

PAGO PAGO HILLSIDE CIP REPLACEMENT PROJECT					
BILL OF QUANTITIES as of September 2024					
WATERLINE PIPING MATERIALS					
No.	Description	Unit	Qty	Rate	Total Cost
1	12" PVC MAIN WATERLINE & FITTINGS				
1.01	12"x20' ULTRA BLUE PVCO AWWA C909	EA	250		
1.02	12" 11.25° DI Elbow, MJxMJ CDMJB1106 MJxMJ BEND 11 1/4° DI C153 MJ fitting, cement lined and bit coated	EA	75		
1.03	12" 22.5° DI Elbow, MJxMJ CDMJB2206 MJxMJ BEND 22 1/2° DI C153 MJ fitting, cement lined and bit coated	EA	25		
1.04	12"Ø PVC PIPE BELL RESTRAINT HARNESS SERIES 1600 FOR C909 PVCO PIPE OR APPROVED EQUAL	EA	250		
1.05	12" PVC Flanged Coupling Adapter W/ Gasket range for 12" PVC C909, Romac Catalog# FCA501-9.06 8" shop coat, w/ alloy N&B	EA	5		
1.06	12" Flange Kit with Bolts, Nuts, Washers, & Gaskets	EA	30		
1.07	12"x12"x12" Tee MJxMJxMJ	EA	5		
1.08	12"x12"x6" Tee MJxMJxFL	EA	20		
1.09	12"x8" Reducer MJxFL	EA	5		
1.10	12" Gate Valve from CLOW Valve Co. MJ x MJ - F-6100	EA	10		
1.11	12" MJ Restraint Accessory Set for C909 PVC Pipe-DI, MJ gland, MJ gasket, low alloy steel T-bolts & nuts per ANSI/AWWA C111/A21.11	EA	760		
1.12	3 Pc Valve Box-Tyler Union-6860 series 5-1/4"shaft, screw type extension 33"-42"-#6 standard base, Drop lid marked w/ "WATER"	EA	10		
1.13	Electronic markers, Omni Markers 66.35 KHZ or approved equal	EA	110		
1.14	PVC Pipe Lubricant 32 oz. Oatey 30600	EA	85		
1.15	1000-LF Warning tape marked "Caution Buried Water Pipe Below"	EA	5		
1.16	Marker/Locator, Electronic (EML100), Marker Mate Cat No. 50607984 or approved equal	EA	1		
2	6" PVC WATERLINE BRANCH & FITTINGS				
2.01	6"x20' ULTRA BLUE PVCO AWWA C909	EA	500		
2.02	6" 11.25° DI Elbow, MJxMJ CDMJB1106 MJxMJ BEND 11 1/4° DI C153 MJ fitting, cement lined and bit coated	EA	205		
2.03	6" 22.5° DI Elbow, MJxMJ CDMJB2206 MJxMJ BEND 22 1/2° DI C153 MJ fitting, cement lined and bit coated	EA	90		
2.04	6" 45° DI Elbow, MJxMJ CDMJB4506 MJxMJ BEND 45° DI C153 MJ fitting, cement lined and bit coated	EA	95		
2.05	6"Ø PVC PIPE BELL RESTRAINT HARNESS SERIES 1600 FOR C909 PVCO PIPE OR APPROVED EQUAL	EA	500		
2.06	6"x6"x6" Tee MJxMJxFL	EA	5		
2.07	6" Schedule 80 PVC Blind Flange 853-060	EA	5		
2.08	6" Gate Valve from CLOW Valve Co. FL x MJ - F-6106	EA	5		
2.09	6" MJ Restraint Accessory Set for C909 PVC Pipe-DI, MJ gland, MJ gasket, low alloy steel T-bolts & nuts per ANSI/AWWA C111/A21.11	EA	820		
2.10	3 Pc Valve Box-Tyler Union-6860 series 5-1/4"shaft, screw type extension 33"-42"-#6 standard base, Drop lid marked w/ "WATER"	EA	5		
