

JMT
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TOTAL COST SUMMARY FORMAT									
PART I - GENERAL									
1. PROJECT TITLE: Olden Avenue Water Main Improvements									
2. Task 001									
3. NAME OF CONSULTANT: Johnson, Mirmiran and Thompson									
4. PROPOSAL DATE 12/22/2021									
1200 Lenox Drive, Suite 101, Trenton, NJ 08648									
PART II - COST SUMMARY									
6. DIRECT LABOR (Specify labor categories)									
	HOURS	HOURLY RATE	ESTIMATED COST	TOTALS					
Project Manager	68	\$86.00	\$ 5,848.00						
Quality Manager	31	\$75.00	\$ 2,325.00						
WWW Senior Design Engineer	374	\$50.00	\$ 18,700.00						
WWW Design Engineer	1,640	\$35.00	\$ 57,400.00						
Senior Traffic Engineer	35	\$59.00	\$ 2,065.00						
Traffic Engineer	14	\$35.00	\$ 490.00						
Permit Specialist	133	\$50.00	\$ 6,650.00						
Hydraulic Modeling	40	\$50.00	\$ 2,000.00						
Surveyor	16	\$81.50	\$ 1,304.00						
Survey Technician	120	\$37.50	\$ 4,500.00						
Instrument Man	80	\$29.70	\$ 2,376.00						
Rodman	80	\$26.00	\$ 2,080.00						
Total Hours	2,631		\$ 105,738.00						\$ 105,738.00
ESCALATION									
Escalation									
7. INDIRECT COSTS (Specify)									
DIRECT LABOR SUBTOTAL:									
	RATE	X DIRECT LABOR TOTAL =	ESTIMATED COST						
	0.00%	\$ 105,738.00	\$ -						
OVERHEAD AND PAYROLL BURDEN									
	RATE	X DIRECT LABOR TOTAL =	ESTIMATED COST						
	150.0000%	\$ 105,738.00	\$ 158,607.00						
INDIRECT COSTS SUBTOTAL									
8. TOTAL OF DIRECT LABOR & INDIRECT COSTS (Combined Sum of Items 6&7)									
9. PROFIT									
10. TOTAL PROFESSIONAL FEE (Combined Sum of Items 8 and 9)									
11. OTHER DIRECT COSTS (refer to attached itemization)									
a. DIRECT COSTS									
Local Travel	QTY.	COST	ESTIMATED COST						
	1,000	\$0.580	\$ 580.00						
Long Distance Travel, if required	0	\$0.580	\$ -						
Printing	100	\$1.500	\$ 150.00						
Miscellaneous	2,000	\$1.000	\$ 2,000.00						
DIRECT COSTS - MARKUP									
DIRECT COSTS SUBTOTAL									
	QTY.	COST	ESTIMATED COST						
			\$ 2,730.00						
b. TASK PRICING (UNIT-BASED)									
TASK PRICING SUBTOTAL									
			\$ -						
c. SUBCONSULTANT(S)									
Boring Brothers Inc. (SUB-consultant)			\$ -						
Cooper (Sub-consultant)			\$ 8,025.00						
SUBCONSULTANT(S) - MARKUP									
			\$ -						
SUBCONSULTANT(S) - SUBTOTAL:									
			\$ 8,025.00						
d. OTHER DIRECT COSTS TOTAL: (Combined Sum of Items a,b,c)									
12. TOTAL PRICE (Combined Sum of Items 10 & 11g)									
			\$ 10,755.00						
			\$ 301,534.50						

