



City of La Vernia  
**CITY COUNCIL + PLANNING AND ZONING JOINT  
WORKSHOP**

102 E. Chihuahua St., La Vernia, Texas 78121

June 08, 2023

6:15 PM

---

## AGENDA

**1. Or immediately following the City Council Meeting**

**Call to Order**

**2. Citizens to Be Heard**

*(At this time, citizens who have filled out a registration form prior to the start of the meeting may speak on any topic they wish to bring to the attention on the governing body so long as that topic is not on the agenda for this meeting. Citizens may speak on specific agenda items when that item is called for discussion. During the Citizens to Be Heard section no council action may take place and no council discussion or response is required to the speaker. A time limit of three minutes per speaker is permitted; the council may extend this time at their discretion.)*

**3. Presentations**

**A.** Presentation by Southwest Engineers regarding the City of La Vernia Impact Fees

**4. Discussion/Action**

**A.** Discuss the preliminary impact fee plan

**5. Items Specific to Future Line Items on the Agenda**

**6. Adjourn**

### DECORUM REQUIRED

*Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order to the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.*

*The City Council for the City of La Vernia reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by the Texas Open Meetings Act, Texas Governmental Code §551.071 (Consultation with Attorney), §551.072 (Deliberations about Real Property), §551.073 (Deliberations about Gifts and Donations), §551.074 (Personnel Matters), §551.076 (Deliberations about Security Devices), and §551.087 (Economic Development), and any other provisions under Texas law that permits a governmental body to discuss a matter in closed executive session.*

*The City of La Vernia Council meetings are available to all persons regardless of disability. The facility is wheelchair accessible parking spaces are available. Request for accommodations, should you require special assistance, must be made 48 hours prior to this meeting. Braille is not available. Please contact the City Secretary at (830) 779-4541 or email Lboyd@lavernia-tx.gov.*

I, the undersigned authority, do hereby certify that the above Notice of Meeting of the governing body of the above-named La Vernia City Council is a true and correct copy of said Notice and that I posted a true and correct copy of said Notice on the bulletin boards of the City Hall of said La Vernia, Texas, a place convenient and readily accessible to the general public at all times, and said Notice was posted on **June 05,2023, at 5:00 PM** and remained so posted continuously for at least 72 Hours proceeding the scheduled time of the said meeting.

---

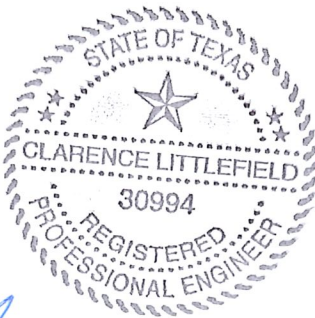
Lindsey Wheeler, City Secretary

# City of La Vernia

## WATER & WASTEWATER IMPACT FEE STUDY

May 2023  
SWE Project No. 0200-034-23

**City of La Vernia**  
PWS #2470004  
P. O. Box 225  
La Vernia, TX 78121-0225  
Phone: (830) 779-4541  
The Honorable Martin Poore, Mayor  
Yvonne Griffin, City Administrator



Prepared by:

A handwritten signature in blue ink, appearing to be "Clarence Littlefield", written over the "Prepared by:" text.

The seal appearing on this document was authorized by Clarence Littlefield, P.E. (Texas Serial #30994) on the date indicated. Alteration of this sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.



# Southwest Engineers

307 St. Lawrence  
Gonzales, TX 78629  
Phone: 830.672.7546  
www.swengineers.com  
TPBE No. F-1909

## Table of Contents

Introduction..... 3

Methodology..... 3

Land Use Assumptions and Projected Growth ..... 4

Capital Improvements ..... 4

Appendix A.....

## Introduction

The City of La Vernia continues to expand and aims to maintain adequate infrastructure and means to provide water and wastewater services.

The City of La Vernia has authorized Southwest Engineers, Inc. to amend the previously approved Impact Fee Study, which identifies system improvements and facility expansion that are necessary for the next ten (10) years. The previous *Impact Fee Study* was completed and adopted by the City in 2015, for the water and wastewater systems. With pending growth and costs for the required infrastructure, the Impact Fees have been reevaluated and proposed.

## Methodology

Impact fees are charged based on capital improvements deemed necessary due to the projected increase in the number of connections over a developmental period not to exceed ten (10) years. The term “capital improvements” refers to the improvements made to water and wastewater system (including facility expansions) with a life expectancy of three or more years, whether or not located within the service area.

### Existing Infrastructure

The existing infrastructure remains unchanged from the previously impact fees study except for the completion of the following projects from the previous impact fee study. Below is the status of the improvements from the previous study:

#### *Water*

- Improvement 1: New Supervisory Control and Data Acquisitions – Complete
- Improvement 2: Woodcreek Subdivision – Complete
- Improvement 3: Miscellaneous Undersized Water Main Replacement – Complete
- Improvement 4: FM 1346, 8-inch Main Expansion – Complete
- Improvement 5: Dry Hollow, 6-inch Water Main Replacement – Complete
- Improvement 6: McCoy Street, 6-inch Water Main Replacement – Not Completed
- Improvement 7: San Antonio & D.L. Vest St., 8-inch Water Main – Complete
- Improvement 8: New Water Well and 12-inch Transmission Line – Complete
- Improvement 9: US Highway 87, 12-inch Interconnect Water Main – Not Completed
- Improvement 10: US Highway 87, 8-inch Water Main Extension West – Not Completed
- Improvement 11: US Highway 87, 8-inch Water Main Extension East – Not Completed

#### *Wastewater*

- Improvement 1: 15-inch Pipe from Wastewater Treatment Plant to Chihuahua Street – Not Completed
- Improvement 2: Clay Sewer Pipe Replacement Program – Not Completed
- Improvement 3: US Highway 87, 8-inch Sewer Line Extension West – Not Completed
- Improvement 4: Clay Sewer Pipe Replacement Program 2 – Not Completed
- Improvement 5: US Highway 87, 12-inch Chamber of Commerce Sewer Main – Not Completed
- Improvement 6: Fm 775 8” Sewer Service Extension West – Completed
- Improvement 7: Woodcreek Subdivision Sewer Service – Completed

