



City of La Vernia

## TOWN HALL MEETING - NOTICE OF POSSIBLE QUORUM

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

November 06, 2023

5:00 PM

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### AGENDA

1. **Topic:**

- A. INTENTION TO ISSUE COMBINATION TAX AND LIMITED PLEDGE REVENUE CERTIFICATES OF OBLIGATION IN A MAXIMUM AGGREGATE PRINCIPAL AMOUNT NOT TO EXCEED \$1,250,000 FOR THE PURPOSE OF CONSTRUCTING DRAINAGE INFRASTRUCTURE, PUBLIC COMMENTS WELCOME

### DECORUM REQUIRED

*Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by 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 permit 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 and parking spaces are available. Request for accommodations, should you require special assistance, must be made 48 hours before this meeting. Braille is not available. Please contact the City Secretary at (830) 779-4541 or email [Lboyd@lavernia-tx.gov](mailto: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 **NOVEMBER 3RD AT 5:00 PM** and remained so posted continuously for at least 72 Hours preceding the scheduled time of said meeting.

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Lindsey Wheeler, City Secretary



**\$1,250,000\***  
**City of La Vernia, Texas**  
**Combination Tax and Limited Pledge Revenue**  
**Certificates of Obligation, Series 2024**  
**(Wilson County, Texas)**

**Timetable of Events**

November 2023						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	<b>9</b>	10	11
12	<b>13</b>	14	15	16	17	18
19	20	21	22	<b>23</b>	24	25
26	27	28	29	<b>30</b>		

December 2023						
S	M	T	W	T	F	S
					1	2
3	4	5	6	<b>7</b>	8	9
10	<b>11</b>	12	13	14	<b>15</b>	16
17	<b>18</b>	19	20	<b>21</b>	22	23
24	<b>25</b>	26	27	28	29	30
31						

January 2024						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	<b>11</b>	12	13
14	15	16	<b>17</b>	18	19	20
21	22	23	24	25	26	27
28	29	30	<b>31</b>			

February 2024						
S	M	T	W	T	F	S
				1	2	3
4	5	6	<b>7</b>	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

- | <u>Date</u>                       | <u>Event</u>   |
|-----------------------------------|--|
| Thursday, November 9, 2023        | • City Council approves a Financing Plan and Notice of Intent Resolution for the issuance of the Obligations.                          |
| Monday, November 13, 2023         | • Request rating from S&P Global Ratings.  |
| Thursday, November 23, 2023       | • First Publication of the Notice of Intent Resolution and City posts it on their website.   |
| Tuesday, November 30, 2023        | • Second Publication of the Notice of Intent Resolution.   |
| Tuesday, November 30, 2023        | • Send 1st Draft of Notice of Sale/Preliminary Official Statement (“NOS/POS”) to Bond Counsel; Request rating from S&P Global Ratings. |
| Thursday, December 7, 2023        | • 1st Draft of NOS/POS comments due from Bond Counsel.   |
| Monday, December 11, 2023         | • Send 2 <sup>nd</sup> Draft of the NOS/POS to all parties.  |
| Monday, December 18, 2023         | • 2 <sup>nd</sup> Draft of the NOS/POS comments due from all parties.  |
| TBD                               | • Rating Agency Conference Call.   |
| Friday, December 15, 2023         | • Rating due from S&P.   |
| Thursday, December 21, 2023       | • NOS/POS to distribution list and post on website. Order CUSIP Numbers.   |
| <b>Thursday, January 11, 2024</b> | • <b>Bids received for the Obligations; Execution of the Official Bid Forms.</b>   |
| Wednesday, January 17, 2024       | • Send transcript to Texas Attorney General.   |
| Wednesday, January 31, 2024       | • Receive Texas Attorney General Preliminary Approval Letter.  |
| Wednesday, February 7, 2024       | • Closing. Delivery of the Obligations and Receipt of Proceeds.  |

*\*Preliminary, subject to change.*



October 12, 2023

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## FY 2024 Capital Improvement Projects: Financing Options and Impact

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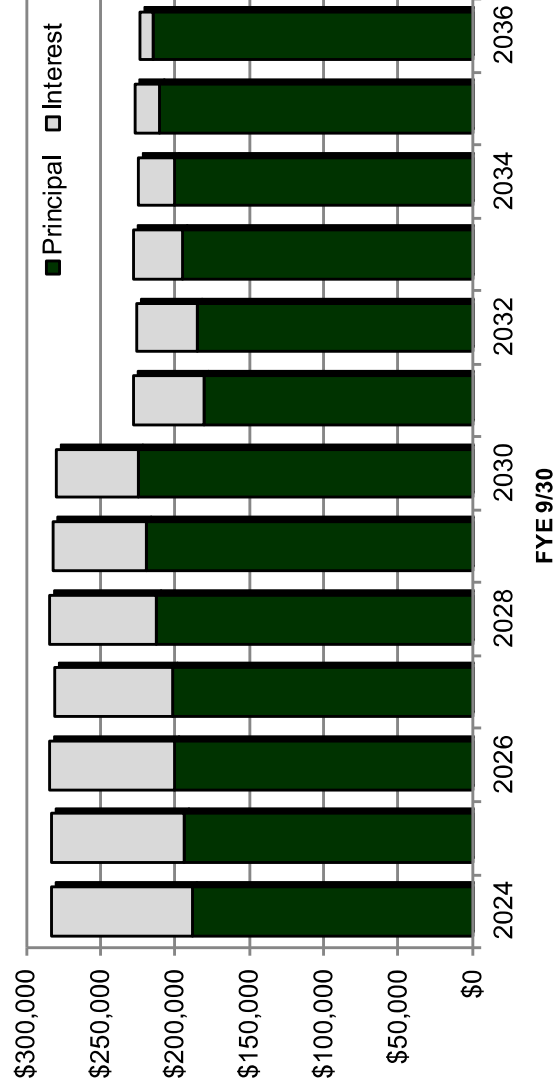
FINANCIAL ADVISORY CONTACT

Victor Quiroga  
Managing Director  
10010 San Pedro Avenue, Suite 301  
San Antonio, Texas 78216  
Cell: 210.887.1810  
victor@spfmuni.com

# Outstanding Debt Requirements

Issue	Purpose	Original Principal	Principal as of 10/5/23		Final Maturity	Callable	Callable Coupons	Self-Supporting	Net GO Outstanding
			Total	Callable					
Comb Tax & Ltd Pledge Rev C/O, Series 2016	New Money	\$ 3,025,000	\$ 2,265,000	\$ 1,980,000	9/1/36	9/1/25	3.00% - 4.00%	100% Water/Sewer	\$0
GO Ref Bds, Series 2017	Refunding	564,000	361,000	361,000	3/1/30	Any Date	2.10% - 2.84%	100% Water/Sewer	\$361,000
			\$ 2,626,000	\$ 2,341,000					\$ 361,000

## Annual Debt Service Payments





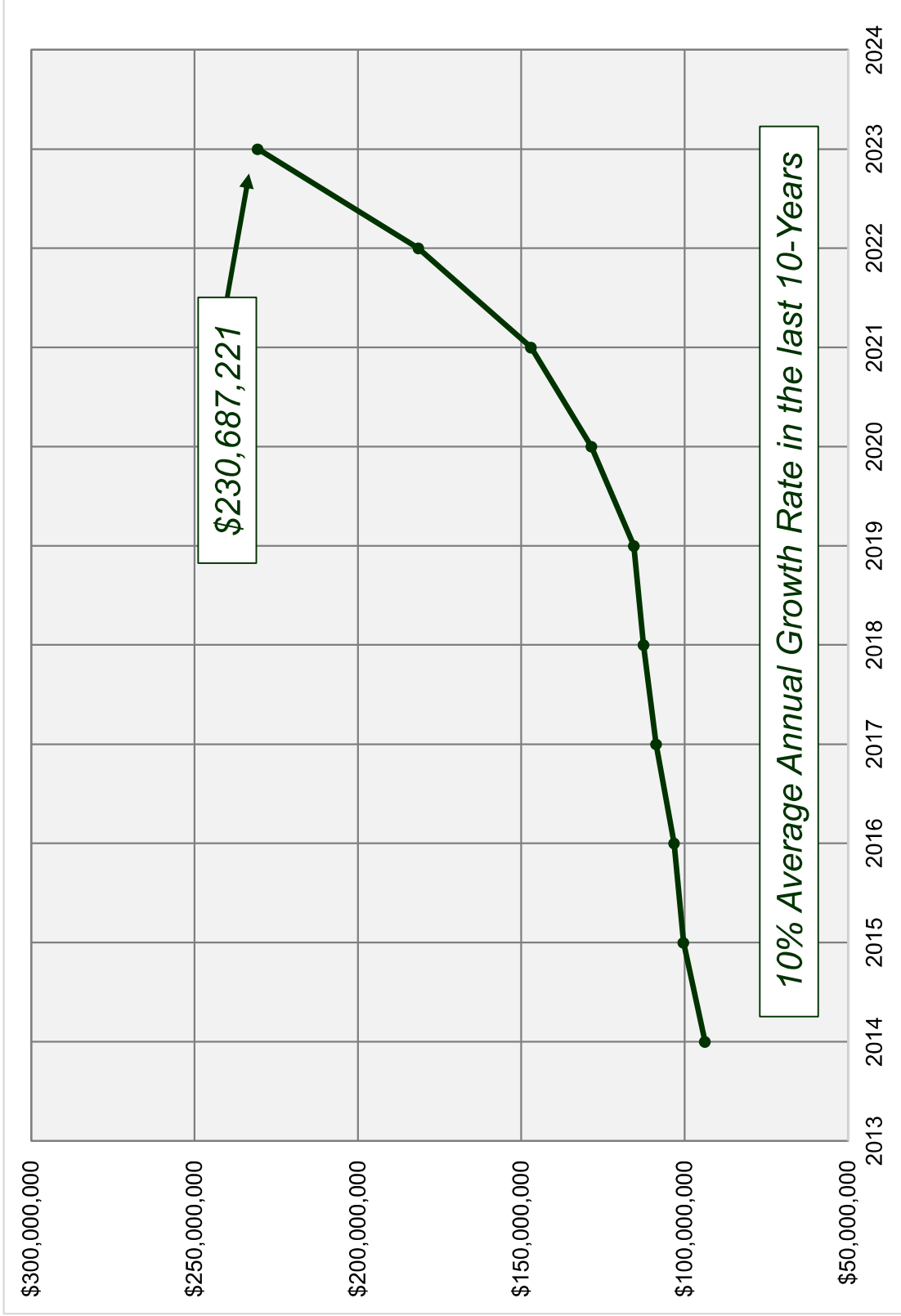
# Highly Rated City: "AA" by Standard & Poor's Rating Agency

Standard & Poor's Ratings Scale
AAA
AA+
<b>AA</b>
AA-
A+
A
A-
BBB+
BBB+
BBB-

S&P	Moody's	Fitch	Definition
AAA	Aaa	AAA	Highest rating assigned.
AA	Aa	AA	Very strong security. Only slightly below best rating.
A	A	A	Average security, but more subject to adverse financial and economic
BBB	Baa	BBB	Adequate capacity to secure debt. Adverse developments may affect ability to meet debt service requirements.