City of Trenton - Olden Avenue Water Main Improvements

	Planned Hrs	Billing Rates	Planned Bill
Project Summary:			
Labor	2,376.00		\$275,380.00
Expense- mileage			\$3,600.00
Consultant - Aerial Survey			\$10,000.00
Allowance - Per RFP			\$100,000.00
Total for Trenton Water Works - Olden Avenue Water Main Improvements	2,376.00		\$388,980.00
Task 1 - Design Services			
Data Collection & Document Review			
Cuthbert, Stephanie - Project Manager	2.00	\$175.00	\$350.00
Hogan, Kalina - WaterGEMS Modeler	60.00	\$120.00	\$7,200.00
Kramer, Kristin - Design Engineer	24.00	\$95.00	\$2,280.00
Mingle, Joseph - Design Engineer	32.00	\$130.00	\$4,160.00
Expense - Mileage			\$400.00
Total for Data Collection & Document Review	118.00		\$14,390.00
Design Memorandum			
Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Gillen, Brian - LSRP	8.00	\$160.00	\$1,280.00
Hogan, Kalina - WaterGEMS Modeler	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	80.00	\$95.00	\$7,600.00
Manganaro, Joseph - Inspector - Constructability Review	12.00	\$120.00	\$1,440.00
Mingle, Joseph - Design Engineer	24.00	\$130.00	\$3,120.00
Nedrick, Vanessa - Design Engineer Lining	16.00	\$160.00	\$2,560.00
Yoder, Dennis - QAQC	1.00	\$175.00	\$175.00
Total for Design Memorandum	161.00		\$18,795.00
Survey			
Adams, Barry - Rodperson	96.00	\$95.00	\$9,120.00
Adamson, Charles - Survey QAQC	6.00	\$140.00	\$840.00
Dunkerley, Thomas - Party Chief	96.00	\$100.00	\$9,600.00
Jordan, Mark - Survey Draftsperson	104.00	\$120.00	\$12,480.00
Taylor, Brian - Survey PM	18.00	\$135.00	\$2,430.00
Yorkiewicz, Brian - Survey Manager	14.00	\$135.00	\$1,890.00
Consultant - Aerial Survey			\$10,000.00
Total for Survey	334.00		\$46,360.00

Remington & Vanick Engineers

Plans & Specifications			
Angelastro, Michael - Design Engineer Road / Traffic Control	26.00	\$155.00	\$4,030.00
Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Gomes, John - Senior Draftsperson	60.00	\$120.00	\$7,200.00
Kramer, Kristin - Design Engineer	220.00	\$95.00	\$20,900.00
Jacovini, Veronica - Technical Aide	16.00	\$65.00	\$1,040.00
Marques, Timothy - Senior Engineering Technician	100.00	\$120.00	\$12,000.00
Meyer, Carl - Technical Aide - Repro	4.00	\$95.00	\$380.00
Nedrick, Vanessa - Design Engineer Lining	16.00	\$160.00	\$2,560.00
Rodgers, Gail - Technical Aide	6.00	\$65.00	\$390.00
Yoder, Dennis - QAQC	2.00	\$175.00	\$350.00
Total for Plans & Specifications	454.00		\$49,550.00
Permitting			
Angelastro, Michael - Design Engineer Road / Traffic Control	16.00	\$155.00	\$2,480.00
Cuthbert, Stephanie - Project Manager	1.00	\$175.00	\$175.00
Gomes, John - Senior Draftsperson	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	32.00	\$95.00	\$3,040.00
Manganaro, Joseph - Onsite Inspector - Constructability Review	16.00	\$120.00	\$1,920.00
Marques, Timothy - Senior Engineering Technician	12.00	\$120.00	\$1,440.00
Total for Permitting	93.00		\$10,975.00
Design Phase Meetings			
Cuthbert, Stephanie - Project Manager	12.00	\$175.00	\$2,100.00
Kramer, Kristin - Design Engineer	24.00	\$95.00	\$2,280.00
Marques, Timothy - Senior Engineering Technician	16.00	\$120.00	\$1,920.00
Expense - Mileage			\$200.00
Total for Design Phase Meetings	52.00		\$6,500.00
Task 2 - Bidding Services			
Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Kramer, Kristin - Design Engineer	8.00	\$95.00	\$760.00
Marques, Timothy - Senior Engineering Technician	8.00	\$120.00	\$960.00
Meyer, Carl - Technical Aide - Reproduction	2.00	\$95.00	\$190.00
Total for Task 2 - Bidding Services	22.00		\$2,610.00
Task 3 - Construction Phase Engineering & Inspection Services			
Cuthbert, Stephanie - Project Manager	12.00	\$175.00	\$2,100.00
Kramer, Kristin - Design Engineer	32.00	\$95.00	\$3,040.00
Manganaro, Joseph - Onsite Inspector	980.00	\$120.00	\$117,600.00
Marques, Timothy - Senior Engineering Technician	32.00	\$120.00	\$3,840.00
Nedrick, Vanessa - Design Engineer Lining	10.00	\$160.00	\$1,600.00
Parent, Gabriel - Senior Inspector	20.00	\$127.00	\$2,540.00
Valentine, Ronald - Contract Administrator	24.00	\$110.00	\$2,640.00
Expense - Mileage			\$3,000.00
Total for Task 3 - Construction Phase Engineering & Inspection Services	1,142.00		\$139,800.00