## Land Use Assumptions and Projected Growth

The water service area for the City of La Vernia is bounded by their current CCN, which encompasses approximately 4,750 acres (of which approximately 2,000 acres are located within the FEMA 100-year floodplain). It is projected that the majority of the growth will occur due to development in the form of residential subdivisions, with some retail/commercial developments and schools to serve the growing population. Growth within the next ten (10) years is expected in areas outside of the city limits, where large tracts are being purchased by potential developers. *Exhibit A* shows the areas of potential development, including areas with active service requests. All existing infrastructure has sufficient capacity for current service requests, however additional infrastructure will be necessary to connect these proposed developments to the existing infrastructure. A 3% growth rate is expected for the area inside the City Limits as this has been seen in the past and in neighboring water districts. The City of La Vernia will also need to complete system improvements to serve several of the proposed development areas.

Although the wastewater service area is not bounded by a CCN and rather the City Limits, it is understood that the City plans to provide wastewater to all water customers and the wastewater impact fees are developed anticipating the same growth as shown in *Table 1*.

## Capital Improvements

### Water

The City of La Vernia needed to make several improvements to their water system to be able to serve the projected growth of their service area over the next ten (10) years. While the existing infrastructure has sufficient capacity for current customers, elevated tower, water mains, wells, and filter plant improvements and expansions will be necessary to serve areas of growth within the City's service area. A 10-year Capital Improvements Plan was developed to identify the projects that will need to be completed to accommodate the proposed growth. The subsequent paragraphs provide the details of each of these projects, followed by a summary of this list and the associated costs in *Table 2*, a full breakdown of costs in *Exhibit B* and a location map of these improvements can be found in *Exhibit C*.

The first project was a 500,000-gallon Elevated Tower located in the Woodcreek Subdivision off Woodcreek Drive. The Elevated Tank provides adequate water pressure to the entire City of La Vernia including flows required for fire flow.

The next project was a 12-inch water main supply line from the Filter Plant to the Old Elevated Tank. The existing 6-inch main is limited to about 300 gpm and is a bottleneck in the City of La Vernia's water supply. This main increased the water supply to the City by allowing more water to be pumped from the Filter Plant to handle the additional supply from Wells #6 and #7 and Well #8 when drilled.

The next major capital improvement is a 16-inch water main from the Booster Station directly to the Elevated Tank. This supply line will be approximately 6,400 L.F and will allow for increased flows to the Elevated Tank to meet the Elevated Tank capacity. The line will also reduce the pumping pressure and result in a power cost savings.

The next major project is the installation of Well #8. This will include the acquisition of land and water rights, and installation of a 700 gpm well. It is proposed for the water well be placed on Tanneberger land, south of current Well #7. The water well will provide water for an additional 1,200 customer connections.

The next project is a 12-inch water line from the proposed Well #8 to the existing Well #7 to allow the water to be treated at the current City of La Vernia Filter Plant. With the proposed well location, this is approximately 10,700 L.F of water line that will be required.

The final major capital improvement is the expansion of the current Filter Plant. The current operation is limited to about 875 gpm with two (2) 7' diameter and two (2) 8' diameter filters. Two (2) additional 8' diameter filters at 250 gpm per filter for 500 gpm of additional treatment capacity to treat the water from Well #6, #7 and #8 will be required.

Table 1: Water Capital Improvement Summary

| Location                             | Cost                   | Number of LUEs | Per LUE            |
|--------------------------------------|------------------------|----------------|--------------------|
| <b>Elevated Tank</b>                 | \$ 1,419,420.00        | 2,500          | \$ 570.00          |
| <b>12" Main to Old Elevated Tank</b> | \$ 371,478.00          | 2,500          | \$ 150.00          |
| <b>16" Main to Elevated Tank</b>     | \$ 1,254,000.00        | 2,500          | \$ 500.00          |
| <b>Well #8 (700 gpm)</b>             | \$ 820,000.00          | 1,200          | \$ 690.00          |
| <b>12" Pipeline from #8 to #7</b>    | \$ 945,000.00          | 1,200          | \$ 790.00          |
| <b>Filter Plant</b>                  | \$ 1,305,000.00        | 900            | \$ 1,620.00        |
|                                      | <b>\$ 6,114,898.00</b> |                | <b>\$ 4,320.00</b> |

Based on the expected growth, the anticipated expenditures for associated capital improvements, and the number of LUEs each capital improvement will serve (Table 2). The City of La Vernia would need to collect approximately \$4,320/LUE from all new developments.

**Wastewater**

The City of La Vernia will also need to make several major improvements to their wastewater system to be able to serve the projected growth of their current water service area over the next ten (10) years especially with service in two (2) areas that would require a major lift station and force mains. While the existing infrastructure has sufficient capacity for current customers in the plant gravity flow plain, a new wastewater treatment plant, and additional gravity mains would be necessary to serve areas of growth within the service area. A 10-year Capital Improvements Plan was developed to identify the projects that will need to be completed to accommodate the proposed growth.

The first project will include 3,000 L.F of 12-inch gravity main in easement from Hwy 87 to the Wastewater Treatment Plant. This sewer line will divert flow from the current 10-inch gravity main down River Street that is approaching capacity. This existing 10-inch gravity main is the only main to the plant.

The next major capital improvement is a new Wastewater Treatment Plant west of the City to serve all development in the general area west of FM 1346 in that gravity plain. The new Wastewater Treatment Plant could be built in phases corresponding with development, but the first plant is recommended to be sized for 100,000 gpm. Building a new plant will also free up capacity in the current Wastewater Treatment Plant.

