

May 12, 2022

Mr. David Olson Streets of West Pryor, LLC 7200 W 132<sup>nd</sup> Street, #150 Overland Park, Kansas 66213

Re: Long-Term Monitoring Plan Survey Points

Lots 7A (Area A), 7B (Area C), and 7C (Area B) Mine Remediation at Streets of West Pryor

Lee's Summit, Missouri

Geotechnology Project No. J035637.02

Dear Mr. Olson,

This letter transmits the results of settlement monitoring performed on the portions of the Streets West of Pryor project for May 2022. Monitoring of potential ground movements has been accomplished using a combination of surface monitoring points (SMPs) and survey points established on sanitary and storm sewer inlets and/or manholes. These points continue to be surveyed by BHC, Inc. Additional data points will be added to the monitoring record, as they are collected, and updated results of settlement monitoring will be provided. Graphic plots will be provided after a sufficient amount of data is recorded for each monitoring point.

Attached to this letter is monitoring data for Monitoring Points as shown on the attached Table 1. Current survey readings were obtained on May 9, 2022 in general accordance with the Long Term Monitoring Plan (LTMP). Table 1 documents the monitoring events to date. Monitoring Point C111 was installed and added to the array in the May survey. During this survey, vertical readings were obtained on all points; these readings will be obtained and reported on each subsequent survey. Based on current construction schedules, it is anticipated that instillation of sleeved rod monuments will commence in the next 30 to 60 days.

As of the current set of data, including the new baseline reading, the monitoring results do not indicate that settlement has exceeded the limits established in the LTMP. Therefore, the planned readings will continue every two months for the duration of surface construction. The following attachments are included for the current results of the LTMP.

Figure 1 - Monitoring Plan Locations
Figure 2 - Monitoring Results from BHC

Table 1 - Monitoring Point Displacement Summary

\* \* \* \* \*



We appreciate the opportunity to provide geotechnical services for this project. If you have a question regarding this letter, or if we may be of additional service to you, please contact the undersigned.