Reminigton & Varneck Engineers

Asbuilt Drawings

Gomes, John - Senior Draftsperson	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	16.00	\$95.00	\$1,520.00
Total for Asbuilt Drawings	32.00	\$107.50	\$3,440.00

Task 4 - Allowance

Allowance			\$100,000.00
Total for Task 4 - Allowance			\$100,000.00

FEE PROPOSAL

REQUEST FOR PROPOSALS OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING & CONSTRUCTION PHASE SERVICES

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PROPOSED FEES:

1. Task 1—Design Services	\$179,470
2. Task 2—Bidding Services	\$9,000
3. Task 3—Construction Phase Engineering Services*	\$144,675
4. Task 4—Allowance	\$100,000
TOTAL ESTIMATED FEE	\$433,145

*Construction Phase Services fee will remain the same regardless of replacement, liner installation or a combination of replacement and liner installation.

ESTIMATED PERMIT FEES

Per the terms of the request for proposal, fees for the permits will be paid by SCE and reimbursed by TWW at direct cost without mark up. The permit application filing fees are not included in our fees.

An estimate of anticipated permit fees is provided below for reference and planning purposes.

NJDEP Bureau of Water Systems Engineering	\$ 4,000
NJDEP Freshwater Wetland Permit	\$ 2,000
NJDEP Flood Hazard Area Permit	\$ 6,000
NJDOT Road Opening Permit	\$ 1,580
Mercer County Soil Conservation District Certification	\$ 985
Mercer County Road Opening Permit	No Charge
TOTAL ESTIMATED PERMIT FEES	\$ 14,565

FEE PROPOSAL

REQUEST FOR PROPOSALS OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING & CONSTRUCTION PHASE SERVICES

Principal/Project Officer	\$160/hour
Senior Project Manager	\$158/hour
Project Manager	\$155/hour
Senior Project Licensed Professional	\$150/hour
Project Licensed Professional	\$145/hour
Licensed Professional	\$135/hour
Senior Project Coordinator	\$150/hour
Project Coordinator	\$145/hour
Senior Designer/Senior Survey Analyst	\$125/hour
Designer/Survey Analyst	\$120/hour
Senior Environmental Scientist	\$125/hour
Environmental Scientist	\$120/hour
Senior Project GIS Analyst	\$140/hour
Project GIS Analyst	\$130/hour
GIS Analyst	\$125/hour
Senior GIS Technician	\$115/hour
GIS Technician	\$105/hour
Senior GIS Project Coordinator	\$130/hour
GIS Project Coordinator	\$125/hour
Senior Inspector	\$115/hour
Inspector	\$105/hour
Senior Technician	\$110/hour
Technician	\$100/hour
Project Administrator	\$115/hour
Administrative Support	\$60/hour

Equipment Unit Cost:

⇒ Unmanned Aerial Systems/Remotely Operated Vehicle	\$150/hour
⇒ Robotic/LiDAR	\$50/hour
⇒ GPS	\$25/hour

LSRP Services Unit Cost:

⇒ For any environmental services requiring LSRP oversight and certification, a \$25/hour unit cost will be included in addition to the hourly rate for roles above.

Any actual disbursements and expenses which we incur on your behalf, such as subconsultant fees, delivery charges, parking, printing and toll charges will be billed at actual **cost-plus 15 percent**.

Mileage will be billed in accordance with federal prevailing wage.



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Buchart Horn Fee Proposal Estimate for TWW - Olden Avenue Water Main Improvements