The final recommended capital improvements is the installation of the US Highway 87, 12-inch gravity main. This main is to include approximately 2,000 L.F of 12-inch sewer to service the existing residences and businesses along US Hwy 87 towards the Chamber of Commerce as well as provide sewer service for the new developments in this area. This main will tie into the new gravity main to the plant described above. Both of the proposed lines are in the east gravity plain.

Table 2: Wastewater Capital Improvement Summary

| Location                          | Cost                   | Number of LUEs | Per LUE            |
|-----------------------------------|------------------------|----------------|--------------------|
| <b>12" Gravity Main to WWTP</b>   | \$ 575,000.00          | 1,000          | \$ 575.00          |
| <b>West WWTP</b>                  | \$ 4,200,000.00        | 500            | \$ 8,400.00        |
| <b>12" Gravity Main US Hwy 87</b> | \$ 377,000.00          | 1,000          | \$ 380.00          |
|                                   | <b>\$ 5,152,000.00</b> |                | <b>\$ 9,355.00</b> |

Based on the expected growth, the anticipated expenditures for associated capital improvements, and the number of LUEs each capital improvement will serve (Table 2). The City of La Vernia would need to collect approximately \$9,355/LUE from all new developments.



**City of La Vernia**  
**Interim 2023 Impact Fee Calculations**  
**SWE Project No. 0200-033-23**  
**May 2, 2023**

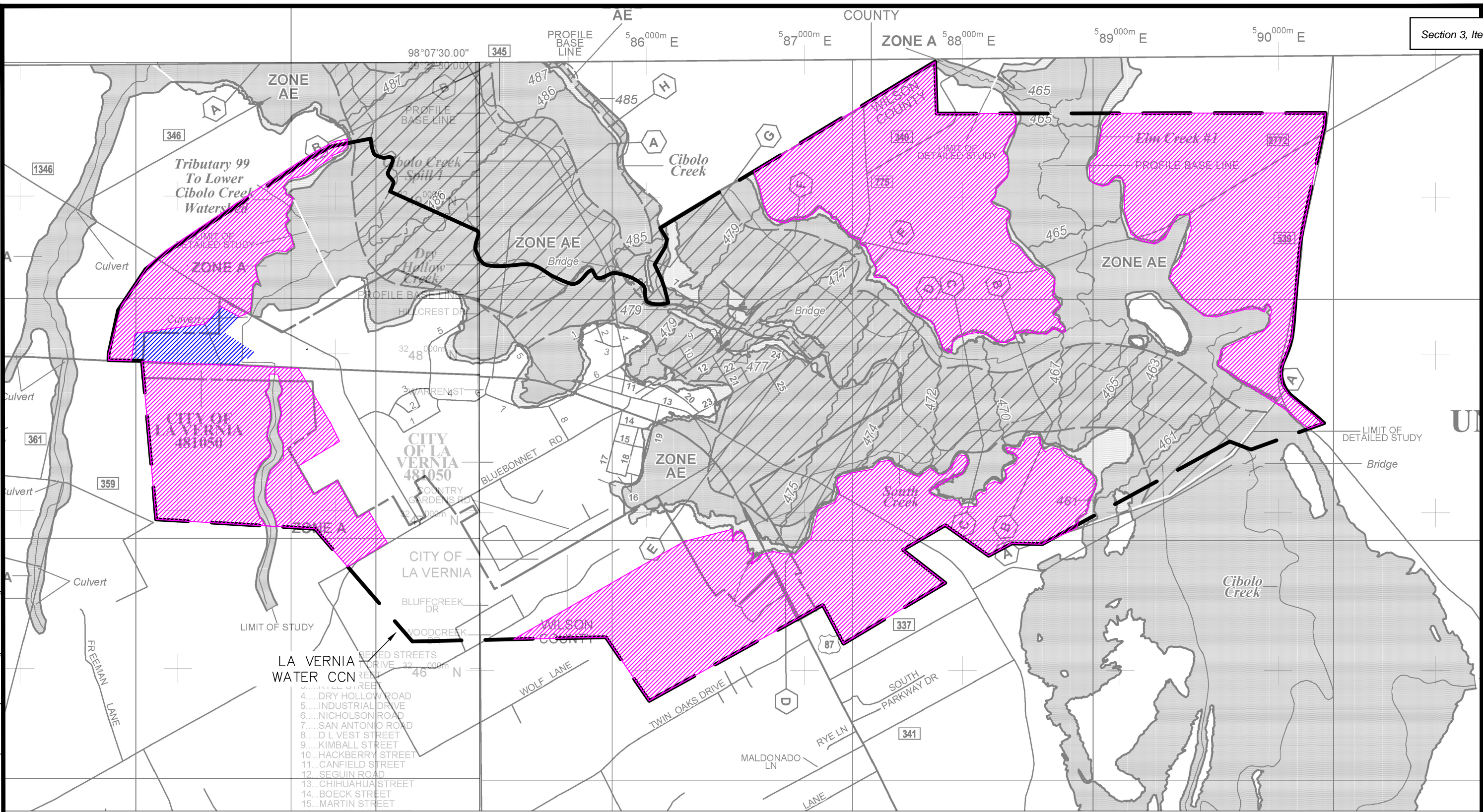
**Impact Fees**

| <b>Location</b>               | <b>Facility</b>         | <b>Cost</b>     | <b>Number of LUEs</b> | <b>Per LUE</b> |
|-------------------------------|-------------------------|-----------------|-----------------------|----------------|
| Elevated Tank                 | 500,000 Gallons         |                 |                       |                |
|                               | Construction Cost       | \$ 1,280,220.00 |                       |                |
|                               | Engineering             | \$ 139,200.00   |                       |                |
|                               | Total                   | \$ 1,419,420.00 | 2,500                 | \$ 570.00      |
| 12" Main to Old Elevated Tank |                         |                 |                       |                |
|                               | Construction Cost       | \$ 331,478.00   |                       |                |
|                               | Engineering             | \$ 40,000.00    |                       |                |
|                               | Total                   | \$ 371,478.00   | 2,500                 | \$ 150.00      |
| 16" Main to Elevated Tank     |                         |                 |                       |                |
| HDPE 18" DR 11                | ROW Acquisition         | \$ 64,000.00    |                       |                |
| 6,400 L.F. @ \$150/L.F.       | Construction Cost       | \$ 1,035,000.00 |                       |                |
| 150 L.F. of 24" Bore @ \$500  | Engineering             | \$ 155,000.00   |                       |                |
|                               | Total                   | \$ 1,254,000.00 | 2,500                 | \$ 500.00      |
| Well #8 (700 gpm)             |                         |                 |                       |                |
|                               | Construction Cost       | \$ 700,000.00   |                       |                |
|                               | Land - 2 Acres          | \$ 20,000.00    |                       |                |
|                               | Engineering             | \$ 100,000.00   |                       |                |
