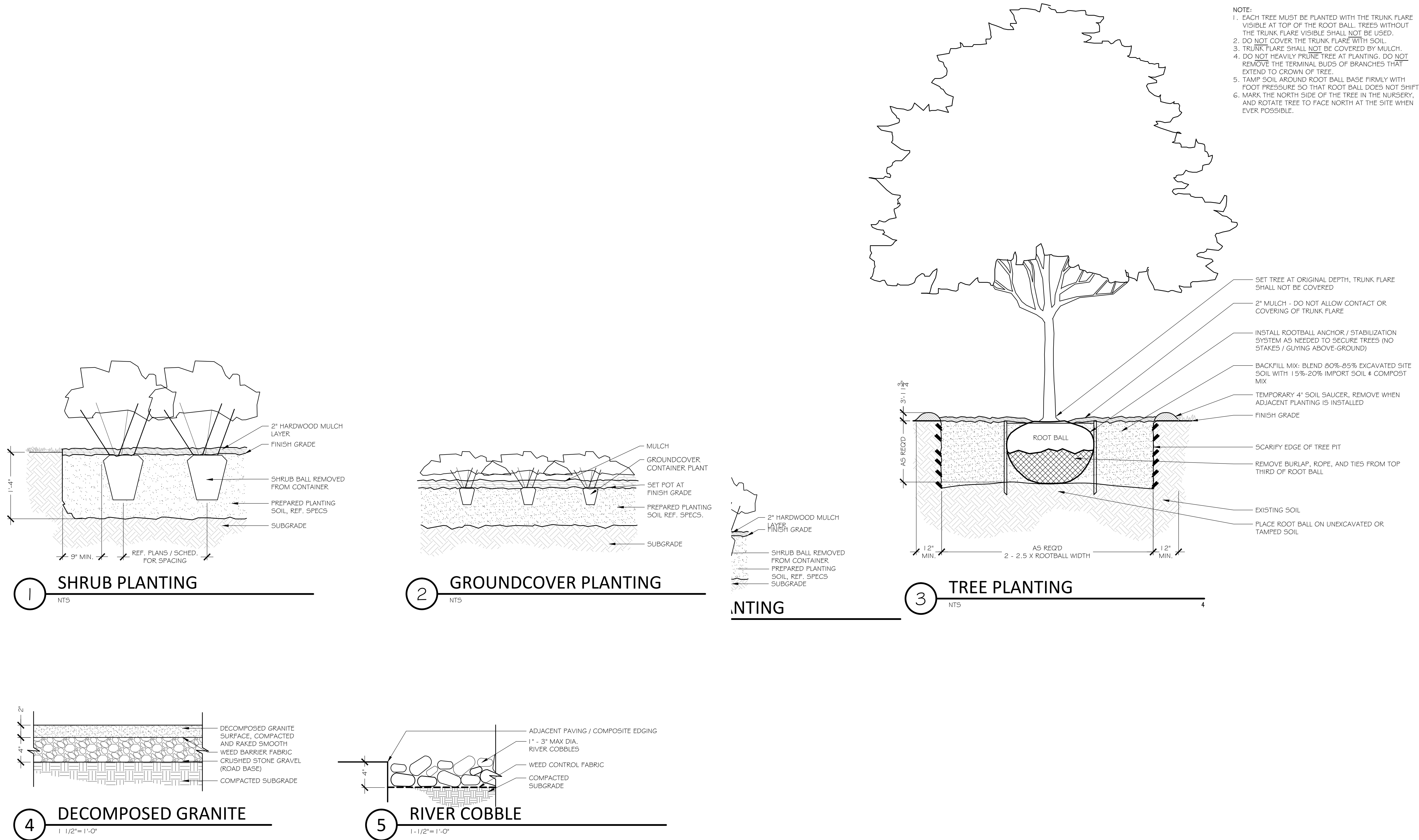
DAVID MCCASKILL DESIGN GROUP
620 East Southlake Blvd
Southlake, TX 76092

COPYRIGHT © 2016
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 08.03.18
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 21800800

**TOWN OF FLOWER MOUND
FLOWER MOUND NO 7
FIRE STATION NO 7**
2701 SKILLERN BLVD.
FLOWER MOUND, TX 75028

NO.	REVISION	DATE

L1.0
LANDSCAPE PLANS AND DETAILS



BROWN REYNOLDS WATFORD ARCHITECTS
3532 TRAVIS STREET
SUITE 2500
DALLAS, TEXAS 75204
214.278.8704
WWW.BRWARCH.COM

BRW

INTERIM REVIEW DOCUMENTS NOT INTENDED FOR BIDDING OR CONSTRUCTION PURPOSES

DAVID McCASKILL DESIGN GROUP
620 East Southlake Blvd
Southlake, TX 76092

COPYRIGHT © 2016
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 08.03.18
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 21800800

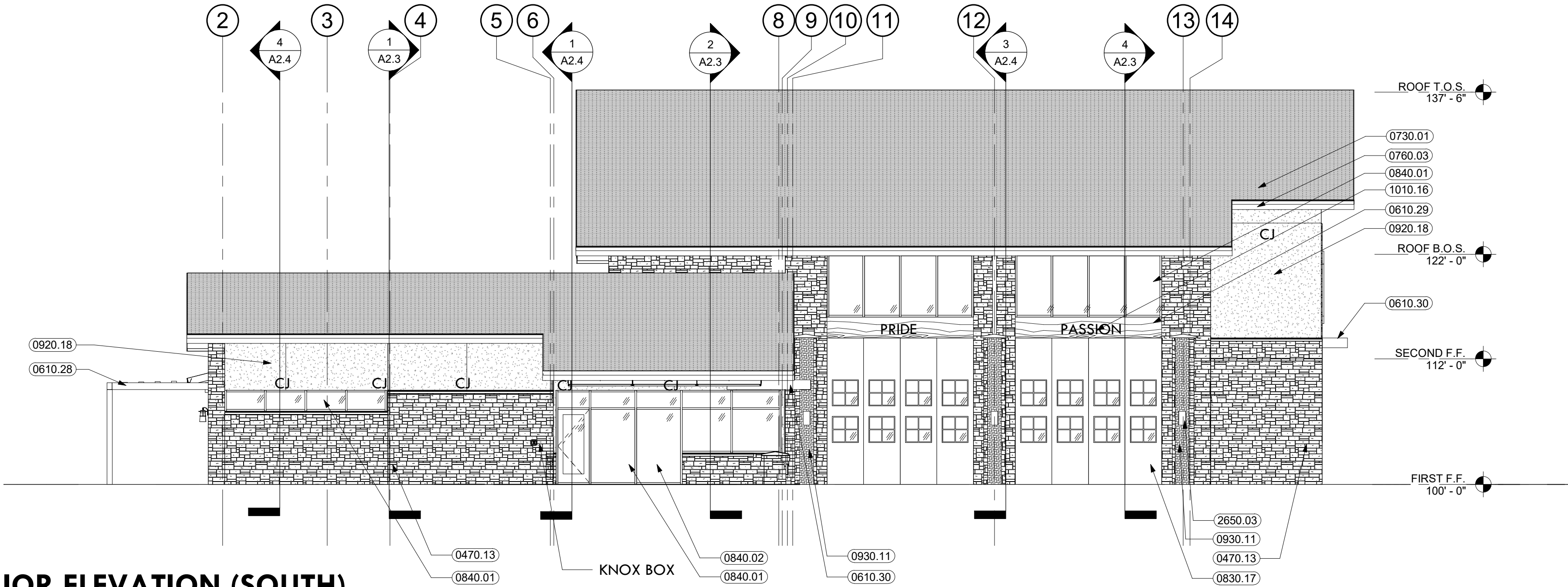
**TOWN OF FLOWER MOUND
FLOWER MOUND NO 7
FIRE STATION NO 7**
2701 SKILLERN BLVD.
FLOWER MOUND, TX 75028