Respectfully submitted,

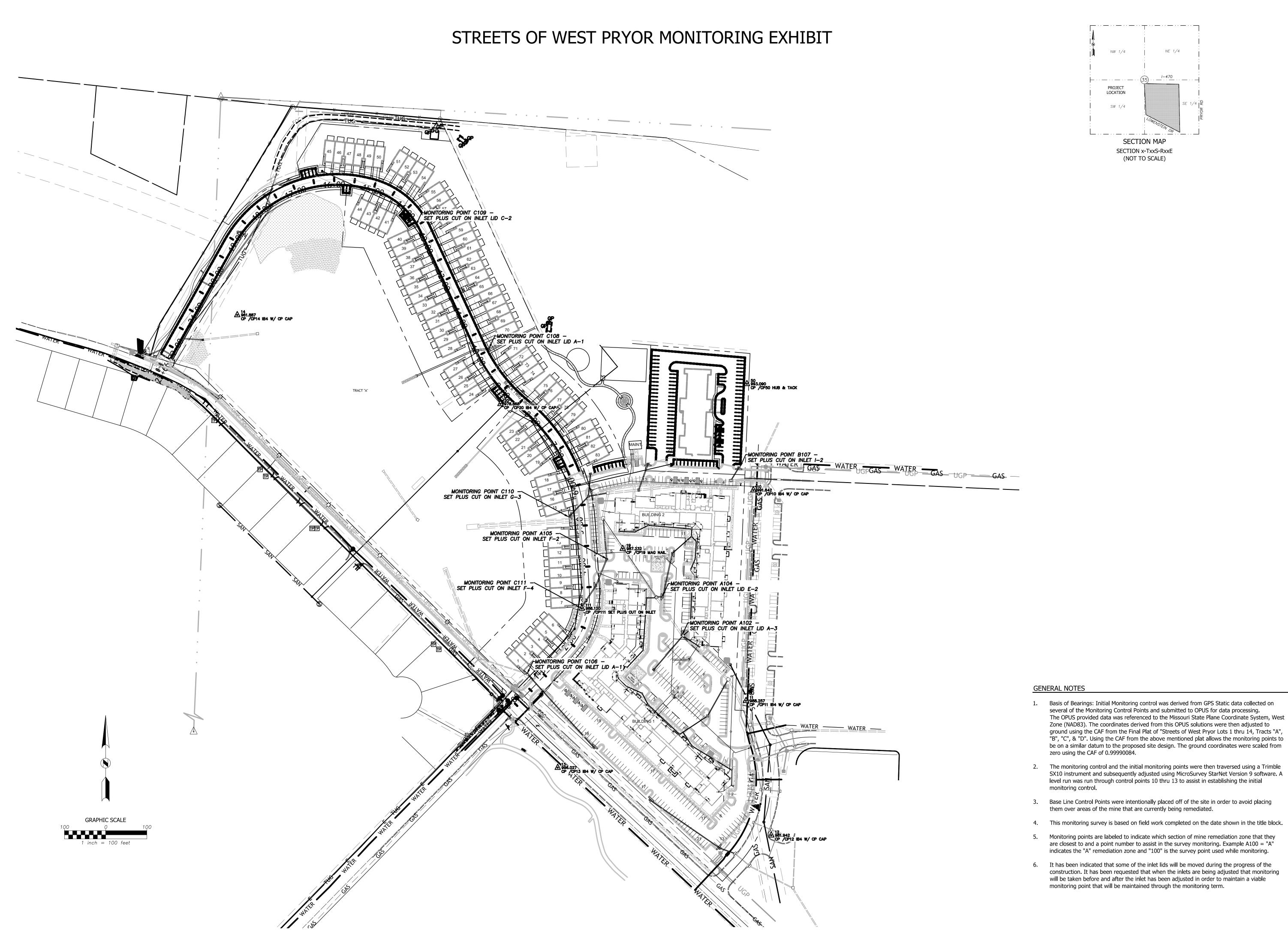
**GEOTECHNOLOGY, LLC** 

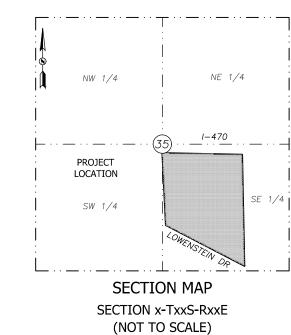
Tanner N. Merz, E.I.

Engineer

TNM/ALP:

Andrea Prince, P.G. Senior Project Manager





OF **1** 

Project No: 028440.00.01 10/13/2021 Field Date: Drawn By: Issue Date: 10/15/2021

# Initial Monitoring Point Locations Points Set Oct. 12, 2021

First Monitoring Results Dec. 12, 2021 Note: Differences Below Between

Oct. 12, 2021 & Dec. 12, 2021

Point #	Northing	<u>Easting</u>	<u>Elevation</u>	<u>Location</u>	Point #	Northing <u>Difference</u>	Easting <u>Difference</u>	Elevation <u>Difference</u>	Observed <u>Elevation</u>	<u>Location</u>
100	1006796.43	2812899.00	992.88	Inlet	2100	-0.03	0.01	0.04	992.84	
101	1006763.01	2812554.02	982.86	Inlet B-1	2101	-2.90	-2.00	0.01	982.87	
102	1006414.57	2812733.04	987.35	Inlet A-3	2102	1.55	-5.17	-0.02	987.33	
103	1006322.29	2812351.55	988.07	Inlet A-1		See Note Below				
					104	1006511.50	2812680.58	987.40		Inlet E-2
Value Greater than 0.08'					105	1006601.94	2812547.13	986.35		Inlet F-2
					106	1006319.59	2812353.76	988.24		Inlet A-1
	Value Greater th	an 0.04'								

**Note:** Point's 10-14 on previous exhibits are Control Point's for monitoring and have been removed to simplify exhibit. Point's 100-103 are monitoring points as shown on the exhibit. Monitoring Point #100 is on an Inlet @ NE Corner of Site

Value Greater than 0.02'

Note: Lid replaced and mark removed on Inlet A-1 after initial monitoring. Point's 104-106 above are new or replacement monitoring points on the site.

