

September 8, 2022

Mr. Kellen Douglas, PE
Water and Wastewater Engineer
City of Hagerstown, Utilities Department
Water and Wastewater Division
1 Clean Water Circle
Hagerstown, MD 21740

Re: City of Hagerstown Pump Station 33 & 13 Engineering Design & Construction Management Services

Dear Mr. Douglas,

Buchart Horn, Inc. (BH) is pleased to submit our price proposal to provide engineering design, permitting, and construction management for the City of Hagerstown Pump Stations 33 and 13. For more than 75 years, BH has successfully delivered a range of water and wastewater projects for clients across the Eastern United States, including many for Washington County, Maryland, such as: Conococheague Wastewater Treatment Plant Enhanced Nutrient Removal Upgrade, Fort Frederick State Park Water System Upgrades, and bidding and construction phase services for the addition of an influent equalization tank at Greenbrier State Park Wastewater Treatment Plant in Boonsboro. BH has extensive experience with upgrades and conversion of existing wastewater pump stations, including submersible pumping stations and designs to accommodate maintaining operations during construction.

The team of professionals we have selected to complete the services under this contract is led by Project Manager, David Highfield, PE. Mr. Highfield has over 31 years of experience in the project management, design, permitting, and construction of public water and wastewater infrastructure. We are certain that this team's expertise will meet and exceed expectations for this project.

We attended the pre-bid meeting on August 30, 2022, and we acknowledge Addendum No. 1, issued on September 2, 2022, and have incorporated any modifications necessary in our submittal.

BH is confident in our ability to offer a qualified team with in-depth and varied technical expertise, focused responsiveness, and cost-effective solutions for your Pump Station replacement and reconstruction projects. We appreciate the opportunity to develop a successful relationship with the City of Hagerstown. If you have any questions or require additional information, please contact me at scottrussell@bucharthorn.com or (814) 574-4518.

Sincerely,
Buchart Horn, Inc.



Scott E. Russell, PE
Senior Vice President – Water Resources

2022 City of Hagerstown MD - Pump Station #33 and #13 - Request for Proposal
COST PROPOSAL

FIRM: **Buchart Horn**

PUMP STATION #33 REPLACEMENT	PUMP STATION #13 REPLACEMENT
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Not-to-Exceed Lump Sum costs for each of the following items:

A	Study and Report Phase	\$20,410.00	\$23,490.00
B	Preliminary Design Phase	\$112,485.00	\$155,415.00
C	Final Design Phase	\$38,410.00	\$46,570.00
E	Bidding Phase	\$18,550.00	\$18,550.00
F	Construction Phase	\$69,770.00	\$70,370.00
G	Post-Construction Phase	\$7,420.00	\$7,420.00
Lump Sum Total		\$267,045.00	\$321,815.00

Time and Material costs for each of the following items:

Permitting	\$38,240.00	\$7,740.00
T&M Total	\$38,240.00	\$7,740.00

TOTAL PROPOSED COST EACH PUMP STATION	\$305,285.00	\$329,555.00
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TOTAL PROPOSED COST	\$634,840.00	
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		Project Manager	Profesional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Profesional Engineer (Structural)	Profesional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Profesional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
	Billing Rate Breakdown																
	Hourly Billing Rate	\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
A	Study and Report Phase																
1	Kickoff Meeting	8	4	4										16	\$ 2,320	\$ 300	\$ 2,620
2	Site Visit (1)		4	4										8	\$ 1,000	\$ 300	\$ 1,300
3	Identify and Analyze Requirements of Governmental Authorities		4	4										8	\$ 1,000		\$ 1,000
4	Prepare Design Report		8	20				8	6			8	8	58	\$ 6,130		\$ 6,130
5	Advise Owner on a Recommended Scope of Work		4	4										8	\$ 1,000		\$ 1,000
6	Develop Survey Scope and Limits		4	8										12	\$ 1,400		\$ 1,400
7	Provide Environmental Report		4	8			12					4	8	36	\$ 3,100		\$ 3,100
8	Provide Study and Report Phase Draft Deliverables		4	4								4	8	20	\$ 1,620	\$ 150	\$ 1,770
9	Provide Study and Report Phase Final Deliverables		4	4								4	8	20	\$ 1,620	\$ 250	\$ 1,870
	Project Management and Teams Meetings	16												16	\$ 2,640		\$ 2,640
	QA/QC	4												4	\$ 660		\$ 660
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	28	40	60	0	0	12	8	6	0	0	20	32	206	\$ 22,490	\$ 1,000	\$ 23,490
B	Preliminary Design Phase																
1	Prepare Preliminary Design Phase Documents		20	100		8				8	4	60	8	208	\$ 20,360		\$ 20,360
2	Geotechnical Subsurface Investigation and Foundation Report		8											8	\$ 1,200	\$ 5,855	\$ 7,055
3	Field Survey and Utility Mapping		8											8	\$ 1,200	\$ 35,060	\$ 36,260
4	Site Visits (2)		16	16										32	\$ 4,000	\$ 600	\$ 4,600
5	Advise Owner Regarding Additional Reports, Data, Info, and Services		4	8										12	\$ 1,400		\$ 1,400
6	Prepare Opinion of Probable Cost		4	4						24	16			48	\$ 6,040		\$ 6,040
7	Review Owner's Procurment of Construction Services		4	4						8	8			24	\$ 2,960		\$ 2,960
8	Prepare 60% and 90% Design Submittals		40	180	24	32		24	76	32	20	220	16	664	\$ 67,660	\$ 500	\$ 68,160
	Project Management and Teams Meetings	40												40	\$ 6,600		\$ 6,600
	QA/QC	12												12	\$ 1,980		\$ 1,980
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	52	104	312	24	40	0	24	76	72	48	280	24	1056	\$ 113,400	\$ 42,015	\$ 155,415


