

**APPENDIX F**  
**Cost Estimates for CIP**



**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 1A**

**Cost Estimate for Problem Area 9 - Puy 01 Upsize Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	1100	lf	\$110,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	4	ea	\$18,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	22	ea	\$33,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,100	lf	\$5,500
17	HMA Trench Patch	\$150	230	TN	\$34,500
18	Half-Width Grind and Overlay	\$130	180	TN	\$23,400
19	Imported Trench Backfill	\$20	1,210	TN	\$24,200
20	Crushed Surfacing	\$25	460	TN	\$11,500
21	Traffic Control (2%)	\$6,000	1	ls	\$6,000
22	General Restoration (2%)	\$6,000	1	ls	\$6,000
23	Mobilization (10%)	\$30,000	1	ls	\$30,000
24	Temporary Erosion & Sediment Control (4%)	\$12,000	1	ls	\$12,000
<b>Construction Costs Subtotal</b>					\$358,100
Sales Tax @ 9.4%					\$33,661
Subtotal					\$391,761
Contingency					30% \$117,528
<b>Total Construction Cost</b>					\$509,290
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$76,393
Administration/Legal					\$15,279
Construction Services					\$35,650
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$636,612
<b>USE</b>					<b>\$640,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 1B**

**Cost Estimate for Problem Area 9 - Puy 01 Upsize Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	1850	lf	\$185,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	7	ea	\$31,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	37	ea	\$55,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,850	lf	\$9,250
17	HMA Trench Patch	\$150	390	TN	\$58,500
18	Half-Width Grind and Overlay	\$130	290	TN	\$37,700
19	Imported Trench Backfill	\$20	2,030	TN	\$40,600
20	Crushed Surfacing	\$25	770	TN	\$19,250
21	Traffic Control (2%)	\$10,000	1	ls	\$10,000
22	General Restoration (2%)	\$10,000	1	ls	\$10,000
23	Mobilization (10%)	\$48,000	1	ls	\$48,000
24	Temporary Erosion & Sediment Control (4%)	\$19,000	1	ls	\$19,000
<b>Construction Costs Subtotal</b>					\$568,300
Sales Tax @ 9.4%					\$53,420
Subtotal					\$621,720
Contingency					30% \$186,516
<b>Total Construction Cost</b>					\$808,236
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$121,235
Administration/Legal					\$24,247
Construction Services					\$56,577
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,010,295
<b>USE</b>					<b>\$1,020,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 2A**

**Cost Estimate for Puyallup 2 - Candlewood Pump Station (26) improvements  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$100,000	1	LS	\$100,000
2	Pump Station - Electrical Upgrades	\$50,000	1	LS	\$50,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$50,000	1	LS	\$50,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$6,000	1	ls	\$6,000
14	General Restoration (2%)	\$6,000	1	ls	\$6,000
15	Mobilization (10%)	\$30,000	1	ls	\$30,000
17	Temporary Erosion & Sediment Control (4%)	\$12,000	1	ls	\$12,000
<b>Construction Costs Subtotal</b>					\$350,500
Sales Tax @ 9.4%					\$32,947
Subtotal					\$383,447
Contingency					30% \$115,034
<b>Total Construction Cost</b>					\$498,481
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$74,772
Administration/Legal					\$14,954
Construction Services					\$34,894
Property/Easement Acquisition					\$9,970
<b>TOTAL ESTIMATED PROJECT COST</b>					\$633,071
<b>USE</b>					<b>\$640,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 3A**