|                               | Total                   | \$ 820,000.00   | 1,200                 | \$ 690.00      |
| Pipeline from #8 to #7        |                         |                 |                       |                |
| 10,700 L.F. of 12" HDPE       | ROW Acquisition         | \$ 160,000.00   |                       |                |
| @ \$65/L.F.                   | Construction            | \$ 700,000.00   |                       |                |
|                               | Engineering             | \$ 85,000.00    |                       |                |
|                               | Total                   | \$ 945,000.00   | 1,200                 | \$ 790.00      |
| Filter Plant                  |                         |                 |                       |                |
|                               | 2 - 8' ø Units          | \$ 350,000.00   |                       | \$             |
|                               | Gr. Storage 400,000 Gal | \$ 750,000.00   |                       |                |
|                               | Additional Site         | \$ 5,000.00     |                       | \$             |
|                               | Pumps and Piping        | \$ 200,000.00   |                       |                |
|                               | Engineering             | \$ 150,000.00   |                       |                |
|                               | Total                   | \$ 1,305,000.00 | 900                   | \$ 1,620.00    |
|                               | TOTAL                   | \$ 6,114,898.00 |                       | \$ 4,320.00    |

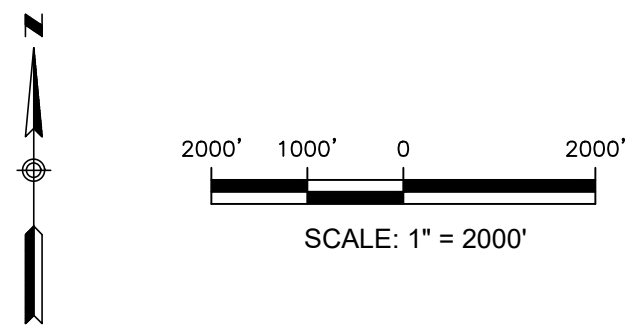
**City of La Vernia  
Interim 2023 Impact Fee Calculations  
SWE Project No. 0200-033-23  
May 2, 2023**

**Impact Fees**

| <b>Location</b>            | <b>Facility</b>   | <b>Cost</b>     | <b>Number of LUEs</b> | <b>Per LUE</b> |
|----------------------------|-------------------|-----------------|-----------------------|----------------|
| 12" Gravity Main to WWTP   | 3,000 L.F.        |                 |                       |                |
|                            | ROW Acquisition   | \$ 30,000.00    |                       |                |
|                            | Construction Cost | \$ 500,000.00   |                       |                |
|                            | Engineering       | \$ 75,000.00    |                       |                |
|                            | <b>Total</b>      | \$ 575,000.00   | 1,000                 | \$ 575.00      |
| West WWTP                  | 100K              |                 |                       |                |
|                            | Site (2 Acres)    | \$ 20,000.00    |                       |                |
|                            | Construction Cost | \$ 4,000,000.00 |                       |                |
|                            | Engineering       | \$ 200,000.00   |                       |                |
|                            | <b>Total</b>      | \$ 4,200,000.00 | 500                   | \$ 8,400.00    |
| 12" Gravity Main US Hwy 87 | 2,000 L.F.        |                 |                       |                |
|                            | ROW Acquisition   | \$ 22,000.00    |                       |                |
|                            | Construction Cost | \$ 300,000.00   |                       |                |
|                            | Engineering       | \$ 55,000.00    |                       |                |
|                            | <b>Total</b>      | \$ 377,000.00   | 1,000                 | \$ 380.00      |
|                            | <b>TOTAL</b>      | \$ 5,152,000.00 |                       | \$ 9,355.00    |




O:\CompanyData\Clients\0200-La Vernia City of\0200-034-23 - 2023 Impact Fee Study\Work in Progress\Exhibits.dwg