Note: Moody's uses the designation "1," "2" or "3" to indicate greater strength within the "Baa," "A" and "Aa" categories "1" being the strongest. Standard & Poor's and Fitch use "+" and "-" to indicate relative strength or weakness in the "BBB," "A" and "AA" categories.

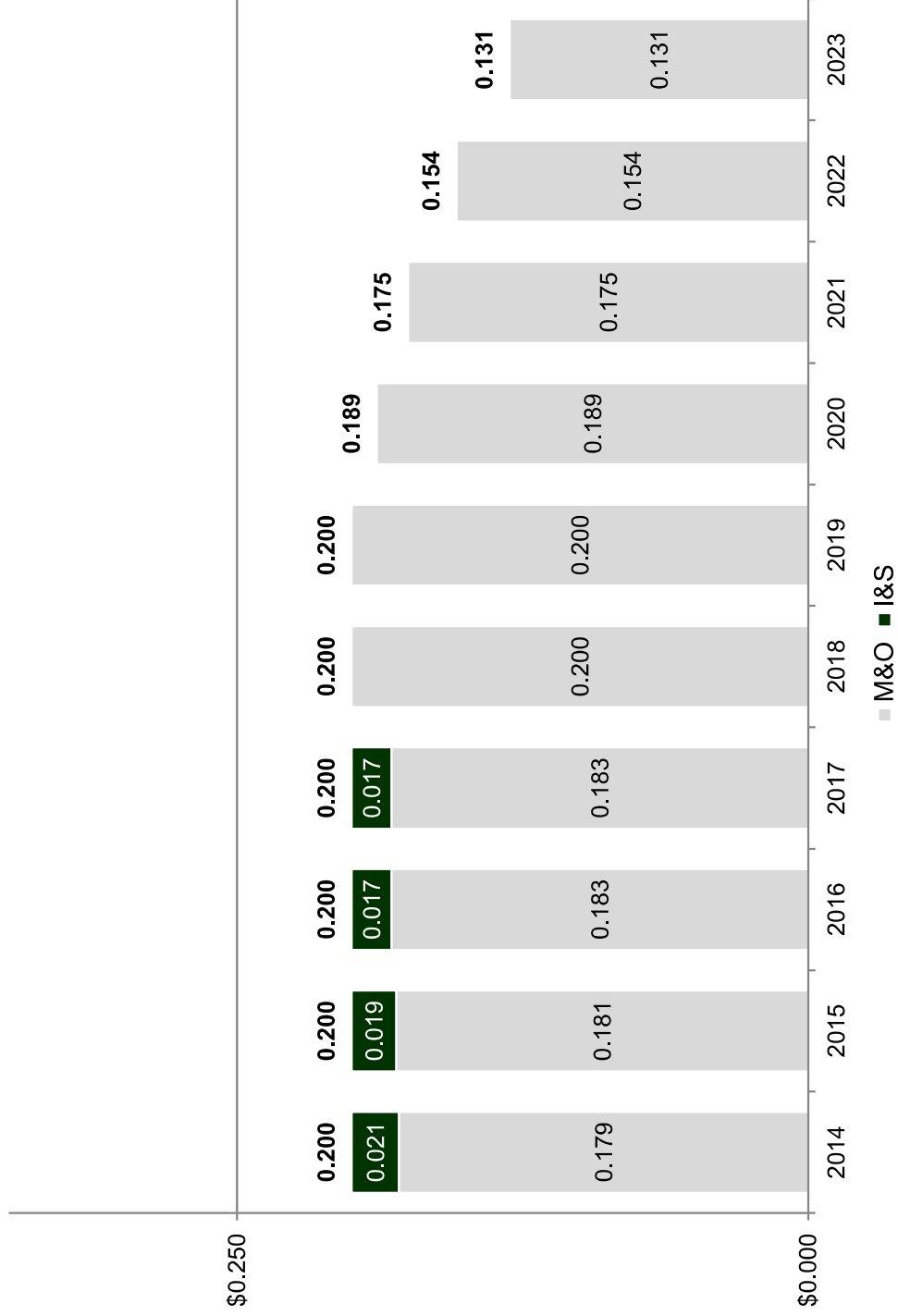
# Taxable Valuation Trend



# Top Ten Taxpayers

Taxpayer	Type of Property	2023 TAV	% of Total TAV
HEB Grocery Company LP	Grocery Store	\$ 10,073,530	4.37%
Karma Capital Construction LLC	Developer	4,331,120	1.88%
Columbia Realty LTD	Strip Mall/Plaza	2,782,220	1.21%
MJS Development LLC	Developer	2,174,255	0.94%
Buffalo Place LLC	Strip Mall/Plaza	2,150,670	0.93%
McDonald's Real Estate Co	Restaurant	2,106,410	0.91%
Shaw Co Home Builders Inc	Developer	1,903,250	0.83%
Koepp Chevrolet Inc	Car Dealership	1,844,210	0.80%
HLJTM Properties LLC	Real Estate	1,691,070	0.73%
Salinas Monica A	Retail	1,682,630	0.73%
<b>Top 10 Total:</b>		<b>\$ 30,739,365</b>	<b>13.33%</b>

# Tax Rate History



# Debt Service and I&S Tax Rate Impact Based on Various Borrowing Amounts

## 10-Year Repayment Term:

Borrowing Amount:	Annual Payment:	I&S Tax Rate:	Impact to \$100,000 Taxable Home Value:		
			Annual	Monthly	Daily
\$1,000,000	\$126,379	\$0.0565	\$56.48	\$4.71	\$0.16
1,250,000	157,974	0.0706	70.60	5.88	0.20
1,500,000	189,568	0.0847	84.72	7.06	0.24
1,750,000	221,163	0.0988	98.84	8.24	0.27

## 15-Year Repayment Term:

Borrowing Amount:	Annual Payment:	I&S Tax Rate:	Impact to \$100,000 Taxable Home Value:		
			Annual	Monthly	Daily
\$1,000,000	\$94,721	\$0.0423	\$42.33	\$3.53	\$0.12
1,250,000	118,401	0.0529	52.91	4.41	0.15
1,500,000	142,082	0.0635	63.50	5.29	0.18
1,750,000	165,762	0.0741	74.08	6.17	0.21

**Assumptions:**

- 10-year repayment term with a conservative interest rate of 4.5% for planning purposes.
- 15-year repayment term with a conservative interest rate of 4.75% for planning purposes.
- Tax Year 2023 Net Taxable Values of \$230,687,221 with a 97% tax collection rate.

## Financing Tools Available to Texas Cities

Type:	General Obligation Bonds	Certificates of Obligation <sup>(1)</sup>	Tax Notes	Revenue Bonds
Purpose:	General Purpose	General Purpose	General Purpose	Enterprise System
Voter Authorization:	Yes	No <sup>(2)</sup>	No	No
Amortization Requirements	Not to exceed 40 years	Not to exceed 40 years	Initial term limited to 7 years from date of issuance	Revenues
Source of Payment:	I&S Taxes <sup>(3)</sup>	I&S Taxes <sup>(3)</sup> and/or revenues	I&S Taxes <sup>(3)</sup>	Revenues
Interest Rate:	Strongest Credit; Lowest Interest Rates	Similar to General Obligation Bonds	Similar to General Obligation Bonds	Higher than General Obligation Bonds

<sup>(1)</sup> If a bond election failed, Certificates may not be issued for that purpose within 3 years of the election.

<sup>(2)</sup> Publication of notice required; petition during notice period could require an election.

<sup>(3)</sup> I&S Tax Rate is not subject to rollback.

## General Obligation Bonds: Election Required

- Texas allows for bond elections to be held on “Uniform Election Dates” in May and November of each year.

Event	May 4, 2024
Window to Call for a Bond Election	February 4 - 16, 2024
Last day to register to vote	April 4, 2024
First day for Early Voting	April 17, 2024
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**❖ Based on a successful election, the City may receive bond proceeds in July or August of 2024**

**Certificates of Obligation: No bond election, but a notice process is required**

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- Step 1 – Council approves a project list to be financed with Certificates of Obligation; and, separately, adopts a Notice of Intent (“NOI”) Resolution
- Step 2 – First publication of the NOI Resolution appears in the La Vernia News (45-day clock begins) and it is also posted on the City’s website
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- Step 4 – Sale of the Certificates of Obligation (lock-in rate) utilizing a Negotiated Sale Method; Council approves sale
- Step 5 – Proceeds delivered to City’s project funds

**❖ From start to finish, the CO issuance process is 75-90 days**



## Summary

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- The City does not currently utilize an I&S tax rate for repayment of debt
- The City is a highly rated entity at “AA” by Standard & Poor’s
- Drainage and quality of life projects are eligible to be financed with either General Obligation (“GO”) Bonds or Certificates of Obligation (“CO”)
- GO Bonds require an election (if the election fails, the City may NOT use CO’s for the same project for a 3-year period)
- CO’s do not require an election but there is a required “notice” process
- GO Bonds and CO’s receive the same interest rate



October 12, 2023

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## **FY 2024 Capital Improvement Projects: Financing Options and Impact**