Direct Payroll	Grade Wage Rate	5 \$104.00	6 \$147.00	7 \$147.00	8 \$163.00	9 \$194.00	10 \$220.00	Labor Hours per Task	Labor \$ per Task	SUB/ODC \$ per Task	Total \$ per Task	Phase Totals
Task 1: Design Services												
Preliminary Engineering												
Kick-Off Meeting					4			5	872	50	922	19,300
Sub-task 1: Data Collection and Document Review		20			16			37	4,908	50	4,958	12,000
Hydraulic Model - System Research for Modeling			24			8		32	5,080	50	5,130	
Project Management and Coordination w/ TWW (during Design Phase)					40			48	8,280	10	8,290	
Design Memorandum												
Design Memorandum		56			32			92	11,920	100	12,020	
Design Plans & Specifications (30%)												
Surveying (CES Subconsultant)					6			6	978	45,000	45,978	
Water Main Plans & Profiles (12 sheets)		96			40			140	17,384	200	17,584	
Misc Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)		8			2			11	1,268	20	1,288	
Construction Details (4 sheets)		24			12			37	4,672	50	4,722	
Traffic Control Details (Standard Details - 2 sheets)		16			8			25	3,078	25	3,103	
Technical Specifications		48			32			82	10,648	100	10,748	
Front-End Documents		8			4			13	1,594	50	1,644	
Construction Cost Estimate		8			4			13	1,594	10	1,604	
Update Design Memorandum		4			2			7	852	20	872	88,500
Design Review Meeting					4			5	872	50	922	
Design Plans & Specifications (60%)												
Water Main Plans & Profiles (12 sheets)		48			20			70	8,682	200	8,882	
Misc Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)		4			1			5	634	20	654	
Construction Details (4 sheets)		12			6			19	2,386	50	2,386	
Traffic Control Details (Standard Details)		8			4			12	1,539	25	1,564	
Technical Specifications		24			16			41	5,324	150	5,474	
Front-End Documents		4			2			6	797	50	847	
Construction Cost Estimate		4			2			6	797	10	807	
Update Design Memorandum		2			1			3	426	20	446	22,000
Design Review Meeting					4			5	872	50	922	
Design Plans & Specifications (95%)												
Water Main Plans & Profiles (12 sheets)		24			10			35	4,346	200	4,546	
Misc Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)		2			0.5			3	345	20	365	
Construction Details (4 sheets)		6			3			9	1,168	50	1,218	
Traffic Control Details (Standard Details)		4			2			6	797	25	822	
Technical Specifications		12			8			21	2,662	100	2,762	
Front-End Documents		2			1			3	426	50	476	
Construction Cost Estimate		2			1			3	426	10	436	
Update Design Memorandum		1			0.5			2	241	20	261	11,800
Design Review Meeting					4			5	872	50	922	
Bid Plans & Specifications (100%)												
Finalize Bid Plans (15 sets)		12			5			18	2,173	600	2,773	
Finalize Bid Specs (15 sets)		6			3			10	1,223	600	1,823	
Permitting												
BWSE Permit to Construct Water Main		24			12			37	4,672	100	4,772	
Mercer County SCD		12			4			17	2,010	100	2,110	
Mercer County ROW Permit		6			2			8	1,005	100	1,105	
Task 2: Bidding Services												
Pre-bid meeting (Agenda & Minutes Prep)					6			7	1,198	75	1,273	
RFI's and Addenda/Clarifications		32			16			50	6,376	50	6,426	
Review & Recommendation letter/report					24			26	4,352	50	4,402	12,100
Task 3: Construction Phase Engineering Services												
Precon Meetings (Agenda & Minutes Prep - 2 meetings)					12			14	2,396	150	2,546	
Shop Dwg Review		48			32			84	11,088	250	11,338	
Project Management during Construction					80			96	16,560	50	16,610	
Contractor Pay Requests		6			12			19	2,800	50	2,850	
Change Order Review and Processing		12			20			34	4,948	100	5,048	
On-site Inspection (Full-time)		1000						1000	104,000	5000	109,000	
Progress Meetings (6)		40			36			42	7,188	300	7,488	
As built DWG Preparation					20			62	7,860	250	8,110	163,000
Task 4: Allowance												
Allowance								0	0		0	100,000
Total Hours per Grade		1645	24	576	8	75	16,500	Total Labor Hrs=	2328	\$54,710	341,258	
Total Payroll per Grade		171,080	3,528	93,888	1,552	16,500		Total Labor \$=	\$286,548	Total Fee	\$341,258	

Total Not-To-Exceed Fee = 441,300

4.1 FEE

Below we present Arcadis' proposed fee and a tabular breakdown of labor and expenses for the project.

Fee Table

	Task	Hours	Hourly Rate	Labor	Subs	Expenses	Total Fee
1	Design Services	1098	\$ 128.64	\$ 141,243	\$ 44,000	\$ 300	\$ 185,543
2	Bidding Services	89	\$ 128.02	\$ 11,394	\$ -	\$ 1,650	\$ 13,044
3	Construction Services	244	\$ 116.05	\$ 28,315	\$ -	\$ 5,616	\$ 33,931
4	Inspection Services	1000	\$ 114.00	\$ 114,000	\$ 44,000		\$ 114,000
	Allowance						\$ 100,000
	TOTAL	2431	\$ 121.33	\$ 294,952	\$ 44,000	\$ 7,566	\$ 446,518

Labor Table

	Task	Principal Engineer	Senior Engineer/ Scientist II	Senior Engineer/ Scientist I	Project Engineer/ Scientist	Staff Engineer	Design Tech II	TOTAL
1	Design Services	154	105	288	305	180	66	1098
2	Bidding Services	6	23	0	60	0	0	89
3	Construction Services	62	82	0	100	0	0	244
4	Inspection Services	0	0	0	1000	0	0	1000
	TOTAL	222	210	288	1465	180	66	2431

Price proposal

This section provides a summary of our engineering fee proposal and labor hour summary for each project task.