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		Project Manager	Profesional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Profesional Engineer (Structural)	Profesional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Profesional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
Billing Rate Breakdown																	
Hourly Billing Rate		\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
C	Final Design Phase																
1	Prepare 95% Draft Design Submittals		12	100		8		4	24	4	8	24	12	196	\$ 19,900	\$ 250	\$ 20,150
2	Site Visit (1)		8	8										16	\$ 2,000	\$ 300	\$ 2,300
3	Prepare Opinion of Probable Cost									12	8			20	\$ 2,520		\$ 2,520
4	Assist Owner in Assembling Existing Reports and Drawings		4	4						4	4			16	\$ 1,980		\$ 1,980
5	Assemble Draft Construction Contract Documents									16	24		4	44	\$ 4,920		\$ 4,920
6	Prepare Draft Bidding-Related Documents									16		4	4	24	\$ 2,700		\$ 2,700
7	Identify Building Codes and Accssibility Standards		4	4										8	\$ 1,000		\$ 1,000
8	Prepare Final Design Submittals		4	8						24		4	4	44	\$ 5,220	\$ 500	\$ 5,720
	Project Management and Teams Meetings	24												24	\$ 3,960		\$ 3,960
	QA/QC	8												8	\$ 1,320		\$ 1,320
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	32	32	124	0	8	0	4	24	76	44	32	24	400	\$ 45,520	\$ 1,050	\$ 46,570
E	Bidding Phase																
1	Assist Owner in Advertizing and Obtaining Bids		2	6						8				16	\$ 2,020		\$ 2,020
2	Prepare Addenda		2	6						16	16			40	\$ 4,820		\$ 4,820
3	Review Contractor Proposals		2	6										8	\$ 900		\$ 900
4	Review Contractor Qualifications		2	6										8	\$ 900		\$ 900
5	Review Subcontractor Qualifications		2	6										8	\$ 900		\$ 900
6	Review Or Equals		2	6										8	\$ 900		\$ 900
7	Attend Bid Opening, Evaluate Bids, Assemble Contracts, Issue Notice of Award			8						8	16		24	56	\$ 4,560	\$ 150	\$ 4,710
8	Furnish (5) hard and (1) Electronic Copies of Executed Contract Documents		2									4	8	14	\$ 920	\$ 500	\$ 1,420
	Project Management and Teams Meetings	10												10	\$ 1,650		\$ 1,650
	QA/QC	2												2	\$ 330		\$ 330
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	12	14	44	0	0	0	0	0	32	32	4	32	170	\$ 17,900	\$ 650	\$ 18,550

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		Project Manager	Profesional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Profesional Engineer (Structural)	Profesional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Profesional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
	Billing Rate Breakdown																
	Hourly Billing Rate	\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
F	Construction Phase																
1	Negotiate Scope of City Staff Provided RPR	8												8	\$ 1,320		\$ 1,320
2	Pre-construction Meeting		8								6		4	18	\$ 1,990	\$ 300	\$ 2,290
3	Maintain (1) Record Hard Copy of Sealed Contruction Documents			8										8	\$ 800		\$ 800
4	Review Contractor Schedules		12											12	\$ 1,800		\$ 1,800
5	Establish Baselines and Benchmarks		4	8										12	\$ 1,400		\$ 1,400
6	Make Periodic Site Visits (12)		96								36			132	\$ 18,180	\$ 1,800	\$ 19,980
7	Review Potential Defective Work										8			8	\$ 840		\$ 840
8	Review Potential Noncompatible Work										8			8	\$ 840		\$ 840
9	Review RFI's		8	8										16	\$ 2,000		\$ 2,000
10	Prepare Field Orders										8			8	\$ 840		\$ 840
11	Review Contractor Requested Change Orders		8	8										16	\$ 2,000		\$ 2,000
12	Review Contractor Notice of Differing Site Conditions										8			8	\$ 840		\$ 840
13	Review Shop Drawings			40										40	\$ 4,000		\$ 4,000
14	Review Contractor Proposed or Equal			8										8	\$ 800		\$ 800
15	Review Certificates of Inspections and Tests			8										8	\$ 800		\$ 800
16	Review and Respond to Change Proposals		12											12	\$ 1,800		\$ 1,800
17	Review and Recommed Contracor Applications for Payment			8							24		8	40	\$ 3,640		\$ 3,640
18	Review O&M's and Furnish Record Drawings to Owner		8	12								60		80	\$ 6,900		\$ 6,900
19	Site Visit for and Issue Substantial Completion Recommendation		8								6		4	18	\$ 1,990	\$ 150	\$ 2,140
20	Final Site Visit and Issue Final Completion Recommendation		8								6		4	18	\$ 1,990	\$ 150	\$ 2,140
	Project Management and Teams Meetings	80												80	\$ 13,200		\$ 13,200
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	88	172	108	0	0	0	0	0	0	110	60	20	558	\$ 67,970	\$ 2,400	\$ 70,370
G	Post-Construction Phase																
1	Site Visit to Observe Apparent Defects in Work, Advise Owner (2)		16								12		2	30	\$ 3,740	\$ 300	\$ 4,040
2	Site Visit One Month Prior To Construction Warranty Period, Advise Owner		8								6		2	16	\$ 1,910	\$ 150	\$ 2,060
	Project Management and Teams Meetings	8												8	\$ 1,320		\$ 1,320
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	8	24	0	0	0	0	0	0	0	18	0	4	54	\$ 6,970	\$ 450	\$ 7,420
	LUMP SUM TOTAL	220	386	648	24	48	12	36	106	180	252	396	136	2444	274250	47565	321815

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		Project Manager	Profesional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Profesional Engineer (Structural)	Profesional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Profesional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
	Billing Rate Breakdown																
	Hourly Billing Rate	\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															

	Permitting																
a	MDE Construction Permit		8	24		12								32	\$ 3,600		\$ 3,600
b	Earth Disturbance Permit													12	\$ 1,500		\$ 1,500
c	Electrical Building Permit							8						8	\$ 1,320		\$ 1,320
d	Plumbing Building Permit							8						8	\$ 1,320		\$ 1,320
e	State Highway Utility Crossing Permit													0	\$ -		\$ -
f	Joint Waterway Obstruction/Encroachment Permit													0	\$ -		\$ -
														0	\$ -		\$ -
	T&M TOTAL	0	8	24	0	12	0	16	0	0	0	0	0	60	\$ 7,740	\$ -	\$ 7,740