**Cost Estimate for Problem Area 3a - 4th and River Rd. Pump Station (#38) Improvements  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	New Pump Station - Mechanical	\$300,000	1	LS	\$300,000
2	New Pump Station - Electrical	\$200,000	1	LS	\$200,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$100,000	1	LS	\$100,000
5	12-inch Force Main	\$90		LF	
6	96-inch Dia Manhole, 20' deep	\$50,000	1	LS	\$50,000
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$50,000	1	LS	\$50,000
9	Sheeting, Shoring, Bracing	\$40,000	1	LS	\$40,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$16,000	1	ls	\$16,000
14	General Restoration (2%)	\$16,000	1	ls	\$16,000
15	Mobilization (10%)	\$79,000	1	ls	\$79,000
16	Temporary Erosion & Sediment Control (4%)	\$31,000	1	ls	\$31,000
<b>Construction Costs Subtotal</b>					\$928,500
Sales Tax @ 9.4%					\$87,279
Subtotal					\$1,015,779
Contingency 30%					\$304,734
<b>Total Construction Cost</b>					\$1,320,513
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$198,077
Administration/Legal					\$39,615
Construction Services					\$92,436
Property/Easement Acquisition					\$26,410
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,677,051
<b>USE</b>					<b>\$1,680,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 3B**

**Cost Estimate for O&M Problems - Replacement of Aging Pipe due to Poor Conditions  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	8-inch PVC Gravity Replacement	\$90	1,900	lf	\$171,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	7	ea	\$31,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	38	ea	\$57,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,900	lf	\$9,500
17	HMA Trench Patch	\$150	400	TN	\$60,000
18	Half-Width Grind and Overlay	\$130	300	TN	\$39,000
19	Imported Trench Backfill	\$20	2,090	TN	\$41,800
20	Crushed Surfacing	\$25	790	TN	\$19,750
21	Traffic Control (2%)	\$9,000	1	ls	\$9,000
22	General Restoration (2%)	\$9,000	1	ls	\$9,000
23	Mobilization (10%)	\$47,000	1	ls	\$47,000
24	Temporary Erosion & Sediment Control (4%)	\$19,000	1	ls	\$19,000
<b>Construction Costs Subtotal</b>					\$557,550
Sales Tax @ 9.4%					\$52,410
Subtotal					\$609,960
Contingency					30% \$182,988
<b>Total Construction Cost</b>					\$792,948
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$118,942
Administration/Legal					\$23,788
Construction Services					\$55,506
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$991,185
<b>USE</b>					<b>\$1,000,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 3C**

**Cost Estimate for Problem Area 5b - Downstream PS 38 Improvements**

**YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	1,265	lf	\$354,200
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	5	ea	\$32,500
12	Lateral Connection	\$1,500	25	ea	\$37,950
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,265	lf	\$6,325
17	HMA Trench Patch	\$150	270	TN	\$40,500
18	Half-Width Grind and Overlay	\$130	200	TN	\$26,000
19	Imported Trench Backfill	\$20	1,390	TN	\$27,800
20	Crushed Surfacing	\$25	530	TN	\$13,250
21	Traffic Control (2%)	\$12,000	1	ls	\$12,000
22	General Restoration (2%)	\$12,000	1	ls	\$12,000
23	Mobilization (10%)	\$58,000	1	ls	\$58,000
24	Temporary Erosion & Sediment Control (4%)	\$23,000	1	ls	\$23,000
<b>Construction Costs Subtotal</b>					<b>\$687,525</b>
Sales Tax @ 9.4%					\$64,627
Subtotal					\$752,152
Contingency 30%					\$225,646
<b>Total Construction Cost</b>					<b>\$977,798</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$146,670
Administration/Legal					\$29,334
Construction Services					\$68,446
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,222,248</b>
<b>USE</b>					<b>\$1,230,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 3D**

**Cost Estimate for Problem Area 5b - Downstream PS 38 Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	550	lf	\$154,000
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	2	ea	\$13,000
12	Lateral Connection	\$1,500	11	ea	\$16,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	550	lf	\$2,750
17	HMA Trench Patch	\$150	120	TN	\$18,000
18	Half-Width Grind and Overlay	\$130	90	TN	\$11,700
19	Imported Trench Backfill	\$20	610	TN	\$12,200
20	Crushed Surfacing	\$25	230	TN	\$5,750
21	Traffic Control (2%)	\$6,000	1	ls	\$6,000
22	General Restoration (2%)	\$6,000	1	ls	\$6,000
23	Mobilization (10%)	\$28,000	1	ls	\$28,000
24	Temporary Erosion & Sediment Control (4%)	\$11,000	1	ls	\$11,000
<b>Construction Costs Subtotal</b>					<b>\$328,900</b>
Sales Tax @ 9.4%					\$30,917
Subtotal					\$359,817
Contingency					30% \$107,945
<b>Total Construction Cost</b>					<b>\$467,762</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$70,164
Administration/Legal					\$14,033
Construction Services					\$32,743
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$584,702</b>
<b>USE</b>					<b>\$590,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 4A**