NO.	REVISION	DATE

L2.0
LANDSCAPE PLANS AND DETAILS

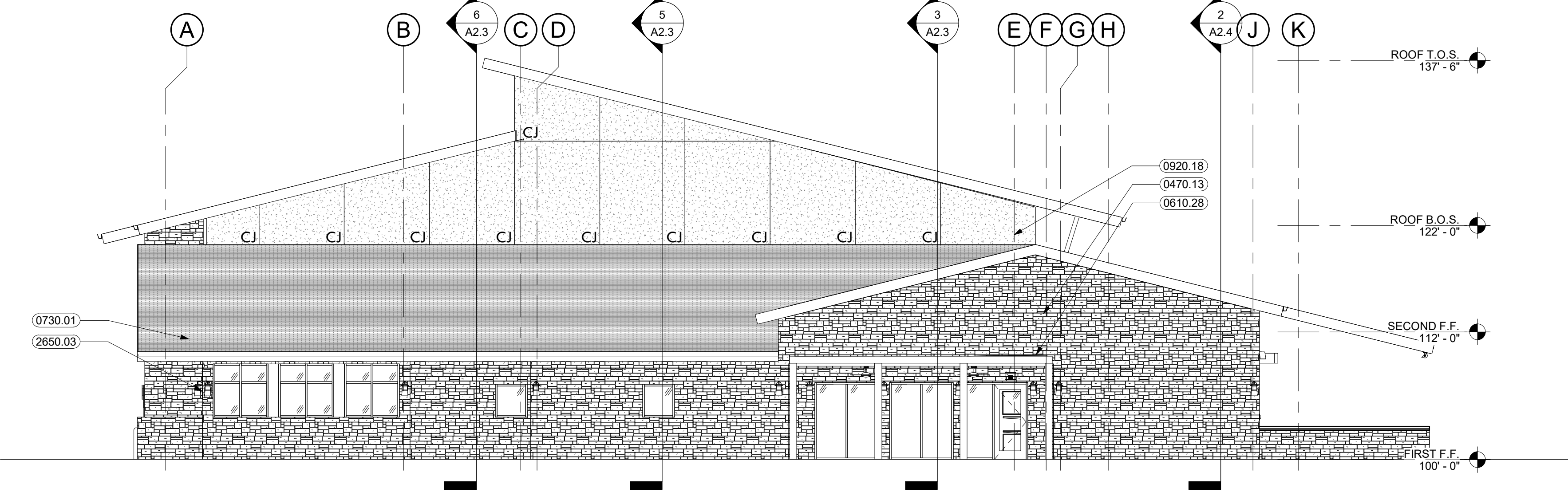
		NORTH	SOUTH	EAST	WEST
1.	TOTAL FACADE S.F.	2,580 S.F.	1,955 S.F.	2,880 S.F.	2,207 S.F.
2.	FACADE S.F. (EXCLUSIVE OF DOORS AND WINDOWS)	1,783 S.F.	1,205 S.F.	2,715 S.F.	1,956 S.F.
3.	DOORS WINDOWS S.F.	797 S.F. and 30%	750 S.F. AND 39%	166 S.F. AND 5%	251 S.F. AND 12%
4.	PRIMARY MASONRY TOTALS (MIN. 80%)	1,551 S.F. AND 86%	1,031 S.F. AND 85%	2,535 S.F. AND 93%	1,936 S.F. AND 96%
	• STONE S.F. (AS APPLICABLE)	888 S.F. AND 35 %	751 S.F. AND 39%	2,093 S.F. AND 72%	1096 S.F. AND 49%
	• *STUCCO S.F. (AS APPLICABLE)	663 S.F. AND 25%	275 S.F. AND 14%	463 S.F. AND 15%	651 S.F. AND 29%
5.	SECONDARY MASONRY TOTALS (MAX.20%)	232 S.F. AND 14% OF 2	174 S.F. AND 15% OF 2	180 S.F. AND 7% OF 2	20 S.S.F. AND 2% OF 2
	• FASCIA S.F. (AS APPLICABLE)	176 S.F. AND 7%	111 S.F. AND 3%	159 S.F. AND 8%	209 S.F. AND 10%
	• CEDAR WOOD TRIM (AS APPLICABLE)	56 S.F. AND 2%	63 S.F. AND 3%	21 S.F. AND 1%	-

*NOTE: PER PARAGRAPH 5.3 OF THE URBAN DESIGN, THE MAXIMUM PERCENTAGE OF STUCCO ALLOWED ON ANY BUILDING ELEVATION SHALL BE 80%. IF THE ENTIRE 80% PRIMARY MASONRY ON A BUILDING ELEVATION CONSISTS OF STUCCO, THEN THE REMAINING 20% ON THE SAME BUILDING ELEVATION SHALL BE LIMITED TO HAND- LAID BRICK OR STONE.



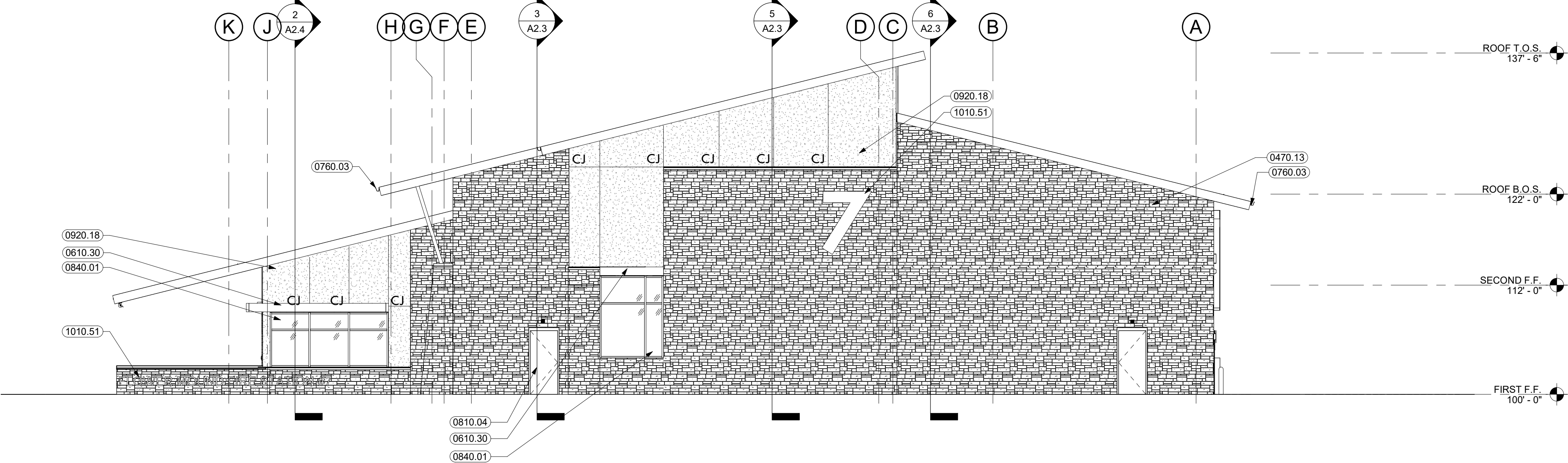
1 EXTERIOR ELEVATION (SOUTH)