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		Project Manager	Professional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Professional Engineer (Structural)	Professional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Professional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
Billing Rate Breakdown																	
Hourly Billing Rate		\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
A	Study and Report Phase																
1	Kickoff Meeting	8	4	4										16	\$ 2,320	\$ 300	\$ 2,620
2	Site Visit (1)		4	4										8	\$ 1,000	\$ 300	\$ 1,300
3	Identify and Analyze Requirements of Governmental Authorities		4	4										8	\$ 1,000		\$ 1,000
4	Prepare Design Report		4	6				8	6			8	8	40	\$ 4,130		\$ 4,130
5	Advise Owner on a Recommended Scope of Work		8	6										14	\$ 1,800		\$ 1,800
6	Develop Survey Scope and Limits		4	4										8	\$ 1,000		\$ 1,000
7	Provide Environmental Report		4	4								4	8	20	\$ 1,620		\$ 1,620
8	Provide Study and Report Phase Draft Deliverables		4	4								4	8	20	\$ 1,620	\$ 150	\$ 1,770
9	Provide Study and Report Phase Final Deliverables		4	4								4	8	20	\$ 1,620	\$ 250	\$ 1,870
	Project Management and Teams Meetings	16												16	\$ 2,640		\$ 2,640
	QA/QC	4												4	\$ 660		\$ 660
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	28	40	40	0	0	0	8	6	0	0	20	32	174	\$ 19,410	\$ 1,000	\$ 20,410
B	Preliminary Design Phase																
1	Prepare Preliminary Design Phase Documents		20	40		8				8	4	40	8	128	\$ 12,860		\$ 12,860
2	Geotechnical Subsurface Investigation and Foundation Report		8											8	\$ 1,200	\$ 8,975	\$ 10,175
3	Field Survey and Utility Mapping		8											8	\$ 1,200	\$ 14,250	\$ 15,450
4	Site Visits (2)		16	16										32	\$ 4,000	\$ 600	\$ 4,600
5	Advise Owner Regarding Additional Reports, Data, Info, and Services		4	8										12	\$ 1,400		\$ 1,400
6	Prepare Opinion of Probable Cost		4	4						16	16			40	\$ 4,920		\$ 4,920
7	Review Owner's Procurment of Construction Services		4	4						8	8			24	\$ 2,960		\$ 2,960
8	Prepare 60% and 90% Design Submittals		20	100	24	32		24	76	24	20	160	16	496	\$ 51,040	\$ 500	\$ 51,540
	Project Management and Teams Meetings	40												40	\$ 6,600		\$ 6,600
	QA/QC	12												12	\$ 1,980		\$ 1,980
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	52	84	172	24	40	0	24	76	56	48	200	24	800	\$ 88,160	\$ 24,325	\$ 112,485
C	Final Design Phase																
1	Prepare 95% Draft Design Submittals		8	60		8		4	24	4	8	24	12	152	\$ 15,300	\$ 250	\$ 15,550
2	Site Visit (1)		4	16										20	\$ 2,200	\$ 300	\$ 2,500
3	Prepare Opinion of Probable Cost									12	8			20	\$ 2,520		\$ 2,520
4	Assist Owner in Assembling Existing Reports and Drawings		4	4						4	4			16	\$ 1,980		\$ 1,980
5	Assemble Draft Construction Contract Documents									16	24		4	44	\$ 4,920		\$ 4,920
6	Prepare Draft Bidding-Related Documents									16		4	4	24	\$ 2,700		\$ 2,700
7	Identify Building Codes and Accssibility Standards		4	4										8	\$ 1,000		\$ 1,000
8	Prepare Final Design Submittals		4	4								4	4	16	\$ 1,460	\$ 500	\$ 1,960
	Project Management and Teams Meetings	24												24	\$ 3,960		\$ 3,960
	QA/QC	8												8	\$ 1,320		\$ 1,320
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	32	24	88	0	8	0	4	24	52	44	32	24	332	\$ 37,360	\$ 1,050	\$ 38,410

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		Project Manager	Profesional Engineer (Water Res/Env)	Design Engineer (Water Resources)	Profesional Engineer (Structural)	Profesional Engineer (Civil/Land Development)	Design Engineer (Civil/Land Development)	Profesional Engineer (Mechanical/Electrical)	Design Engineer (Mechanical/Electrical)	Senior Environmental Specialist	Environmental Specialist	CAD Technician	Clerical	Total Hours	Labor	Direct Cost	Total
Billing Rate Breakdown																	
Hourly Billing Rate		\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
E	Bidding Phase																
1	Assist Owner in Advertizing and Obtaining Bids		2	6						8				16	\$ 2,020		\$ 2,020
2	Prepare Addenda		2	6						16	16			40	\$ 4,820		\$ 4,820
3	Review Contractor Proposals		2	6										8	\$ 900		\$ 900
4	Review Contractor Qualifications		2	6										8	\$ 900		\$ 900
5	Review Subcontractor Qualifications		2	6										8	\$ 900		\$ 900
6	Review Or Equals		2	6										8	\$ 900		\$ 900
7	Attend Bid Opening, Evaluate Bids, Assemble Contracts, Issue Notice of Award			8						8	16		24	56	\$ 4,560	\$ 150	\$ 4,710
8	Furnish (5) hard and (1) Electronic Copies of Executed Contract Documents		2									4	8	14	\$ 920	\$ 500	\$ 1,420
	Project Management and Teams Meetings	10												10	\$ 1,650		\$ 1,650
	QA/QC	2												2	\$ 330		\$ 330
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	12	14	44	0	0	0	0	0	32	32	4	32	170	\$ 17,900	\$ 650	\$ 18,550
F	Construction Phase																
1	Negotiate Scope of City Staff Provided RPR	8												8	\$ 1,320		\$ 1,320
2	Pre-construction Meeting		8								6		4	18	\$ 1,990	\$ 300	\$ 2,290
3	Maintain (1) Record Hard Copy of Sealed Contruccion Documents			8										8	\$ 800		\$ 800
4	Review Contractor Schedules		12											12	\$ 1,800		\$ 1,800
5	Establish Baselines and Benchmarks			8										8	\$ 800		\$ 800
6	Make Periodic Site Visits (12)		96								36			132	\$ 18,180	\$ 1,800	\$ 19,980
7	Review Potential Defective Work										8			8	\$ 840		\$ 840
8	Review Potential Noncompatible Work										8			8	\$ 840		\$ 840
9	Review RFI's		8	8										16	\$ 2,000		\$ 2,000
10	Prepare Field Orders										8			8	\$ 840		\$ 840
11	Review Contractor Requested Change Orders		8	8										16	\$ 2,000		\$ 2,000
12	Review Contractor Notice of Differing Site Conditions										8			8	\$ 840		\$ 840
13	Review Shop Drawings			40										40	\$ 4,000		\$ 4,000
14	Review Contractor Proposed or Equal			8										8	\$ 800		\$ 800
15	Review Certificates of Inspections and Tests			8										8	\$ 800		\$ 800
16	Review and Respond to Change Proposals		12											12	\$ 1,800		\$ 1,800
17	Review and Recommed Contracor Applications for Payment			8							24		8	40	\$ 3,640		\$ 3,640
18	Review O&M's and Furnish Record Drawings to Owner		8	12								60		80	\$ 6,900		\$ 6,900
19	Site Visit for and Issue Substantial Completion Recommendation		8								6		4	18	\$ 1,990	\$ 150	\$ 2,140
20	Final Site Visit and Issue Final Completion Recommendation		8								6		4	18	\$ 1,990	\$ 150	\$ 2,140
	Project Management and Teams Meetings	80												80	\$ 13,200		\$ 13,200
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	88	168	108	0	0	0	0	0	0	110	60	20	554	\$ 67,370	\$ 2,400	\$ 69,770

