CITY OF WELDON SPRING
BOARD OF ALDERMEN WORK SESSION
ON THURSDAY, JANUARY 25, 2024, AT 6:00 P.M.
WELDON SPRING CITY HALL
5401 INDEPENDENCE ROAD
WELDON SPRING, MISSOURI 63304

******TENTATIVE AGENDA******

A NOTICE IS HEREBY GIVEN that the Board of Aldermen Work Session will be in person at 5401 Independence Road Weldon Spring, Missouri, 63304. Also, the public can attend virtually by video-conference and/or audio-conference call, you may attend the meeting on a desktop, laptop, mobile device, or telephone by following the highlighted instructions below.

Link to join Zoom Video-Conference Meeting:

https://us02web.zoom.us/j/8163394872?pwd=aUdVRUtDRUdBTVFXYUJUMEtHbm5DZz09&omn=84720271688

Meeting ID: 816 339 4872
Password: WS.BOA

Or by telephone dial: 1-312-626-6799

Meeting ID: 816 339 4872
Password: 886581

Our Vision - The City of Weldon Spring fosters a premier Community that is a safe place to live and enjoy life.

******WORK SESSION AGENDA 1/25/24 at 6:00 PM******

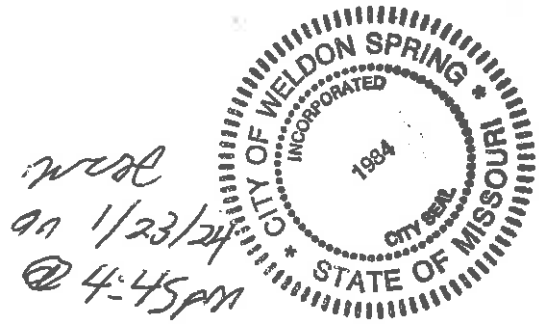
1. **CALL TO ORDER**
2. **NEW DISCUSSION**

   A. Adopting the Updated Building Codes from St. Charles County

   B. City of Weldon Spring "Back" Wolfrum Road Safety Study (From Terra Engineering) Discussion

3. **OTHER DISCUSSION**
4. **ADJOURN WORK SESSION**

***** No votes are to be taken at a Work Session.**



mrsk
on 1/23/24
@ 4:45pm

Our Mission - The City of Weldon Spring will provide premier public services to the Community with integrity, transparency, and fiscal responsibility.

CITY OF WELDON SPRING
BOARD OF ALDERMEN REGULAR MEETING
ON THURSDAY, JANUARY 25, 2024, AT 7:30 P.M.
WELDON SPRING CITY HALL
5401 INDEPENDENCE ROAD
WELDON SPRING, MISSOURI 63304

******TENTATIVE AGENDA******

A NOTICE IS HEREBY GIVEN that the Regular Board of Aldermen Meeting will be in person at 5401 Independence Road Weldon Spring, Missouri, 63304. Also, the public can attend virtually by video-conference and/or audio-conference call, you may attend the meeting on a desktop, laptop, mobile device, or telephone by following the highlighted instructions below.

Link to join Zoom Video-Conference Meeting:

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******BOARD OF ALDERMEN REGULAR AGENDA – 1/25/24 at 7:30 PM******

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL and DETERMINATION OF A QUORUM**
4. **PRESENTATION**
   - **A.** Eagle Scouts Project – Noah Hutchingson
5. **CITIZENS COMMENTS**

   The public must be in person to speak during Citizens Comments or send comments in writing to the City Clerk (at bhanks@weldonspring.org) prior to the Board meeting. Anyone wishing to speak shall state their name, their address, and limit their remarks to 3 minutes.

6. **APPROVAL OF MINUTES**
   - **A.** January 11, 2024 – Work Session Minutes
   - **B.** January 11, 2024 – Regular Board Meeting Minutes
7. **CITY TREASURER'S PACKET**
   - **A.** Paid Bills (January 5, 2024 – January 18, 2024)
   - **B.** Unpaid Bills (January 12, 2024 – January 25, 2024)
8. **UNFINISHED BUSINESS**
   - **A.** An Ordinance Authorizing the Execution of an Agreement between the City of O'Fallon, Missouri, and the City of Weldon Spring, Missouri, for the Asphalt Mill and Overlay of Technology Drive and Matters Relating Thereto – **Alderman Yeager**
   - **B.** City Park Lake Improvement Project – Engineering Design Services – **City Administrator**
9. **NEW BUSINESS**
   - **A.** An Ordinance Readopting Certain Sections of Chapter 500 of the City of Weldon Spring, Missouri, Municipal Code to Bring Same up to Date with the Most Recently Adopted Building Codes and Regulations as Adopted by St Charles County, and Matters Relating Thereto – **Alderman Martiszus**
   - **B.** City of Weldon Spring "Back" Wolfrum Road Safety Study (From Terra Engineering) Discussion
10. **REPORTS & COMMITTEES**
    - **A.** City Administrator Report (Informational) – **City Administrator**
11. **RECEIPTS & COMMUNICATIONS**
12. **CLOSED SESSION**

    An Accordance with **RSMo Section 610.021,** the Board of Aldermen will go into Closed Session during this meeting for the purpose of discussing Paragraph (1) - legal actions, cause of action or litigation and Paragraph (3) – Hiring, Firing, Discipling or Promoting of a Particular Employee.
13. **ADJOURNMENT**

mcm 01/23/24 @ 4:45pm

CITY OF WELDON SPRING * INCORPORATED 1984 * STATE OF MISSOURI

Our Mission - The City of Weldon Spring will provide premier public services to the Community with integrity, transparency, and fiscal responsibility.

CITY OF WELDON SPRING
BOARD OF ALDERMEN WORK SESSION
JANUARY 11. 2024

CALL TO ORDER: A Work Session of the Board of Aldermen for the City of Weldon Spring was held on Thursday, January 11, 2024. at approximately 6:30PM, at the Weldon Spring City Hall, which is located at 5401 Independence Road. The Work Session was called to order at 6:45 PM by Alderman Yeager.

Alderman Clutter, Alderman Conley, Alderman Kolb, and Alderman Yeager were present. Alderman Kolb joined the meeting at 6:55 PM. Also, present for the Work Session was Michael Padella (City Administrator) and Bill Hanks (City Clerk). Mayor Licklider joined the meeting at 6:53 PM.

BUSINESS FOR DISCUSSION:

Review and Discuss the Five-Year Financial Plan: Mr. Padella (City Administrator) gave a presentation on the City's Five-Year Financial Plan, which is a projection of revenues and expenditures, for the years 2025 through 2029. The purpose of this presentation is to gain input from the Board before the Finance Committee finalizes the five-year plan. A lengthy discussion took place.

The Work Session was adjourned at 7:11 PM.

Respectfully submitted,

_____
William C. Hanks, City Clerk

CITY OF WELDON SPRING
REGULAR MEETING OF THE BOARD OF ALDERMEN
JANUARY 11, 2024

CALL TO ORDER: The Weldon Spring Board of Aldermen met for their regular meeting at Weldon Spring City Hall, 5401 Independence Road on Thursday, January 11, 2024, at 7:30 PM with Mayor Donald Licklider presiding.

PLEDGE OF ALLEGIANCE: Alderman Yeager asked everyone in attendance to stand and join in reciting the Pledge of Allegiance.

ROLL CALL AND DETERMINATION OF QUORUM: On a roll call, the following Aldermen were present:

Ward 1:	Alderman Clutter	Alderman Yeager
Ward 2:	Alderman Yeager	Alderman Kolb
Ward 3:	Alderman Martiszus	

A quorum was declared.

Also, present were Bob Wohler (City Attorney), Michael Padella (City Administrator), and Bill Hanks (City Clerk).

PRESENTATION:

St. Charles County Economic Development Council Presentation: Scott Drachnik, President of the St. Charles County Economic Development Council, gave the annual update to the Board.

PUBLIC COMMENTS:

There were no public comments at this time.

MINUTES:

December 14, 2023 – Regular Board Meeting Minutes: Alderman Yeager moved to approve the minutes from the December 14, 2023, regular meeting, with two typographical corrections. The motion was seconded by Alderman Baker. **Motion carried** with 4 ayes. Alderman Yeager abstained from voting.

TREASURER'S REPORT:

Alderman Yeager made a motion to accept the Treasurer's packet of paid bills from December 1, 2023, to January 4, 2024, and the November 2023 Credit Card Bill. The motion was seconded by Alderman Clutter. **Motion carried** with 5 ayes.

UNFINISHED BUSINESS:

Bill #1210 – An Ordinance Amending Section 405.430 (B) (7) of the City of Weldon Spring, Missouri, Municipal Code and Matters Relating Thereto (Front Entry Garages): Alderman Martiszus made a motion to take Bill #1210 off the table for discussion and approve Bill #1210 for its second and final reading by title only. Alderman Clutter seconded the motion.

There was a lengthy discussion on the discrepancy about the difference in the dates between the passage of the Ordinance, which prohibit front-entry garage and the date used in Bill #1210

On a roll call vote, Bill #1210 **failed to be approved**:

AYES: 0
NOES: 5 – Clutter, Conley, Kolb, Martiszus, and Yeager
ABSENT: 1 – Baker

NEW BUSINESS:

Bill #1213 - An Ordinance Authorizing the Execution of an Agreement between the City of O'Fallon, Missouri, and the City of Weldon Spring, Missouri, for the Asphalt Mill and Overlay of Technology Drive and Matters Relating Thereto: Alderman Yeager moved to introduce Bill #1213 for its first reading by title only. Alderman Clutter seconded the motion and the **motion carried.**

Bill #1213 was tabled in accordance with the City Code

Golf Cart Restriction Signage: Alderman Clutter made a motion to move forward with City's staff recommendation of the verbiage and placement for the golf cart restriction signage, seconded by Alderman Martiszus. **Motion carried** with 5 ayes.

City Park Lake Improvement Project: This item was tabled until the next Board meeting because the City have not received a cost, from Horner & Shifrin, for the project prior to the meeting.

REPORTS AND COMMITTEES:

Public Safety Report: The December Crime Statistic Report was submitted to the elected officials prior to the meeting.

Parks & Recreation Advisory Committee (PRAC) Report: There was no report given.

City Administrator Report: The City Administrator Report was submitted to the Board prior to the meeting.

CLOSED SESSION:

Alderman Yeager made a motion to go into closed session according to Missouri State Statute 610.021 Paragraph (1) - legal actions, cause of action, litigation, or privileged communications between a public governmental body and its attorneys – at 8:47 PM. The motion was seconded by Alderman Clutter and the **motion carried** on a roll call vote:

AYES: 5 – Clutter, Conley, Kolb, Martiszus, and Yeager
NOES: 0
ABSENT: 1 – Baker

Alderman Yeager made a motion to go into open session at 8:53 PM. The motion was seconded by Alderman Clutter and the **motion carried** on a roll call vote:

AYES: 5 – Clutter, Conley, Kolb, Martiszus, and Yeager
NOES: 0
ABSENT: 1 – Baker

ADJOURNMENT:

Alderman Kolb moved to adjourn the meeting at 8:54 PM, seconded by Alderman Clutter. **Motion carried** with 5 ayes.

Respectfully submitted,

William C. Hanks, City Clerk

PAID BILLS TO BE APPROVED
JANUARY 5, 2024 -- JANUARY 18, 2024

CHECKS ARE DATED 1/3/2024 THRU 1/10/2024

EXCEPT FOR THE ITEMS NOTED, THE ATTACHED LIST IS APPROVED BY THE BOARD OF ALDERMAN FOR PAYMENT. APPROVED THIS 25TH DAY OF JANUARY 2024 _____, MAYOR

Jan 2 thru Jan 18, 2024

ACCOUNTS PAYABLE CLAIMS REPORT

VENDOR	REFERENCE	GL ACCT NO	AMOUNT	CHECK #	CHECK DATE
BUILDINGSTARS OPERATIONS INC	MONTHLY HOUSEKEEPING	20-20-5244	$ 240.00	10240078	1/5/2024
COTTLEVILLE/WELDON SPRING	MEMBERSHIP DUES 12/23-12/24	10-10-5204	$ 125.00	16813	1/10/2024
CUIVRE RIVER ELECTRIC	MONTHLY ELECTRIC	20-20-5253	$ 292.22	10240073	1/5/2024
CUIVRE RIVER ELECTRIC	MONTHLY ELECTRIC	20-20-5253	$ 256.50	10240074	1/5/2024
CUIVRE RIVER ELECTRIC	MONTHLY ELECTRIC	20-20-5253	$ 35.12	10240075	1/5/2024
CUIVRE RIVER ELECTRIC	MONTHLY ELECTRIC	20-20-5253	$ 35.00	10240076	1/5/2024
DOUGLAS R SMITH	MUNI COURT PA	10-10-5304	$ 650.00	9795	1/5/2024
KANSAS CITY LIFE INS CO	GROUP LIFE INS JAN 2024	10-02-2110	$ 1.32	10240071	1/3/2024
KANSAS CITY LIFE INS CO	GROUP LIFE INS JAN 2024	10-10-5131	$ 222.00	10240071	1/3/2024
MOCCFOA EASTERN DIV	LUNCHEON MEETINGS JAN 24	10-10-5201	$ 20.00	16814	1/10/2024
MUNICIPAL LEAGUE OF METRO STL	JOB POSTING-CITY ADMINISTRATOR	10-10-5223	$ 25.00	16815	1/10/2024
MUNIWEB	WEBSITE HOSTING DEC2023	10-10-5210	$ 180.00	10240070	1/3/2024
O'FALLON MUNICIPAL COURT	Q4 BANK SVC FEES	10-10-5216	$ 145.63	16816	1/10/2024
O'FALLON MUNICIPAL COURT	Q4 MUNI COURT COSTS	10-16-5306	$ 3,784.36	16816	1/10/2024
O'FALLON MUNICIPAL COURT	Q4 MUNI COURT SERVICES	10-16-5606	$ 9,000.00	16816	1/10/2024
PAVEMENT SOLUTIONS, LLC	CASE SETTLEMENT 1811-CC00885	22-22-5448	$ 120,000.00	16812	1/10/2024
REPUBLIC SERVICES	TRASH SERVICE	20-20-5254	$ 141.27	9794	1/5/2024
SCC GOVT - FINANCE DEPT	ANIMAL CAPTURE 2024	10-10-5275	$ 7,345.76	16818	1/10/2024
SCC GOVT - FINANCE DEPT	ORTHO IMAGERY 2024	10-10-5282	$ 1,032.84	16818	1/10/2024
SCC GOVT - FINANCE DEPT	BLDG CODE ENFORCEMENT 2024	10-16-5952	$ 5,326.00	16818	1/10/2024
SLACMA	LUNCH MEETING JAN 2024	10-10-5201	$ 15.00	16817	1/10/2024
ST CHARLES IT	IT SERVICES	10-10-5325	$ 618.37	9792	1/5/2024
TURN-KEY MOBILE, INC	PTZ CAMERAS/PURCHASED-OWNED	22-22-5440	$ 28,794.00	10240079	1/8/2024
VERIZON WIRELESS	MONTHLY CELL	10-02-2113	$ 49.20	10240077	1/5/2024
VERIZON WIRELESS	MONTHLY CELL	20-20-5257	$ 276.86	10240077	1/5/2024
WEX BANK	FLEET GAS CARD	20-20-5237	$ 223.11	9793	1/5/2024
Accounts Payable Total			$ 178,834.56		

UNPAID BILLS TO BE APPROVED
JANUARY 12, 2024 -- JANUARY 25, 2024

EXCEPT FOR THE ITEMS NOTED, THE ATTACHED LIST IS APPROVED BY THE BOARD OF ALDERMAN FOR PAYMENT. APPROVED THIS 25TH DAY OF JANUARY 2024 _____, MAYOR

1/12 -- 1/25/2024 **CLAIMS REPORT**

VENDOR	REFERENCE	AMOUNT	CHECK #	CHECK DATE
LOUIS J BASSO, P.C.	OUTSIDE ATTY/ PSL SUIT	$ 15,337.50	16819	1/25/2024
Accounts Payable Total		$ 15,337.50		

