



**CITY OF PUYALLUP
ENGINEERING SERVICES
ESTIMATE OF COST**

ON-SITE

DATE: 10/4/2023 **ESTIMATOR:** Alex White, PE
PROJECT NAME & LOCATION: ARCO AMPM - PUYALLUP **TELEPHONE #:** (425) 251-6222
1402 S MERIDIAN

STREET	UNIT	UNIT COST	PLAN QUANTITY	TOTAL
6" CURB & 18" GUTTER	LF	\$19.00	779	14,801.00
DRIVE APPROACH	SY	\$55.00		0.00
SIDEWALK	SY	\$35.00	250	8,750.00
WHEEL CHAIR RAMP	LS	\$2,800.00	0	0.00
MONUMENT	EA	\$650.00	0	0.00
STREET SIGN	EA	\$280.00	0	0.00
WARNING SIGN	EA	\$230.00	0	0.00
PERMANENT BARRICADE	EA	\$850.00	0	0.00
STREET LIGHT	EA	\$5,500.00	0	0.00
METER BASE AND PANEL FOR ST LT	EA	\$13,200.00	0	0.00
ROADWAY EXCAVATION / HAUL	CY	\$35.00	7400	259,000.00
GRAVEL BASE	TON	\$25.00	3000	75,000.00
TOP COURSE	TON	\$30.00		0.00
CLASS B ASPHALT CONCRETE	TON	\$95.00	320	30,400.00
RAISE M.H. / VALVE BOX TO GRAD	EA	\$425.00		0.00
ROUGH GRADING	CY	\$3.00	3600	10,800.00
MISC. ITEMS				0.00
MISC. ITEMS				0.00
MISC. ITEMS				0.00
STORM DRAINAGE				0.00
48" STORM SEWER MANHOLE	EA	\$3,605.00	3	10,815.00
54" STORM SEWER MANHOLE	EA	\$4,265.00		0.00
60" STORM SEWER MANHOLE	EA	\$5,075.00		0.00
72" STORM SEWER MANHOLE	EA	\$7,615.00		0.00
84" STORM SEWER MANHOLE	EA	\$10,150.00		0.00
96" STORM SEWER MANHOLE	EA	\$14,720.00		0.00
FLOW CONTROL MANHOLE	EA	\$4,900.00	2	9,800.00
CATCH BASIN TYPE I	EA	\$1,800.00		0.00
CATCH BASIN TYPE II	EA	\$3,550.00		0.00
12" PVC	LF	\$65.00	375	24,375.00
18" PVC	LF	\$85.00		0.00
21" PVC	LF	\$100.00		0.00
24" PVC	LF	\$125.00		0.00
30" PVC	LF	\$150.00		0.00
36" RCP	LF	\$275.00		0.00
42" RCP	LF	\$350.00		0.00
48" RCP	LF	\$440.00		0.00
BIOSWALE / DETENTION POND	CF	\$2.00		0.00
COMPOST / COALESCE FILTER	LF	\$7.70		0.00
EROSION CONTROL	SF	\$0.50		0.00
SITE STABILIZATION	SF	\$1.70		0.00
STORMWATER DETENTION VAULT	CF	\$10.00	84000	840,000.00
MODULAR WETLAND AND OILWATER	EA	\$40,000.00	1	40,000.00

WATER		UNIT	UNIT COST	PLAN QUANTITY	TOTAL
3/4"	WATER SERVICE / METER	EA	\$850.00		0.00
1"	WATER SERVICE / METER	EA	\$1,000.00	1	1,000.00
1 1/2"	WATER SERVICE / METER	EA	\$1,430.00	1	1,430.00
2"	WATER SERVICE / METER	EA	\$2,000.00		0.00
	FIRE HYDRANT ASSEMBLY	EA	\$3,400.00		0.00
	2' BLOW OFF ASSEMBLY	EA	\$2,080.00		0.00
	8" GATE VALVE	EA	\$820.00		0.00
	10" BUTTERFLY VALVE	EA	\$1,300.00		0.00
	12" BUTTERFLY VALVE	EA	\$1,500.00		0.00
	AIR RELIEF VALVE	EA	\$2,400.00		0.00
	8" D.I.P.	LF	\$85.00		0.00
	10" D.I.P.	LF	\$100.00		0.00
	12" D.I.P.	LF	\$115.00		0.00
	16" D.I.P.	LF	\$145.00		0.00
	2" DOUBLE CHECK ASSEMBLY	EA	\$1,950.00	1	1,950.00
	2" REDUCED PRESSURE ASSEMBLY	EA	\$1,625.00	1	1,625.00
	2" DOUBLE DETECTOR CHECK	EA	\$1,625.00		0.00
	ADJUST WM TO GRADE	EA	\$500.00		0.00
	MISC. ITEMS				0.00

