

**PRELIMINARY REPORT
WYE ROAD DRAINAGE IMPROVEMENT
PETITION PROJECT PHASE 2**

**ISSUED: APRIL 29, 2024
FOR FIRST HEARING MAY 13, 2024**

**PREPARED BY:
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ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER**

INTRODUCTION

In accordance with Ohio Revised Code (ORC) 6131, The Bath Township Board of Trustees filed a petition with Summit County for the improvement of a portion of the storm drainage system and drainage course within the Sanctuary of Bath Subdivision and continuing downstream to the outlet at Yellow Creek, as shown on Attachment A. ORC 6131 provides a process through which the County may make improvements to a stormwater ditch or drain and assess the owners of property benefiting from the improvement for the cost of the improvement and the perpetual maintenance thereof in accordance with the benefits conferred thereby. ORC 6131.09 provides that the County Engineer shall file a preliminary report at the time of the first hearing of the petition by the County. The purpose of this document is to satisfy this requirement.

BACKGROUND

The Sanctuary of Bath Subdivision Phases 1 and 2, consisting of 94 residential lots and six township streets, was platted and constructed in the late 1980s. The terrain consists of plains and valleys with steep slopes in the valleys to the ravines below. The streets were constructed (generally on the plains) of asphalt pavement with roadside ditches supplemented with ditch inlets and storm sewers. The constructed portion of the stormwater drainage system is confined within the limits of the road right-of-way and within easements along lot lines to the rear of building sites, but not to the rear of the lots. The roadway storm drainage system was designed to collect storm runoff from the roadway and adjacent properties and discharge the stormwater at various locations into existing small valleys. These small valleys drain down to the main stream and on down to Yellow Creek. There are also two valleys that bring surface water runoff to the subdivision from an older subdivision on an upper plain to the west. The subdivision plat includes easements to Summit County over the constructed storm sewers, plus easements over the stream but the stream easements are not dedicated to Summit County.

THE PROBLEM

The steep valleys and ravines through the Sanctuary of Bath have experienced erosion that has carried soil downstream to plug the Wye Road storm sewer and pollute Yellow Creek, and created potentially dangerous slopes that could give way and cause damage to property and possibly personal injury should an individual fall or become trapped by falling earth. The soil below the topsoil layer consists of predominantly sand, making the steep slopes unstable and subject to landslides and erosion.

Upon establishment of the Surface Water Management District in 2018 Bath Township was the first community to opt in. As the SWMD commenced a study of the Yellow Creek watershed, the township also asked for a focused study of

the subject waterway as shown on the map of the overall drainage area attached as Appendix A. Upon completion of that study with recommendations, Bath Township petitioned Summit County for the stormwater system to be improved in the method prescribed by ORC 6131.

DESCRIPTION OF PROPOSED IMPROVEMENT

The proposed improvement Phase 2 will involve the following:

1. Reconstruction of the existing stormwater detention basin on Sublots 1 and 2 with a goal to increase capacity, reduce flooding, reduce erosion and improve water quality.
2. Install a series of riffles, cascades and step-pools along the stream with a goal to reduce stream velocity, reduce erosion and improve water quality.
3. Perform erosion repair at various locations along the stream, using hand-placed logs and similar means.
4. The project will provide a direct benefit to 28 properties, as listed in Appendix B.

The design of the improvements has required the services of professional engineering firm ms consultants. The project will also require the acquisition of temporary and permanent construction and stormwater easements. The easements will be acquired via an easement plat in conformance with ORC 6131.

OPINION OF PROBABLE COST

The Opinion of Probable Construction Cost for the project varies from \$989,830.80 to \$1,033,475.00, depending on the alternates selected, as shown in the Opinion of Probable Construction Cost dated April 11, 2024, attached as Appendix C.

The above costs are estimated construction costs. The cost of the preliminary study was paid by the Summit County Surface Water Management District – Bath Subdistrict, and the cost of survey, final design, administration and inspection services performed by the County Engineer’s Office has also been paid by the SWMD-Bath, so these costs are not included in the above costs. The payment of compensation and damages for the easements to be acquired are being determined by a professional right-of-way appraisal firm.