**Cost Estimate for Problem Area 9 - Puy 04 Upsize Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	3400	lf	\$340,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	12	ea	\$54,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	68	ea	\$102,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	3,400	lf	\$17,000
17	HMA Trench Patch	\$150	710	TN	\$106,500
18	Half-Width Grind and Overlay	\$130	530	TN	\$68,900
19	Imported Trench Backfill	\$20	3,730	TN	\$74,600
20	Crushed Surfacing	\$25	1,400	TN	\$35,000
21	Traffic Control (2%)	\$17,000	1	ls	\$17,000
22	General Restoration (2%)	\$17,000	1	ls	\$17,000
23	Mobilization (10%)	\$84,000	1	ls	\$84,000
24	Temporary Erosion & Sediment Control (4%)	\$34,000	1	ls	\$34,000
<b>Construction Costs Subtotal</b>					<b>\$994,000</b>
Sales Tax @ 9.4%					\$93,436
Subtotal					\$1,087,436
Contingency 30%					\$326,231
<b>Total Construction Cost</b>					<b>\$1,413,667</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$212,050
Administration/Legal					\$42,410
Construction Services					\$98,957
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,767,084</b>
<b>USE</b>					<b>\$1,770,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 5A**

**Cost Estimate for Problem Area 8 - Puy 12 outlet Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120	3,200	lf	\$384,000
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	11	ea	\$49,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	64	ea	\$96,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	3,200	lf	\$16,000
17	HMA Trench Patch	\$150	670	TN	\$100,500
18	Half-Width Grind and Overlay	\$130	500	TN	\$65,000
19	Imported Trench Backfill	\$20	3,510	TN	\$70,200
20	Crushed Surfacing	\$25	1,320	TN	\$33,000
21	Traffic Control (2%)	\$17,000	1	ls	\$17,000
22	General Restoration (2%)	\$17,000	1	ls	\$17,000
23	Mobilization (10%)	\$86,000	1	ls	\$86,000
24	Temporary Erosion & Sediment Control (4%)	\$34,000	1	ls	\$34,000
<b>Construction Costs Subtotal</b>					\$1,012,200
Sales Tax @ 9.4%					\$95,147
Subtotal					\$1,107,347
Contingency					30% \$332,204
<b>Total Construction Cost</b>					\$1,439,551
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$215,933
Administration/Legal					\$43,187
Construction Services					\$100,769
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,799,439
<b>USE</b>					<b>\$1,800,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 6A**

**Cost Estimate for Puyallup 7 - North Levee Pump Station (#5) Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$200,000	1	LS	\$200,000
2	Pump Station - Electrical Upgrades	\$100,000	1	LS	\$100,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$75,000	1	LS	\$75,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$9,000	1	ls	\$9,000
14	General Restoration (2%)	\$9,000	1	ls	\$9,000
15	Mobilization (10%)	\$47,000	1	ls	\$47,000
17	Temporary Erosion & Sediment Control (4%)	\$19,000	1	ls	\$19,000
<b>Construction Costs Subtotal</b>					\$555,500
Sales Tax @ 9.4%					\$52,217
Subtotal					\$607,717
Contingency 30%					\$182,315
<b>Total Construction Cost</b>					\$790,032
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$118,505
Administration/Legal					\$23,701
Construction Services					\$55,302
Property/Easement Acquisition					\$15,801
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,003,341
<b>USE</b>					<b>\$1,010,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 7A**