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	Hourly Billing Rate	\$ 165.00	\$ 150.00	\$ 100.00	\$ 135.00	\$125.00	\$90.00	\$165.00	\$115.00	\$140.00	\$105.00	\$ 75.00	\$ 40.00				
Task No.	Description	Estimated Time Requirement - Hours															
G	Post-Construction Phase																
1	Site Visit to Observe Apparent Defects in Work, Advise Owner (2)		16								12		2	30	\$ 3,740	\$ 300	\$ 4,040
2	Site Visit One Month Prior To Construction Warranty Period, Advise Owner		8								6		2	16	\$ 1,910	\$ 150	\$ 2,060
	Project Management and Teams Meetings	8												8	\$ 1,320		\$ 1,320
														0	\$ -		\$ -
														0	\$ -		\$ -
	Subtotal	8	24	0	0	0	0	0	0	0	18	0	4	54	\$ 6,970	\$ 450	\$ 7,420
	LUMP SUM TOTAL	220	354	452	24	48	0	36	106	140	252	316	136	2084	\$ 237,170.00	\$ 29,875.00	\$ 267,045.00

	Permitting																
a	MDE Construction Permit		8	24										32	\$ 3,600		\$ 3,600
b	Earth Disturbance Permit					12								12	\$ 1,500		\$ 1,500
c	Electrical Building Permit							8						8	\$ 1,320		\$ 1,320
d	Plumbing Building Permit							8						8	\$ 1,320		\$ 1,320
e	State Highway Utility Crossing Permit		8	24										32	\$ 3,600		\$ 3,600
f	Joint Waterway Obstruction/Encroachment Permit		4	8						100	100			212	\$ 25,900	\$ 1,000	\$ 26,900
														0	\$ -		\$ -
	T&M TOTAL	0	20	56	0	12	0	16	0	100	100	0	0	304	\$ 37,240	\$ 1,000	\$ 38,240

CITY OF HAGERSTOWN
PUMP STATION 33 AND 13
ENGINEERING DESIGN AND CONSTRUCTION MANAGEMENT SERVICES

PROPOSED SCHEDULE

Description	Date
Notice to Proceed - Engineering	October 3, 2022
Kickoff Meeting / Initial Site Visit	October 10, 2022
Study and Report Phase	November 7, 2022
Client Review and Approval	November 21, 2022
Submit Joint Permit Application	December 23, 2022
Completion of Geotechnical Investigation / Field Survey	January 16, 2023
30% Submittal	January 20, 2023
Client Review and Approval	February 3, 2023
60% Submittal	May 12, 2023
Submit Remaining Permit Applications	May 19, 2023
Client Review and Approval	May 26, 2023
90% Submittal	July 28, 2023
Client Review and Approval	August 11, 2023
95% Submittal	September 8, 2023
Client Review and Approval	September 22, 2023
100% Final Document Submittal	October 13, 2023
Client Review and Approval	October 27, 2023
Bid Advertisement	November 17, 2023
Notice to Proceed - Construction	January 12, 2024
Substantial Completion	October 8, 2024
Final Completion	December 7, 2024

CITY OF HAGERSTOWN
PUMP STATION 33 AND 13
ENGINEERING DESIGN AND CONSTRUCTION MANAGEMENT
SERVICES

ASSUMPTIONS

The scope of the engineering services included in this request will be limited to the replacement of Pump Station #9 with new Pump Station #33 and reconstruction of Pump Station #13 including the associated gravity sewer extension and forcemain piping. This solicitation is being done under the open ended, on call Division of Environmental Services Contract with Washington County (PUR-1547) and therefore the hourly rates for each job title and contract conditions apply to this solicitation. These projects will use Federal money (ARPA) and therefore construction of these pump stations need to be completed by December 2024.

Pump Station #33

Pump Station #9 (PS9) is located at the intersection of Dual Highway and Day Road and is beyond its useful life. PS9 is a buried steel enclosure configured as a dry well/wet well station. PS9 has two (2) dry pit horizontal pumps each with a pump capacity of approximately 265 gpm. Due to the configuration of the pump station, increasing capacity isn't a feasible option. Therefore, a replacement pump station, Pump Station #33, will be constructed along Hebb Road approximately 2,500 ft west of the existing pump station. Existing right-of-way will be used as much as possible and additional right-of-way acquisition is not included as part of this proposal. We understand the City has already contracted another Consultant for the proposed easements required for Pump Station 33. If additional right-of-way or easements are required as a result of the new information in the design study phase, an amendment to the scope of services will be negotiated at that time.

- The existing average daily base flow at the pump station is 90,000 gpd.
- The design average daily flow capacity of PS33 will be 504,000 gpd or 350 gpm. The design peaking factor will be in accordance with MDE and the Ten State Standards for wastewater design.
- A gravity sewer system will be constructed from the existing PS9 to the new pump station as shown in the alignment in the RFP. This will include a horizontal boring across Route 40 (Dual Highway).
- A forcemain will be constructed parallel to the new gravity sewer to connect to the

existing gravity sewer along Dual Highway.

- Existing discharge manholes are assumed to be retained.
- The new pump station will be designed with a 10 ft diameter wet well.
- The pump station design shall include a permanent standby diesel-powered generator sized to accommodate electrical loads at each station.
- BH Electrical assumes that a new service for Pump Station 33 will be needed. BH Electrical assumes that the Utility Company will be able to provide the additional service capacity on their system.
- BH Electrical will develop an electrical distribution system model to determine that all electrical equipment has ratings high enough to withstand a short circuit event based on Utility available fault current. BH will also provide a calculated available utility fault current label at the service entrance. However, BH did not include the cost to provide a full Arc-flash study or arc-flash labeling for the electrical equipment. BH can add a full arc-flash study and equipment labeling for additional fee.
- BH Electrical assumes that no internet or other external communications services will need to be established to facilitate alarming communications. BH Electrical assumes that there is adequate cellular service in the project area to implement a cellular alarm dialer if desired.
- The new pump station will be designed as a submersible station with a two (2) pump configuration (one (1) duty pump, one (1) standby pump) at a minimum, but a three (3) pump configuration should be evaluated by the Consultant.
- A pre-fabricated building has been assumed to be included in the design to house the electrical equipment (ATS, Control Panel, etc..). Reuse of existing structure shall be investigated.
- The removal of the existing pump station shall be included in the scope of work.
- A final plat and easement area is being secured by another Consultant.
- We have assumed that each pump station construction contract will include materials and installation (no pre-procurement contracts). If project schedule dictates that a procurement contract is necessary, the City and Consultant will negotiate an amendment for the additional work.
- We have A Water and Sewer Plan review application will not be required as part of the permitting scope of work.