1/8" = 1'-0"



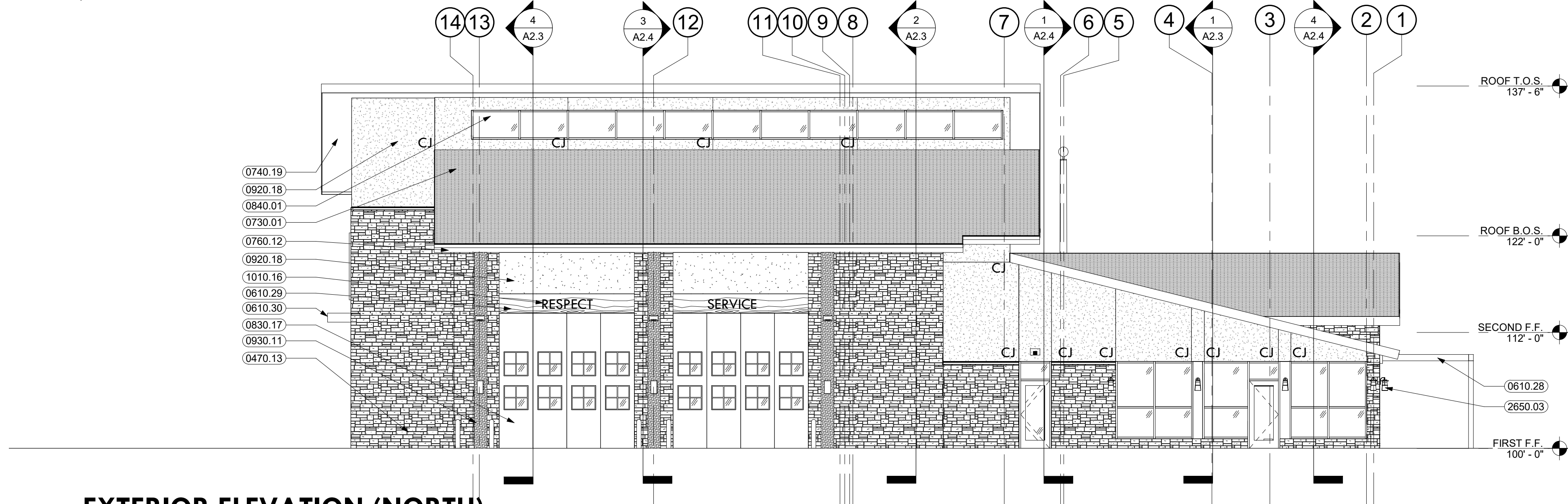
2 EXTERIOR ELEVATION (WEST)

1/8" = 1'-0"



3 EXTERIOR ELEVATION (EAST)

1/8" = 1'-0"



4 EXTERIOR ELEVATION (NORTH)

1/8" = 1'-0"

KEYNOTES

- 0470.13 MANUFACTURED STONE
- 0610.28 CEDAR TRIM
- 0610.29 CEDAR TRIM
- 0610.30 Louvered Cedar Sunscreen
- 0730.01 COMPOSITION SHINGLES
- 0740.19 FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL
- 0760.03 PREFINISHED METAL GUTTER
- 0760.12 PREFINISHED METAL CANOPY GUTTER / FASCIA
- 0810.04 HOLLOW METAL DOOR AND FRAME
- 0830.17 SECTIONAL DOOR
- 0840.01 ALUMINUM STOREFRONT
- 0840.02 ALUMINUM STOREFRONT DOOR
- 0920.18 1" PORTLAND CEMENT STUCCO ON METAL LATH
- 0930.11 STONE TILE
- 1010.16 14" HIGH PIN-MOUNTED ALUMINUM SIGN LETTERS (DARK BRONZE FINISH)
- 1010.51 LED BACKLIT PIN-MOUNTED ALUMINUM SIGN (DARK BRONZE FINISH)
- 2650.03 SURFACE-MOUNTED LIGHT FIXTURE

BROWN REYNOLDS WATFORD ARCHITECTS
3333 TRAVIS STREET
SUITE 250
DALLAS, TEXAS 75204
214-528-8704
WWW.BRWARCH.COM



COPYRIGHT © 2018
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
JULY 10, 2018
DATE
DRAWN BY RF, CK
CHECKED BY SH, GDV
BRW PROJECT NUMBER 218008.00