**Cost Estimate for O&M Problems - Replacement of Aging Pipe due to Poor Conditions  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	8-inch PVC Gravity Replacement	\$90	1200	lf	\$108,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	4	ea	\$18,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	24	ea	\$36,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,200	lf	\$6,000
17	HMA Trench Patch	\$150	250	TN	\$37,500
18	Half-Width Grind and Overlay	\$130	190	TN	\$24,700
19	Imported Trench Backfill	\$20	1,320	TN	\$26,400
20	Crushed Surfacing	\$25	500	TN	\$12,500
21	Traffic Control (2%)	\$6,000	1	ls	\$6,000
22	General Restoration (2%)	\$6,000	1	ls	\$6,000
23	Mobilization (10%)	\$31,000	1	ls	\$31,000
24	Temporary Erosion & Sediment Control (4%)	\$13,000	1	ls	\$13,000
<b>Construction Costs Subtotal</b>					<b>\$369,100</b>
Sales Tax @ 9.4%					\$34,695
Subtotal					\$403,795
Contingency 30%					\$121,139
<b>Total Construction Cost</b>					<b>\$524,934</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$78,740
Administration/Legal					\$15,748
Construction Services					\$36,745
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$656,168</b>
<b>USE</b>					<b>\$660,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 7B**

**Cost Estimate for Puyallup 7 - Pump Station 24 Improvements  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$130,000	1	LS	\$130,000
2	Pump Station - Electrical Upgrades	\$65,000	1	LS	\$65,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$60,000	1	LS	\$60,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$7,000	1	ls	\$7,000
14	General Restoration (2%)	\$7,000	1	ls	\$7,000
15	Mobilization (10%)	\$35,000	1	ls	\$35,000
17	Temporary Erosion & Sediment Control (4%)	\$14,000	1	ls	\$14,000
<b>Construction Costs Subtotal</b>					\$414,500
Sales Tax @ 9.4%					\$38,963
Subtotal					\$453,463
Contingency 30%					\$136,039
<b>Total Construction Cost</b>					\$589,502
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$88,425
Administration/Legal					\$17,685
Construction Services					\$41,265
Property/Easement Acquisition					\$11,790
<b>TOTAL ESTIMATED PROJECT COST</b>					\$748,667
<b>USE</b>					<b>\$750,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**CIP #PUY 10A**

See G&O Predesign Report for S. Hill Mall LS Removal

**CITY OF PUYALLUP  
SOUTH HILL MALL LIFT STATION REMOVAL FEASIBILITY STUDY - ALTERNATIVE 2  
ENGINEER'S PRELIMINARY CONSTRUCTION COST ESTIMATE  
UPDATED: AUGUST 12, 2014  
G & O #14504**

ITEM BASE BID:		ESTIMATED	UNIT	AMOUNT
NO.	DESCRIPTION	QUANTITY	PRICE	
1.	SPOC Plan (1-07.15(1))	1	LS	\$1,500
2.	Minor Changes (S.P. 1-04.4(1))	1	MC	\$5,000
3.	Mobilization, Cleanup, and Demobilization (S.P. 1-09.7)	1	LS	\$23,200
4.	Project Temporary Traffic Control (1-10.5(3))	1	LS	\$3,000
5.	Clearing and Grubbing (S.P. 2-01.5)	1	LS	\$5,000
6.	Removal of Structure and Obstruction (S.P. 2-02.5)	1	LS	\$10,000
7.	Locate Existing Utilities (S.P. 2-09.5)	1	LS	\$2,000
8.	Temporary Bypass Pumping	1	LS	\$7,800
9.	Crushed Surfacing Base Course (S.P. 4-04.5)	150	TN	\$30
10.	HMA CL 1/2" PG 64-22 (S.P. 5-04.5)	150	TN	\$150
11.	8" PVC (Including excavation, bedding)	0	LF	\$60
12.	12" PVC (Including excavation, bedding)	350	LF	\$80
13.	18" PVC (Including excavation, bedding)	360	LF	\$120
14.	12" PVC storm (Including excavation, bedding)	30	LF	\$80
15.	18" PVC storm (Including excavation, bedding)	10	LF	\$120
16.	48" Precast Manhole (Basic to 8')	2	EA	\$4,000
17.	48" Precast Manhole (Height Over 8')	18.5	VF	\$250
18.	Connection to Existing Manhole	2	EA	\$2,500
19.	Removal of Unsuitable Material (Trench) (S.P. 7-08.5)	521	CY	\$50
20.	Sawcutting	1,520	LF	\$4
21.	Trench Excavation Safety Systems (S.P. 7-08.5)	1	LS	\$5,000
22.	Bank Run Gravel for Trench Backfill (S.P. 7-08.5)	938	TN	\$30
23.	Planing Bituminous Pavement	667	SY	\$10
24.	Seeding, Fertilizing, and Mulching (S.P. 8-01.5)	20	SY	\$5
25.	Erosion / Water Pollution Control (S.P. 8-01.5)	1	LS	\$5,000
26.	Project Documentation (S.P. 8)	1	LS	\$1,000
Subtotal All Items				\$254,971
Sales Tax (8.5%)				\$21,700
<b>TOTAL CONSTRUCTION COST:</b>				<b>\$277,000</b>
Contingency (20%)				\$55,400
<b>TOTAL CONSTRUCTION COST W/ CONTINGENCIES</b>				<b>\$332,400</b>

