



AGENDA

City of Lucas
City Council Meeting
October 20, 2016
7:00 PM
City Hall – Council Chambers
665 Country Club Road – Lucas, Texas

Notice is hereby given that a City of Lucas meeting of the City Council will be held on Thursday, October 20, 2016 at 7:00 pm at Lucas City Hall, 665 Country Club Road, Lucas, Texas, 75002-7651 at which time the following agenda will be discussed. As authorized by Section 551.071 of the Texas Government Code, the City Council may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any item on the agenda at any time during the meeting.

Call to Order

- Roll Call
- Determination of Quorum
- Reminder to turn off or silence cell phones
- Pledge of Allegiance

Citizen Input

The Citizens' Input portion of the agenda is an opportunity for the public to address the City Council on any subject. By completing a "Request to Speak" form and submitting it to the City Secretary, citizens have an opportunity to speak at the City Council meeting. However, in accordance with the Texas Open Meetings Act, the City Council cannot discuss issues raised or make any decisions but may refer items to City Staff for research and possible inclusion on a future agenda.

1. Citizens' Input (**Mayor Jim Olk**)

Community Interest

Pursuant to Section 551.0415 of the Texas Government Code, the City Council may report on the following items: 1) expression of thanks, congratulations or condolences; 2) information about holiday schedules; 3) recognition of individuals; 4) reminders about upcoming City Council events; 5) information about community events; and 6) announcements involving imminent threat to public health and safety.

2. Community Interest. (**Mayor Jim Olk**)

Presentation to the City of Lucas Finance Department for receiving the 2015 Certificate of Achievement for Excellence in Financial Reporting Award from the Government Finance Officers Association.

Presentation of a Proclamation declaring October 2016 as "Breast Cancer Awareness Month".

Public Hearing

3. Public hearing to consider adopting Ordinance 2016-10-00840 amending the City's Code of Ordinances, Chapter 14, Article 14.04, Division 8 - Accessory Buildings, Structures and Uses regarding square footage requirements for habitable space and accessory buildings; and amendments to the Code of Ordinances, Schedule Use Chart related to guest/servant quarters and accessory buildings with habitual space. *(Development Services Director Joe Hilbourn)*
 - A. Presentation by Development Services Director Joe Hilbourn
 - B. Conduct Public Hearing
 - C. Take action and provide recommendation to City Council regarding proposed revisions.

Consent Agenda

All items listed under the consent agenda are considered routine and are recommend to the City Council for a single vote approval. If discussion is desired, an item may be removed from the consent agenda for a separate vote.

4. Consider approval of the minutes of the September 15, 2016, City Council meeting. *(City Secretary Stacy Henderson)*
5. Consider approving Resolution R 2016-10-00455 authorizing an interlocal agreement between the City of Lucas and Collin County for Collin County to fund a portion of the construction costs for improvements to the East Winningkoff Trailhead. *(Development Services Director Joe Hilbourn)*

Regular Agenda

6. Consider updates to the Water System Capital Improvement Plan for 2016 to 2030 prepared by BW2 Engineers, Inc. *(Public Works Director/City Engineer Stanton Foerster)*
7. Consider adopting Ordinance 2016-10-00844 removing the Statutory Limitations for funding for the Texas Municipal Retirement Services. *(Human Resources Manager Cheryl Meehan)*
8. Consider the City of Lucas options available through Texas Multistate Intergovernmental Benefits Pool and Public Employee Benefits Alliance (PEBA) for Pre and Post Sixty-five Retiree Benefits. *(Human Resources Manager Cheryl Meehan)*
9. Consider adopting Ordinance 2016-10-00833 approving amendments to the City's Code of Ordinances by amending Appendix C "Fee Schedule" Article 19.000 (7) "Wastewater Rates" to provide for rates for wastewater consumption and discharge over 2,000 gallons. *(Public Works Director/City Engineer Stanton Foerster)*

10. Consider amendments to the City's Comprehensive Plan including: (*Development Services Director Joe Hilbourn*)
- Chapter 1 – Introduction
 - Chapter 2 – Demographics
 - Chapter 3 – Housing
 - Chapter 4 – Land Use
 - Chapter 5 – Economic Development
 - Chapter 6 – Parks, Recreation & Open Space
 - Chapter 7 – Streets, Drainage & Master Thoroughfare Plan
 - Chapter 8 – Water System
11. Consider adopting Ordinance 2016-10-00843 approving amendments to the City's Code of Ordinances Chapter 10, Section 10.03.123 (i) Streets and Drainage relating to where street lights may be located and including an appeal process. (*Development Services Director Joe Hilbourn*)

Executive Session

The City Council may convene in a closed Executive Session pursuant to Chapter 551.071 of the Texas Government Code.

12. Executive Session: No items are scheduled for Executive Session.
13. Adjournment.

Certification

I hereby certify that the above notice was posted in accordance with the Texas Open Meetings Act on the bulletin board at Lucas City Hall, 665 Country Club Road, Lucas, TX 75002 and on the City's website at www.lucastexas.us on or before 5:00 p.m. on October 14, 2016.

Stacy Henderson, City Secretary

In compliance with the American with Disabilities Act, the City of Lucas will provide for reasonable accommodations for persons attending public meetings at City Hall. Requests for accommodations or interpretive services should be directed to Stacy Henderson at 972.912.1211 or by email at shenderson@lucastexas.us at least 48 hours prior to the meeting.



City of Lucas City Council Agenda Request October 20, 2016

Requester: Mayor Jim Olk

Agenda Item:

Citizens' Input

Background Information:

NA

Citizen Summary:

Citizen Input is an item at the beginning of each City Council agenda that allows citizens an opportunity to address the City Council on any subject. In accordance with the Texas Open Meetings Act however, the City Council cannot discuss issues raised or make decisions regarding any items that are not on the agenda, but the City Council may refer items to City Staff for research and possible inclusion on a future agenda.

Attachments/Supporting Documentation:

NA

Budget/Financial Impact:

NA

Recommendation:

NA

Motion:

NA



City of Lucas Council Agenda Request October 20, 2016

Requester: Mayor Jim Olk

Agenda Item:

Community Interest:

1. Presentation to the City of Lucas Finance Department for receiving the 2015 Certificate of Achievement for Excellence in Financial Reporting Award from the Government Finance Officers Association.
2. Presentation of a Proclamation declaring October 2016 as “Breast Cancer Awareness Month”.

Background Information:

The City of Lucas has received the Certificate of Achievement for Excellence in Financial Reporting Award for the September 30, 2015, Comprehensive Annual Financial Report (CAFR). This is the 6th year in a row the City has received this award by the Government Finance Officers Association of the United States and Canada (GFOA). The Certificate of Achievement is the highest form of recognition in the area of governmental accounting and financial reporting.

Citizen Summary:

Under Community Interest items, the City Council may report to the public on items such as an expression of thanks, congratulations or condolences, recognition of individuals, reminders of upcoming community events, and announcements involving imminent threat to public health and safety.

Attachments/Supporting Documentation:

1. Breast Cancer Awareness Month Proclamation

Budget/Financial Impact:

NA

Recommendation:

NA

Motion:

NA



Proclamation

WHEREAS, breast cancer is one of the most common cancers among women and affects approximately 246,000 women as well as 2,600 men each year, and is the second leading cause of cancer death among American women; and

WHEREAS, awareness of this disease and its symptoms must be raised so that education is first and foremost about the importance of early detection of breast cancer through mammography and other methods; and

WHEREAS, researchers, scientists, and nonprofit organizations, are dedicated to discovering the cure for breast cancer. During the month of October, we acknowledge the extraordinary commitment and effort invested in this cause; and

WHEREAS, we recognize that over two and a half million Americans are breast cancer survivors that give us hope of a better future.


NOW, THEREFORE, I, Jim Olk, Mayor of the City of Lucas, Texas on behalf of the City Council support those who continue to cope with breast cancer, and extend our deepest respect for survivors and those advocating for prevention and a cure, and in so doing hereby proclaim OCTOBER 2016 as

“BREAST CANCER AWARENESS MONTH”

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the official seal of the City of Lucas, this 20th day of October, 2016.



Jim Olk, Mayor



Stacy Henderson, City Secretary



City of Lucas City Council Agenda Request October 20, 2016

Requester: Development Services Director Joe Hilbourn

Agenda Item:

Public hearing to consider adopting Ordinance 2016-10-00840 amending the City's Code of Ordinances, Chapter 14, Article 14.04, Division 8 - Accessory Buildings, Structures and Uses regarding square footage requirements for habitable space and accessory buildings; and amendments to the Code of Ordinances, Schedule Use Chart related to guest/servant quarters and accessory buildings with habitual space.

- A. Presentation by Development Services Director Joe Hilbourn
- B. Conduct Public Hearing
- C. Take action and provide recommendation to City Council regarding proposed revisions.

Background Information:

Proposed amendments to accessory buildings, structures and uses was brought before the Planning and Zoning Commission at their June 9, 2016 meeting for consideration. The item was then brought forward to the City Council on July 21, 2016. The City Council recommended sending the item back to the Planning and Zoning Commission for further review and consideration regarding square footage, and giving relief to property owners for the use of storage containers for agricultural use in residentially zoned areas.

The Planning and Zoning Commission at their August 11, 2016 meeting recommended changes to allowable temporary structures, square footage requirements for habitable space and language clarification relating to habitable space.

The City of Lucas has adopted the International Residential Building Code which defines habitable space as "space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces, and similar areas are not considered habitable spaces."

Citizen Summary:

There are two issues that the City of Lucas is addressing with the proposed amendment to the ordinances regulating accessory buildings, which include: 1) how an accessory building is defined; and 2) the square footage requirements for habitable space.

Issue 1: Approximately 24 months ago, City staff received a complaint regarding a citizen using a storage container as a permanent accessory building. Staff was unable to gain voluntary compliance and this issue was taken to court. The City lost its case because the Judge found that the City's definition of an accessory building was not sufficient. The City is clarifying its definition of accessory building to ensure that storage containers are not used as permanent structures.



City of Lucas City Council Agenda Request October 20, 2016

Issue 2: City staff received several concerns regarding “tiny houses” being used as habitable space. These “tiny houses” are considered accessory buildings but not habitable space, as they do not meet the requirements of the International Residential Building Code that is adopted as the City’s building standards. The City became concerned for the safety and welfare of a citizen living in a structure that does not comply with acceptable residential building standards.

In addition, at the October 6, 2016 City Council meeting, the Lucas City Council expressed concern over the size of accessory buildings with habitable space. The logic behind the concern was the circumventing of the zoning code, which helps us maintain our country feel through the preservation of open space. For example, if a citizen builds a 3,000 square foot home on a 2 acre residentially zoned lot and then wants to build a 2,500 square foot “accessory” building with habitable space, transforms the zoning into one with more density.

The City Council can either approve this item, table to a future meeting or send back to the Planning and Zoning Commission for further review.

Supporting Documentation:

1. Redlined changes to proposed Ordinance 2016-10-00840 to be approved by City Council.
2. Public hearing notice

Budget/Financial Impact:

NA

Recommendation:

The Planning and Zoning Commission recommended unanimously the following additional amendments to proposed Ordinance 2016-10-00840 amending Code of Ordinances, Chapter 14, Article 14.04, Division 8, Accessory Buildings, Structures and Uses:

- Section 14.04.302(d) change 45 days to 90 days related to industrial, commercial and agriculture use of trailers, containers or commercial boxes for temporary storage;
- Section 14.04.304(c) change the square footage requirements proposed in the ordinance from 600 to 800 square feet for Residential 1.5 zoning.

Motion:

I make a motion to adopt Ordinance 2016-10-00840 amending the Code of Ordinances, Chapter 14, Article 14.04, Division 8 - Accessory Buildings, Structures and Uses allowing square footage requirements for habitable space and accessory buildings up to _____ square feet in R-1, up to _____ square feet in R-1.5, and up to _____ square feet in R-2; and amendments to the Code of Ordinances, Schedule Use Chart related to guest/servant quarters and accessory buildings with habitual space, and regulating the use of storage containers as accessory buildings.



ORDINANCE 2016-10-00840
[ORDINANCE AMENDING CODE OF ORDINANCE
CHAPTER 14 “ZONING”]

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, AMENDING THE LUCAS CODE OF ORDINANCES BY AMENDING CHAPTER 14 TITLED “ZONING” BY AMENDING ARTICLE 14.03 TITLED “DISTRICTS” BY AMENDING DIVISION 15 TITLED “SCHEDULE OF USES” BY AMENDING SECTION 14.03.801 TITLED “USE DESIGNATIONS” BY AMENDING SUBSECTION (e) TITLED “SCHEDULE OF USES CHART” TO INCLUDE “ACCESSORY BUILDINGS WITH HABITABLE SPACE”; BY AMENDING ARTICLE 14.04 TITLED “SUPPLEMENTARY REGULATIONS” BY AMENDING DIVISION 8 TITLED “ACCESSORY BUILDINGS, STRUCTURES AND USES” BY AMENDING SECTION 14.04.302 TITLED “ACCESSORY STRUCTURES, BUILDINGS AND USES PERMITTED” TO EXCLUDE TRAILERS, CONTAINERS, COMMERCIAL BOXES OR OTHER SIMILAR STRUCTURES; BY AMENDING SECTION 14.04.304 TITLED “GENERAL ACCESSORY BUILDINGS AND STRUCTURES REGULATIONS” TO INCLUDE REQUIREMENTS FOR ACCESSORY BUILDINGS WITH HABITABLE SPACE AND THEIR SIZE; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000) FOR EACH OFFENSE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Planning and Zoning Commission of the City of Lucas, Texas and the City Council of the City of Lucas, Texas, in compliance with the laws of the State of Texas with reference to the granting of zoning classifications and changes, have given the requisite notices by publication and otherwise, and have held due hearings and afforded a full and fair hearing to all property owners generally and to all persons interested and situated in the affected area and in the vicinity thereof, and the City Council of the City of Lucas, Texas is of the opinion and finds that said zoning change should be granted and that the Comprehensive Zoning Ordinance and Map should be amended;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS:

Section 1. The Code of Ordinances of the City of Lucas, Texas, is hereby amended by amending Chapter 14 titled “Zoning” by amending Article 14.03 titled “Districts” by amending Division 15 titled “Schedule of Uses” by amending Section 14.03.801 titled “Use designations” by amending Subsection (e) titled “Schedule of uses chart”; and, by amending Article 14.04 titled “Supplementary Regulations” by amending Division 8 titled “Accessory Buildings, Structures and Uses” by amending Section 14.04.302 titled “Accessory structures, buildings and uses permitted” and by amending Section 14.04.304 titled “General accessory buildings and structures regulations”, to read as follows:

**“CHAPTER 14
ZONING**

...

ARTICLE 14.03 DISTRICTS

...

Division 15. Schedule of Uses

Sec. 14.03.801 Use designations

...

(e) Schedule of uses chart.

Use	AO	R2	R1.5	R1	VC	CB	OS	MH	LI	ED
Residential uses										
Accessory buildings	X	X	X	X	S		X	X		X
...										
Registered family home	S	S	S	S						
Accessory buildings with Habitable Space	X	X	X	X						
Single-family dwelling (detached)	X	X	X	X		X	X			X
Temporary field construction office	X	X	X	X	X	X			X	X
Educational, institutional, public and special uses										
...										

ARTICLE 14.04 SUPPLEMENTARY REGULATIONS

...

DIVISION 8. Accessory Buildings, Structures and Uses

...

Secs. 14.04.305-14.04.340 Reserved.”

Sec. 14.04.302 Accessory structures, buildings and uses permitted

(a) Accessory structures or buildings may be erected, maintained, and used for purposes which are clearly accessory to the principal or main structure, building or use permitted on the premises. Except in the agriculture district accessory buildings shall be built after the main building or structure.

Commented [OJ1]: This doesn't make sense since property in an AG district can have a barn, loafing shed, tack room or hay storage as the main building.

...

(d) No trailers, containers, commercial boxes or other similar structures shall be used as accessory structures or buildings.

Exception: industrial, commercial, and agriculture uses, may use trailers, containers, or commercial boxes for temporary storage for a period not to exceed 90 days total in any one calendar year. The Director of Community Development may extend the allowable time in 30 day increments up to a maximum of 180 days provided the property owner provides just cause for the extension.

Commented [JH2]: New section

...

Sec. 14.04.304 General accessory buildings and structures regulations

In all residential districts, accessory structures shall comply with the following standards except as may be otherwise specifically provided for in this code:

...

(4) An aAccessory building ~~that~~may contain Habitable Space as defined by the International Residential Code adopted by the City and may be occupied provided it is in shall be permitted in compliance with the following:

(1) General Regulations for accessory buildings containing habitable space. Any accessory buildings containing habitable space shall comply with the following:

(a) Accessory buildings containing Habitable Space shall meet the requirements of the International Residential Code as adopted by the City from time to time.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

(b) Accessory buildings containing Habitable Space shall be designed to be architecturally compatible with the main building and constructed of similar materials as the main building.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

(c) Accessory buildings containing Habitable Space may not be rented out separate and apart from the main structure.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

(d) Accessory buildings containing Habitable Space shall only be occupied by an immediate member of the family that resides in the main building or a friend of the family that resides in the main building, if occupied by domestic staff, all adults occupying the quarters shall be full-time domestic servants providing support to the property, health care providers for the residents of the main building or care takers of the property.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

Commented [JH3]: Added friend of the family that resides in the main building

(e) Detached accessory buildings containing Habitable Space shall be limited to a maximum height of 25 feet measured to the peak of the roof of the structure.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

~~(a)~~(f) Accessory buildings containing habitable space shall not contain a kitchen, cooking or food preparation area except as provided for in ??? section

(2) Specific Regulations for an Accessory Building Containing Habitable Space:

(a) In R-2 or AO zoning districts that contain a single family home:

(i) Kitchen, cooking or a food preparation area may be permitted on property with a specific use permit. The specific use permit may only be granted provided the owners of the property enact a deed restriction with the city as party to the deed restriction that prohibits the use of the Habitable Space to be used for lease/barter agreement other than that of the full-time domestic staff providing support to the property, health-care providers for the residents of the main building or care takers of the property.

Formatted: Normal, Outline numbered + Level: 6 + Numbering Style: i, ii, iii, ... + Start at: 1 + Alignment: Left + Aligned at: 1.25" + Indent at: 1.5"

Commented [JH4]: Moved location

(ii) An accessory building may contain up to 1000 square feet of Habitable Space.

Formatted: Normal, Indent: Left: 0.5", First line: 0"

Formatted: Normal, Outline numbered + Level: 6 + Numbering Style: i, ii, iii, ... + Start at: 1 + Alignment: Left + Aligned at: 1.25" + Indent at: 1.5"

(b) In R-1.5 zoning districts:

Formatted: Normal, Indent: Left: 0.5", First line: 0"

(i) An accessory building may contain up to 800 square feet of Habitable Space.

Formatted: Normal, Outline numbered + Level: 5 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1" + Indent at: 1.25"

~~(b)~~(c) In R-1 zoning districts:

(i) An accessory building may contain up to 600 square feet of Habitable Space.

Formatted: Normal, Indent: Left: 1", First line: 0"

Section 2. That all ordinances of the City of Lucas in conflict with the provisions of this Ordinance shall be, and same are hereby, repealed, provided, however, that all other provisions of said Ordinances are not in conflict herewith shall remain in full force and effect.

Section 3. That should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance of the City of Lucas Code of Ordinances, as amended hereby, be adjudged or held to be voided or unconstitutional, the same shall not affect the validity of the remaining portions of said Ordinances or the City of Lucas Code of Ordinances, as amended hereby, which shall remain in full force and effect.

Section 4. That any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the Code of Ordinances, as amended, and upon conviction in the municipal court shall be punished by a fine not to exceed the sum of Two Thousand Dollars (\$2,000.00) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

Section 5. That this Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Lucas, and it is accordingly so ordained

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 20th DAY OF OCTOBER, 2016.

APPROVED:

Jim Olk, Mayor

APPROVED AS TO FORM:

ATTEST:

Joseph J. Gorfida, Jr., City Attorney
(07-06-2016/77177)

Stacy Henderson, City Secretary



NOTICE OF PUBLIC HEARING

Notice is hereby given, that the Planning & Zoning Commission of the City of Lucas, Texas Held a public hearing on Thursday, September 8, 2016 at 7:00 p.m. and City Council will conduct a second public hearing on Thursday, October 20, 2016 at 7:00 p.m. at Lucas City Hall, 665 Country Club, Lucas, Texas to consider changes to the City's Code of Ordinances more particularly described as follows:

Amending the Schedule of Use Chart and Sec. 14.04.302 Accessory structures, buildings and uses permitted

(a) Accessory structures or buildings may be erected, maintained, and used for purposes which are clearly accessory to the principal or main structure, building or use permitted on the premises. Except in the agriculture district accessory buildings shall be built after the main building or structure.

(d) No trailers, containers, commercial boxes or other similar structures shall be used as accessory structures or buildings.
Exception: industrial, commercial, and agriculture uses, may use trailers, containers, or commercial boxes for temporary storage for a period not to exceed 45 days total in any one calendar year.

Sec. 14.04.304 General accessory buildings and structures regulations

In all residential districts, accessory structures shall comply with the following standards except as may be otherwise specifically provided for in this code:

(4) Accessory buildings that contain Habitable Space as defined by the International Residential Code adopted by the City shall be permitted in compliance with the following:

(A) Any accessory building where a kitchen or food preparation area is provided shall only be permitted on property that is located within an R-2 or AO zoning districts and only with a specific use permit. The specific use permit may only be granted provided the owners of the property enact a deed restriction with the city as party to the deed restriction that prohibits the use of the Habitable Space to be used for lease/barter agreement other than that of the full-time domestic staff providing support to the property, health-care providers for the residents of the main building or care takers of the property.

(B) One accessory building containing Habitable Space not exceeding 600 square feet in area may be permitted as an accessory use to a single-family residence in R-1 zoning district provided there is no kitchen/food preparation area.

(C) One accessory building containing Habitable Space not exceeding 600 square feet in area may be permitted as an accessory use to a single-family residence in R-1.5 zoning district provided there is no kitchen/food preparation area.

(D) One accessory building containing Habitable Space not exceeding 1,000 square feet in area may be permitted as an accessory use to a single-family residence in R-2 or AO zoning district.

(E) Detached accessory buildings containing Habitable Space shall be limited to a maximum height of 25 feet measured to the peak of the roof of the structure.

(F) Accessory buildings containing Habitable Space shall only be occupied by an immediate member of the family that resides in the main building or a friend of the family that resides in the main building, if occupied by domestic staff, all adults occupying the quarters shall be full-time domestic servants providing support to the property, health care providers for the residents of the main building or care takers of the property.

(G) Accessory buildings containing Habitable Space shall meet the requirements of the International Residential Code as adopted by the City from time to time.

(H) Accessory buildings containing Habitable Space may not be rented out separate and apart from the main structure.

(I) Accessory buildings containing Habitable Space shall be designed to be architecturally compatible with the main building and constructed of similar materials as the main building.

Those wishing to speak FOR or AGAINST the above item are invited to attend. If you are unable to attend and have comments you may send them to City of Lucas, City Secretary, 665 Country Club Road, Lucas, Texas 75002, email shenderson@lucastexas.us, and it will be presented at the Hearing. If you have any questions about the above hearing you may contact jhilbourn@lucastexas.us



City of Lucas Council Agenda Request October 20, 2016

Item No. 04-05

Requester: City Secretary Stacy Henderson,

Consent Agenda Items:

4. Consider approval of the minutes of the September 15, 2016, City Council meeting.
5. Consider approving Resolution R 2016-10-00455 authorizing an interlocal agreement between the City of Lucas and Collin County for Collin County to fund a portion of the construction costs for improvements to the East Winningkoff Trailhead.

Background Information:

Agenda Item No. 5:

The City of Lucas was informed by the Collin County Project Funding Assistance Program that the City's grant application for a trailhead on East Winningkoff Road has been approved in the amount of \$106,480. As part of this grant, the City agreed to provide matching grant funds in the amount of \$11,000 that will be provided by the City for a water line. Funds in the amount of \$117,480 are budgeted in the fiscal year 2016-2017 budget under Account 21-8210-491-120.

Citizen Summary:

All items listed under the Consent Agenda are considered routine and are recommended to the City Council for a single vote approval. Should the Council want to discuss an item on the Consent Agenda, it can be removed and placed on the Regular Agenda for further discussion.

Attachments/Supporting Documentation:

1. Minutes of the September 15, 2016, City Council meeting
2. Resolution 2016-10-00455 and Collin County Interlocal Agreement

Budget/Financial Impact:

NA

Recommendation:

City Staff recommends approval of the Consent Agenda.

Motion:

I make a motion to approve/deny the Consent Agenda as presented.



**City of Lucas
City Council Meeting
September 15, 2016
7:05 P.M.**

(or immediately following the Lucas Fire Control Prevention and EMS District Meeting)

City Hall - 665 Country Club Road – Lucas Texas

Minutes

Call to Order

Mayor Olk called the meeting to order at 7:03 p.m.

City Councilmembers Present:

Mayor Jim Olk
Mayor Pro Tem Kathleen Peele
Councilmember Wayne Millsap
Councilmember Tim Baney
Councilmember Steve Duke
Councilmember Philip Lawrence
Councilmember Debbie Fisher

Staff Present:

City Manager Joni Clarke
City Secretary Stacy Henderson
City Attorney Joe Gorfida
Development Services Director Joe Hilbourn
Public Works Director/City Engineer Stanton Foerster
Finance Director Liz Exum
Fire Chief Jim Kitchens
Assistant Fire Chief Ted Stephens

Mayor Olk determined that a quorum was present. Everyone was reminded to turn off or silence their cell phones and the Pledge of Allegiance was recited.

Citizen Input

1. Citizen Input:

There was no citizen input.

Community Interest

2. Community Interest Items:

Mayor Olk presented Proclamations to the following individuals honoring their successful lifesaving efforts for an emergency event on August 19, 2016:

- Collin County Deputy Sheriff George White
- Lucas Fire Rescue Firefighter/Paramedic Aaron Alderdice
- Lucas Fire Rescue Firefighter/Paramedic Jason Bender
- Lucas Fire Rescue Firefighter/EMT Victor Jones
- Lucas Fire Rescue Firefighter/EMT Theran Johnson

Mayor Olk also honored the following individuals for their lifesaving efforts for an emergency event on August 19, 2016 that could not be in attendance:

- Lucas Fire Rescue Captain Jonathan Haynes
- City of Plano Safety Communications Dispatcher Trainee Rebecca Thompson
- City of Plano Safety Communications Dispatcher Trainer Di-Ann Williams

Mayor Olk reminded everyone of the annual Scarecrow Contest currently underway with a registration deadline of October 9, 2016 and the National Night Out event scheduled for October 4. Mayor Olk encouraged neighborhoods hosting events to contact Fire-Rescue to register their event and members of Lucas Fire-Rescue and City Councilmembers may come take part in their event.

Lastly, Mayor Olk reminded all in attendance of the upcoming Founders Day event scheduled for Saturday, October 22. Mayor Pro Tem Peele reminded everyone to participate in the stick horse rodeo event that will be taking place during Founders Day as well.

Consent Agenda

3. Consider approval of the minutes of the September 1, 2016 City Council meeting.

***MOTION:** A motion was made by Councilmember Fisher, seconded by Councilmember Duke to approve the minutes as presented. The motion passed unanimously by a 7 to 0 vote.*

Regular Agenda

4. Presentation and discussion regarding the provisions of law enforcement services by the Collin County Sheriff's Office.

Major Scott Morrison of the Collin County Sheriff's office gave a presentation discussing the 2015 crime statistics for Lucas. He noted that the largest category was larceny, which included theft, a majority of which involved construction sites. Major Morrison discussed new strategies taking place by the Sheriff's office to tackle crime and taking a proactive approach towards property offences and narcotics and illegal substances.

Major Morrison noted that one future project includes working with developers on reducing property theft occurrences around their construction sites. Major Morrison stated that Lucas would serve as part of the pilot project for this crime prevention strategy. Major Morrison discussed the Deputy dedicated to the City of Lucas and the crime prevention efforts in place within the Deputy's daily duties.

The Council discussed improvements seen in law enforcement efforts and ways in which the community could get involved.

Councilmember Lawrence discussed ratios associated with the number of officers needed versus the City's population. In the future, Councilmember Lawrence suggested that the City may need to consider adding additional deputies to the budget as the City continues to grow.

City Manager Joni Clarke stated that the City has discussed with Deputy White flexing his schedule to ensure he was available during the July 4th holiday and the City's Founders Day event. Ms. Clarke noted that the City's existing contract with the Collin County Sheriff's Office expires in 2017.