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
		GENERAL FUND				
		GENERAL DEPARTMENT DEPARTMENT				
10-10-4801	FRANCHISE FEES - CHARTER	67,000.00		14,547.97	21.71	52,452.03
10-10-4802	FRANCHISE FEES - CUIVRE RIVER	236,000.00	18,792.36	59,640.47	25.27	176,359.53
10-10-4803	FRANCHISE FEES - SPIRE GAS	84,500.00	8,002.80	17,979.19	21.28	66,520.81
10-10-4804	FRANCHISE FEES - AMERENUE	76,500.00	4,741.00	22,399.59	29.28	54,100.41
10-10-4805	FRANCHISE FEES-SYMMETRY ENERGY	500.00				500.00
10-10-4806	FRANCHISE FEES - AT&T	18,000.00		3,925.00	21.81	14,075.00
10-10-4814	PERMITS - GRADING	1,750.00		300.00	17.14	1,450.00
10-10-4815	PERMITS - LAND USE	13,500.00	150.00	1,800.00	13.33	11,700.00
10-10-4816	PERMITS - FIREWORKS	20,000.00				20,000.00
10-10-4817	PERMITS - PLANNING & ZONING	6,500.00				6,500.00
10-10-4818	PERMITS - SIGNS	1,000.00	329.50	479.30	47.93	520.70
10-10-4819	PERMITS - SOLICITORS	350.00				350.00
10-10-4831	LICENSES - BUSINESS	6,250.00	450.00	2,870.00	45.92	3,380.00
10-10-4832	LICENSES - LIQUOR	7,500.00		750.00	10.00	6,750.00
10-10-4901	INTEREST - GENERAL	17,500.00	486.71	1,501.33	8.58	15,998.67
10-10-4905	INTEREST CD/MOSIP - GENERAL	104,761.00				104,761.00
10-10-4951	RECORDS/PLAN REQUEST	250.00				250.00
10-10-4952	MISC -GENERAL-REVENUE	2,500.00		35.00	1.40	2,465.00
	GENERAL DEPARTMENT TOTAL	664,361.00	32,952.37	126,227.85	19.00	538,133.15
		CODE ENFORCEMENT/COURT DEPARTMENT				
10-16-4991	CRT COSTS-CLERK FEE-MUNI & E/R	6,500.00	1,032.00	3,976.36	61.17	2,523.64
10-16-4992	FINE-MUNI ORDN OTHER & E/R	38,000.00	7,442.00	28,640.50	75.37	9,359.50
10-16-4997	BOND FORFEITURE			300.00		300.00-
	CODE ENFORCEMENT/COURT TOTAL	44,500.00	8,474.00	32,916.86	73.97	11,583.14
		PARK IMPROVEMENT DEPARTMENT				
	TOTAL REVENUE	708,861.00	41,426.37	159,144.71	22.45	549,716.29
		GENERAL DEPARTMENT DEPARTMENT				
10-10-5101	GOVERNMENT SALARIES	7,800.00	1,950.00	1,950.00	25.00	5,850.00
10-10-5103	STAFF WAGES	288,270.00	18,119.02	60,082.68	20.84	228,187.32
10-10-5123	FICA	22,649.00	1,554.21	4,802.19	21.20	17,846.81
10-10-5126	UNEMPLOYMENT TAXES	287.00				287.00
10-10-5127	LAGERS BENEFIT	14,791.00	1,000.19	3,045.76	20.59	11,745.24
10-10-5130	DENTAL INSURANCE BENFITS	4,010.00	226.26	678.78	16.93	3,331.22
10-10-5131	LIFE INSURANCE EMP BENEFIT	3,173.00	222.00	666.00	20.99	2,507.00
10-10-5132	HEALTH INS BENEFIT(GROUP PLAN)	58,338.00	3,704.01	11,112.03	19.05	47,225.97
10-10-5134	MEDICARE STIPEND	4,200.00	350.00	1,050.00	25.00	3,150.00
10-10-5135	CITY OFFICIAL APPRECATION	1,000.00				1,000.00
10-10-5201	MEALS-TRAVEL-LODGING	6,000.00	64.06	348.56	5.81	5,651.44

CALENDAR 12/2023, FISCAL 3/2024

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
10-10-5202	CAR ALLOWANCE (MILEAGE)	3,000.00	261.42	479.93	16.00	2,520.07
10-10-5203	TRAINING & EDUCATION COSTS	4,500.00	.75	7,452.03	165.60	2,952.03-
10-10-5204	DUES & SUBSCRIPTIONS	3,600.00	1,117.38	1,192.38	33.12	2,407.62
10-10-5205	MAYOR'S DISCRETIONARY	500.00	349.99	386.10	77.22	113.90
10-10-5206	INSURANCE - PROPERTY	5,150.00	5,520.00	5,520.00	107.18	370.00-
10-10-5207	INSURANCE - LIABILITY	12,000.00	5,043.00	5,043.00	42.03	6,957.00
10-10-5208	INSURANCE - BONDING	1,000.00	45.00	95.00	9.50	905.00
10-10-5209	ECONOMIC DEVELOPMENT	6,000.00				6,000.00
10-10-5210	WEBSITE DESIGN & HOSTING	3,350.00		360.00	10.75	2,990.00
10-10-5211	NEWSLETTER PUBLISHING	5,000.00		1,112.36	22.25	3,887.64
10-10-5212	PRINTING/NON NEWSLETTER	1,000.00				1,000.00
10-10-5213	POSTAGE - ALL	2,525.00		570.44	22.59	1,954.56
10-10-5214	PUBLIC NOTICES	1,750.00		282.42	16.14	1,467.58
10-10-5215	ELECTIONS	5,025.00				5,025.00
10-10-5216	Bank Service Fees	3,800.00	222.11	704.00	18.53	3,096.00
10-10-5217	INSURANCE-CYBER LIAB POLICY	2,835.00	2,410.00	2,410.00	85.01	425.00
10-10-5220	COPIER/POSTAGE MACHINE EXPENSE	2,500.00		149.91	6.00	2,350.09
10-10-5223	ADVERTISEMENTS/MARKETING	3,500.00	937.46	1,086.42	31.04	2,413.58
10-10-5243	CITY HALL - OFFICE SUPPLIES	4,800.00	245.99	557.81	11.62	4,242.19
10-10-5275	ANIMAL CONTROL CONTRACT	7,346.00				7,346.00
10-10-5280	MOSQUITO CONTROL	2,100.00				2,100.00
10-10-5282	ORTHO IMAGERY CONTRACT	1,033.00				1,033.00
10-10-5301	CITY ATTORNEY	7,500.00	570.00	1,715.00	22.87	5,785.00
10-10-5304	PROSECUTING ATTORNEY -COURT	8,500.00	650.00	1,300.00	15.29	7,200.00
10-10-5321	AUDITOR	16,500.00				16,500.00
10-10-5324	SOFTWARE SUBSCRIPTIONS/SUPPORT	16,500.00	122.97	744.99	4.52	15,755.01
10-10-5325	CONSULTANT - NETWORK	7,250.00		1,236.74	17.06	6,013.26
10-10-5326	CONSULTANT - RECODIFICATION	3,000.00				3,000.00
10-10-5327	CONSULTANT - MISC	11,250.00				11,250.00
10-10-5560	NON-CAPITAL EQUIP -CITY HALL	3,000.00		263.66	8.79	2,736.34
10-10-5952	MISC - GENERAL FUND	750.00		52.22	6.96	697.78
	GENERAL DEPARTMENT TOTAL	567,082.00	44,685.82	116,450.41	20.54	450,631.59
	CODE ENFORCEMENT/COURT DEPARTMENT					
10-16-5243	OFFICE SUPPLIES - COURT	300.00				300.00
10-16-5306	O'FALLON MUNI COURT COSTS REBA	6,500.00				6,500.00
10-16-5606	O'FALLON MUNICIPAL COURT	36,000.00				36,000.00
10-16-5952	COURT/CODE ENFORCEMENT - MISC	5,326.00				5,326.00
	CODE ENFORCEMENT/COURT TOTAL	48,126.00	.00	.00	.00	48,126.00
	EMERGENCY MANAGEMENT DEPARTMENT					
	TOTAL EXPENSES	615,208.00	44,685.82	116,450.41	18.93	498,757.59
	GENERAL TOTAL	93,653.00	3,259.45-	42,694.30	45.59	50,958.70

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
	GENERAL FUND - ESCROWS FUND					
	ESCROW DEPARTMENT					
15-15-5952	ESCROW MISC			5,000.00		5,000.00-
	ESCROW TOTAL	.00	.00	5,000.00	.00	5,000.00-
	TOTAL EXPENSES	.00	.00	5,000.00	.00	5,000.00-
	GENERAL FUND - ESCROWS TOTAL	.00	.00	5,000.00-	.00	5,000.00
	MUNICIPAL BUILDING & PARK FUND					
	MUNICIPAL BUILDING & PARK DEPARTMENT					
20-20-4701	LOCAL SALES TAX	390,000.00	48,172.10	125,170.52	32.10	264,829.48
20-20-4702	METRO PARK DISTRICT TAX	18,000.00				18,000.00
20-20-4901	INTEREST -MUNIC BLDG & PARK	10,000.00	311.18	959.88	9.60	9,040.12
20-20-4905	INTEREST CD/MOSIP - PARKS	22,500.00				22,500.00
20-20-4970	SPONSORSHIPS/PARK DONATIONS	5,000.00				5,000.00
20-20-4971	PARK FACILITY RENTALS	3,500.00		125.00	3.57	3,375.00
20-20-4972	PARK TREE-BENCH DONATIONS		1,100.00	1,100.00		1,100.00-
	MUNICIPAL BUILDING & PARK TOTA	449,000.00	49,583.28	127,355.40	28.36	321,644.60
	PARK IMPROVEMENT DEPARTMENT					
	TOTAL REVENUE	449,000.00	49,583.28	127,355.40	28.36	321,644.60
	ARPA EXPENDITURES DEPARTMENT					
20-13-5314	ARPA PROFESSIONAL SERVICES	48,215.00	13,711.04	166,750.68	345.85	118,535.68-
	ARPA EXPENDITURES TOTAL	48,215.00	13,711.04	166,750.68	345.85	118,535.68-
	MUNICIPAL BUILDING & PARK DEPARTMENT					
20-20-5103	STAFF WAGES	158,060.00	10,311.23	28,262.62	17.88	129,797.38
20-20-5123	FICA EMPLOYER COST	12,092.00	783.96	2,147.57	17.76	9,944.43
20-20-5126	UNEMPLOYMENT TAXES	80.00				80.00
20-20-5127	LAGERS BENEFIT	10,142.00	457.51	1,536.04	15.15	8,605.96
20-20-5203	TRAINING & EDUCATION	1,800.00				1,800.00
20-20-5216	EVENTS IN THE PARK	10,000.00	328.25	1,115.91	11.16	8,884.09
20-20-5217	FOURTH OF JULY	18,500.00				18,500.00
20-20-5218	SENIOR CITIZENS DAY	800.00				800.00
20-20-5219	SANTA CLAUS/WINTER CHILL OUT	2,000.00	109.29	109.29	5.46	1,890.71

CALENDAR 12/2023, FISCAL 3/2024

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
20-20-5220	FISHING DERBY	500.00				500.00
20-20-5231	SIGNS	3,200.00				3,200.00
20-20-5232	PARK - UNIFORMS	450.00				450.00
20-20-5233	BLDG - REPAIRS & MAINT	3,500.00				3,500.00
20-20-5236	PARK - REPAIRS	18,000.00	68.39	86.97	.48	17,913.03
20-20-5237	PARK EQUIPMENT-REPAIRS/MAINT	3,500.00	650.98	1,593.42	45.53	1,906.58
20-20-5240	PARK EQUIPMENT RENTALS	5,000.00		250.00	5.00	4,750.00
20-20-5241	CITY HALL - REPAIRS/MAINT	9,000.00	290.20	290.20	3.22	8,709.80
20-20-5243	PARKS - GENERAL SUPPLIES	3,200.00	900.37	1,627.40	50.86	1,572.60
20-20-5244	CITY HALL - HOUSEKEEPING	3,000.00	240.00	720.00	24.00	2,280.00
20-20-5250	UTILITIES - SEWER	550.00		80.25	14.59	469.75
20-20-5251	TELEPHONE-INTERNET-EMAIL HOST	5,600.00	942.26	1,413.39	25.24	4,186.61
20-20-5253	ELECTRIC	7,500.00	607.89	1,047.69	13.97	6,452.31
20-20-5254	TRASH	2,100.00	141.27	423.81	20.18	1,676.19
20-20-5255	BOTTLED WATER	450.00	38.10	93.01	20.67	356.99
20-20-5256	UTILITIES-OTHER-ALARM	192.00		48.00	25.00	144.00
20-20-5257	CELL PHONE - PARKS	1,850.00		519.13	28.06	1,330.87
20-20-5314	LAKE DESGN/ENG.PROF SVC-CONSUL	50,000.00		1,837.50	3.68	48,162.50
20-20-5450	GROUNDS MAINTENANCE	5,000.00				5,000.00
20-20-5463	CAP EQUIPMENT - PARK	12,000.00				12,000.00
20-20-5490	AMP/PAV:CAP-REAL PROP IMPROVEM	1,080,935.00				1,080,935.00
20-20-5550	LANDSCAPING: NON-CAPITAL	5,200.00		397.65	7.65	4,802.35
20-20-5560	EQUIPMENT-CITY HALL:NON-CAPITA	1,800.00	88.95	872.19	48.46	927.81
20-20-5563	EQUIPMENT-PARK: NON-CAPITAL	2,800.00		522.48	18.66	2,277.52
20-20-5570	TRAIL MAINT / REPAIRS	2,000.00				2,000.00
20-20-5575	PARK PLAN/PROFESSIONAL SVCS	20,000.00				20,000.00
20-20-5952	MISC -MUNI BLDG & PARK	1,000.00		124.14	12.41	875.86
	MUNICIPAL BUILDING & PARK TOTA	1,461,801.00	15,958.65	45,118.66	3.09	1,416,682.34
	PARK IMPROVEMENT DEPARTMENT					
20-21-5150	POCKET PARK:LOT C SITE IMPROVE		11,805.50	32,729.25		32,729.25-
	PARK IMPROVEMENT TOTAL	.00	11,805.50	32,729.25	.00	32,729.25-
	TOTAL EXPENSES	1,510,016.00	41,475.19	244,598.59	16.20	1,265,417.41
	MUNICIPAL BUILDING & PARK TOTA	1,061,016.00-	8,108.09	117,243.19-	11.05	943,772.81-
	STATE REVENUE SHARING FUND					
	ROADS & POLICE DEPARTMENT					
22-19-4701	ROADS & POLICE 1% SALES TAX	780,000.00	94,618.36	248,409.02	31.85	531,590.98
	ROADS & POLICE TOTAL	780,000.00	94,618.36	248,409.02	31.85	531,590.98

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
	STATE REVENUE SHARING DEPARTMENT					
22-22-4711	MOTOR FUEL TAX	167,000.00	17,127.89	50,608.23	30.30	116,391.77
22-22-4712	MOTOR VEHICLE SALES TAX	58,000.00	3,837.58	15,104.84	26.04	42,895.16
22-22-4713	MOTOR VEHICLE FEE INCREASE	27,000.00	1,645.91	5,272.01	19.53	21,727.99
22-22-4901	INTEREST - STATE REV SHARING	1,000.00				1,000.00
22-22-4952	STATE REV SHARING MISC REVENUE	100.00		500.00	500.00	400.00-
22-22-4994	CVC SURCHARGE MUNI & E/R	180.00	31.82	122.60	68.11	57.40
22-22-4995	POST CITY - LET MUNI	750.00	172.00	662.00	88.27	88.00
22-22-4996	INMATE SECURITY/OFFSET LAW ENF	1,200.00	172.00	660.50	55.04	539.50
	STATE REVENUE SHARING TOTAL	255,230.00	22,987.20	72,930.18	28.57	182,299.82
	TOTAL REVENUE	1,035,230.00	117,605.56	321,339.20	31.04	713,890.80
	ROADS & POLICE DEPARTMENT					
22-19-5305	NEW POLICE SVCS CONTRACT	236,970.00		67,527.50	28.50	169,442.50
22-19-5440	SAFETY CAMERA SYSTEMS	13,000.00	5,524.00	5,524.00	42.49	7,476.00
22-19-5442	ROAD CONST - WOLFRUM RD	25,000.00				25,000.00
	ROADS & POLICE TOTAL	274,970.00	5,524.00	73,051.50	26.57	201,918.50
	STATE REVENUE SHARING DEPARTMENT					
22-22-5103	STATE REV ADMIN STAFF SALARIES	76,043.00	5,078.75	14,299.79	18.80	61,743.21
22-22-5123	FICA	5,717.00	386.68	1,088.41	19.04	4,628.59
22-22-5127	LAGERS BENEFIT	3,804.00	202.80	649.87	17.08	3,154.13
22-22-5231	SIGNS	800.00				800.00
22-22-5264	RIGHT OF WAY LANDSCAPING/MAINT	8,000.00		4,231.24	52.89	3,768.76
22-22-5265	RIGHT-OF-WAY MOWING	16,000.00		2,700.00	16.88	13,300.00
22-22-5302	OUTSIDE ATTORNEY	25,000.00		48,496.35	193.99	23,496.35-
22-22-5440	CITY STREETS		125.00	500.00		500.00-
22-22-5453	CITY STRTS/SIDEWALKS/PED CROSS	380,000.00				380,000.00
22-22-5470	TRAILS	25,000.00				25,000.00
	STATE REVENUE SHARING TOTAL	540,364.00	5,793.23	71,965.66	13.32	468,398.34
	TOTAL EXPENSES	815,334.00	11,317.23	145,017.16	17.79	670,316.84
	STATE REVENUE SHARING TOTAL	219,896.00	106,288.33	176,322.04	80.18	43,573.96
	ROAD & BRIDGE FUND FUND					
	ROADS & BRIDGES DEPARTMENT					
23-23-4790	ROAD AND BRIDGE TAX	249,130.00				249,130.00