2.11	6" Romac Coupling Style 501 Straight PVC 6.60-6.91 x PVC 6.60-6.91 w/ 12" CR LGTH	EA	55		
2.12	Electronic markers, Omni Markers 66.35 KHZ or approved equal	EA	220		
2.13	PVC Pipe Lubricant 32 oz. Oatey 30600	EA	100		
2.14	1000-LF Warning tape marked "Caution Buried Water Pipe Below"	EA	10		
2.15	6" Cla-Val Model 92-01 Combination Pressure Reducing & Pressure Sustaining Valve Flanged Class 125/250 Flange with CRL-60 (20-200 psi) & CRD (20-105 psi) consist with X101 Valve position Indicator & X141 Pressure Gauges for Upstream/downstream pressure settings	EA	4		
2.16	6" Omni Flowmeter (inline) to go complement PRV/PSV Combination kit	EA	4		
3	2" PVC WATERLINE BRANCH & FITTINGS				
3.01	2"x20' PVC S80 pipe, plain end 8008-020AB PVC 2" S80 x 20' PE NSF14/61 ASTM D1784/5 USA	EA	50		
3.02	2" 45° Sch 80 Elbow Socket x Socket Part# 817-020 Spears	EA	5		
3.03	2" Sch 80 Coupling Socket x Socket Part# 829-020	EA	25		
3.04	Oatey Heavy Duty Clear PVC Cement, 32 oz	EA	5		
3.05	Oatey Purple Primer, 32oz	EA	5		
3.06	Electronic markers, Omni Markers 66.35 KHZ or approved equal	EA	25		
3.07	1000-LF Warning tape marked "Caution Buried Water Pipe Below"	EA	5		

4	SERVICE CONNECTION - (QTY: 395) All Brass fittings to be "No Lead" and conform to AWWA C800, ASTM B584, ANSI B16.15, and threads conform to ANSI/ASME B1.20.1				
4.01	12"x2" Saddle for PVC OD 9.05 X 2" FIPT, Romac Style 202NS Nylon Coated Saddle with double Stainless Steel Straps	EA	60		
4.02	6"x2" Saddle for PVC OD 6.90 X 2" FIPT, Romac Style 202NS Nylon Coated Saddle with double Stainless Steel Straps	EA	335		
4.03	2"x2"x2" Tee Socket x Socket x Socket Part # 801-020	EA	35		
4.04	2"x20' PVC S80 pipe, plain end 8008-020AB PVC 2" S80 x 20' PE NSF14/61 ASTM D1784/5 USA	EA	395		
4.05	3/4"x20' PVC S80 pipe, plain end 8008-007AB PVC 3/4" S80 x 20' PE NSF14/61 ASTM D1784/5 USA	EA	395		
4.06	2" Ballcorp - Male Iron Pipe Thread Inlet by Pack Joint Outlet for PVC Pipe	EA	395		
4.07	2" 45° Sch 80 Elbow Socket x Socket Part# 817-020	EA	395		
4.08	2"x3/4" reducer coupling, Sch 80 Socket x Socket Part# 829-249 Spears	EA	395		
4.09	2"x3/4" tee	EA	395		
4.10	2" Sch 80 Coupling Socket x Socket Part# 829-020	EA	395		
4.11	3/4" Sch 80 Coupling Socket x Socket Part# 829-007	EA	395		
4.12	2" Sch 80 female adapter soc x fipt Part# 835-020 Spears	EA	395		
4.13	3/4" Sch 80 female adapter soc x fipt Part# 835-007 Spears	EA	395		
4.14	Oatey Heavy Duty Clear PVC Cement, 32 oz	EA	310		
4.15	Oatey Purple Primer, 32oz	EA	310		