<b>USE</b>	<b>\$ 400,000</b>
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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 10B**

**Cost Estimate for Problem Area 1 - Bradley Lake Sewer Line Abandonment  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110	1300	lf	\$143,000
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	5	ea	\$22,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	26	ea	\$39,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,300	lf	\$6,500
17	HMA Trench Patch	\$150	270	TN	\$40,500
18	Half-Width Grind and Overlay	\$130	210	TN	\$27,300
19	Imported Trench Backfill	\$20	1,430	TN	\$28,600
20	Crushed Surfacing	\$25	540	TN	\$13,500
21	Traffic Control (2%)	\$7,000	1	ls	\$7,000
22	General Restoration (2%)	\$7,000	1	ls	\$7,000
23	Mobilization (10%)	\$36,000	1	ls	\$36,000
24	Temporary Erosion & Sediment Control (4%)	\$15,000	1	ls	\$15,000
<b>Construction Costs Subtotal</b>					<b>\$429,900</b>
Sales Tax @ 9.4%					\$40,411
Subtotal					\$470,311
Contingency 30%					\$141,093
<b>Total Construction Cost</b>					<b>\$611,404</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$91,711
Administration/Legal					\$18,342
Construction Services					\$42,798
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$764,255</b>
<b>USE</b>					<b>\$770,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 11A**

**Cost Estimate for Puyallup 11 - Cherokee Pump Station (#26) Improvements  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$100,000	1	LS	\$100,000
2	Pump Station - Electrical Upgrades	\$50,000	1	LS	\$50,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$75,000	1	LS	\$75,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$6,000	1	ls	\$6,000
14	General Restoration (2%)	\$6,000	1	ls	\$6,000
15	Mobilization (10%)	\$32,000	1	ls	\$32,000
17	Temporary Erosion & Sediment Control (4%)	\$13,000	1	ls	\$13,000
<b>Construction Costs Subtotal</b>					<b>\$378,500</b>
Sales Tax @ 9.4%					\$35,579
Subtotal					\$414,079
Contingency 30%					\$124,224
<b>Total Construction Cost</b>					<b>\$538,303</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$80,745
Administration/Legal					\$16,149
Construction Services					\$37,681
Property/Easement Acquisition					\$10,766
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$683,644</b>
<b>USE</b>					<b>\$690,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 14A**