Inlet Lids on Structures B-1 and A-3 have been adjusted since the initial monitoring. The new location of points will now be monitored.

Note: The certification on this exhibit is to verify that the horizontal and vertical positions shown hereon were collected under my direct supervision. This certification does not intend to show anything other what is shown on the exhibit. We are not certifying any reason or cause for the differences in the locations or elevations.



## Second Monitoring Results Feb. 4, 2022

**Note: Differences Below Between** 

Oct. 12, 2021 & Feb. 4, 2022 (Point 100)

Dec. 12, 2021 & Feb. 4, 2022 (Points 101, 102, & 104-106)

### Third Monitoring Results 2-Mar-22

Note: Differences Below Between

Oct. 12, 2021 & March 2, 2022 (Point 100)

Dec. 12, 2021 & March 2, 2022 (Points 101, 102, & 104-106)

Point #	Northing <u>Difference</u>	Easting Difference	Elevation Difference	Observed Elevation	Location	Point #	Northing Difference	Easting Difference	Elevation Difference	Observed Elevation	Location
3100	-0.04	-0.01	0.01	992.89	Inlet	4100	-0.03	-0.01	-0.04	992.84	Inlet
3101	-0.03	-0.06	0.06	982.92	Inlet B-1	4101	-0.01	-0.39	0.00	982.87	Inlet B-1
3102	-0.02	-0.03	0.02	987.37	Inlet A-3	4102	-0.02	-0.01	0.00	987.33	Inlet A-3
3104	0.00	-0.04	0.04	987.44	Inlet E-2	4104	0.01	-0.08	0.00	987.40	Inlet E-2
3105	-0.04	-0.05	0.06	986.41	Inlet F-2	4105	0.00	0.01	0.01	986.36	Inlet F-2
3106	0.02	-0.17	0.04	988.28	Inlet A-1	4106	0.04	-0.10	-0.03	988.21	Inlet A-1
							Deliver the second second in the second seco				
	Not	e: Differences	Below Betwe	en			Not	e: Differences	Relow Retwe	en	
	D	ec. 12, 2021 8	& Feb. 4. 2022					eb. 4, 2022 & I			
		,						. J. 4, 2022 Q	Widi Cii 2, 2022		
3100	-0.01	-0.02	0.05	992.89		4100	0.01	0.00	-0.05	992.84	
3101	-0.03	-0.06	0.05	982.92		4101	0.02	-0.33	-0.05	982.87	
3102	-0.02	-0.03	0.04	987.37					A STATE OF THE PARTY OF THE PAR		
3102	-0.02	-0.03	0.04	307.37		4102	0.00	0.02	-0.04	987.33	

0.01

0.05

0.02

4104 4105

4106

-0.05

0.06

0.06

-0.04

-0.05

Note: The certification on this exhibit is to verify that the horizontal and vertical positions shown hereon were collected under my direct supervision. This certification does not intend to show anything other what is shown on the exhibit. We are not certifying any reason or cause for the differences in the locations or elevations.



987.40

986.36

Inlet G-3

# Fourth Monitoring Results 4/8/2022

Note: Differences Below Between Dec. 12, 2021 & April 8, 2022

Point #	Northing	Easting	Elevation	Observed	Location
	<u>Difference</u>	<u>Difference</u>	<u>Difference</u>	<b>Elevation</b>	
	Inlet Ad	djusted- Remo	ved from Mo	nitoring	
	Inlet Ad	djusted- Remo	ved from Mo	nitoring	
5102	-3.35	1.84	1.10	988.44	Inlet A-3
Base	d on above res	ults, Inlet A-3	has shifted si	nce last monit	oring
5104	0.00	-0.04	0.04	987.44	Inlet E-2
5105	-0.01	-0.02	0.02	986.37	Inlet F-2
5106	0.02	-0.09	0.00	988.24	Inlet A-1
107	1006824.68	2812868.80	990.01		Inlet I-2
108	1007111.59	2812258.87	979.05		Inlet A-1
109	1007411.19	2812081.44	975.28		Inlet C-2



Note: Point's 107-110 above are new or replacement monitoring points on the site.