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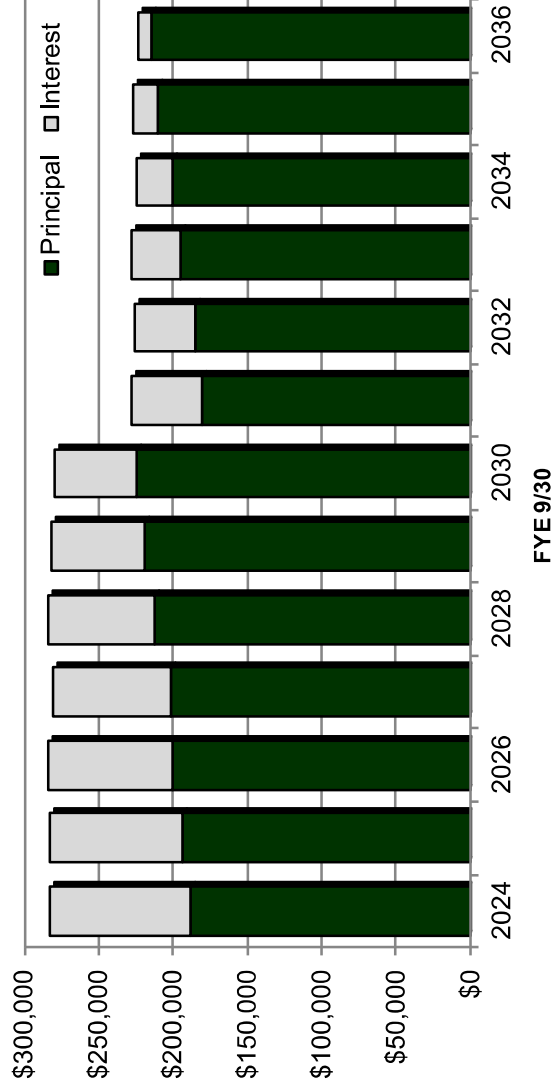
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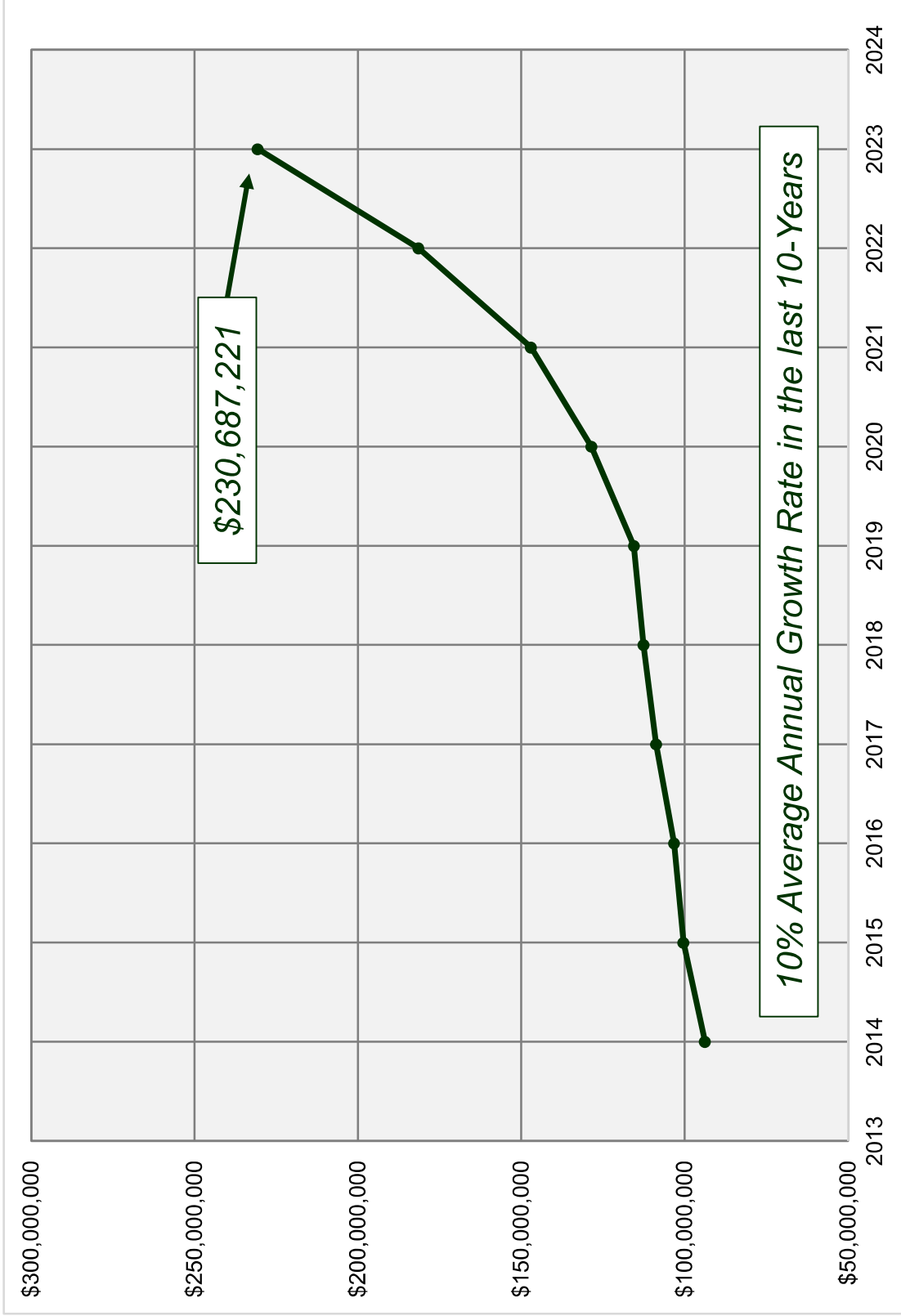
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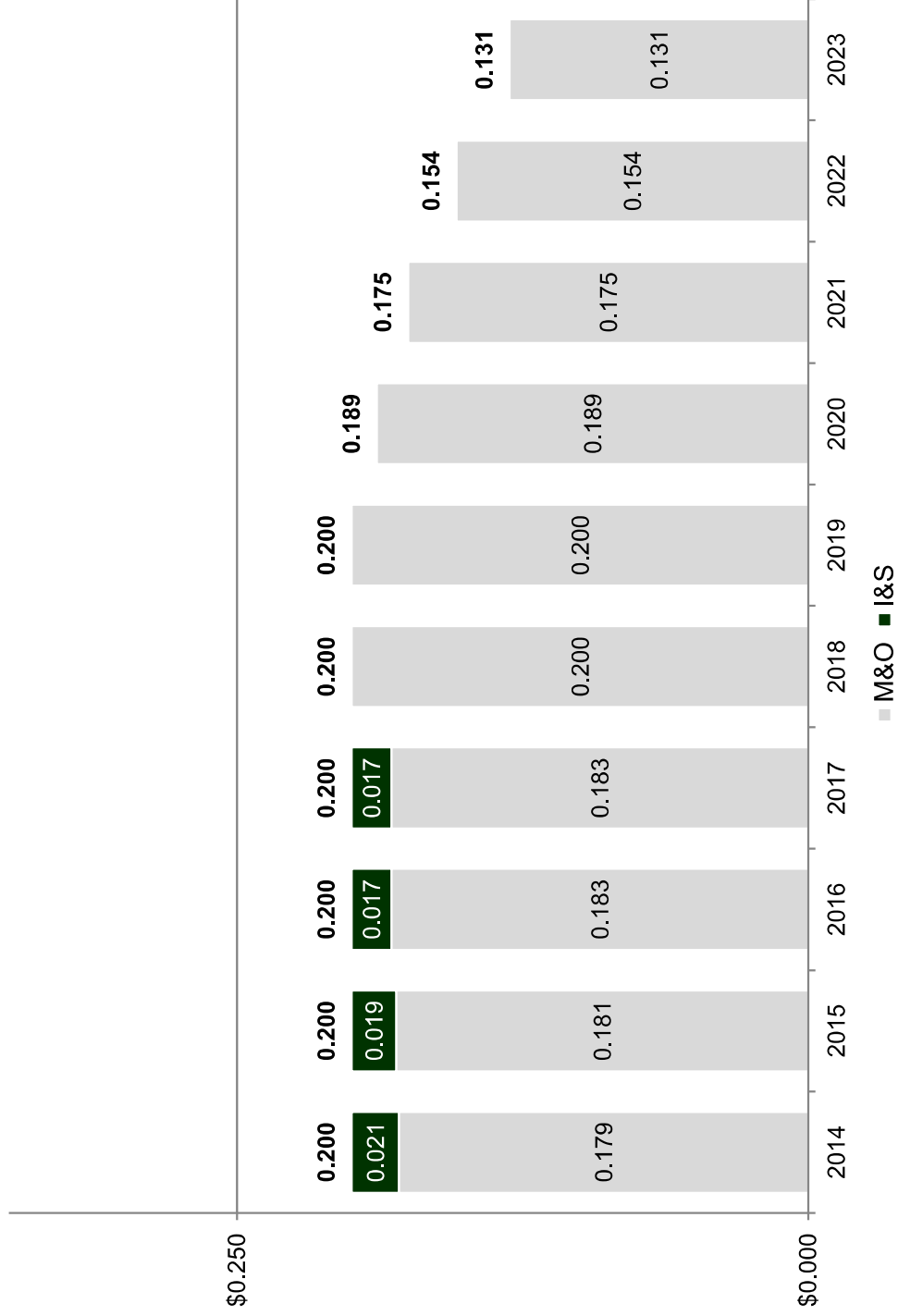
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# Southwest Engineers

Civil | Environmental | Land Development

## OVERALL PRELIMINARY DRAINAGE REPORT

FOR

CITY OF LA VERNIA

Prepared For:

LA VERNIA MUNICIPAL DEVELOPMENT DISTRICT  
207 W. CHIHUAHUA, SUITE 102  
LA VERNIA, TEXAS 78121

Prepared By:

### **SOUTHWEST ENGINEERS, INC**

307 ST. LAWRENCE ST.

GONZALES, TX 78629

P: 830.672.7546 | F: 830.672.2034

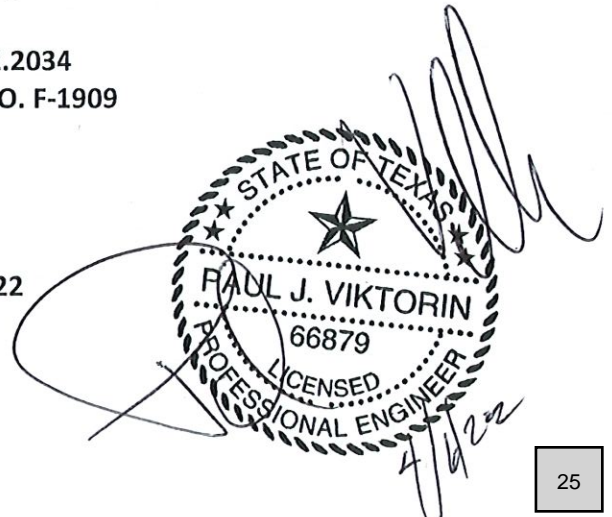
205 CIMARRON PARK LOOP

BUDA, TX 78610

P: 512.312.4336 | F: 830.672.2034

[www.swengineers.com](http://www.swengineers.com) | TBPE NO. F-1909

APRIL 2022 – GG/PV  
SWE Project #: 0200-032-22



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**EXHIBITS**

- A. OVERALL DRAINAGE AREA MAP
- B. ISSUE #1 (H-E-B) - MAP
- C. ISSUE #1 (H-E-B) - COST ESTIMATE
- D. ISSUE #2 (CITY PARK/LA VERNIA ISD) - MAP
- E. ISSUE #2 (CITY PARK/LA VERNIA ISD) - COST ESTIMATE
- F. ISSUE #3 (HWY 87 CROSSING NEAR W. CHIHUAHUA) - MAP
- G. ISSUE #3 (HWY 87 CROSSING NEAR W. CHIHUAHUA) - COST ESTIMATE
- H. ISSUE #5 (HWY 87 CROSSINGS & CR 342 CROSSING) - MAP
- I. ISSUE #5 (HWY 87 CROSSINGS & CR 342 CROSSING) - COST ESTIMATE

## Overall Preliminary Drainage Report for the City of La Vernia

### **INTRODUCTION**

Southwest Engineers, Inc. (SWE) has prepared this Overall Preliminary Drainage Report for the City of La Vernia in order to perform preliminary analyses of existing drainage ways, low-lying areas, and to identify problem areas that are either flooding or prone to flooding. By utilizing data provided by the City, data available through GIS & FEMA, and performing on-site investigations, SWE has identified five (5) problem areas that warrant attention. For each of the problem areas identified, SWE has provided recommendations and probable costs in order to alleviate current drainage issues.