**TOWN OF FLOWER MOUND
FIRE STATION NO 7**
2701 SKILLERN BLVD.
FLOWER MOUND, TX 75028

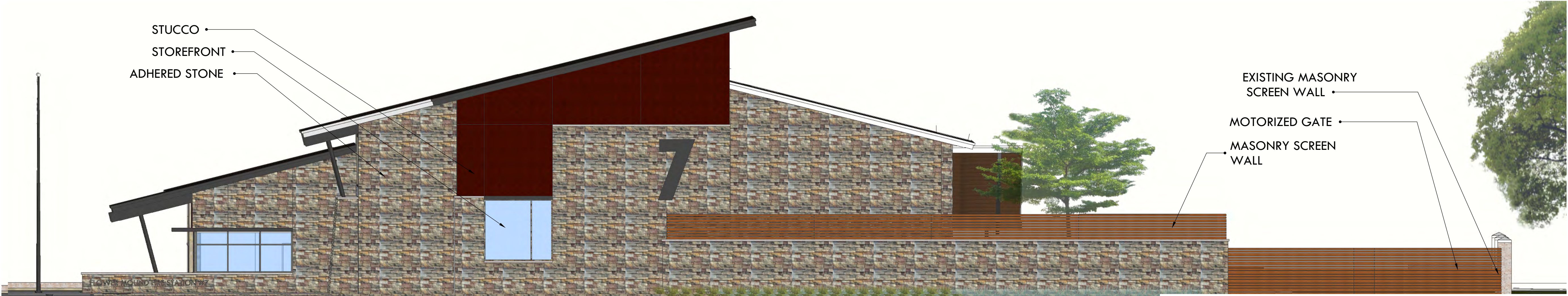
NO.	REVISION	DATE

A2.1



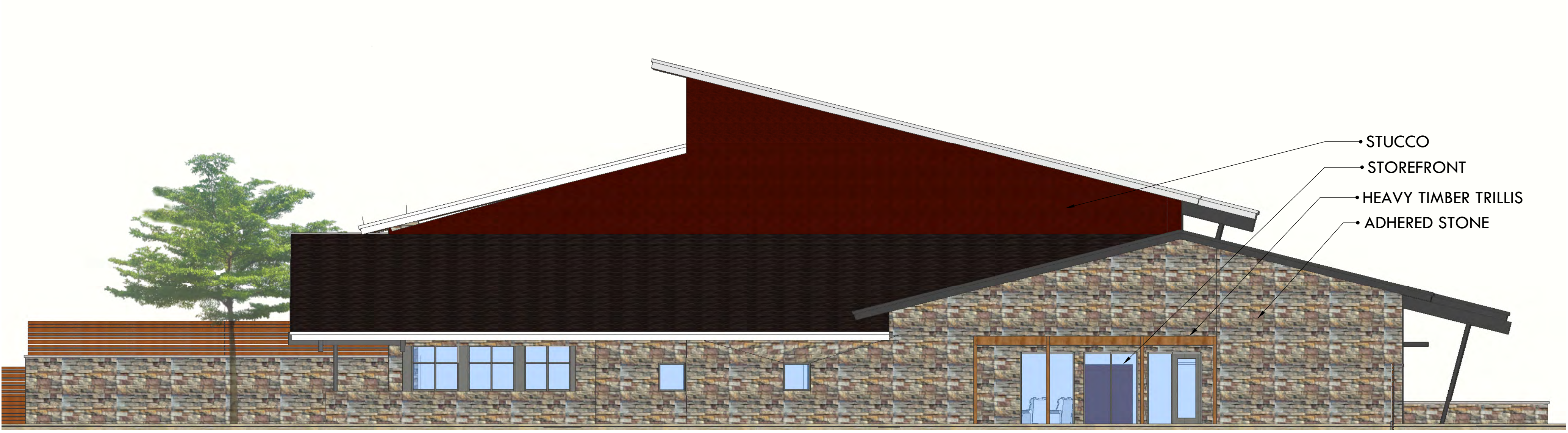
SOUTH ELEVATION

1/8" = 1'-0"



EAST ELEVATION

1/8" = 1'-0"



WEST ELEVATION

1/8" = 1'-0"



NORTH ELEVATION

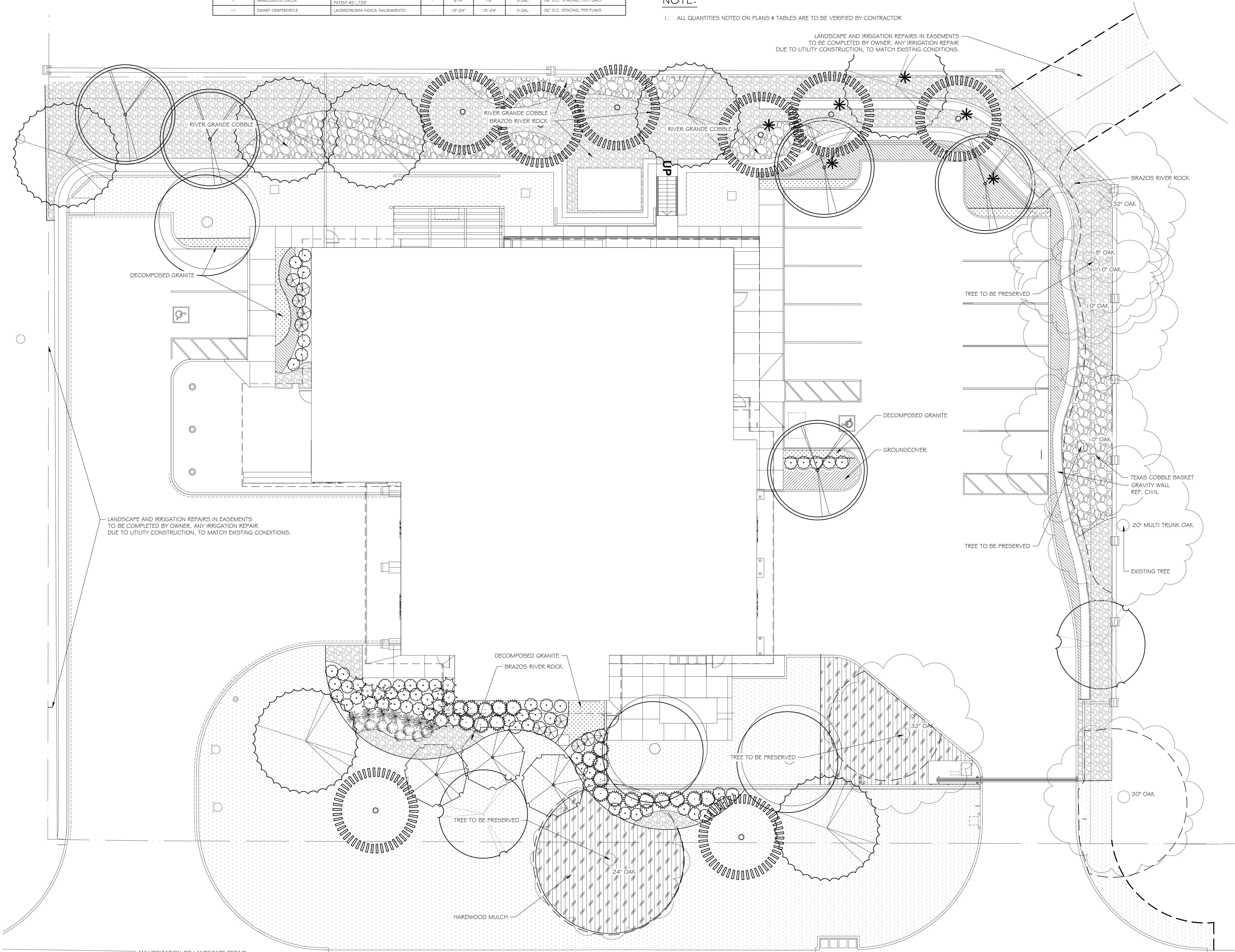
1/8" = 1'-0"

PLANT LIST							
QUANTITY	COMMON NAME	BOTANICAL NAME	CAL.	HT.	SPREAD	CONT.	REMARKS
CANOPY TREES							
5	CEDAR ELM	LIULIUS CRASSIFOLIA	3"	12' MIN.	10'-12'	1MB / CONT.	FULL & MATCHED, STRAIGHT TRUNK
2	RED OAK	QUERCUS TEXANA	3"	12' MIN.	10'-12'	1MB / CONT.	FULL & MATCHED, STRAIGHT TRUNK
7	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	3"	12' MIN.	10'-12'	1MB / CONT.	FULL & MATCHED, STRAIGHT TRUNK
5	TEXAS ASH	FRAXINUS TEXENSIS	3"	12' MIN.	10'-12'	1MB / CONT.	FULL & MATCHED, STRAIGHT TRUNK
6	LITTLE OLM DWARF SOUTHERN MAGNOLIA	MAGNOLIA GRANDIFLORA LITTLE OLM	3"	10'	6'-10'	1MB / CONT.	FULL & MATCHED, STRAIGHT TRUNK
ORNAMENTAL TREES							
3	TEXAS REDBUD	CERCIS CANADENSIS VAR. TENNESIS	-	6" MIN.	5'-7'	1MB / CONT.	FULL & MATCHED
SHRUBS / PERENNIALS							
20	AUTUMN SAGE	SALVIA DREGGII	-	18"-24"	18"-24"	3 GAL.	30" O.C. SPACING, PER PLANS
56	THUNDER CLOUD™ TEXAS SAGE	LEUCOPHYLLUM CANADICUM THUNDER CLOUD	-	18"-24"	18"-24"	5 GAL.	30" O.C. SPACING, PER PLANS
12	PROSTRATE ROSEMARY	ROSEMARINUS PROSTRATUS	-	12"	12"	3 GAL.	24" O.C. TRIANGULAR SPACING
7	BRAKELIGHTS YUCCA	HEPHERACE FRAUENFELDER PLANT PATENT #21,129	-	6"-9"	18"	5 GAL.	30" O.C. SPACING, PER PLANS
11	DWARF CRAPEMYRTLE	LAEZETROMA INDICA 'SACRAMENTO'	-	18"-24"	18"-24"	5 GAL.	30" O.C. SPACING, PER PLANS