SANITARY 0.00

	SANITARY SEWER MANHOLE	EA	\$4,000.00		0.00
	DROP MANHOLE	EA	\$5,000.00		0.00
	TERMINAL CLEAN OUT	EA	\$425.00	17	7,225.00
	SIDE SEWER	LF	\$60.00	544	32,640.00
	8" SANITARY PVC	LF	\$70.00		0.00
	10" SANITARY PVC	LF	\$75.00		0.00
	12" SANITARY PVC	LF	\$90.00		0.00
	18" SANITARY PVC	LF	\$100.00		0.00
	GREASE INTERCEPTOR	GALLON	\$6.90	1000	6,900.00
	OIL WATER SEPARATOR	EA	\$10,000.00	1	10,000.00

RETAINING WALLS 0.00

	ROCK RETAINING WALL	S.Y./ FACE	\$250.00		0.00
	POURED IN PLACE RETAINING WALL	S.Y./ FACE	\$250.00		0.00
	KEYSTONE WALL	S.F./FACE	\$35.00	280	9,800.00
	MISC. ITEMS				0.00

MISCELLANEOUS 0.00

	RELOCATE POWER POLE/TRANSFORMER				0.00
	PRIVATE UTILITY TRENCHING	FT	\$3.00		0.00
	MISC. ITEMS				0.00
	MISC. ITEMS				0.00
	MISC. ITEMS				0.00
	MISC. ITEMS				0.00

TOTAL	1,396,311.00
20%CONTINGENCY	279,262.20
GRAND TOTAL	1,675,573.20

For City use only:

Total Valuat
Engineering
Performance



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DATE: 10/4/2023 **ESTIMATOR:** Alex White, PE
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1402 S MERIDIAN

Conversions
 SY to SF 1SY=9SF

STREET	UNIT	UNIT COST	PLAN QUANTITY	TOTAL
6" CURB & 18" GUTTER	LF	\$19.00	394	7,486.00
DRIVE APPROACH	SY	\$55.00	145	7,975.00
SIDEWALK	SY	\$35.00	253	8,855.00
WHEEL CHAIR RAMP	LS	\$2,800.00	1	2,800.00
MONUMENT	EA	\$650.00		0.00
STREET SIGN	EA	\$280.00	1	280.00
WARNING SIGN	EA	\$230.00		0.00
PERMANENT BARRICADE	EA	\$850.00		0.00
STREET LIGHT	EA	\$5,500.00	1	5,500.00
METER BASE AND PANEL FOR ST LT	EA	\$13,200.00		0.00
ROADWAY EXCAVATION / HAUL	CY	\$35.00		0.00
GRAVEL BASE	TON	\$25.00		0.00
TOP COURSE	TON	\$30.00		0.00
CLASS B ASPHALT CONCRETE	TON	\$95.00		0.00
RAISE M.H. / VALVE BOX TO GRAD	EA	\$425.00		0.00
ROUGH GRADING	CY	\$3.00	100	300.00
MISC. ITEMS				0.00
MISC. ITEMS				0.00
MISC. ITEMS				0.00
STORM DRAINAGE				0.00
48" STORM SEWER MANHOLE	EA	\$3,605.00		0.00
54" STORM SEWER MANHOLE	EA	\$4,265.00		0.00
60" STORM SEWER MANHOLE	EA	\$5,075.00		0.00
72" STORM SEWER MANHOLE	EA	\$7,615.00		0.00
84" STORM SEWER MANHOLE	EA	\$10,150.00		0.00
96" STORM SEWER MANHOLE	EA	\$14,720.00		0.00
FLOW CONTROL MANHOLE	EA	\$4,900.00		0.00
CATCH BASIN TYPE I	EA	\$1,800.00		0.00
CATCH BASIN TYPE II	EA	\$3,550.00		0.00
12" PVC	LF	\$65.00		0.00
18" PVC	LF	\$85.00		0.00
21" PVC	LF	\$100.00		0.00
24" PVC	LF	\$125.00		0.00
30" PVC	LF	\$150.00		0.00
36" RCP	LF	\$275.00		0.00
42" RCP	LF	\$350.00		0.00
48" RCP	LF	\$440.00		0.00
BIOSWALE / DETENTION POND	CF	\$2.00		0.00
COMPOST / COALESCE FILTER	LF	\$7.70		0.00
EROSION CONTROL	SF	\$0.50		0.00
SITE STABILIZATION	SF	\$1.70		0.00
MISC. ITEMS				0.00
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WATER		UNIT	UNIT COST	PLAN QUANTITY	TOTAL
3/4" WATER SERVICE / METER	EA	\$850.00		0.00	
1" WATER SERVICE / METER	EA	\$1,000.00		0.00	
1 1/2" WATER SERVICE / METER	EA	\$1,430.00		0.00	
2" WATER SERVICE / METER	EA	\$2,000.00		0.00	
FIRE HYDRANT ASSEMBLY	EA	\$3,400.00		0.00	
2' BLOW OFF ASSEMBLY	EA	\$2,080.00		0.00	
8" GATE VALVE	EA	\$820.00		0.00	
10" BUTTERFLY VALVE	EA	\$1,300.00		0.00	
12" BUTTERFLY VALVE	EA	\$1,500.00		0.00	
AIR RELIEF VALVE	EA	\$2,400.00		0.00	
8" D.I.P.	LF	\$85.00		0.00	
10" D.I.P.	LF	\$100.00		0.00	
12" D.I.P.	LF	\$115.00		0.00	
16" D.I.P.	LF	\$145.00		0.00	
2" DOUBLE CHECK ASSEMBLY	EA	\$1,950.00		0.00	
2" REDUCED PRESSURE ASSEMBLY	EA	\$1,625.00		0.00	
2" DOUBLE DETECTOR CHECK	EA	\$1,625.00		0.00	
ADJUST WM TO GRADE	EA	\$500.00		0.00	
MISC. ITEMS				0.00	