In general, SWE recommends that Wilson County and SS WSC work with or notify La Vernia on future development in the 3 or 4 major watersheds that impact La Vernia to the south. Also, SWE recommends that the city require all development within its ETJ provide detention, especially if stormwater from the property flows into the city limits.

#### **1. H-E-B**

- a. Description: Within the frontage of the HEB located on Highway 87, there are 3 – 6' x 3' box culverts crossing Highway 87. During on-site investigations, it was observed that dirt and other debris has collected in these culverts, preventing them from flowing at full capacity. Flows from these culverts are then routed towards a concrete-lined channel which conveys flows around the store and parking lot, without providing detention. Downstream from the concrete-lined channel, stormwater continues through a section with brush and heavy vegetation before converging with another channel and passing through a culvert at FM 1346. Ponding was observed in the concrete-lined channel due to the brush obstructing the flow of stormwater downstream. It is our understanding that there are plans to expand the H-E-B building footprint and parking lot. There is existing 100-yr FEMA Floodplain both upstream and downstream of this location.
- b. Recommendation(s): Cleaning out the 3 – 6' x 3' culverts crossing Highway 87 will allow additional flow through the culvert and assist in reducing existing flooding conditions upstream. Brush should be cleared out downstream of the concrete-lined channel. Detention should be required for any improvements associated with the H-E-B expansion to prevent future flooding issues associated with additional impervious cover. Conversations should be had with City staff regarding the planned development to the south of Highway 87 (upstream from this location), which should be required to provide detention to prevent additional flooding issues. Based on preliminary analysis, it appears that the 3 – 6' x 3' box culverts may

be undersized. It is recommended that the City start a dialogue with the Texas Department of Transportation (TxDOT) about upgrading the culverts at this location.

While these improvements may assist in reducing existing flooding conditions, it is difficult to make recommendations when there is existing 100-yr FEMA Floodplain downstream. Please see the map in **Exhibit B** for reference.

- c. Probable Cost: \$16,400 (See **Exhibit C**)

## 2. CITY PARK/LA VERNIA ISD

- a. Description: There is a  $\pm 300$ -acre drainage area that is conveyed adjacent to La Vernia Primary & Intermediate Schools and through City Park. There are some existing drainage structures through this area, including 2 – 8' x 4' box culverts crossing FM 1346 S, 5 – 24" culverts crossing a private roadway by the school, and a low water crossing over San Antonio Rd. There is an existing water quality/detention pond on the La Vernia ISD property that has a 30" culvert outlet, but it has been observed that only a small amount of stormwater is detained by the pond.
- b. Recommendation(s): It is recommended that a 6'-wide concrete-bottom channel/sidewalk with earthen sides (graded 5:1) be constructed through this area to better define the flow path. It is also recommended that improvements be made to the outlet structure of the existing detention & water quality pond. The improved outlet structure should be able to control the outflow for lower intensity storms. Finally, the low water crossing at San Antonio Rd. should have gauge boards facing either direction if there are currently none. These recommendations complement the perforated piping and catch basin system that is being proposed to the east of the baseball fields. Please see the map in **Exhibit D** for reference.
- c. Probable Cost: \$430,900 (See **Exhibit E**)

## 3. HIGHWAY 87 CROSSING NEAR W. CHIHUAHUA

- a. Description: Downstream of Issue #2 (after the low water crossing at San Antonio Rd.), stormwater continues generally northeast through multiple properties, before crossing Highway 87 near W. Chihuahua. There are 3 – 6' x 3' box culverts crossing Highway 87 at this location. The length of the channel between the City Park and the Highway 87 crossing is  $\pm 737$  LF. During on-site investigations, there was brush and heavy vegetation observed through this channel which prevents the channel from flowing at full capacity. There was also scour/undermining observed at the upstream headwall at the Highway 87 crossing.



Downstream of the Highway 87 crossing, stormwater continues generally northeast through private property. However, there is a lack of a defined channel on the first property downstream of the crossing. A defined channel is apparent on the next property downstream. Most of the area that is related to this issue lies within the 100-yr FEMA Floodplain.

- b. Recommendation(s): It is recommended that the City acquire 25'-wide drainage easements between the low water crossing at San Antonio Rd. and the crossing at Highway 87 (about 737 LF), as well as around the property downstream of the Highway 87 crossing. These easements can be utilized to construct defined channels and clear brush that is obstructing the flow of stormwater. If a channel is constructed downstream of the Highway 87 crossing, fill will likely be required to fill in the existing channel (if any). It is also recommended that the scour/undermining at the headwall be fixed.

While these improvements may assist in reducing existing flooding conditions, it is difficult to make recommendations when there is existing 100-yr FEMA Floodplain downstream. Please refer to **Exhibit F**.

- c. Probable Cost: \$147,700(See **Exhibit G**)

#### **4. WOODBRIDGE FARMS UNIT #2 DEVELOPMENT**

- a. Description: Multiple sources have brought up flooding concerns within the Country Gardens subdivision. Directly upstream from flooding concerns is the Woodbridge Farms Unit #2 subdivision, which is in the process of being fully developed. Owners of neighboring properties have made complaints about more water coming onto their property since development began. During on-site investigations, observations included significant sediment within channels and pond areas, as well as erosion around headwall structures.
- b. Recommendation(s): Recommendations include for the developer to remove sediment from channels and culvert structures, and to repair erosion issues. A major sediment issue is caused by homebuilders not installing adequate erosion and sedimentation controls. This issue can be improved by creating or increasing requirements for erosion and sedimentation controls installed during the homebuilding phase. Complaints from neighbors about increased stormwater on their property could be related to the detention pond outlet structure not adequately detaining flows. Further study would need to be completed to determine the cause of any particular drainage issues. It is recommended that the developer of the Woodbridge Farms subdivision address these concerns.
- c. Probable Cost: It is recommended that costs be borne by the developer.

## 5. HIGHWAY 87 CROSSINGS & CR 342 CROSSING

- a. Description: There are two culverts crossing Highway 87 on either side of Wiseman Lane. On the north side, there are 2 – 6' x 3' culverts; on the south side, there are 3 – 6' x 3' culverts. Upstream of the culverts on the northern side, there is a low-lying area that lacks a defined channel. Downstream of the culverts, stormwater is then conveyed towards the east onto private property (between Highway 87 and CR 342). Stormwater from the culverts on the northern side is conveyed east through what appears to be the resemblance of a channel. However, stormwater from the southern side flows east across a field with no defined channel. Flows from both sides eventually converge and are conveyed under CR 342 through a 12' x 5' culvert which is outside of the city limits. Most of the area concerned with this issue lies within the 100-yr FEMA Floodplain.
- b. Recommendation(s): It is recommended that the City acquire drainage easements in the area upstream of the Highway 87 crossings, as well as the area between the crossings at Highway 87 and the crossing at CR 342. Easement acquisition would allow for the construction of a defined channel through these sections. For the area upstream of the Highway 87 crossing, it is recommended that a 6'-wide concrete-bottom channel/sidewalk with earthen sides (graded 5:1) be constructed through this area to better define the flow path. Based on preliminary analyses using Atlas 14 rainfall data, it appears the culverts at both Highway 87 crossings may be undersized. It is recommended that the City start a dialogue with the Texas Department of Transportation (TxDOT) about upgrading the culverts at both of these locations.

In addition, the culvert at CR 342 is also undersized. Calculations show that peak flows at this location are equal to  $\pm 1,600$  cfs for the 2-yr storm event, and  $\pm 9,400$  cfs for the 100-yr storm event. A significant structure or bridge would be required to have the capacity to handle these flows. Further analysis and discussions with the county would be required before constructing improvements at this location; therefore, no cost estimate has been provided regarding this improvement.

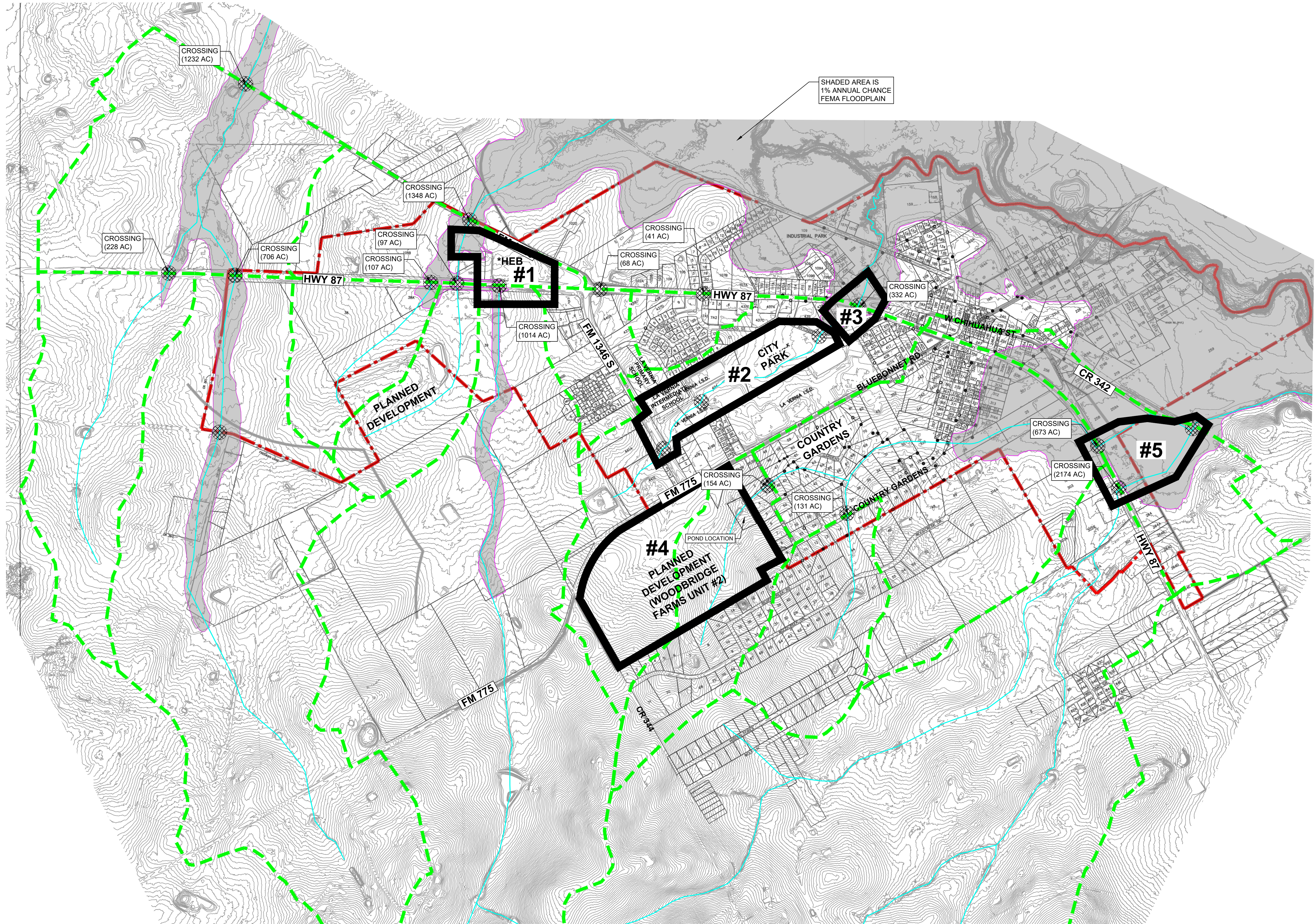
While these improvements may assist in reducing existing flooding conditions, it is difficult to make recommendations when there is existing 100-yr FEMA Floodplain downstream. Please refer to **Exhibit H**.