5. Consider adopting Ordinance 2016-09-00842 approving the budget for fiscal year beginning October 1, 2016 and ending September 30, 2017.

MOTION: *A motion was made by Mayor Pro Tem Peele, seconded by Councilmember Lawrence to adopt Ordinance 2016-09-00842 approving the budget for fiscal year beginning October 1, 2016 and ending September 30, 2017 and including an additional \$13,000 in account 6999-326 for overtime related to law enforcement.*

The record vote to adopt the budget was as follows:

*Councilmember Fisher: Opposed
Councilmember Baney: In Favor
Councilmember Duke: In Favor
Mayor Olk: In Favor
Mayor Pro Tem Peele: In Favor
Councilmember Lawrence: In Favor
Councilmember Millsap: In Favor*

The motion passed by a 6 to 1 vote with Councilmember Fisher voting in opposition.

MOTION: *A motion was made by Mayor Pro Tem Peele, seconded by Councilmember Duke to ratify the property tax revenue increase reflected in the fiscal year 2016-2017 adopted budget.*

The record vote was as follows:

*Councilmember Fisher: Opposed
Councilmember Baney: In Favor
Councilmember Duke: In Favor
Mayor Olk: In Favor
Mayor Pro Tem Peele: In Favor
Councilmember Lawrence: In Favor
Councilmember Millsap: In Favor*

The motion passed by a 6 to 1 vote with Councilmember Fisher voting in opposition.

6. Consider adopting Ordinance 2016-09-00841 levying Ad Valorem Taxes for the Tax Year 2016 (Fiscal Year 2016-2017) at a rate of \$0.317948 per one hundred (\$100) assessed valuation on all taxable property within the corporate limits of the City of Lucas as of January 1, 2016.

Councilmember Fisher noted that her objection to the budget and tax rate was related to the budget not reflecting some of the City's current needs.

MOTION: *A motion was made by Councilmember Millsap, seconded by Councilmember Baney, to approve Ordinance 2016-09-00841 of the City of Lucas, Texas, levying Ad Valorem Taxes for Tax Year 2016 at a rate of \$0.317948 per one hundred (\$100) assessed valuation on all taxable property within the corporate limits of the City of Lucas as of January 1, 2016.*

The record vote was as follows:

*Councilmember Fisher: Opposed
Councilmember Baney: In Favor
Councilmember Duke: In Favor
Mayor Olk: In Favor
Mayor Pro Tem Peele: In Favor
Councilmember Lawrence: In Favor
Councilmember Millsap: In Favor*

The motion passed by a 6 to 1 vote with Councilmember Fisher voting in opposition.

7. Discuss and provide guidance to staff regarding the revision and amendment of the Comprehensive Plan including:

- Chapter 1 – Introduction
- Chapter 2 – Demographics
- Chapter 3 – Housing
- Chapter 4 – Land Use
- Chapter 5 – Economic Development
- Chapter 6 – Parks, Recreation & Open Space
- Chapter 7 – Streets, Drainage & Master Thoroughfare Plan
- Chapter 8 – Water System

Mayor Pro Tem Peele explained that the City Council was evaluating each chapter of the Comprehensive Plan to ensure the contents were accurate and reflected the vision of the City. Mayor Pro Tem Peele noted that Chapter 8 – Water Projects would be reviewed by the City Council at their October 6, 2016 meeting and street projects would be reviewed at their November 3, 2016 meeting.

The Council had no comments and no formal action was taken. This item was for discussion purposes only.

8. Discuss and consider nominations for the 2016 Service Tree Award Program.

Councilmember Fisher noted that the Service Tree Committee met to discuss nominations. During that meeting, it was also discussed amending guidelines related to nominee residency requirements from required to preferred, and that a guideline be added stating “volunteer service must be substantive in creating and maintaining or enhancing the Lucas way of life.

City Attorney Joe Gorfida explained that because Service Tree guidelines were not part of the Agenda Item, any policy amendments would have to be brought back before the City Council at a later time.

MOTION: *A motion was made by Councilmember Fisher, seconded by Councilmember Duke to nominate Don Kendall and Lee Bauer as Service Tree Recipients for 2016. The motion passed unanimously by a 7 to 0 vote.*

Councilmember Fisher explained that Don Kendall was a previous City Council member in the 1980's and was instrumental as part of the Wilson Creek Oversight Committee working with the North Texas Municipal Water District ensuring the agreement and regulations in place for the plant did not cause any damage to the City and surrounding areas. Councilmember Fisher noted that Lee Bauer was a founding member of Lucas Fire-Rescue and had dedicated over 40 years of service to Lucas Fire-Rescue and the Lucas community.

9. Discuss and consider appointments and reappointments to the Board of Adjustment, Planning and Zoning Commission and the Parks and Open Space Board for two year terms beginning November 1, 2016 through October 31, 2018.

Mayor Pro Tem Peele recommended postponing this item to allow for additional time to increase the number of volunteer applications.

Mayor Olk suggested asked that this item be continued to the November 3, 2016 City Council meeting.

10. Discuss and consider providing the City Manager direction regarding funding the design and construction of eastbound Parker Road to northbound Cimarron Trail median opening and left turn lane.

Public Works Director/City Engineer Stanton Foerster stated that a group of citizens had approached the City requesting a turn lane be added between Lewis Lane and Santa Fe Trail as part of the Parker Road widening construction project. Mr. Foerster noted that residents traveling eastbound on Parker Road wanting to access Cimarron Trail, must either turn at the Santa Fe Trail median opening and drive through another neighborhood, or make a U-turn at the Santa Fe Trail median opening. Mr. Foerster noted that TxDOT Collin County offices had given preliminary approval of a median opening and left turn lane if the City of Lucas was willing to fund the design and construction of the turn lane.

The Council discussed that they were not interested in pursuing dedicating funds towards the design and construction of a left turn lane on eastbound Parker Road to northbound Cimarron Trail.

MOTION: *A motion was made by Mayor Pro Tem Peele, seconded by Councilmember Duke to not pursue or dedicate funds towards the design or construction of the eastbound Parker Road to northbound Cimarron Trail project by TxDOT. The motion passed unanimously by a 7 to 0 vote.*

Executive Session

The City Council may convene in a closed Executive Session pursuant to Chapter 551.071 of the Texas Government Code.

- 11. Pursuant to Section 551.072 of the Texas Government Code, the City Council will convene into Executive Session to deliberate the purchase, exchange, lease or value of real property within the City of Lucas.**
- 12. Pursuant to Section 551.074 of the Texas Government Code, the City Council will convene into Executive Session to discuss the evaluation for the City Manager.**

The City Council convened into Executive Session at 8:12 pm.

The City Council reconvened into Regular Session at 9:49 pm.

***MOTION:** A motion was made by Mayor Pro Tem Peele, seconded by Mayor Olk to approve raising the City Manager’s salary by four percent beginning October 1, 2016. The motion passed unanimously by a 7 to 0 vote.*

13. Adjournment.

***MOTION:** A motion was made by Councilmember Millsap, seconded by Councilmember Fisher to adjourn the meeting at 9:50 pm. The motion passed unanimously by a 7 to 0 vote.*

APPROVED:

ATTEST:

Jim Olk, Mayor

Stacy Henderson, City Secretary



RESOLUTION NO. R-2016-10-00455
[Approving Interlocal Agreement – Collin County]

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS, APPROVING THE INTERLOCAL AGREEMENT BY AND BETWEEN THE CITY OF LUCAS AND COLLIN COUNTY FOR COLLIN COUNTY TO FUND A PORTION OF THE CONSTRUCTION COSTS FOR IMPROVEMENTS TO EAST WINNINGKOFF TRAILHEAD; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Chapter 791 of the Texas Government Code and Chapter 344 of the Texas Local Government Code authorize local governments and special districts to contract with each other and provide services and governmental functions; and

WHEREAS, the City Council of the City of Lucas, Texas, has been presented a proposed Interlocal Agreement by and between the City and Collin County (“Interlocal Agreement”) for the purpose of Collin County funding a portion of the construction costs for improvements to East Winningkoff Trailhead;

WHEREAS, upon full review and consideration of the Interlocal Agreement and all matters related thereto, the City Council is of the opinion and finds that the terms and conditions thereof should be approved, and that the Mayor should be authorized to execute the Interlocal Agreement on behalf of the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS, THAT:

SECTION 1. The Interlocal Agreement by and between the City of Lucas and Collin County attached hereto as Exhibit “A” is hereby approved, and the Mayor is hereby authorized to execute said Interlocal Agreement and all documents related thereto.

SECTION 2. This Resolution shall take effect immediately upon its passage.

DULY PASSED AND APPROVED by the City Council of the City of Lucas, Texas, on this the 22nd day of October 2016.

ATTEST:

APPROVED:

Stacy Henderson, City Secretary
(10-11-2016/80302)

Jim Olk, Mayor

EXHIBIT "A"
Interlocal Agreement

**INTERLOCAL AGREEMENT
BETWEEN
COLLIN COUNTY
AND THE
CITY OF LUCAS**

WHEREAS, the County of Collin, Texas (“County”) and the City of Lucas (“City”) desire to enter into an Agreement concerning improvements to East Winningkoff Trailhead in the City of Lucas, Collin County, Texas; and

WHEREAS, the Interlocal Cooperation Act (Texas Government Code Chapter 791) authorizes any local government to contract with one or more local governments to perform governmental functions and services under the terms of the Act; and

WHEREAS, the City and County have determined that the improvements may be constructed most economically by implementing this Agreement; and

WHEREAS, the City and the County find that this Agreement will benefit the residents of the County and provide additional park and recreational facilities and open space for all County residents; and

WHEREAS, this Agreement will support or advance the mission of the Collin County Parks and Open Space Strategic Plan;

NOW, THEREFORE, this Agreement is made and entered into by the County and the City upon and for the mutual consideration stated herein.

WITNESSETH:

ARTICLE I.

The City shall arrange for improvements to East Winningkoff Trailhead, hereinafter called the “Project”.

ARTICLE II.

The City shall prepare plans and specifications for improvements, accept bids, award a construction contract and administer the construction contract in accordance with all state statutory requirements. The City shall provide the county with a copy of executed construction contract(s) for the Project. All improvements shall be in accordance with the plans and specifications approved by the City. Changes to the Project which alter the initial funding set forth in Exhibit “A” must be reviewed by the Parks Foundation Advisory Board and approved by Commissioners Court.

ARTICLE III.

The City will not expend assistance funds to acquire easements or real property for use as right-of-way.

ARTICLE IV.

The City estimates the total actual cost of the Project to be \$235,480.00. The County agrees to fund a portion of the total cost to construct improvements described in Exhibit "A" in an amount not to exceed **\$106,480.00**. The County shall reimburse the City for invoices paid by the City for costs related to items described in Exhibit "A" on a dollar for dollar matching basis. Should the City receive funding or reimbursement from third party sources for items described in Exhibit "A", then the County's matching obligations shall be calculated so as to exclude such third-party funding amounts. Alternative payment schedules would require Commissioners Court approval.

ARTICLE V.

Collin County's dollar for dollar matching participation in this project shall not exceed \$106,480.00 as indicated in Article IV above. The City shall be responsible for any costs, which exceed the total estimated project cost.

ARTICLE VI.

The City shall install a **project sign** identifying the project as being partially funded by the Collin County 2007 Parks and Open Space Bond Program. The City shall also provide **before, during and after photos** and **quarterly progress reports** in electronic format or via US mail to the contact identified on Exhibit "A". Following completion of the project, the City shall provide **an itemized final accounting of expenditures** including in-kind services or donations for the project. All projects for which the County has provided funds through its 2007 Parks and Open Space Bond Program must remain open and accessible to all County residents.

ARTICLE VII.

The City and County agree that the party paying for the performance of governmental functions or services shall make those payments only from current revenues legally available to the paying party.

ARTICLE VIII.

INDEMNIFICATION. To the extent allowed by law, each party agrees to release, defend, indemnify, and hold harmless the other (and its officers, agents, and employees) from and against all claims or causes of action for injuries (including death), property damages (including loss of use), and any other losses, demands, suits, judgements and costs, including reasonable attorneys' fees and expenses, in any way arising out of, related to, or resulting from its performance under this Agreement, or caused by its negligent acts or omissions (or those of its respective officers, agents, employees, or any other third parties for whom it is legally responsible) in connection with performing this Agreement.

ARTICLE IX.

VENUE. The laws of the State of Texas shall govern the interpretation, validity, performance and enforcement of this Agreement. The parties agree that this Agreement is performable in Collin County, Texas and that exclusive venue for any disputes arising under this Agreement shall lie in Collin County, Texas.

ARTICLE X.

SEVERABILITY. The provisions of this Agreement are severable. If any paragraph, section, subdivision, sentence, clause, or phrase of this Agreement is for any reason held by a court of competent jurisdiction to be contrary to law or contrary to any rule or regulation having the force and effect of the law, the remaining portions of the Agreement shall be enforced as if the invalid provision had never been included.

ARTICLE XI.

ENTIRE AGREEMENT. This Agreement embodies the entire Agreement between the parties and may only be modified in writing executed by both parties.

ARTICLE XII.

SUCCESSORS AND ASSIGNS. This Agreement shall be binding upon the parties hereto, their successors, heirs, personal representatives and assigns. Neither party will assign or transfer an interest in this Agreement without the written consent of the other party.

ARTICLE XIII.

IMMUNITY. It is expressly understood and agreed that, in the execution of this Agreement, neither party waives, nor shall be deemed hereby to have waived any immunity or defense that would otherwise be available to it against claims arising in the exercise of governmental powers and functions. By entering into this Agreement, the parties do not create any obligations, express or implied, other than those set forth herein, and this Agreement shall not create any rights in parties not signatories hereto.

ARTICLE XIV.

TERM. This Agreement shall be effective upon execution by both parties and shall continue in effect annually until final acceptance of the Project.

ARTICLE XV.

The declarations, determinations and findings declared, made and found in the preamble to this Agreement are hereby adopted, restated and made part of the operative provisions hereof.

APPROVED AS TO FORM:

By: _____
Name: _____
Title: _____
Date: _____

COUNTY OF COLLIN, TEXAS

By: _____
Name: Keith Self
Title: County Judge
Date: _____

Executed on this ____ day of _____,
20 __, by the County of Collin,
pursuant to Commissioners' Court
Order No. _____.
County Bond Project 07PG90

ATTEST:

By: _____
Name: _____
Title: _____
Date: _____

CITY OF LUCAS

By: _____
Name: _____
Title: _____
Date: _____

Executed on behalf of the City of
Lucas pursuant to City
Council Resolution No. _____

APPROVED AS TO FORM:

By: _____
Name: _____
Title: _____
Date: _____

EXHIBIT "A"

The County will provide funding assistance for the following:

- Pavilion construction (Item 1)
- Picnic tables (Item 2)
- Electric for pavilion (Item 3)
- Fence (Item 4)
- Round pen including installation and foundation (Item 5)
- Restroom (Item 7)
- Electric for restroom (Item 8)
- Aerobic septic system (Item 9)
- Landscaping (Item 10)
- Transformer and service panel (Items 11 and 12)

Total funding

\$106,480.00

Contact Information

Request for reimbursement submitted to:

Collin County Special Projects
Teresa Nelson
4690 Community Avenue, Suite 200
McKinney, Texas 75071
972-548-3744

Submission of electronic photos and quarterly reports:

Teresa Nelson
tnelson@collincountytexas.gov

Project Manager Contact: (must be able to answer specific questions regarding project)

Name: _____

Address: _____

Phone: _____

Fax: _____

Email: _____



City of Lucas Council Agenda Request October 20, 2016

Item No. 06

Requester: Public Works Director/City Engineer Stanton Foerster

Agenda Item:

Consider updates to the Water System Capital Improvement Plan for 2016 to 2030 prepared by BW2 Engineers, Inc.

Background Information:

During May and June 2016, staff requested BW2 Engineers, Inc. develop a Water System Capital Improvement Plan (CIP) for the next 15+/- years. Working closely with staff, a CIP has been developed. The plan focuses on a variety of elements associated with the anticipated population growth of the service area as well as the following:

- Dead End Waterlines
- Pressure Planes
- Elevated Storage
- Pipe Material Replacement

Due to the size of the maps, they will be made available and disbursed to the City Council at the October 20, 2016 meeting.

Citizen Summary:

The purpose of this item is to discuss the draft information in the Water System CIP. The City Council will most likely provide direction regarding the next steps to incorporate this plan into the Comprehensive Plan Update by referring the Water System CIP to the Planning and Zoning Commission for further review and comment.

Attachments/Supporting Documentation:

1. *DRAFT* CIP Estimates

Budget/Financial Impact:

2016 to 2020	\$6.4 Million
2021 to 2025	\$6.3 Million
2026 to 2030	\$4.4 Million
Total	\$17.1 Million

Recommendation:

NA



**City of Lucas
Council Agenda Request
October 20, 2016**

Item No. 06

Motion:

NA

CITY OF LUCAS

WATER SYSTEM CIP UPDATE

The purpose of this study is to update the Capital Improvements Plan (CIP) for the City of Lucas water system. The City of Lucas owns and operates the water system, which serves the City, several areas in the City's ETJ, and an area in the City of Allen ETJ located on the northwest side of Lucas. The system does not serve the large ETJ area on the southeast side of the City or a small area inside the city limits in the Fairbrook Circle/Rock Ridge Road area. The City's existing water system and the present service area of the water system are shown on the attached Existing Water System map.

The water system CIP is typically determined by the projected water demand, based on the anticipated population in the service area. Needs associated with different elements of the system can also have an impact on the projects of the CIP. In the Lucas water system, such elements include the following:

- Dead End Water Lines

The Lucas water system has many dead end water lines that have resulted from the way the system was developed over the years. There are some entire neighborhood areas located on the end of dead end water lines. The dead end water lines and dead end neighborhoods in the system are shown on the attached Dead End Water Lines map. Projects are included in the CIP update which will address the more critical dead end water lines.

- Pressure Planes

The Lucas water system is on two pressure planes. The pressure plane boundaries are shown on the attached Pressure Plane Boundary map. The water system has been difficult to operate due to the way that key facilities in the system have been constructed in past years. A single pressure plane would alleviate this situation. Projects are included in the CIP update which will address the pressure plane situation.

- Elevated Tank

A new elevated storage tank is needed to meet projected water demand in the water system. Two sites for the new tank were analyzed to determine the most cost effective site. The two sites are the North Pump Station site and the City Hall site. The site alternatives are shown on the attached Elevated Tank Alternatives map. It was determined that the construction of a new elevated tank at the North Pump Station site would be the most effective alternative. This project is included in the CIP update.

- Pipe Materials

Water lines in the Lucas water system consist of three types of pipe. Most of the water lines are standard wall polyvinyl chloride (PVC) pipelines. The older water lines are asbestos cement (AC) pipelines and thin wall PVC pipelines. The pipeline materials in the water system are shown on the Pipe Material map. Projects are included in the CIP updated which will address the replacement of the older water lines.

The water system CIP update has been prepared based on the projected water demand for the service area and the needs of the different elements of the system. Following is a list of the CIP projects. The CIP projects have been broken down into five year increments based on the priorities of the projects. The estimate of the project cost for each project is included on the list of the CIP projects. Also attached is a detailed cost estimate breakdown for each CIP project.

**City of Lucas
Water System CIP Update**

2016 to 2020

1.	Parker Road Phase 1 12" replacement water line	\$292,037
2.	Altitude valve at Winningkoff Tank	\$97,708
3.	Pump station with two 500 GPM pumps at Winningkoff Tank	\$217,498
4.	Edgefield Lane/Cedar Bend Trail 6" water line loop and East Lucas Road 12" water line loop	\$510,647
5.	Graham Lane/Rock Ridge Court 6"/8" water line loop	\$571,775
6.	Wiltshire Court 8" water line connection	\$98,237
7.	500,000 gallon elevated storage tank at North Pump Station	\$1,496,880
8.	Enchanted Way/Brookhaven Drive 8" water line loop	\$203,262
9.	Lewis Lane/Parker Road 8" replacement water line	\$326,004
10.	Pump station with three 500 GPM pumps at north pump station	\$432,575
11.	Snider Lane 8" replacement water line	\$594,549
12.	Estates Parkway/Rock Ridge Road 8"/12" replacement water line	\$491,953
13.	Glencove Circle/Crestview Circle 6" water line loops	\$224,255
14.	Hickory Hill Street 8" water line loop	\$226,383
15.	Manor Lane 8" replacement water line	\$313,951
16.	Lakeview Drive 8" replacement water line	\$87,682
17.	Repaint 200,000 gallon ground storage tank at McGarity Pump Station	\$150,150
18.	Rock Ridge Road/Lovejoy High School 8" water line loop	\$56,773

Total Project Cost 2016 to 2020

\$6,392,318

1. Includes cost for engineering, surveying, and geotechnical services.
2. Does not include any cost for right-of-way, easement, or property acquisition.
3. Does not include any costs for permitting, mitigation, or construction testing and inspection.

OPINION OF PROBABLE CONSTRUCTION COST



Water System CIP Update
Update 2016 to 2020
City of Lucas

Date: 9/12/2016

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 1 (Parker Rd. Phase 1 12" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$11,500.00	\$11,500
2	Traffic Control/ Construction Signing	LS	1	\$3,000.00	\$3,000
3	Erosion Control	LS	1	\$5,000.00	\$5,000
4	Trench Safety	LF	2,115	\$1.50	\$3,173
5	Furnish & install 12" PVC, including Class "B" embedment	LF	2,100	\$60.00	\$126,000
6	Furnish & install 12" PVC, by bore and jacking	LF	25	\$320.00	\$8,000
7	Furnish & install 8" PVC, including Class "B" embedment	LF	15	\$42.00	\$630
8	Furnish & install 8" PVC, by bore and jacking	LF	25	\$280.00	\$7,000
9	Furnish & install 12" Bend	LS	1	\$8,000.00	\$8,000
10	Furnish & install 8" Bend	LS	1	\$800.00	\$800
11	Furnish & install 12" Tee	EA	4	\$1,200.00	\$4,800
12	Furnish & install 12" Valve	EA	5	\$1,500.00	\$7,500
13	Furnish & install 8" Valve	EA	1	\$500.00	\$500
14	Furnish & install 12"x8" Reducer	EA	1	\$1,200.00	\$1,200
15	Furnish & install Fire Hydrant, including lead and 6" valve	EA	3	\$4,000.00	\$12,000
16	Connections to Existing Water Lines	LS	1	\$8,000.00	\$8,000
17	Cut and Plug Existing Water Lines	LS	1	\$2,000.00	\$2,000
18	Remove Existing Fire Hydrant and Return to City	EA	2	\$500.00	\$1,000
19	Furnish & install Water Service Connection	EA	16	\$1,500.00	\$24,000
20	Block Sod	SY	500	\$7.00	\$3,500
21	Seeding	SY	3,000	\$1.25	\$3,750
22	Construction Contingency (10%)	LS	1	\$24,135.25	\$24,135
23	Engineering/Surveying Services (10%)	LS	1	\$26,548.78	\$26,549
				Sub-Total:	\$292,037
Priority 2 (Altitude valve at Winningkoff Tank)					
1	Mobilization, Bonds, Insurance	LS	1	\$4,500.00	\$4,500
2	Furnish & install Altitude Valve	LS	1	\$10,000.00	\$10,000
3	Furnish & install Valve Vault	LS	1	\$40,000.00	\$40,000
4	Furnish & install Sump Pump	LS	1	\$4,000.00	\$4,000
5	Furnish & install Electrical	LS	1	\$15,000.00	\$15,000
6	Furnish & install By Pass Piping/Valving	LS	1	\$6,000.00	\$6,000
7	Seeding	SY	1,000	\$1.25	\$1,250
8	Construction Contingency (10%)	LS	1	\$8,075.00	\$8,075
9	Engineering/Surveying Services (10%)	LS	1	\$8,882.50	\$8,883
				Sub-Total:	\$97,708
Priority 3 (Pump Station with two 500 GPM Pumps at Winningkoff Tank)					
1	Mobilization, Bonds, Insurance	LS	1	\$8,500.00	\$8,500
2	Furnish & install 500 GPM Pumps	EA	2	\$20,000.00	\$40,000
3	Furnish & install Pump Vault	LS	1	\$50,000.00	\$50,000
4	Furnish & install Pipes and Valves	LS	1	\$10,000.00	\$10,000
5	Furnish & install Electrical	LS	1	\$70,000.00	\$70,000
6	Seeding	SY	1,000	\$1.25	\$1,250
7	Construction Contingency (10%)	LS	1	\$17,975.00	\$17,975
8	Engineering/Surveying Services (10%)	LS	1	\$19,772.50	\$19,773
				Sub-Total:	\$217,498

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 4 (Edgefield Ln./Cedar Bend Tr. 6" Water Line Loop and East Lucas Rd. Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$20,000.00	\$20,000
2	Traffic Control/ Construction Signing	LS	1	\$5,000.00	\$5,000
3	Erosion Control	LS	1	\$9,000.00	\$9,000
4	Trench Safety	LF	3,515	\$1.50	\$5,273
5	Furnish & install 12" PVC, including Class "B" embedment	LF	3,460	\$60.00	\$207,600
6	Furnish & install 12" PVC, by bore and jacking	LF	100	\$320.00	\$32,000
7	Furnish & install 12" PVC, by wet bore	LF	235	\$130.00	\$30,550
8	Furnish & install 6" PVC, including Class "B" embedment	LF	55	\$35.00	\$1,925
9	Furnish & install 6" PVC, by bore and jacking	LF	90	\$260.00	\$23,400
10	Furnish & install 12" Bend	LS	1	\$2,000.00	\$2,000
11	Furnish & install 12" Valve	EA	5	\$1,500.00	\$7,500
12	Furnish & install 6" Valve	EA	1	\$400.00	\$400
13	Connections to Existing Water Lines	LS	1	\$10,000.00	\$10,000
14	Furnish & install Fire Hydrant, including lead and 6" valve	EA	9	\$4,000.00	\$36,000
15	Cut and Plug Existing Water Lines	LS	1	\$4,000.00	\$4,000
16	Remove Existing Fire Hydrant and Return to City	EA	1	\$500.00	\$500
17	Furnish & install Water Service Connection	EA	4	\$1,500.00	\$6,000
18	Block Sod	SY	2,000	\$7.00	\$14,000
19	Seeding	SY	5,500	\$1.25	\$6,875
20	Construction Contingency (10%)	LS	1	\$42,202.25	\$42,202
21	Engineering/Surveying Services (10%)	LS	1	\$46,422.48	\$46,422
				Sub-Total:	\$510,647

Priority 5 (Graham Ln./Rock Ridge Ct. 6"/8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$22,500.00	\$22,500
2	Traffic Control/ Construction Signing	LS	1	\$2,000.00	\$2,000
3	Erosion Control	LS	1	\$13,000.00	\$13,000
4	Trench Safety	LF	5,230	\$1.50	\$7,845
5	Furnish & install 6" PVC, including Class "B" embedment	LF	3,115	\$35.00	\$109,025
6	Furnish & install 6" PVC, by bore and jacking	LF	80	\$260.00	\$20,800
7	Furnish & install 6" PVC, by wet bore	LF	185	\$75.00	\$13,875
8	Furnish & install 8" PVC, including Class "B" embedment	LF	2,115	\$42.00	\$88,830
9	Furnish & install 8" PVC, by bore and jacking	LF	90	\$280.00	\$25,200
10	Furnish & install 8" PVC, by wet bore	LF	100	\$90.00	\$9,000
11	Furnish & install 6" Bend	LS	1	\$2,250.00	\$2,250
12	Furnish & install 8" Bend	LS	1	\$1,085.00	\$1,085
13	Furnish & install 6" Valve	EA	1	\$400.00	\$400
14	Furnish & install 8" Valve	EA	4	\$500.00	\$2,000
15	Furnish & install 8"x6" reducer	EA	1	\$700.00	\$700
16	Connections to Existing Water Lines	LS	1	\$10,000.00	\$10,000
17	Furnish & install Fire Hydrant, including lead and 6" valve	EA	9	\$4,000.00	\$36,000
18	Cut and Plug Existing Water Lines	LS	1	\$4,500.00	\$4,500
19	Remove Existing Fire Hydrant and Return to City	EA	2	\$500.00	\$1,000
20	Furnish & install Water Service Connection	EA	28	\$1,500.00	\$42,000
21	Block Sod	SY	8,000	\$7.00	\$56,000
22	Seeding	SY	3,625	\$1.25	\$4,531
23	Construction Contingency (10%)	LS	1	\$47,254.13	\$47,254
24	Engineering/Surveying Services (10%)	LS	1	\$51,979.54	\$51,980
				Sub-Total:	\$571,775