4.16	Valve box key w/extension fixed key; 7' max length	EA	10		
4.17	3/4" x 10ft Sch 80 Flush Threaded Pipe	EA	200		
4.18	10x3" Heavy Duty Solid Top Well Seal with 2 extra 1" port for Sounding tube & motor cable	EA	4		
4.19	10x4" Heavy Duty Solid Top Well Seal with 2 extra 1" port for Sounding tube & motor cable	EA	4		
4.20	8x4" Heavy Duty Solid Top Well Seal with 2 extra 1" port for Sounding tube & motor cable	EA	4		
4.21	8x2" Heavy Duty Solid Top Well Seal with 2 extra 1" port for Sounding tube & motor cable	EA	4		
4.22	6x2" Heavy Duty Solid Top Well Seal with 2 extra 1" port for Sounding tube & motor cable	EA	4		
5	1" WATER METER ASSEMBLY				
5.01	SENSUS IPERL 1" Smart Water Meter	EA	165		
5.02	Long Yokebox-Ford 1" FEMALE IRON PIPE INLET by 3/4" OUTLET Catalog# LYLBI11-233-NL	EA	165		
5.03	FORD METER BOX CO. METER KEY	EA	165		
5.04	FORD METER BOX CO. SECURITY SCREW ACCESS KEY (KE800999-SSF)	EA	165		
5.05	B88-333-NL 1" Male Iron Pipe Thread Both Ends, Ford Ball Valve Curb Stops Ball Valves with Iron Pipe Threads	EA	165		
5.06	1" Febco Backflow Prevention 810EB21, Dual check, MPT x FPT Union outlet	EA	165		
6	FIRE HYDRANT ASSEMBLY - (QTY: 25)				
6.01	6" Wet Barrel Hydrant CLOW Model 960 AWWA C503 or approved equal	EA	25		
6.02	6"x20' ULTRA BLUE PVCO AWWA C909	EA	25		
6.03	12" Gate Valve from CLOW Valve Co. FL x MJ - F-6106	EA	15		
6.04	6" Gate Valve from CLOW Valve Co. FL x MJ - F-6106	EA	55		
6.05	12"x12"x6" Tee FLxFLxFL	EA	15		
6.06	6"x6"x6" Tee FLxFLxFL	EA	20		
6.07	12" MJ Restraint Accessory Set for C909 PVC Pipe-DI, MJ gland, MJ gasket, low alloy steel T-bolts & nuts per ANSI/AWWA C111/A21.11	EA	15		
6.08	6" MJ Restraint Accessory Set for C909 PVC Pipe-DI, MJ gland, MJ gasket, low alloy steel T-bolts & nuts per ANSI/AWWA C111/A21.11	EA	55		
6.09	12" PVC Flanged Coupling Adapter W/ Gasket range 8.60-9.06, Romac Catalog# FCA501-9.06 8" shop coat, w/ alloy N&B	EA	15		
6.10	6" PVC Flanged Coupling Adapter W/ Gasket range 6.60-6.91, Romac Catalog# FCA501-9.06 8" shop coat, w/ alloy N&B	EA	55		
6.11	6" DI Flanged Hydrant Bury 6 Hole, 6"x30" with 90deg Hydrant Base MJ x MJ	EA	35		

6.12	6" Red rubber full face gasket Flange w/ 6 holes	EA	70		
6.13	6" Break-off hydrant check valve, 21" LONG w/ 6 holes FL (Mueller/James Jones)	EA	35		
6.14	6" x 24" hydrant spool w/ 6 holes FL	EA	35		
7	1" ARV ASSEMBLY - (QTY: 25) All Brass fittings to be "No Lead" and conform to AWWA C800, ASTM B584, ANSI B16.15, and threads conform to ANSI/ASME B1.20.1				