Pump Station #13

Pump Station #13 is located along Western MD Parkway on the west side of the City

of Hagerstown. Pump station #13 is configured as a dry pit pump station with a concrete wet well and brick building structure. This pump station was decommissioned approximately 20 years ago with the wastewater being diverted via gravity to the Washington County sewer collection system. The existing infrastructure is visually deteriorated however the use of the existing infrastructure (building and wet well) shall be evaluated by the Consultant as part of the study and report phase of this project. Existing right-of-way will be used as much as possible and additional right-of-way acquisition is not included as part of this proposal. If additional right-of-way or easements are required as a result of the new information in the design study phase, an amendment to the scope of services will be negotiated at that time.

- The existing average daily flow at this pump station is 480,000 gpd.
- The design average daily flow capacity will be 560,000 gpd or 390 gpm. The design peaking factor will be in accordance with MDE and the ten state standards for wastewater design.
- The new pump station will be designed with a 10 ft diameter wet well.
- The pump station design shall include a permanent standby diesel-powered generator sized to accommodate electrical loads at each station.
- BH Electrical assumes that a power service upgrade will be necessary at Pump Station 13 as the Utility will most likely see that service as defunct. BH Electrical assumes that the Utility Company will be able to provide the additional service capacity on their system.
- BH Electrical will develop an electrical distribution system model to determine that all electrical equipment has ratings high enough to withstand a short circuit event based on Utility available fault current. BH will also provide a calculated available utility fault current label at the service entrance. However, BH did not include the cost to provide a full Arc-flash study or arc-flash labeling for the electrical equipment. BH can add a full arc-flash study and equipment labeling for additional fee.
- BH Electrical assumes that no internet or other external communications services will need to be established to facilitate alarming communications. BH Electrical assumes that there is adequate cellular service in the project area to implement a cellular alarm dialer if desired.
- The new pump station will be designed as a submersible station with a two (2) pump configuration (one (1) duty pump, one (1) standby pump) at a minimum, but a three (3) pump configuration should be evaluated by the Consultant.
- A prefabricated building has been assumed to be included in the design to house the electrical equipment (ATS, Control Panel, etc..). Reuse of existing structure shall be investigated.
- The removal of the existing pump station shall be included in the scope of work.

- A forcemain will be constructed from the pump station to the discharge manhole adjacent to Virginia Ave as shown in the RFP exhibit. Should the City add an alternate route along the railroad to be considered, this would be done for an additional negotiated fee.
- Existing discharge manholes are assumed to be retained.
- The existing railroad crossings are assumed to be re-used.
- We have assumed the City will locate the existing forcemain so that the Consultant has a clear, defined alignment for the topographical surveys required for this project.
- Currently all flow to pump station 13 is diverted just outside the pump station to the gravity system that connects to the County's sewer collection system. We have assumed all current customers (County or City parcels) will remain on the existing City sewer system and their flow conveyed to by the new pump station to the City of Hagerstown's sewer collection system.
- We have assumed that each pump station construction contract will include materials and installation (no pre-procurement contracts). If project schedule dictates that a procurement contract is necessary, the City and Consultant will negotiate an amendment for the additional work.
- We have A Water and Sewer Plan review application will not be required as part of the permitting scope of work.

As outlined in the RFP, the following scope of services and assumptions for each task, are included in this proposal:

Study and Report Phase

- A. Study Phase to clarify Owner's requirements for the Project.
 - 1. Conduct a "kickoff" meeting with Owner to define and clarify Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations, and identify available data, information, reports, facilities plan, and site evaluations. Engineer will identify, study, and evaluate potential alternative solutions potentially available to Owner.
 - 2. Conduct a site visit to review existing conditions and facilities, applicable to meeting the objectives of the Study and Report Phase.
 - 3. Identify, consult with, and analyze requirements of governmental authorities having jurisdiction to approve the portions of the Project to be designed or

specified by Engineer, including but not limited to mitigating measures identified in an environmental assessment for the Project. Confer with Washington County regarding the location of the proposed forcemain within County roadways.

4. Prepare a report (the "Report") which will, as appropriate, contain hydraulic calculations that evaluate the potential forcemain size and number alternatives. The Report shall include an analysis of the current and future flow impacts of the forcemain alternatives. The Report should also include evaluations of the number of pumps in the wetwell.
5. Use ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" to advise the Owner on a recommended scope of work and procedure for the identification and mapping of existing utilities.
6. Develop a scope of work and survey limits for any topographic and other surveys necessary for design.
7. Provide an Environmental Report as defined at 7 CFR 1970 or another Agency approved format.
8. Furnish two (2) review copies of the Report and any other Study and Report Phase deliverables to Owner.
9. Revise the Report and any other Study and Report Phase deliverables in response to Owner's comments, as appropriate, and furnish three (3) written copies and one (1) electronic copy of the revised Report and any other Study and Report Phase deliverables to the Owner.

Preliminary Design Phase

- B. After acceptance by Owner of the Report and any other Study and Report Phase deliverables, the Owner will select a recommended solution and direct the Engineer to proceed with preliminary design.
 1. Prepare Preliminary Design Phase documents consisting of final design criteria, preliminary drawings, technical specifications, and written descriptions of the Project. The "front end" specifications will be EJCDC documents.
 2. The Engineer shall include geotechnical services in their scope of work. The geotechnical work included should include a bearing strength analysis at the pump station site and rock profile for all areas outside of the public right of way along the piping alignment. See attached Geotechnical Exploration and Surveying Services proposed scope and fee for additional assumptions.
 3. Provide necessary field surveys and topographic and utility mapping for Engineer's design purposes. Comply with the scope of work and

procedure for the identification and mapping of existing utilities selected and authorized by Owner pursuant to advice from Engineer based on ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data,". See attached Geotechnical Exploration and Surveying Services proposed scope and fee for additional assumptions.