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 6 (Wiltshire Ct. 8" Water Line Connection)					
1	Mobilization, Bonds, Insurance	LS	1	\$3,850.00	\$3,850
2	Traffic Control/ Construction Signing	LS	1	\$500.00	\$500
3	Erosion Control	LS	1	\$2,550.00	\$2,550
4	Trench Safety	LF	975	\$1.50	\$1,463
5	Furnish & install 8" PVC, including Class "B" embedment	LF	975	\$42.00	\$40,950
6	Furnish & install 8" PVC, by wet bore	LF	120	\$90.00	\$10,800
7	Furnish & install 8" Bend	LS	1	\$4,300.00	\$4,300
8	Furnish & install 8" Valve	EA	2	\$500.00	\$1,000
9	Furnish & install Fire Hydrant, including lead and 6" valve	EA	1	\$4,000.00	\$4,000
10	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
11	Block Sod	SY	700	\$7.00	\$4,900
12	Seeding	SY	1,500	\$1.25	\$1,875
13	Construction Contingency (10%)	LS	1	\$8,118.75	\$8,119
14	Engineering/Surveying Services (10%)	LS	1	\$8,930.63	\$8,931
				Sub-Total:	\$98,237
Priority 7 (500,000 Gallon Elevated Storage Tank at North Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$60,000.00	\$60,000
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$4,000.00	\$4,000
4	Furnish & install 500,000 Gallon Elevated Storage Tank	LS	1	\$1,100,000.00	\$1,100,000
5	Furnish & install Yard Piping/Valving	LS	1	\$20,000.00	\$20,000
6	Furnish & install Electrical	LS	1	\$45,000.00	\$45,000
7	Furnish & install Tank Piping/Valving	LS	1	\$20,000.00	\$20,000
8	Site Work	LS	1	\$5,000.00	\$5,000
9	Seeding	SY	4,000	\$1.25	\$5,000
10	Construction Contingency (10%)	LS	1	\$126,000.00	\$126,000
11	Engineering/Surveying/Geotechnical Services (8%)	LS	1	\$110,880.00	\$110,880
				Sub-Total:	\$1,496,880
Priority 8 (Enchanted Way/Brookhaven Dr. 8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$8,000.00	\$8,000
2	Traffic Control/ Construction Signing	LS	1	\$500.00	\$500
3	Erosion Control	LS	1	\$1,400.00	\$1,400
4	Trench Safety	LF	3,235	\$1.50	\$4,853
5	Furnish & install 8" PVC, including Class "B" embedment	LF	3,235	\$42.00	\$135,870
6	Furnish & install Fire Hydrant, including lead and 6" valve	EA	1	\$4,000.00	\$4,000
7	Connections to Existing Water Lines	LS	1	\$3,500.00	\$3,500
8	Block Sod	SY	150	\$7.00	\$1,050
9	Seeding	SY	7,050	\$1.25	\$8,813
10	Construction Contingency (10%)	LS	1	\$16,798.50	\$16,799
11	Engineering/Surveying Services (10%)	LS	1	\$18,478.35	\$18,478
				Sub-Total:	\$203,262

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 9 (Lewis Ln./Parker Rd. 8" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$12,850.00	\$12,850
2	Traffic Control/ Construction Signing	LS	1	\$2,000.00	\$2,000
3	Erosion Control	LS	1	\$4,000.00	\$4,000
4	Trench Safety	LF	3,500	\$1.50	\$5,250
5	Furnish & install 8" PVC, including Class "B" embedment	LF	3,500	\$42.00	\$147,000
6	Furnish & install 8" PVC, by bore and jacking	LF	80	\$280.00	\$22,400
7	Furnish & install 8" PVC, by wet bore	LF	100	\$90.00	\$9,000
8	Furnish & install 8" PVC Creek Crossing, by bore and jacking	LF	50	\$330.00	\$16,500
9	Furnish & install 8" Bend	LS	1	\$4,050.00	\$4,050
10	Furnish & install 8" Valve	EA	4	\$500.00	\$2,000
11	Furnish & install Fire Hydrant, including lead and 6" valve	EA	4	\$4,000.00	\$16,000
12	Connections to Existing Water Lines	LS	1	\$4,000.00	\$4,000
13	Block Sod	SY	2,500	\$7.00	\$17,500
14	Seeding	SY	5,500	\$1.25	\$6,875
15	Construction Contingency (10%)	LS	1	\$26,942.50	\$26,943
16	Engineering/Surveying Services (10%)	LS	1	\$29,636.75	\$29,637
				Sub-Total:	\$326,004
Priority 10 (Pump Station with three 500 GPM Pumps at North Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$17,000.00	\$17,000
2	Erosion Control	LS	1	\$3,000.00	\$3,000
3	Furnish & install 500 GPM Pumps	EA	3	\$20,000.00	\$60,000
4	Furnish & construct Pump Building	LS	1	\$120,000.00	\$120,000
5	Furnish & install Pipes and Valves	LS	1	\$50,000.00	\$50,000
6	Furnish & install Electrical	LS	1	\$100,000.00	\$100,000
7	Site Work	LS	1	\$5,000.00	\$5,000
8	Seeding	SY	2,000	\$1.25	\$2,500
9	Construction Contingency (10%)	LS	1	\$35,750.00	\$35,750
10	Engineering/Surveying/Geotechnical Services (10%)	LS	1	\$39,325.00	\$39,325
				Sub-Total:	\$432,575
Priority 11 (Snider Ln. 8" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$23,500.00	\$23,500
2	Traffic Control/ Construction Signing	LS	1	\$6,500.00	\$6,500
3	Erosion Control	LS	1	\$15,000.00	\$15,000
4	Trench Safety	LF	6,075	\$1.50	\$9,113
5	Furnish & install 8" PVC, including Class "B" embedment	LF	6,075	\$42.00	\$255,150
6	Furnish & install 8" PVC, by bore and jacking	LF	80	\$280.00	\$22,400
7	Furnish & install 8" PVC Creek Crossing, by bore and jacking	LF	50	\$330.00	\$16,500
8	Furnish & install 8" PVC, by wet bore	LF	270	\$90.00	\$24,300
9	Furnish & install 8" Bend	LS	1	\$3,150.00	\$3,150
10	Furnish & install 8" Tee	EA	1	\$900.00	\$900
11	Furnish & install 8" Valve	EA	7	\$500.00	\$3,500
12	Furnish & install Fire Hydrant, including lead and 6" valve	EA	13	\$4,000.00	\$52,000
13	Connections to Existing Water Lines	LS	1	\$4,000.00	\$4,000
14	Cut and Plug Existing Water Lines	LS	1	\$2,225.00	\$2,225
15	Furnish & install Water Service Connection	EA	20	\$1,500.00	\$30,000
16	Remove Existing Fire Hydrant and Return to City	EA	1	\$500.00	\$500
17	Block Sod	SY	1,000	\$7.00	\$7,000
18	Seeding	SY	12,500	\$1.25	\$15,625
19	Construction Contingency (10%)	LS	1	\$49,136.25	\$49,136
20	Engineering/Surveying Services (10%)	LS	1	\$54,049.88	\$54,050
				Sub-Total:	\$594,549

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 12 (Estates Pkwy./Rock Ridge Rd. 8"/12" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$19,500.00	\$19,500
2	Traffic Control/ Construction Signing	LS	1	\$5,000.00	\$5,000
3	Erosion Control	LS	1	\$10,400.00	\$10,400
4	Trench Safety	LF	4,165	\$1.50	\$6,248
5	Furnish & install 8" PVC, including Class "B" embedment	LF	925	\$42.00	\$38,850
6	Furnish & install 8" PVC, by wet bore	LF	100	\$90.00	\$9,000
7	Furnish & install 12" PVC, including Class "B" embedment	LF	3,240	\$60.00	\$194,400
8	Furnish & install 12" PVC, by bore and jacking	LF	40	\$320.00	\$12,800
9	Furnish & install 12" PVC, by wet bore	LF	120	\$130.00	\$15,600
10	Furnish & install 12" Bend	LS	1	\$3,000.00	\$3,000
11	Furnish & install 12" Tee	EA	1	\$1,250.00	\$1,250
12	Furnish & install 8" Valve	EA	5	\$500.00	\$2,500
13	Furnish & install 12" Valve	EA	1	\$1,500.00	\$1,500
14	Furnish & install Fire Hydrant, including lead and 6" valve	EA	9	\$4,000.00	\$36,000
15	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
16	Cut and Plug Existing Water Lines	LS	1	\$2,250.00	\$2,250
17	Furnish & install Water Service Connection	EA	14	\$1,500.00	\$21,000
18	Remove Existing Fire Hydrant and Return to City	EA	6	\$500.00	\$3,000
19	Block Sod	SY	1,325	\$7.00	\$9,275
20	Seeding	SY	8,000	\$1.25	\$10,000
21	Construction Contingency (10%)	LS	1	\$40,657.25	\$40,657
22	Engineering/Surveying Services (10%)	LS	1	\$44,722.98	\$44,723
				Sub-Total:	\$491,953

Priority 13 (Glencove Cir./Crestview Cir. 6" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$9,000.00	\$9,000
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$5,100.00	\$5,100
4	Trench Safety	LF	1,965	\$1.50	\$2,948
5	Furnish & install 6" PVC, including Class "B" embedment	LF	1,965	\$35.00	\$68,775
6	Furnish & install 6" PVC, by bore and jacking	LF	40	\$260.00	\$10,400
7	Furnish & install 6" PVC, by wet bore	LF	180	\$75.00	\$13,500
8	Furnish & install 6" Bend	LS	1	\$2,500.00	\$2,500
9	Furnish & install 6" Valve	EA	2	\$400.00	\$800
10	Furnish & install Fire Hydrant, including lead and 6" valve	EA	4	\$4,000.00	\$16,000
11	Connections to Existing Water Lines	LS	1	\$7,750.00	\$7,750
12	Cut and Plug Existing Water Lines	LS	1	\$4,000.00	\$4,000
13	Furnish & install Water Service Connection	EA	14	\$1,500.00	\$21,000
14	Block Sod	SY	3,000	\$7.00	\$21,000
15	Seeding	SY	1,375	\$1.25	\$1,719
16	Construction Contingency (10%)	LS	1	\$18,377.25	\$18,377
17	Engineering/Surveying Services (10%)	LS	1	\$20,386.85	\$20,387
				Sub-Total:	\$224,255

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 14 (Hickory Hill St. 8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$9,000.00	\$9,000
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$5,300.00	\$5,300
4	Trench Safety	LF	2,120	\$1.50	\$3,180
5	Furnish & install 8" PVC, including Class "B" embedment	LF	2,120	\$42.00	\$89,040
6	Furnish & install 8" PVC, by bore and jacking	LF	40	\$280.00	\$11,200
7	Furnish & install 8" PVC, by wet bore	LF	100	\$90.00	\$9,000
8	Furnish & install 8" Bend	LS	1	\$1,500.00	\$1,500
9	Furnish & install 8" Valve	EA	3	\$500.00	\$1,500
10	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
11	Furnish & install Fire Hydrant, including lead and 6" valve	EA	2	\$4,000.00	\$8,000
12	Cut and Plug Existing Water Lines	LS	1	\$1,800.00	\$1,800
13	Furnish & install Water Service Connection	EA	12	\$1,500.00	\$18,000
14	Remove Existing Fire Hydrant and Return to City	EA	2	\$500.00	\$1,000
15	Block Sod	SY	3,015	\$7.00	\$21,105
16	Seeding	SY	1,175	\$1.25	\$1,469
17	Construction Contingency (10%)	LS	1	\$18,709.38	\$18,709
18	Engineering/Surveying Services (10%)	LS	1	\$20,580.31	\$20,580
				Sub-Total:	\$226,383

Priority 15 (Manor Ln. 8" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$12,500.00	\$12,500
2	Traffic Control/ Construction Signing	LS	1	\$3,150.00	\$3,150
3	Erosion Control	LS	1	\$7,500.00	\$7,500
4	Trench Safety	LF	3,010	\$1.50	\$4,515
5	Furnish & install 8" PVC, including Class "B" embedment	LF	3,010	\$42.00	\$126,420
6	Furnish & install 8" PVC, by bore and jacking	LF	40	\$280.00	\$11,200
7	Furnish & install 8" PVC, by wet bore	LF	115	\$90.00	\$10,350
8	Furnish & install 8" Bend	LS	1	\$1,500.00	\$1,500
9	Furnish & install 8" Valve	EA	3	\$500.00	\$1,500
10	Connections to Existing Water Lines	LS	1	\$6,250.00	\$6,250
11	Furnish & install Fire Hydrant, including lead and 6" valve	EA	6	\$4,000.00	\$24,000
12	Cut and Plug Existing Water Lines	LS	1	\$2,000.00	\$2,000
13	Furnish & install Water Service Connection	EA	6	\$1,500.00	\$9,000
14	Remove Existing Fire Hydrant and Return to City	EA	5	\$500.00	\$2,500
15	Block Sod	SY	5,025	\$7.00	\$35,175
16	Seeding	SY	1,675	\$1.25	\$2,094
17	Construction Contingency (10%)	LS	1	\$25,756.00	\$25,756
18	Engineering/Surveying Services (10%)	LS	1	\$28,540.98	\$28,541
				Sub-Total:	\$313,951

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 16 (Lakeview Dr. 8" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$3,500.00	\$3,500
2	Traffic Control/ Construction Signing	LS	1	\$875.00	\$875
3	Erosion Control	LS	1	\$2,100.00	\$2,100
4	Trench Safety	LF	830	\$1.50	\$1,245
5	Furnish & install 8" PVC, including Class "B" embedment	LF	830	\$42.00	\$34,860
6	Furnish & install 8" PVC, by wet bore	LF	60	\$90.00	\$5,400
7	Furnish & install 8" Valve	EA	1	\$500.00	\$500
8	Connections to Existing Water Lines	LS	1	\$6,000.00	\$6,000
9	Furnish & install Fire Hydrant, including lead and 6" valve	EA	1	\$4,000.00	\$4,000
10	Cut and Plug Existing 6" water line in place	LS	1	\$2,250.00	\$2,250
11	Furnish & install Water Service Connection	EA	1	\$1,500.00	\$1,500
12	Block Sod	SY	1,385	\$7.00	\$9,695
13	Seeding	SY	475	\$1.25	\$594
14	Construction Contingency (10%)	LS	1	\$7,192.50	\$7,193
15	Engineering/Surveying Services (10%)	LS	1	\$7,971.13	\$7,971
				Sub-Total:	\$87,682
<hr/>					
Priority 17 (Repaint 200,000 Gallon Ground Storage Tank at McGarity Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$8,000.00	\$8,000
2	Repaint existing 200,000 gallon ground storage tank	LS	1	\$120,000.00	\$120,000
3	Disinfect Tank	LS	1	\$2,000.00	\$2,000
4	Construction Contingency (10%)	LS	1	\$13,000.00	\$13,000
5	Engineering/Surveying Services (5%)	LS	1	\$7,150.00	\$7,150
				Sub-Total:	\$150,150
<hr/>					
Priority 18 (Rock Ridge Rd./Lovejoy High School 8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$2,250.00	\$2,250
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$1,800.00	\$1,800
4	Trench Safety	LF	770	\$1.50	\$1,155
5	Furnish & install 8" PVC, including Class "B" embedment	LF	770	\$42.00	\$32,340
6	Furnish & install 8" Bend	LS	1	\$750.00	\$750
7	Connections to Existing Water Lines	LS	1	\$5,500.00	\$5,500
8	Seeding	SY	1,700	\$1.25	\$2,125
9	Construction Contingency (10%)	LS	1	\$4,692.00	\$4,692
10	Engineering/Surveying Services (10%)	LS	1	\$5,161.20	\$5,161
				Sub-Total:	\$56,773
<hr/>					
TOTAL PROJECT COST:					\$6,392,318

- Notes:
1. Includes cost for engineering, surveying, and geotechnical services.
 2. Does not include any cost for right-of-way, easement, or property acquisition.
 3. Does not include any costs for permitting, mitigation, or construction testing and inspection.

2021 to 2025

19.	950,000 gallon ground storage tank at McGarity Pump Station	\$1,279,093
20.	Shiloh Drive/Toole Drive 6" replacement water line and Braeburn Way 8" water line loop	\$190,546
21.	Restore existing pump station at North Pump Station	\$153,821
22.	Parker Road Phase 2 12" replacement water line	\$353,184
23.	Parker Road Phase 3 12" replacement water line and Parker Road/Southview Drive 8" water line loop	\$835,239
24.	Fair Brook Circle 8" replacement water line and water line loop	\$256,453
25.	Lewis Lane/Shepherds Creek Drive/Green Acres Lane 8" water line loop	\$300,113
26.	FM 2551/McGarity Lane/Estates Parkway 8"/12" water line loop	\$425,539
27.	Ingram Lane/McGarity Lane to West Lucas Road 12"/6" replacement water line	\$836,217
28.	Estates Road 8" replacement water line	\$232,014
29.	Restore existing old pump station at McGarity Pump Station	\$115,101
30.	Chisholm Trail/Caman Park Drive 8" water line and Turnberry Lane/Highland Drive 8" water line	\$322,203
31.	Stinson Road/Enchanted Way 8" water line	\$142,278
32.	Stinson Road/East Lucas Road 8" water line	\$147,827
33.	Rock Creek Estates Road 6" water line loop	\$175,610
34.	Stinson Road 12" water line connector	\$39,189
35.	Repaint 750,000 gallon ground storage tank at North Pump Station	\$409,303
36.	Repaint 350,000 gallon ground storage tank at McGarity Pump Station	\$228,690

Total Project Cost 2021 to 2025**\$6,251,877**

1. Includes cost for engineering, surveying, and geotechnical services.
2. Does not include any cost for right-of-way, easement, or property acquisition.
3. Does not include any costs for permitting, mitigation, or construction testing and inspection.

OPINION OF PROBABLE CONSTRUCTION COST



**Water System CIP Update
Update 2021 to 2025
City of Lucas**

Date: 9/12/2016

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 19 (950,000 Gallon Ground Storage Tank at McGarity Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$50,800.00	\$50,800
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$5,000.00	\$5,000
4	Furnish & install 950,000 Gallon Ground Storage Tank	LS	1	\$900,000.00	\$900,000
5	Furnish & install Yard Piping/Valving	LS	1	\$40,000.00	\$40,000
6	Furnish & install all Electrical Components	LS	1	\$35,000.00	\$35,000
7	Furnish & install Tank Piping/Valving	LS	1	\$25,000.00	\$25,000
8	Site Work	LS	1	\$5,000.00	\$5,000
9	Seeding	SY	4,000	\$1.25	\$5,000
10	Construction Contingency (10%)	LS	1	\$106,680.00	\$106,680
11	Engineering/Surveying/Geotechnical Services (9%)	LS	1	\$105,613.20	\$105,613
				Sub-Total:	\$1,279,093
Priority 20 (Shiloh Dr./Toole Dr. Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$7,500.00	\$7,500
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$5,250.00	\$5,250
4	Trench Safety	LF	1,710	\$1.50	\$2,565
5	Furnish & install 6" PVC, including Class "B" embedment	LF	1,395	\$35.00	\$48,825
6	Furnish & install 6" PVC, by bore and jacking	LF	40	\$260.00	\$10,400
7	Furnish & install 6" PVC, by wet bore	LF	185	\$75.00	\$13,875
8	Furnish & install 8" PVC, including Class "B" embedment	LF	315	\$42.00	\$13,230
9	Furnish & install 6" Bends	LS	1	\$550.00	\$550
10	Furnish & install 8" Bends	LS	1	\$750.00	\$750
11	Furnish & install 6" valve	EA	1	\$500.00	\$500
12	Connections to Existing Water Lines	LS	1	\$11,250.00	\$11,250
13	Cut and Plug Existing Water Lines	LS	1	\$2,000.00	\$2,000
14	Furnish & install Water Service Connection	EA	20	\$1,500.00	\$30,000
15	Block Sod	SY	875	\$7.00	\$6,125
16	Seeding	SY	2,925	\$1.25	\$3,656
17	Construction Contingency (10%)	LS	1	\$15,747.63	\$15,748
18	Engineering/Surveying Services (10%)	LS	1	\$17,322.39	\$17,322
				Sub-Total:	\$190,546
Priority 21 (Restore Existing Pump Station at North Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$6,500.00	\$6,500
2	Restore Existing Pump Station	LS	1	\$120,000.00	\$120,000
3	Seeding	SY	500	\$1.25	\$625
4	Construction Contingency (10%)	LS	1	\$12,712.50	\$12,713
5	Engineering/Surveying Services (10%)	LS	1	\$13,983.75	\$13,984
				Sub-Total:	\$153,821

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 22 (Parker Rd. Phase 2 12" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$15,250.00	\$15,250
2	Traffic Control/ Construction Signing	LS	1	\$3,185.00	\$3,185
3	Erosion Control	LS	1	\$7,500.00	\$7,500
4	Trench Safety	LF	3,035	\$1.50	\$4,553
5	Furnish & install 12" PVC, including Class "B" embedment	LF	3,035	\$60.00	\$182,100
6	Furnish & install 12" PVC, by bore and jacking	LF	40	\$320.00	\$12,800
7	Furnish & install 12" PVC, by wet bore	LF	100	\$130.00	\$13,000
8	Furnish & install 12" Bends	LS	1	\$2,500.00	\$2,500
9	Furnish & install 12"x8" Reducer	EA	1	\$1,500.00	\$1,500
10	Connections to Existing Water Lines	LS	1	\$5,250.00	\$5,250
11	Cut and Plug Existing Water Lines	LS	1	\$2,250.00	\$2,250
12	Furnish & install Water Service Connection	EA	3	\$1,500.00	\$4,500
13	Block Sod	SY	5,000	\$7.00	\$35,000
14	Seeding	SY	2,000	\$1.25	\$2,500
15	Construction Contingency (10%)	LS	1	\$29,188.75	\$29,189
16	Engineering/Surveying Services (10%)	LS	1	\$32,107.63	\$32,108
				Sub-Total:	\$353,184

Priority 23 (Parker Rd. Phase 3 12" Replacement Water Line and Parker Rd./Southview Dr. 8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$33,000.00	\$33,000
2	Traffic Control/ Construction Signing	LS	1	\$10,600.00	\$10,600
3	Erosion Control	LS	1	\$24,000.00	\$24,000
4	Trench Safety	LF	10,100	\$1.50	\$15,150
5	Furnish & install 8" PVC, including Class "B" embedment	LF	6,140	\$42.00	\$257,880
6	Furnish & install 12" PVC, including Class "B" embedment	LF	3,960	\$60.00	\$237,600
7	Furnish & install 12" PVC, by bore and jacking	LF	100	\$320.00	\$32,000
8	Furnish & install 12" PVC Creek Crossing, by bore and jacking	LF	75	\$350.00	\$26,250
9	Furnish & install 12" Bends	EA	1	\$3,000.00	\$3,000
10	Furnish & install 12" Tees	EA	1	\$1,250.00	\$1,250
11	Furnish & install 8" Tees	EA	1	\$900.00	\$900
12	Connections to Existing Water Lines	LS	1	\$6,250.00	\$6,250
13	Cut and Plug Existing Water Lines	LS	1	\$1,500.00	\$1,500
14	Furnish & install Water Service Connection	EA	3	\$1,500.00	\$4,500
15	Block Sod	SY	1,450	\$7.00	\$10,150
16	Seeding	SY	21,000	\$1.25	\$26,250
17	Construction Contingency (10%)	LS	1	\$69,028.00	\$69,028
18	Engineering/Surveying Services (10%)	LS	1	\$75,930.80	\$75,931
				Sub-Total:	\$835,239

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 24 (Fair Brook Cir. 8" Replacement Water Line and Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$10,000.00	\$10,000
2	Traffic Control/ Construction Signing	LS	1	\$1,700.00	\$1,700
3	Erosion Control	LS	1	\$6,585.00	\$6,585
4	Trench Safety	LF	2,660	\$1.50	\$3,990
5	Furnish & install 8" PVC, including Class "B" embedment	LF	2,660	\$42.00	\$111,720
6	Furnish & install 8" PVC, by bore and jacking	LF	40	\$280.00	\$11,200
7	Furnish & install 8" PVC, by wet bore	LF	100	\$90.00	\$9,000
8	Furnish & install 8" Bends	LS	1	\$3,225.00	\$3,225
9	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
10	Furnish & install Water Service Connection	EA	11	\$1,500.00	\$16,500
11	Block Sod	SY	4,450	\$7.00	\$31,150
12	Seeding	SY	1,500	\$1.25	\$1,875
13	Construction Contingency (10%)	LS	1	\$21,194.50	\$21,195
14	Engineering/Surveying Services (10%)	LS	1	\$23,313.95	\$23,314
				Sub-Total:	\$256,453

Priority 25 (Lewis Ln./Shepherds Creek Dr./Green Acres Ln. 8" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$12,000.00	\$12,000
2	Traffic Control/ Construction Signing	LS	1	\$3,875.00	\$3,875
3	Erosion Control	LS	1	\$10,500.00	\$10,500
4	Trench Safety	LF	4,465	\$1.50	\$6,698
5	Furnish & install 8" PVC, including Class "B" embedment	LF	4,465	\$42.00	\$187,530
6	Furnish & install 8" PVC, by wet bore	LF	30	\$90.00	\$2,700
7	Furnish & install 8" Bends	LS	1	\$1,675.00	\$1,675
8	Furnish & install 8" Tees	EA	1	\$900.00	\$900
9	Connections to Existing Water Lines	LS	1	\$6,150.00	\$6,150
10	Block Sod	SY	625	\$7.00	\$4,375
11	Seeding	SY	9,300	\$1.25	\$11,625
12	Construction Contingency (10%)	LS	1	\$24,802.75	\$24,803
13	Engineering/Surveying Services (10%)	LS	1	\$27,283.03	\$27,283
				Sub-Total:	\$300,113

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 26 (FM 2551/McGarity Ln./Estates Pkwy. 8"/12" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$16,750.00	\$16,750
2	Traffic Control/ Construction Signing	LS	1	\$5,085.00	\$5,085
3	Erosion Control	LS	1	\$11,500.00	\$11,500
4	Trench Safety	LF	4,840	\$1.50	\$7,260
5	Furnish & install 8" PVC, including Class "B" embedment	LF	945	\$42.00	\$39,690
6	Furnish & install 8" PVC, by bore and jacking	LF	30	\$280.00	\$8,400
7	Furnish & install 12" PVC, including Class "B" embedment	LF	3,895	\$60.00	\$233,700
8	Furnish & install 12" Bends	LS	1	\$3,300.00	\$3,300
9	Furnish & install 12" Tees	EA	1	\$1,250.00	\$1,250
10	Connections to Existing Water Lines	LS	1	\$7,000.00	\$7,000
11	Block Sod	SY	750	\$7.00	\$5,250
12	Seeding	SY	10,000	\$1.25	\$12,500
13	Construction Contingency (10%)	LS	1	\$35,168.50	\$35,169
14	Engineering/Surveying Services (10%)	LS	1	\$38,685.35	\$38,685
				Sub-Total:	\$425,539

Priority 27 (Ingram Ln./McGarity Ln. to West Lucas Rd. 12"/6" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$33,000.00	\$33,000
2	Traffic Control/ Construction Signing	LS	1	\$6,785.00	\$6,785
3	Erosion Control	LS	1	\$22,500.00	\$22,500
4	Trench Safety	LF	9,415	\$1.50	\$14,123
5	Furnish & install 6" PVC, including Class "B" embedment	LF	4,055	\$35.00	\$141,925
6	Furnish & install 12" PVC, including Class "B" embedment	LF	5,360	\$60.00	\$321,600
7	Furnish & install 12" PVC, by bore and jacking	LF	40	\$320.00	\$12,800
8	Furnish & install 12" PVC, by wet bore	LF	110	\$130.00	\$14,300
9	Furnish & install 12" Bends	LS	1	\$2,000.00	\$2,000
10	Furnish & install 6" Bends	LS	1	\$600.00	\$600
11	Furnish & install 12" to 6" reducer	EA	1	\$1,000.00	\$1,000
12	Furnish & install 6" to 2.5" reducer	EA	1	\$500.00	\$500
13	Furnish & install 12" Tees	EA	7	\$1,250.00	\$8,750
14	Furnish & install 6" Tees	EA	1	\$600.00	\$600
15	Connections to Existing Water Lines	EA	1	\$21,200.00	\$21,200
16	Cut and Plug Existing Water Lines	LS	1	\$2,500.00	\$2,500
17	Furnish & install Water Service Connection	EA	6	\$1,500.00	\$9,000
18	Block Sod	SY	9,000	\$7.00	\$63,000
19	Seeding	SY	11,925	\$1.25	\$14,906
20	Construction Contingency (10%)	LS	1	\$69,108.88	\$69,109
21	Engineering/Surveying Services (10%)	LS	1	\$76,019.76	\$76,020
				Sub-Total:	\$836,217