GROUND COVER							
804	BIG BLUE LIRIOPE	LIRIOPE MUSCARI 'BIG BLUE'	-	-	-	1 GAL.	12" O.C. SPACING, PER PLAND
6	SALVIA	SALVIA X SYLVESTRIS 'MAY NIGHT'	-	2'-9"	12"	1 GAL.	24" O.C. SPACING, PER PLAND
TURF GRASS							
10,135 SF	COMMON BERMUDA GRASS SOD	CYNODON DACTYLON	HAND-LAID SOD PANELS				
OTHER							
255 LF	BED EDGING	STEEL	GREEN				INSTALL 1" ABOVE ADJACENT GRADE
4,721 SF	RIVER COBBLE	BRAZOS RIVER ROCK					
1,399 SF	RIVER COBBLE	RIVER GRANDE COBBLE SMALL					
1,546 SF	HARDWOOD MULCH						
321 SF	DECOMPOSED GRANITE						

NOTE:

1. ALL QUANTITIES NOTED ON PLANS & TABLES ARE TO BE VERIFIED BY CONTRACTOR



PLANT SYMBOL LEGEND

- CANOPY TREES**

 - TEXAS RED OAK
 - SOUTHERN LIVE OAK
 - TEXAS ASH
 - CEDAR ELM
 - LACEBARK ELM
 - SOUTHERN MAGNOLIA

ACCENT TREES

 - TEXAS REDBUD

TURF

 - BERMUDA GRASS SOD

* TREES W/ DEEP ROOT BARRIER
- GROUND COVER**

 - BIG BLUE LIRIOPE

SHRUBS & PERENNIALS

 - AUTUMN SAGE
 - DWARF CRAPEMYRTLE
 - BRAKELIGHTS YUCCA
 - TEXAS SAGE
 - ROSEMARY
 - SALVIA

OTHER

 - BRAZOS RIVER ROCK
 - RIVER GRANDE COBBLE SMALL
 - DECOMPOSED GRANITE
 - HARDWOOD MULCH
 - LANDSCAPE EDGE

GENERAL LANDSCAPE NOTES

- CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.
- LANDSCAPE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES. THE LANDSCAPE CONTRACTOR SHALL PROTECT ALL LANDSCAPE MATERIALS FROM DAMAGE. DAMAGED PLANT MATERIAL SHALL BE REPLACED WITH SIMILAR VARIETIES AND SIZES IF DAMAGED, DESTROYED, OR LOST.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THE DRAWINGS.
- ALL SHRUB, GROUND COVER, PERENNIAL & SEASONAL BEDS SHALL HAVE A 2" THICK SHREDDED HARDWOOD MULCH LAYER, UNLESS OTHERWISE NOTED. FINISHED LEVEL OF MULCH TO SIT 1" BELOW ADJOINING FINISHED HARDSCAPE AND LAWN LEVEL.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION, AND MUST BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE IF UNHEALTHY, DAMAGED, DESTROYED, OR OTHERWISE REMOVED.
- STRUCTURAL AND HARDSCAPE WORK SHALL BE INSTALLED PRIOR TO PLANTING INSTALLATION.
- LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS AT ALL TIMES DURING CONSTRUCTION.
- PLANT SPACING IS AS INDICATED ON THE 'PLANT SCHEDULE' UNLESS OTHERWISE NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE REMARKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT AN INDEPENDENT 'TAKE-OFF' TO VERIFY SIZES AND QUANTITIES OF PLANT MATERIALS SHOWN.
- AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO IRRIGATE ALL TURF AND LANDSCAPE BED AREAS AND SHALL BE OPERATIONAL AT THE TIME OF PLANT MATERIAL INSTALLATION. OVERSPRAY ON STREETS AND WALKS IS PROHIBITED. ALL WORK ON THE IRRIGATION SYSTEM, INCLUSIVE OF HYDROSTATIC COVERAGE AND OPERATIONAL TESTS SHALL BE COMPLETED PRIOR TO PLANTING INSTALLATION.
- ALL TREES PLANTED NEAR CURBS SHALL BE PLACED AT LEAST 6' CLEAR FROM THE CURB FACE UNLESS OTHERWISE NOTED. REFERENCE CITY LANDSCAPE NOTES FOR OTHER REQUIREMENTS.
- ALL EXISTING LANDSCAPE TO BE REMOVED WHERE PROPOSED LANDSCAPE IS SHOWN UNLESS NOTED ON PLANS.
- SOLID SOD ALL AREAS DISTURBED BY CONSTRUCTION.
- REFER TO ARCHITECTURE SHEETS FOR MASONRY SCREEN WALL & FENCING DETAILS.
- REFER TO CIVIL SHEETS FOR PROPOSED GRADING.