The annual maintenance assessments collected and credited to the Northern Maintenance District will continue for the stormwater detention basin.

The cost to maintain the in-stream improvements will be paid for by the revenues collected by the SWMD.

The Engineer will obtain the necessary permits from the US Army Corps of Engineers, Ohio EPA, Summit County Floodplain Manager, and Bath Township Zoning Official. SCE has provided notice of this project to the Director of the Ohio Department of Natural Resources and Summit Soil and Water Conservation District. We have determined that it is not necessary to inform the Director of the Ohio Department of Transportation.

OPINION OF FEASIBILITY OF PROJECT

The erosion along the stream through the ravine, and the flooding experienced along the west side of Wye Road will be mitigated by the reconstruction of the existing stormwater management basin, by the construction of stream stabilization measures, and by the spot erosion repairs.

OPINION OF COST VS BENEFIT

The Project will provide a direct benefit to three (3) commercial properties and twenty-five (25) single-family residential lots.

The SWMD–Bath has paid for the preliminary engineering and final design and the SWMD will fund the project construction through a combination of SWMD revenue and an Ohio EMA grant. There will be no construction assessments to property owners. There will be no maintenance assessments to property owners for the new in-stream stabilization measures or spot erosion repairs. The perpetual drainage maintenance assessment on lots in the Sanctuary of Bath will remain in place for the existing stormwater detention basin.

It is the opinion of the engineer that the benefit of the improvement will exceed the cost.

FACTORS APPARENT TO THE ENGINEER:

1. This improvement is necessary to provide greater control of the drainage from about 186 acres of land within Bath Township as shown on the map of the overall drainage area attached as Appendix A.
2. The project will also help reduce risk of flooding on a commercial property at 800 Wye Road which has had incidences of property damages and interrupted business due to flooding.
3. This improvement will reduce the stream velocity, thereby reducing the erosion of the stream bed and stream banks, to the benefit of 25 residential properties in the Sanctuary of Bath and adjoining properties.
4. This reduction in erosion will reduce the frequency of tree falls as well as the amount of maintenance required.
5. This improvement will create permanent stream maintenance easements (about 60 foot wide) that will facilitate permanent maintenance by the

- County Engineer. The easements will encompass the stream and an unobstructed access lane along the in-stream stabilization improvements.
6. This improvement will construct reinforced turf drives to provide access to the engineered improvements.
 7. Best management practices for temporary and permanent erosion controls will be employed before, during and after construction.

The proposed facilities will be designed and constructed in a manner to be adequate for acceptance for perpetual maintenance as a part of a public maintained facility as provided for in the ORC 6131 petition process. There are no known obstacles to the implementation of this project. The project is feasible.

Respectfully submitted:

Alan Brubaker, P.E., P.S.
Summit County Engineer



David L. Koontz, P.E.
Engineering Project Manager/SWMD Coordinator

- Attachment A: Map of the Drainage Area
- Attachment B: List of Benefitting Property Owners
- Attachment C: Opinion of Probable Construction Cost (4/11/2024)