984.07

Inlet Adjusted- Removed from Monitoring Inlet Adjusted- Removed from Monitoring

		.,		
5102	-3.33	1.85	1.10	988.44
5104	-0.01	0.04	0.04	987.44
5105	-0.01	-0.02	0.01	986.37
5106	-0.03	0.02	0.03	988.24

1006703.64 2812454.33

110

Note: The certification on this exhibit is to verify that the horizontal and vertical positions shown hereon were collected under my direct supervision. This certification does not intend to show anything other what is shown on the exhibit. We are not certifying any reason or cause for the differences in the locations or elevations

# Fifth Monitoring Results 5/9/2022

#### **Note: Differences Below Between**

Dec. 12, 2021 & May 9, 2022 (Points 104 - 106) April 8, 2022 & May 9, 2022 (Points 102 & 107 - 110)

Point #	Northing	Easting	Elevation Difference	Observed Elevation	Location
6102	See Note	Below	0.01	988.44	Inlet A-3
6104	See Note	Below	0.01	987.41	Inlet E-2
6105	See Note	Below	0.01	986.36	Inlet F-2
6106	See Note	Below	0.03	988.27	Inlet A-1
6107	See Note	Below	-0.02	989.99	Inlet I-2
6108	See Note	Below	0.03	979.08	Inlet A-1
6109	See Note	Below	0.00	975.28	Inlet C-2
6110	See Note	Below	0.00	984.07	Inlet G-3
111	1006482.19	2812485.01	986.12		Inlet F-4
	Note: Point	#111 is a ne	w monitoring	point.	



Note: This monitoring exhibit represents a shift in the data collection method for the monitoring at the Streets of West Pryor site. Long term monitoring will concentrate on the vertical differences between observations, unless otherwise noted.

# Note: Differences Below Between April 8, 2022 & May 9, 2022

6104 -0.03 987.41 Inlet E-2 6105 -0.01 986.36 Inlet F-2 6106 0.03 988.27 Inlet A-1 Note: The certification on this exhibit is to verify the vertical positions shown hereon were collected under my direct supervision. This certification does not intend to show anything other what is shown on the exhibit. We are not certifying any reason or cause for the differences in elevations.