- c. Probable Cost: \$513,400 (See **Exhibit I**)

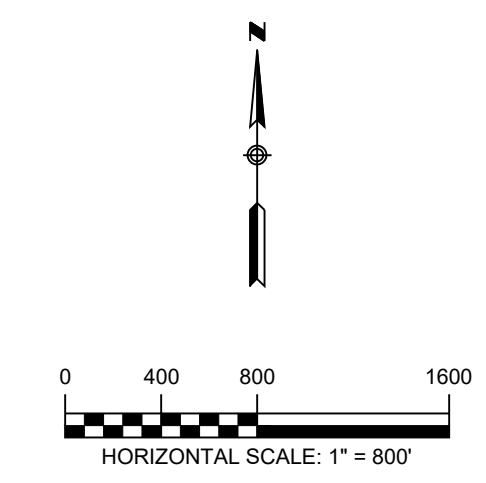
**EXHIBIT A**

**OVERALL DRAINAGE AREA MAP**





SHADED AREA IS 1% ANNUAL CHANCE FEMA FLOODPLAIN



LEGEND	
	CITY LIMITS
	ISSUE AREA
	PROPERTY BOUNDARIES
	EXISTING 2-FT CONTOURS
	CHANNEL CENTERLINE
	DRAINAGE AREA BOUNDARY
	MAJOR CULVERT/CROSSING
	100-YR FEMA FLOODPLAIN

DRAINAGE AREAS CONTINUE CUT-OFF FOR MAP READABILITY

**Southwest Engineers**  
 TBPE NO. F-1909  
 www.swengineers.com

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

# EXHIBIT A - OVERALL DRAINAGE AREA MAP

## CITY OF LA VERNIA

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 DRAWN BY: GG  
 PROJECT NO.: 0200-032-22

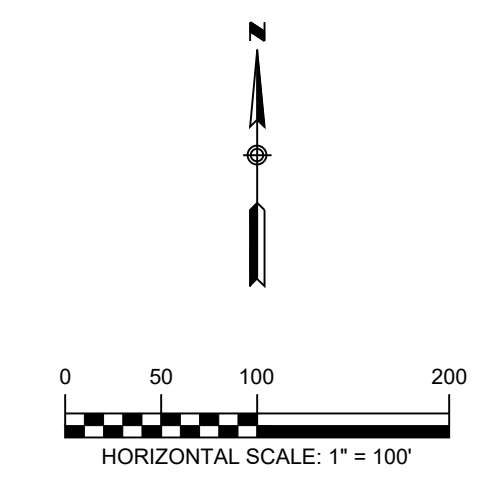
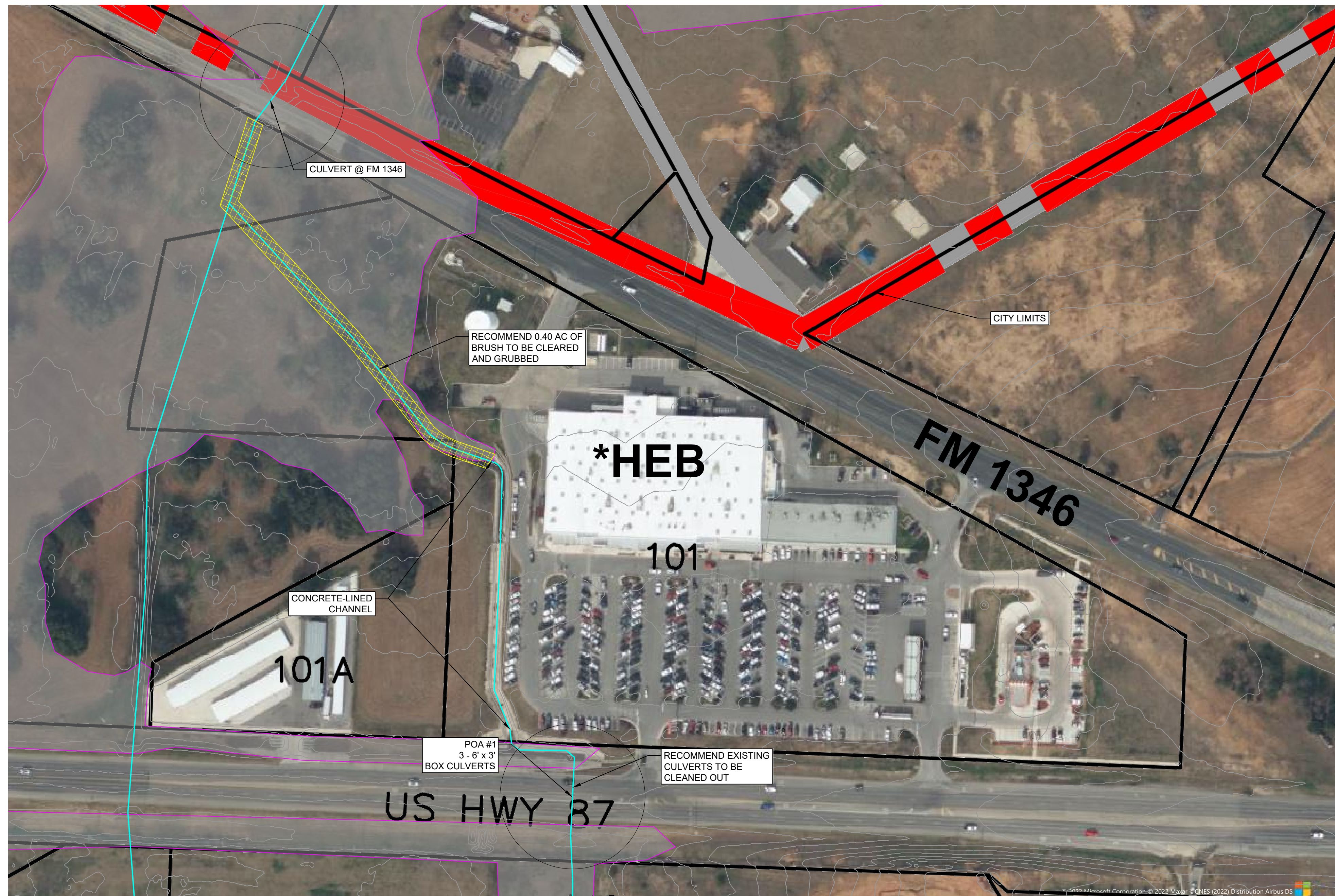
C:\CompanyData\GIS\Projects\0200-032-22 - Master Drainage Study\0305\City of La Vernia\Exhibit A - City Mapping - Layout1 - Exhibit.glt - Tue, Apr 05, 2022, 4:17pm, By: C1038, Owner: C1038



**EXHIBIT B**

**ISSUE #1 (H-E-B) - MAP**





LEGEND	
	CITY LIMITS
	PROPERTY BOUNDARIES
	EXISTING 2-FT CONTOURS
	CHANNEL CENTERLINE
	CLEARING & GRUBBING AREA
	100-YR FEMA FLOODPLAIN
	POA POINT OF ANALYSIS

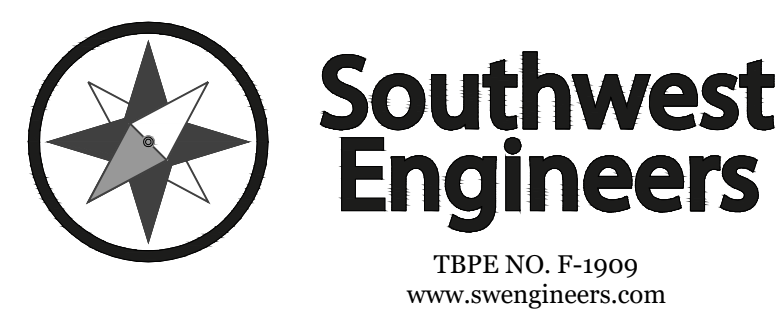
TIME OF CONCENTRATION

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			CHANNEL FLOW (GUTTER)			Total Tc (MIN.)		
	SLOPE (FT/FT)	L FT	n	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L		Tc Shallow (MIN.)	
POA #1 - HWY 87 XING	0.015	100	0.24	14.2	0.038	869	N	4.6	6.00	15903	44.18	63.0

HYDROLOGIC SUMMARY TABLE (SCS METHOD)

Area Name	POA #1 HWY 87 CROSSING
Drainage Area (ac)	1014
CN #	68
% Imperv.	20
Tc (hrs)	1.050
Lag Time (hrs)	0.63
2 year Discharge (cfs)	615
10 year Discharge (cfs)	1541
25 year Discharge (cfs)	2258
100 year Discharge (cfs)	3540

\* Part of the SCS Design Calculations shown are derived from existing conditions assumptions using available graphical computer programs (Google Earth, Google Maps, TNRS GIS Information) for what would be considered current developed conditions.  
 \*\* All drainage calculations utilize Atlas 14 rainfall data



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# EXHIBIT B - ISSUE #1 (H-E-B) - MAP

CITY OF LA VERNIA

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 DRAWN BY: GG  
 PROJECT NO.: 0200-032-22

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## EXHIBIT C

### ISSUE #1 (H-E-B) – COST ESTIMATE



Civil | Environmental | Land Development
HEADQUARTERS: 307 St. Lawrence St. Gonzales, TX 78629 Phone: 830.672.7546
CENTRAL TEXAS OFFICE: 205 Cimarron Park Loop, Ste B Buda, TX 78610 Phone: 512.312.4336

City of La Vernia - Drainage Improvement Recommendations
La Vernia, TX
Issue #1 - H-E-B
Preliminary Cost Estimate
April 2022

Table with 6 columns: Item #, Item, Quantity, Unit, Unit Cost, Cost. Rows include: 1 Clearing and Grubbing (0.40 ac, \$6,000, \$2,400), 2 Clean Existing Culvert (3 ea, \$2,000, \$6,000), 3 Revegetation (1,954 sy, \$3, \$5,862). Summary: OPINION OF PROBABLE CONSTRUCTION COST \$14,262, CONTINGENCY (15%) \$2,138, TOTAL OPINION OF PROBABLE COST \$16,400.