APPENDIX A

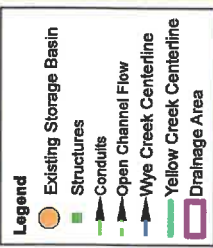
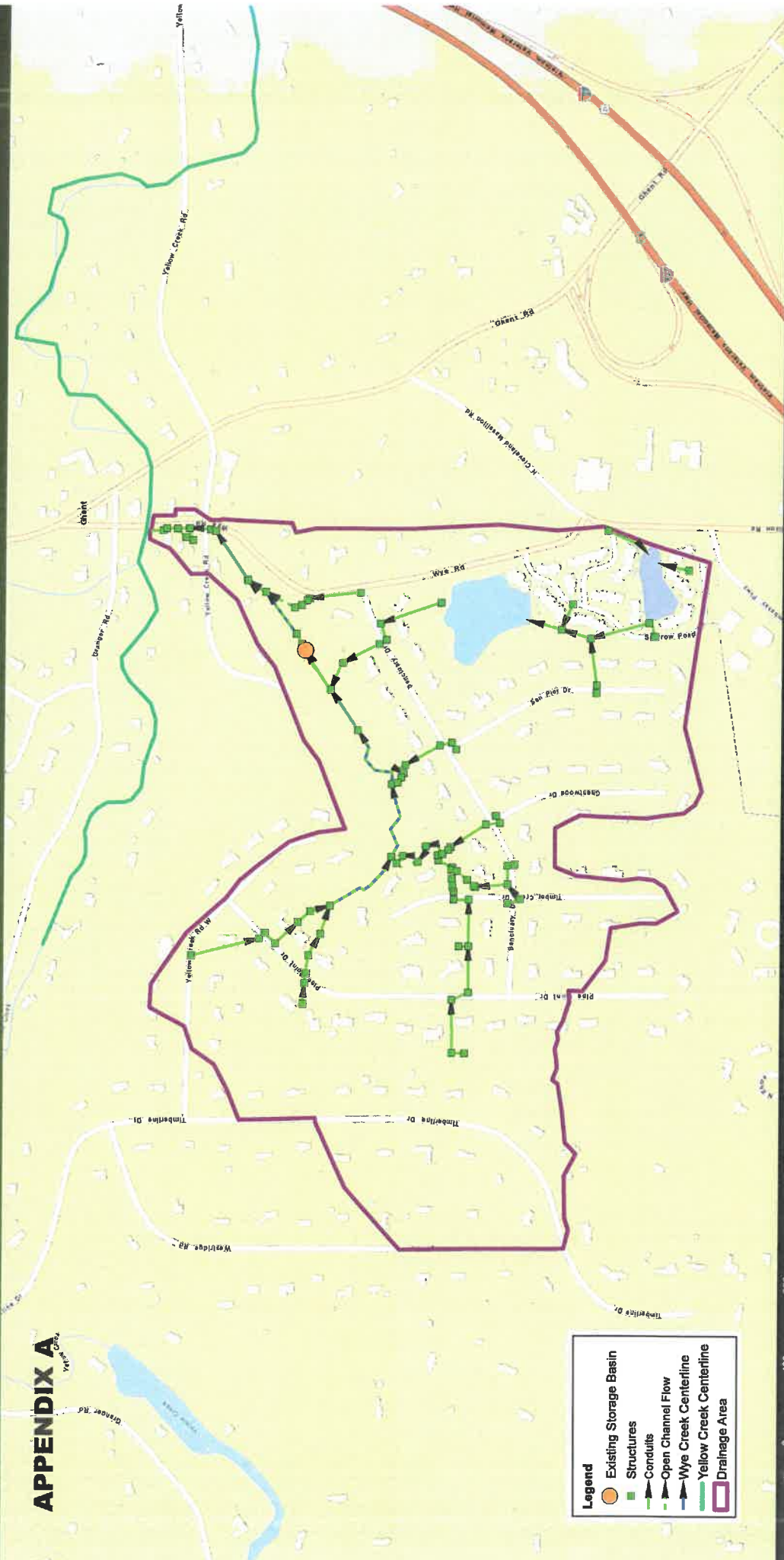


Figure 01
Study Drainage Area

APPENDIX B

Wye Road Flood Mitigation and Improvement Phase 2 Benefiting or Damaged Property Owners