Base Bid (Based on Open-Cut Water Main Replacement)

Task 1 – Design Services	
Data Collection	\$60,936
Design Memorandum	\$33,427
Construction Drawings and Technical Specifications	\$73,108
Permitting	\$42,236
Design Phase Meetings	\$8,900
Task 2 – Bidding Services	\$7,114
Task 3 – Construction Phase Engineering Services	\$168,242
Task 4 – Allowance	\$100,000
Total Base Bid	\$493,963

In accordance with the RFP, we are also including an alternate fee proposal for construction phase services should the water main improvements be constructed utilizing an internal structural rehabilitation. The use of an internal structural rehabilitation liner will reduce construction administration largely associated with shop drawing reviews and record drawings preparation.

Alternate Bid (Based on Internal Structural Rehabilitation)

Task 1 – Design Services	
Data Collection	\$60,936
Design Memorandum	\$33,427
Construction Drawings and Technical Specifications	\$73,108
Permitting	\$42,236
Design Phase Meetings	\$8,900
Task 2 – Bidding Services	\$7,114
Task 3 – Construction Phase Engineering Services	\$164,767
Task 4 – Allowance	\$100,000
Total Base Bid	\$490,488

In accordance with the RFP, please note the following:

- All fees are proposed as reimbursable, not-to-exceed. We have attached a table of our cost breakdown, supported with names, titles, hourly rates and number of hours. We have also attached Mott MacDonald's 2022 hourly rate table.
- Mott MacDonald will initially pay permit application fees, which will be reimbursed by TWW with no markup. We have not included the permit application fees in our Fee Proposal, but anticipate that a contract amendment will be issued once the costs are known.
- Mott MacDonald has allocated 1,000 hours for full time resident project representation during construction of the water main improvements for both the Base Bid and Alternate Bid fees.
- The permitting task is to include permitting that may be required at the two stream crossings. However, should the design include an internal structural rehabilitation of the existing water main at the stream crossings which does not require open-cutting of the stream or stream bank, the permitting effort and fees can be reduced as a Flood Hazard Area Individual Permit and Freshwater Wetlands GP-2 Permit would not be required.

Project Fee Assumptions:

- Rates shown are based upon the design phase and bidding phase services being performed in 2022; with construction administration and construction inspection services commencing the end of 2022 and being completed in 2023. Escalation would be necessary at 4% per year if work extends beyond the attached project schedule, unless such delays were caused by Mott MacDonald.
- Subconsultants are proposed to be marked up at 0 percent. Mott MacDonald is proposing to use Robinson Aerial Surveys of Hackettstown, New Jersey for aerial topographic mapping and Traffic Plan of Farmingdale, New Jersey for traffic control during to safely perform topographic field surveying.

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E. FEE PROPOSAL AND TERMS

FEE ESTIMATE

ENGINEERING SERVICES FOR OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING & CONSTRUCTION PHASE ENGINEERING SERVICES PROJECT RFP #2021-47

Based on the Project Scope of this proposal, we find that the effort necessary to successfully undertake and complete the Scope of Work described under the RFP can be provided for the not-to-exceed cost indicated below:

Task ID	Description	Sub-task No	Hours	Cost
A	Task 1: Design Services	1. Data Collection and Document Review	132	\$21,912.00
		2. Design Memorandum	168	\$29,616.00
		3. Construction Drawings and Technical Specifications	1,390	\$265,613.00
		4. Permitting	120	\$19,824.00
		5. Design Phase Meetings	176	\$30,656.00
B	Task 2: Bidding Services	1. Bidding Services	74	\$11,808.00
C	Task 3: Construction Phase Engineering Services	1. Construction phase services	929	\$163,556.00
		2. Resident engineering / inspection services	1,000	\$172,000.00
		3. Furnish 2 (two) final hardcopy "As-Built" drawings	110	\$18,256.00
SUBTOTAL				\$733,241.00
D	Task 4: Allowance	ALLOWANCE	-	\$100,000.00
TOTAL				\$833,241.00

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