- LEGEND**
- CURRENT DEVELOPMENT SERVICE REQUEST
  - AREA FOR FUTURE DEVELOPMENT
  - FEMA 100 YR FLOODPLAIN

**CITY OF LA VERNIA  
LAND USE  
MAY 2023**



**Southwest  
Engineers**

TBPE NO. F-1909  
www.swengineers.com

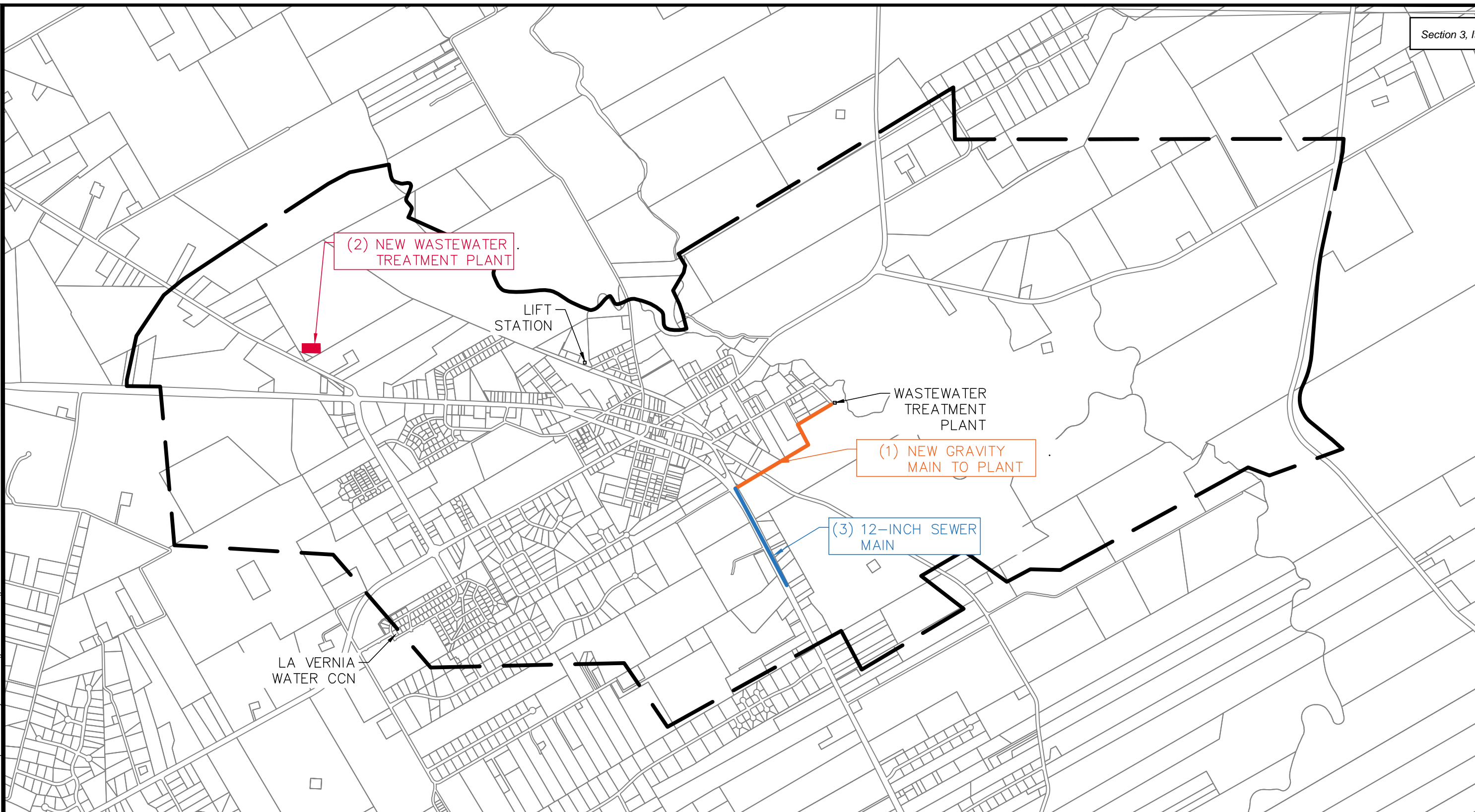
**HEADQUARTERS**

307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

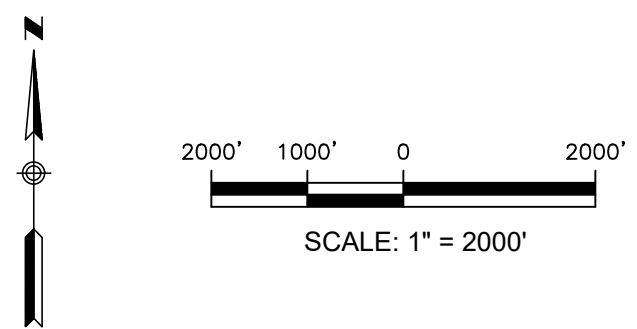
---

**CENTRAL TEXAS**

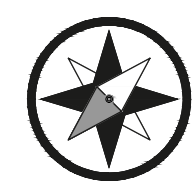
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336



O:\CompanyData\Clients\0200-La Vernia City\01200-034-23 - 2023 Impact Fee Study\Work In Progress\Exhibits.dwg