NO.	PARID	OWN1	OWN2	OWNADDR1	OWNZIP1	CITYNAME	STATECODE
1	0402101	KREICI MARY ANNE TRUSTEE		1811 N REVERE RD	44333	AKRON	OH
2	0400165	KREICI MARY ANNE TRUSTEE		1811 N REVERE RD	44333	AKRON	OH
3	0400164	ANDERSON MICHELLE A		3126 ECHO HILLS RD	44333	BATH	OH
4	0400665	JARZENSKI BRIAN	JARZENSKI EMILY	3693 YELLOW CREEK RD	44333	AKRON	OH
5	0402637	HLAVIN CHRISTINE C		3715 YELLOW CREEK RD	44333	AKRON	OH
6	0407278	MEACHAM MARK H	MEACHMAN ELIZABETH J	3720 YELLOW CREEK RD	44333	AKRON	OH
7	0404886	LIGHTNER DOUGLAS J	LIGHTNER PAMELA L S	3583 SANCTUARY DR	44333	AKRON	OH
8	0407279	PATTERSON JANINE J TRUSTEE		3730 YELLOW CREEK DR	44333	AKRON	OH
9	0404887	CLINE MOJGAN	CLINE MAJGAN	3833 YELLOW CREEK RD	44333	AKRON	OH
10	0404888	GLASS PHYLLIS T TRUSTEE		3609 SANCTUARY DR	44333	AKRON	OH
11	0404889	SQUIRES BLAKE R	SQUIRES MICHELLE M	3623 SANCTUARY DR	44333	AKRON	OH
12	0404890	THOMAS FREDERICK J	THOMAS KIMBERLY K	3633 SANCTUARY DR	44333	AKRON	OH
13	0404891	REGULA DAVID	REGULA LAUREN	3647 SANCTUARY DR	44333	AKRON	OH
14	0404892	MJAKKASSA RIMA K TRUSTEE		3655 SANCTUARY DR	44333	AKRON	OH
15	0404893	SABLE ROBERT S	SABLE JOCELYN R	3665 SANCTUARY DR	44333	AKRON	OH
16	0404894	DARWISH MOHAMED S TRUSTEE		3673 SANCTUARY DR	44333	AKRON	OH
17	0405037	BABAI SIMIN D TRUSTEE		3833 YELLOW CREEK W	44313	AKRON	OH
18	0405389	VORIS NATHAN	VORIS REBECCA J	637 TIMBER CREEK DR	44333	AKRON	OH
19	0405390	SKAGGS ORA D II	SKAGGS HEATHER E	653 TIMBER CREEK DR	44333	AKRON	OH
20	0404922	SKAGGS ORA D II	SKAGGS HEATHER E	653 TIMBER CREEK DR	44333	AKRON	OH
21	0405541	KEIPER TODD	KEIPER TODD	3832 W YELLOW CREEK RD	44333	AKRON	OH
22	0405542	SCHOENSTEIN WILLIAM A JR CO TRUSTEE	SCHOENSTEIN NANCY J CO TRUSTEE	P O BOX 516	44210	BATH	OH
23	0404921	FARNSWORTH SARAH C	FARNSWORTH STEVEN L	665 TIMBER CREEK DR	44333	AKRON	OH
24	0405041	SEARS C CHRISTOPHER TRUSTEE	SEARS ANITA FERRIS TRUSTEE	737 PINE POINT DR	44313	AKRON	OH
25	0405042	WRIGHT EVA S		715 PINE POINT DR	44333	AKRON	OH
26	0405043	SLEZAK PATRICIA A	SLEZAK FREDERICK A	699 PINE POINT DR	44333	AKRON	OH
27	0405044	SLEZAK PATRICIA A TRUSTEE	SLEZAK FREDERICK A TRUSTEE	699 PINE POINT DR	44333	AKRON	OH
28	0404920	ANENSON TROY	FELIX CHRISTINA	656 TIMBER CREEK DR	44333	AKRON	OH

