

Artondale Water System

Pierce County

Eng. File # 3899

Distribution Extension for 5911 30th St NW

Engineer's Opinion of Projected Construction Materials Costs

2/22/2021

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WWS Construction Crew for **CICA Projects - Watermain**

WWS Con

		Rate	Sub-Total	
1 Man & Vac Truck	HRS	\$ 125	\$ -	1 Man & V
1 Man & Boom Truck	HRS	\$ 125	\$ -	1 Man & B
1 Man & Backhoe - Trench	HRS	\$ 125	\$ -	1 Man & B
1 Man & Backhoe - Comp	HRS	\$ 125	\$ -	1 Man & B
1 Man & Truck	HRS	\$ 75	\$ -	1 Man & T
2 Men & Truck	HRS	\$ 150	\$ -	2 Men & T
1 Electrician & Truck	HRS	\$ 101	\$ -	1 Electricia
2 Electricians & Truck	HRS	\$ 202	\$ -	2 Electricia
			\$ -	
		Total	\$ -	

WWS Construction Crew for **WWS Capital Projects - Mains**

WWS Con

		Rate	Sub-Total	
1 Man & Vac Truck	HRS	\$ 75	\$ -	1 Man & V
1 Man & Boom Truck	HRS	\$ 75	\$ -	1 Man & B
1 Man & Backhoe - Trench	24 HRS	\$ 75	\$ 1,800	1 Man & B
1 Man & Backhoe - Comp	24 HRS	\$ 75	\$ 1,800	1 Man & B
1 Man & Truck	HRS	\$ 75	\$ -	1 Man & T
2 Men & Truck	52 HRS	\$ 150	\$ 7,800	2 Men & T
1 Electrician & Truck	HRS	\$ 80	\$ -	1 Electricia
2 Electricians & Truck	HRS	\$ 160	\$ -	2 Electricia
			\$ -	
		Total	\$ 11,400	

Outside Contractor - No Pilot Car

1-Flagger	60 HRS	\$	24	\$	1,440
2-Flaggers	HRS	\$	48	\$	-
Sub-total \$ 1,440					

Sanitary Facility Rental (Portable Toilet)

	Days		\$ 75	\$ -
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Task	Hours	Employee Classification	Rate	Total
<u>Facility Design</u>				
Project Setup	1	Engineer	\$ 85.00	\$ 85.00
Route Topo		Engineer	\$ 85.00	-
Develop Base Drawings from Topo Info		Engineer	\$ 85.00	-
Design & Draft Watermain Construction Documents	16	Engineer	\$ 85.00	\$ 1,360.00
Sub-Total	17			\$ 1,445.00
<u>Revisions per Peer Review Comments</u>				
P.E. Peer Review	1	Principle Eng	\$ 115.00	\$ 115.00
Revisions to Construction Documents per Peer Review Comments		Engineer	\$ 85.00	-
Coping & Re-Submittal of Project Report & Construction Documents		Clerical	\$ 60.00	-
Sub-Total	1			\$ 115.00
<u>Construction</u>				
Pre-Construction Conference with Engineering & Contractor	1	Engineer	\$ 85.00	\$ 85.00
Construction Inspection & Pressure Test	8	Engineer	\$ 85.00	\$ 680.00
Sub-Total	9			\$ 765.00
<u>Record Documents</u>				
As-Built Drawings & Testing Validations along with Project Certification Document Preparation	4	Engineer	\$ 85.00	\$ 340.00
P.E. Project Certification		Principle Eng	\$ 115.00	-
Updating Base Maps & Site Piping		Engineer	\$ 85.00	-
Coping, Binding & Submittal of Project Certification to File & Rosario		Clerical	\$ 60.00	-
Sub Total	4			\$ 340.00
Projected Total Hours	31			\$ 2,665.00

Washington Water Service Co.

2/22/2021

Engineering Department

6800 Meridian Road SE

Olympia, WA 98513

Engineer's Opinion of Probable Project Costs
Colonial Manor Hydraulic Model Creation Peak Hour Demand Scenario

Task	Hours	Rate	Total
<u>Hydraulic Model Construction</u>			
Data Collection of Preston's Source Facilities & Distribution System	1		
Distribution Pipes set-up in ACAD for importing into a GIS Shape File	2		
Distribution Pipes conversion ACAD to GIS Shape File	1		
Distribution Pipes - Import GIS Shape File, Create Junctions (Nodes) in Preston's Model	1		
Junction (Node) elevation assignment	1		
Preston Industrial Source of Supply Construction in the Model	4		
Load Model with Preston Industrial Park ERU's	1		
Calc Preston's Peak Day Diurnal Curve & Assign to Junctions w/ ERU's Loaded	4		
Run & Perform QA/QC checks & make any necessary refinements	4		
Sub-Total	11.0		\$0.00
<u>Hydraulic Model Scenario & Report</u>			
Setup & Run Hydraulic Model Scenario for MDD & PHD Meeting DOH Requirements	2.0		
Setup & Run Hydraulic Model Scenario for Fire Flow Analysis	2.0		
Prepare Hydraulic Model Narrative (Report) for DOH Submittal	4.0		
P.E. Peer Review	1.0		
Edit Project Report per Peer Review	1.0		
Final P.E. Peer Review for submittal	0.5		
Coping, Binding & of Project Report for DOH Submittal	1.0		
Sub-Total	11.5		\$0.00
Sub-Total	22.5	\$95.00	\$2,137.50
Department of Health Office of Drinking Water Review Fee			\$811.00
Projected Total Fees:			\$2,948.50

Notes:

1) This document is intended to forecast approximate Engineering fees based upon current information and similar projects, with billing on an hourly basis. Final project fees could vary from the projected fees shown.

Engineering Staff Hours to Consolidate Sea Cliff Records into Pecock Hill

Task	Hours	Employee Classification
Update System History	0.25	Engineer
Site Facility Address Update	0.25	Clerical
Source of Supply Inventory drawing	4	Engineer
Update Connection Summary	4	Clerical
Document Draw Records Consolidation	0.5	Clerical
Sattin System Customer Migration to Aspinwall	1	Clerical
System's Owned & Managed List Update	0.5	Clerical
CMP Revisions for consolidated System - Site Selection & rotation	1	Engineer
CMP Revisions for consolidated System - CMP Map Update	2	Engineer
Coliform Monitoring Schedule Updated - WQ	0.25	Clerical
Chemical Contaminants Monitoring Schedule Update - WQ	0.25	Clerical
Nitrate Monitoring Schedule Update - WQ	0.25	Clerical
Lead & Cooper Schedule Update - WQ	0.5	Clerical
WQ Records Merge	0.25	Clerical
Wellhead Meter Reading Forms merge	0.5	Clerical
Wellhead Protection Records Merge	1	Engineer
Sanitary Survey Action Items merge	2	Clerical
	Total	18.5