7.01	12"X1" Service Saddle, Romac Style 202S-9.7-1" IP Painted Saddle with Stainless Straps or approved equal	EA	5		
7.02	6"X1" Service Saddle, Romac Style 202S-7.5-1" IP Painted Saddle with Stainless Straps or approved equal	EA	20		
7.03	1" Ballcorp - Male Iron Pipe Thread Inlet by Pack Joint Outlet for PE Pipe	EA	25		
7.04	1" x 20' PVC Sch 80 pipe	EA	25		
7.05	1" 45° Sch 80 Elbow SOC x SOC	EA	50		
7.06	1" Copper Pipe	EA	25		
7.07	1" Brass Joint Coupling (C24-44) or approved equal	EA	25		
7.08	1" Ball Valve Curb Stops with Brass Coupling both sides (B22-444) or approved equal	EA	25		
7.09	1" Air relief, Air Vacuum Valve, Plast-o-matic Model ARV100EPT-PV or approved equal	EA	25		
7.10	1" Copper Pipe Support Piece MIP x PE	EA	25		
7.11	Oatey Heavy Duty Clear PVC Cement, 32 oz	EA	10		
7.12	Oatey Purple Primer, 32oz	EA	10		
7.13	Thread seal tape, 1/2 in. x 260 in.	EA	25		
7.14	Brass Curb Stop 3/4" NPT	EA	12		
7.15	Brass Tee 3/4" NPT	EA	12		
7.16	Brass Nipple 3/4" x 3" NPT	EA	12		
7.17	Brass 90 degree elbow 3/4" NPT	EA	12		
7.18	Brass Reducing Bushing 3/4" x 1/4" NPT	EA	12		
7.19	Brass Curb Stop 1" NPT	EA	12		
7.20	Brass Tee 1" NPT	EA	12		
7.21	Brass Nipple 1" NPT	EA	12		
7.22	Brass Reducing Bushing 1" x 3/4" NPT	EA	12		
7.23	Brass 90 degree elbow 1" NPT	EA	12		
7.24	Brass Bell Reducer 1" x 3/4" NPT	EA	12		
7.25	Brass Coupling 1"	EA	12		
7.26	Brass Coupling 3/4"	EA	12		
7.27	Plastic ARV D-040 3/4"	EA	16		
7.28	Plastic ARV D-040 1"	EA	16		
7.29	Liquid Filled Pressure Gauge 0 - 60psi bottom entry 1/4"	EA	12		
7.30	Liquid Filled Pressure Gauge 0 - 100psi bottom entry 1/4"	EA	12		
7.31	Liquid Filled Pressure Gauge 0 - 120psi bottom entry 1/4"	EA	12		
7.32	Liquid Filled Pressure Gauge 0 - 160psi bottom entry 1/4"	EA	12		
7.33	Liquid Filled Pressure Gauge 0 - 200psi bottom entry 1/4"	EA	12		
7.34	LMI Metering pump - 4 GPH @ 100 , Molded PVDF/PVDF, 4 Function Valve, .375 Ceramic Valve Balls, PVDF / PTFE O-Ring, PE Tubing . 3/8" OD Connection, 120 Volts, 60 Hz. - Max 4.00 GPH, 100 PSI	EA	3		
7.35	5hp Petrol Engine Driven Compressor 20 cfm @ 75psi	EA	1		
8	4" ARV ASSEMBLY - (QTY: 10) All Brass fittings to be "No Lead" and conform to AWWA C800, ASTM B584, ANSI B16.15, and threads conform to ANSI/ASME B1.20.1				
8.01	12"x12"x4" Tee MJxMJxMJ	EA	10		
8.02	4" Ballcorp - Male Iron Pipe Thread Inlet by Pack Joint Outlet for PE Pipe	EA	10		
8.03	4"x20' ULTRA BLUE PVCO AWWA C909	EA	10		
8.04	4" 45° Sch 80 Elbow SOC x SOC	EA	20		
8.05	4" Copper Pipe	EA	10		
8.06	4" Brass Joint Coupling (C24-44) or approved equal	EA	10		