APPENDIX C

Opinion of Probable Construction Cost - Wye Road Phase 2

Project: **Wye Road Flood Mitigation & Improvement Plans**
100% Submittal

Date: 4/11/24



ITEM NO.	ITEM DESCRIPTION	EST. QNTY.	UNIT OF MEAS.	UNIT PRICE	ITEM PRICE
Phase 2					
201	Clearing/Grubbing	1	LS	\$ 50,000.00	\$ 50,000.00
201	Tree Removal (12" - 24")	6	EA	\$ 2,000.00	\$ 12,000.00
201	Tree Removal (>24" - 48")	3	EA	\$ 2,000.00	\$ 6,000.00
201	Tree Removal Associated With Construction Access	0.20	AC	\$ 20,000.00	\$ 4,000.00
203	Excavation	1,256	CY	\$ 30.00	\$ 37,680.00
203	Additional Excavation Allowance	189	CY	\$ 30.00	\$ 5,670.00
203	Embankment - Stream Improvements	142	CY	\$ 30.00	\$ 4,260.00
203	Undercut - Excavate & Haul/Removal Unsuitable Material	126	CY	\$ 30.00	\$ 3,780.00
203	Undercut - Embankment	126	CY	\$ 30.00	\$ 3,780.00
204	Subgrade Compaction	1,568	SY	\$ 5.00	\$ 7,840.00
204	Geotextile Fabric	90	SY	\$ 5.00	\$ 450.00
304	Aggregate Base (Reinforced Turf Drive)	262	CY	\$ 90.00	\$ 23,580.00
304	Aggregate For Stabilized Construction Entrance - No. 1 Stone	12	CY	\$ 90.00	\$ 1,080.00
623	Construction Layout Stakes and Monuments	1	LS	\$ 5,000.00	\$ 5,000.00
624	Mobilization	1	LS	\$ 20,000.00	\$ 20,000.00
653	Topsoil	181	CY	\$ 25.00	\$ 4,525.00
659	Seeding and Mulching	4,653	SY	\$ 3.00	\$ 13,959.00
659	Repair Seeding and Mulching	4,653	SY	\$ 3.00	\$ 13,959.00
670	Slope Erosion Protection Mat, Type G	966	SY	\$ 4.00	\$ 3,864.00
671	Erosion Control Mat, Type G	146	SY	\$ 4.00	\$ 584.00
832	Silt Fence	1,565	LF	\$ 5.00	\$ 7,825.00
832	Straw Wattle	103	LF	\$ 5.00	\$ 515.00
832	Inlet Protection - Dandy Bag	1	EA	\$ 120.00	\$ 120.00
832	High Visibility Construction Fence	815	LF	\$ 0.40	\$ 326.00
832	Rock Check Dam	6	EA	\$ 375.00	\$ 2,250.00
SPECIAL	Sand	84	CY	\$ 125.00	\$ 10,500.00
SPECIAL	Sandstone Cascade and Pool Boulders - 36"	54	CY	\$ 500.00	\$ 27,000.00
SPECIAL	Sandstone Riffle Cobbles - 12"	145	CY	\$ 815.00	\$ 118,175.00
SPECIAL	Woodchips	21	CY	\$ 10.00	\$ 210.00
SPECIAL	Tensor BX 1100 Geogrid or Approved Equal	1,568	SY	\$ 2.50	\$ 3,920.00
SPECIAL	Bypass Pumping	1	LS	\$ 10,000.00	\$ 10,000.00
SPECIAL	Native Wetland Plantings	1	LS	\$ 4,300.00	\$ 4,300.00
SPECIAL	Native Wetland Seed	153	SY	\$ 4.00	\$ 612.00
SPECIAL	Bonds & Insurance	1	LS	\$ 15,000.00	\$ 15,000.00
SPECIAL	Pipe Cleaning - Heavy	75	LF	\$ 10.00	\$ 750.00
SPECIAL	Pipe Cleaning - Light	234	LF	\$ 4.00	\$ 936.00
SPECIAL	Pipe Inspection & Cleaning - 699 & 715 Pine Point Drive	252	LF	\$ 66.00	\$ 16,632.00
SPECIAL	Allowance - As Directed by the Owner	1	LS	\$ 75,000.00	\$ 75,000.00
SPECIAL	Allowance - Stream Cleanup & Removal of Downed Trees Greater than 12"	1	LS	\$ 50,000.00	\$ 50,000.00
304	Alternate - Aggregate For Maintenance Access Drive - No. 1 Stone	178	CY	\$ 90.00	\$ 16,020.00
304	Alternate - Aggregate For Maintenance Access Drive - No. 57 Stone	89	CY	\$ 90.00	\$ 8,010.00
	Phase 2 Subtotal				\$ 564,570.00
	Phase 2 Contingency (20%)				\$ 112,914.00
	Phase 2 Total				\$ 677,484.00
	Alternate Phase 2 Subtotal				\$ 561,100.00
	Alternate Phase 2 Contingency (20%)				\$ 112,220.00