4. Conduct two site visits as needed to prepare the Preliminary Design Phase documents.
5. Advise Owner if additional reports, data, information, or other services are necessary and assist Owner in obtaining such reports, data, information, or services.
6. Prepare a revised opinion of probable Construction Cost based on the information contained in the Preliminary Design Phase documents and assist Owner in tabulating the various cost categories which comprise Total Project Costs.
7. Obtain and review Owner's instructions regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's bidding-related documents, and Construction Contract Documents. Also obtain and review copies of Owner's design and construction standards, Owner's standard forms, general conditions (assumed EJCDC® C-700, Standard General Conditions of the Construction Contract, 2013 Edition), supplementary conditions, text, and related documents or content for Engineer to include in the draft bidding-related documents, and in the draft Construction Contract Documents, when applicable. Engineer must also incorporate Agency regulations, forms, and design and construction standards applicable to the project in development of the documents indicated in this Article.
8. Submit preliminary design drawings at 60% and 90% completion.
9. Furnish two (2) review copies of the Preliminary Design Phase documents, opinion of probable Construction Cost, and any other Preliminary Design Phase.
10. At the end of the preliminary design phase, the Consultant shall submit applicable permits to the appropriate agencies. The list of permits necessary for this project are assumed to include a MDE Construction Permit, earth disturbance permit, building permit including an electrical and plumbing permit, State Highway Utility Crossing permit and Waterway Obstruction/Encroachment Permit (Joint Permit). The Consultant shall amend the project documents in accordance with the comments received from the governing authorities during the permitting process. This will include the completion of a hydraulics and hydrology (H&H) analysis of the floodplain impacts to be included in the joint permit application submission. Due to project schedule, the Waterway

Obstruction/Encroachment Permit (Joint Permit) shall be submitted as soon as possible.

Final Design Phase

- C. After acceptance by Owner of the Preliminary Design Phase documents, revised opinion of probable Construction Cost as determined in the Preliminary Design Phase, and any other Preliminary Design Phase deliverables, the City will direct the Engineer to proceed with Final Design.
1. Prepare final Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor. The “front end” specifications should be EJCDC documents or approved other.
 2. Visit the Site one time as needed to assist in preparing the final Drawings and Specifications.
 3. Advise Owner of any recommended adjustments to the opinion of probable Construction Cost.
 4. Assist Owner in assembling known reports and drawings of Site conditions, and in identifying the technical data contained in such reports and drawings upon which bidders or other prospective contractors may rely.
 5. In addition to preparing the final Drawings and Specifications, assemble drafts of other Construction Contract Documents based on specific instructions and contract forms, text, or content received from Owner.
 6. Prepare or assemble draft bidding-related documents based on the specific bidding or procurement-related instructions and forms, text, or content received from Owner. Engineer must also incorporate all Agency regulations, forms, and design and construction standards applicable to the project in development of the documents indicated in this Article.
 7. The Engineer shall identify the building codes and accessibility standards used in the design and indicate them on the drawings and specifications and certify that the final drawings and specifications comply with those standards.
 8. Furnish for review by Owner, two (2) copies of the final Drawings and Specifications, assembled drafts of other Construction Contract Documents, the draft bidding-related documents, and any other Final Design Phase deliverables. The number of prime contracts for Work designed or specified by Engineer upon which the Engineer’s compensation has been established under this Agreement is two (2). If more prime contracts are awarded, Engineer shall be entitled to an equitable increase in its compensation.

Bidding Phase

- E. After acceptance by Owner of the final Drawings and Specifications, other

Construction Contract Documents, bidding-related documents, and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, the City will direct the Engineer to proceed into the Bidding Phase:

1. Assist Owner in advertising for and obtaining bids or proposals for the Work, assist Owner in issuing assembled design, contract, and bidding-related documents to prospective contractors.
2. Assist in the preparation and issuance of Addenda as appropriate to clarify, correct, or change the issued documents.
3. Provide information or assistance needed by Owner in the course of any review of proposals with prospective contractors.
4. Consult with Owner as to the qualifications of prospective contractors.
5. Consult with Owner as to the qualifications of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors, for those portions of the Work as to which review of qualifications is required by the issued documents.
6. Evaluate and determine the acceptability of "or equals" and substitute materials and equipment proposed by prospective contractors prior to award of contracts for the Work, if applicable.
7. Attend the bid opening, prepare bid tabulation sheets to meet Owner's schedule, and assist Owner in evaluating bids or proposals, assembling final contracts for the Work for execution by Owner and Contractor, and in issuing notices of award of such contracts.
8. Upon award of the Construction Contract, the Engineer shall furnish to Owner five (5) executed copies of the Contract Documents and one (1) electronic copy of the signed documents, including Drawings and Specifications.

Construction Phase

- F. Upon successful completion of the Bidding and Negotiating Phase, and upon written authorization from Owner, Engineer shall:
1. Negotiate the scope of Resident Project Representative (RPR). It has been assumed that the RPR will be provided by City staff.
 2. Participate in a pre-construction conference prior to commencement of Work at the Site.
 3. Maintain and safeguard during the Construction Phase at least one (1) original printed record version of the Construction Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals in accordance with applicable Laws and

Regulations.

4. Receive, review, and determine the acceptability of schedules that Contractor is required to submit to Engineer, including the Progress Schedule, Schedule of Submittals, and Schedule of Values.
5. As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.
6. Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary, to observe as an experienced and qualified design professional the progress of Contractor's executed Work. The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. It has been assumed a total of up to 12 site visits will be made.
7. Reject Work if, on the basis of Engineer's observations, Engineer believes that such Work is defective under the terms and standards set forth in the Construction Contract Documents.
8. If Engineer has express knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed Project as a functioning whole, then inform Owner of such incompatibility, and provide recommendations for addressing such Work.
9. Accept from Contractor and Owner submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents.
10. Prepare and issue Field Orders requiring minor changes in the Work as needed, subject to any limitations in the Construction Contract Documents.
11. Recommend Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.

12. Respond to any notice from Contractor of differing site conditions, including conditions relating to underground facilities such as utilities, and hazardous environmental conditions.
13. Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals, but only for conformance with the information given in the Construction Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents.
14. Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor, but subject to the Review of substitutes and "or equals" shall be in accordance with the General Conditions of the Construction Contract.
15. Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents
16. Review and respond to Change Proposals.
17. Review Applications for Payment and accompanying supporting documentation.
Provide recommendations to the City regarding Contractor payments.
18. Receive from Contractor, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data approved as provided. **The Engineer shall prepare Record Drawings, based on markups provided by the contractor, and furnish such Record Drawings to Owner.**
19. Visit the Site to review the Work and determine the status of completion issuance of a final certificate of Substantial Completion.
20. Conduct a final visit to the Project to determine if the Work is complete and acceptable so that Engineer may recommend, in writing, final payment to Contractor.