PCT OF FISCAL YTD 25.0%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT DIFFERENCE	DIFFERENCE
	ROADS & BRIDGES TOTAL	249,130.00	.00	.00	.00	249,130.00
	TOTAL REVENUE	249,130.00	.00	.00	.00	249,130.00
23-23-5445	CITY STREETS REPAIRS & MAINT	525,000.00				525,000.00
	ROADS & BRIDGES TOTAL	525,000.00	.00	.00	.00	525,000.00
	TOTAL EXPENSES	525,000.00	.00	.00	.00	525,000.00
	ROAD & BRIDGE FUND TOTAL	275,870.00-	.00	.00	.00	275,870.00-
	SEWER - REPLACEMENT FUND					
	SEWER REPLACEMENT DEPARTMENT					
31-31-5566	EQUIPMENT - SEWER	3,800.00				3,800.00
	SEWER REPLACEMENT TOTAL	3,800.00	.00	.00	.00	3,800.00
	TOTAL EXPENSES	3,800.00	.00	.00	.00	3,800.00
	SEWER - REPLACEMENT TOTAL	3,800.00-	.00	.00	.00	3,800.00-
	SEWER - OPERTNS & MAINT FUND					
	SEWER OPS/MAINT DEPARTMENT					
33-33-5249	OPERATIONS & MAINT - SEWER	800.00				800.00
	SEWER OPS/MAINT TOTAL	800.00	.00	.00	.00	800.00
	TOTAL EXPENSES	800.00	.00	.00	.00	800.00
	SEWER - OPERTNS & MAINT TOTAL	800.00-	.00	.00	.00	800.00-
	CID-COMMUNITY IMPROVEMENT FUND					
	CID-COMMUNITY IMPROVEMENT DEPARTMENT					
	Report Total	1,027,937.00-	111,136.97	96,773.15	9.41-	1,124,710.15-

BILL NO. _____ **ORDINANCE NO. _____**

****

AN ORDINANCE AUTHORIZING THE EXECUTION OF AN AGREEMENT BETWEEN THE CITY OF O'FALLON, MISSOURI, AND THE CITY OF WELDON SPRING, MISSOURI, FOR THE ASPHALT MILL AND OVERLAY OF TECHNOLOGY DRIVE AND MATTERS RELATING THERETO

****

WHEREAS, O'Fallon and Weldon Spring are adjoining cities which share many common boundary points; and

WHEREAS, Weldon Spring Road and Technology Dr. are bisected by a common boundary line creating a roadway with split ownership between the two cities; and

WHEREAS, Technology Dr. is in need of an asphalt mill and overlay; and

WHEREAS, the Cities are authorized by Sec. 70.220, RSMo., Supp 2010, to contract and cooperate with each other and their officials for the planning, development, construction, acquisition, or operation of any facility, or for a common service, when, as here, the subject and purposes of any such contract or cooperative action shall be within the scope of the powers of each City; and

WHEREAS, the City O'Fallon plans to asphalt mill and overlay Technology Drive and the City of Weldon Spring desires to pay the City of O'Fallon the proportionate cost to include the asphalt mill and overlay om their portion of Technology Drive.

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF WELDON SPRING, MISSOURI AS FOLLOWS:

SECTION 1: Section 70.220 through 70.320 of the Revised Missouri Statutes authorizes intergovernmental agreements.

SECTION 2: That the Board of Aldermen hereby authorize the execution by the Mayor of the Intergovernmental Cooperation Agreement which is attached hereto as Exhibit "A" and is incorporated by reference herein.

SECTION 3: The vote on the aforesaid being deemed an emergency by the Board of Aldermen, the Board does hereby waive and dispense with the tabling procedure set forth in City Code, Section 110.070 and does hereby authorize the reading of the above bill twice at this meeting, and a vote thereon immediately following said second reading.

SECTION 4: That this ordinance shall be in full force and effect from and after its enactment and approval.

BILL NO. _____ **ORDINANCE NO. _____**

READ TWO TIMES AND PASSED BY THE BOARD OF ALDERMEN OF THE CITY OF WELDON SPRING, MISSOURI, THIS _____ DAY OF _____ 2024.

_____
Donald D. Licklider, Mayor

Attest:

_____
William C. Hanks, City Clerk

BILL NO. _____ **ORDINANCE NO. _____**

To approve Bill

Motioned: _____
Seconded: _____

	Aye	Nay	Abstention
Baker	___	___	___
Clutter	___	___	___
Conley	___	___	___
Kolb	___	___	___
Martiszus	___	___	___
Yeager	___	___	___
Licklider	___	___	___

Absent:_____

Exhibit A

INTERGOVERNMENTAL COOPERATION AGREEMENT

This Intergovernmental Cooperation Agreement is entered into this _____ day of _____, 2024, by and between the City of O'Fallon, Missouri, ("O'Fallon") and the City of Weldon Spring, Missouri, ("Weldon Spring"), two municipal corporations and political subdivisions of the State of Missouri (collectively: "the Cities" or "the parties") located in St. Charles County.

WHEREAS, O'Fallon and Weldon Spring are adjoining cities which share many common boundary points; and

WHEREAS, Weldon Spring Road and Technology Dr. are bisected by a common boundary line creating a roadway with split ownership as identified in Exhibit A; and

WHEREAS, Technology Dr. is in need of an asphalt mill and overlay; and

WHEREAS, O'Fallon, in accordance with law, has caused contract documents to be prepared and an advertisement calling for bids to be published, for and in connection with O'Fallon's annual asphalt program; and

WHEREAS, O'Fallon plans to renew the contract for the annual asphalt program including a mill and overlay of Technology Dr. ("the Project"); and

WHEREAS, Weldon Spring desires to include milling and overlaying of Technology Dr. on the O'Fallon Contract at the limits shown on Exhibit A; and

WHEREAS, the Cities are authorized by Sec. 70.220, RSMo., Supp 2010, to contract and cooperate with each other and their officials for the planning, development, construction, acquisition, or operation of any facility, or for a common service, when, as here, the subject and purposes of any such contract or cooperative action shall be within the scope of the powers of each City; and

WHEREAS, the governing body of each City, by its approval and authorization of this Agreement, hereby finds, determines and declares that the arrangements and terms of cooperative action hereinafter set forth respect and properly retain the sovereignty of each City within its jurisdiction and territorial limits in accord with Sec. 70.270, RSMo. 2010;

NOW, THEREFORE, for and in consideration of the mutual covenants and promises hereinafter set forth, the adequacy and sufficiency of which consideration is hereby acknowledged by each party, it is hereby agreed by and between O'Fallon and Weldon Spring as follows:

O'Fallon shall administer project management and inspections services for the project.

The Cities shall be responsible for the cost of work performed within each City's limits as shown on Exhibit B.

Weldon Spring shall deposit to O'Fallon the full amount of estimated work proposed within Weldon Spring limits within 60 days of execution of this contract.

The estimated proposed work within Weldon Spring limits is Forty-eight Thousand Seven Hundred Twenty-one and zero cents **($48,721.00).**

Should the final cost of the work be less than the estimate, O'Fallon will issue a refund to Weldon Spring for the remaining amount.

Should the final cost of the work be more than the estimate, O'Fallon will prepare a detailed invoice for the additional expenses from Weldon Spring.

In the event that the City of O'Fallon terminates this agreement, the City of Weldon Spring may at its sole discretion complete improvements within their limits, and any funds deposited by Weldon Spring and not used toward the project shall be returned to Weldon Spring.

In the event that the City of Weldon Springs terminates this agreement, the City of O'Fallon may at its sole discretion complete improvements within their limits, and any funds deposited by Weldon Spring and not used toward the project shall be returned to Weldon Spring.

[REMAINDER OF PAGE INTENTIAL LEFT BLANK]

IN WITNESS WHEREOF, the parties have entered into this Intergovernmental Cooperation Agreement, in the prescribed form and manner, effective as of the day and year of the signature of the last party to execute the Agreement.

Executed by the City of O'Fallon this _____ day of _____, 2024

Executed by the City of Weldon Spring this _____ day of _____, 2024

CITY OF WELDON SPRING, MISSOURI

By: _____

Title: _____

ATTEST:

By: _____

Title: _____

[Seal]

APPROVED AS TO FORM:

By: _____

Title: _____

ORDINANCE NO.:_____

CITY OF O'FALLON, MISSOURI

By: _____

Title: _____

ATTEST:

By: _____

Title: _____

[Seal]

APPROVED AS TO FORM:

By: _____

Title: _____

ORDINANCE NO.:_____

Exhibit B - Technology Drive Asphalt - Estimated Cost & Quantity

LINE ITEM	ITEM/DESCRIPTION	UNIT	23 Unit Price	Renewal Pricing 1	O'Fallon Est Qty	O'Fallon Cost	W. S. Est Qty	W.S. Cost
1	Mobilization	LS	$ 12,000.00	$ 13,200.00	0.80	10,560.00	0.20	$ 2,640.00
2	Changeable Message Sign	EA	$ 4,000.00	$ 4,400.00	1.60	7,040.00	0.40	$ 1,760.00
3	1 3/4" Full Width Milling	SY	$ 3.00	$ 3.30	10,900.00	35,970.00	2,650.00	$ 8,745.00
4	1 3/4" St Louis County Type C with Fiber	SY	$ 11.00	$ 12.10	10,900.00	131,890.00	2,650.00	$ 32,065.00
5	Full Depth Asphalt Repairs	SY	$ 88.00	$ 96.80	220.00	21,296.00	20.00	$ 1,936.00
6	6" White Acrylic Waterborne Paint - Crosswalk	LF	$ 7.00	$ 7.70		0.00		$ -
7	24" White Acrylic Waterborne Paint- Stop bar	LF	$ 11.50	$ 12.65		0.00		$ -
8	4" Yellow Acrylic Waterborne Paint	LF		$ 1.00	8,200.00	8,200.00	1,575.00	$ 1,575.00
						209,956.00		$ 48,721.00

HORNER & SHIFRIN

101 LAURA K DRIVE, STE. 101 • O'FALLON, MISSOURI 63366-3991
636-329-9296 • FAX 844-339-2910 • www.HornerShifrin.com

January 18, 2024

Mr. Michael Padella
City Administrator
City of Weldon Spring
5401 Independence Road
Weldon Spring, MO 63304
(636) 441-2110 ext 102
mpadella@weldonspring.org

Re: **Weldon Spring City Park Pond Improvements**
Proposal to Provide Surveying, Planning, and Professional Engineering Services
H&S Opportunity Number P230611

Dear Michael,

Horner & Shifrin, Inc., teaming with Planning Design Studio, LLC, is pleased to submit our proposal to provide planning, surveying, and professional engineering services for the proposed improvements centered around the City Park 0.85-acre pond in Weldon Spring, Missouri. We understand the scope of the project to include survey of the park in and around the pond, refinement of the park's Master Plan, and dredging considerations for the existing pond.

PROPOSED SCOPE OF SERVICES

SCOPE OF SERVICES

The City of Weldon Spring has invited Horner & Shifrin to provide a proposal for design of improvements to the 0.85-acre lake on the City's property at 5401 Independence Road. The Consultant Team will provide the following Scope of Services:

1.0 Data Collection

1.1 Attend a kick-off meeting with City representatives including the Park Board and/or Implementation Committee to review schedule and develop project goals. It is our understanding that the project objectives include lake dredging, stormwater management, and shoreline/bank restoration. The Consultant team will explore each of these objectives in more detail and define goals that can be measured. (PDS, H&S)

1.1.1 Lake Dredging –Removal recommendations will be considered to present to the City, along with methods of removal and alternatives for relocation of the removed material. (H&S)

1.1.2 Water and Aquatic Life Management – Provide options for the aeration of the lake, along with restructuring of the bottom of the lake for creation of channels and ridges for fish habitat.

Aeration may be in the form of a fountain or aerator, and electrical connections will be reviewed. (PDS)

1.1.3 Bank and Shoreline Restoration – Prioritize aesthetics and function of the lake for public recreation use (City Events, fishing, etc.) while using natural elements and native plant life. (PDS) This will include analysis of the stormwater runoff for potential improvements to the Lake Forebay, the drainage ditch, banks, and shorelines to combat erosion and improve aesthetics. (H&S) Additionally, the discharge path of the lake will be reviewed for aesthetics and improvements for opportunities for park users to interact with the environment. (PDS)

1.1.4 ADA Access and Connections to Existing Trail – Analyze the existing ADA access to the fishing dock and path surrounding the lake to recommend improvements or additions. Additional fishing locations do not need to be ADA compliant, but additional mulch paths around the north side of the lake may be requested. (PDS, H&S)

1.1.5 Fishing Dock Improvements – Investigate opportunities for improving the visual appearance of the dock including the possibility of expanding the dock along the lake berm. (PDS, H&S)

1.2 Gather project data from identified sources, previous efforts, and collect or develop the background data necessary to adequately analyze the existing conditions and develop alternative approaches to achieve the goals and objectives as follows:

1.2.1 Pond Dredging - Bathometric survey will be performed to understand the existing elevation of the lake bottom. This information will be cross-referenced with the original design plans for the pond to understand the amount of silts that exists on the bottom of the pond. (H&S)

1.2.2 Pond Hydrology – The Consultant Team will develop a pond hydrologic model for use in the analysis. In order to develop this information, drainage basin topography, drainage network data, soil types, and impervious surfaces, among other data will be used. The data will be used to delineate the drainage basin and determine the time of concentration and, ultimately, peak flow rates for design rain events. The pond forebay will be reviewed for existing working conditions and the design parameters for water quality. The pond outfall structure will be modeled to predict the peak stage, discharge flow rate and detention volumes for the various design storm events. One item that could be of high importance is whether this pond is subject to detention, water quality, and channel protection requirements by the City of Weldon Spring or St. Charles County. (H&S)

1.2.3 Pond Maintenance – The Consultant Team will also need to know the current pond and surrounding area maintenance procedures. Maintenance would include the schedule and amounts of chemical applications in the pond for emergent control as well as the schedule and amounts of fertilizer and weed control type chemical applications in the park. (PDS) This data will help inform water quality and habitat topics as well as identify potential non structural Best Management Practices (BMP) that may apply. (PDS, H&S)

1.2.4 Pond Miscellaneous – There may be other, miscellaneous data that is necessary such as data regarding the pond design, liners, and associated equipment. (PDS, H&S)

1.2.5 Channel Data – The Consultant Team will obtain existing geometric data for the channel (slope, width, depth) from topographic survey, as well as a sense of how the City would like the channel managed. (PDS, H&S)

1.2.6 Water Quality Data – Any previous pond water quality data will be needed for use in identifying water quality goals and developing methods to achieve those goals. (H&S)

1.2.7 Existing Dock Data – Any permits or design plans for the existing fishing dock. (H&S)

1.3 Site Visit and Field Work: Conduct field work as necessary to generate any data that is determined to be necessary but not otherwise available. Field work may include, but is not limited to the following:

1.3.1 Conduct a site visit and provide an overview analysis of the lake site within the context of City Hall Park. Prepare a written summary of the field observations. (PDS, H&S)

1.3.2 Additional topographic survey of the area around the lake, berm, fishing dock, and outfall channel. (H&S)

1.3.3 Bathometric survey to determine amount of material to be dredged from the lake bottom. (H&S)

2.0 Analysis, Findings, & Schematic Designs

2.1 Data Analysis – The Consultant Team will evaluate the data to help structure the various alternatives to achieving the goals and objectives. The data analysis phase includes schematic design of alternative approaches. The Consultant Team will initially select the alternatives that most practically meet the project goals. Design alternatives may include, but are not limited to the following:

2.1.1 Creating a natural rock channel discharge downstream of the pond – this may involve drops in the channel constructed to look like natural rock outcroppings. (PDS)

2.1.2 Emergent vegetation in the pond – A shallow shelf could be constructed in designated areas to create a location for emergent wetland and lake edge vegetation to grow. The vegetation would help with water quality, fish habitat, and geese control. (PDS)