1 LANDSCAPE PLAN
1" = 10'-0"

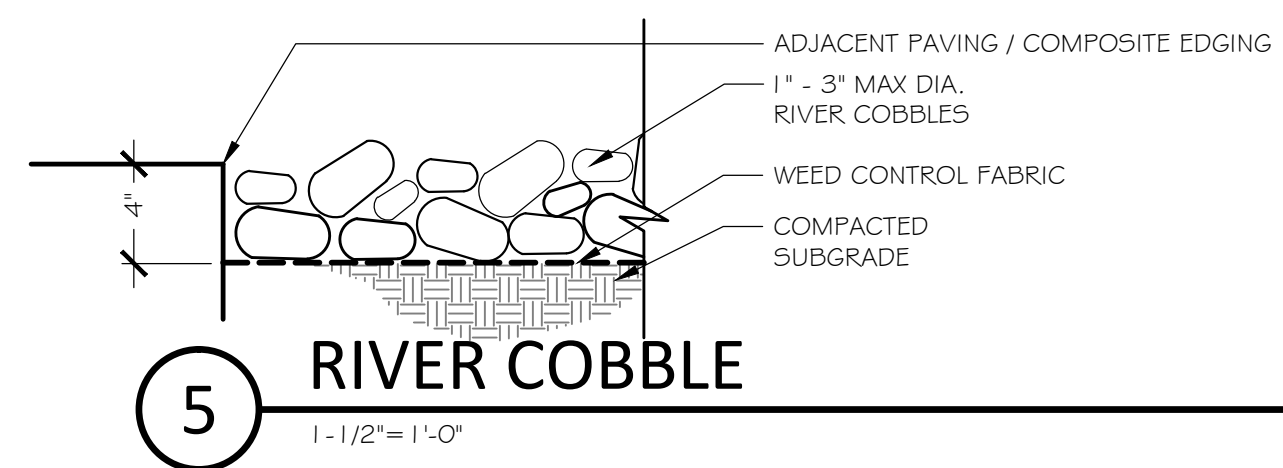
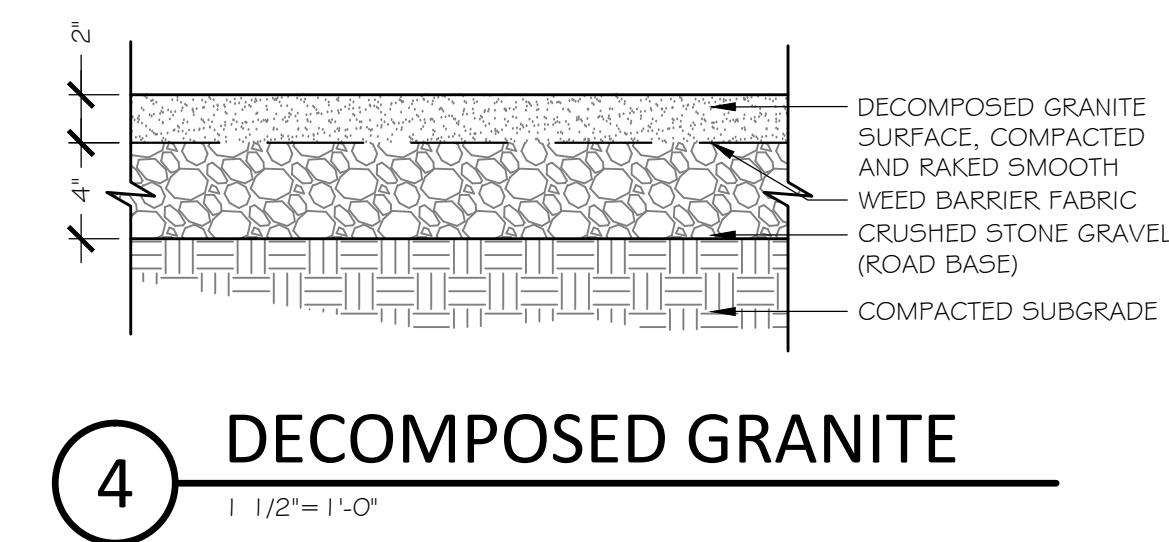
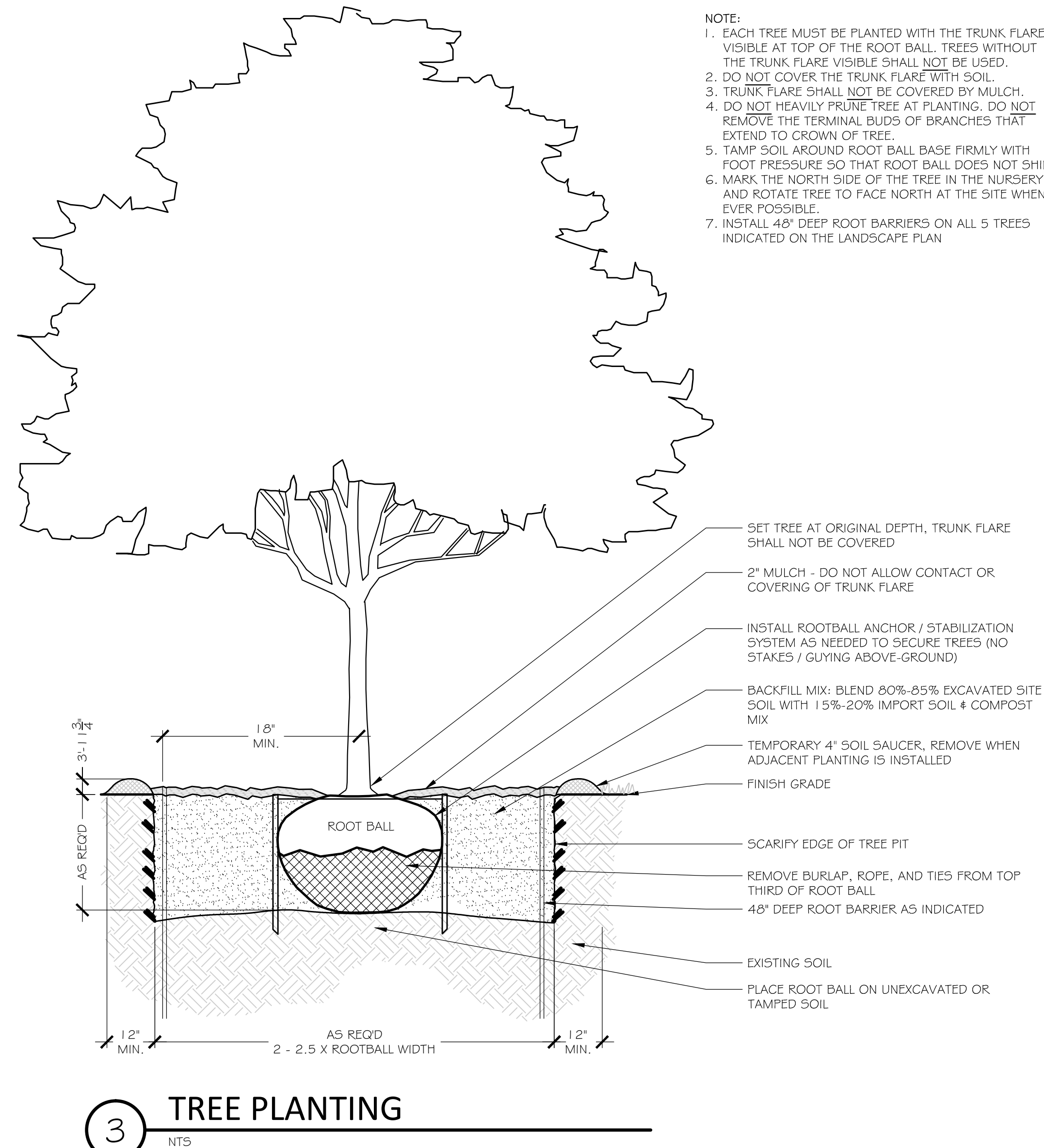
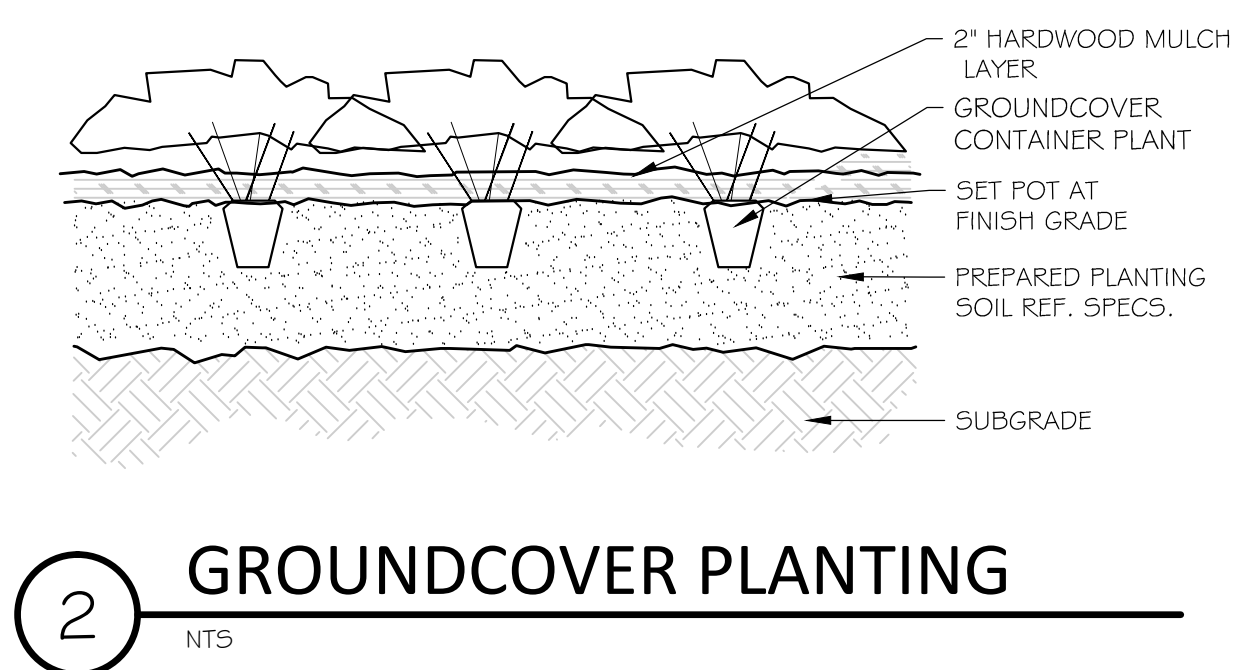
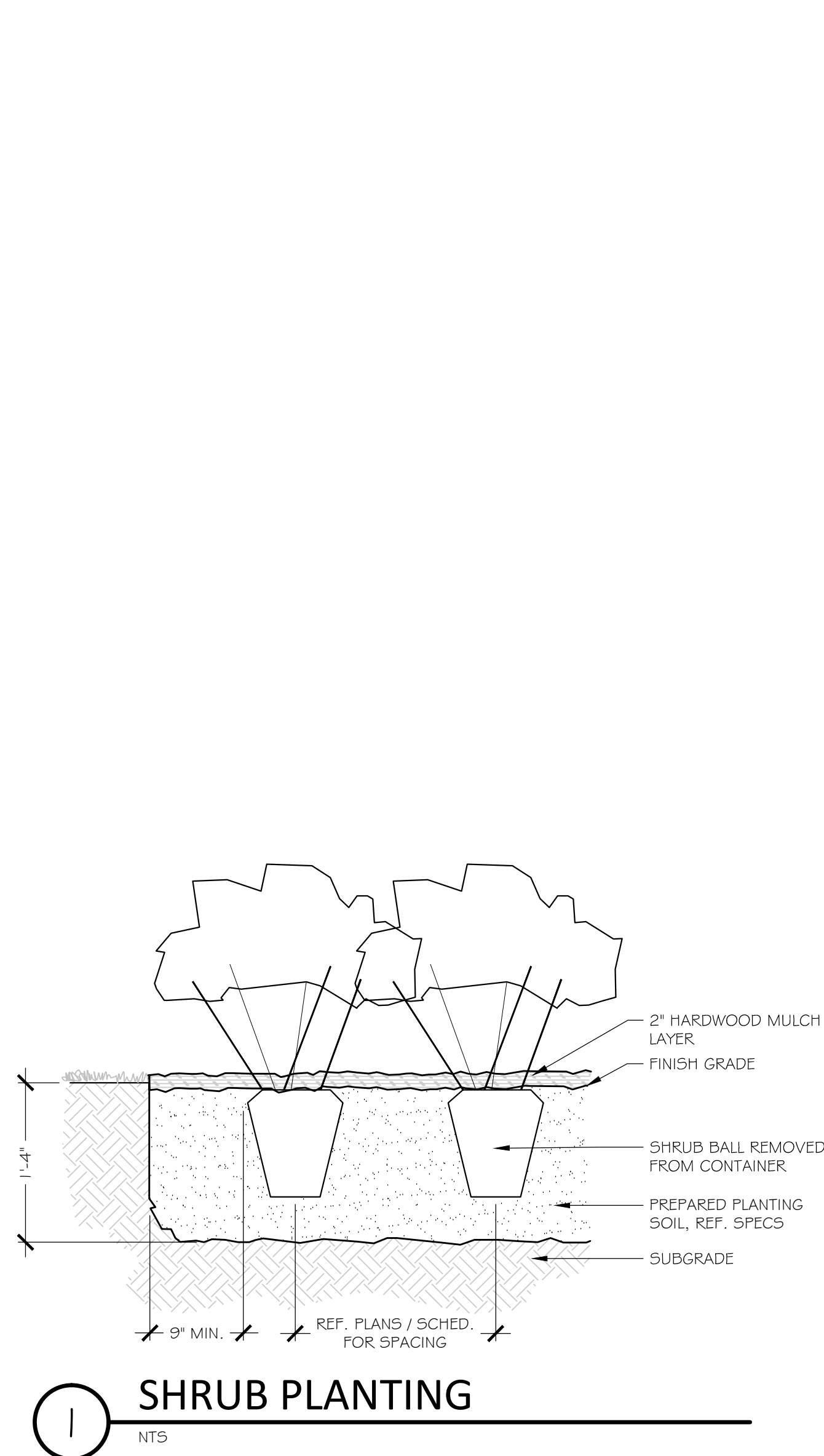
BROWN REYNOLDS WATFORD ARCHITECTS
3535 TRAVIS STREET
SUITE 200
DALLAS, TEXAS 75204
214.528.8704
WWW.BRWARCH.COM