**CITY OF LA VERNIA**  
**WASTEWATER CAPITAL IMPROVEMENTS**  
 MAY 2023

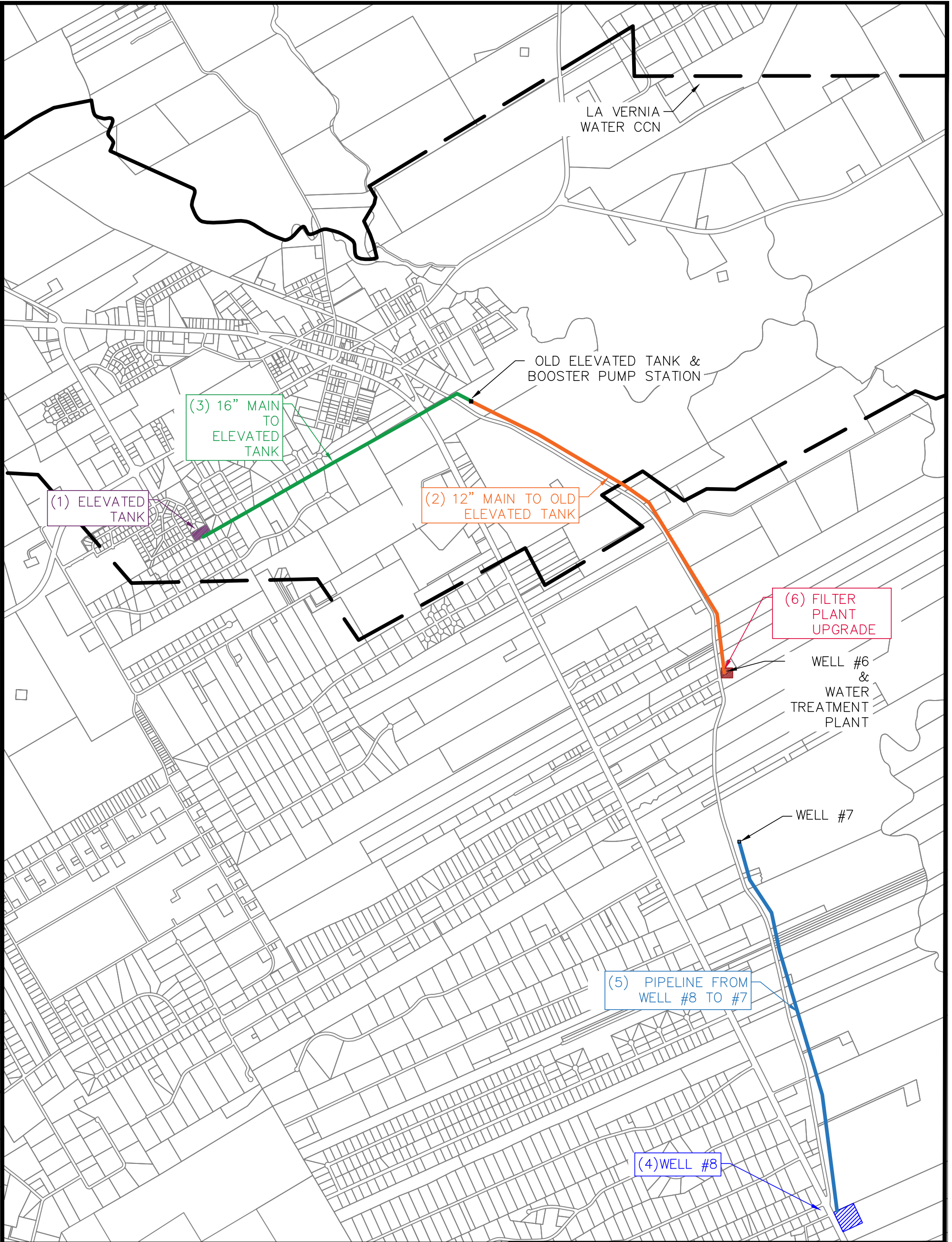


**Southwest  
 Engineers**

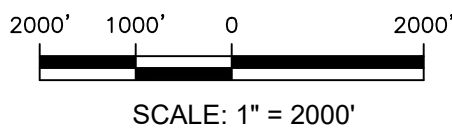
TBPE NO. F-1909  
 www.swengineers.com

**HEADQUARTERS**  
 307 Saint Lawrence Street, Gonzales TX 78629  
 P: 830.672.7546 F: 830.672.2034

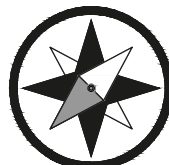
**CENTRAL TEXAS**  
 205 Cimarron Park Loop, Ste. B, Buda TX 78610  
 P: 512.312.4336



O:\CompanyData\Clients\0200-La Vernia City of\0200-034-23 - 2023 Impact Fee Study\Work In Progress\Exhibits.dwg



**CITY OF LA VERNIA  
WATER CAPITAL IMPROVEMENTS  
APRIL 2023**



**Southwest  
Engineers**

TBPE NO. F-1909  
www.swengineers.com

**HEADQUARTERS**

307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

**CENTRAL TEXAS**

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

# PRELIMINARY

## City of La Vernia

### WATER & WASTEWATER INTERIM IMPACT FEE STUDY

May 2023  
SWE Project No. 0200-033-23

**City of La Vernia**  
PWS #2470004  
P. O. Box 225  
La Vernia, TX 78121-0225  
Phone: (830) 779-4541  
The Honorable Martin Poore, Mayor  
Yvonne Griffin, City Administrator

Prepared by:



**Southwest  
Engineers**

307 St. Lawrence  
Gonzales, TX 78629  
Phone: 830.672.7546  
www.swengineers.com  
TPBE No. F-1909

## Table of Contents

|   |   |
|---|---|
| Introduction.....                               | 3 |
| Methodology.....                                | 3 |
| Land Use Assumptions and Projected Growth ..... | 4 |
| Capital Improvements .....                      | 4 |
| Appendix A.....                                 |   |

## Introduction

The City of La Vernia continues to expand and aims to maintain adequate infrastructure and means to provide water and wastewater services.

The City of La Vernia has authorized Southwest Engineers, Inc. to amend the previously approved Impact Fee Study, which identifies system improvements and facility expansion that are necessary for the next ten (10) years. The previous *Impact Fee Study* was completed and adopted by the City in 2015, for the water and wastewater systems. With pending growth and costs for the required infrastructure, the Impact Fees have been reevaluated and proposed.

## Methodology

Impact fees are charged based on capital improvements deemed necessary due to the projected increase in the number of connections over a developmental period not to exceed ten (10) years. The term “capital improvements” refers to the improvements made to water and wastewater system (including facility expansions) with a life expectancy of three or more years, whether or not located within the service area.

### Existing Infrastructure

The existing infrastructure remains unchanged from the previously impact fees study except for the completion of the following projects from the previous impact fee study. Below is the status of the improvements from the previous study:

#### *Water*

- Improvement 1: New Supervisory Control and Data Acquisitions – Complete
- Improvement 2: Woodcreek Subdivision – Complete
- Improvement 3: Miscellaneous Undersized Water Main Replacement – Complete
- Improvement 4: FM 1346, 8-inch Main Expansion – Complete
- Improvement 5: Dry Hollow, 6-inch Water Main Replacement – Complete
- Improvement 6: McCoy Street, 6-inch Water Main Replacement – Not Completed
- Improvement 7: San Antonio & D.L. Vest St., 8-inch Water Main – Complete
- Improvement 8: New Water Well and 12-inch Transmission Line – Complete
- Improvement 9: US Highway 87, 12-inch Interconnect Water Main – Not Completed
- Improvement 10: US Highway 87, 8-inch Water Main Extension West – Not Completed
- Improvement 11: US Highway 87, 8-inch Water Main Extension East – Not Completed