2.1.3 Ledge rock pond edge – In areas where it is desirable for park patrons to be immediately at the water edge for fishing and viewing, a ledge rock edge may be preferred to accommodate the patrons and to provide immediate depth to the pond at the edge as a form of emergent control. (PDS)

2.1.4 Fishing habitat – Submerged habitat (grading, spawning shelves, submerged vegetation) may be added in association with those areas along the lake edge where patrons are encouraged to fish. (PDS)

2.1.5 Fishing Dock – Improvements or expansion of the current dock that encourages close interaction with the pond and fishing. (H&S)

2.1.6 Aeration Recommendations – Provide initial recommendations with regard to the fountain or aeration devices. (PDS)

2.1.7 Pond Dredging – Provide initial recommendations for dredging of deposited material, drying of material, and then relocation to another location on the property for future use or removal from the property. (H&S)

2.1.8 Perimeter Pathway Improvement Recommendation – Suggest improvements to perimeter pathway and include recommendations for possible mulch paths, benches, trash receptacles, etc. (PDS, H&S)

2.2 The Consultant Team will prepare an illustrative master plan drawing of the pond showing the proposed master plan improvements. Sketch sections and precedent images will be provided to help communicate the concepts shown on the master plan. (PDS) Schematic design plan for property to be included for engineering purposes. (H&S)

2.3 Work Session – The Consultant Team will present the results of the alternatives analysis to the Park Board, Implementation Committee, and staff at a joint work session meeting. The goal of this Work session will be the development of a list of program items, a schedule, and project budget which will be the basis of the Implementation Plan. (PDS, H&S)

2.4 Optional Public Engagement Forum – Conduct an optional public engagement forum. This forum will present the findings and concepts to the public. This public engagement forum will be structured as an open house or town hall meeting, with a designated time for a short presentation of findings and solicit input by the public. (PDS, H&S)

2.5 Optional Grant Assistance: The Consultant Team can prepare support graphics and narrative for grant funding applications. (PDS, H&S)

PROPOSED FEE

The proposed hourly-not-to-exceed fee for the above services is broken down as follows (see attached documents for additional backup information and hourly rates):

1. Horner & Shifrin, Inc. (H&S
    a. Civil/Site Schematic Engineering $29,400
    b. Dredging Schematic $2,000
    c. Ground topo around lake/outfall $7,400
    d. Lake bottom topo $2,800
    e. Reimbursable Expenses $100
2. Planning Design Studio, LLC (PDS)
    a. Master Planning $15,200
3. Optional Services
    a. Public Engagement Forum (H&S) $3,500
    b. Public Engagement Forum (PDS) $1,900
    c. Prep of Materials for Grants (H&S) $2,500
    d. Prep of Materials for Grants (PDS) $2,500

Park Schematic Design and Master Planning Services Total: ***$56,900***
With Optional Services: ***$67,300***

ASSUMPTIONS

1. Park design will follow Master Planning effort and cost discussions with City personnel. Based on schematic design cost opinions provided during this phase, the City will choose options for further design.
2. Electronic submittals to Owner and utility contacts are sufficient. No paper copies of plans will be submitted. If required, cost of copies will be reimbursed by Owner.

3. Regulatory floodplain and floodway will not be impacted by design.
4. Delineated wetlands will not be impacted by design.

SERVICES SPECIFICALLY EXCLUDED

The following services are not included in Engineer's scope of work for this project, unless specifically otherwise indicated herein, but can be provided for additional fee if desired:

1. Construction plans or final design of any park improvements.
2. Floodplain or floodway analysis.
3. Wetlands delineation or mitigation.
4. Landscape, irrigation, or outdoor lighting design.
5. Permitting or review fees.
6. Specifications book (JSPs will be provided).
7. Material Testing and Construction Inspection.
8. Attendance at Planning Commission or County Council meetings.

ADDITIONAL SERVICES

Additional services can be performed at current hourly billing rates.

SCHEDULE

We will work with the City to provide the requested services within a mutually agreeable schedule.

If this proposal is acceptable, please forward your standard contract for engineering services for review and approval. We greatly appreciate the opportunity to provide this proposal and look forward to working toward the successful completion of the project.

Respectfully Submitted,

April M Giesmann

April M. Giesmann, PE, CFM
Vice President, Business Unit Leader – Civil/Site
101 Laura K Drive, Suite 101
O'Fallon, MO 63366
636-439-2393 (direct) 314-374-5755 (mobile)
amgiesmann@hornershifrin.com

CITY OF WELDON SPRING

5401 Independence Road
Weldon Spring, MO 63304
phone: (636) 441-2110
fax: (636) 441-8495
www.weldonspring.org

MEMORANDUM

To: Mayor Licklider & Board of Aldermen Date: 1/23/24

From: Steve Lauer, City Planner

Subject: Readopting Chapter 500

Cc: Bill Hanks, City Clerk

The Bill for the updated Building Codes references Section 500.180 Mobile and Manufacture Home Code and Section 500.190 Explosives Code which were not updated by the County and the Property Maintenance Code Section 500.080 which will be updated later this year. These codes were included in the Bill to make sure that everything has been covered.

Included below are some key regulations from the updated International Building Codes and the attachment from St. Charles County which lists Key Changes to the St. Charles County Residential Code.

2021 International Building Codes – Key Regulations

1. Decks not exceeding 120 sq. ft. in size that are not 30 inches above grade and not attached to a dwelling and do not serve as an exit door are exempt from building permit requirements.
2. Any builder of a one- and two-family dwelling unit shall offer the purchaser the option to install an automatic sprinkler system at the purchaser's cost.
3. Reinforcement for foundation walls.
4. Public water supply is available when the nearest property line is located within 200 feet of a public water main.
5. Public sewer considered available when nearest property line is located within 200 feet of a public sewer.
6. Every permit issued shall become invalid unless such work authorized by such permit commences within 180 days after its issuance or if work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced.
7. An expired permit may be reinstated where approved by the code official.
8. All natural watercourses depicted on most current USGS 7.5-minute series topographic map shall be left in their natural state.
9. Sewage tanks shall be 100 feet from any private water

ST. CHARLES COUNTY
COMMUNITY DEVELOPMENT

Key Changes to the St. Charles County Residential Code

The Division of Building & Code Enforcement (BCE) has compiled the following list to help provide guidance on key changes to the St. Charles County Residential Code. This list does not contain every code change.

Building

- Permits are now required when more than three (3) windows and/or doors are being replaced. This permit will require the installation of at least battery-operated smoke and carbon monoxide alarms.
- Updated Wind Speed maps match IBC and ASCE 7 maps.
- An updated seismic map reflects the most conservative Seismic Design Category (SDC) based on any soil type and a new map reflects less conservative SDCs when Site Class A, B or D is applicable.
- Component and cladding wind pressures in Table R301.2(2) are updated for new design wind speeds and hip or gable roof profiles.
- The rated separation for two-family dwellings is 1 hour whether or not a lot line exists between units.
- The townhouse separation provisions now include options for using two separate fire-resistant-rated walls or a common wall.
- Floor assemblies meeting certain criteria are now required to be fire protected with ½ gypsum board, 5/8 wood structural panel or an equivalent.
- An emergency escape and rescue opening is no longer required in basement sleeping rooms where the dwelling has an automatic fire sprinkler system and the basement has a second means of egress or an emergency escape opening.
- Emergency escape and rescue openings require a clear 36-inch-wide path to a public way.
- The exemption for interconnection of smoke alarms in existing areas has been deleted.
- An engineered design is required for storm shelters.
- Minimum footing size tables are revised to more accurately reflect current practice.
- When using exception to R404.1.3.2, a soils report provided by a Missouri Licensed registered engineer is now required.
- Deck design now considers snow load, tributary area for footing and post height, and guard details.
- Specific requirements for deck guardrails were added.
- Braced wall lines must be placed on a physical wall or placed between multiple walls.
- A habitable attic is limited to one-half the area of the story below and the dwelling requires sprinklers.
- Cripple wall requirements apply only to exterior cripple walls.
- New girder/header tables have been revised to incorporate the use of #2 Southern Pine in lieu of #1 Southern Pine.
- New tables address alternative wood stud heights and the required number of full height studs in high wind areas.
- Appendix AQ containing Tiny Houses has now been adopted.

Energy

- Prescriptive insulation minimum R-values and fenestration requirements by component have been changed. Basement wall R-value is now 10ci or 13.

Mechanical/Gas

- A 30 percent reduction of airflow is permitted for balanced ventilation systems.
- Commercial gas cooking appliances are prohibited.

Plumbing

- The head pressure for a water test of DWV systems increased to 10 feet.
- Air vacuum testing is now permitted for plastic piping DWV systems.
- Section P2904 for dwelling sprinklers is expanded to more closely align with NFPA 13D.

Electrical

- A surge-protective device (SPD) is now required at the service panel.
- The number of receptacle outlets required for peninsular and island countertops in kitchens is determined by the area of the countertop surface.
- GFCI protection is now required for damp and wet locations not included in the other 10 areas requiring GFCI protection.
- AFCI protection is now required in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways.

BILL NO. _____ **ORDINANCE NO. _____**

****

AN ORDINANCE READOPTING CERTAIN SECTIONS OF CHAPTER 500 OF THE WELDON SPRING, MISSOURI, MUNICIPAL CODE TO BRING THOSE SECTIONS UP TO DATE WITH THE MOST RECENTLY ADOPTED BUILDING CODES AND REGULATIONS AS ADOPTED BY ST. CHARLES COUNTY, AND MATTERS RELATING THERETO

****

WHEREAS, St. Charles County is under contract with the City of Weldon Spring, Missouri, to enforce certain building codes within the City; and

WHEREAS, St. Charles County has recently adopted newer versions of these technical codes and in compliance with the contract that the City has with the County, the City also needs to adopt these same technical codes.

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF WELDON SPRING, MISSOURI AS FOLLOWS:

SECTION 1: The City does hereby readopt the following Sections of Chapter 500 to effectively adopt the most current versions of the St. Charles County Building Codes and similar regulations.

500.010: Adoption of Building Code of St. Charles County;
500.015: Adoption of Existing Building Code of St. Charles County;
500.020: Adoption of Mechanical Code of St. Charles County;
500.030: Adoption of Electrical Code of St. Charles County;
500.040: Adoption of Plumbing Code of St. Charles County;
500.050: Adoption of Fire Prevention Code of St. Charles County;
500.060: Adoption of Residential Code for One- and Two-Family Dwellings of St. Charles County;
500.070: Adoption of Private Sewage Disposal Code of St. Charles County;
500.080: Adoption of Property Maintenance Code of St. Charles County;
500.150: Adoption of Fuel Gas Code of St. Charles County;
500.160: Adoption of Energy Conservation Code of St. Charles County;
500.170: Adoption of Swimming Pool and Spa Code Code of St. Charles County;
500.180: Adoption of Mobile and Manufactured Home Code of St. Charles County;
500.190: Adoption of Explosives Code of St. Charles County.

SECTION 2: Penalty. Any violation of the Building Codes hereby adopted shall be deemed an ordinance violation, and the violator, upon conviction, shall be punished by a fine not exceeding five hundred dollars ($500.00) or by imprisonment in the City or County Jail not exceeding ninety (90) days, or by both such fine and imprisonment. Every day that any violation of this code shall continue shall constitute a separate offense.

BILL NO. _____ **ORDINANCE NO. _____**

SECTION 3: That this ordinance shall be in full force and effect from and after its enactment and approval.

READ TWO TIMES AND PASSED BY THE BOARD OF ALDERMEN OF THE CITY OF WELDON SPRING, MISSOURI, THIS _____ DAY OF _____ 2024.

_____
Donald D. Licklider, Mayor

Attest:

_____
William C. Hanks, City Clerk

BILL NO. _____ **ORDINANCE NO. _____**

To approve Bill

Motioned: _____
Seconded: _____

	Aye	Nay	Abstention
Baker	___	___	___
Clutter	___	___	___
Conley	___	___	___
Kolb	___	___	___
Martiszus	___	___	___
Yeager	___	___	___
Licklider	___	___	___

Absent: _____

TERRA ENGINEERING LTD.

CITY OF WELDON SPRING
"BACK" WOLFRUM ROAD SAFETY STUDY

PROJECT ADDRESS

Wolfrum Road from MoDOT
Right-of-Way to Whitmoor Dr.
Weldon Spring, MO

PREPARED BY

Michael C. Hutchinson, P.E., PTOE
Senior Traffic Engineer

PREPARED FOR

City of Weldon Spring
5401 Independence Rd
Weldon Spring, Missouri 63304

DRAFT REPORT DATE

December 14, 2023

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SECTION I

EXECUTIVE SUMMARY

This safety study was undertaken to evaluate the overall safety of the "back" stretch of Wolfrum Road in the City of Weldon Spring, Missouri. This included evaluating the traffic volumes, speeds, horizontal and vertical geometry, roadway width, edge drop-off, curve treatments, and signing along the route.

The analysis showed that the roadway geometry is deficient in several places due to the horizontal and vertical geometry not meeting MoDOT policy and design recommendations for the posted speed limit. This includes tight horizontal curves including a near 90-degree turn along the roadway and numerous vertical grades in the range of 10-15% which can be treacherous in wet or icy conditions. Additionally, the roadway widths were measured to be around 20-21 feet in width in most locations which equates to 10' lanes.

A review of the volumes and speeds collected by TERRA in 2022 and the City of Weldon Spring in 2023 show that a majority of drivers are exceeding the posted speed limit of 35 mph along Wolfrum Road. Over 75% of vehicles were measured to be traveling above the speed limit, with the majority of the drivers between 35-45 mph but many in the 45-50 range and some recorded as high as 70+ mph. These increased speeds with the geometric deficiencies create potential for higher crash rates along the corridor.

A review of the signing along Wolfrum Road shows that the overall signing plan is has improved over the last 15 years as many signs which were not in place have been added. However, it was noted that a number of signs are not functioning as intended as some signs have been struck by vehicles and are leaning to the side or missing completely. Other signs are obfuscated by dirt and debris, weathered, have reduced retroreflectivity, or are small and at locations where oversized signs should be considered for better driver identification. Also, there are several locations which do not provide advance signing or appropriate curvature warning signs.

A review of the crash history over the last 10 years shows 28 total crashes along Wolfrum Road which include 1 fatality and 14 injuries. A majority of these crashes involved vehicles leaving the roadway surface and striking fixed objects and 78% of the crashes occurred at curves. Numerous factors were identified as contributing to the crashes including speeds, pavement conditions, inattentiveness and inability to recover control when leaving the pavement surface. TERRA can investigate and recommend to Weldon Spring various treatments which could be implemented to reduce crashes and improve safety.

SECTION II

BACKGROUND INFORMATION

TERRA Engineering was contracted by the City of Weldon Spring to provide a safety evaluation of "Back" Wolfrum Road which is a 2.5-mile long section of roadway stretching from near Whitmoor Drive on the east to the location where the roadway hits the Missouri Department of Transportation (MoDOT) Right-of-way along Interstate 64 to the west. The roadway is a two-lane section with one lane in each direction of travel and is generally considered a "rural" roadway section.

The roadway through this section has a double yellow centerline stripe down the middle but does not provide edge striping near the outside of the lanes. Shoulders are not present at the edge of pavement. Much of the roadway length contains significant drop-offs at the edge of pavement which make it difficult for a vehicle whose tire has gone off the edge to reestablish control. The roadway has been overlaid numerous times which has raised the pavement elevation making this edge drop-off condition worse.

TERRA estimated the horizontal and vertical alignments along Wolfrum Road using available Light Detection and Ranging (LiDAR) data to develop approximate alignments. The Wolfrum alignment features some drastic vertical changes throughout the length with steep slopes through the study area. The horizontal alignment features numerous curves and reverse curves and a significant approximately 90-degree turn in the roadway near the Strathalbyn Farms Club and Old Wolfrum Road.

TERRA collected crash data along this section of Wolfrum Road from 2013 through 2023 which was available on the Missouri State Highway Patrol reporting website. This site provides data in reported crashes which were responded to by public safety officials. It is important to note that this database may not include all crashes because if the crash is not reported to police, then no report is filed, and they are not included in the database. This may include some minor crashes, single car crashes or cars which may go off the road but only require a tow truck to get back on the road. It is expected that there are more crashes than reported in the database, however the analysis can only consider the information which is public record and available for evaluation.

SECTION III

ROADWAY GEOMETRY

Wolfrum Road is functionally classified as a major rural collector. Geometric design features should be consistent with a design speed appropriate for the roadway. TERRA's team analyzed both the horizontal and vertical geometry to determine whether geometric conditions are present that may be contributing to the crashes. Wolfrum Road has a posted speed of 35 miles per hour (mph) which is an important factor for defining applicable design policy and standards.