This opinion of probable construction cost represent best judgment as a design professional familiar with the Construction Industry and based on opinions and evaluations of current market rates for labor, materials and equipment. It is based on the understanding of the project at the time of its creation only. There is no warranty that any construction bid will not vary from this opinion.

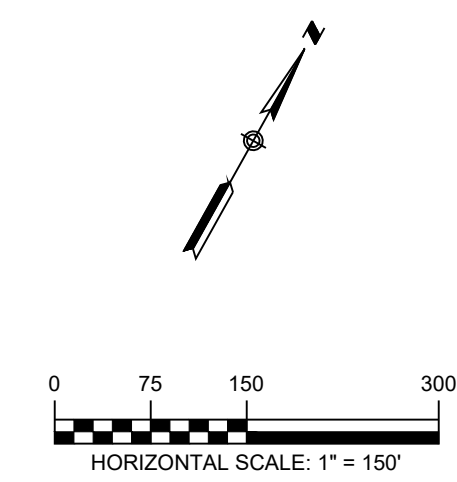
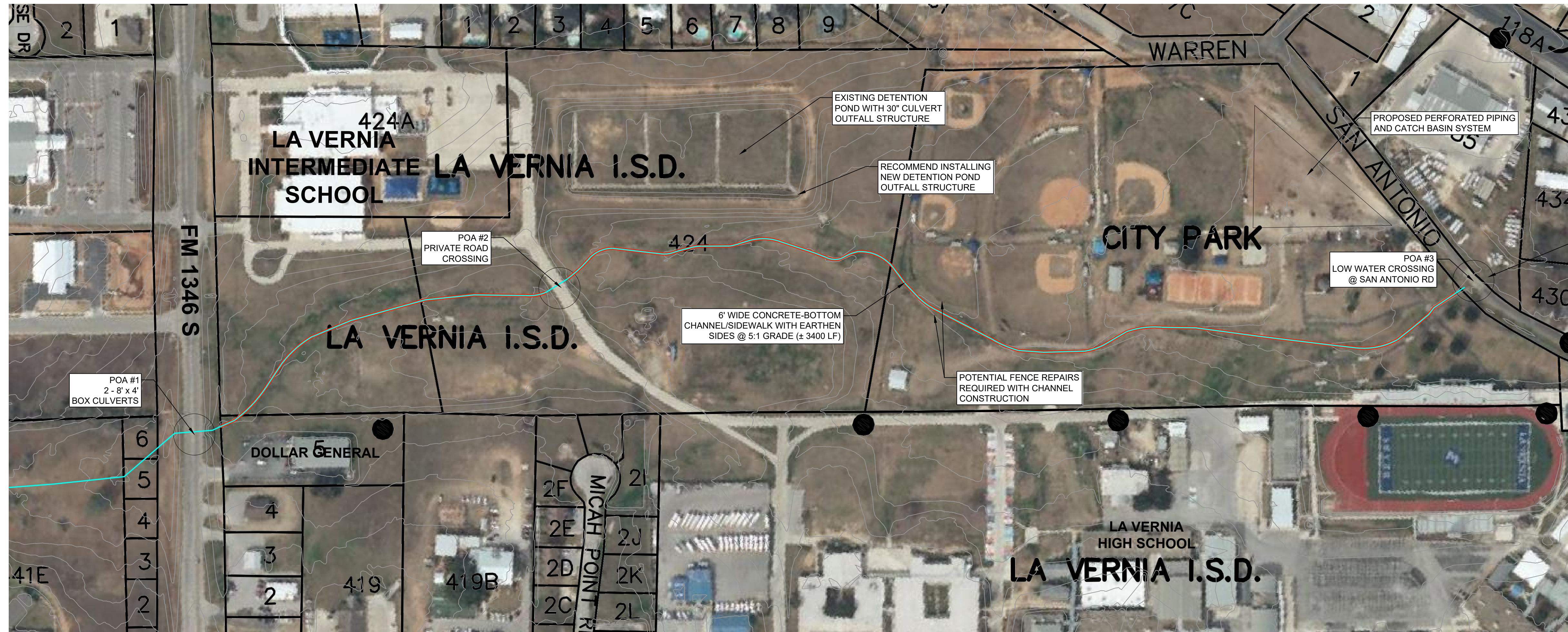
Professional Engineer seal for Paul J. Viktorin, State of Texas, License No. 66879, dated 4/6/22.



## **EXHIBIT D**

### **ISSUE #2 (CITY PARK/LA VERNIA ISD) - MAP**





SEE ISSUE #3 FOR CONTINUATION

**LEGEND**

- CITY LIMITS
- PROPERTY BOUNDARIES
- EXISTING 2-FT CONTOURS
- CHANNEL CENTERLINE
- PROPOSED CHANNEL BOTTOM/SIDEWALK
- POA POINT OF ANALYSIS

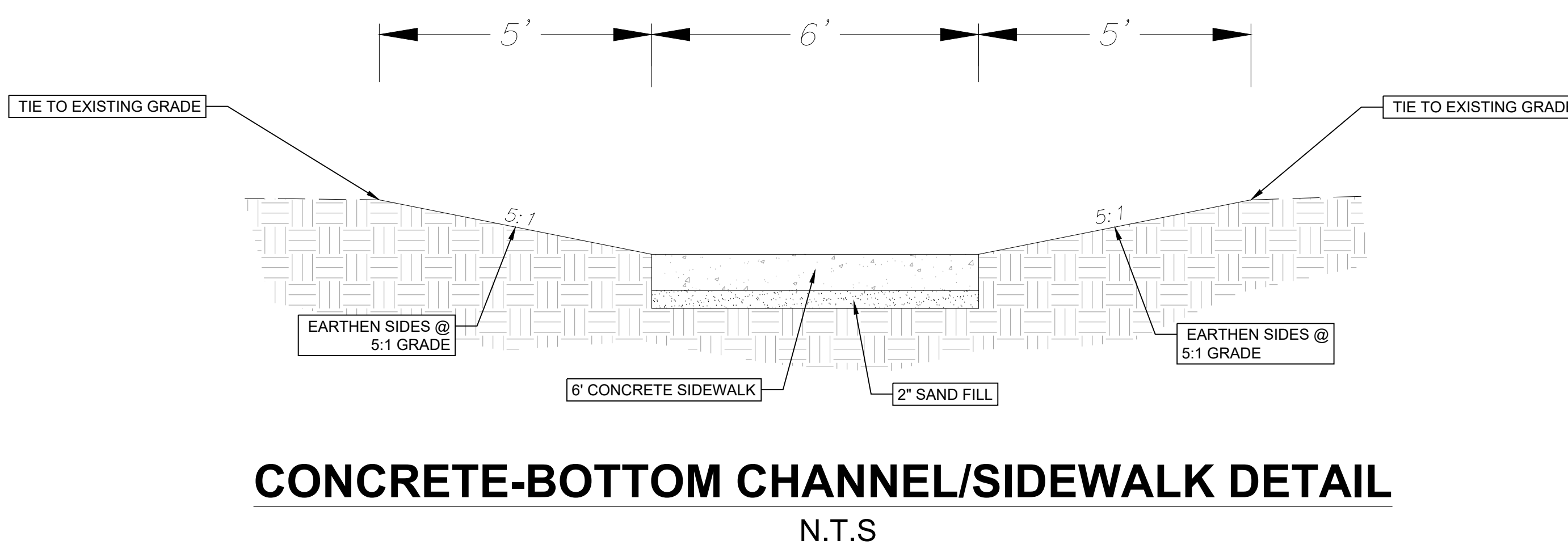
**TIME OF CONCENTRATION**

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)				Total Tc (MIN.)
	SLOPE (FT/FT)	L (FT)	n	SLOPE (FT/FT)	L (FT)	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L	Tc Shallow (MIN.)		
POA #1 - FM 1346 XING	0.025	100	0.24	0.025	1453	N	9.5	5.00	1920	6.40	27.5	
POA #2 - PRIVATE RD XING	0.025	100	0.24	0.025	1453	N	9.5	5.00	2922	9.74	30.8	
POA #3 - LOW WATER XING	0.025	100	0.24	0.025	1453	N	9.5	5.00	5318	17.73	38.8	

**HYDROLOGIC SUMMARY TABLE (SCS METHOD)**

Area Name	POA #1 FM 1346 CROSSING	POA #2 PRIVATE RD CROSSING	POA #3 LOW WATER CROSSING (@ SAN ANTONIO RD)
Drainage Area (ac)	154	176	287
CN #	70	70	70
% Imperv.	30	30	30
Tc (hrs)	0.458	0.514	0.647
Lag Time (hrs)	0.27	0.31	0.39
2 year Discharge (cfs)	174	188	266
10 year Discharge (cfs)	408	436	624
25 year Discharge (cfs)	582	624	897
100 year Discharge (cfs)	883	953	1375

\* Part of the SCS Design Calculations shown are derived from existing conditions assumptions using available graphical computer programs (Google Earth, Google Maps, TNRS GIS Information) for what would be considered current developed conditions.  
 \*\* All drainage calculations utilize Atlas 14 rainfall data.



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**EXHIBIT D - ISSUE #2 (CITY PARK/LA VERNIA ISD) MAP**

**CITY OF LA VERNIA**

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 DRAWN BY: GG  
 PROJECT NO.: 0200-032-22

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## **EXHIBIT E**

### **ISSUE #2 (CITY PARK/LA VERNIA ISD) – COST ESTIMATE**



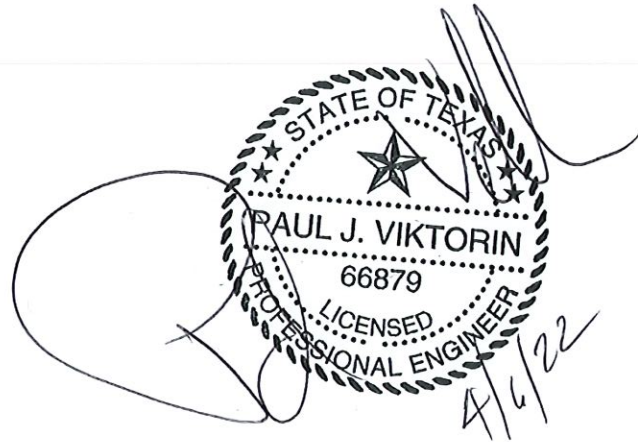
Civil | Environmental | Land Development
HEADQUARTERS: 307 St. Lawrence St. Gonzales, TX 78629 Phone: 830.672.7546
CENTRAL TEXAS OFFICE: 205 Cimarron Park Loop, Ste B Buda, TX 78610 Phone: 512.312.4336

City of La Vernia - Drainage Improvement Recommendations
La Vernia, TX
Issue #2 - City Park/La Vernia ISD
Preliminary Cost Estimate
April 2022

Table with 6 columns: Item #, Item, Quantity, Unit, Unit Cost, Cost. Rows include Clearing and Grubbing, Earthwork for Channel, 6' Concrete Channel Bottom/Sidewalk, Embankment/Fill, Upgrade Existing Pond Outfall Structure, Fence Repair, and Revegetation.