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 28 (Estates Rd. 8" Replacement Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$9,000.00	\$9,000
2	Traffic Control/ Construction Signing	LS	1	\$2,400.00	\$2,400
3	Erosion Control	LS	1	\$5,800.00	\$5,800
4	Trench Safety	LF	2,290	\$1.50	\$3,435
5	Furnish & install 8" PVC, including Class "B" embedment	LF	2,290	\$42.00	\$96,180
6	Furnish & install 8" PVC, by bore and jacking	LF	35	\$280.00	\$9,800
7	Furnish & install 8" PVC, by wet bore	LF	150	\$90.00	\$13,500
8	Furnish & install 8" Bends	LS	1	\$1,075.00	\$1,075
9	Connections to Existing Water Lines	LS	1	\$4,000.00	\$4,000
10	Cut and Plug Existing Water Lines	LS	1	\$1,500.00	\$1,500
11	Furnish & install Water Service Connection	EA	18	\$1,500.00	\$27,000
12	Block Sod	SY	2,035	\$7.00	\$14,245
13	Seeding		3,050	\$1.25	\$3,813
14	Construction Contingency (10%)	LS	1	\$19,174.75	\$19,175
15	Engineering/Surveying Services (10%)	LS	1	\$21,092.23	\$21,092
				Sub-Total:	\$232,014
Priority 29 (Restore Existing Old Pump Station at McGarity Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$4,500.00	\$4,500
2	Restore Existing Pump Station	LS	1	\$90,000.00	\$90,000
3	Seeding	SY	500	\$1.25	\$625
4	Construction Contingency (10%)	LS	1	\$9,512.50	\$9,513
5	Engineering/Surveying Services (10%)	LS	1	\$10,463.75	\$10,464
				Sub-Total:	\$115,101
Priority 30 (Chisholm Tr./Caman Park Dr. 8" Water Line and Turnberry Ln./Highland Dr. 8" Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$12,750.00	\$12,750
2	Traffic Control/ Construction Signing	LS	1	\$2,500.00	\$2,500
3	Erosion Control	LS	1	\$10,700.00	\$10,700
4	Trench Safety	LF	4,515	\$1.50	\$6,773
5	Furnish & install 8" PVC, including Class "B" embedment	LF	4,515	\$42.00	\$189,630
6	Furnish & install 8" PVC, by bore and jacking	LF	40	\$280.00	\$11,200
7	Furnish & install 8" Bends	LS	1	\$1,675.00	\$1,675
8	Connections to Existing Water Lines	LS	1	\$8,450.00	\$8,450
9	Block Sod	SY	1,750	\$7.00	\$12,250
10	Seeding	SY	8,285	\$1.25	\$10,356
11	Construction Contingency (10%)	LS	1	\$26,628.38	\$26,628
12	Engineering/Surveying Services (10%)	LS	1	\$29,291.21	\$29,291
				Sub-Total:	\$322,203

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 31 (Stinson Rd./Enchanted Way 8" Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$5,600.00	\$5,600
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$4,585.00	\$4,585
4	Trench Safety	LF	1,950	\$1.50	\$2,925
5	Furnish & install 8" PVC, including Class "B" embedment	LF	1,950	\$42.00	\$81,900
6	Furnish & install 8" PVC, by bore and jacking	LF	40	\$280.00	\$11,200
7	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
8	Seeding	SY	4,300	\$1.25	\$5,375
9	Construction Contingency (10%)	LS	1	\$11,758.50	\$11,759
10	Engineering/Surveying Services (10%)	LS	1	\$12,934.35	\$12,934
				Sub-Total:	\$142,278
Priority 32 (Stinson Rd./East Lucas Rd. 8" Water Line)					
1	Mobilization, Bonds, Insurance	LS	1	\$5,800.00	\$5,800
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$4,750.00	\$4,750
4	Trench Safety	LF	1,990	\$1.50	\$2,985
5	Furnish & install 8" PVC, including Class "B" embedment	LF	1,990	\$42.00	\$83,580
6	Furnish & install 8" PVC by bore and jacking	LF	30	\$280.00	\$8,400
7	Furnish & install 8" Bends	LS	1	\$600.00	\$600
8	Connections to Existing Water Lines	LS	1	\$5,500.00	\$5,500
9	Block Sod	SY	700	\$7.00	\$4,900
10	Seeding	SY	3,725	\$1.25	\$4,656
11	Construction Contingency (10%)	LS	1	\$12,217.13	\$12,217
12	Engineering/Surveying Services (10%)	LS	1	\$13,438.84	\$13,439
				Sub-Total:	\$147,827
Priority 33 (Rock Creek Estates Rd. 6" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$7,000.00	\$7,000
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$4,975.00	\$4,975
4	Trench Safety	LF	1,905	\$1.50	\$2,858
5	Furnish & install 6" PVC, including Class "B" embedment	LF	1,905	\$35.00	\$66,675
6	Furnish & install 6" PVC, by bore and jacking	LF	30	\$260.00	\$7,800
7	Furnish & install 6" PVC, by wet bore	LF	180	\$75.00	\$13,500
8	Furnish & install 6" Bends	LS	1	\$1,200.00	\$1,200
9	Furnish & install 6" to 2" reducer	EA	1	\$500.00	\$500
10	Furnish & install 6" Tees	EA	1	\$600.00	\$600
11	Connections to Existing Water Lines	LS	1	\$7,000.00	\$7,000
12	Cut and Plug Existing Water Lines	LS	1	\$2,000.00	\$2,000
13	Furnish & install Water Service Connection	EA	10	\$1,500.00	\$15,000
14	Block Sod	SY	1,700	\$7.00	\$11,900
15	Seeding	SY	2,500	\$1.25	\$3,125
16	Construction Contingency (10%)	LS	1	\$14,513.25	\$14,513
17	Engineering/Surveying Services (10%)	LS	1	\$15,964.58	\$15,965
				Sub-Total:	\$175,610

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 34 (Stinson Rd. 12" Water Line Connector)					
1	Mobilization, Bonds, Insurance	LS	1	\$1,500.00	\$1,500
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$750.00	\$750
4	Trench Safety	LF	225	\$1.50	\$338
5	Furnish & install 12" PVC, including Class "B" embedment	LF	225	\$60.00	\$13,500
6	Furnish & install 12" PVC, by wet bore	LF	60	\$130.00	\$7,800
7	Connections to Existing Water Lines	LS	1	\$4,000.00	\$4,000
8	Block Sod	SY	500	\$7.00	\$3,500
9	Construction Contingency (10%)	LS	1	\$3,238.75	\$3,239
10	Engineering/Surveying Services (10%)	LS	1	\$3,562.63	\$3,563
				Sub-Total:	\$39,189
Priority 35 (Repaint 750,000 Gallon Ground Storage Tank at North Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$16,875.00	\$16,875
2	Repaint existing 750,000 gallon ground storage tank	LS	1	\$450,000.00	\$330,000
3	Disinfect Tank	LS	1	\$7,500.00	\$7,500
4	Construction Contingency (10%)	LS	1	\$35,437.50	\$35,438
5	Engineering/Surveying Services (5%)	LS	1	\$19,490.63	\$19,491
				Sub-Total:	\$409,303
Priority 36 (Repaint 350,000 Gallon Ground Storage Tank at McGarity Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$9,500.00	\$9,500
2	Repaint existing 350,000 gallon ground storage tank	LS	1	\$185,000.00	\$185,000
3	Disinfect Tank	LS	1	\$3,500.00	\$3,500
4	Construction Contingency (10%)	LS	1	\$19,800.00	\$19,800
5	Engineering/Surveying Services (5%)	LS	1	\$10,890.00	\$10,890
				Sub-Total:	\$228,690
TOTAL PROJECT COST:					\$6,251,877

- Notes:**
1. Includes cost for engineering, surveying, and geotechnical services.
 2. Does not include any cost for right-of-way, easement, or property acquisition.
 3. Does not include any costs for permitting, mitigation, or construction testing and inspection.

2026-2030

37.	500,000 galloon elevated storage tank at McGarity Pump Station	\$1,372,140
38.	Rock Ridge Road (North) to Fair Brook Circle 12" water line loop	\$224,712
39.	Snider Lane/CR 891 6" water line loop and Knights Crest Trail/CR 889 8" water line loop	\$1,135,688
40.	Forest Grove East/Horseman Drive/Orr Road 6"/8" water line loop	\$867,422
41.	Orr Road (North) 8" water line loop	\$426,327
42.	Country Club Road/Jan Marie Drive 6" water line loop	\$93,486
43.	Repaint 500,000 gallon ground storage tank at North Pump Station	\$297,124

Total Project Cost 2026 to 2030 **\$4,416,898**

1. Includes cost for engineering, surveying, and geotechnical services.
2. Does not include any cost for right-of-way, easement, or property acquisition.
3. Does not include any costs for permitting, mitigation, or construction testing and inspection.

OPINION OF PROBABLE CONSTRUCTION COST



Water System CIP Update
Update 2026 to 2030
City of Lucas

Date: 9/12/2016

Item No.	Description	Unit	Est. Quantity	Unit Cost	Cost
Priority 37 (500,000 Gallon Tank at McGarity Pump Station)					
1	Mobilization, Bonds, Insurance	LS	1	\$54,000.00	\$54,000
2	Traffic Control/ Construction Signing	LS	1	\$1,000.00	\$1,000
3	Erosion Control	LS	1	\$4,000.00	\$4,000
4	Furnish & install 500,000 Gallon Elevated Storage Tank	LS	1	\$980,000.00	\$980,000
5	Furnish & install Yard Piping/Valving	LS	1	\$20,000.00	\$20,000
6	Furnish & install Electrical	LS	1	\$45,000.00	\$45,000
7	Furnish & install Tank Piping/Valving	LS	1	\$20,000.00	\$20,000
8	Site Work	LS	1	\$5,000.00	\$5,000
8	Seeding	SY	4,000	\$1.25	\$5,000
9	Construction Contingency (10%)	LS	1	\$113,400.00	\$113,400
10	Engineering/Surveying Services (10%)	LS	1	\$124,740.00	\$124,740
				Sub-Total:	\$1,372,140
Priority 38 (Rock Ridge Rd. (North) to Fair Brook Cir. 12" Water Line Loop)					
1	Mobilization, Bonds, Insurance	LS	1	\$8,850.00	\$8,850
2	Traffic Control/ Construction Signing	LS	1	\$2,115.00	\$2,115
3	Erosion Control	LS	1	\$5,000.00	\$5,000
4	Trench Safety	LF	2,015	\$1.50	\$3,023
5	Furnish & install 12" PVC, including Class "B" embedment	LF	2,015	\$60.00	\$120,900
6	Furnish & install 12" PVC, by bore and jacking	LF	30	\$320.00	\$9,600
7	Furnish & install 12" PVC, by wet bore	LF	70	\$130.00	\$9,100
8	Furnish & install 12" Bendss	EA	2	\$2,500.00	\$5,000
9	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
10	Block Sod	SY	2,000	\$7.00	\$14,000
11	Seeding	SY	2,500	\$1.25	\$3,125
12	Construction Contingency (10%)	LS	1	\$18,571.25	\$18,571
13	Engineering/Surveying Services (10%)	LS	1	\$20,428.38	\$20,428
				Sub-Total:	\$224,712

Priority 39 (Snider Ln./CR 891 6" Water Line Loop and Knight Crest Tr./CR 889 8" Water Line Loop)

1	Mobilization, Bonds, Insurance	LS	1	\$45,000.00	\$45,000
2	Traffic Control/ Construction Signing	LS	1	\$16,000.00	\$16,000
3	Erosion Control	LS	1	\$37,000.00	\$37,000
4	Trench Safety	LF	15,235	\$1.50	\$22,853
5	Furnish & install 6" PVC, including Class "B" embedment	LF	4,050	\$35.00	\$141,750
6	Furnish & install 6" PVC, by wet bore	LF	60	\$75.00	\$4,500
7	Furnish & install 8" PVC, including Class "B" embedment	LF	11,185	\$42.00	\$469,770
8	Furnish & install 8" PVC, by bore and jacking	LF	150	\$280.00	\$42,000
9	Furnish & install 6" PVC, by wet bore	LF	300	\$90.00	\$27,000
10	Furnish & install 6" Bends	LS	1	\$3,850.00	\$3,850
11	Furnish & install 8" Bends	LS	1	\$12,300.00	\$12,300
12	Cut and Plug Existing Water Lines	LS	1	\$2,850.00	\$2,850
13	Connections to Existing Water Lines	LS	1	\$8,150.00	\$8,150
14	Furnish & install Water Service Connection	EA	23	\$1,500.00	\$34,500
15	Block Sod	SY	5,000	\$7.00	\$35,000
16	Seeding	SY	28,850	\$1.25	\$36,063
17	Construction Contingency (10%)	LS	1	\$93,858.50	\$93,859
18	Engineering/Surveying Services (10%)	LS	1	\$103,244.35	\$103,244
				Sub-Total:	\$1,135,688

Priority 40 (Forest Grove East/Horseman Dr./Orr Rd. 6"/8" Water Line Loop)

1	Mobilization, Bonds, Insurance	LS	1	\$34,000.00	\$34,000
2	Traffic Control/ Construction Signing	LS	1	\$9,500.00	\$9,500
3	Erosion Control	LS	1	\$25,750.00	\$25,750
4	Trench Safety	LF	10,635	\$1.50	\$15,953
5	Furnish & install 6" PVC, including Class "B" embedment	LF	1,235	\$35.00	\$43,225
6	Furnish & install 6" PVC, by wet bore	LF	80	\$260.00	\$20,800
7	Furnish & install 8" PVC, including Class "B" embedment	LF	9,400	\$42.00	\$394,800
8	Furnish & install 8" PVC, by bore and jacking	LF	105	\$280.00	\$29,400
9	Furnish & install 6" PVC, by wet bore	LF	150	\$90.00	\$13,500
10	Furnish & install 8" Bends	LS	1	\$1,550.00	\$1,550
11	Furnish & install 8" Tees	EA	4	\$850.00	\$3,400
12	Cut and Plug Existing Water Lines	LS	1	\$2,800.00	\$2,800
13	Connections to Existing Water Lines	LS	1	\$6,200.00	\$6,200
14	Furnish & install Water Service Connection	EA	19	\$1,500.00	\$28,500
15	Block Sod	SY	10,000	\$7.00	\$70,000
16	Seeding	SY	14,000	\$1.25	\$17,500
17	Construction Contingency (10%)	LS	1	\$71,687.75	\$71,688
18	Engineering/Surveying Services (10%)	LS	1	\$78,856.53	\$78,857
				Sub-Total:	\$867,422

Priority 41 (Orr Rd. (North) 8" Water Line Loop)

1	Mobilization, Bonds, Insurance	LS	1	\$17,000.00	\$17,000
2	Traffic Control/ Construction Signing	LS	1	\$3,075.00	\$3,075
3	Erosion Control	LS	1	\$15,625.00	\$15,625
4	Trench Safety	LF	6,630	\$1.50	\$9,945
5	Furnish & install 8" PVC, including Class "B" embedment	LF	6,630	\$42.00	\$278,460
6	Furnish & install 8" PVC, by wet bore	LF	20	\$90.00	\$1,800
7	Furnish & install 8" Bends	LS	1	\$2,025.00	\$2,025
8	Connections to Existing Water Lines	LS	1	\$4,500.00	\$4,500
9	Furnish & install Water Service Connection	EA	1	\$1,500.00	\$1,500
10	Seeding	SY	14,725	\$1.25	\$18,406
11	Construction Contingency (10%)	LS	1	\$35,233.63	\$35,234
12	Engineering/Surveying Services (10%)	LS	1	\$38,756.99	\$38,757
				Sub-Total:	\$426,327

Priority 42 (Country Club Rd./Jan Marie Dr. 6" Water Line Loop)

1	Mobilization, Bonds, Insurance	LS	1	\$3,700.00	\$3,700
2	Traffic Control/ Construction Signing	LS	1	\$875.00	\$875
3	Erosion Control	LS	1	\$3,050.00	\$3,050
4	Trench Safety	LF	1,295	\$1.50	\$1,943
5	Furnish & install 6" PVC, including Class "B" embedment	LF	1,295	\$35.00	\$45,325
6	Furnish & install 6" Bends	LS	1	\$500.00	\$500
7	Furnish & install 6" to 2" reducer	EA	1	\$500.00	\$500
8	Cut and Plug Existing Water Lines	LS	1	\$800.00	\$800
9	Connections to Existing Water Lines	LS	1	\$5,000.00	\$5,000
10	Furnish & install Water Service Connection	EA	3	\$1,500.00	\$4,500
11	Block Sod	SY	1,300	\$7.00	\$9,100
12	Seeding	SY	1,575	\$1.25	\$1,969
13	Construction Contingency (10%)	LS	1	\$7,726.13	\$7,726
14	Engineering/Surveying Services (10%)	LS	1	\$8,498.74	\$8,499
				Sub-Total:	\$93,486

Priority 43 (Repaint 500,000 Gallon Ground Storage Tank at North Pump Station)

1	Mobilization, Bonds, Insurance	LS	1	\$12,250.00	\$12,250
2	Repaint existing 500,000 gallon ground storage tank	LS	1	\$240,000.00	\$240,000
3	Disinfect Tank	LS	1	\$5,000.00	\$5,000
4	Construction Contingency (10%)	LS	1	\$25,725.00	\$25,725
5	Engineering/Surveying Services (5%)	LS	1	\$14,148.75	\$14,149
				Sub-Total:	\$297,124

TOTAL PROJECT COST: \$4,416,898

- Notes:
1. Includes cost for engineering, surveying, and geotechnical services.
 2. Does not include any cost for right-of-way, easement, or property acquisition.
 3. Does not include any costs for permitting, mitigation, or construction testing and inspection.



City of Lucas Council Agenda Request October 20, 2016

Requester: Human Resources Manager Cheryl Meehan

Agenda Item:

Consider adopting Ordinance 2016-10-00844 removing the Statutory Limitations for funding for the Texas Municipal Retirement Services.

Background Information:

Every June the Texas Municipal Retirement Services notifies the City of the municipal contribution rate to begin on January 1 of the following year. The actuarially determined contribution rates for retirement benefits and Supplemental Death Benefits (SDB), are based on the City's plan provisions in effect as of April 1 of that year. The City of Lucas combined contribution rate is 13.90% for 2017.

The TMRS Act provides a limit to the maximum rate that the City can be required to contribute for the retirement plan, however the Supplemental Death Benefits (SDB) is excluded in the maximum rate. The maximum required rate is 13.75% for 2017.

Attachments/Supporting Documentation:

1. City of Lucas 2017 Municipal Contribution Rate Letter dated June 2, 2016
2. Ordinance 2016-10-00844 removing the TMRS Statutory Maximum Contribution

Budget/Financial Impact:

The approved budget for FY 16/17 includes the 13.90% contribution rate.

Recommendation:

Staff recommend that the City of Lucas remove the TMRS Statutory Maximum Contribution.

Motion:

I make a motion to adopt Ordinance 2016-10-00844 removing the TMRS Statutory Maximum Contribution.



ORDINANCE 2016-10-00844
[CONTRIBUTIONS TO TEXAS MUNICIPAL RETIREMENT
SYSTEM]

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ELECTING TO MAKE CURRENT SERVICE AND PRIOR SERVICE CONTRIBUTIONS TO THE CITY'S ACCOUNT IN THE BENEFIT ACCUMULATION FUND OF THE TEXAS MUNICIPAL RETIREMENT SYSTEM AT THE ACTUARIALLY DETERMINED RATE OF TOTAL EMPLOYEE COMPENSATION; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City of Lucas (the "City") is a participating municipality in the Texas Municipal Retirement System (the "System"), and has undertaken to provide certain retirement, death and disability benefits to its employees pursuant to Subtitle G, Title 8, of the Texas Government Code (hereinafter, called the TMRS ACT); and

WHEREAS, in accordance with prior state law, the City has adopted ordinances relating to the City's participation in the System, placing a cap on the City's current and prior service contributions to the City's account in the Benefit Accumulation Fund of the System; and

WHEREAS, the laws and regulations governing participation in the System requires local government participants in the System to contribute an actuarially determined amount in order to insure full funding of employee retirement benefits, which amount may from year-to-year exceed the existing cap on such contributions adopted by prior ordinance and

WHEREAS, the City Council finds it to be in the public interest to authorize funding of such benefits as required by applicable law:

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, THAT:

Section 1. Pursuant to Section 855.407(g) of the TMRS Act. the City hereby elects to make future normal and prior service contributions to its account in the Benefit Accumulation Fund of the System at such combined rate of the total compensation paid by the City to employees who are members of the System as the System's actuary shall annually determine the rate necessary to fund within the amortization period determined as applicable to the City under the TMRS Act, the costs of all benefits which are or may become chargeable to or are to be paid out of the City's account in said accumulation fund regardless of other provisions of the TMRS Act limiting the combined rate of the City's contributions.

Section 2. All ordinances of the City of Lucas in conflict with the provisions of this Ordinance shall be, and same are hereby, repealed, provided, however, that all other provisions of

said Ordinances are not in conflict herewith shall remain in full force and effect.

Section 3. Should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance or of the City of Lucas Code of Ordinances, as amended hereby, be adjudged or held to be voided or unconstitutional, the same shall not affect the validity of the remaining portions of said Ordinances or the City of Lucas Code of Ordinances, as amended hereby, which shall remain in full force and effect.

Section 4. This Ordinance shall take effect on January 1, 2017 in accordance with the provisions of the Charter of the City of Lucas.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 20th DAY OF OCTOBER, 2016.

APPROVED:

Jim Olk, Mayor

APPROVED AS TO FORM:

ATTEST:

Joseph J. Gorfida, Jr., City Attorney
(10-12-2016/80358)

Stacy Henderson, City Secretary



June 2, 2016

City #00779

City Official
City of Lucas
665 Country Club Road
Lucas, TX 75002

Subject: 2017 Municipal Contribution Rate

Dear City Official:

Presented below are your city’s contribution requirements to the Texas Municipal Retirement System (TMRS) for Plan Year 2017 (Calendar Year 2017, PY2017) as determined by the December 31, 2015 actuarial valuation. The actuarially determined contribution rates for retirement benefits and Supplemental Death Benefits (SDB), if any, are based on your city’s plan provisions in effect as of April 1, 2016 and the actuarial assumptions and methods adopted by the TMRS Board. Effective January 1, 2017, your city’s monthly contribution rates will be:

Normal Cost	11.14%
Prior Service	<u>2.61%</u>
Total Retirement Rate	13.75%
Supplemental Death Benefit	<u>0.15%</u>
Total Combined Contribution	13.90%

The contribution rate phase-in of your city’s Full Retirement Rate is complete. Therefore, the Phase-in Rate is no longer applicable and the Full Retirement Rate is the minimum required contribution.

Your city’s 2017 contribution rate exceeds the maximum contribution rate limit (Stat Max). See “The Statutory Maximum Contribution Rates” section for more information.

The Total Retirement Rate shown above represents the Actuarially Determined Employer Contribution (ADEC) for PY2017 based on current TMRS funding policy. The actuarial liabilities and contribution rates determined as part of the December 31, 2015 actuarial valuation reflect a change in actuarial assumptions based on the results of the 2015 experience study for the period ending December 31, 2014. Please see the “Actuarial Changes” section for more detailed information. Full information on your contribution rate, including an explanation of changes, is contained in the attached report.

IMPORTANT NOTE: The pension disclosure and financial statement information necessary to assist your city with the financial reporting requirements of the Governmental Accounting Standards Board (GASB) will be provided in a separate document available later this summer.

If you have questions about your rate or if you wish to evaluate potential changes in your TMRS plan, contact TMRS at 800-924-8677.

Sincerely,

Eric W. Davis
Deputy Executive Director

TMRS
P.O. Box 149153
AUSTIN, TEXAS 78714-9153

www.TMRS.com

512.476.7577
TOLL-FREE 800.924.8677
FAX 512.476.5576

Table of Contents

Actuarial Changes	A summary of the changes in actuarial assumptions adopted by the Board and effective with the December 31, 2015 actuarial valuation based on the results of the 2015 experience study.
Executive Summary	A comparison of the highlights of the December 31, 2015 and December 31, 2014 actuarial valuations for your city. Included are membership counts, asset information, actuarial information, and contribution rate requirements.
Calculation of Contribution Requirements	Details the calculation of the Full Retirement Rate (TMRS Plan Year - ADEC), Minimum Required Phase-in Retirement Rate, and the Supplemental Death Rate, if applicable, for your city. Comparisons before and after the actuarial changes and to the 2014 actuarial valuation results are included.
Summary of Benefit Provisions	A summary of plan provisions for plan years 2015 and 2016.
Amortization Bases and Payments	Information on the amortization bases and payments for your city.
Historical and Projected Accumulation of the BAF Balance	This schedule provides your city with historical cash flows, interest credits and the year-end balance of its Benefit Accumulation Fund (BAF), as well as projected values for calendar/plan years 2016 and 2017.
Reconciliation of Full Retirement Rate from Prior Actuarial Valuation Report	A detailed reconciliation of changes in your city's Full Retirement Rate (ADEC) since the prior valuation.
The Statutory Maximum Contribution Rate	An explanation of "Stat Max" and how it impacts your city, including related options available to address the "Stat Max" now that your City's Minimum Retirement Contribution Rate exceeds the limit.

Actuarial Changes

As part of their continued effort to ensure that TMRS is well funded and that members' benefits remain secure and sustainable over generations, the TMRS Board of Trustees adopted the actuarial changes summarized below at its December 2015 Board meeting, based on the results of the 2015 experience study and the recommendations of the System's consulting actuary, Gabriel Roeder Smith & Company (GRS). The combined impact of the following changes is shown in the "Reconciliation of Full Retirement Rate from Prior Actuarial Valuation Report" section of this letter.

Actuarial Assumption Changes

The TMRS Act requires that at least once every 5 years, the System's consulting actuary perform an actuarial experience study and make recommendations to the Board based on the results of that study. Current Board policy is to conduct an actuarial experience study every four years. Accordingly, during 2015, TMRS' consulting actuary, GRS, conducted an experience study for the period ending December 31, 2014. A single set of assumptions is not expected to be suitable forever. As the actual experience of a plan unfolds or the future expectations change, the assumptions should be reviewed and adjusted accordingly. The actuarial assumptions used in the annual actuarial valuations and reviewed as part of the experience study are generally grouped into the following two major categories:

1. Economic assumptions – investment return, salary increases, overall payroll growth, inflation
2. Demographic assumptions – rates of termination, forfeiture, service retirement, disability retirement, pre-retirement mortality, post-retirement mortality

The Board adopted several changes in actuarial assumptions including:

- Reduction in the investment return assumption from 7% to 6.75%
- Reduction in the inflation assumption from 3% to 2.5%
- Reduction in individual salary increases
- Reduction in projected cost of living adjustments (COLAs) consistent with lower inflation
- Reduction to the 3% payroll growth assumption for cities with patterns of population decline
- Reduction in the rates of termination and modification of classification and city multipliers
- Reduction in forfeiture rates (withdrawal of member deposits) for vested members not eligible for retirement
- Reduction in rates of disability

Asset Valuation (Smoothing) Method Modification

An asset smoothing method is the technique used in determining the Actuarial Value of Assets (AVA) which recognizes gains or losses in pension assets over some period of time in order to reduce the effects of normal market volatility on contribution rates. In TMRS, the AVA is based on the Market Value of Assets (MVA) with ten-year smoothing applied. This is accomplished by recognizing each year 10% of the difference between the MVA and the expected AVA, based on the assumed rate of investment return. The AVA is further adjusted by 33% of any difference between the initial value and a 15% corridor

around the MVA. Effective with the December 31, 2015 actuarial valuation, a provision was added to the current 10-year smoothing method to ensure that an asset gain or loss from an individual year is fully recognized within 10 years. Also, beginning with the December 31, 2015 actuarial valuation, a System-wide calculation to determine the ratio of the smoothed value to the market value in aggregate will be performed and that ratio will then be applied to each city's MVA in determining their individual AVA. Previously, the AVA was determined for each individual city based on the cash flow and asset levels of that city.

Amortization Policy Modification

In TMRS, for underfunded plans, amortization of the Unfunded Actuarial Accrued Liability (UAAL) is a level percentage of payroll over a closed period using the process of "laddering" which separately tracks different amortization components or bases. For all new losses, including benefit enhancements, occurring after December 31, 2015, the maximum amortization period will be 25 years for all cities. Previously, some cities amortized their losses over a 30-year period. Bases created on or before December 31, 2015 will continue to be amortized on their original schedule. This change will have no impact on the December 31, 2015 actuarial valuation, but will affect future valuations for certain cities.