For this project, TERRA utilized LiDAR data from the Missouri Spatial Data Information Service (MSDIS). The LiDAR data was utilized to generate a three-dimensional surface approximating the elevation of the roadway throughout the project limits. TERRA also approximated the horizontal roadway centerline of Wolfrum Road using aerial imagery.

Horizontal Geometry

According to the Engineering Policy Guide (EPG) published by the Missouri Department of Transportation (MoDOT), the minimum horizontal length of curve should be 525 feet for posted speed of 35 mph. Most curves along Wolfrum Road do not meet this policy. The shortest curve length is 127.8 feet, located at the intersection of Wolfrum Road and Willow Lake Ct. The only curve within our project limits that meets policy is approximately 500 feet west of the intersection of Wolfrum Road and Old Wolfrum Road, which is documented to be 813.8 feet.

The minimum radius of curvature with normal crown is also included in this analysis. The minimum radius of curvature is crucial for operation with tire friction, lateral acceleration, and as a margin of safety against skidding and vehicle rollover. Superelevation rate is unable to be determined since record plans or topographical survey will be needed for this part of the analysis. The minimum radius of curvature with normal crown for the posted speed of 35 mph is 454 feet per the American Association of State Highway and Transportation Officials (AASHTO) *"A Policy on Geometric Design of Highways and Streets"* (Green Book) Table 3-13b. There are 5 locations within our project limits that do not meet policy (refer to plan and profile exhibit in Appendix A):

1. STA. 31+07 to STA. 34+38: 208' horizontal curve radius
2. STA. 89+13 to STA. 91+55: 143' horizontal curve radius
3. STA. 91+55 to STA. 94+85: 358' horizontal curve radius
4. STA. 94+85 to STA. 97+75: 248' horizontal curve radius
5. STA. 125+60 to STA. 127+23: 139' horizontal curve radius

Note that, if present, superelevation may be alleviating these horizontal curve conditions. During a field visit, TERRA observed that superelevation is present on several of the curves. There is a possibility that the listed horizontal curve radii are acceptable if proper superelevation is present. This analysis should be revisited when detailed topographic survey data is available.

Vertical Geometry

Wolfrum Road has rolling terrain. In rolling terrain conditions, natural slopes consistently rise above and fall below the road or street grade, and occasional steep slopes offer some restriction to normal horizontal and vertical roadway alignment. The maximum grade for 35 mph is 9% per AASHTO Green Book Table 6-2. There are six locations within the project limits along Wolfrum Road that do not meet policy (refer to plan and profile exhibit in Appendix A):

1. STA. 26+00 to STA. 32+00: 14.6%
2. STA. 40+00 to STA. 43+00: -15.5%
3. STA. 47+00 to STA. 48+50: 9.5%
4. STA. 51+00 to STA. 55+00: 14.0%
5. STA. 82+00 to STA. 85+00: 10.7%
6. STA. 115+00 to STA. 120+00: 11.4%

The crest and sag vertical curves are also taken account for this analysis. The major design control for crest vertical curves is the provision of ample sight distances for the design speed. The rate of change of grade should be kept within tolerable limits. This consideration is most important in sag vertical curves where gravitational and vertical centripetal forces act in opposite directions. Sag vertical curves need to provide sufficient headlight sight distance. To determine the appropriate sight distance, the value of K, or length of vertical curve per percent change in A, the algebraic difference in grade, needs to be determined. Per MoDOT EPG 230.2.8, the appropriate crest vertical curve K value and sag vertical curve K value are 29 and 49 for 35 mph, respectively. The following summary lists the locations of crest and sag vertical curves within the project limits that do not meet the design policy for 35 mph.

Crest vertical curve K value is less than policy value (29):

STA.	K Value
31+66	27
40+50	16
46+97	10
77+97	18
96+10	22
105+50	22
120+41	13
125+50	28

Sag vertical curve K value is less than policy value (49):

STA.	K Value
2+17	33
24+30	24
43+85	16
49+63	17
74+91	17
81+57	15
92+31	28
100+39	13
109+48	8
114+59	11
122+70	7

According to the AASHTO Green Book Table 3-34, the minimum vertical curve length for both crest and sag is 100 feet. Two locations do not meet this policy (refer to plan and profile exhibit in Appendix A):

1. STA. 109+00 to STA. 111+00: 81' vertical curve length
2. STA. 123+00 to STA. 124+00: 72' vertical curve length

These horizontal and vertical deficiencies are a possible contributor to crashes on this portion of Wolfrum Road. In some cases, advisory speed warning signs are present to address geometric constraints. The geometric deficiencies also emphasize the significance of the measured speeds that exceed the posted speed limit.

Clear Zone

The "clear zone" concept is the road design principle of providing an unobstructed, traversable area beyond the edge of the traveled way for the recovery of errant vehicles. It is located immediately adjacent to the traveled way.

The MoDOT EPG policy guidance notes that clear zone guidelines should be used when the design speed of the roadway is 45 mph or more. With a posted speed of 35 mph on this portion of Wolfrum Road, the clear zone policy is not strictly applicable. However, the principles of the clear zone concept are always worth considering for driver safety.

Wolfrum Road, within the project limits, has been observed to have a drop off at the edge of pavement due to a lack of shoulder, overlays over the years, and erosion. Errant vehicles may not be able to recover if their wheels fall off the edge. Additionally, the character of this rural section roadway is such that trees have grown to be close to the roadway edge. While this cultivates an aesthetic driving experience, the trees represent hazards within the roadway clear zone, potentially threatening the safety of drivers and passengers of errant vehicles.

The AASHTO Roadside Design Guide (RDG) acknowledges that the most cost-effective improvement that can be made on low-volume roadways is providing adequate signing and marking. However, the RDG defines "low volume" roadways as having less than 400 vehicles per day. As noted in the following section, this portion of Wolfrum Road has over 900 vehicles per day on average. The RDG recommends a clear zone of 10' to 14' from the edge of traveled way, depending on the adjacent foreslope (per RPG Table 3-1). Where feasible and reasonable, Wolfrum Road should be modified to provide a minimum of 10' clear zone.

SECTION IV

TRAFFIC DATA AND OBSERVED SPEEDS

TERRA collected traffic data for the City of Weldon Springs from November 11, 2022, to November 13, 2022, on Wolfrum Road near the 300 Wolfrum Road address at approximately Station 60+00. This section of Wolfrum road is on a straight section of roadway with a moderate slope of around 3%-4% between two curves. The data collected included vehicle volumes and vehicle speeds and were collected over a period of 24 hours on each of the three days for a total of 72 hours of data. Table 1 summarizes the Average Daily Traffic (ADT) measured on Wolfrum Road for each day in each direction and the total volume. The daily totals were summed and divided by three to get an average traffic and it was noted that the ADT was 913 vehicles per day (vpd).

The recording devices utilized also estimated the speeds of each vehicle based on the time that the vehicle spent crossing over the sensor. This included the approximate length of the vehicle and the speed it was travelling. Figure 1, Figure 2, and Figure 3 graphically shows the distribution of vehicle speeds measured on Wolfrum Road. The average speed for all vehicles was 41 miles per hour (mph) with 85% of the recorded vehicles exceeding the posted speed limit of 35 mph. 2.5% of vehicles were traveling in excess of 55 mph. The 85th percentile speed was 47 mph.

TERRA also classified vehicle types during traffic data collection. Of the total classified vehicles, 69% were passenger vehicles, 29% were vans and pickups, 2% were busses and trucks, and 1% were tractor trailers (total is 101% due to rounding).

Table 1 – Average Daily Traffic (ADT) on Wolfrum Road

	Westbound ADT	Eastbound ADT	Total ADT
Tue 11/8/2022	369	408	777
Wed 11/9/2022	470	499	969
Thur 11/10/2022	453	541	994
Average	**431**	**483**	**913**

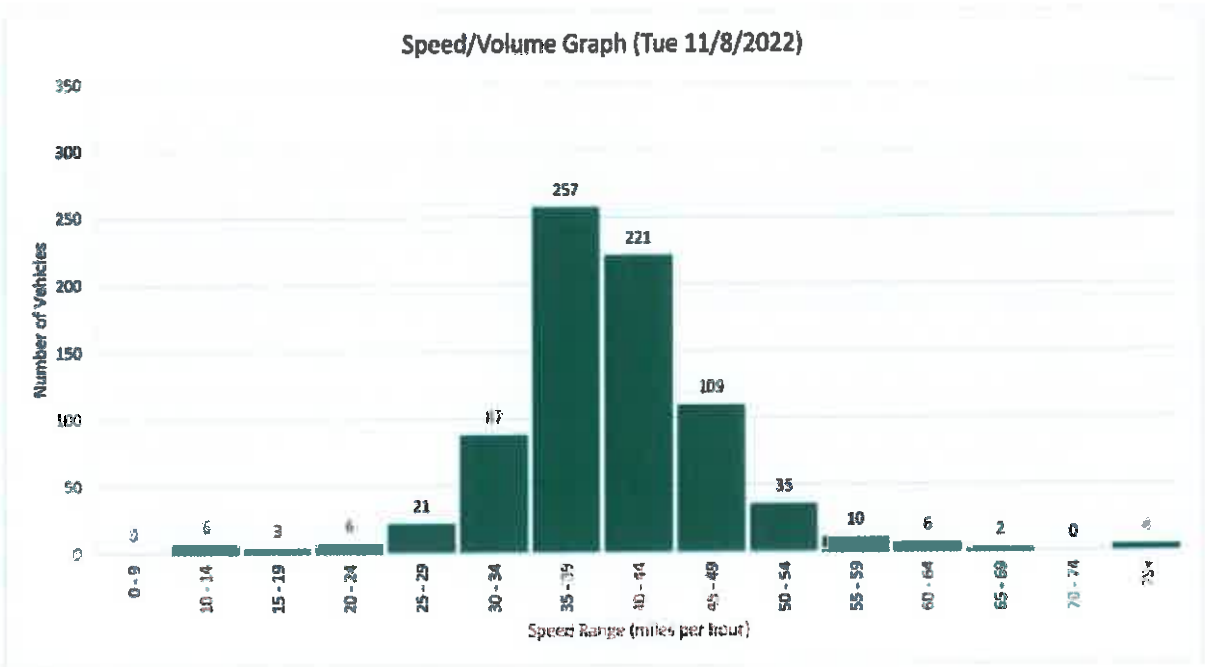


Figure 1 - Speed and volume data for 11/08/2022.

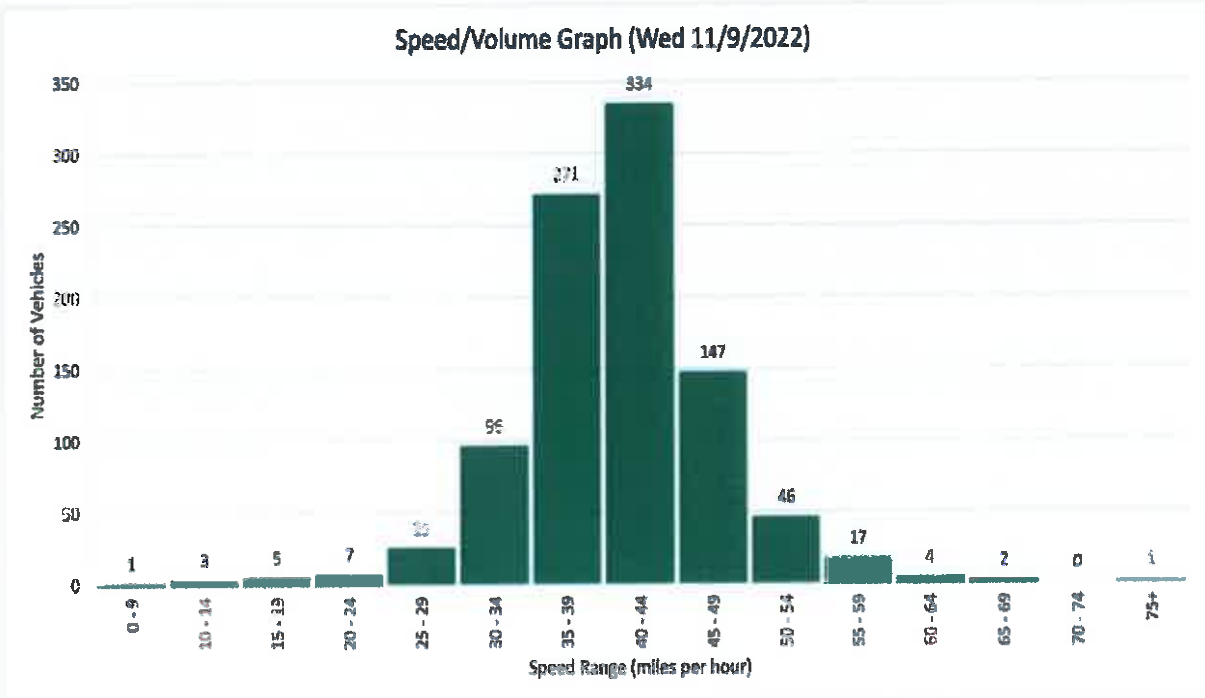


Figure 2 - Speed and volume data for 11/09/2022.

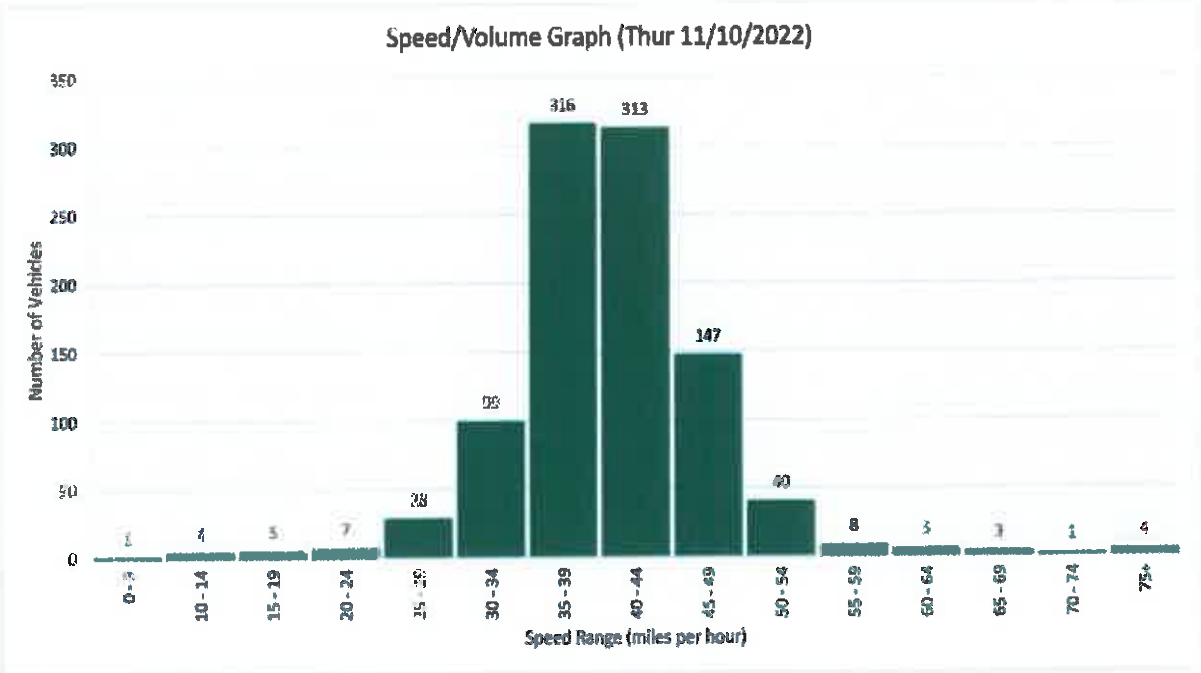


Figure 3 - Speed and volume data for 11/10/2022.

In reviewing the figures, it shows that a majority of the vehicles on each day of observation appear to be traveling within the bars which represent the speeds of 35-45 mph. However, it is also noted that 100-150 vehicles per day are travelling between 45-49 mph which is greater each day than those traveling between 30 mph and 34 mph. Finally, it was observed that around 40 per day are between 50-55 mph, which is an excessive speed for a roadway with approximately 10-11' foot lanes with no shoulders and significant drop-offs at the edge of pavement.

In addition, the City of Weldon Springs also collected speed data for seven (7) days on Wolfrum Road at the speed limit sign near Station 48+00 from September 11, 2023, to September 17, 2023. From the provided speed data, TERRA constructed a histogram of the speeds observed along Wolfrum Road. **Figure 6 - Speed/Volume graph for 9/13/2023.**Figure 6 through Figure 10 show the number of vehicles in each 5 mile per hour (mph) bins that vehicles drove. Figure 11 shows the measured speeds for the entire duration of the study.