Post-Construction Phase

- G. Upon written authorization from Owner during the Post-Construction Phase, Engineer shall:
1. Together with Owner, visit the Project to observe any apparent defects in the Work, make recommendations as to replacement or correction of defective Work, if any, or the need to repair of any damage to the Site or adjacent areas, and assist Owner in consultations and discussions with Contractor concerning correction of any such defective Work and any

needed repairs. It has been assumed that site visits will be limited to two.

2. Together with Owner, visit the Project within one month before the end of the Construction warranty period to ascertain whether any portion of the Work or the repair of any damage to the Site or adjacent areas is defective and therefore subject to correction by Contractor.

September 8, 2022

RE: Proposal for Geotechnical Exploration and Surveying Services

City of Hagerstown Pump Stations 33 and 13

Hagerstown, Maryland

Triad Proposal No. 03-22-0746

Triad Engineering, Inc. (Triad) is pleased to submit this proposal for geotechnical and surveying services in conjunction with the above referenced project. We received the Request for Proposal (RFP) prepared by the City of Hagerstown dated August 23, 2022 outlining the project and requested scope of services and Addendum #1 dated September 2, 2022. This proposal outlines the planned scope of work and contains an estimated fee for our services.

GEOTECHNICAL SCOPE OF SERVICES

Field Exploration

Test Borings

We propose to drill 1 test boring at each of the pump stations. We propose to accomplish the test borings with a rotary auger drill rig and perform Standard Penetration Testing and sampling at 2.5-foot sample intervals to a depth of ten (10) feet and at 5-foot intervals thereafter. The soil borings will be extended to a depth of 20 feet or refusal, whichever occurs first.

The test location will be checked for groundwater upon completion and then backfilled with auger cuttings. Please note that some settling of this backfill may occur over time. Our proposal does not include return site visits for maintenance of the test location after our on-site work is complete.

A geotechnical engineer from our office will be present during the field work to supervise the field exploration program and log the test location. Triad will stake out the test location at the time of the field exploration.

We understand that access will be granted through a neighboring property and as a result clearing will not be required to access the boring location. Crop damage may occur and Triad will not be responsible for any crop damage.

Rock Profiling – Air-track Probes

We proposed to perform 1 day of air-track probe drilling along the proposed new gravity sewer layout for pump station #33 to profile the top of bedrock. It is requested that probes be drilled every 100 feet along the pipe layout for areas outside of the public

Right of Way. As a result, we assume that no permitting from State Highway is required. We estimate approximately 2,300 linear feet require rock profiling, which equate to approximately 24 probes. We have assumed a maximum drill depth of 25 feet. We will extend the probes to the maximum drill depth of 25 feet or 5 feet into rock, whichever occurs first. We estimate approximately 60 to 100 probes can be drilled within the minimum one day of drilling charge. As a result, we will start with drilling every 100 feet and will add additional probes in between to provide additional rock profiling data.

Underground Utilities

Unmarked underground utilities pose a grave threat to workers performing subsurface drilling and excavation. Because of this, Triad will contact the appropriate public utility location service (e.g., Miss Utility, PA One-Call, etc.) to mark underground utilities prior to our subsurface exploration. **However, it must be noted that public utility location services will not mark private underground lines or public underground utilities beyond a meter. Therefore, it is your responsibility to disclose the presence and provide the accurate location of all underground utilities not marked by the public utility location service. Triad will not be responsible for any damages that may result from striking underground utilities during the course of the subsurface exploration.**

We understand that private utilities will be located by an SUE firm prior to our mobilization.

Laboratory Testing

Laboratory testing will be conducted on representative samples to supplement field classifications and establish design parameters. The following types and numbers of tests are planned:

TYPE OF TEST	PLANNED NUMBER
Moisture Content	4
Classification (Sieve Analysis and Atterberg Limits)	2

Evaluation and Report

Upon completion of the field exploration and laboratory testing, we will prepare a geotechnical report which will include the following:

- 1) A detailed discussion of the site geology and subsurface conditions encountered.
- 2) Detailed logs with a Test Location Plan.
- 3) Results of the field exploration and laboratory testing.

- 4) Foundation recommendations with specific references to bearing capacity, settlement potential and seismicity data.
- 5) Recommended modulus of subgrade reaction for design of slabs-on-grade.
- 6) Lateral earth pressure recommendations for design of below grade walls.
- 7) Recommendations for site preparation and controlled fill construction.
- 8) Foundation construction procedures.

Our services for this project are strictly limited to those described herein. If necessary, additional services which may be required will be addressed by a change order to this contract.

SURVEYING SCOPE OF SERVICES

Pump Station 33 and Pump Station 13

Project Administration

Triad's Survey Practice Leader will attend the "kickoff" meeting and site visit to review existing conditions and facilities as required.

Topographic Survey

Triad will request a utility designation and marking through Miss Utility. Based on available information combined with utility markings and above ground evidence, an effort will be made to show, describe and label above ground and underground utilities. Extensive underground utility or private utility location is excluded.

Triad will establish survey control points with NAD83 Maryland State Plane Coordinates and NAVD88 elevations based on published Survey Control Monuments. We will perform a field run topographic survey along the length of the proposed force main, the survey limits will include a total width of sixty feet (60') in open/forested areas and ten feet (10') beyond the curb line on each side of the roadway in residential/developed areas where the piping will be installed in a public road right of way. In addition, we will extend the survey limits one hundred feet (100') beyond each pumping station. The survey will include existing site features, such as buildings, porches, patios, walkways, curbs, roadways, trees twenty four inches (24") or greater in diameter, wetland delineation flags, streams, known utilities, and other features as necessary. The area of survey for pump station 33 contains approximately 5 acres, and the area of survey for pump station 13 contains approximately 13 acres.

Our office staff will prepare a base cad file for purposes of providing to the Client. Deliverables will include a cad file via email.

Survey Control Points/Benchmarks

Survey control points and benchmarks will be established along the survey/utility corridor as necessary to be used for construction of the proposed improvements. Prior to commencement of construction, we will return to the site to recover, paint/flag control points and benchmarks as required.

As-Built Survey

Triad will also perform an as-built survey of the newly constructed above ground improvements, including rim and invert elevations of the gravity lines. A drawing will be prepared and provided to the Client. If required by Washington County Division of Permits, a foundation as-built survey will be prepared for the newly constructed pump station 33 building.

ESTIMATED FEES AND SCHEDULE

Based on the scope of work defined in this proposal, we estimate the following fees:

Geotechnical Exploration: \$8,975

Surveying Services Pump Station 33: \$14,250

Surveying Services Pump Station 13: \$35,060

A breakdown of the estimated fees are attached to this proposal.