8.07	4" Ball Valve Curb Stops with Brass Coupling both sides (B22-444) or approved equal	EA	10		
8.08	4" Air relief, Air Vacuum Valve, Plast-o-matic Model ARV400EPT-PV or approved equal	EA	10		
8.09	4" Copper Pipe Support Piece MIP x PE	EA	10		
8.10	Oatey Heavy Duty Clear PVC Cement, 32 oz	EA	5		
8.11	Oatey Purple Primer, 32oz	EA	5		
8.12	Thread seal tape, 1/2 in. x 260 in.	EA	10		
8.13	0 70 ft of Water (ft H2O) Gauge 1/4" Bottom Entry - 4" Dial Face	EA	25		
8.14	4"Ø Sensus OMNI plus T2 Water Meter, FLGXFLG with SCADA Ready Connection - Pulse or Digital Output option	EA	4		
8.15	2"Ø Sensus OMNI plus T2 Water Meter, NPT with SCADA Ready Connection - Pulse or Digital Output option	EA	4		
9	SAMPLING STATION - (QTY: 1)				
9.01	MUELLER Sampling station	EA	5		
9.02	6"X1" Service Saddle, Romac Style 202S-7.5-1" IP Painted Saddle or approved equal	EA	5		
9.03	1" Ballcorp - Male Iron Pipe Thread Inlet by Pack Joint Outlet for PVC Pipe	EA	5		
9.04	1" 45° Sch 80 Elbow SOC x SOC	EA	10		
9.05	1" 90° Sch 80 Elbow SOC x SOC	EA	10		
9.06	1" 90° Copper Elbow FIPT x FIPT	EA	10		
9.07	1" Sch 80 PVC Female Adapter SOC x FIPT	EA	5		
9.08	1" x 20' PVC Sch 80 pipe	EA	5		
9.09	Oatey Heavy Duty Clear PVC Cement, 32 oz	EA	5		
9.10	Oatey Purple Primer, 32oz	EA	5		
9.11	Thread seal tape, 1/2 in. x 260 in.	EA	5		
9.12	B88-444-NL 1" Male Iron Pipe Thread Both Ends, Ford Ball Valve Curb Stops Ball Valves with Iron Pipe Threads	EA	5		
9.13	1" Copper Nipple	EA	5		
9.14	1"x3" Brass Nipple	EA	5		
9.15	1" Brass Ball with handle	EA	5		
9.16	1" Brass Piping	EA	5		
9.17	1/4" Copper Sample Port	EA	5		
9.18	1/2" Brass Hose Bibb with fittings	EA	5		
9.19	Support Clamp	EA	5		
9.20	Extra Deep Socket	EA	10		
9.21	Ridgid Wrench 31305, Rapid Rip	EA	5		
10	SHIPPING & DELIVERY TO ASPA TAFUNA				
10.01	Shipping & Handling to ASPA Warehouse at Tafuna via Pago Pago Port, American Samoa. (This includes but is not limited to Shipping Insurance, destination's Custom taxes and local hauling fees)	LS	1		
BOOSTER STATION PIPING MATERIALS					
No.	Description	Unit	Qty	Rate	Total Cost
1	WATERLINE & FITTINGS				
1.01	10,000 US Gallon Break Tank	EA	1		
1.02	3" DI Pipe Break Tank Manual Drain	EA	5		
1.03	2" DI Pipe Break Tank Overflow Drain	EA	5		
1.04	1056 US Gallon Pressure Tank	EA	1		
1.05	2"x8" DI Spool FLxFL Pressure Tank Drain Line	EA	5		
1.06	4"x4" DI Spool FLxFL Pressure Tank Test & Drain Line	EA	5		
1.07	Grundfos CR 185-6-4 A-G-A-E-HQQE Vertical Centrifugal Pump	EA	3		
1.08	Petrol Engine Driven Powerwasher 3000 psi complete with nozzle	EA	2		