From the data provided by Weldon Springs, 74% of vehicles traveled faster than the speed limit of 35 mph, 41% traveled faster than 40 mph, and 14% traveled faster than 45 mph.

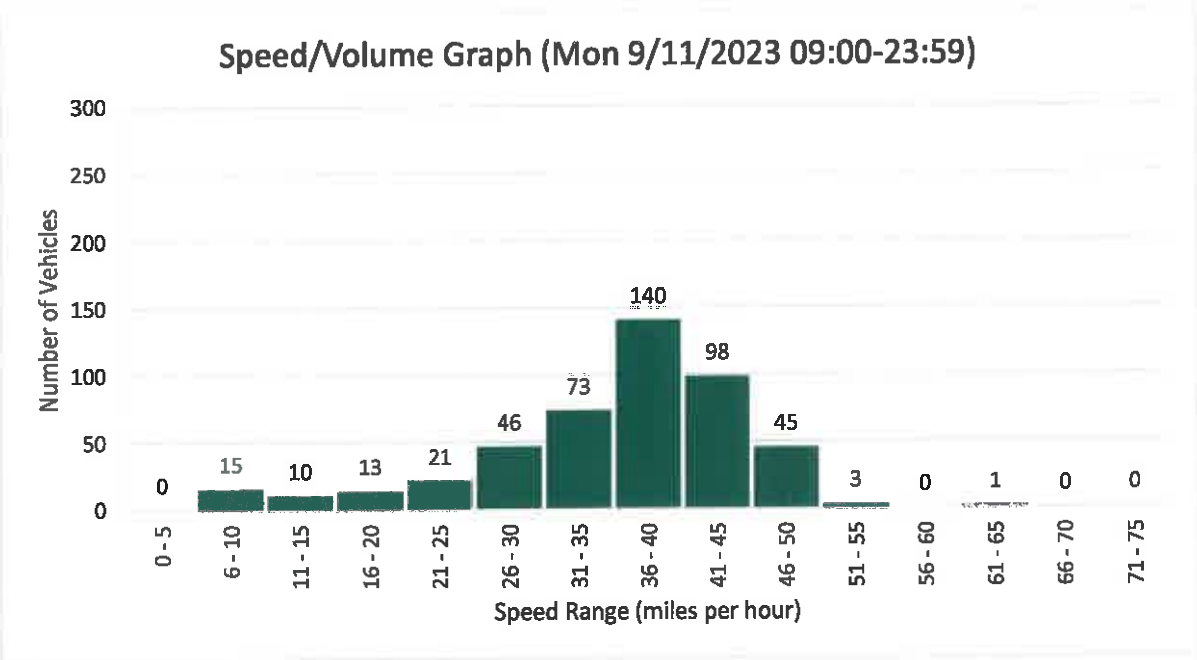


Figure 4 – Speed/Volume graph for 9/11/2023.

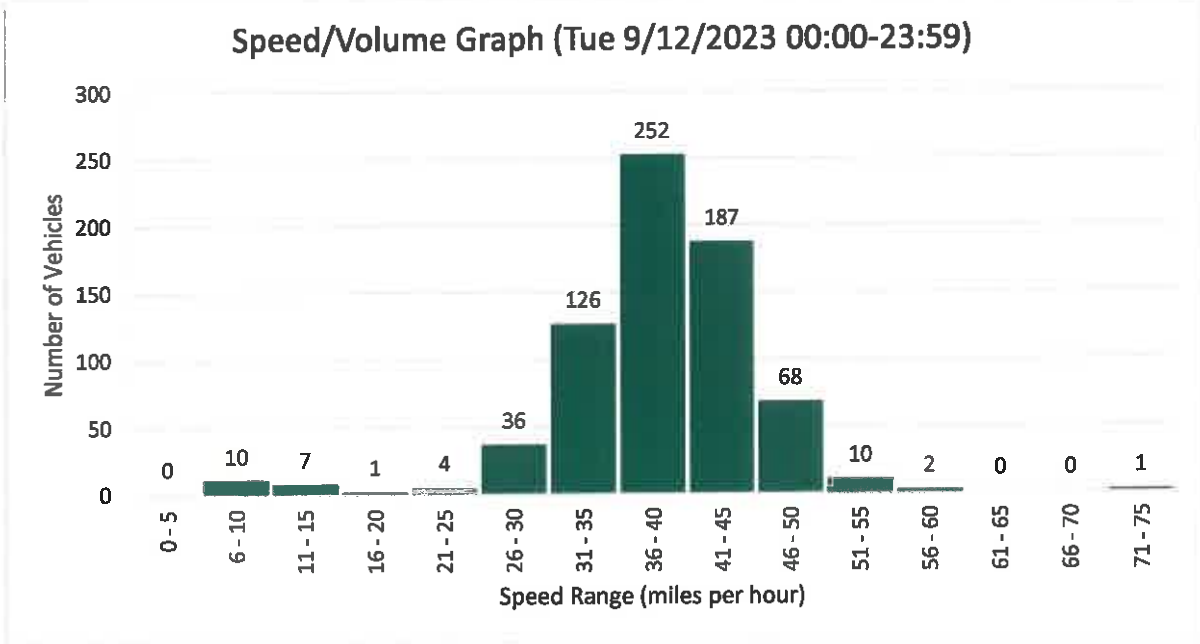


Figure 5 - Speed/Volume graph for 9/12/2023.

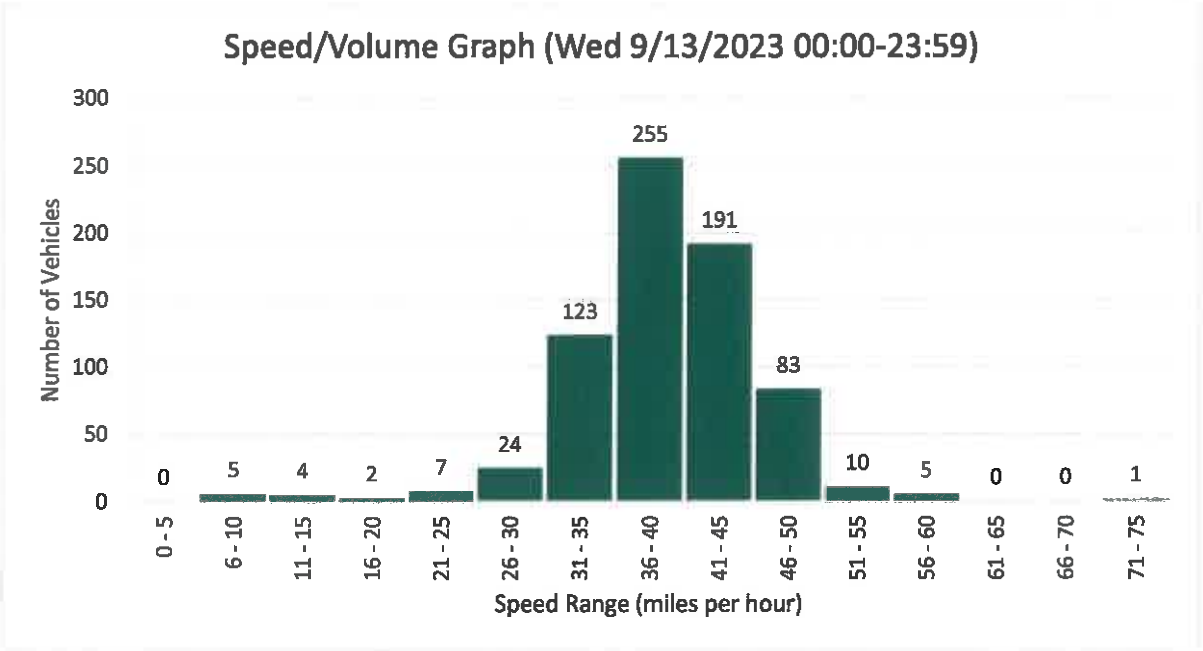


Figure 6 - Speed/Volume graph for 9/13/2023.

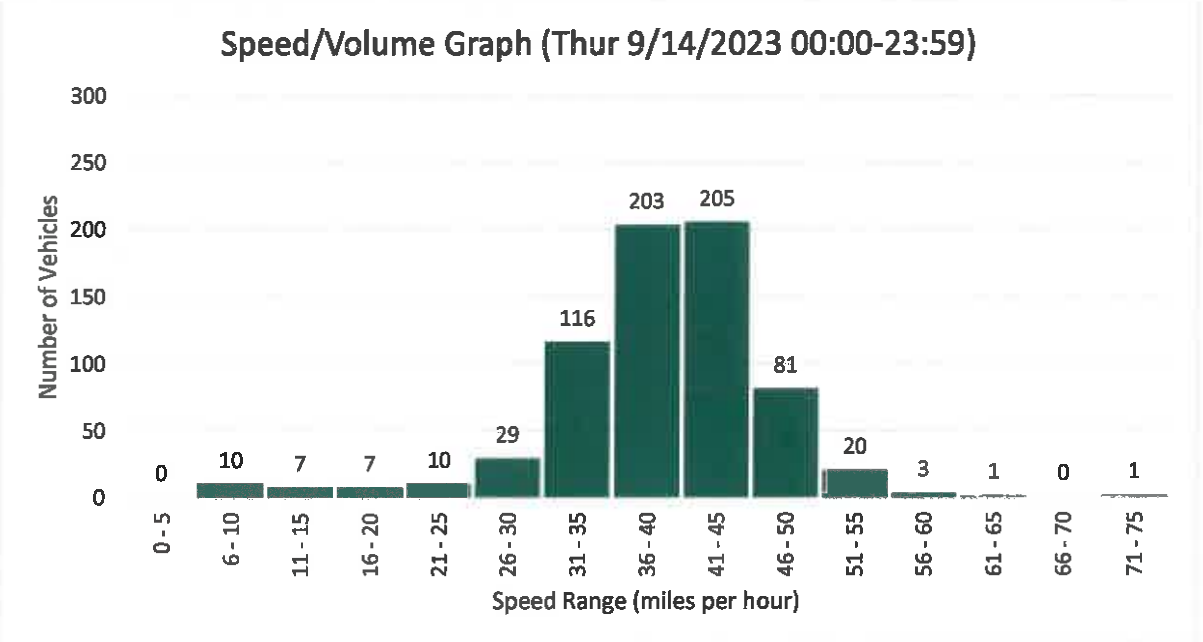


Figure 7 - Speed/Volume graph for 9/14/2023.

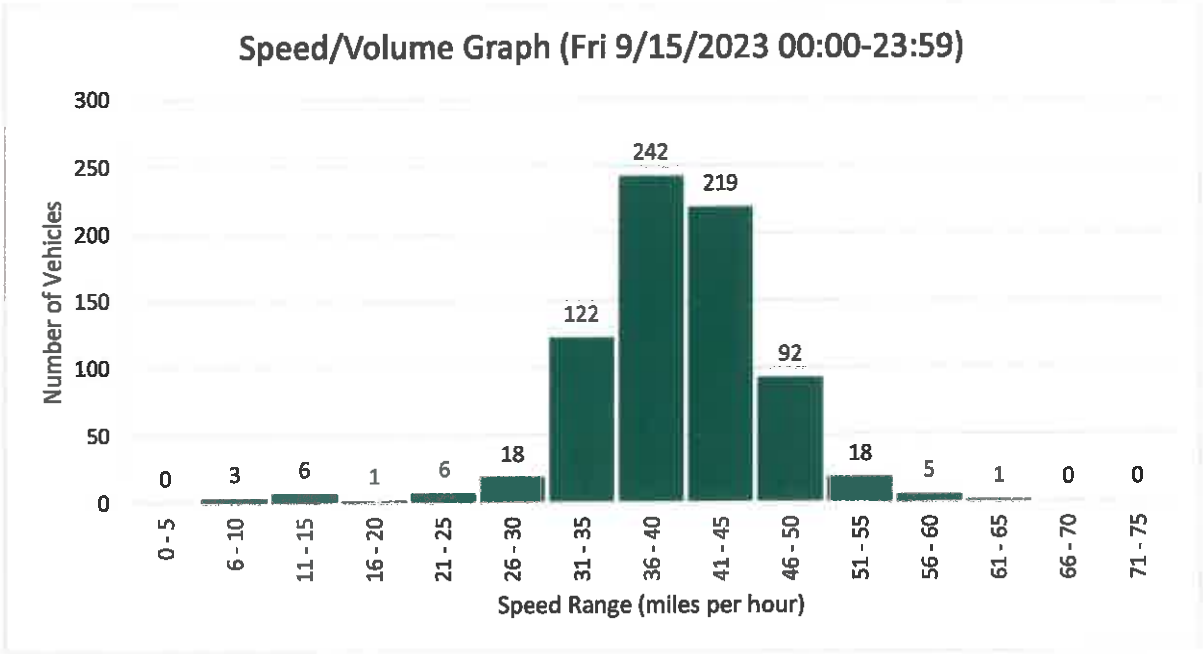


Figure 8 - Speed/Volume graph for 9/15/2023.

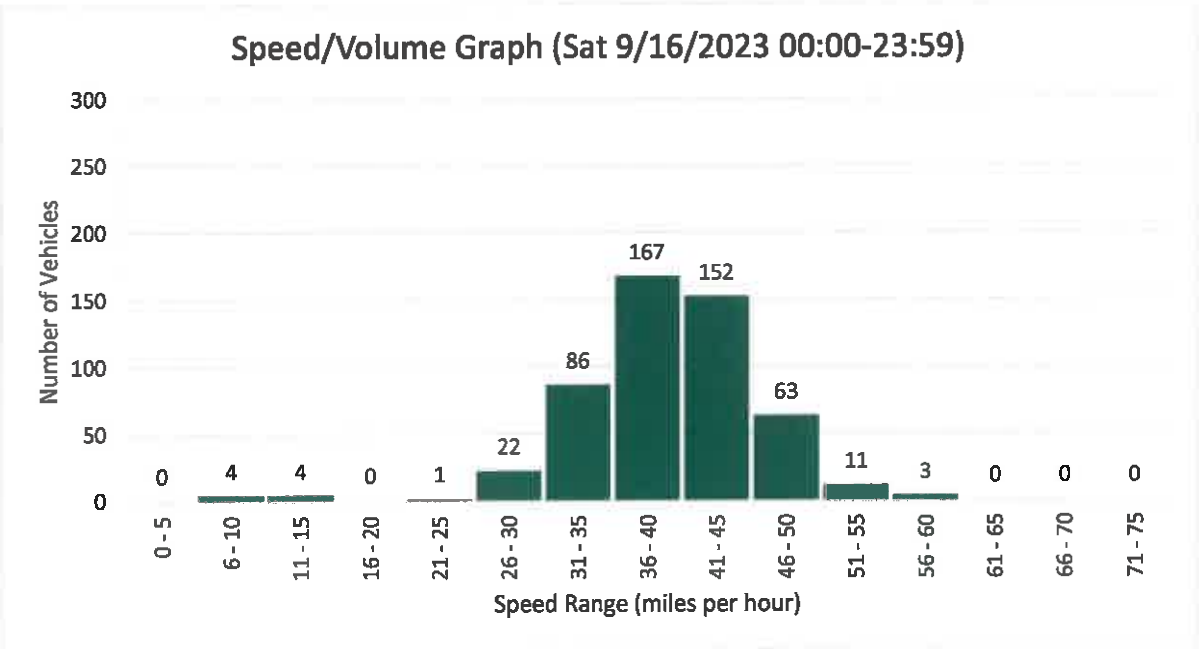


Figure 9 - Speed/Volume graph for 9/16/2023.