SANITARY					0.00
SANITARY SEWER MANHOLE	EA	\$4,000.00		0.00	
DROP MANHOLE	EA	\$5,000.00		0.00	
TERMINAL CLEAN OUT	EA	\$425.00		0.00	
SIDE SEWER	LF	\$60.00		0.00	
8" SANITARY PVC	LF	\$70.00		0.00	
10" SANITARY PVC	LF	\$75.00		0.00	
12" SANITARY PVC	LF	\$90.00		0.00	
18" SANITARY PVC	LF	\$100.00		0.00	
GREASE INTERCEPTOR	GALLON	\$6.90		0.00	
MISC. ITEMS				0.00	

RETAINING WALLS					0.00
ROCK RETAINING WALL	S.Y./FACE	\$250.00		0.00	
POURED IN PLACE RETAINING WALL	S.Y./FACE	\$250.00		0.00	
KEYSTONE WALL	S.F./FACE	\$35.00		0.00	
MISC. ITEMS				0.00	

MISCELLANEOUS					0.00
RELOCATE POWER POLE/TRANSFORMER				0.00	
PRIVATE UTILITY TRENCHING	FT	\$3.00		0.00	
MISC. ITEMS				0.00	
MISC. ITEMS				0.00	
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MISC. ITEMS				0.00	

TOTAL	33,196.00
20%CONTINGENCY	6,639.20
GRAND TOTAL	39,835.20

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Inspection Fee (3%)	51,462.25
TOTAL	#####
Bond Amount Required (150%)	59,753.00

Estimating Tables

Tables in Exhibits 620-1 through 620-5h are for developing estimates of quantities for pavement sections, shoulder sections, stockpiles, asphalt distribution, and fog seal.

D-1 Estimating: Miscellaneous Tables

Unit Dry Weight – Gravel Base and Surfacing				
Type of Material	Truck Measure		Compacted on Roadway	
	lb/cy	T/cy	lb/cy	T/cy
Ballast	3,100	1.55	3,900	1.95
Crushed Surfacing Top Course	2,850	1.43	3,700	1.85
Crushed Surfacing Base Course	2,950	1.48	3,700	1.85
Screened Gravel Surfacing			3,700	1.85
Gravel Base			3,400 – 3,800	1.70 – 1.90
Permeable Ballast			2,800	1.40

3,700 lb/cy (1.85 tons/cy) is recommended as the most suitable factor; however, if the grading approaches the coarseness of ballast, the factor would approach 3,800 lb/cy (1.90 tons/cy), and if the grading contains more than 45% sand, the factor would decrease, approaching 3,400 lb/cy (1.70 tons/cy) for material that is essentially all sand.

Notes:

Weights shown are dry weights and corrections are required for water contents.

The tabulated weights for the materials are reasonably close; however, apply corrections in the following order:

$$\text{For specific gravity: } \text{Wt.} = \frac{\text{tabular wt.} \times \text{specific gravity on surface report}}{2.65}$$

$$\text{For water content: } \text{Wt.} = \text{tabular wt.} \times (1 + \text{free water \% in decimals})$$

If material is to be stockpiled, increase required quantities by 10% to allow for waste.

Consider the inclusion of crushed surfacing top course material for keystone when estimating quantities for projects having ballast course.