Executive Summary

Valuation as of TMRS Plan Year (PY) Ending	12/31/2015	12/31/2014
Membership as of the Valuation Date		
• Number of		
- Active members	31	26
- Retirees and beneficiaries	10	7
- Inactive members	<u>24</u>	<u>25</u>
- Total	65	58
• Prior year's payroll provided by TMRS	\$ 1,657,575	\$ 1,484,954
• Valuation Payroll	\$ 1,577,474	\$ 1,424,987
Benefit Accumulation Fund (BAF) Assets		
• Market BAF Balance	\$ 2,065,703	\$ 1,758,456
• BAF crediting rate for PY	0.06%	5.68%
• Interest credited on beginning BAF balance	\$ 1,047	\$ 85,001
• Municipal contributions	229,058	113,742
• Member contributions during year	116,030	103,947
• Benefit and refund payments	38,889	40,230
Actuarial Value of Assets (AVA)		
• Market BAF Balance	\$ 2,065,703	\$ 1,758,456
• Actuarial Value of Assets (AVA)	2,121,738	1,710,590
• AVA as a Percentage of BAF	102.7%	97.3%
• Return on AVA*	6.59%	7.37%
Actuarial Information		
• Actuarial accrued liability (AAL)	\$ 2,792,618	\$ 2,315,141
• Actuarial value of assets (AVA)	2,121,738	1,710,590
• Unfunded actuarial accrued liability (UAAL)	670,880	604,551
• UAAL as % of pay	40.5%	40.7%
• Funded ratio (AVA/AAL)	76.0%	73.9%
• Employer normal cost	11.14%	10.71%
• Prior Service Rate	2.61%	2.61%
Contribution Rates for TMRS Plan Year (PY)		
• Member	2017 7.00%	2016 7.00%
• Full retirement rate (ADEC)	13.75%	13.32%
• Phase-in retirement rate (minimum)	13.75%	13.15%
• Supplemental Death rate	0.15%	0.16%
Total Employer Contribution Estimates for PY		
• Projected payroll	2017 \$ 1,624,798	2016 \$ 1,467,737
• Minimum Phase-in contribution rate	13.90%	13.31%
• Estimated employer contribution	\$ 225,847	\$ 195,356

Note: TMRS Plan Year coincides with Calendar Year

Results from prior year reflect the plan provisions used in the 12/31/2015 valuation report.

* Return on AVA is calculated prior to actuarial changes.

Calculation of Contribution Requirements

	<u>December 31, 2015</u>		<u>December 31, 2014</u>	
	New Assumptions	Old Assumptions		
1. Prior year's payroll provided by TMRS	\$ 1,657,575	\$ 1,657,575	\$	1,484,954
2. Valuation payroll	1,577,474	1,577,474		1,424,987
3. Employer normal cost rate	11.14%	10.82%		10.71%
4. Actuarial liabilities				
a. Present active members	\$ 1,490,597	\$ 1,465,106	\$	1,096,217
b. Present inactive members	731,619	713,572		893,605
c. Annuitants	<u>570,402</u>	<u>568,603</u>		<u>325,319</u>
d. Total actuarial accrued liability	\$ 2,792,618	\$ 2,747,281	\$	2,315,141
5. Actuarial value of assets	<u>2,121,738</u>	<u>2,129,448</u>		<u>1,710,590</u>
6. Unfunded actuarial accrued liability (UAAL) (4d - 5)	\$ 670,880	\$ 617,833	\$	604,551
7. Funded ratio (5 / 4d)	76.0%	77.5%		73.9%
8. Equivalent Single Amortization Period*	25.0 years	24.9 years		26.0 years
9. Assumed payroll growth rate	3.00%	3.00%		3.00%
<hr/>				
Contribution Rate for TMRS Plan Year:	2017		2016	
10. Full retirement rate				
a. Normal cost	11.14%	10.82%		10.71%
b. Prior service	<u>2.61%</u>	<u>2.47%</u>		<u>2.61%</u>
c. Full retirement rate	13.75%	13.29%		13.32%
11. Minimum phase-in retirement rate				
a. Full retirement rate (10c)	13.75%	13.29%		13.32%
b. Less phase-in deferral	<u>(0.00%)</u>	<u>(0.00%)</u>		<u>(0.17%)</u>
c. Minimum phase-in retirement rate	13.75%	13.29%		13.15%
12. Supplemental Death rate	0.15%	0.15%		0.16%
13. Combined contribution rates				
a. Combined full rate (10c + 12)	13.90%	13.44%		13.48%
b. Combined phase-in rate (11c + 12)	13.90%	13.44%		13.31%

* New Losses are laddered on 25-year period.

Summary of Benefit Provisions

The plan provisions are adopted by the governing body of the City, within the options available in the state statutes governing TMRS. Plan provisions for the City were as follows:

	Plan Year 2016	Plan Year 2015
Employee deposit rate	7%	7%
Matching ratio (city to employee)	2 to 1	2 to 1
Years required for vesting	5	5
Retirement Eligibility (Age /Service)	60/5, 0/20	60/5, 0/20
Updated Service Credit	100% Repeating	100% Repeating
Annuity Increase (to retirees)	70% of CPI Repeating	70% of CPI Repeating
Supplemental Death Benefit to Active Employees	Yes	Yes
Supplemental Death Benefit to Retirees	Yes	Yes

Amortization Bases and Payments

Year Established	Description	Years Remaining	Base	Payment
2013	2013 Valuation (Fresh Start)	28	\$266,455	\$15,285
2013	2013 Benefit Change	23	308,015	19,936
2014	2014 Experience	24	33,926	2,137
2015	2015 Experience	25	9,437	579
2015	2015 Actuarial Changes	25	<u>53,047</u>	<u>3,257</u>
	Total		670,880	41,194

Historical and Projected Accumulation of the BAF Balance

Year Ending December 31, (1)	Payroll for the Year (2)	Effective					External Cash Flow for the Year (7)	Interest Credit (8)	BAF Balance ^b (9)
		Retirement Contribution Rate ^a (3)	Employer Contributions for the Year (4)	Member Contributions for the Year (5)	Benefit Payments (6)	(4) / (2)			
2013	\$ 1,102,491	6.67%	\$ 73,536	\$ 77,174	\$ (34,684)	\$ 116,026	\$ 122,073	\$ 1,495,996	
2014	\$ 1,484,954	7.66%	\$ 113,742	\$ 103,947	\$ (40,230)	\$ 177,459	\$ 85,001	\$ 1,758,456	
2015	\$ 1,657,575	13.82%	\$ 229,058	\$ 116,030	\$ (38,889)	\$ 306,199	\$ 1,047	\$ 2,065,703	
2016	\$ 1,577,474	13.15%	\$ 207,438	\$ 110,423	\$ (101,350)	\$ 216,511	\$ 139,435	\$ 2,421,649	
2017	\$ 1,624,798	13.75%	\$ 223,410	\$ 113,736	\$ (101,382)	\$ 235,764	\$ 163,461	\$ 2,820,874	

a. Effective retirement contribution rate is the actual rate determined by dividing the employer contribution received by the payroll paid.
b. BAF Balance may be off a dollar due to rounding.

Reconciliation of Full Retirement Rate from Prior Actuarial Valuation Report

Actuarial valuations are based on long-term assumptions, and actual results in a specific year can, and almost certainly will, differ as actual experience deviates from the assumptions. The following table provides a detailed breakdown of changes in the retirement portion of your city's contribution rate. This analysis reconciles the change in the retirement portion (ADEC) of your city's contribution rate from 2016 to 2017, but will not reflect any change in the cost of the Supplemental Death Benefit (SDB), if your city currently has this provision. (Any changes in the cost of the SDB are primarily due to the changes in the average age of your city's employee group and/or the number of covered retirees.) Following the table below is a brief description of the common sources for deviation from the expected.

Change in Full Retirement Rate	
Full Rate from 12/31/2014 Valuation (PY 2016 Rate)	13.32 %
Benefit changes	0.00 %
Return on Actuarial Value of Assets	0.03
Contribution lag	(0.17)
Payroll growth	(0.18)
Normal cost	0.11
Liability growth	0.18
Subtotal Experience Change	(0.03) %
Actuarial Changes	0.46
Total change	0.43 %
Full Rate from 12/31/2015 Valuation (PY 2017 Rate)	13.75 %

Benefit Changes - Shows the increase or decrease in the contribution rate associated with any modifications made to the member city's TMRS plan provisions. This will also include any changes to the amortization period adopted by ordinance.

Return on Actuarial Value of Assets (AVA) - Shows the change in the contribution rate associated with the return on the AVA being different than the assumed 7.0%. For the year ending December 31, 2015, the return on an AVA basis was 6.59%. The impact may show as 0.00% due to rounding.

Contribution Lag - Shows the total increase or decrease in the contribution rate associated with the phase in of contributions and/or any additional contributions above the full rate. The effect of the "Contribution Lag" is also included here and refers to the time delay between the actuarial valuation date and the date the contribution rate becomes effective. For TMRS member cities, the

“Contribution Lag” is one year (i.e., the Actuarial Valuation as of December 31, 2015 sets the rate effective for Calendar Year 2017). **The impact of the “Contribution Lag” is expected to become immaterial once a city is contributing the Full Rate and the Full Rate stabilizes.**

Payroll Growth - Shows the increase or decrease in the contribution rate associated with higher or lower than expected growth in the member city’s overall payroll. The amortization payments were calculated assuming payroll grows at 3.00% per year. Overall payroll growth in excess of 3.00% will typically cause a decrease in the prior service rate.

Normal Cost - Shows the increase or decrease in the contribution rate associated with changes in the average normal cost rate for the individual city’s population. The normal cost rate for an employee is the contribution rate which, if applied to a member’s compensation throughout their period of anticipated covered service with the municipality, would be sufficient to meet all benefits payable on their behalf. The salary-weighted average of the individual rates is the total normal cost rate.

Liability Growth - Shows the increase or decrease in the contribution rate associated with larger or lower than expected growth in the member city’s overall plan liabilities. The most significant sources for variance will be individual salary increases compared to the assumption and turnover.

Actuarial Changes - Shows the change in the contribution rate associated with the changes in actuarial assumptions based on the results of the 2015 experience study.

The Statutory Maximum Contribution Rate

The TMRS Act provides a limit to the maximum rate that a city can be required to contribute for the retirement portion of its plan (the cost of Supplemental Death Benefits is excluded from this limit) based on the combination of the employee deposit rate and the matching ratio. This limit, known as the statutory maximum, or “stat max,” is not a limit of the cost of a plan, but rather is simply a limit on the maximum a city could be required to contribute for the plan. If the TMRS minimum required retirement contribution rate exceeds this limit, unless the city takes additional action as permitted under the TMRS Act, it will not be meeting the minimum contribution requirements for its TMRS plan. The TMRS Act provides several options for a city if the retirement portion of the contribution rate exceeds the statutory maximum contribution limit, as outlined below.

Because your city’s 2017 minimum retirement contribution rate has exceeded the statutory maximum contribution rate limit, your city will need to consider adopting an ordinance to raise or repeal the limit. TMRS strongly recommends that you raise or remove the limit to ensure that your minimum contribution requirements are met. If you do not raise or repeal the limit, some benefits may be reduced or eliminated, as outlined below.

Options when Your City’s Minimum Required Retirement Contribution Rate Exceeds the Statutory Maximum

Option 1. Remove the Statutory Maximum Contribution Rate Limit

To ensure proper funding of your city’s pension plan, TMRS encourages each city to consider adopting an ordinance to permanently repeal this statutory maximum contribution rate. The System’s actuary will calculate the cost of the plan benefits adopted by your city each year, and your city will be advised of the Full Rate and any Phase-in Rate, if applicable.

Option 2. Increase the Statutory Maximum Contribution Rate Limit (not available to cities with a 5% Employee Deposit Rate or a 1 to 1 city matching ratio.)

Your city can adopt an ordinance to increase its statutory maximum contribution rate. This option will raise your limit from the current statutory maximum to the increased maximum, as seen in the chart below. Your city will then pay the minimum required retirement contribution rate (either Full Rate or Phase-in Rate, as applicable). However, this may not be a permanent solution and will not prevent your retirement contribution rate from exceeding the increased statutory maximum limit in the future.

Option 3. Pay the Retirement Cost Contribution Rate

Your city can adopt an ordinance each year to pay the minimum required retirement contribution rate, provided that rate does not exceed the statutory maximum contribution rate plus 2.00%, plus the cost of Supplemental Death Benefits, if your city has that provision.

It is important to note, however, that if your city chooses this option, you cannot adopt any additional plan improvements, including USC or COLAs.

Also, if USC and COLAs have been adopted on an annually repeating basis, these options will be suspended until the minimum required retirement contribution rate drops below the statutory maximum contribution rate limit.

Option 4. Pay Only the Statutory Maximum Contribution Rate

Your city can elect to pay only the statutory maximum contribution rate, plus the cost of the Supplemental Death Benefit, if applicable. Refer to the chart below to determine your city’s maximum contribution rate limit. **TMRS does not recommend this option.** If this option is chosen, your city will not be paying the minimum required retirement contribution rate for the plan of benefits adopted, and the funding status of your city’s plan will decline. As a result, your city cannot adopt any additional plan improvements, including USC or COLAs. Also, if USC or COLAs have been adopted on an annually repeating basis, these options will be suspended until the minimum required retirement contribution rate drops below the statutory maximum contribution rate limit. This could lead to further funding difficulties in the future since your city will have to make up the unpaid amount at some later time. In addition, because your city is paying less than the retirement cost rate, this difference will be reflected as an increase in your city’s unfunded actuarial liability and amortized accordingly. Paying less than the required retirement contribution rate will also result in a deterioration of your city’s funded ratio.

STATUTORY MAXIMUM CONTRIBUTION RATES

Deposit Rate	Matching Ratio		
	1 to 1	1½ to 1	2 to 1
3%*	5.50%	7.50%	9.50%
5%	7.50%	9.50%	11.50%
6%	8.50%	10.50% / 11.00%	12.50% / 13.50%
7%	9.50%	11.50% / 12.50%	13.50% / 15.50%

For the four plans showing split limits, the left number is the base limit, and the right number is what the limit can be increased to.
 *This deposit rate is no longer an option for new cities.

Ordinances to adopt any of the above options may be requested from TMRS. If you need further information, please call 800-924-8677.



City of Lucas Council Agenda Request October 20, 2016

Item No. 08

Requester: Human Resources Manager Cheryl Meehan

Agenda Item:

Consider the City of Lucas options available through Texas Multistate Intergovernmental Employee Benefits Pool and Public Employee Benefits Alliance (PEBA) for Pre and Post Sixty-five Retiree Benefits.

Background Information:

Chapter 175 of the Local Government Code states persons who retire from a municipality with a population of 25,000 or more must be offered options for continuing healthcare.

Currently, healthcare for *Pre Sixty-five Retirees* is not offered by the City, however healthcare is always available through COBRA for 18 months which is required by law. This could have an effect on the pricing of current employee healthcare since during the COBRA period the former employee's health care usage is considered for yearly pricing. Staff recommends keeping this impact to only what is required by law.

However, the City may consider an option to offer the opportunity to access healthcare for *Post Sixty-five Retirees* through the Public Employee Benefits Alliance, without negatively impacting the cost of employee benefits. All arrangements will be handled by the retiree and PEBA.

Attachments/Supporting Documentation:

1. Public Employee Benefits Alliance (PEBA) flyer
2. Cost for Post Sixty-five Retirees plans for Medicare Supplemental Insurances
3. Texas Multistate Intergovernmental Employee Benefits Pool Selection form for the City to choose access for Retirees marked with staff suggestion

Budget/Financial Impact:

No change to the budget or additional financial impact to the City.

Recommendation:

Staff recommend that the City of Lucas decline all 2017 Pre Sixty-five Retiree Options, since any selection could negatively impact the City's cost of healthcare of current employees.



City of Lucas Council Agenda Request October 20, 2016

Requester: Human Resources Manager Cheryl Meehan

Staff recommends that we allow Post Sixty-five Retirees access to Medicare Supplemental Insurances through Texas Multistate Intergovernmental Employee Benefits Pool and their affiliation with the Public Employee Benefits Alliance (PEBA).

Motion:

I make a motion to approve/deny the City of Lucas selection for Retiree Options for Healthcare Coverage Insurances through Texas Multistate Intergovernmental Employee Benefits Pool and their affiliation with the Public Employee Benefits Alliance (PEBA).

Public Employee Benefits Alliance

Helping your employees to be educated and engaged in their healthcare decisions



UnitedHealthcare (UHC) Post Sixty-five (65) Employer Benefit Plan Options

UHC Post Sixty-five Retiree Plan Options to PEBA

PEBA	2015	2015 % Renewal	2016	2016 % Renewal	2017	2017 % Renewal
HMO Austin, full Rx**	\$368.98	9.50%	\$391.12	6.00%	\$406.76	4.00%
HMO Houston, full Rx**	\$331.45	9.50%	\$351.33	6.00%	\$365.38	4.00%
HMO Other, full Rx**	\$279.17	9.50%	\$295.82	5.96%	\$307.76	4.00%
HMO Austin, tier 1 Rx**	\$263.83	9.50%	\$279.66	6.00%	\$290.85	4.00%
HMO Houston, tier 1 Rx**	\$219.42	9.50%	\$232.58	6.00%	\$241.88	4.00%
HMO Other, tier 1 Rx**	N/A	N/A				
Supp Plan F	\$217.00	8.00%	\$225.68	4.00%	\$234.71	4.00%
Supp Plan K	\$123.99	8.00%	\$128.95	4.00%	\$134.11	4.00%
Rx Plan 1 full Rx	\$194.66	5.00%	\$206.34	6.00%	\$225.85	8.00%
Rx Plan 2, tier 1 Rx	\$73.61	5.00%	\$78.02	5.99%	\$84.26	8.00%
TAC						
Senior Supp Plan F + Admin Fee	\$227.00	8.00%	\$235.68	3.82%	\$244.71	3.83%
Rx Plan 1 full Rx	\$194.66	5.00%	\$206.34	6.00%	\$222.85	8.00%
PEBA						
HMO Austin, full Rx**	\$320.61	\$341.45	\$333.43	2012 Final	2013	2014
HMO Houston, full Rx**	\$288.32	\$307.06	\$299.85	\$320.92	\$336.97	\$336.97
HMO Other, full Rx**	\$245.49	\$261.45	\$255.31	\$288.28	\$302.69	\$302.69
HMO Austin, tier 1 Rx**	\$220.64	\$234.98	\$229.47	\$242.80	\$254.94	\$254.94
HMO Houston, tier 1 Rx**	\$183.50	\$195.43	\$190.84	\$229.47	\$240.94	\$240.94
HMO Other, tier 1 Rx**	\$143.30	\$145.30	\$141.89	\$190.84	\$200.38	\$200.38
Supp Plan F	\$184.00	\$197.80	\$191.36	\$141.89	N/A	N/A
Supp Plan K	\$105.13	\$113.01	\$109.34	\$191.36	\$200.93	\$200.93
Rx Plan 1 full Rx	\$167.40	\$200.40	\$187.49	\$109.34	\$114.81	\$114.81
Rx Plan 2, tier 1 Rx	\$60.77	\$75.96	\$68.06	\$179.99	\$185.39	\$185.39
TAC				\$68.06	\$70.10	\$70.10
Senior Supp Plan F + Admin Fee	\$194.00	\$207.80	\$201.36		\$210.93	\$210.93
Rx Plan 1 full Rx	\$167.40	\$200.40	\$187.49	\$179.99	\$185.39	\$185.39

** If emergency room copay added \$75.00 - the pricing impact of changing the ER Copay from \$50 to \$75 would be \$.50 PMPM. This would apply to each of the current HMO rates.





Staff Suggested.

Group Name: City of Lucas

Please check 2017 Pre Sixty-five Retiree Option:

- UnitedHealthcare Pre Sixty-five (65) MultiCarrier Connector Model Employer Benefit Plan Options (If Employer not enrolled now, 90-day setup requirement and no open enrollment offered until CY January 2018.)**
Employers may offer their pre sixty-five retirees the employer's affordable (less than 9.5%, for 2017 9.66% of Box 1 of the employees W-2 form) minimum essential coverage employer plan or the UnitedHealthcare's Off Exchange Pre Sixty-five MultiCarrier Connector Model benefit plans.
- IEBP Pre Sixty-five (65) Employer Benefit Plan Option**
Employers may choose to have the pre sixty-five retirees access the active employee benefits at the active employee cost.
- IEBP Pre Sixty-five (65) Employer Benefit Plan Option**
Employers may choose to have the pre sixty-five retirees access the active employee benefit plan at 195% of the active employee rate.
- IEBP Pre Sixty-five Retiree Pool Medal Medical and Prescription Options**
The Pool member employer may offer their retirees a choice of one of the four plan options. Once a pre sixty-five retiree transfers to a Pool metal plan they cannot transition back to the employer plan. Pool membership not currently accessing the pre sixty-five Pool will require individual underwriting and may not receive the below rates.
- Decline all 2017 Pre Sixty-five Retiree Options**

Please check one Post Sixty-five Retiree Option:

- Renew all current 2016 UnitedHealthcare Post Sixty-five Retiree Options for 2017**
- Elect 2017 UnitedHealthcare Post Sixty-five Retiree Options**
 - HMO Advantage**
 - Supplemental Plan** } Employers may choose both
 - Medicare Supplemental F** } -cadillac- most expensive to retirees
 - Medicare Supplemental K** } One choice per Employer
 - Prescription Part D Plan** } -chevrolet- least expensive
 - Prescription Full Gap Coverage PDP Option 1**
 - Prescription Generic in the Gap Coverage PDP Option 2** } One choice per Employer
- Decline all 2017 Post Sixty-five Retiree Options**

Please return this page via fax to 512-719-6520. Your time in this matter is appreciated. Your employer election decision is to be received by IEBP before close of business October 24, 2016.

Respectfully,

Susan Smith
Executive Director



City of Lucas Council Agenda Request October 20, 2016

Item No. 09

Requester: Public Works Director/City Engineer Stanton Foerster

Agenda Item:

Consider adopting Ordinance 2016-10-00833 approving amendments to the City's Code of Ordinances by amending Appendix C "Fee Schedule" Article 19.000 (7) "Wastewater Rates" to provide for rates for wastewater consumption and discharge over 2,000 gallons.

Background Information:

Recently a discrepancy was discovered relating to the wastewater billing versus the wastewater revenues. Staff started reviewing the various related accounts and documentation.

In general, the City of Lucas is billed by the North Texas Municipal Water District for wastewater for every 1,000 gallons of effluent passing through two meters: 1) Angel Lift Station and 2) Lovejoy Lift Station. There is a minimum volume that the NTMWD charges the city each month. In August of each year, the NTMWD determines the monthly charge for the next 12 months based on an estimate of what they think the meter readings will be. At the end of the 12 months, there is a true-up of the data. The actual flow through the wastewater meter is compared to the NTMWD estimate. For many years the meters have registered less than the minimum volume.

During the true-up for this past year, it was revealed that one of the wastewater meters was registering three or four times the volume of water being sold to that location by the City.

The Water Fund is sustained by payment of fees. The fees must cover the wastewater and water expenses and fund future wastewater and water improvements.

Citizen Summary:

1. An amendment to the Code of Ordinances is brought before the City Council for discussion and consideration.
2. The City Council votes, tables, gives direction, or takes no action on the amendment.
3. If the amendment passes, it is added to the Code of Ordinances by the City Secretary.
4. If the amendment is not approved, the City Manager will receive direction from the City Council regarding the next step for the amendment: 1) brought back to the City Council with modification, 2) issue is not pursued, or 3) tabled for reconsideration in the future.

Attachments/Supporting Documentation:

1. Ordinance 2016-10-00833



City of Lucas Council Agenda Request October 20, 2016

Budget/Financial Impact:

Balancing ratio between 1) expenses and future infrastructure and 2) fees collected. The fees charged to the City of Lucas by NTMWD must always be less than the fees charged to the customers by the City of Lucas for the Water Fund to be sustained. The fees must cover the expenses and fund future improvements.

Recommendation:

NA

Motion:

I make a motion to approve/deny adopting Ordinance 2016-10-00833 approving amendments to the City of Lucas Code of Ordinances by amending Appendix C “Fee Schedule” Article 19.000(7) “Wastewater Rates” to provide for rates for wastewater consumption and discharge over 2,000 gallons.



**ORDINANCE 2016-10-00833
[AMENDING APPENDIX C TITLED “FEE SCHEDULE”]**

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS, AMENDING THE CODE OF ORDINANCES BY AMENDING APPENDIX C TITLED “FEE SCHEDULE” BY AMENDING ARTICLE 19.000 TITLED “WASTEWATER RATES” BY AMENDING SECTION SEVEN (7) TO PROVIDE FOR RATES FOR WASTEWATER CONSUMPTION AND DISCHARGE OVER 2,000 GALLONS; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED THAT THE CITY COUNCIL OF THE CITY OF LUCAS:

Section 1. That the Code of Ordinances of the City of Lucas, Texas be, and the same is, hereby amended by amending Appendix C titled “Fee Schedule”, by amending Article 19.000 Section Seven (7) to read as follows:

“APPENDIX C

FEE SCHEDULE

...

ARTICLE 19.000 WASTEWATER RATES

...

(7) Consumption Charge – on a per monthly basis for every 1,000 gallons of water used after the first 2,000 gallons, the customer shall be charged \$4.00. On an annual reconciled basis, if the discharge into the wastewater system by the customer exceeds the volume of water sold to the customer, the customer shall be charged \$4.00 per 1,000 gallons of wastewater discharge greater than the volume of water sold to the customer. The customer is responsible for paying for every gallon of wastewater discharge into the system regardless of the amount of water that is used by the customer.

...”

Section 2. All ordinances of the City of Lucas in conflict with the provisions of this Ordinance shall be, and same are hereby, repealed, and provided, however, that all other provisions of said Ordinances that are not in conflict herewith shall remain in full force and effect.

Section 3. Should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance or of the City of Lucas Code of Ordinances, as amended hereby, be adjudged or held to be voided or unconstitutional, the same shall not affect the validity of the remaining portions of said Ordinances or the City of Lucas Code of Ordinances, as amended hereby, which shall remain in full force and effect.

Section 4. An offense committed before the effective date of the Ordinance is governed by prior law and the provisions of the City of Lucas Code of Ordinances in effect when the offense was committed and the former law is continued in effect for this purpose.

Section 5. This Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Lucas, and it is accordingly so ordained.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 20th DAY OF OCTOBER 2016.

APPROVED:

Jim Olk, Mayor

APPROVED AS TO FORM:

ATTEST:

Joseph J. Gorfida, Jr., City Attorney
(09-26-2016/79569)

Stacy Henderson, City Secretary



City of Lucas City Council Agenda Request October 20, 2016

Item No. 10

Requester: Development Services Director Joe Hilbourn

Agenda Item:

Consider amendments to the City's Comprehensive Plan including:

- Chapter 1 – Introduction
- Chapter 2 – Demographics
- Chapter 3 – Housing
- Chapter 4 – Land Use
- Chapter 5 – Economic Development
- Chapter 6 – Parks, Recreation & Open Space
- Chapter 7 – Streets, Drainage & Master Thoroughfare Plan
- Chapter 8 – Water System

Background Information:

To date, the City Council has reviewed Chapters 1 through 6 of the Comprehensive Plan and proposed revisions have been included in the attached draft document. Items to be considered for update at the October 20, 2016 City Council meeting include Chapter 7 - Streets and Drainage and the Thoroughfare Plan. This is a technical review only and staff will continue to update the document as proposed revisions are made. Formatted Chapters 1 through 7 have been included as part of the packet.

Citizen Summary:

There is no state law that requires a City to have a Comprehensive Plan; however, if a City would like to enforce zoning it is required to have an adopted Comprehensive Plan that is updated from time to time. The Comprehensive Plan is a long-range planning tool that is intended to be used by the City to guide growth and development of the community for the future. The Comprehensive Plan was adopted in 1980, and as the City grows, the Plan needs periodic updating, the last update was 2004. The goal of this update is to continue to make long-range plans for the community of Lucas as it continues to grow. At this time the Comprehensive Plan has been brought before the Planning and Zoning Commission as a standing item each month. The Comprehensive Plan is required to be adopted following two public hearings. Public hearings for adoption of the amended Comprehensive Plan are tentatively scheduled for January or February 2017.