Services above and beyond the work scope outlined herein will be invoiced in accordance with our current approved Schedule of Fees.

Triad will submit invoices for payment on a monthly basis, or upon project completion, whichever occurs first. Our invoices will be based on the percentage of work completed during the previous period, or based upon project milestones set forth in this proposal. Any subcontractor costs will be invoiced immediately upon receipt. In all cases, payment is due no more than 30 days following receipt of our invoice unless the provisions of our contract set forth an alternate schedule for payment.

Our work load at the time of authorization will have some influence on the starting date. We are normally able to initiate field work within five to fifteen working days after written authorization is received. We anticipate that the Geotechnical Services will require approximately 4 to 6 weeks to complete. We anticipate that the Surveying Services for pump station 33 will require about 4 to 6 weeks to complete, and pump station 13 approximately 8 to 10 weeks to complete. ***It is emphasized that this schedule is an estimate, and it is based on normal workloads and appropriate weather conditions.***

AUTHORIZATION


This proposal and the attached Professional Services Agreement (PSA) represent the entire understanding between you and us with respect to the subject project. If our

scope of work and fee are acceptable, please fill out and sign the PSA and return one copy to us. Our receipt of the signed PSA will constitute formal notice to proceed. This proposal will remain open for acceptance for a period of 60 days from this date.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

TRIAD ENGINEERING, INC.



Ronald D. Bidle, Jr.
Survey Practice Leader



Stephen J. Gyurisin, P.E.
Geotechnical Services Manager

Attachments: Itemized Fee Estimate for Geotechnical Services
Survey Fee Estimate for Pump Station 33
Survey Fee Estimate for Pump Station 13
Professional Services Agreement

ITEMIZED FEE ESTIMATE

Proposal for Geotechnical Exploration
Pump Stations 33 and 13

Triad Proposal No. 03-22-0746

ITEM	ESTIMATED QUANTITY	UNIT RATE	CONTRACT FEE
FIELD EXPLORATION			
Test Boring Drill Rig Minimum Daily Charge	1	\$ 2,800.00	\$ 2,800.00
Design Geotechnical Engineer to log borings	8	\$ 105.00	\$ 840.00
Airtrack Drill Rig Mobilization/Demobilization, lump sum	1	\$ 600.00	\$ 600.00
Airtrack Drill Rig and Operator	8	\$ 210.00	\$ 1,680.00
Design Geotechnical Engineer to log airtrack probes	8	\$ 105.00	\$ 840.00
		Subtotal	\$ 6,760.00
LABORATORY TESTING SERVICES			
Moisture Content (ASTM D 4959)	6	\$ 12.50	\$ 75.00
Atterberg Limits (ASTM D 4318)	2	\$ 85.00	\$ 170.00
Sieve Analysis (with #200 wash)(ASTM D 6913)	2	\$ 85.00	\$ 170.00
		Subtotal	\$ 415.00
EVALUATION AND REPORT			
Design Geotechnical Engineer	12	\$ 105.00	\$ 1,260.00
Professional Geotechnical Engineer	4	\$ 135.00	\$ 540.00
		Subtotal	\$ 1,800.00
TOTAL ESTIMATED PROJECT FEES			\$ 8,975.00

ITEMIZED FEE ESTIMATE

Proposal for Surveying Services
Pump Station 33

Triad Proposal No. 03-22-0746

ITEM	ESTIMATED QUANTITY	UNIT RATE	CONTRACT FEE
Description			
PROJECT MANAGEMENT			
Professional Surveyor	8	\$ 125.00	\$ 1,000.00
		Subtotal	\$ 1,000.00
DEVELOP SCOPE OF UTILITIES and SURVEY LIMITS			
Professional Surveyor	8	\$ 125.00	\$ 1,000.00
		Subtotal	\$ 1,000.00
TOPOGRAPHIC SURVEY			
Professional Surveyor	8	\$ 125.00	\$ 1,000.00
Survey Crew Chief	36	\$ 85.00	\$ 3,060.00
Survey Crew Member	36	\$ 65.00	\$ 2,340.00
CADD Technician	32	\$ 80.00	\$ 2,560.00
		Subtotal	\$ 8,960.00
RECOVER BENCHMARKS			
Professional Surveyor	0	\$ 125.00	\$ -
Survey Crew Chief	8	\$ 85.00	\$ 680.00
Survey Crew Member	8	\$ 65.00	\$ 520.00
CADD Technician	0	\$ 80.00	\$ -
		Subtotal	\$ 1,200.00
SITE AS-BUILT SURVEY			
Professional Surveyor	2	\$ 125.00	\$ 250.00
Survey Crew Chief	8	\$ 85.00	\$ 680.00
Survey Crew Member	8	\$ 65.00	\$ 520.00
CADD Technician	8	\$ 80.00	\$ 640.00
		Subtotal	\$ 2,090.00
TOTAL ESTIMATED PROJECT FEES			\$ 14,250.00

ITEMIZED FEE ESTIMATE

Proposal for Surveying Services
Pump Station 13

Triad Proposal No. 03-22-0746

ITEM	ESTIMATED QUANTITY	UNIT RATE	CONTRACT FEE
Description			
PROJECT MANAGEMENT			
Professional Surveyor	10	\$ 125.00	\$ 1,250.00
		Subtotal	\$ 1,250.00
DEVELOP SCOPE OF UTILITIES and SURVEY LIMITS			
Professional Surveyor	8	\$ 125.00	\$ 1,000.00
		Subtotal	\$ 1,000.00
TOPOGRAPHIC SURVEY			
Professional Surveyor	16	\$ 125.00	\$ 2,000.00
Survey Crew Chief	128	\$ 85.00	\$ 10,880.00
Survey Crew Member	128	\$ 65.00	\$ 8,320.00
CADD Technician	104	\$ 80.00	\$ 8,320.00
		Subtotal	\$ 29,520.00
RECOVER BENCHMARKS			
Professional Surveyor	0	\$ 125.00	\$ -
Survey Crew Chief	8	\$ 85.00	\$ 680.00
Survey Crew Member	8	\$ 65.00	\$ 520.00
CADD Technician	0	\$ 80.00	\$ -
		Subtotal	\$ 1,200.00
SITE AS-BUILT SURVEY			
Professional Surveyor	2	\$ 125.00	\$ 250.00
Survey Crew Chief	8	\$ 85.00	\$ 680.00
Survey Crew Member	8	\$ 65.00	\$ 520.00
CADD Technician	8	\$ 80.00	\$ 640.00
		Subtotal	\$ 2,090.00
TOTAL ESTIMATED PROJECT FEES			\$ 35,060.00