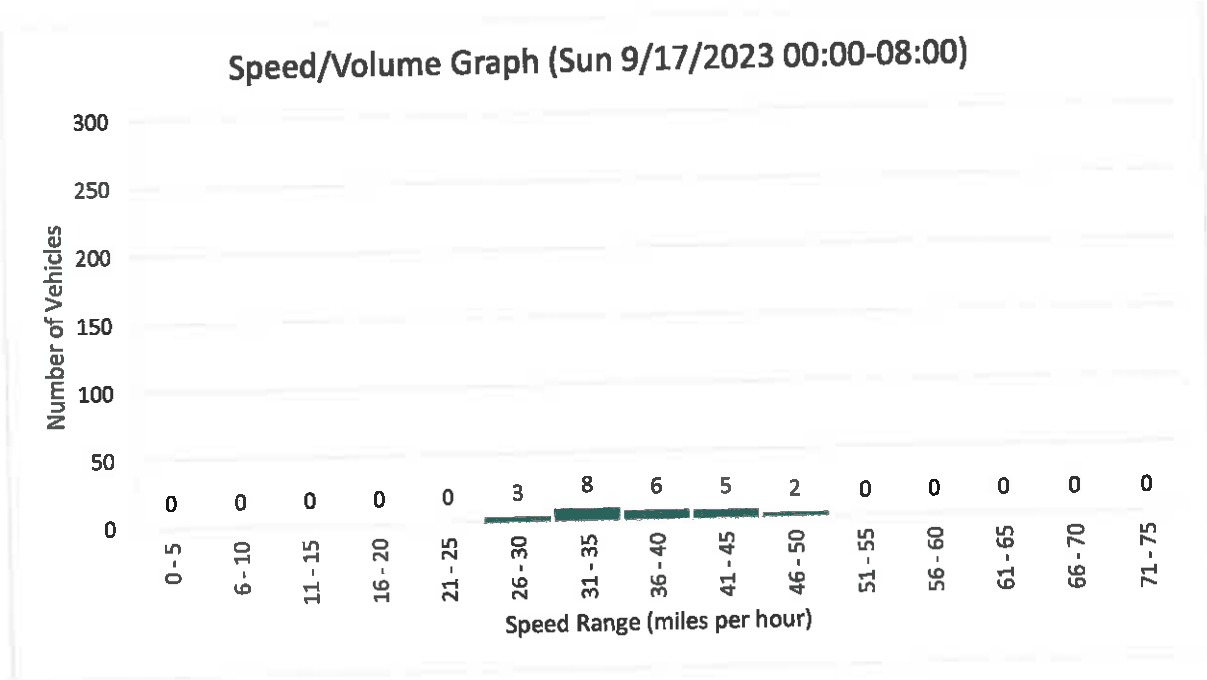


Figure 10 - Speed/volume graph for 11/17/2023

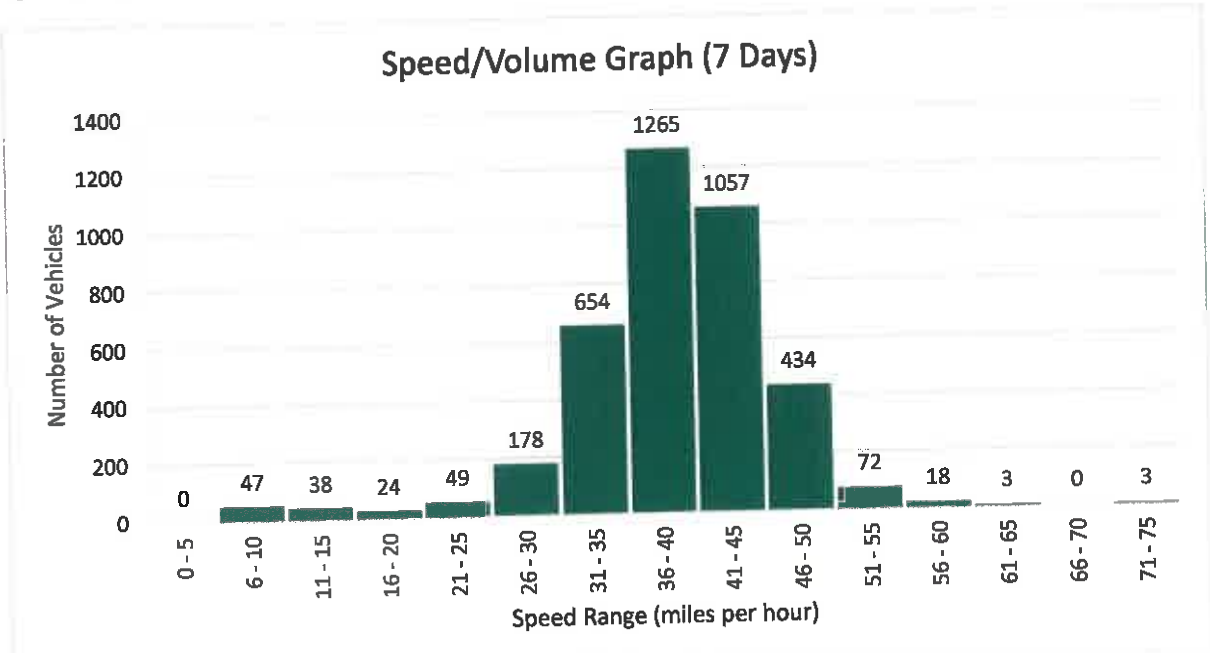


Figure 11 - Speed/Volume graph for entire 7-day data collection duration.

The distribution of the graphs is similar to what TERRA's counts observed with the bulk of the vehicles traveling between 35-45 mph, but a significant number of vehicles traveling in the 45-55 mph range. Although the totals show a higher percentage of drivers in the 31-35 mph range than in the TERRA count, which may be due to the feedback from the radar-controlled speed readout which shows drivers their speed or the location of the count.

SECTION V

CRASH DATA

TERRA Engineering reviewed the information provided in the Missouri State Highway Patrol (MSHP) website for crash reporting data. This data includes all the reported crashes throughout the state which have reported crashes which are recorded in a police record collected by either the State Highway Patrol, County Police, or local police within a jurisdiction. In some locations this may include reports from multiple agencies, however in the case of Wolfrum Road all reports were only provided by St. Charles County Police as the City does not have its own department and the roadway is outside of the area where State Police would respond.

The website allows the user to input the parameters for a specific request within the system to return search results tailored to meet their query. The request submitted by TERRA included the dates of January 1, 2013, through October 30, 2023, to provide the last 10 years of available data. The website containing the crash data is available at www.mshp.dps.missouri.gov/TR15Map/Search. A map showing the query and the crashes within the immediate area of Wolfrum Road is shown in Figure 12.

Figure 12 - Screenshot of Crash Query from MSHP website.

It is important to note again that if the police are not contacted then no report is filed, and it would not be reported within the website, therefore the expected crashes which occurred is likely higher than reported. As an example of crashes not being reported, the City of Weldon Spring staff discovered an abandoned car located along the side of Wolfrum Road on November 17, 2023. TERRA staff ran a new query on the MSHP website in December 2023 and there were no reported crashes listed on the website, however this car was significantly disabled and not able to be driven from the site. A photo of this crash is provided in Figure 13.

Figure 13 - Unreported Crash on November 17, 2023.

Investigating the available data, TERRA reviewed the data exported from the MSHP website to find all of the crash reports which detailed crashes which occurred on Wolfrum Road. This initially included all crashes along Wolfrum Road. This data was then cross referenced with the map to develop a list of only the crashes which occurred within the 2.5-mile study area. The list exported from the website was then cut down to only crashes which could be verified within the study area which included a total of 28 crashes which specifically occurred on Wolfrum Road.

The next step in the process was to evaluate the crashes that occurred and to look for potential underlying causes for the crashes which showed trends or patterns which imply that there are deficiencies along the roadway or other contributing factors which need further investigation.

Looking at the total list of crashes, the list shows that three (3) of the crashes occurred with a vehicle striking an animal, five (5) of the crashes involved a vehicle striking another vehicle in motion or on the roadway surface, two (2) vehicles overturned, while the remaining 18 crashes involved vehicles striking fixed objects outside of the roadway surface. It should be noted that both vehicles which overturned also left the roadway surface and one of the vehicles which hit another vehicle continued off the road after crossing the centerline. This brings the total vehicles which left the pavement to 21 of the 28 total accidents or 75% of the overall crashes.

The first evaluation considered the lighting conditions along the roadway. While lighting the entirety of Wolfrum Road would not be something which would be considered, there are other factors affected by the amount of lighting along the roadway, such as the reflectivity of the signs which may need evaluation. The crash reports provide information on whether the road was lighted or dark and this information was pulled from the reports and is shown in Table 2.

Table 2 – Total Crashes based on Lighting Conditions by Year

Year	Daytime	Night	Day/Night Ratio	Total Crashes
2013	3	2	40%	5
2014	0	1	100%	1
2015	1	7	88%	8
2016	1	0	0%	1
2017	1	0	0%	1
2018	0	2	100%	2
2019	0	1	100%	1
2020	0	2	100%	2
2021	2	1	33%	3
2022	1	1	50%	2
2023	1	1	50%	2
Total	10	18	64%	28

The data shows that overall that 64% of the total crashes occur at night. Looking at the outcomes of the 18 crashes which occurred at night, it appears that two (2) of them were caused by striking an animal, three (3) involved striking other vehicles on the roadway, while the remaining 13 involved drivers leaving the roadway surface on the right or left

side. Of the 10 crashes occurring during the daylight hours, one (1) involved striking an animal while the other nine (9) involved vehicles leaving the roadway surface.

The next evaluation looked at the pavement conditions at the time of the crash. The police reports of the individual crashes include a check box which allows the documenting officer to record the pavement condition at the time of the incident. The results from the crashes based on the pavement condition is provided in Table 3.

Table 3 - Total Crashes based on Pavement Conditions by Year

Year	Dry	Wet	Snow/Ice	Unknown	Total
2013	2	0	2	1	5
2014	1	0	0	0	1
2015	3	1	4	0	8
2016	0	1	0	0	1
2017	1	0	0	0	1
2018	2	0	0	0	2
2019	0	1	0	0	1
2020	1	0	1	0	2
2021	1	1	1	0	3
2022	2	0	0	0	2
2023	2	0	0	0	2
Total	15	4	8	1	28
%Total	54%	14%	29%	4%	

The results show that over half of the crashes occur during dry conditions where there were no additional frictional causes which could have contributed to the crash. It was noted that only four (4) overall crashes occurred when the pavement was wet, which assumed to only be from rain. There were twice as many crashes, eight (8) which occurred on icy of snow-covered pavement. Descriptions of these crashes revealed that a number of these ice related crashes occurred at the same location on the same day where a crash occurred, and additional vehicles then crashed into the original incident as they slid on the ice which caused the initial crash into the stationary vehicles. Another incident occurred where vehicles got stuck going uphill on one of the steeper slopes and vehicles slid backwards down the hill into the opposing lanes of traffic and hit ither vehicles. It was noted that all crashes which involved motor vehicles crashing into other vehicles occurred on wet or icy pavement.

The next evaluation of the trips looked at the injuries that occurred in the reported crashes. For this evaluation we separated the crashes into those which involved fatalities, crashes with reported injuries and crashes with only property damage without injuries. When fatalities or injuries occurred, the total number of injuries were reported for each crash.

For example, in 2019 there was only one (1) injury crash, but four (4) passengers in the car were injured, so the number of injuries can exceed the number of crashes. The results of the injury evaluation is provided in Table 4.

Table 4 – Injury Crashes by Year							
Year	Fatal Crashes	Number of Fatalities	Personal Injury Crashes	Number of Injuries	Property Damage Only	Total Crashes	Total Injuries
2013	0	0	0	0	5	5	1
2014	0	0	0	0	1	1	0
2015	0	0	1	2	7	8	2
2016	0	0	0	0	1	1	0
2017	0	0	1	1	0	1	1
2018	0	0	2	2	0	2	2
2019	0	0	1	4	0	1	4
2020	1	1	0	0	1	2	1
2021	0	0	2	2	1	3	2
2022	0	0	1	1	1	2	1
2023	0	0	1	1	1	2	1
Total	1	1	9	13	17	28	15

Reviewing the data in the reports, one fatality occurred which was near the intersection of Patriotic Trail and Wolfrum Road which involved a vehicle leaving the roadway at the intersection after failing to make a turn at hitting a tree. It was noted in the report that the other nine (9) crashes which involved an injury of some type, all the vehicles had the wheels leave the roadway surface at some point during the crash and either overturned or struck a fixed object.

Most of the injury crashes were single car accidents with only one occupant of the vehicle, however one crash occurred where four occupants were injured and another had two injuries during the same incident.

Overall, about 32% of the crashes involved an injury of some type during the crash with varying levels of severity.

SECTION VI

ROADWAY SIGNING

TERRA reviewed the signing along the Wolfrum Road corridor to evaluate the existing signing plan and how it performs from a safety perspective. This included both a cursory review of the signs as shown in Google Streetview and then an evaluation in the field to physically observe the signing. An overall exhibit of the signing was prepared for the corridor and is included in Figure 15.

Several items were noted in the field review of the sign conditions and the signing locations. The first thing noted was the number of signs which were damaged or missing.

Working from west to east along Wolfrum Road the first location of concern is on the curve located just west of Wolfrum Road and Patriotic Trail there are several chevron signs (W1-8) in place to denote the curvature in the roadway, however there are two at the beginning of the curve and then a large gap in the signs before reaching the final chevron. This gap is either due to poor sign placement or could be because signs were hit by cars leaving the roadway surface and are no longer in place. As shown in Figure 14 there is a chevron sign in the foreground but then a large gap to the next sign in the background of the picture.

Figure 14 - View along westbound Wolfrum Road approaching Patriotic Trail.

Figure 15 - Existing Signing Map.

Panning back and looking at the foreground chevron from further away in Figure 16, it is clear that additional chevrons are needed to delineate the curvature in the roadway.

Figure 16 - Another picture approaching the curve traveling westbound.

Figure 17 - Back of westbound facing chevron.

Another thing noted at this curve location is that the chevrons are single sided with the signs only facing westbound and no chevrons providing guidance for eastbound traffic. As noted in Figure 17 the post blocks part of the back of the sign and this particular sign is leaning over slightly as if it has been struck by something. This makes this sign less effective at helping to guide motorists and harder to be seen along the roadway. It was noted that this specific curve was the location of two (2) of the injury crashes which occurred along Wolfrum Road.

The next signing location worth discussing is at the intersection of the Wolfrum Road and Patriotic Trail. The one fatal crash that occurred at this intersection when a car failed to stop or turn and went through the intersection southbound on Patriotic Trail and struck a tree. The sign located at the end of the roadway is the W1-7 sign as shown in **Error! Reference source not found.**.

Figure 18 – Sign W1-7 at end of Patriotic Trail.

This sign is installed at the far side of a T-intersection in line with the view of traffic coming from the stem of the T-intersection. The standard size of this sign is to be 48 inches wide by 24 inches in height, which appears to be the size installed, however larger versions of this sign can be 60 inches wide by 30 inches tall to make the sign more noticeable to drivers. With the gap in the trees which may not indicate the end of the roadway, it might be advisable to install a larger sign at this location if crashes become an issue with vehicles not navigating the turn successfully.

The next section of roadway just to the east of Patriotic Trail leads into a right curve on a steep downgrade which does not meet vertical geometry requirements. There is a W1-2 sign showing the curve in the roadway, but there are no advisory plaques for the horizontal curve or signing for the steep grade. This location was the site of several accidents on the same day in 2015 when ice was present and vehicles coming around the curve were unable to stop on the ice downhill. Another crash report mentions that vehicles coming uphill could not make it up the hill on a different icy day in 2022 when a truck slid down the hill backwards and got stuck blocking the roadway. The sign leading into this curve is shown in Figure 19.

Figure 19 - W1-2 curve sign prior to steep downhill grade.

Coming over the crest of this hill and around the curve it is difficult to see anything that might be around the corner and with the estimated 15.5% downhill grade the lack of sight distance and grade make it more difficult to stop, especially on wet or icy pavement. This may lead to the suggestion of providing additional advisory or warning signs to warn westbound drivers.

To provide an idea of the slope of the roadway Figure 20 shows the view looking back to the east up the hill toward this initial curve from a point partially down the hill. It was also noted in this section while observing the signage that there is a significant drop-off at the pavement edges on both sides of the roadway.

Figure 20 - View looking east back uphill at the curve.

The next location with numerous crashes which likely needs additional signing is near the Strathalbyn Farms and Old Wolfrum Road intersection where Wolfrum road makes a 90-degree curve before continuing in a north-south direction. Vehicles approaching the curve from the west are coming uphill toward the curve and there is a slight crest vertical curve which hides the sharp curvature. A view of the sightline for the driver approaching the curve is shown in Figure 21. From the photo taken, the W1-6 sign is visible in the distance, but the curve itself is not visible at this distance.

At this location there is no advance warning sign when traveling westbound, although it appears that there was an advance warning sign back in May of 2019 in Google Streetview. If this sign was struck by a vehicle leaving the roadway, it was never replaced. The W1-1 sign which had been in place had an advisory plaque (W13-1P) which had a recommended speed of 20 mph.

As shown in Figure 22, the curve is sharp to remain on Wolfrum Road and there is a gravel shoulder that leads to Strathalbyn Farms and Old Wolfrum Road which is positioned lower than the existing pavement and has a sloped drop-off. This could cause some instability to cars rounding the corner which have a tire leave the pavement, but is not as severe as some drop-offs located along the length of the roadway.

Figure 21 - View approaching the 90-degree curve at Strathalbyn Road.

Figure 22 - Curve at the Strathalbyn Farm intersection.