OPINION OF PROBABLE CONSTRUCTION COST \$ 344,727
ENGINEERING & CONTINGENCY (25%) \$ 86,173
TOTAL OPINION OF PROBABLE COST \$ 430,900

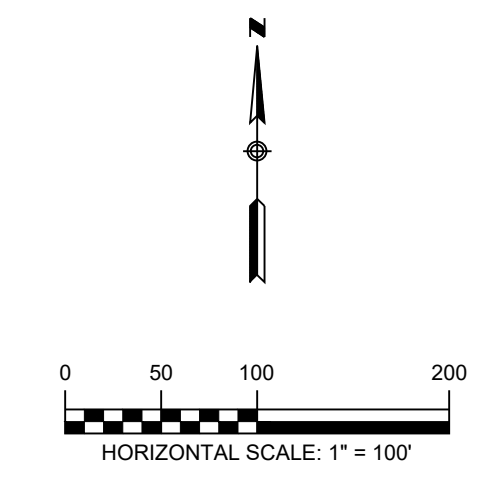
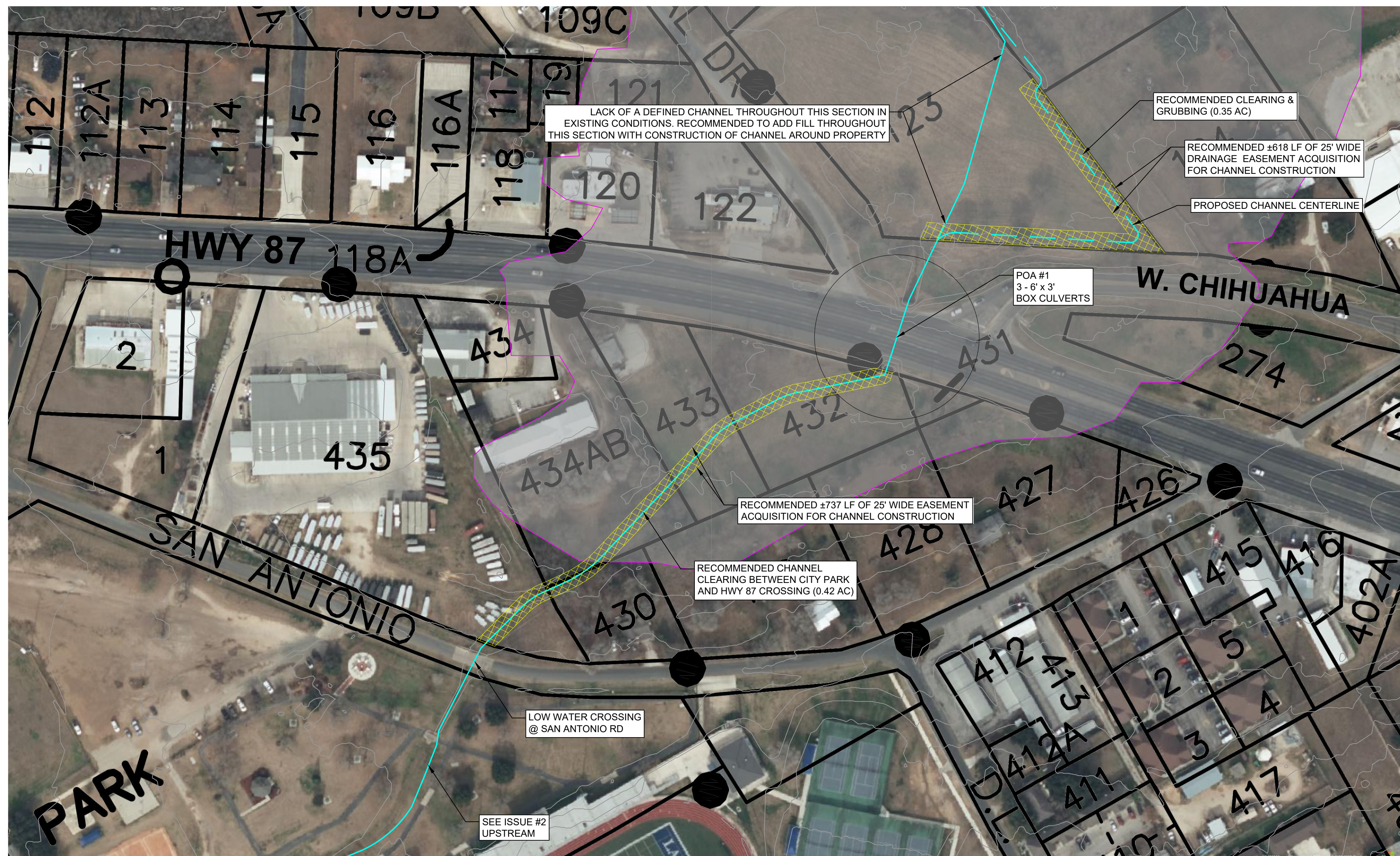
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## EXHIBIT F

### ISSUE #3 (HIGHWAY 87 CROSSING NEAR W. CHIHUAHUA) - MAP





LEGEND	
	CITY LIMITS
	PROPERTY BOUNDARIES
	EXISTING 2-FT CONTOURS
	EXISTING CHANNEL CENTERLINE
	PROPOSED CHANNEL CENTERLINE
	EASEMENT / CLEARING & GRUBBING AREA
	100-YR FEMA FLOODPLAIN
	POA POINT OF ANALYSIS

TIME OF CONCENTRATION

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)				
	SLOPE (FT/FT)	L (FT)	n	Tc sheet (MIN.)	SLOPE (FT/FT)	L (FT)	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L (FT)	Tc Shallow (MIN.)	Total Tc (MIN.)
POA #1 - HWY 87 XING	0.025	100	0.24	11.6	0.025	1453	N	9.5	5.00	6136	20.45	41.5

HYDROLOGIC SUMMARY TABLE (SCS METHOD)

Area Name	POA #1 HWY 87 CROSSING
Drainage Area (ac)	332
CN #	70
% Imperv.	30
Tc (hrs)	0.691
Lag Time (hrs)	0.41
2 year Discharge (cfs)	296
10 year Discharge (cfs)	694
25 year Discharge (cfs)	998
100 year Discharge (cfs)	1529

\* Part of the SCS Design Calculations shown are derived from existing conditions assumptions using available graphical computer programs (Google Earth, Google Maps, TNRS GIS Information) for what would be considered current developed conditions.  
 \*\* All drainage calculations utilize Atlas 14 rainfall data.

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

# EXHIBIT F - ISSUE #3 (HWY 87 CROSSING NEAR W. CHIHUAHUA) - MAP

CITY OF LA VERNIA

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 DRAWN BY: GG  
 PROJECT NO.: 0200-032-22

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## EXHIBIT G

### ISSUE #3 (HIGHWAY 87 CROSSING NEAR W. CHIHUAHUA) – COST ESTIMATE



Civil | Environmental | Land Development  
HEADQUARTERS 307 St. Lawrence St. Gonzales, TX 78629 Phone: 830.672.7546  
CENTRAL TEXAS OFFICE 205 Cimarron Park Loop, Ste B Buda, TX 78610 Phone: 512.312.4336

City of La Vernia - Drainage Improvement Recommendations  
La Vernia, TX  
Issue #3 - Highway 87 Crossing near W. Chihuahua  
Preliminary Cost Estimate  
April 2022

Item #	Item	Quantity	Unit	Unit Cost	Cost
1	Clearing and Grubbing	0.77	ac	\$ 6,000	\$ 4,620
2	Easement Acquisition	1,355	lf	\$ 20	\$ 27,100
3	Earthwork for Channel	1,355	lf	\$ 20	\$ 27,100
4	Clean Existing Culvert	3	ea	\$ 2,000	\$ 6,000
5	Embankment/Fill	598	cy	\$ 12	\$ 7,176
6	Repair Existing Headwall Scour/Undermining	1	ls	\$ 35,000	\$ 35,000
7	Revegetation	3,727	sy	\$ 3	\$ 11,181

OPINION OF PROBABLE CONSTRUCTION COST \$ 118,177  
ENGINEERING & CONTINGENCY (25%) \$ 29,523  
TOTAL OPINION OF PROBABLE COST \$ 147,700