#### *Wastewater*

- Improvement 1: 15-inch Pipe from Wastewater Treatment Plant to Chihuahua Street – Not Completed
- Improvement 2: Clay Sewer Pipe Replacement Program – Not Completed
- Improvement 3: US Highway 87, 8-inch Sewer Line Extension West – Not Completed
- Improvement 4: Clay Sewer Pipe Replacement Program 2 – Not Completed
- Improvement 5: US Highway 87, 12-inch Chamber of Commerce Sewer Main – Not Completed
- Improvement 6: Fm 775 8” Sewer Service Extension West – Completed
- Improvement 7: Woodcreek Subdivision Sewer Service – Completed



## Land Use Assumptions and Projected Growth

The water service area for the City of La Vernia is bounded by their current CCN, which encompasses approximately 4,750 acres (of which approximately 2,000 acres are located within the FEMA 100-year floodplain). It is projected that the majority of the growth will occur due to development in the form of residential subdivisions, with some retail/commercial developments and schools to serve the growing population. Growth within the next ten (10) years is expected in areas outside of the city limits, where large tracts are being purchased by potential developers. *Exhibit A* shows the areas of potential development, including areas with active service requests. All existing infrastructure has sufficient capacity for current service requests, however additional infrastructure will be necessary to connect these proposed developments to the existing infrastructure. A 3% growth rate is expected for the area inside the City Limits as this has been seen in the past and in neighboring water districts. The City of La Vernia will also need to complete system improvements to serve several of the proposed development areas.

Although the wastewater service area is not bounded by a CCN and rather the City Limits, it is understood that the City plans to provide wastewater to all water customers and the wastewater impact fees are developed anticipating the same growth as shown in *Table 1*.

## Capital Improvements

### Water

The City of La Vernia needed to make several improvements to their water system to be able to serve the projected growth of their service area over the next ten (10) years. While the existing infrastructure has sufficient capacity for current customers, elevated tower, water mains, wells, and filter plant improvements and expansions will be necessary to serve areas of growth within the City's service area. A 10-year Capital Improvements Plan was developed to identify the projects that will need to be completed to accommodate the proposed growth. The subsequent paragraphs provide the details of each of these projects, followed by a summary of this list and the associated costs in *Table 2*, a full breakdown of costs in *Exhibit B* and a location map of these improvements can be found in *Exhibit C*.

The first project was a 500,000-gallon Elevated Tower located in the Woodcreek Subdivision off Woodcreek Drive. The Elevated Tank provides adequate water pressure to the entire City of La Vernia including flows required for fire flow.

The next project was a 12-inch water main supply line from the Filter Plant to the Old Elevated Tank. The existing 6-inch main is limited to about 300 gpm and is a bottleneck in the City of La Vernia's water supply. This main increased the water supply to the City by allowing more water to be pumped from the Filter Plant to handle the additional supply from Wells #6 and #7 and Well #8 when drilled.

The next major capital improvement is a 16-inch water main from the Booster Station directly to the Elevated Tank. This supply line will be approximately 6,400 L.F and will allow for increased flows to the Elevated Tank to meet the Elevated Tank capacity. The line will also reduce the pumping pressure and result in a power cost savings.

The next major project is the installation of Well #8. This will include the acquisition of land and water rights, and installation of a 700 gpm well. It is proposed for the water well be placed on Tanneberger land, south of current Well #7. The water well will provide water for an additional 1,200 customer connections.

The next project is a 12-inch water line from the proposed Well #8 to the existing Well #7 to allow the water to be treated at the current City of La Vernia Filter Plant. With the proposed well location, this is approximately 10,700 L.F of water line that will be required.

The final major capital improvement is the expansion of the current Filter Plant. The current operation is limited to about 875 gpm with two (2) 7' diameter and two (2) 8' diameter filters. Two (2) additional 8' diameter filters at 250 gpm per filter for 500 gpm of additional treatment capacity to treat the water from Well #6, #7 and #8 will be required.

Table 1: Water Capital Improvement Summary

| Location                             | Cost                   | Number of LUEs | Per LUE            |
|--------------------------------------|------------------------|----------------|--------------------|
| <b>Elevated Tank</b>                 | \$ 1,419,420.00        | 2,500          | \$ 570.00          |
| <b>12" Main to Old Elevated Tank</b> | \$ 371,478.00          | 2,500          | \$ 150.00          |
| <b>16" Main to Elevated Tank</b>     | \$ 1,254,000.00        | 2,500          | \$ 500.00          |
| <b>Well #8 (700 gpm)</b>             | \$ 820,000.00          | 1,200          | \$ 690.00          |
| <b>12" Pipeline from #8 to #7</b>    | \$ 945,000.00          | 1,200          | \$ 790.00          |
| <b>Filter Plant</b>                  | \$ 1,305,000.00        | 900            | \$ 1,620.00        |
|                                      | <b>\$ 6,114,898.00</b> |                | <b>\$ 4,320.00</b> |

Based on the expected growth, the anticipated expenditures for associated capital improvements, and the number of LUEs each capital improvement will serve (Table 2). The City of La Vernia would need to collect approximately \$4,320/LUE from all new developments.

Wastewater

The City of La Vernia will also need to make several major improvements to their wastewater system to be able to serve the projected growth of their current water service area over the next ten (10) years especially with service in two (2) areas that would require a major lift station and force mains. While the existing infrastructure has sufficient capacity for current customers in the plant gravity flow plain, a new wastewater treatment plant, and additional gravity mains would be necessary to serve areas of growth within the service area. A 10-year Capital Improvements Plan was developed to identify the projects that will need to be completed to accommodate the proposed growth.

The first project will include 3,000 L.F of 12-inch gravity main in easement from Hwy 87 to the Wastewater Treatment Plant. This sewer line will divert flow from the current 10-inch gravity main down River Street that is approaching capacity. This existing 10-inch gravity main is the only main to the plant.