#### Monitoring Point Displacement Summary Streets West of Pryor Lee's Summit Missouri

Geotechnology Project No. J035637.02

						Geotechnology Pr	oject No. J035637.02				
Diamlassan	f A100										
	ent for A100	N 41: 01 (6)	F (: 0) (()	N (1) (6)	E 4: (6)	E1 (1) (6)	T: 51 1/ )	51 6 61 6 7	T (   E   4   0   4   )	D ( ( )	
Date 10/12/2021	Elevation Change (ft) NA	Northing Change (ft) NA	Easting Change (ft) NA	Northing (ft) 1006796.43	Easting (ft) 2812899	Elevation (ft) 992.88	Time Elapsed (yr) NA	Elevation Change (in) NA	Total Elevation Change (in) NA	Rate (in/yr) NA	Remarks
12/12/2021	-0.04	-0.03	0.01	1006796.40	2812899.01	992.84	0.17	-0.48	-0.48	-2.87	
2/4/2022	0.05	-0.01	-0.02	1006796.39	2812898.99	992.89	0.15	0.60	0.12	4.06	
3/2/2022	-0.05	0.01	0.00	1006796.40	2812898.99	992.84	0.07	-0.60	-0.48	-8.42	Inlet point moved, new baseline set
4/8/2022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Monitor point removed due to adjusting inlet
Diamlacam	f A101										
	ent for A101	N 41: 01 (6)	- · · · · · · · · · · · · · · · · · · ·	N. di		E1 (1) (6)	T: 51 1/ )		Total Elevation Change (in)	D ( ( ) )	
Date 10/12/2021	Elevation Change (ft) NA	Northing Change (ft) NA	Easting Change (ft) NA	Northing 1006763.01	Easting 2812554.02	Elevation (ft) 982.86	Time Elapsed (yr) NA	Elevation Change (in) NA	NA	Rate (in/yr)	Remarks
12/12/2021	0.01	-2.90	-2.00	1006760.11	2812552.02	982.87	0.17	0.12	0.12	0.72	Inlet lid adjusted after initial monitoring
2/4/2022	0.05	-0.03	-0.06	1006760.08	2812551.96	982.92	0.15	0.60	0.72	4.06	, ,
3/2/2022	-0.05	0.02	-0.33	1006760.10	2812551.63	982.87	0.07	-0.60	0.12	-8.42	Inlet point moved, new baseline set
4/8/2022	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	Monitor point removed due to adjusting inlet
Diamlasam	4 4102										
	ent for A102										
Date 10/12/2021	Elevation Change (ft) NA	Northing Change (ft) NA	Easting Change (ft) NA	Northing 1006414.57	Easting 2812733.04	Elevation (ft) 987.35	Time Elapsed (yr) NA	Elevation Change (in) NA	Total Elevation Change (in) NA	Rate (in/yr) NA	Remarks
12/12/2021	-0.02	-1.55	5.17	1006413.02	2812738.21	987.33	0.17	-0.24	-0.24	-1.44	Inlet lid adjusted after initial monitoring
2/4/2022	0.04	-0.02	-0.03	1006413.00	2812738.18	987.37	0.15	0.48	0.24	3.24	y
3/2/2022	-0.04	0.00	0.02	1006413.00	2812738.20	987.33	0.07	-0.48	-0.24	-6.74	Inlet point moved, new baseline set
4/8/2022	1.11	-3.33	1.85	1006412.77	2812729.71	988.44	0.10	13.32	13.08	131.40	Inlet A-3 shifted since last monitoring
5/9/2022	0	NA	NA	NA	NA	988.44	0.08	0.00	13.08	0.00	Switch to vertical monitoring only
Displaceme	ent for C103										
Date	Elevation Change (ft)	Nambiae Character (64)	Faction Observe (fr)	Manthina	Faction	Flourdies (ft)	Time Flores d (cm)	Elevation Change (in)	T-t-I Flavetian Channe (in)	Data (inter)	
10/12/2021	NA Elevation Change (π)	Northing Change (ft) NA	Easting Change (ft) NA	Northing 1006322.29	Easting 2812351.55	Elevation (ft) 988.07	Time Elapsed (yr) NA	NA NA	Total Elevation Change (in) NA	Rate (in/yr) NA	Remarks
12/21/2021	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	Removed after initial monitoring
											3
Displaceme	ent for A104										
Date	Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
12/12/2021	NA	NA	NA	1006511.50	2812680.58	987.40	NA	NA	NA	NA	
2/4/2022	0.04	0.00	-0.04	1006511.50	2812680.54	987.44 987.40	0.15 0.07	0.48 -0.48	0.48	3.24	
3/2/2022 4/8/2022	-0.04 0.04	0.01 -0.01	-0.05 0.04	1006511.51 1006511.50	2812680.49 2812680.53	987.40 987.44	0.07	-0.48 0.48	0.00	-6.74 4.74	Inlet point moved, new baseline set
5/9/2022	-0.04	NA NA	NA NA	NA	NA NA	987.41	0.08	-0.36	0.46	-4.24	Switch to vertical monitoring only