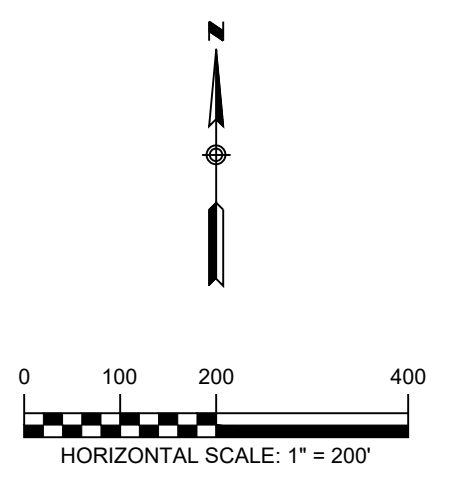
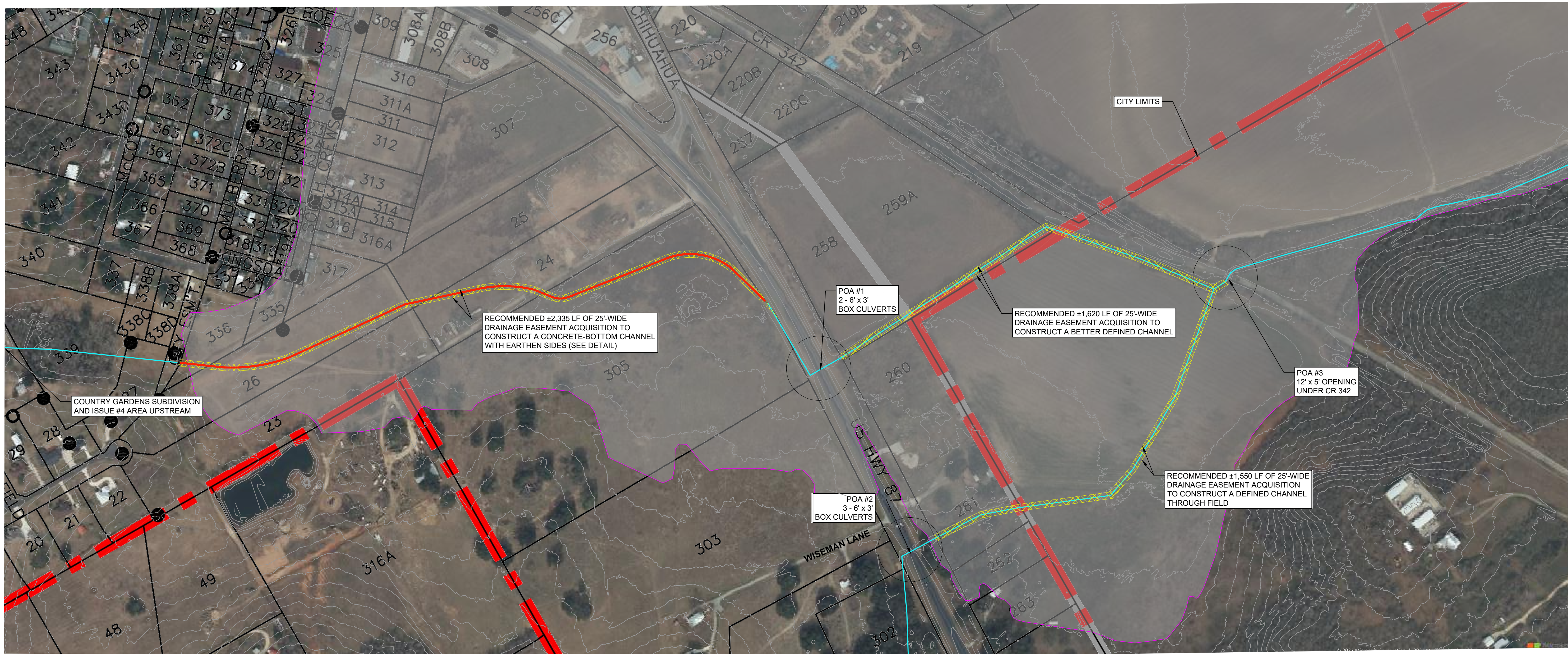
This opinion of probable construction cost represent best judgment as a design professional familiar with the Construction Industry and based on opinions and evaluations of current market rates for labor, materials and equipment. It is based on the understanding of the project at the time of its creation only. There is no warranty that any construction bid will not vary from this opinion.



## EXHIBIT H

### ISSUE #5 (HIGHWAY 87 & CR 342 CROSSINGS) - MAP





RECOMMENDED ±2,335 LF OF 25'-WIDE DRAINAGE EASEMENT ACQUISITION TO CONSTRUCT A CONCRETE-BOTTOM CHANNEL WITH EARTHEN SIDES (SEE DETAIL)

POA #1  
2- 6' x 3'  
BOX CULVERTS

RECOMMENDED ±1,620 LF OF 25'-WIDE DRAINAGE EASEMENT ACQUISITION TO CONSTRUCT A BETTER DEFINED CHANNEL

POA #3  
12' x 5' OPENING  
UNDER CR 342

RECOMMENDED ±1,550 LF OF 25'-WIDE DRAINAGE EASEMENT ACQUISITION TO CONSTRUCT A DEFINED CHANNEL THROUGH FIELD

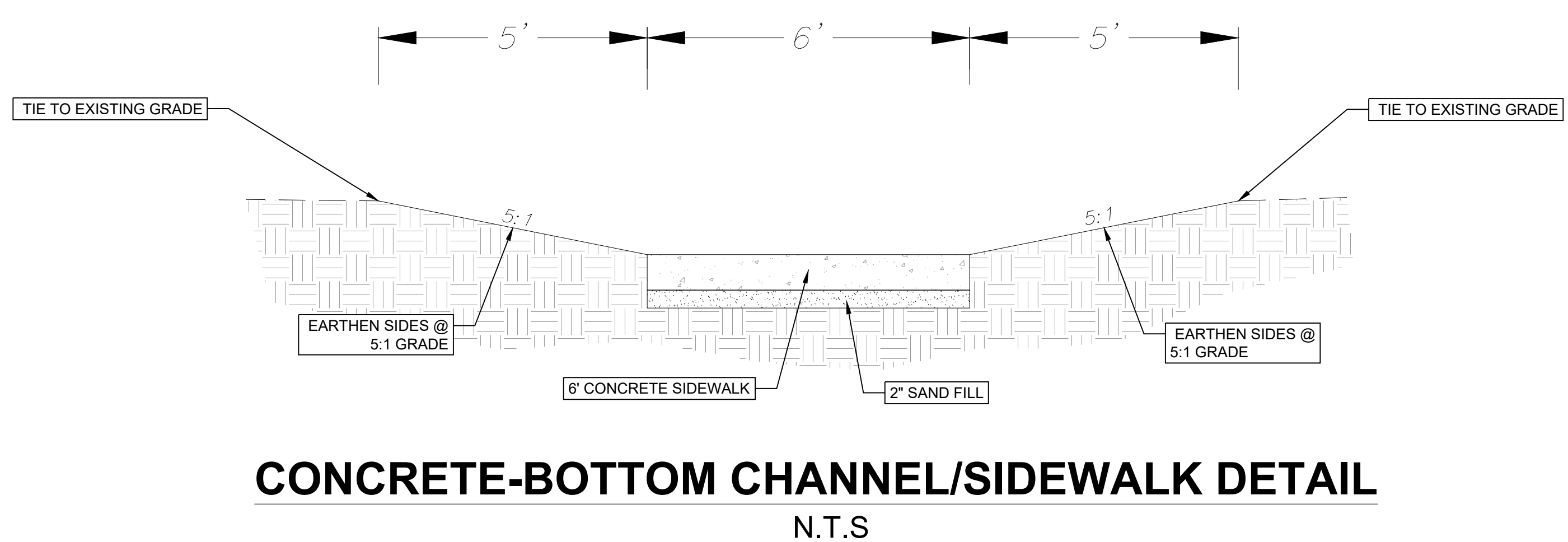
POA #2  
3- 6' x 3'  
BOX CULVERTS

COUNTRY GARDENS SUBDIVISION AND ISSUE #4 AREA UPSTREAM

DRAINAGE AREA	SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)			
	SLOPE (FT/FT)	L (FT)	n	Tc sheet (MIN.)	SLOPE (FT/FT)	L (FT)	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L (FT)	Tc Shallow (MIN.)	Total Tc (MIN.)
POA #1 - HWY 87 N XING	0.055	100	0.24	8.5	0.054	817	N	3.6	6.00	8721	24.23	36.3
POA #2 - HWY 87 S XING	0.040	100	0.24	9.6	0.040	2747	N	14.2	6.00	17032	47.31	71.1
POA #3 - CR 342 XING	0.040	100	0.24	9.6	0.040	2747	N	14.2	6.00	18591	51.64	75.4

HYDROLOGIC SUMMARY TABLE (SCS METHOD)			
Area Name	POA #1 HWY 87 N CROSSING	POA #2 HWY 87 S CROSSING	POA #3 CR 342 CROSSING
Drainage Area (ac)	673	2174	3010
CN #	69	68	68
% Imperv.	25	20	20
Tc (hrs)	0.604	1.185	1.257
Lag Time (hrs)	0.36	0.71	0.75
2 year Discharge (cfs)	613	1211	1619
10 year Discharge (cfs)	1484	3054	4065
25 year Discharge (cfs)	2142	4492	5971
100 year Discharge (cfs)	3296	7080	9413

\* Part of the SCS Design Calculations shown are derived from existing conditions assumptions using available graphical computer programs (Google Earth, Google Maps, TNIRIS GIS Information) for what would be considered current developed conditions.  
 \*\* All drainage calculations utilize Atlas 14 rainfall data



**LEGEND**

- CITY LIMITS
- PROPERTY BOUNDARIES
- EXISTING 2-FT CONTOURS
- EXISTING CHANNEL CENTERLINE
- EASEMENT / CLEARING & GRUBBING AREA
- PROPOSED CHANNEL BOTTOM/SIDEWALK
- 100-YR FEMA FLOODPLAIN
- POA POINT OF ANALYSIS

**Southwest Engineers**  
 TBPE NO. F-1909  
 www.swengineers.com

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**CENTRAL TEXAS**  
 205 Cimarron Park Loop, Ste. B, Buda TX 78610  
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**EXHIBIT H - ISSUE #5 (HWY 87 & CR 342 CROSSINGS) - MAP**

**CITY OF LA VERNIA, TEXAS**

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 PROJECT NO.: 0200-032-22

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## EXHIBIT I

### ISSUE #5 (HIGHWAY 87 & CR 342 CROSSINGS) – COST ESTIMATE

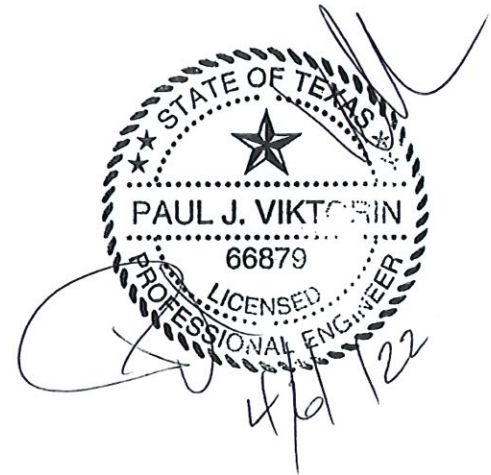


Civil | Environmental | Land Development
HEADQUARTERS: 307 St. Lawrence St. Gonzales, TX 78629 Phone: 830.672.7546
CENTRAL TEXAS OFFICE: 205 Cimarron Park Loop, Ste B Buda, TX 78610 Phone: 512.312.4336

City of La Vernia - Drainage Improvement Recommendations
La Vernia, TX
Issue #5 - Highway 87 and CR 342 Crossings
Preliminary Cost Estimate
April 2022

Table with 6 columns: Item #, Item, Quantity, Unit, Unit Cost, Cost. Rows include Clearing and Grubbing, Easement Acquisition, Earthwork for Channel, 6' Concrete Channel Bottom/Sidewalk, Embankment/Fill, and Revegetation. Summary rows for OPINION OF PROBABLE CONSTRUCTION COST, ENGINEERING & CONTINGENCY (25%), and TOTAL OPINION OF PROBABLE COST.

This opinion of probable construction cost represent best judgment as a design professional familiar with the Construction Industry and based on opinions and evaluations of current market rates for labor, materials and equipment. It is based on the understanding of the project at the time of its creation only. There is no warranty that any construction bid will not vary from this opinion.





# Southwest Engineers

Civil | Environmental | Land Development

## **SOUTHWEST ENGINEERS, INC**

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