The next major capital improvement is a new Wastewater Treatment Plant west of the City to serve all development in the general area west of FM 1346 in that gravity plain. The new Wastewater Treatment Plant could be built in phases corresponding with development, but the first plant is recommended to be sized for 100,000 gpm. Building a new plant will also free up capacity in the current Wastewater Treatment Plant.

The final recommended capital improvements is the installation of the US Highway 87, 12-inch gravity main. This main is to include approximately 2,000 L.F of 12-inch sewer to service the existing residences and businesses along US Hwy 87 towards the Chamber of Commerce as well as provide sewer service for the new developments in this area. This main will tie into the new gravity main to the plant described above. Both of the proposed lines are in the east gravity plain.

Table 2: Wastewater Capital Improvement Summary

| Location                   | Cost                   | Number of LUEs | Per LUE            |
|----------------------------|------------------------|----------------|--------------------|
| 12" Gravity Main to WWTP   | \$ 575,000.00          | 1,000          | \$ 575.00          |
| West WWTP                  | \$ 4,200,000.00        | 500            | \$ 8,400.00        |
| 12" Gravity Main US Hwy 87 | \$ 377,000.00          | 1,000          | \$ 380.00          |
|                            | <b>\$ 5,152,000.00</b> |                | <b>\$ 9,355.00</b> |

Based on the expected growth, the anticipated expenditures for associated capital improvements, and the number of LUEs each capital improvement will serve (Table 2). The City of La Vernia would need to collect approximately \$9,355/LUE from all new developments.

**City of La Vernia**  
**Interim 2023 Impact Fee Calculations**  
**SWE Project No. 0200-033-23**  
**May 2, 2023**

**Impact Fees**

| Location                      | Facility                | Cost            | Number of LUEs | Per LUE     |
|-------------------------------|-------------------------|-----------------|----------------|-------------|
| Elevated Tank                 | 500,000 Gallons         |                 |                |             |
|                               | Construction Cost       | \$ 1,280,220.00 |                |             |
|                               | Engineering             | \$ 139,200.00   |                |             |
|                               | Total                   | \$ 1,419,420.00 | 2,500          | \$ 570.00   |
| 12" Main to Old Elevated Tank |                         |                 |                |             |
|                               | Construction Cost       | \$ 331,478.00   |                |             |
|                               | Engineering             | \$ 40,000.00    |                |             |
|                               | Total                   | \$ 371,478.00   | 2,500          | \$ 150.00   |
| 16" Main to Elevated Tank     |                         |                 |                |             |
| HDPE 18" DR 11                | ROW Acquisition         | \$ 64,000.00    |                |             |
| 6,400 L.F. @ \$150/L.F.       | Construction Cost       | \$ 1,035,000.00 |                |             |
| 150 L.F. of 24" Bore @ \$500  | Engineering             | \$ 155,000.00   |                |             |
|                               | Total                   | \$ 1,254,000.00 | 2,500          | \$ 500.00   |
| Well #8 (700 gpm)             | Construction Cost       | \$ 700,000.00   |                |             |
|                               | Land - 2 Acres          | \$ 20,000.00    |                |             |
|                               | Engineering             | \$ 100,000.00   |                |             |
|                               | Total                   | \$ 820,000.00   | 1,200          | \$ 690.00   |
| Pipeline from #8 to #7        |                         |                 |                |             |
| 10,700 L.F. of 12" HDPE       | ROW Acquisition         | \$ 160,000.00   |                |             |
| @ \$65/L.F.                   | Construction            | \$ 700,000.00   |                |             |
|                               | Engineering             | \$ 85,000.00    |                |             |
|                               | Total                   | \$ 945,000.00   | 1,200          | \$ 790.00   |
| Filter Plant                  |                         |                 |                |             |
|                               | 2 - 8' ø Units          | \$ 350,000.00   |                | \$          |
|                               | Gr. Storage 400,000 Gal | \$ 750,000.00   |                |             |
|                               | Additional Site         | \$ 5,000.00     |                | \$          |
|                               | Pumps and Piping        | \$ 200,000.00   |                |             |
|                               | Engineering             | \$ 150,000.00   |                |             |
|                               | Total                   | \$ 1,305,000.00 | 900            | \$ 1,620.00 |
|                               | TOTAL                   | \$ 6,114,898.00 |                | \$ 4,320.00 |

**City of La Vernia  
Interim 2023 Impact Fee Calculations  
SWE Project No. 0200-033-23  
May 2, 2023**

**Impact Fees**

| <b>Location</b>            | <b>Facility</b>   | <b>Cost</b>            | <b>Number of LUEs</b> | <b>Per LUE</b>     |
|----------------------------|-------------------|------------------------|-----------------------|--------------------|
| 12" Gravity Main to WWTP   | 3,000 L.F.        |                        |                       |                    |
|                            | ROW Acquisition   | \$ 30,000.00           |                       |                    |
|                            | Construction Cost | \$ 500,000.00          |                       |                    |
|                            | Engineering       | \$ 75,000.00           |                       |                    |
|                            | Total             | \$ 575,000.00          | 1,000                 | \$ 575.00          |
| West WWTP                  | 100K              |                        |                       |                    |
|                            | Site (2 Acres)    | \$ 20,000.00           |                       |                    |
|                            | Construction Cost | \$ 4,000,000.00        |                       |                    |
|                            | Engineering       | \$ 200,000.00          |                       |                    |
|                            | Total             | \$ 4,200,000.00        | 500                   | \$ 8,400.00        |
| 12" Gravity Main US Hwy 87 | 2,000 L.F.        |                        |                       |                    |
|                            | ROW Acquisition   | \$ 22,000.00           |                       |                    |
|                            | Construction Cost | \$ 300,000.00          |                       |                    |
|                            | Engineering       | \$ 55,000.00           |                       |                    |
|                            | Total             | \$ 377,000.00          | 1,000                 | \$ 380.00          |
|                            | <b>TOTAL</b>      | <b>\$ 5,152,000.00</b> |                       | <b>\$ 9,355.00</b> |