DAVID MCCASKILL DESIGN GROUP
620 East Southlake Blvd
Southlake, TX 76092

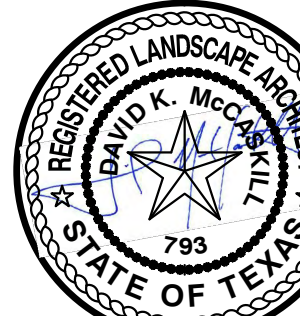
TOWN OF FLOWER MOUND
FIRE STATION NO 7
2777 SKILLERN BLVD.
FLOWER MOUND, TX 75028

NO.	REVISION	DATE

L1.0
LANDSCAPE PLANS



BROWN REYNOLDS WATFORD
ARCHITECTS
3532 TRAVIS STREET
SUITE 200
DALLAS, TEXAS 75204
214.298.8704
WWW.BRWARCH.COM



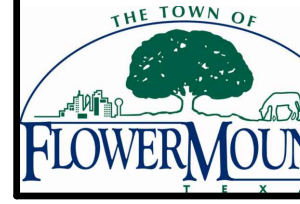
10.17.18

DAVID MCCASKILL
DESIGN GROUP
620 East Southlake Blvd
Southlake, TX 76092



COPYRIGHT © 2018
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
OCTOBER 17, 2018
DATE
DRAWN BY JH
CHECKED BY DM
BRW PROJECT NUMBER 218008.00

TOWN OF FLOWER MOUND
FIRE STATION NO 7
2777 SKILLERN BLVD.
FLOWER MOUND, TX 75028



NO.	REVISION	DATE

L2.0
LANDSCAPE DETAILS



TOWN COUNCIL AGENDA ITEM NO. 14

REGULAR ITEM

DATE: October 15, 2018

FROM: Debra Wallace, Deputy Town Manager/CFO *DW*

ITEM: Consider approval of an ordinance providing for a residential homestead ad valorem (property) tax exemption.