	Alternate Phase 2 Total				\$ 673,320.00
Phase 1B					
201	Clearing/Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
201	Tree Removal Associated with Basin Improvements	0.53	AC	\$ 20,000.00	\$ 10,600.00
203	Excavation	193	CY	\$ 30.00	\$ 5,790.00
203	Excavation of Unsuitable Material - As Per Plan	1,296	CY	\$ 30.00	\$ 38,880.00
203	Embankment	1,230	CY	\$ 30.00	\$ 36,900.00
203	Additional Embankment Required to Meet Proposed Grade - Berm	419	CY	\$ 30.00	\$ 12,570.00
601	Rock Channel Protection - Type A	348	CY	\$ 100.00	\$ 34,800.00
601	Rock Channel Protection - Type C	75	CY	\$ 100.00	\$ 7,500.00
601	Rip Rap With Grout	25	CY	\$ 120.00	\$ 3,000.00
623	Construction Stakes and Monuments	1	LS	\$ 5,000.00	\$ 5,000.00
624	Mobilization	1	LS	\$ 20,000.00	\$ 20,000.00
653	Topsoil	286	CY	\$ 25.00	\$ 7,150.00
659	Seeding and Mulching	2,577	SY	\$ 3.00	\$ 7,731.00
659	Repair Seeding and Mulching	2,577	SY	\$ 3.00	\$ 7,731.00
670	Slope Erosion Protection Mat, Type G	159	SY	\$ 4.00	\$ 636.00
832	Inlet Protection - Drop Inlet Sediment Filter	1	EA	\$ 121.00	\$ 121.00
832	Silt Fence	1,130	LF	\$ 5.00	\$ 5,650.00
SPECIAL	Bonds & Insurance	1	LS	\$ 6,000.00	\$ 6,000.00
SPECIAL	Existing 27" Pipe - CIPP Liner - 15.0 mm	11	LF	\$ 600.00	\$ 6,600.00
SPECIAL	Existing 30" Pipe - CIPP Liner - 15.0 mm	83	LF	\$ 600.00	\$ 49,800.00
SPECIAL	12" Orifice Plate	1	EA	\$ 12,000.00	\$ 12,000.00
SPECIAL	24" Orifice Plate	1	EA	\$ 400.00	\$ 400.00
SPECIAL	Groundwater Monitoring	1	LS	\$ 800.00	\$ 800.00
SPECIAL	Anti-Seep Collar	1	EA	\$ 7,000.00	\$ 7,000.00
SPECIAL	Alternate - Liner Pipe	94	LF	\$ 250.00	\$ 23,500.00
	Phase 1B Subtotal				\$ 296,659.00
	Phase 1B Contingency (20%)				\$ 59,332.00
	Phase 1B Total				\$ 355,991.00
	Alternate Phase 1B Subtotal				\$ 263,759.00
	Alternate Phase 1B Contingency (20%)				\$ 52,751.80
	Alternate Phase 1B Total				\$ 316,511
	Phase 1B and Phase 2 Combined Total:				\$ 1,033,475.00
	Phase 1B and Alternate Phase 2 Combined Total:				\$ 1,029,311.00
	Alternate Phase 1B and Phase 2 Combined Total:				\$ 993,994.80
	Alternate Phase 1B and Alternate Phase 2 Combined Total:				\$ 989,830.80
<p>Note- The opinion of probable construction cost does not include costs for right of way or easement acquisition, private utility relocation/permit costs including gas, electric and telecommunications, traffic signals and signal interconnect, environmental remediation, rock excavation, unsuitable material and soil stabilization, waterline relocation, and demolition of existing buildings. Costs should be adjusted for work performed beyond this time.</p>					

This Estimate of Probable Project Cost is based on available information and the Engineer's experience and qualifications and represents the Engineer's best judgement as an experienced and qualified professional engineer. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over competitive bidding or market conditions, the Engineer can not and does not guarantee that the actual total project cost will not exceed the above Estimate of Probable Project Costs.