**City of Lucas
City Council Agenda Request
October 20, 2016**

Item No. 10

Attachments/Supporting Documentation:

1. Chapters 1 through 7 of the City's Comprehensive Plan.
2. Approved Thoroughfare Plan

Budget/Financial Impact:

NA

Recommendation from the Planning and Zoning Commission:

The Planning and Zoning Commission's recommended changes to Chapter 7 included removing the roundabout designations depicted on the Thoroughfare Plan and on page 1, paragraph 4 of Chapter 7 to remove the term "adequate facilities" and replace with "adequate streets and drainage."

Motion:

N/A

CITY OF LUCAS



COMPREHENSIVE PLAN



TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION 4

CHAPTER 2 POPULATION 6

CHAPTER 3 HOUSING 8

CHAPTER 4 LAND USE 10

CHAPTER 5 ECONOMIC DEVELOPMENT 19

CHAPTER 6 PARKS, RECREATION AND OPEN SPACE..... 24

CHAPTER 7 STREETS AND DRAINAGE 30

CHAPTER 8 WATER SYSTEM

CHAPTER 9 CAPITAL IMPROVEMENT PROJECTS

APPENDIX MAPS



INTRODUCTION

PURPOSE

The comprehensive plan can be defined as a long-range planning tool that is intended to be used by city staff, decision-makers and citizens to guide the growth and physical development of a community for its future growth. The original plan adopted in the late 1980's initiated the framework for the City of Lucas. Over the years it has been reviewed and updated as growth dictated. Having this comprehensive framework will assist in evaluating proposed actions, decisions concerning changes in local economic and demographic conditions, and resources as well as guiding future planning scenarios for Lucas.

The State of Texas has established laws that specifically regulate the way incorporated cities such as Lucas can ensure the health, safety, and welfare of their citizens. It gives them the power to regulate the use of land, but only if such regulations are based on a comprehensive plan. Lucas strives to guide future development to accommodate new development without sacrificing the unique character of the city.

In basic terms, the primary objectives of a comprehensive plan are to:

- Manage growth in an orderly manner,
- Minimize potential conflicts between land uses,
- Provide for efficient and cost-effective delivery of public services, and
- A rational and reasonable basis for making decisions about the community.

This updated version of the comprehensive plan will address the preservation of the country atmosphere of Lucas by addressing the growth and future needs relating to population, housing, land use, economic development, parks, streets, drainage, water, thoroughfares, and capital improvements.

LOCATION

Lucas is located in Collin County just northeast of the Dallas-Fort Worth Metroplex, 30 miles north of downtown Dallas. The City is positioned 10 miles east of the DART Parker Road Station, 30 miles north of the Love Field Airport, and 40 miles east of the Dallas-Fort Worth International Airport. Lucas is bordered by the City of Allen to the west, the City of Parker to the southwest, the City of Wylie to the south, the City of St. Paul to the southeast, Lake Lavon to the east, and the City of Fairview to the northwest as shown in figures 1.1 and 1.2.

The population is estimated at 6,875 in 2016 and contains a total land area of 9.85 acres.



The City has experienced significant growth in recent years as a result of its unique features including:

- Appealing rural atmosphere
- Animal friendly neighborhoods
- Exceptional educational systems
- Proximity to services and shopping
- Low crime rate
- High quality housing
- Large lot sizes
- Proximity to Lake Lavon

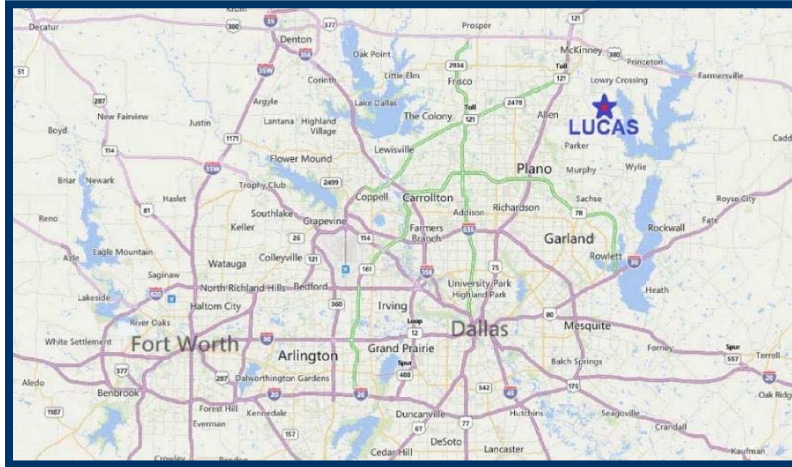


Figure 1.1—City of Lucas and Dallas/Fort Worth Metroplex

The City of Lucas' location, outside the pressures and restrictions of intense urban life, combined with its convenient position relative to local and regional economic and recreational centers, makes the City a stable and attractive community.

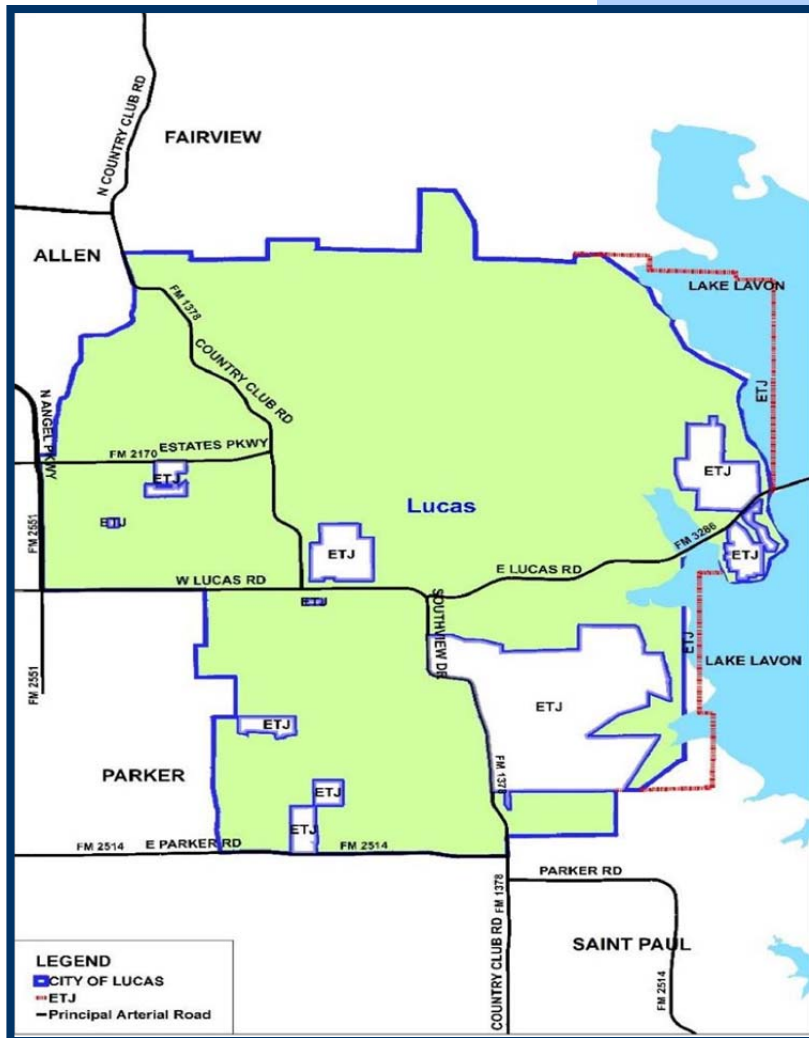


Figure 1.2—City of Lucas, Texas



POPULATION



One of the most important parameters of the planning process is the analysis and projection of the population. The purpose of projecting population is to provide a general scale for future development which is compatible with the prospects and the potentials of the city.

Population growth is primarily driven by construction of new housing and the annexation of land.

The population estimates reported in this plan are based on the US Census Bureau, the North Central Texas Council of Governments Databases on Demographics, and other State agencies. Over the next 25 years the North Central Texas population is expected to grow by 5 million people. It is assumed the City of Lucas will also experience significant growth if the local and regional economies remain stable.

After estimating the size and density of the future population, it becomes possible to determine the future level of demand for facilities, and to develop indices for issues which typically confront those persons who are actively involved in making decisions related to the planning process.

Projected population demand is the rational basis for projecting infrastructure needs, and establishing the timing of capital expenditures.

POPULATION TRENDS

The population of Lucas has increased dramatically from 540 in 1970 to 6,875 in 2016. This represents an annual growth rate of 5.69%. This is a reflection of the desire of many people to live in a rural or "small town" environment while keeping close to major urban centers. Continued population growth in Lucas is supported by forecast data for Collin County. The population of Collin County is expected to increase by almost 54 percent by 2035. The age composition of the Lucas population provides a profile, illustrating when and where the greatest need for various types of public expenditures will be required in order to meet citizen demand.

POPULATION PROJECTIONS

Population projections provide the most basic planning assumptions required for strategically meeting future public needs. Six significant assumptions specific to Lucas help form the basis from which to project the populations, and are listed below:

1. The density and character of development in Lucas will not change appreciably.
2. Lucas will experience in-migration from larger urban areas causing the local population to increase.



3. The average household size will remain 3.22 persons per household.
4. Population can be estimated based on the number of existing houses; the calculation of potential number of houses that can be built on developable land based on projected future land use, and subdivision of land tracts.
5. The City of Lucas is estimated to be built out in 2030. Based upon all the foregoing assumptions, future population projections for both Lucas and the area within the extra-territorial jurisdiction (ETJ) are shown in table 2.1 and can be illustrated in figure 2.2.
6. Whether the projected population occurs five years early or five years later, the city will require the same number of facilities for the projected number of people.

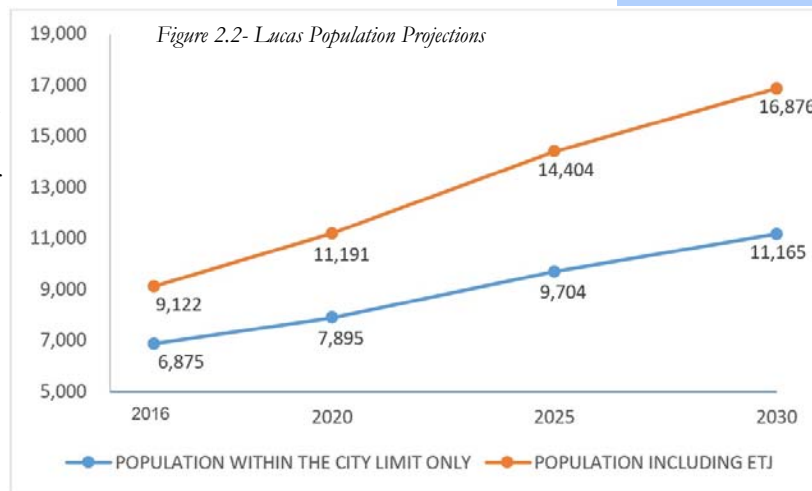
YEAR	POPULATION (CITY LIMITS ONLY)	PERCENT GROWTH	ANNUAL GROWTH RATE	POPULATION (ETJ)	POPULATION (CITY LIMITS & ETJ)	PERCENT GROWTH	ANNUAL GROWTH RATE
2016	6,875	N/A	N/A	2,247	9,122	N/A	N/A
2020	7,895	14.8%	3.5%	3,296	11,191	22.7%	5.2%
2025	9,704	22.9%	4.2%	4,700	14,404	28.7%	5.2%
2030	11,165	15.1%	2.8%	5,711	16,876	17.2%	3.2%

Table 2.1- City of Lucas Population Projections

The anticipated population growth will place additional burdens on the City’s infrastructure and resources:

- Streets
- Water and wastewater system (waste water serves non-residential uses only)
- Parks and recreational facilities
- Environmental, educational, safety and health services

Lucas should set goals for both the desired population levels and facilities necessary to accommodate the resulting demands. Most of these topics will be discussed in the following chapters of this Comprehensive Plan.



H O U S I N G

INTRODUCTION

There are four generally recognized determinants of the level of effective demand for housing units as follow:

1. The physical sources of housing demand which includes the number of type of family units in an area and the need for replacing existing units.
2. The level of wealth in an area and the distribution of that income.
3. Mortgage rates.
4. The supply price of housing which is the cost of providing the residents of an area with appropriate housing facilities.

The complex interaction of these four considerations works to determine whether or not adequate housing of the appropriate types is available to the residents of Lucas.

EXISTING HOUSING ANALYSIS

As of June 1, 2016 there were 2111 single family housing units in Lucas. There are an additional 24 other forms of housing units in Lucas which could be classified as housing in a non- or semi--permanent structure. Within the Lucas extra territorial jurisdiction there are 697 units, bringing the total housing in Lucas and the ETJ to 2,832 units.

- Single family 2111 units
- Semi or non-permanent housing 24 units
- Single family 697 units
- Total 2,832 units

HOUSING GOALS AND OBJECTIVES

Although Lucas will add new dwelling units through new construction, existing units must be adequately maintained in order to meet the local housing demand and foster a stable housing environment. It should be assumed that all housing and properties within the community are maintained in a reasonable (or sound), safe and sanitary condition for its useful life. To enable the city to direct its efforts in develop housing with the highest and best use, the following specific goals and objectives should be followed:

GOAL 1.

Encourage suitable development of land with adequate lot sizes, paved streets and utility lines.

Objectives:

- Establish and maintain subdivision ordinances to ensure that new infrastructure meets or exceeds minimum city requirements.
- Encourage high-quality construction through the continued enforcement of recognized building codes.



- Alleviate maintenance and service issues by upgrading existing infrastructure (water, streets and drainage) to meet or exceed minimum acceptable standards.

GOAL 2.

A sufficient choice of adequate housing should be provided to meet the needs of individuals.

Objectives:

- Zone land to promote long-term neighborhood stability.
- Maintain moderate density housing in suitable locations on the periphery of the city.

FUTURE HOUSING REQUIREMENTS

To provide an indication of the future demand for housing in Lucas, it is necessary to project the number of housing units which will be needed. These projections are based upon the assumption that the average household size would remain at 3.22 persons during the planning period. Allowing for a five percent vacancy rate, and reflecting anticipated future population levels, the future total housing needs for Lucas are estimated and illustrated in Figure 3.1. Lucas should encourage the maintenance of, and/or rehabilitation of older homes so they remain habitable over the planning period and beyond. As the population ages, provision must be considered for proper accessibility for an increasing elderly and disabled population. Attention to building design and adaptability can achieve a solution to this challenge.

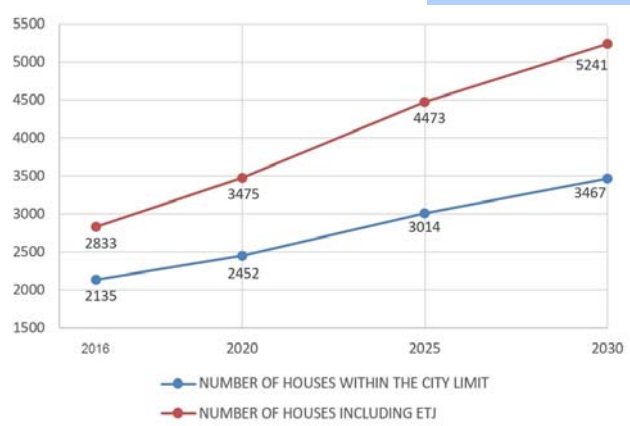


Figure 3.1– Projected number of housing unit needs for City of Lucas

HOUSING ACTIONS

Housing needs and some of the potential housing issues within the City have been identified above. The prevention of housing issues in Lucas will require the development and implementation of an effective housing program. Although this will be an ongoing process, specific actions for the next five years have been developed. These actions, all of which will be of negligible cost to the city, are listed below.

Action Items:

1. Beginning with those units in worst condition, complete the rehabilitation of housing units in the City by using one or a combination of the following methods:
 - Strict Code Enforcement of the City's adopted ordinances.
 - Establish or coordinate with existing benevolent groups such as Habitat for Humanity to help those unable to help themselves.
2. Review current zoning ordinance for compliance with development issues within the city.



LAND USE

INTRODUCTION

The purpose of the land use analysis is to provide both statistical and graphical information concerning the various types, amount and intensity of land use within Lucas and identify problems which have arisen as a result of conflicting land use patterns or inappropriate land uses. An updated future land use plan can then be produced enabling Lucas to better guide land development in a manner which reflects local goals and objectives.

The total corporate limits of Lucas comprise 9,855 acres of land while the actual developed area of the City covers 7,285 acres. The extraterritorial jurisdiction (ETJ) covers an additional 1922 acres. Figure 4.1 at the end of this chapter displays an aerial illustration of the City of Lucas and the extraterritorial (ETJ) pockets within the city.

ANALYSIS OF EXISTING LAND USE



Residential Land Use

Residential land use consists of 5,582 acres of single family land use and 43 acres of manufactured homes land use, or 56 percent of the gross land area of Lucas. This is the most important land use classification in Lucas. Most single-family development lies in the central portions of Lucas, taking advantage of gentle topography which is out of floodplain areas. Although there are some scattered commercial uses intermingled with single-family uses,

most neighborhoods contend only with vacant lots as the only other use present. Manufactured homes account for 0.6 percent of total developed land area.

Commercial Land Use

Commercial land use covers 505 acres or 5 percent of the gross land area of Lucas. Access to public sewer facilities is allowed only in areas designated by metes and bounds that have been zoned for commercial use. There are six independent school districts in City of Lucas and one private school:

- McKinney ISD
- Princeton ISD
- Allen ISD
- Lovejoy ISD
- Plano ISD
- Wylie ISD
- Lucas Christian Academy

Most of the remaining commercial land uses within the city are in close proximity to the major roadway system. At present, there appears to be minimal conflict between commercial land uses and adjacent land uses.

Industrial Land Use - (These parcels are zoned LI light industrial)

Industrial land use covers 7 acres or 0.08 percent gross land area of the City and consists of light industrial uses along the north side of West Lucas Road. These light industrial uses have potential for conflict with adjacent future residential uses.

Streets and Rights-of-Way

Land utilized for streets and utilities comprises 965 acres, or 9.79 percent of the gross land area of Lucas. Streets do not pose any conflicts with other land uses in Lucas as these uses tend to be compatible.

Public/Semi-Public Land Use

Public and semi-public land use within Lucas covers 29 acres, or 0.30 percent of the gross land area. Most of this is utilized for City facilities, cemeteries and public utilities such as water towers.

Parks Land Use

Parks land use covers 153 acres, or 1.55 percent of the gross land area of the City. This includes three neighborhood parks, the Lucas Community Park and two parks located adjacent to Lake Lavon. In general, parks are compatible with their surrounding land uses.

Agricultural and Open Space Land Use

The remaining land use types, including agricultural and open spaces, are located randomly throughout the City. Agricultural and Open Spaces cover 2,570 acres or 26.08 percent of gross land in City of Lucas. In addition to land located in flood plain areas, this also includes those areas which are usually subdivided into lots with access to potable water facilities and paved streets or where surrounding development densities make agriculture or ranching less practical.



SOCIO-ECONOMIC AND MAN-MADE INFLUENCES AFFECTING LAND USE

An analysis of the existing development activity in Lucas should examine the following basic influences: population growth, housing availability, public utilities and facilities, transportation, and development constraints posed by both the natural and man-made environment. This can then be used to better determine the influences which will define future land development in the City.



Housing

Lucas is comprised of only single-family housing units. With a steady growth in population, it is anticipated that the demand for well-constructed and well-maintained housing will continue to increase. Therefore, more units will need to be built to provide adequate and safe housing for the growing population. As the City's development approaches a "built out" condition, the increase in tax revenue due to new housing should be expected to diminish.

Infrastructure

Future growth and appropriate levels of service depends upon the City's water supply and distribution system, street system, and drainage system at suitable capacities and operational levels to meet demands. Various elements of Lucas' water, streets, and drainage systems will need improvement in the coming years.

Public/Semi-Public Facilities

Public facilities in Lucas include a City Hall, community center, parks, cemeteries, fire station and utility sites. As the future population increases, there will be a corresponding increase in the demand for these public facilities.

OTHER SERVICES

As the population increases, there will be an increase in the local demand for retail and/or consumer services. The City of Lucas has approximately 5.85 acres of commercial land use per 100 inhabitants (excluding the schools). To avoid conflict with adjacent residential uses and minimize negative traffic impacts, future commercial uses should generally continue to be confined to peripheral areas of the city.

ETJ AND FUTURE ANNEXATIONS

The extraterritorial jurisdiction of Lucas includes:

- Land adjacent to Lake Lavon.
- A municipal utility district in the southeast corner of the City
- Several pockets of land scattered throughout the City as well as adjacent to it

Figure 4.3 depicts the current ETJ. Additional development is anticipated to occur in the ETJ.



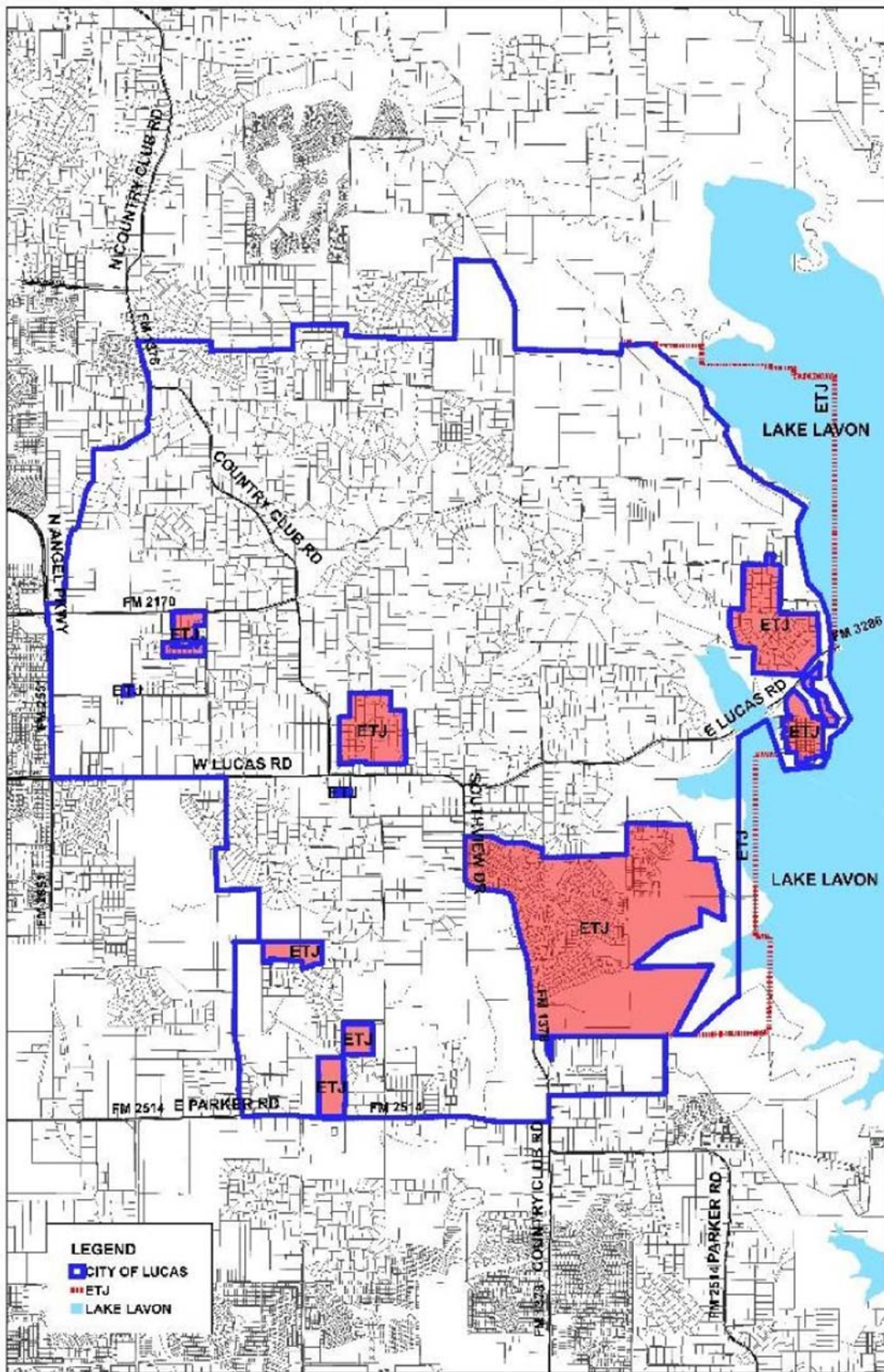


Figure 4.3 - City Limits and Extraterritorial jurisdictions (ETJ)



The composition of the ETJ area is presented in table 4.3 and figure 4.4. Any future large-scale residential development in the ETJ area will most probably occur to the southeast adjacent to Lake Lavon. As opportunities arise, the city should favorably consider annexing those "out areas" currently within the city limits as they become available for annexation. It should be noted that development agreements are in place which preclude some of the ETJ areas from annexation at the time of preparation of this Comprehensive Plan. The available areas for annexation at this time include:

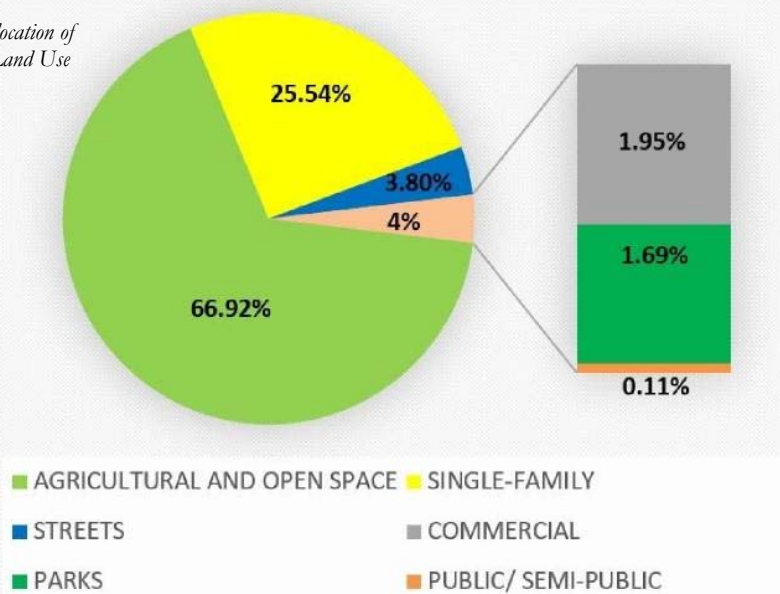
- Claremont Springs Phase 1
- Cimarron
- Edgewood Estates
- Trinity Park

Table 4.3 - Allocation of Existing ETJ Land Uses

LAND USE	ACRES	% OF GROSS
SINGLE-FAMILY	490.88	25.54
COMMERCIAL	37.44	1.95
INDUSTRIAL	0.00	0.00
PARKS	32.39	1.69
PUBLIC/ SEMI-PUBLIC	2.15	0.11
STREETS	73.00	3.80
AGRICULTURAL AND OPEN SPACE	1286.43	66.92
TOTAL	1922.29	100.0

Source: August 2015 land use survey using aerial photography

Figure 4.4 - Allocation of Existing ETJ Land Use



ZONING AND SUBDIVISION REGULATIONS

Lucas has previously adopted zoning and subdivision ordinances. The subdivision ordinance provides the City with control over development practices within both the City and the ETJ. The zoning ordinance is used to regulate land uses that can occur within the city limits. The continued monitoring of these ordinances is important to ensure future development activities are consistent with the City's development objectives.

LAND USE GOALS AND OBJECTIVES

The goal of Lucas is to optimize land use in order to increase the quality of life of the residents. Lucas' land use goals are to avoid traffic congestion, inadequate or obsolete utilities or services and the location of incompatible land uses adjacent to one another. The proper planning and use of land will result in well-ordered land uses and development patterns as the City progresses.

LOCAL GOALS AND OBJECTIVES AFFECTING DEVELOPMENT

GOAL 1.

Develop the community in a manner which preserves and maintains property values and is consistent with the City's ability to serve existing and future development.

Objectives:

- Plan for reasonable demand with regard to water, street circulation and neighborhood connectors.
- Maintain the present rural atmosphere with a majority of large-lot residential development.

GOAL 2.

Preserve the residential and rural small-town atmosphere of the community while encouraging some quality small-scale economic development.

Objectives:

Utilize the "Survey of selected business" as a guideline for attracting business to the community.

- Ensure that commercial and other "high activity" uses are adjacent to designated neighborhood connectors to maintain acceptable fire/emergency response times.
- Preserve peripheral areas to the south and west for future limited commercial and moderate density residential development.
- Regularly review, update (if necessary) and enforce the zoning and subdivision ordinances to minimize the intrusion of incompatible land uses.
- Promote the general health and safety of the residents of the community.