BACKGROUND INFORMATION: Currently the Town does not have a residential homestead property tax exemption. During the FY2018-2019 budget process, staff provided various scenarios as well as the projected impact on future revenue if a homestead tax exemption was approved. Council provided direction to bring forward an ordinance creating a homestead tax exemption that states the owner of a residence homestead shall be entitled to an exemption from Flower Mound ad valorem taxation in an amount equal to the greater of five thousand dollars (\$5,000) or 2.5 percent (2.5%). The exemption will become effective beginning with the Tax Year 2019/Fiscal Year 2019-20

BOARD REVIEW/CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: The first fiscal year effective is FY2019-20

Proposed Expenditure:

Account Number(s):

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

LEGAL REVIEW: The attached ordinance has been reviewed as to form and legality by Ashley Dierker with Taylor, Olson, Sralla, & Elam L.L.P., on September 21, 2018.

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, PROVIDING FOR A RESIDENTIAL HOMESTEAD AD VALOREM (PROPERTY) TAX EXEMPTION; PROVIDING A SAVINGS/REPEALING CLAUSE, SEVERABILITY CLAUSE, AND 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, Section 11.13(n) of the Texas Tax Code authorizes the Town Council of the Town of Flower Mound, Texas ("Town Council") to adopt an exemption from taxation of a portion of the appraised value of an individual's residence homestead; and

WHEREAS, the Town Council of the Town of Flower Mound, Texas ("Flower Mound") has investigated and determined that it would be advantageous and beneficial to Flower Mound and its citizens to adopt the residential homestead ad valorem (property) tax exemption in accordance with Section 11.13(n) of the Texas Tax Code, as set forth below.

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

In addition to any other exemption provided by Texas law or Flower Mound ordinance, the owner of a residence homestead shall be entitled to an exemption from Flower Mound ad valorem taxation in an amount equal to the greater of five thousand dollars (\$5,000) or 2.5 percent (2.5%) of the appraised value of the residence homestead, subject to the limitations set forth in Texas law, including Section 11.13(n) of the Texas Tax Code, as it exists or may be amended. The exemption shall be granted to any such residential homestead and the improvements qualifying for same as provided by law.

SECTION 3

The exemption set forth in Section 2 of this Ordinance shall become effective beginning with the 2019 tax year, and shall remain effective for each successive tax year until otherwise amended or repealed by the Town Council or other appropriate authority.

SECTION 4

All provisions of any ordinance in conflict with this Ordinance are hereby repealed, but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent prosecution from being commenced for any violation occurring prior to the repeal of the ordinance. Any remaining portions of conflicting ordinances shall remain in full force and effect.

SECTION 5

Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional and/or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. The Town Council hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, regardless of whether any one or more sections, subsections, sentences, clauses or phrases is declared unconstitutional and/or invalid.

SECTION 6

This Ordinance shall become effective immediately upon its passage.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF FLOWER MOUND, TEXAS on this 15th day of October, 2018.

APPROVED:

Steve Dixon, MAYOR

ATTEST:

Theresa Scott, TOWN SECRETARY

APPROVED AS TO FORM AND LEGALITY:

Bryn Meredith, TOWN ATTORNEY

Town Council Future Agenda Items



SCHEDULED	11/5/2018	Presentation	Proclamation to designate November as Arts Month in Flower Mound
		Presentation	Recycling – Overcoming Today's Challenges presented by Republic Services
		Presentation	Placeholder: National Night Out neighborhood and poster contest winners
		Consent	Red Rock WSC Agreement.
		Consent	Consider approval of Change Order No. 1 for the construction of the Lake Forest Boulevard Roadway Improvements and 12-inch Waterline projects, amending the contract with Joe Funk Construction, Inc., to provide for an increase to the contract in the amount of \$38,393.65; and authorization for the Mayor to execute same on behalf of the Town.
		Consent	Consider approval of a Quote from Axon Enterprises, Inc. for the purchase of body worn camera products and authorization for the Mayor to execute same on behalf of the Town.
		Consent	Request approval to award the installation of the new Town Hall's Bi-Directional Antenna System for Public Safety Communications, to Crosspoint Communications LLC, a Buy-Board member, No. 523-17.
		Consent	Old Gerault Road 12-Inch Water Line Development Agreement.
		Consent	Consider acceptance of 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 2018 Bulletproof Vest Partnership.
		Consent	Consider approval of Change Order No. 2 for the construction of the FM 2499 Roadway, Drainage, and Traffic Signal Improvements project, amending the contract with Mario Sinacola & Sons Excavating, Inc., to provide for an increase to the contract in the amount of \$40,037.60; and authorization for the Mayor to execute same on behalf of the Town.
		Consent	Consider approval of the purchase of fifty sets of bunker gear from NAFECO, Inc. through BuyBoard Purchasing Contract No. 524-17 in the total amount of \$126,732.00 and authorization for the Mayor to approve same on behalf of the Town.
		Consent	Consider approval of a professional service agreement with Kimley Horn and Associates Inc., to provide surveying, design, and construction documents, for the Bakersfield Restroom and Concrete Walkway project, in the amount of \$55,300.00; and authorization for the Mayor to execute same on behalf of the Town..
		Consent	Consider approval of the minutes from a regular meeting of the Town Council held on October 15, 2018.

SCHEDULED	11/5/2018	Regular	Consider approval to award Bid No. 2018-123-B, Flower Mound Central Fire Station Phase II, to Schmoldt Construction Inc., in the amount of \$1,457,000.00; and authorization for the Mayor to execute on behalf of the Town.
		Regular	Public Hearing to consider a request for rezoning (ZPD18-0004 – Balekian Addition / CVS) from Agricultural District (A) to Planned Development District No. 164 (PD-164) with Single-Family Estate District (SF-E) and Retail District-1 (R-1) uses, with certain modifications and exceptions to the Code of Ordinances, and to consider adopting an ordinance providing for said amendment. The property is generally located north of Cross Timbers Road and east of Lusk Lane. (Planning and Zoning Commission recommended by a vote of to at its October 22, 2018, meeting.)
		Regular	PLACEHOLDER: 5PM START - RIBBON CUTTING
		Regular	Public Hearing to consider a request for a Master Plan Amendment (MPA18-0004 – Balekian Addition / CVS) to amend Section 1.0, Land Use Plan, of the Master Plan to change the current land use designation from Estate Residential to Retail use on approximately 2.48 acres of land within the Cross Timbers Protection Area, and to consider adopting an ordinance providing for said amendment. The property is generally located north of Cross Timbers Road and east of Lusk Lane. (Planning and Zoning Commission recommended by a vote of to at its October 22, 2018, meeting.)
	11/19/2018	Consent	East Waketon Road Drainage Design Award.
		Consent	Consider approval of the minutes from a work session of the Town Council held on November 15, 2018.
	12/3/2018	Consent	Consider approval of the sale and consumption of alcoholic beverages (beer and wine) at Bakersfield Park, during the 2019 Independence Fest.
		Consent	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.
		Consent	Consider approval of a resolution authorizing the adoption of the Program Year 2017 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.
		Consent	Flower Mound Storage Warehouse - Construction Award.
	12/17/2018	Consent	Bruton Orand EST Chloramine Design Award.
		Consent	Fire Station #7 Testing Award.
		Consent	Fire Station #7 Construction Award
	1/21/2019	Regular	Discuss and consider appointment of Chair to the Tax Increment Reinvestment Zone (TIRZ).