At this sharp curve there are numerous visible signs that cars have difficulty navigating the corner which may be surprising to unfamiliar drivers or hard to navigate on wet or icy pavement or at higher speeds. The Strathalbyn Farms Gun Club has placed large boulders on the far side of the curve as protection for their fence line which appears to have been replaced in sections due to previous damage. The boulders themselves show scrapes and paint marks from being struck by errant vehicles which have gone off the roadway. This is shown in Figure 23. A review of the crash reports and data from this location show that multiple injury crashes have occurred in the area with vehicles leaving the roadway surface due to being unable to successfully navigate the curve.

Figure 23 - Damaged boulder with scrapes and paint transfer.

After rounding the 90-degree curve to the left the driver is presented with a reverse curve to the right and then back to the left with an advisory speed of 20 mph. This section of roadway has the W1-3 sign denoting the reverse curve with the advisory plaque, several chevron (W1-8) signs and several Type 3 object marker signs to designate the steep drop off along the side of the roadway. This location is shown in Figure 24.

The object markers were in place to denote the steep drop which also contains a drainage structure and outfall along the side of the roadway partially down the slope from the edge of pavement. It was noted that several of these signs are leaning to the side, implying they have been clipped by vehicles traveling around the curve along Wolfrum. Additionally, there are chevron signs for the opposite direction of travel which have the back side facing the eastbound/northbound traffic.

Figure 24 - Signage denoting reverse curve north of Starthalbyn Dr.

In the opposite direction of travel, heading south and west along Wolfrum Road, it was noted that there is a curve advisory sign (W1-1) with a speed advisory plaque at the 90-degree curve. Upon closer investigation, it was also noted that there may have been another version of this sign or another type of sign placed near which had been struck and knocked down as the base of the sign post was still visible in the ground as shown in Figure 25. The sign that remains also appears to be darkened and obscured with dirt and a dark residue of some type on the sign. This dirt reduces the retroreflectivity of the sign when viewed and especially at night when headlights are supposed illuminate the sign. This may make it harder to see and reduces the effectiveness of warning motorists about the upcoming curve, although after having just navigated the reverse curve section drivers have hopefully already slowed their speed entering the 90-degree curve. The less reflective sign is shown in Figure 26.

Moving along the curve to the north and looking back toward the Strathalbyn Rd intersection to the south, drivers can see the reverse curves in Figure 27. Heading southbound toward the intersection, there is a W1-6 sign which denotes the first curve and again there is an uphill stretch leading into the curve which makes it hard to see for drivers approaching the curve. There is an advance warning sign of the upcoming reverse curve heading southbound (W1-3) with a speed advisory plaque of 20 mph. There is also a small horse crossing sign posted on the bottom of the sign which does not appear to meet the minimum size criteria for the official crossing sign per the MUTCD. These conditions on the approach can be seen in Figure 28.

Figure 25 - Broken sign post foundation.

Figure 26 - Dirty sign with reduced retroreflectivity at night.

Figure 27 - Reverse curves looking to the south along Wolfrum Road.

Figure 28 - Advance curve warning sign and approach to first turn heading southbound.

The remainder of the corridor to the north is a relatively straight section of roadway when compared to the previous sections. There are fewer signs in this northern section consisting mostly of Type 3 object markers to identify roadside hazards which are typically near culverts placed under the road. At the north end of study area, there is a northbound advance warning sign for the reverse curve (W1-3) with an advisory speed plaque for a 25-mph speed. There are also chevron signs for southbound traffic delineating the curve near Willow Lake Ct. which are facing southbound traffic. It was noted that in Google Streetview there were three (3) chevron signs in March 2022, but a fourth chevron had been added toward the end of the curve in November 2022.

Overall, the signs are appropriate at many of the locations along the corridor, however several locations need to have signing replaced or augmented to improve the overall safety of the corridor. It will also be important for the City of Weldon Spring to perform regular sign maintenance to replace damaged signs and ensure that the existing signs are kept up to desired standards.

SECTION VII

LANE WIDTH AND EDGE DROP OFF

TERRA also completed some spot measurements of the roadway in the field. This included using a measuring wheel to estimate the lane widths along Wolfrum Road and to visually look at some of the roadway pavement edges.

First TERRA completed roadway width measurements in the area near Wolfrum Road and Patriotic Trail. Lane width measurements were taken on both the east and west side of the Patriotic Trail intersection and on both sides of the intersection the overall roadway width was measured to be around 20-21 feet in width. This equates to roughly 10-foot lanes in each direction which is less than the standard lane width of 12 feet. It appears that the lane widths may widen slightly around some of the roadway curves to allow for slightly larger lanes. There are no shoulders anywhere within this study area, so there are no areas along the roadway for a disabled or vehicle to pull out of the lane safely, so any breakdowns or incidents are likely to remain within the driving lane.

The City of Weldon Spring has discussed with TERRA that the pavement has been overlaid multiple times with new asphalt which has raised the top of pavement elevation, however the elevation of the ground adjacent to the pavement was not necessarily raised along with the pavement height. With no shoulders or safety edge along the outside edge, when a tire goes off of the edge of pavement there is a drop almost straight down which often leads to

the frame of the car scraping on the edge of pavement and provides no room for the driver to recover their vehicle because the tire may be in the air or has nothing to gain traction on. It was noted in reading the crash reports that a number of vehicles did have a tire go off the right edge of pavement and then turned the steering wheel to the left to try to get back onto the pavement which resulted in them losing control of the vehicle, crossing the centerline and leaving the left side of the pavement. An example of one drop-off observed is shown in Figure 29. As shown in the photo there are numerous scrape marks along the edge of the pavement from vehicle frames hitting the edge and the asphalt edge has broken off the edge in some places.

Figure 29 - Pavement edge drop-off east of Patriotic Trail

Further down the roadway it was noted that there were similar edge drop-off concerns at the edge of pavement throughout the length of the corridor. Another example from the area near Strathalbyn Farms is provided in Figure 30. Again, there are numerous scrapes observed on the edge of pavement near the lane in this area and the drop-off from the edge of pavement is severe, as is typical throughout the length of Wolfrum Road. This edge drop-off makes it very difficult for vehicles going off the road to recover back onto the pavement should they have a wheel go over the edge. This may mean that some types of edge treatments such as rumble stripes, narrow shoulders or some other treatment might need to be considered to improve safety throughout the study area.

Figure 30 - Another edge drop-off near Strathalbyn Farms

SECTION VIII

SUMMARY AND CONCLUSIONS

TERRA reviewed the Wolfrum Road corridor to look at the safety concerns of the roadway. This included evaluating the traffic volumes, speeds, horizontal and vertical geometry, roadway width, edge drop-off, curve treatments, and signing along the route. These factors were looked at along with the crashes reported along the corridor to evaluate the possible causes and to determine what contributing factors may be present.

In evaluating the crash data, it was noted that many of the crashes which occur along Wolfrum Road involve vehicles leaving the pavement surface at some point during the crash and often this vehicle strikes a fixed object near the roadway, which is often a tree due to the proximity of the tree line to the edge of pavement, and the inability of vehicles that leave the pavement to recover and get back onto the pavement without crossing over the centerline or possibly going off of the left side of the roadway after crossing the other lane of traffic. There is a tight tree canopy along the entire roadway which increases the likelihood of having cars strike a fixed object/tree. It is important to the community to maintain the trees and overall feel of the roadway, so it may be important to consider

options to keep vehicles on the pavement surface where there are trees or other obstacles near the roadway edge.

While crashes occur along the entire length of the roadway it was noted that many of the crashes occurring happen near the 90-degree curve at Strathalbyn Rd and near the curves on either side of the intersection with Patriotic Trail. The data shows that 22 of the 28 crashes occurred on a curved section of roadway. This could be due to several roadway geometry factors including poor superelevation, deficient radii, narrow lanes and vertical slopes. Other potential deficiencies at curves could include inadequate signing, pavement edge drop-offs, poor curve delineation and inadequate pavement friction.

The crash reports offer various descriptions of the circumstances that led to the different crashes. In some cases, it was wet or icy pavement, others speeding may have been a factor, a couple of deer were hit on the road, but many had drivers leaving the roadway edge either because of encroachment on their lane, inattentiveness or other factors.

While there are no perfect treatments to prevent all crashes, there are measures which can be implemented to reduce the potential for crashes and severity of the crashes which do occur.

Many of these are low-cost treatments which can be implemented strategically throughout the corridor or can be applied to the entire length of the roadway. As many of the crashes which do occur involve roadway departures, this should be an area of focus in the potential strategies. There are several proven treatments which are recommended by the Federal Highway Administration (FHWA) for treating roadway departure accidents. These include:

1. Enhanced Delineation and Friction for Horizontal Curves
2. Longitudinal Rumble Strips and Stripes
3. Safety Edge Treatments
4. Roadside Design Improvements at Curves

Evaluation of safety improvements often include both a site analysis component and a systemic component. The site analysis strategy often involves treatments of specific locations where clear safety problems exist. These treatments are often reactive and come at a higher cost. A systemic approach looks to solve particular types of severe crashes and are deployed throughout the corridor at a number of locations and often are considered more proactive.

Additional guidance can be found in numerous publications including from the FHWA which provides safety publications including the publication on "Low-Cost Treatments for Horizontal Curve Safety" which in discussing safety improvement programs states:

> *"How a safety program and data analyses are focused—severe crashes versus total crashes—influences the degree to which a particular safety problem is addressed with*

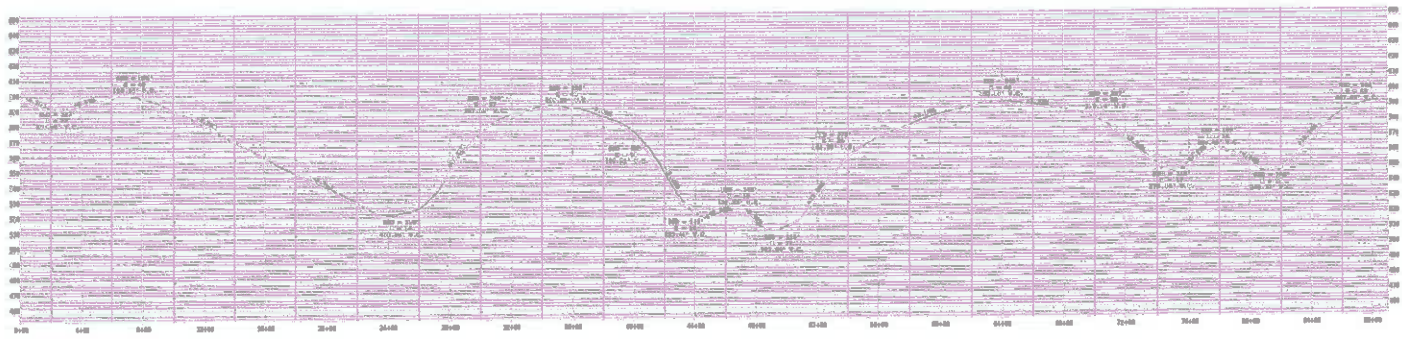
the systemic approach versus the more traditional site analysis approach. With a program where all crashes are used as the performance measure, high crash locations will be more prevalent and treatment strategies will tilt more heavily toward addressing high crash locations. In contrast, a program that uses severe crashes as the performance measure will use a stronger systemic component as severe crash locations are not as concentrated.

This is particularly true for severe roadway departure crashes, which tend to be highly scattered across the rural and local roads system. This does not mean that severe crashes are random. They tend to be overrepresented at locations with high risk characteristics, horizontal curvature being one of those.

A safety improvement process should include both components: treating high severe crash locations where they exist as well as systemically addressing locations or segments at higher risk. Both components will provide optimal results with good data and data analysis."

With this in mind, based on the results of TERRA's review of the corridor we would suggest that the City of Weldon Spring consider multiple different strategies to address the roadway deficiencies along Wolfrum Road. There are both specific locations which have higher crash occurrences which need improvements and overall system wide improvements which should be considered.

APPENDIX A
PLAN AND PROFILE SHEETS, SIGNING PLAN, AND CRASH DIAGRAM



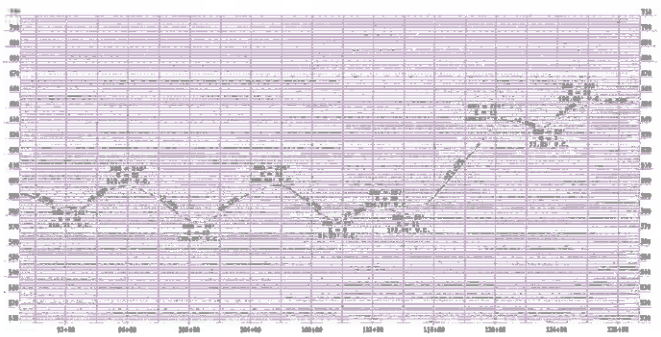
TERRA ENGINEERING LTD.

CITY OF WELDON SPRINGS
DEPARTMENT OF PUBLIC WORKS

PLAN AND PROFILE
WOLFRUM ROAD

SCALE:

CONTRACT NO.



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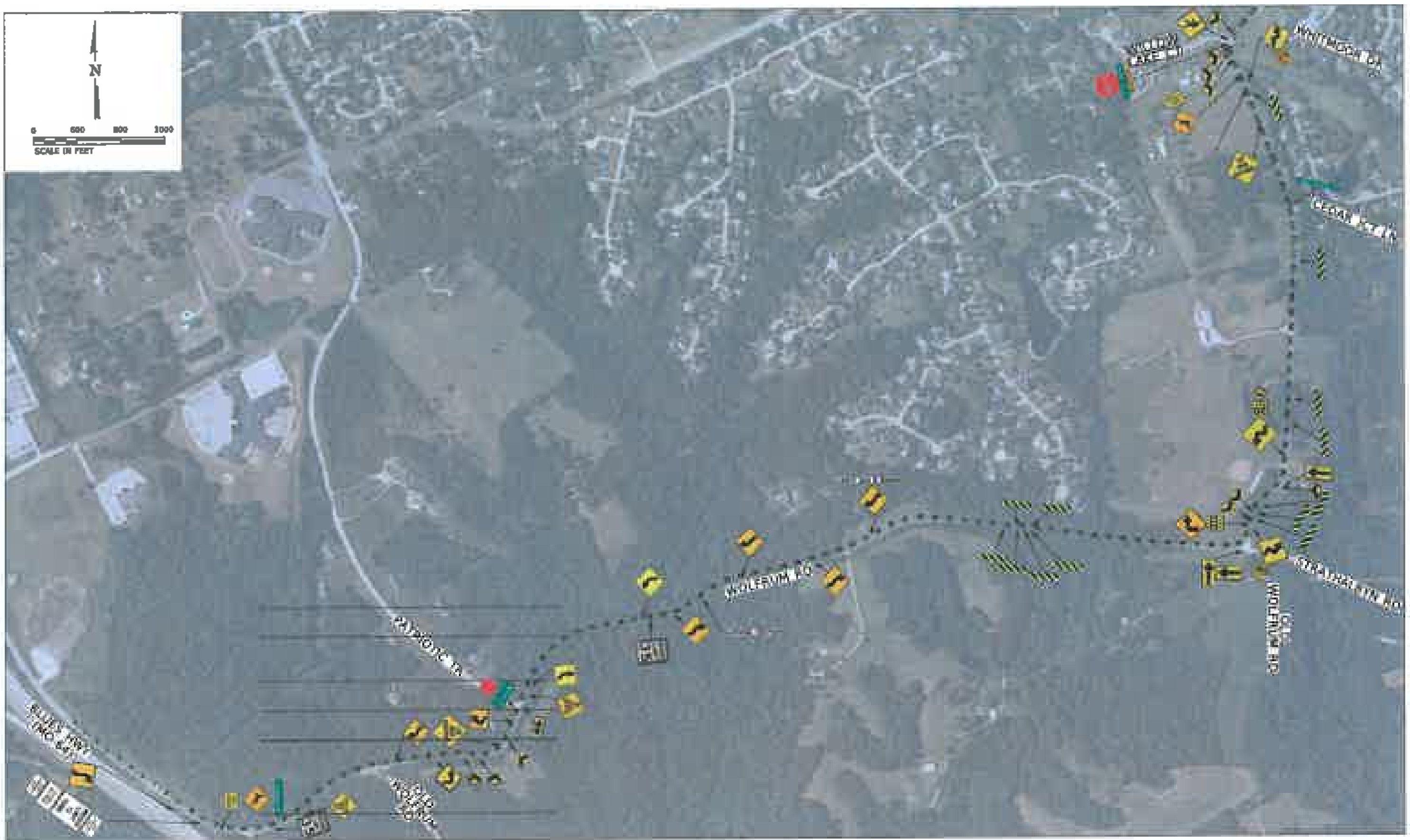
PLAN AND PROFILE
WOLFRUM ROAD



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Wolfrum Road

Existing Signage Exhibit
DRAFT 12/11/2023

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Existing Signage Exhibit
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