It is important to understand that the Land Use Plan for Lucas is intended to serve as a general guide for the future development of the city. It should be considered flexible in nature, rather than a rigid blueprint for future land use. The population, housing, infrastructure and land use data contained in sections of this Comprehensive Plan serve to establish the determinants for land use projections.

FUTURE LAND USE

Land Use Planning Principles and Process

The following principles are considered applicable to the proper designation of land for residential use:

- Residential land should be well drained and free from danger of floods.
- Residential land should be readily accessible from, but not necessarily facing, arterial or collector streets.
- Residential land should be free from the danger of encroaching incompatible land uses.
- Residences should be able to access community facilities such as parks, schools, playgrounds and commercial facilities serving everyday needs.

Factors relating to the designation of land for commercial land uses include:

- Commercial areas must be located to maximize the use of major neighborhood connectors while minimizing excessive traffic impacts on residential roads and neighborhoods.
- Commercial areas should be limited and compact.
- Commercial areas must allow for safe automobile/pedestrian access and circulation. (Commercial areas require sidewalks per our adopted regulations)
- Commercial areas must be designed to avoid blighting effects on adjacent residential land and must be kept from encroaching on other sensitive land uses.

The proposed locations for commercial activities on the periphery of the community is acceptable both in terms of decreasing traffic stresses on central area roadways while providing accessibility to area customers. Commercial areas, if properly developed with landscaping programs and a developed access route to remove consumer traffic from through traffic, can be an asset to a community. It is with these factors in mind that the following principles were established for the planning of commercial areas:

- Commercial land uses should be formed into compact developments, avoiding "strip commercial" growth.
- Avoid the occurrence of scattered commercial development along major highways. Commercial activities should be consolidated into a few well organized areas to take maximum advantage of utilities and services and to promote the economic well-being of the total business community.



- Adequate off-street parking and access should be utilized for commercial areas to decrease potential congestion and safety hazards.
- Avoid commercial growth on both sides of heavily traveled highways.

As the City of Lucas grows, future fire stations and emergency sites should be located to minimize the response time in accordance to National Fire Protection Association (NFPA) standards.

In order to formulate, adopt and implement a plan that accomplishes the foregoing overall goals and objectives, it is important to incorporate certain basic planning principles and processes into the local future land use planning effort. The Future Land Use Plan expresses projections that are based on sound planning principles, recognizing and supporting existing land uses, community facilities and physical features.

The plan for Lucas suggests that certain areas be reserved and developed for various land uses. Selecting the pattern and distribution of future land use is best accomplished through:

1. The analysis of existing land use characteristics
2. The effects of existing infrastructure
3. The location of existing neighborhood connectors
4. The application of recognized planning principles

These characteristics and principles establish a process by which to judge the most optimum and best land use based on local and community-wide standards. There are two advantages of going through such a process. First, it results in a land use plan for the City as represented by the Future Land Use Map. The Future Land Use Map can be used to assure that individual decisions follow a comprehensive pattern. It also helps in the sensitive but necessary evaluation of change with respect to public and private benefits. Second, the establishment of this planning process provides the City with a method of logically making subsequent land use decisions. It is important to reiterate that the Future Land Use Plan does not attempt to set the specific use for each and every parcel in the planning area.

RECOMMENDED ASSIGNMENT OF LAND USES

Residential Land Use Requirements

The assignment of land uses is then based upon the goals, objectives and planning principles previously stated. It is anticipated that new residential uses will be built as (1) new subdivisions close to or within current city limits, as (2) larger lot development in sparsely populated areas adjacent to Lake Lavon and the ETJs, and as (3) in-fill development/redevelopment. As one moves further west and south, residential densities transition from larger lots of two or more acres, to lots of one and one-half acres, and one acre. By establishing this hierarchy of development density, will result in a more cohesive land use throughout the City.



Commercial Land Use Requirements

Future commercial land use allocations in Lucas should focus on peripheral locations to minimize traffic impacts on residential areas, reduce the potential for incompatible land uses, and minimize subsequent potential adverse effects. Drive will serve local needs with limited impacts to commuter and passerby highway traffic.

Industrial Land Use Requirements

No provision is made for future industrial development in Lucas. There are no perceived benefits to the City in preserving areas for future industrial development.

Parks Requirements

With respect to parks and open space, local opportunities for residents exist in Lucas. Expanded recreation options can be a benefit if operating and maintenance costs are held to manageable levels. Because of its limited tax base, Lucas should only expand park and open space facilities where and to the extent they are deemed needed.

RECOMMENDED LAND USE PLAN

The future land use plan which has been developed for Lucas is included on figure 4.5. A current delineation of existing conditions in both graphic and tabular form will not only allow for an up-to-date analysis of needs but will also allow for a measurement of success in achieving the Plan. Further, the Future Land Use Map should be used as a guide to keep incremental changes of the community in perspective. The individual decisions which actually shape the community, however, should be evaluated with respect to the characteristics and principles discussed throughout this document. Exceptions to this plan can be made and can be acceptable on a case by case basis where the greater good of the community is enhanced.



ECONOMIC DEVELOPMENT

INTRODUCTION

Economic Development can be defined as the basis by which a community maximizes or preserves the quality of life for its citizens. Economic development is a complex process vital to a community's pursuit of greater prosperity. Successful community development is a result of a well-executed economic development process that is given high priority by local leadership, and supported by residents. Moreover, economic development provides local employment and investment opportunities that generate these revenues. These revenues pay for public improvements, services, and facilities, as well as offset the increases in property taxes. However, for the City of Lucas, it is important to understand that economic development is only supported when it sustains the overall livability of Lucas. What does the term livability mean with regard to city planning? Many intangibles make a city livable, such as a sense of community, a strong sense of place in particular areas, city pride, and the friendliness of neighbors. However, there are also tangible aspects which can nurture livability. Therefore, the aspects of livability that this chapter will embrace include:

- Creation of a trail network that connects neighborhoods;
- Creation of neighborhood identity, and areas with a strong “sense of place”;
- Aesthetic quality of the neighborhoods and community;
- Proximity to open space and recreational opportunities;
- Proximity and availability of other community services such as high quality schools;
- Ease of access to and quality of retail and restaurants;
- Traffic flow and managing the impact of development and the associated increase in traffic on neighborhoods;
- Sustainability in buildings and development pattern; and
- Accessibility to natural areas

DEVELOPMENT CHARACTERISTICS AND POLICIES

Regional Context

Many aspects of regional development and demographic trends have a significant influence on economic potential. State, national, and international economics influence the regional and local economic potential, as well as contribute to the underlying assumptions for conducting regional and local economic analysis.

Lucas, with a current population estimate of 6,875 persons in 2016, contains a total land area of approximately 9,855 acres. An additional 1,922 acres is located within the extra-territorial jurisdiction. The city's location in Collin County places it on the northeastern



edge of the Dallas/Fort Worth Metroplex, convenient to most major employment centers.

Physical Growth Patterns

The Future Land Use Plan (Figure 4.5) depicts future land development characteristics for Lucas. Lucas is a traditional bedroom community with primarily large single-family lots and open spaces located through the core of the city with commercial located on the periphery. Residential is served by on-site sewerage facilities (OSSF), which requires a minimum of one acre for a residential home site. Commercial is served as defined by the Waste Water Master Plan. Commercial development is planned in two primary areas of the City. Both of these areas have been planned and have all necessary services installed for development. Unlike residential development, these areas for commercial development have access to sanitary sewer infrastructure installed with capacity available to meet future demand for these services.

In the past, the majority of commercial establishments consisted of small retail providers catering generally to local trade. In recent years major commercial growth has occurred along the western city limit boundary near the City of Allen, between West Lucas Road and Estates Parkway. In addition to development of commercial establishments near the western city limit, future commercial growth is anticipated near the southern city limit boundary in an area west of Southview Drive. Since Lucas foresees itself in the future as a community of primarily low density residential uses, the City will focus on appropriate, smaller scale commercial development, which will generate an acceptable level of sales tax revenues while effectively serving the needs of the local population base.

Local Regulations and Development Policies

The local regulations are reflected in the City's subdivision and zoning ordinances. Both ordinances must effectively direct development activities in a manner which both reflects local goals and objectives while recognizing realistic development standards. These regulations are not intended to discourage growth but rather to ensure that any new development provides for quality facilities and services.

Economic Base Study

The majority of all workers living in Lucas tend to be employed in occupations which require a higher or higher/moderate skill level. According to the US Census Bureau estimates for 2009-2013, the median household income in City of Lucas is \$101,636, which is almost twice the \$51,900 median household for the State of Texas.



Utility Services

The City of Lucas is the retail provider of water for its residents and businesses and its water wholesaler is the North Texas Municipal Water District. Details regarding the water system are described in Chapter 8 (Water) of this planning document. TXU and Grayson/Collin Electric provide electrical distribution. Natural gas, supplied by CoServe, is available in limited areas of the city.

Industrial Sites

Presently, there is no industrial development in Lucas. The high land costs in the area, compared to the Dallas/Fort Worth Metroplex, the zoning, the limited sanitary sewer system and the emphasis on Lucas remaining a low density residential community, are factors which make future industrial development in Lucas unlikely. The proximity of Lucas to major employment centers makes the issue of local job creation less important. Residential development is and will continue to be the most dominant land use along with minor ancillary development.

Commercial Sites

Lucas has a total of 505 acres of commercial development. By excluding land reserved for schools, 375 acres are directly reserved for commercial land uses. Future commercial sites will be located on the periphery of the city to minimize intrusive traffic volumes on interior neighborhoods. Details are provided in the Land Use Section of this planning document.

Community Assessment

It is important to note there is a critical link between economic development and comprehensive planning. Economic development is impacted by:

- Land use;
- Zoning;
- Accessibility to utilities;
- Access via transportation systems and infrastructure; and
- Demographics..

Characteristics of the City of Lucas include:

1. A property tax rate lower than the average for cities in Collin County and for the cities in DFW region. (\$0.320661 in 2015)
2. The city has traditionally had a conservative City Council that places an emphasis on providing a balance between necessary services with low taxes.
3. Skilled labor represents a high percentage of the Lucas work force.
4. Commercial land availability along FM 2551 and the southeast quadrant of the City (FM1378 and Parker Road).
5. Vacant land for additional housing.
6. Sewer service is available in commercially zoned areas as defined by the Waste Water Master Plan.
7. Land prices are higher than region or state average.



It is important for Lucas to realize its potentials and liabilities in terms of future economic development. Because of its location, Lucas has more potential for developing as a quality residential area than it does in becoming a significant economic center. However, it is important for Lucas to develop some commercial areas to meet the needs of residents.

While it is possible to operate primarily upon property taxes, doing so may require undesirable constraints on future spending. It is important Lucas not become dependent solely upon property taxes as the only revenue source for local government operations. The City of Lucas needs a healthy mix of ad valorem and sales tax revenue. Ad valorem taxes should be used generally for day-to-day operations while sales tax revenue should be used for capital projects.

Decision regarding business location will come from the business owner and his or her willingness to invest in a particular site; however, the city's development environment as conveyed through its development codes will have a major impact on where and what type of business activity takes place.

ECONOMIC DEVELOPMENT PLAN

Economic development in Lucas should have two major thrusts: (1) maintain appropriate housing development and (2) attract businesses that are appropriate for the City. Commercial development has benefitted the City with increased revenue. Balancing the financial well-being of the City and its ability to provide essential services with the citizens' desire to maintain the features and attributes of the City is paramount. Therefore, it is important to emphasize citizen feedback during the public meeting regarding economic development.

HOUSING SUPPLY

The demand for quality, upscale housing in Lucas is expected to continue. Lucas should focus on quality housing to ensure that values are maintained and the city continues as desirable place to live.

ATTRACTING NEW BUSINESSES

Attracting appropriate new businesses to Lucas will increase tax revenues and fund city-provided services. There is attractive land available for new businesses in western and southern city limit boundaries with infrastructure in place or in the planning stages. The western area is accessible through three arterial roadways including West Lucas Road, Estates Parkway and Angel Parkway. The area in southern part of city is similarly accessible through two major arterial roadways East Parker Road and Southview Drive.



The citizen's preferable commercial businesses survey conducted by the City in 2015 should be utilized to attract businesses desired by citizens of Lucas. The top five responses from the survey include:

- Sit Down Family Restaurant
- Farmers Market
- Garden/Nursery
- Grocery Store
- Feed Store

These types of retail establishments typically generate sales tax revenues. It is anticipated that planning for the continued development of similar businesses in the western and southern part of the city in commercial zoning areas will continue.

ECONOMIC DEVELOPMENT GOALS AND OBJECTIVES

Based on input from Lucas citizens, Boards and Commissions, City Council and staff, the following economic development goals and implementation strategies are recommended:

GOAL 1:

Support business endeavors that are in harmony with the rural characteristics and distinctive environment.

GOAL 2:

Improve and maintain the infrastructure to support growth in the tax base and sustain a sound financial future through the adoption and implementation of a capital improvement program.

GOAL 3:

Attract businesses to Lucas that serve the local population and promote the livability and a high quality of life for our citizens.



PARKS, RECREATION AND OPEN SPACE

INTRODUCTION PARKS, OPEN SPACE, AND TRAILS



The amount and quality of parks and open space within a community are often cited as important elements of local quality of life. Lucas has recognized this fact through an adopted Park Plan and a park dedication ordinance. Lucas is a unique community with large lots and open spaces naturally throughout the city. The city's entire Eastern boundary is located on the shores of Lake Lavon, with natural waterways through the city for storm water run-off.

Due to the unique features of Lucas and the large lots and natural open spaces, parks are not as important to the city as they are to surrounding communities. With input from the community, Boards, council, and staff it was decided that existing parks with the exception of the future potential to expand existing facilities especially at the community park located next to city hall, that we have adequate parks facilities. The city should concentrate on expanding existing trails equestrian and hiking trails adjacent to the city on US Army Corps of Engineering property throughout the city.

COMMUNITY COMPOSITION

The City of Lucas contains a total land area of approximately 9,856 acres. Approximately 74 percent (about 7,285 acres) of the land within the existing City is developed, while the remaining acreage is vacant or being used for some agricultural related purpose. Lucas currently has six parks (153 acres) utilized as parkland and has no planned or designated open space system. In addition the City of Lucas is located immediately adjacent to Lake Lavon, which provides opportunities for water based recreational activities, trails and open spaces.

PREVIOUS PARKS AND OPEN SPACE STUDIES

The City of Lucas historically has had common visions for development of Parks & Open Space. Previous studies performed date back to 2001 when community planning involved City officials interacting with the citizens in the form of Town Hall meetings and questionnaires intended to gather preferences and opinions about parks and open space in the City. Preferences and opinions came from a sample of the population voicing a variety of choices. A 2001 study entitled "Lucas Parks and Open Space Master Plan" presented a detailed analysis of the park system, open spaces, possible programs and recreational opportunities available,



and the detailed history of lands in the City. The study also painted an overall picture of the City's situation regarding these issues, described a strategy in which to develop a parks and open space master plan, and established goals and objectives outlining means to implement the proposed plan. Additional study was performed as a part of the 2004 City of Lucas Comprehensive plan which included an evaluation of the parks and recreational opportunities in the City and the current opportunities available and existing facilities available.

In 2015, the City hosted several Town Hall meetings to provide forum to receive feedback from citizens and to address the parks, recreation, and open space needs. The town hall meetings, previous study, and ongoing changes to parks and recreation in the region will serve as a backdrop in describing the current opportunities as they exist today.

EXISTING PARKS AND OPEN SPACE

Over the years, the City of Lucas has developed 4 parks and preserved open space in accordance with community planning efforts. The existing parks and open space include Brockdale and Highland Park currently operated by the Army Corps of engineers, and one private park located in the Stonegate sub-division making a total of 6 parks in the city and they are described and evaluated as follows.

BROCKDALE PARK

Brockdale Park was established in 2005 and is located at east edge of City of Lucas immediately next to Lake Lavon. Brockdale Park is 127 acres and has several amenities that have been developed and includes The Blackland Prairie Raptor Center that is located in the middle section of the park. This center is a nonprofit, rehabilitation and conservation education organization. The mission of this organization is to preserve the environment through public education and conservation of birds of prey and wildlife in their natural habitat.

KENNETH R. LEWIS PARK

Kenneth R. Lewis Park is located adjacent to FM 1378 (Southview Dr.), near the southern side of the City. The park is approximately 5 acres and offers baseball/softball field and soccer field. About two thirds of the park is open space and undeveloped for use with other activities.

LUCAS COMMUNITY PARK AT CITY HALL

The Lucas Community Park at City Hall is directly adjacent to the southern side of City Hall Parking Lot. The park is approximately 3 acres and offers a 5-foot wide concrete sidewalk that circulates the park and a pavilion for picnics and barbeques for the City residents of Lucas. A large playground including multiple slides and climbing areas. The park also boasts a community center with



rooms available to residents at no cost. The parking area provided for the City Hall can be also utilized for the community park.

HIGHLAND PARK

Highland Park is located at Northeast edge of the city just off Snider Lane. This park is approximately 59 acres and has a minimal of services developed at the park.

Highland Park Provides a boat ramp at the north end of the park for boating and fishing activities on Lake Lavon. The ramp is concrete with ample parking for trailers and vehicles. Entrance to the boat ramp area is via Highland Park Road. Available facilities at this park include the following, a parking area, boat ramp, and restrooms.

As with Brockdale Park, the Trinity Trail passes through the Highland Park. There is a trailhead existing at this park that serves as a point for riders to unload and load their horses with an entrance area on Highland Park Road. The Trinity trail continues north past the limit of Highland Park to the north end of City of Lucas Limit near the North Texas Municipal Water District Treatment Plant as previously discussed. Available facilities at the trailhead existing in Highland Park include the followings. Loading/unloading area, restroom facility with ADA considerations, one pavilion, and a watering place for horses

FOREST CREEK NEIGHBORHOOD PARK

Forest Creek Neighborhood Park is located at North of City of Lucas next to Orchard Gap Lane. The Forest Creek Neighborhood Park is a small 2 acre park with several playgrounds and a soccer field. Access to the park from Country Club Road is via Orchard Gap Lane off Norfolk Lane. Facilities available at this park includes a traditional neighborhood playground and open space.

STONE GATE PARK

Stone Gate Park is a private park located on north side of the city in the Stone Gate Neighborhood and is only accessible to residents of that neighborhood. This park is a very small neighborhood park occupying less than 1 acre next to one of the tributaries of White Rock Creek. This park offers a traditional multiuse playground, a small gazebo, picnic tables and a 2-foot wide concrete sidewalk that passes through the park. The sidewalk connects to a concrete trail that continues alongside the tributary of the White Rock Creek.

OPEN SPACES AND NATURAL FEATURES

Open space represents the natural and agricultural through fields, pastures, prairies and woodlands. Public and private objectives may differ in regard to preservation of open spaces. The City's desire to preserve open spaces will depend on achieving common goals with private land owners and the public. The goal of maintaining open space should be continued with continued interaction between the City and land owners to determine common means to achieve these goals.



Other open spaces in Lucas are in the form of:

- Lake Lavon existing flood plain areas
- Creeks and waterways;
- Vacant lands, farm lands, pastures and rights-of-way

All these open spaces can potentially allow for trails and trail connections.

The most important natural feature in Lucas is Lake Lavon and its tributary creeks. Constructed in 1954, the lake is owned and controlled by the U.S. Army Corp of Engineers. There are twenty areas along the lake designated for park use, including Highland Park and Brockdale Park which reside in Lucas. These parks provide water-based recreational opportunities that would otherwise not generally be available in the county.

EXISTING TRAILS

Currently Trinity Trail along Lake Lavon is the only trail in-use that exists in City of Lucas. The Trinity Trail is situated along Lake Lavon with scenic views of the lake and surrounding landscape. The trail extends to the southeastern City limit of Lucas, and north to a limit shared with North Texas Municipal Water District and the City limit boundary. This unpaved trail is 25.5 miles long and placed on the US Army Corps of Engineers land along the Lake Lavon from East Fork Trail Head in Wylie in the South to the Giant Sycamore Loop to the North. Approximately 11 miles of the Trinity Trail passes through the City of Lucas. This trail enters City of Lucas in the south from Collin Park in St. Paul, and stretches north along the edge of the lake passing through Brockdale Park and Highland Park. This trail is only open to horseback riders and hikers, and the trail is maintained and operated by a group of volunteers named Trinity Trail Preservation Association (TTPA).



PROPOSED FUTURE TRAILS

Based on input from the citizens, boards, city council, and staff that the future needs of the city are to add additional equestrian/hiking trails. Specifically a trail system linking The Trinity trails on the north side of the city with a trail through the city to reconnect with the trinity trails on the southern end of the city. The trail as proposed would start at a proposed new trail head on E Winingkoff road and end at the Hunt property on the southern end of the city at a proposed future trail head location. The trail should utilize wet lands and natural tree lines whenever possible to create a secluded, shaded trail area.

GOALS AND OBJECTIVES

The City has continued to work toward achieving the goals and objectives established with previous comprehensive and community planning. By setting the goals and objectives, some results are evident and progress has been made. Recognizing the current achievements and a changed environment and surroundings, a revised set of goals have been outlined that share common themes that resonate with Collin County Open Space Strategic Plan:

GOAL 1.

Preserve natural environment and native ecosystems.

Objectives:

- Conserve and protect ecologically sensitive and naturally beautiful areas, e.g. flood plains along creeks, high points with scenic views toward Lavon Lake, etc.
- Establish and/or enhance green space and natural areas along flood plains, and promote public access to green belt areas with trail systems, e.g. equestrian/hiking trails, etc.
- Encourage and promote water conservation through the use of native plant materials, xeriscape techniques, and other methods.
- Maintain high standards for groundwater quality due to the proximity of Lake Lavon.
- Encourage development types, which minimize impacts upon the community's natural resources and visual appeal.

GOAL 2.

Provide a comprehensive Trail System Plan to include green belt and open space that is compatible with the environment and compatible with residential neighborhoods.

Objectives:

- Continue to revise and adopt comprehensive Parks and Open Space Plan that meets current preferences and reflection of changing environment in the region in 2016.
- Promote trail connections, and ensure greenbelt and open space dedication during the development review process.
- Create pedestrian, and equestrian trails between residential neighborhoods, linear greenbelts, schools, public administrative facilities, and other activity centers, whenever physically and financially possible.
- Continue to adopt and finalize a detailed plan for necessary open space/trail easements to connect existing and future parks, schools, and neighborhoods into an integrated, low maintenance park and recreation system.
- Formulate and adopt policies and ordinances that protect the acquired/donated park land and open space easements.
- Utilize trails, wherever possible, to locally and regionally connect schools, parks and residential areas.



- Design a parks and open space system that is interconnected and multifunctional, which protects important natural, cultural and visual resources while providing appropriate opportunities for recreation.
- Integrate locally planned trails with the "Collin County Regional Master Trail Plan".
- Coordinate planning efforts with those of adjacent cities.

GOAL 3.

Develop and maintain the new Lucas parks and open space system.

Objectives:

- Determine actual maintenance cost currently needed to maintain existing parks.
- Undertake the necessary effort to determine maintenance costs and capital investment costs associated with acquiring and/or developing new parks and open space.
- Allocate sufficient funding to maintain existing parks, open space and trails.
- Formulate and adopt policies and ordinances that protect existing park facilities, open spaces, and trails.
- Explore cost sharing options such as Federal, TxDOT grants, or "Keep Lucas Beautiful" for fund raising.

PLAN AND RECOMMENDATIONS

The purpose of the plan and recommendations is to provide community direction in a constantly changing environment. Under existing and currently projected conditions and circumstances, the City of Lucas parks, open space and recreational needs will be well satisfied. Few things have so positive an effect on the quality of life in a community as a well-executed plan for a community's parks, open space, trails, and recreational facilities. These recommendations should be helpful to future decision-making as each plan component is gradually considered for implementation or revision.

- Equestrian, hike, and bike trails, greenbelts, parkways or paths should be provided to connect large recreational areas, providing access, scenic views and recreational opportunities.
- Combined municipal and school recreational facilities should be used to serve the community and prevent the construction of redundant facilities. If possible, school recreational areas should include parking, drinking fountains and restrooms and should remain open on weekends and during the summer months.



STREETS AND DRAINAGE

STREETS



The livelihood of a community is, to a very large extent, dependent upon convenient and efficient access to nearby major trade centers outside the city, major national travel routes and transportation terminals of national importance outside of the city. It is likewise dependent upon efficient circulation of people within the city. Local streets should provide safe, reliable access to work, schools, shopping, and homes. A street network, therefore, is of vital importance as it ties a community together and links it to the outside world.

The primary function of a street network is the safe and efficient movement of vehicles and people. The street network of any city operates, in effect, as the skeleton of that city, providing access in varying degrees to all properties abutting the network. Roadways and other rights-of-ways occupy more than 13% of the total developed area and allow for circulation between all areas within the City. In addition to moving traffic, streets provide: access to and drainage for abutting properties; open space between buildings; and right-of-way for various utilities. In this way, the street network is a primary factor in the determination of appropriate land use locations.

The condition of the streets in a city are, perhaps, the item most noticed and for which the city receives the most criticism. While the average citizen cannot see breaks in the water lines or know that an area needs more water storage capacity, they are very aware of the condition of the roads, especially ones near their homes. Street problems affect them daily and can be very aggravating.

If adequate streets and drainage facilities are constructed, they can represent the largest single required expenditure of a city, because problems within the street system are costly to repair. The condition of the roads is affected by many factors: the quality of the soil under the road base and pavement surface; the maintenance on the roads needed to seal cracks and prevent water from soaking into the road base; drainage conditions in the area (related to topography); and the ability to afford needed improvements.

In order to repair the roads to proper standards for long term durability, many roads must be raised or lowered to improve drainage, have additional right-of-way dedicated, have improved drainage facilities installed, and have appropriate road materials used in construction. This involves an intensive process. While a large number of the streets in Lucas are in good condition, many are in need of immediate attention. All of the paved roadways consist of asphalt or concrete.

DRAINAGE

The topography of Lucas consists of both level and rolling terrain. As a result, localized flooding can be a problem, especially where culvert and drainage ditches are obstructed with vegetation or debris.

To help minimize property damage from flooding during periods of intense rainfall, the drainage system for a community must be addressed, sized, and properly maintained. The public has an expectation that no damage will result to property from storm drainage or high water. Many factors directly affect the surface storm drainage immediately adjacent to homes and other structures. Storm drainage facilities include inlets, culverts, bridges, concrete lined channels, natural drainage channels, swales, creeks, rivers, retention and detention ponds, and lakes.

Drainage can have significant effects on structural durability of streets and travel safety. Level ground and poor drainage allows water to collect in some areas, which erodes the road base and causes sections of road to fail, and can also lead to hydroplaning. Currently roadway drainage is primarily handled via open ditches and culverts. The lack of maintenance on some of these ditches has resulted in over growth of trees and other vegetation. This over growth can make roads difficult to drain, and roots can undermine the structural stability of the pavements. As a result the drainage system is discussed in conjunction with the streets system in this chapter.

STREET SYSTEM ANALYSIS

General Street Statistics

Within the City, traffic control is achieved primarily with signage. The City does not own, operate, or monitor any traffic signals to control traffic flow. However, the Texas Department of Transportation (TxDOT) controls several traffic signals at these intersections:

- Lucas Road and Southview Drive
- West Lucas Road and Country Club Road
- Country Club Road and Estates Parkway

STREET CONFIGURATION AND FUNCTIONAL CLASSIFICATION

The roadways in Lucas, which are classified as arterials (Type A and B), neighborhood connectors (Type C), and local streets (Type D). All of these roadways provide different levels of access and serve varying levels of the traffic volumes.

The highest level of roadway in the City of Lucas is the arterial, which carries varying amounts of traffic based upon the number of lanes, with somewhat limited access connections.



On the next level of the spectrum is the neighborhood connector, which carries less traffic for mostly local trips and has a higher level of access associated with it. At the lowest end is the local street, which has direct access to every parcel and carries a more limited volume of traffic. Figure 7.1 shows the relation between different levels of roadways.

Presently, Angel Parkway, Country Club Road, Estates Parkway, Lucas Road, Parker Road, and Southview Drive function as the arterial streets in the City. They allow traffic movement to cities such as Allen, Fairview, McKinney, Parker, Plano, and Wylie..

The neighborhood connectors in the City are Blondy Jhune Road, Brockdale Park Road, East Winningkoff Road, Forest Grove Road, Highland Drive, Ingram Lane, Lewis Lane, Orr Road, Snider Lane, Stinson Road, Winningkoff Road, Snider Lane, and Stinson Road. The remaining streets in the City function as local streets. On local streets through traffic is normally discouraged, On-street parking is normally not permitted throughout Lucas roadways. Figure 7.2 represents the street network in City of Lucas located in the Appendix.