OIOIZOZZ	-0.00	103	IV	NA	14/1	307.41	0.00	-0.00	0.12	-4.24	Owner to vertical mornioring only
Displaceme	ent for A105										
Date	Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
12/12/2021	NA	NA	NA	1006601.94	2812547.13	986.35	NA	NA	NA	NA	
2/4/2022	0.06	-0.04	-0.05	1006601.90	2812547.08	986.41	0.15	0.72	0.72	4.87	
3/2/2022	-0.05 0.01	0.05	0.06	1006601.95	2812547.14	986.36 986.37	0.07 0.10	-0.60	0.12 0.24	-8.42	Inlet point moved, new baseline set
4/8/2022 5/9/2022	-0.01	-0.01 NA	-0.02 NA	1006601.94 NA	2812547.12 NA	986.36	0.10	0.12 -0.12	0.24	1.18 -1.41	Switch to vertical monitoring only
O/O/EUEE	-0.01	103	IVA	INA	14/1	300.00	0.00	-0.12	0.12	-1.41	Owner to vertical mornioring only
Displaceme	ent for C106										
Date	Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
12/12/2021	NA	NA	NA	1006319.59	2812353.76	988.24	NA.	NA NA	NA	NA	romano
2/4/2022	0.04	0.02	-0.17	1006319.61	2812353.59	988.28	0.15	0.48	0.48	3.24	
3/2/2022	-0.07	0.02	0.06	1006319.63	2812353.65	988.21	0.07	-0.84	-0.36	-11.79	Inlet point moved, new baseline set
4/8/2022 5/9/2022	0.03 0.03	-0.03 NA	0.02	1006319.60	2812353.67	988.24 988.27	0.10	0.36 0.36	0.00 0.36	3.55 4.24	Switch to vertical monitoring only
3/9/2022	0.03	INA	NA NA	NA	NA	900.21	0.06	0.30	0.36	4.24	Switch to vertical monitoring only
Displaceme	ent for B107										
	Elevation Change (ft)	Northing Change (ft)	Easting Change_(ft)	Northing	Easting	Elevation (ft)	Time Elapsed (vr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/vr)	Remarks
Date 4/8/2022	NA NA	Northing Change (ft) NA	Easting Change (ft) NA	Northing 1006824.68	Easting 2812868.80	Elevation (ft) 990.01	Time Elapsed (yr)	NA	Total Elevation Change (in) NA	Rate (in/yr)	
5/9/2022	-0.02	NA NA	NA	NA	NA	989.99	0.08	-0.24	-0.24	-2.83	Switch to vertical monitoring only
Dicolore	ont for C100										
Displaceme	ent for C108  Elevation Change (ft)	N 41: 01 (6)	- · · · · · · · · · · · · · · · · · · ·	N. 41.	- "	E1 (1) (6)	T: 51 1/ )		7.4.151.41.01.41.	2 ( ( )	
4/8/2022	Elevation Change (ft) NA	Northing Change (ft) NA	Easting Change (ft) NA	Northing 1007111.59	Easting 2812258.87	Elevation (ft) 979.05	Time Elapsed (yr) NA	Elevation Change (in) NA	Total Elevation Change (in) NA	Rate (in/yr) NA	Remarks
5/9/2022	0.03	NA NA	NA NA	NA	NA	979.05	0.08	0.36	0.36	4.24	Switch to vertical monitoring only
GGELOZZ	0.00		1465	.4/3	.3/3	3.3.00	3.00	3.00	5.50	24	omen to recast monitoring only
Displaceme	ent for C109										
Date	Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
4/8/2022	NA NA	NA NA	NA NA	1007411.19	2812081.44	975.28	NA NA	NA NA	NA NA	NA	
	INA	N14	NA	NA	NA	975.28	0.08	0.00	0.00	0.00	Switch to vertical monitoring only
5/9/2022	0	NA NA	101								
	0	NA NA	101								
Displaceme	o ent for C110										
Displacemondate Date	ent for C110  Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
Displaceme	o ent for C110			Northing 1006703.64 NA	Easting 2812454.33 NA	Elevation (ft) 984.07 984.07	Time Elapsed (yr) NA 0.08	Elevation Change (in) NA 0.00	Total Elevation Change (in)  NA 0	Rate (in/yr) NA 0.00	Remarks Switch to vertical monitoring only



Monitoring Point Displacement Summary

Streets West of Pryor Lee's Summit Missouri

Geotechnology Project No. J035637.02

Displacement for C111											
Date	Elevation Change (ft)	Northing Change (ft)	Easting Change (ft)	Northing	Easting	Elevation (ft)	Time Elapsed (yr)	Elevation Change (in)	Total Elevation Change (in)	Rate (in/yr)	Remarks
5/9/2022	NA	NA	NA	1006482.19	2812485.01	986.12	NA	NA	NA	NA	Monitor point installed
***************************************	more and according to the control of										

\*Negative values indicate a decrease in elevation

\*\*Graphs to be provided after obtaining a sufficient amount of survey recordings