1.09	GRUNDFOS 99918287 - CR64-3-2 A-G-A-E-HQQE, 40 HP 230/460V 3PH 60Hz	EA	2		
1.10	GRUNDFOS 99918130 - CR45-3 A-G-A-E-HQQE, 25 HP 230V/460V 3PH 60Hz	EA	2		
1.11	Grundfos CRIE3-8N-FGJ-A-E-HQQE 1.5Hp 230V 60Hz Single Phase	EA	3		
1.12	8" Water Meter Sensus Omni T2 with Strainer	EA	6		

1.13	8"x2' DI Spool FLxFL	EA	5		
1.14	8"x5' DI Spool FLxFL	EA	5		
1.15	8"x8' DI Spool FLxFL	EA	5		
1.16	8"x9" DI Spool FLxFL	EA	5		
1.17	8"x12" DI Spool FLxFL	EA	5		
1.18	8"x4' DI Spool FLxFL	EA	5		
1.19	8" DI Butterfly Valve Smith-Cooper Series 0160L Lug Type	EA	10		
1.20	8" Check Valve FLxFL from Flomatic Model 402BT	EA	5		
1.21	8" Gate Valve from CLOW Valve Co. FL x FL - F-6102	EA	5		
1.22	8" Gate Valve from CLOW Valve Co. MJ x MJ - F-6100	EA	5		
1.23	8"x8"x8" DI Tee FLxFLxFL	EA	5		
1.24	8"x4" DI Reducer MJxMJ w/ N,B&G	EA	5		
1.25	8"x8" 45° Lateral (Wye) MJxMJxMJ CDMJL0808 MJxMJ DI C153 MJ fitting, cement lined and bit coated	EA	5		
1.26	8" PVC Flanged Coupling Adapter W/ Gasket range 6.60-6.91, Romac Catalog# FCA501-6.91 6" shop coat, w/ alloy N&B	EA	5		
1.27	8" 90° DI Elbow, FLxFL, cement lined shop coated	EA	5		
1.28	12" 45° DI Elbow, MJxMJ CDMJB4512 MJxMJ BEND 45° DI C153 MJ fitting, cement lined and bit coated	EA	5		
1.29	8" 45° DI Elbow, MJxMJ CDMJB4508 MJxMJ BEND 45° DI C153 MJ fitting, cement lined and bit coated	EA	5		
1.30	8" 45° DI Elbow, FLxFL, cement lined shop coated	EA	5		
1.31	4" 45° DI Elbow, FLxFL, cement lined shop coated	EA	5		
1.32	3" 90° DI Elbow, FLxFL, cement lined shop coated	EA	5		
1.33	8" MJ Restraint Accessory Set for C909 PVC Pipe-DI, MJ gland, MJ gasket, low alloy steel T-bolts & nuts per ANSI/AWWA C111/A21.11	EA	5		
1.34	8" Steel Saddle Mount	EA	10		
1.35	4" Steel Saddle Mount	EA	5		
1.36	8"x20' ULTRA BLUE PVCO AWWA C909	EA	10		
1.37	12"x20' ULTRA BLUE PVCO AWWA C909	EA	5		
1.38	PVC Pipe Lubricant 32 oz. Oatey 30600	EA	5		
1.39	4"x6' DI Spool FLxFL	EA	5		
1.40	4"x8' DI Spool FLxFL	EA	5		
1.41	12"x12"x8" Tee MJxMJxMJ, cement lined and bit coated	EA	5		
1.42	12"x8" Reducer MJxFL	EA	5		
1.43	4" x 6" FLxFL DI Spool Pipe Class 125	EA	4		
1.44	4" x 12" FLxFL DI Spool Pipe Class 125	EA	6		
1.45	4" x 24" FLxFL DI Spool Pipe Class 125	EA	6		
1.46	4" x 36" FLxFL DI Spool Pipe Class 125	EA	6		
1.47	4" x 48" FLxFL DI Spool Pipe Class 125	EA	6		
1.48	4" x 45 Deg Elbow FLGxFLG Class 125	EA	6		
1.49	4" x 90 Deg Elbow FLGxFLG Class 125	EA	6		
1.50	4" x 1" Single Strap Service Saddle	EA	6		
1.51	4" x 3/4" Single Strap Service Saddle	EA	6		