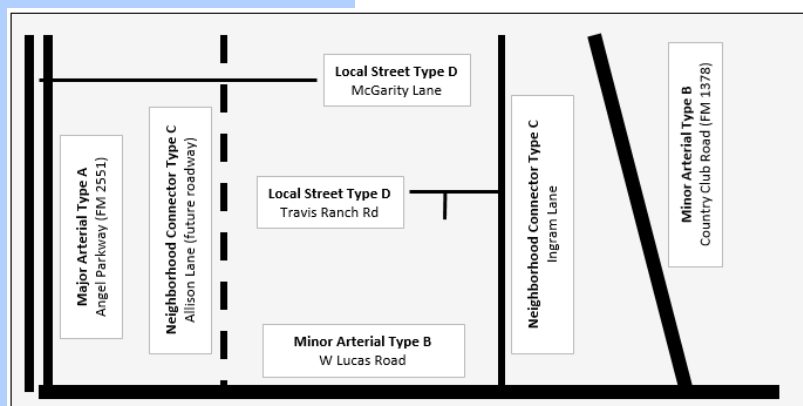


Figure 7.1— Roadway Classification

The geometric configuration of the street system is adequate to meet most current vehicle circulation demands. However, some of the roadways in the City are narrow and have pavement conditions that are unacceptable for current residents. The narrow roadways are inconvenient for two way traffic.

STREET SYSTEM EVALUATION

Before beginning major improvements to roadways, it is essential that the City have a street condition assessment and management system in place. This system will help to ensure that streets in the existing developed areas of Lucas are improved in a uniform and orderly manner. It is through such a system that completed City projects will provide maximum benefits and will become an integral part of the future City. This should assist in the elimination of duplicate expenditures and assure that possible early obsolescence of improvements can be avoided.

A system inventory, as part of a street management system helps to identify different segments of the roadway system. Condition Evaluation of the roadway segments is the first step in planning improvement. Such a system will provide a continuous evaluation of the street system inventory. It will also help to detect developing problems and determine the proper, corrective action needed. If a road is found to be adequate for its present service, it should be re-evaluated every five to 10 years to determine the trend of changes affecting its future adequacy. A complete evaluation of the roadway system would include all arterials, neighborhood connectors, and local streets in the network.

As part of the condition assessment, an extensive visual evaluation of the pavement surface conditions, drainage, traffic control devices, and environmental conditions was performed. This evaluation included collecting data on the existing conditions and rating evaluated elements for adequacy.



The criteria for the condition assessment are based on criteria which was adapted to the City needs. Table 7.1 describes the ratings used currently used in the assessment of the neighborhood connectors. Figure 7.3 summarizes the present ratings of the neighborhood connectors in Lucas.

This condition assessment identified neighborhood connectors’ segments that were nearing failure so that the City might be able to repair or perform a total reconstruction. It should be noted that the longer repairs or proper maintenance are deferred, the more expensive it will be to repair a roadway to standard condition.

EXISTING STREET DEFICIENCIES

The results of the data from the streets observation and the assessments of the neighborhood connectors combined with data obtained from the City of Lucas were utilized to identify deficiencies in need of remedial action. These are ranked according to priority as in the followings:

1) Street Paving

While a large number of streets in the City are paved, have acceptable pavement width, and are in fair to good condition, many are in need of attention or have never been properly paved. Most of the concrete sections of roadway are in good condition.

However, a majority of the asphalt streets, while seemingly in good driving condition, are demonstrating signs of eminent failure due to inadequate road bases and potentially poor in situ soil condition.

2) Street Drainage

As mentioned earlier, some of the street system has been affected by poor drainage flow. The key areas that need to be addressed are silted and improperly sloped bar ditches along some roadways as well as the silted or undersized culverts. These ditches and culverts allow water to sheet across roadways causing premature damage. Potholes, cracks, and slumped pavement are examples of what can happen when the road base is allowed to erode.

Rating	Description
A Good	Good riding surface with no noticeable wear or obvious defects.
B Acceptable	Good riding surface, but has some minor surface defects and wear indications. Some minor cracking or patch repairs may exist.
C Fair	Slightly rough riding surface, edges beginning to break down, some moderate cracking, small areas of spalling, pavement, shoulder drop-offs, and cut repairs beginning to require attention.
D Poor	Uncomfortable and/or badly worn riding surface, extensive spalling, cracks, paving failures, poor patches and/or cut repairs, edge breakdown, and severe shoulder drop-offs.
E Unacceptable	Very rough and/or uneven ridding surface, drainage problems, large surface in bad condition, many unsatisfactory patches and cut repairs, and safety hazards.

Table 7.1 Rating Description

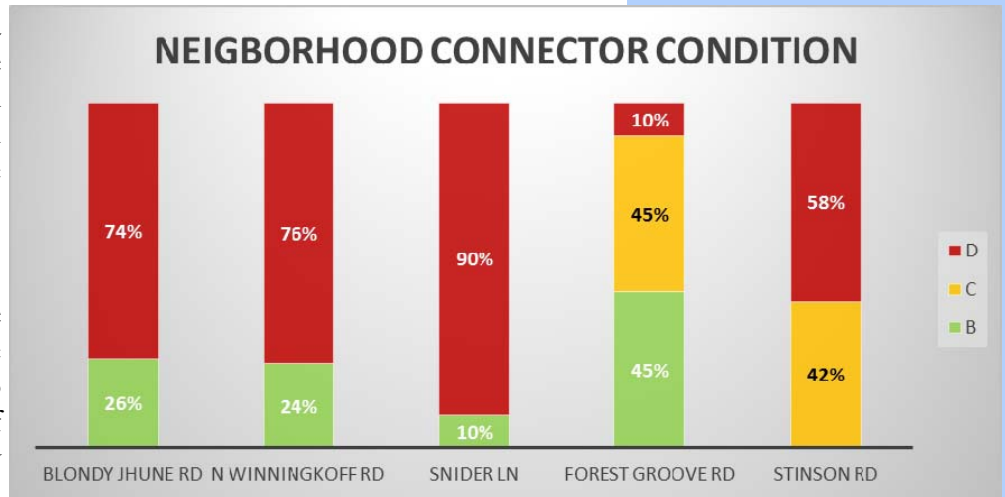


Figure 7.3 Neighborhood Connector Condition



3) Street Right-of-Way

Many of the roadways appear to have been constructed with inadequate right-of-way. As a result, bar ditches are too close to the road base, allowing water to prematurely deteriorate it. These narrow rights-of-way also allow trees to grow too close to the road ways, when the right-of-way is not cleaned or maintained properly. Roots from these trees have been found to burrow under the roadway. These roots cause premature damage to the pavement.

4) Surface Deficiencies

Surface distresses appear on many of the City streets. The asphalt pavement related-distresses that are most common included: longitudinal and transverse cracking, potholes and patch deterioration, rutting, shoving and corrugation, alligator cracking, and shoulder/pavement edge drop-offs, and deterioration. These deficiencies will lend to citizen complaints if not managed properly.

5) Street Width

Some roadways in the City are undersized. These narrow streets present a hindrance to vehicular circulation.

If the deficiencies outlined above are addressed, the primary roadway problems will be eliminated. The remaining streets in the City, which are maintained by TxDOT, will continue to operate effectively within their design and function classification.

TYPES OF STREET IMPROVEMENTS

There are several different methods of maintaining streets within a City. The appropriate choice depend upon the condition of roadway, the anticipated traffic load, and available funds.

Generally, paving improvements for asphalt roadways utilize either Asphaltic Concrete or Surface Treatments. The asphaltic concrete consists of a mixture of asphalt and aggregate. Asphaltic concrete is usually prepared at an asphalt batch plant, taken to the job site, laid by street paving contractors or paving machines on a prepared base material, and compacted. Although asphaltic concrete is generally expensive, its durability and relative ease of installation makes it the preferred type of surface pavement in some communities. Surface Treatment is generally used for road maintenance or preventive maintenance of existing asphalt pavements. Surface treatment is usually used by communities to renew the pavement where the road is still in a relatively good condition. Chip seal is a very common form of asphalt surface treatment. Surface treatment is considered as a short- term solution for extending the life of a road, however it does not improve the strength of the pavement.

Recommended street maintenance improvements alternatives for City of Lucas can include the followings.

- “Do Nothing” -- This means to not perform any type of improvements. This might apply to roadways at very good condition. However, these roads should



continue to be monitored for pavement deterioration over the next 5 to 10 years.

- Point Repairs -- Excavation of failed pavement sections to a depth of eight to 10 inches, back-filled with eight inches of crushed limestone stabilized with 2% cement, primed and sealed with a coarse surface treatment. (Used to treat potholes and other imperfections and roadway hazards.)
- Level-Up -- Leveling of depressions in pavement with hot/cold mix asphalt concrete. This is used to even out roadway surface.
- Seal-Coat -- Application of asphaltic cement covered with uniform size of aggregate and rolling the aggregates after application. Ideally, used once every three to five years to maintain streets and forestall more costly repairs. It should be noted that seal-coating does not address the structural deficiencies and it is only effective when the roadway base is in relatively good structural condition. Seal-coating should be performed by only qualified contractors, as too much asphalt is wasteful and insufficient asphalt does not seal the pavement or bond the aggregate to the surface.
- Overlay -- Depending on the severity of wear, approximately one inch of surface is milled off the existing roadway. The remaining surface material is then overlaid with a minimum of 1.5 to 2 inches of hot mix asphaltic concrete, followed by a surface treatment. This is used to completely replace the surface material of a street to address pavement deterioration and extend street life.
- Reclaim -- Scarifying existing pavement and base material, while adding cement to create a recycled asphalt-enhanced roadway base. The base is then compacted and overlaid with a new asphaltic concrete pavement. Streets receiving this treatment might last five years, depending on the traffic load and environmental conditions.
- Reconstruction -- Roadway reconstruction options removes of the existing pavement structure, and the new pavement structure is recommended to include a six- to 12-inch lime treated subgrade, a flexible base, and asphaltic concrete surface layer. The existing road pavement can be also replaced with a new reinforced concrete pavement.

The City historically budgets approximately \$500,000 each year for maintaining the street system. These funds are used for point repairing, leveling-up, overlaying, and reclaiming.

DRAINAGE SYSTEM ANALYSIS

The entire City relies on storm water drainage to be carried on the surface. The storm drainage system of Lucas currently consists of a system of bar ditches, channels, and culverts. These facilities carry storm water run-off within Lucas to the eventual terminus outside the city limits in Lavon Lake or Lake Ray Hubbard.

Annual precipitation is approximately 42 inches per year. The rains are heaviest in spring and fall. The streets in the City crowned to promote open ditch drainage on each side.



The Federal Emergency Management Agency (FEMA) provides flood insurance rate maps that depict the 100-year and 500-year flood plains. These flood plains cover those areas that would most likely be inundated with storm water during the heaviest rains . The 100- year floodway defines the area where buildings are not eligible for flood insurance, while those located in the 100-year floodway fringe are eligible once flood proofing is implemented. The goal of this program is to curtail development in flood plains, thereby reducing damage to structures and minimizing the danger to people during flooding. The City of Lucas is a participating city in the National Flood Insurance Program (NFIP).

The City of Lucas does not maintain most of the above drainage features within the city limits, and jurisdictions. Collin County, TxDOT, and US Army Corps of Engineers control some of those facilities in the extraterritorial jurisdiction and along some of the roadways in and around the City. Most of the necessary seasonal maintenance is the responsibility of the individual property owners. The open ditches running parallel to the city streets receive little to no maintenance from the property owners. The root cause of most if not all the negative drainage issues within the City of Lucas stem from failure of the initial design and lack of maintenance. Many of the neighborhoods and properties developed before 2002 did not have any consideration for proper drainage. Properties along West Lucas Road, north of Estates Parkway and west of Country Club Road, and along Estates Road were not graded or constructed for drainage.

GENERAL DRAINAGE PROBLEMS

Creeks

All creeks are subject to flooding at some point. However, most large channels have had their flood carrying capacity as indicated by FEMA, as shown on their respective floodway maps. It is important to note that creeks that have not been mapped by FEMA are still subject to inundation.

Bar Ditches and Water Channels

A significant portion of the flooding that occurs in the City is associated with bar ditches and culverts being inundated with rainwater flowing off adjacent properties while following the natural topographical lay of the City. Despite the proper construction and operation of the majority of these ditches, some are not able to deal with the intense storm water flows brought on by heavy rains. As a result, water is often left standing in intersections and yards of homes after rain has subsided. This water is a breeding ground for mosquitoes, contributes to premature street damage and is a visual blight on the City. Compounding negative drainage issues is the lack of understanding by homeowners for their responsibility to maintain the drainage associated with their property.

Street System

Some structures in the street system do not lend themselves to adequate drainage since the facilities exist perpendicular to the natural flow lines. In cases that culvert passage is silted, undersized or not provided, the storm water can cause premature damage to roadways and major safety problems.



PLAN AND RECOMMENDATIONS

Purpose

The purpose of the Streets and Drainage section of the Comprehensive Plan is to assist the City in appropriating public funds in a manner which maximizes benefit. The plan identifies those street and drainage improvements, which are needed in order to provide an efficient transportation system, as well as minimizing property damage from flooding during periods of intense rainfall in the City.

STREET RECOMMENDATIONS

The most important consideration when developing a plan for street rehabilitation is to ensure that all plans for roadway construction also include plans for drainage improvements. In Lucas, the drainage ditches along the sides of the roads serve as a route of storm water removal from the City. All plans for road reconstruction must consider the size and slope needs for drainage ditches or the potential construction of curb and gutter as part of an underground storm sewer system. Any program for street improvements without drainage improvements would be futile.

The City has adopted specific street section designs based on the classification of the roadway. Different rights-of-way widths, pavement widths, and base thicknesses, are required for roadways that are expected to serve differing levels of traffic. This is especially useful when enforcing street quality standards and minimums for residential subdivision developments.

If several years lapse before projects are undertaken, a new assessment may be necessary to ensure that data is current. Whether increased traffic due to growth, new commercial, and changes in City; maintenance practices can change the recommendations made in this report. Street maintenance and repair plans should be reviewed annually to adjust for cost and changes in the road conditions.

Proposed improvements were based on the street analysis, focusing on the improvements that are most in need or will benefit the most people. High priority projects including highly traveled roadways in poor condition or first-time paving should be considered as soon as the City is able to finance the repairs. Typically, roads with the greatest traffic should be improved first since a larger number of people will benefit from the limited tax dollars available. This excludes the state roads since they are maintained by TxDOT. For this plan, improvements are phased. Phasing of improvements is designed to help minimize the financial impact on the community, while still realizing the need to make necessary improvements.

PROPOSED IMPROVEMENTS

As part of the Street Plan, recommended roads for reconstruction are presented in Table 7.2. Possible funding sources has been developed and is presented below.



These projects also include improving bar ditches along these roadways as recommended previously.

For the remainder of the planning period, the City should continue to reconstruct roadways that have inadequate bases. It should be noted that while overlay is a viable solution for repairing damaged roadways, it is most effective when done on streets with properly constructed bases. If for example, a street improperly constructed to handle heavy vehicles is overlaid, it can be expected that continued traffic of this type will accelerate premature roadway damage. Therefore, it is recommended that before overlay is initiated, proper base construction be ensured. This way, maintenance costs will be reduced and the longevity of the roadway will be ensured.

Street Name	Type of Repair
Blondy Jhune Road	Reconstruction
Forest Grove Road	Reconstruction
Snider Lane and Bridge	Reconstruction
Stinson Road and Culvert	Reconstruction
Winningkoff Road	Reconstruction

Table 7.2 - Recommended Roads for Reconstruction, City of Lucas, Texas

POSSIBLE FINANCIAL SOURCES FOR STREETS

The City should aggressively pursue these, and any other funding sources, available to assist in providing necessary street improvements:

- The General Fund
- General Obligation Bonds
- Certificates of Obligation
- City Sales Tax
- Special Fees/User Fees

POSSIBLE FINANCIAL SOURCES FOR DRAINAGE IMPROVEMENTS

The following is a listing of sources which may be utilized to assist with future drainage projects:

- The General Fund
- General Obligation Bonds
- Certificates of Obligation
- Grants through the Office of Rural Community Affairs
- Special Fees/User Fees
- Increase landowners' participation

ADDITIONAL FINANCIAL SOURCES

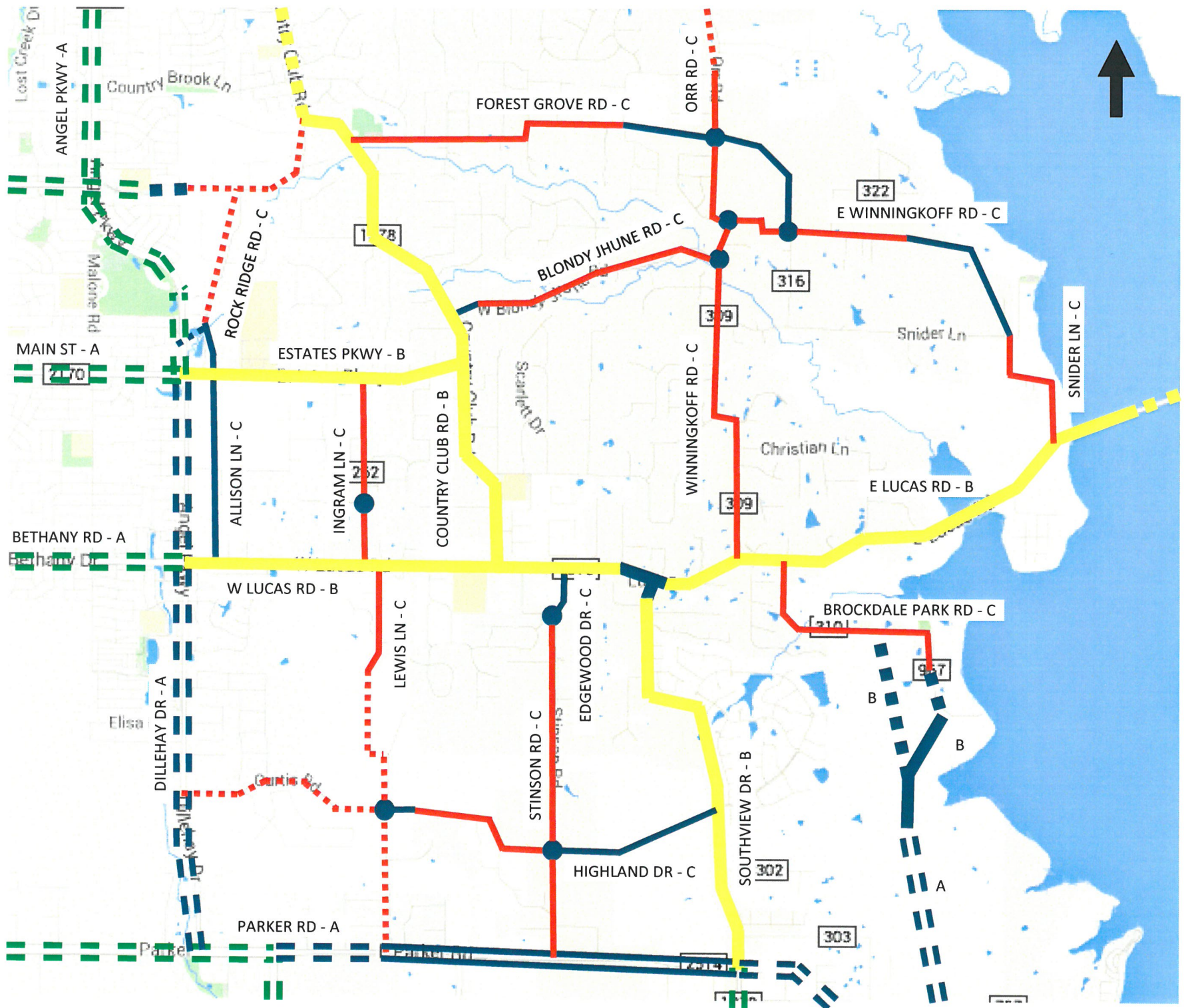
- Grants through the Office of Rural Community Affairs/Texas Community Development Program can be used to re-pave and repair streets. However, while streets are eligible, it is unlikely that a street project alone would be funded. Therefore, it might be possible to incorporate some street work into another, more fundable activity such as water line or sewer line construction where streets must be torn up to bury line.



- Individuals who are required to perform community service can often be utilized to do some of the required labor. Often times, this can be accomplished by participating with local governmental units such as the county judicial system.
- The Texas Department of Transportation (TxDOT) has a program designed to maintain and improve on- and off-system roadways.
- The Texas Department of Transportation (TxDOT) also has a landscaping cost sharing program through which the department will provide landscaping materials up to 50% of the project cost. The city's contribution may be in-kind in the form of installation of materials. The city must provide the design plan for approval by the department over and above the city's in-kind contribution. Finally, the city must commit to maintaining the landscaping improvements
- Loans from the Texas Department of Agriculture. These low interest loans can be utilized in place of bank loans and the issuing of bonds.
- In an Assessment Paving Program, the City has its engineer prepare designs and cost estimates. Afterward, the City then, following carefully prescribed procedures of notices, public hearings and bidding, begins making the street improvements, assessing a portion of the costs against the adjacent property owners. The City may have to advance the cost of the projects, but eventually, the property owners will pay their fair share of the costs. This procedure is governed by the Texas Civil Statutes.






2014 Master Thoroughfare Plan (Figure 10.2.1)



Legend

- Solid lines are thoroughfares within the city.
- Dashed lines are thoroughfares outside the city.
- Blue lines are proposed thoroughfares.
- Blue dots are proposed roundabout locations.
- Thoroughfare name is followed by thoroughfare type.

Thoroughfare Type	No. of Lanes	Divided Roadway	Pavement Width (Feet)	Right-of-Way Width (Feet)
A 	Six	Yes	78 Plus a 16-Foot Median	120
B 	Four	No	64	90
C 	Two	No	34	60
D (Not Shown)	Two	No	24	50



City of Lucas
City Council Agenda Request
October 20, 2016

Item No. 11

Requester: Development Services Director Joe Hilbourn

Agenda Item:

Consider adopting Ordinance 2016-10-00843 approving amendments to the City's Code of Ordinances Chapter 10, Section 10.03.123 (i) Streets and Drainage relating to where streetlights may be located and including an appeal process.

Background Information:

The existing Code of Ordinances states that street lighting shall be provided at street intersections within new subdivisions, at streets connecting to new subdivisions, and shall conform to the latest edition of the Illuminating Engineering Society Handbook and the City's Code of Ordinances. The use of sodium vapor lights for street and parking lot illumination shall not be allowed in the City. Cost of installation of street lighting shall be borne by the subdivider. Cost of ongoing service and utilities shall be borne by the subdivider and included in a maintenance agreement as part of the Homeowner's Association (HOAs) documents.

The proposed changes would require street lighting in new subdivisions when deemed necessary by the Public Works Director/City Engineer for safety. The same change is proposed for existing intersections and gives guidelines on the types of lights that are permitted.

The Public Works Director/City Engineer has been correcting discrepancies regarding the ongoing cost of maintenance and electrical service for streetlights throughout the City. As part of that process and review of complaints regarding the discontinuance of the City paying for the upkeep of streetlights that were the responsibility of HOAs, the City Council directed staff to bring this code section before the Planning and Zoning Commission for further review.

Currently streetlights are located at signalized intersections by TxDOT, neighborhood entrances by HOAs, and the City Engineer is reviewing various locations along the roadways for illumination needs.

Citizen Summary:

This item proposes to reduce the requirements for the placement of streetlights in new subdivisions and makes the installation of streetlights optional unless required for safety purposes. This amendment also gives homeowners an appeal process if the City Engineer determines a streetlight is not warranted for safety reasons, the decision can be appealed to the City Council. The City Council can either approve this item, table to a future meeting, or send back to Planning and Zoning Commission for further review.



**City of Lucas
City Council Agenda Request
October 20, 2016**

Item No. 11

Attachments/Supporting Documentation:

1. Ordinance 2016-10-00843 streetlight amendments

Budget/Financial Impact:

N/A

Recommendation:

The Planning and Zoning Commission recommended to unanimously approve the proposed amendments.

Motion:

I make a motion to adopt Ordinance 2016-10-00843 approving amendments to the City's Code of Ordinances Chapter 10, Section 10.03.123 (i) Streets and Drainage relating to where streetlights may be located and including an appeal process.



**ORDINANCE 2016-10-00843
[AMENDING CODE OF ORDINANCE CHAPTER 10]**

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, AMENDING THE LUCAS CODE OF ORDINANCES BY AMENDING CHAPTER 10 TITLED “SUBDIVISIONS” BY AMENDING ARTICLE 10.03 TITLED “SUBDIVISION AND DEVELOPMENT ORDINANCE” BY AMENDING DIVISION 4 TITLED “STANDARDS AND REQUIREMENTS” BY AMENDING SECTION 10.03.123 TITLED “STREETS AND DRAINAGE” BY CREATING A NEW SUBSECTION (i) TITLED “STREET LIGHTING” TO PROVIDE NEW REGULATIONS FOR STREET LIGHTING; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000) FOR EACH OFFENSE; AND PROVIDING FOR AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, THAT:

Section 1. The Code of Ordinances of the City of Lucas, Texas, is hereby amended by amending Chapter 10 “Subdivisions” by amending Section 10.03.123 titled “Streets and Drainage” by creating a new subsection (i) titled “Street Lighting”, to read as follows:

“CHAPTER 10

SUBDIVISIONS

...

ARTICLE 10.03 SUBDIVISION AND DEVELOPMENT ORDINANCE

...

DIVISION 4. Standards and Requirements

...

Sec. 10.03.123 Streets and drainage

...

(i) Street lighting.

- (1) Street lighting shall be provided at street intersections at the request of the city engineer within new subdivisions and at streets connecting to new subdivisions. Street lighting shall conform to the latest edition of the Illuminating Engineering Society Handbook and the city’s regulations as provided in the Code of Ordinances and zoning regulations. When a conflict exists between the two, the city’s Code of Ordinances shall take precedent. The use of sodium vapor lights for street and parking lot illumination shall not be allowed in the city.
- (2) Cost of installation of street lighting shall be borne by the subdivider. Cost of ongoing service and utilities shall be borne by the subdivider and included in a maintenance agreement as part of the homeowners’ association documents approved by the city attorney.
- (3) The city may install lights at existing intersections that the city engineer deems necessary.
- (4) The city manager may, based on field conditions, modify the requirements of this section.
- (5) All street lights shall conform to the city’s lighting regulations and be the same or similar in nature to the examples of streets lights as shown on Figure 1, Figure 2 and Figure 3:

FIGURE 1



FIGURE 2



FIGURE 3



Sec. 10.03.124 Water and utility extensions

...”

Section 2. All ordinances of the City of Lucas in conflict with the provisions of this Ordinance shall be, and same are hereby, repealed, provided, however, that all other provisions of said Ordinances are not in conflict herewith shall remain in full force and effect.

Section 3. Should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance or of the City of Lucas Code of Ordinances, as amended hereby, be adjudged or held to be voided or unconstitutional, the same shall not affect the validity of the remaining portions of said Ordinances or the City of Lucas Code of Ordinances, as amended hereby, which shall remain in full force and effect.

Section 4. An offense committed before the effective date of the Ordinance is governed by prior law and the provisions of the City of Lucas Code of Ordinances in effect when the offense was committed and the former law is continued in effect for this purpose.

Section 5. Any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for the in the City of Lucas Code of Ordinances, as amended, and upon conviction shall be punished by a fine not to exceed the sum of Two Thousand Dollars (\$2,000) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

Section 6. This Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Lucas, and it is accordingly so ordained.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 20th DAY OF OCTOBER, 2016.

APPROVED:

Jim Olk, Mayor

APPROVED AS TO FORM:

ATTEST:

Joseph J. Gorfida, Jr., City Attorney
(09-27-2016/74772)

Stacy Henderson, City Secretary



City of Lucas Council Agenda Request October 20, 2016

Requester: Mayor Jim Olk

Agenda Item:

Executive Session:

No Executive Session is scheduled for this meeting.

Background Information:

NA

Citizen Summary:

The City Council may convene into a closed Executive Session per the Texas Government Code regarding items such as consulting with the City Attorney, deliberation regarding the purchase, exchange, lease or value of real property, and personnel matters.

Attachments/Supporting Documentation:

NA

Budget/Financial Impact:

NA

Recommendation:

NA

Motion:

NA