**Cost Estimate for Problem Area 6 - East Main Downstream Improvements**

**YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	1,940	lf	\$543,200
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	7	ea	\$45,500
12	Lateral Connection	\$1,500	39	ea	\$58,200
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,940	lf	\$9,700
17	HMA Trench Patch	\$150	410	TN	\$61,500
18	Half-Width Grind and Overlay	\$130	310	TN	\$40,300
19	Imported Trench Backfill	\$20	2,130	TN	\$42,600
20	Crushed Surfacing	\$25	800	TN	\$20,000
21	Traffic Control (2%)	\$17,000	1	ls	\$17,000
22	General Restoration (2%)	\$17,000	1	ls	\$17,000
23	Mobilization (10%)	\$87,000	1	ls	\$87,000
24	Temporary Erosion & Sediment Control (4%)	\$35,000	1	ls	\$35,000
<b>Construction Costs Subtotal</b>					\$1,021,000
Sales Tax @ 9.4%					\$95,974
Subtotal					\$1,116,974
Contingency 30%					\$335,092
<b>Total Construction Cost</b>					\$1,452,066
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$217,810
Administration/Legal					\$43,562
Construction Services					\$101,645
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,815,083
<b>USE</b>					<b>\$1,820,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 14B**

**Cost Estimate for Problem Area 6 - East Main Downstream Improvements**

**YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230	910	lf	\$209,300
7	36-inch PVC Gravity Upsize	\$280	680	lf	\$190,400
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	6	ea	\$39,000
12	Lateral Connection	\$1,500	32	ea	\$47,700
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,590	lf	\$7,950
17	HMA Trench Patch	\$150	330	TN	\$49,500
18	Half-Width Grind and Overlay	\$130	250	TN	\$32,500
19	Imported Trench Backfill	\$20	1,750	TN	\$35,000
20	Crushed Surfacing	\$25	660	TN	\$16,500
21	Traffic Control (2%)	\$13,000	1	ls	\$13,000
22	General Restoration (2%)	\$13,000	1	ls	\$13,000
23	Mobilization (10%)	\$67,000	1	ls	\$67,000
24	Temporary Erosion & Sediment Control (4%)	\$27,000	1	ls	\$27,000
<b>Construction Costs Subtotal</b>					<b>\$791,850</b>
Sales Tax @ 9.4%					\$74,434
Subtotal					\$866,284
Contingency 30%					\$259,885
<b>Total Construction Cost</b>					<b>\$1,126,169</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$168,925
Administration/Legal					\$33,785
Construction Services					\$78,832
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,407,711</b>
<b>USE</b>					<b>\$1,410,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 14C**

**Cost Estimate for Problem Area 6 - Meridian to 9th Ave SW  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230	2,125	lf	\$488,750
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	8	ea	\$52,000
12	Lateral Connection	\$1,500	43	ea	\$63,750
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	2,125	lf	\$10,625
17	HMA Trench Patch	\$150	450	TN	\$67,500
18	Half-Width Grind and Overlay	\$130	340	TN	\$44,200
19	Imported Trench Backfill	\$20	2,330	TN	\$46,600
20	Crushed Surfacing	\$25	880	TN	\$22,000
21	Traffic Control (2%)	\$17,000	1	ls	\$17,000
22	General Restoration (2%)	\$17,000	1	ls	\$17,000
23	Mobilization (10%)	\$84,000	1	ls	\$84,000
24	Temporary Erosion & Sediment Control (4%)	\$34,000	1	ls	\$34,000
<b>Construction Costs Subtotal</b>					<b>\$991,425</b>
Sales Tax @ 9.4%					\$93,194
Subtotal					\$1,084,619
Contingency					30% \$325,386
<b>Total Construction Cost</b>					<b>\$1,410,005</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$211,501
Administration/Legal					\$42,300
Construction Services					\$98,700
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,762,506</b>
<b>USE</b>					<b>\$1,770,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 14D**

**Cost Estimate for O&M Problems - Replacement of Aging Pipe due to Poor Conditions  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	8-inch PVC Gravity Replacement	\$90	500	lf	\$45,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	2	ea	\$9,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	10	ea	\$15,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	500	lf	\$2,500
17	HMA Trench Patch	\$150	110	TN	\$16,500
18	Half-Width Grind and Overlay	\$130	80	TN	\$10,400
19	Imported Trench Backfill	\$20	550	TN	\$11,000
20	Crushed Surfacing	\$25	210	TN	\$5,250
21	Traffic Control (2%)	\$3,000	1	ls	\$3,000
22	General Restoration (2%)	\$3,000	1	ls	\$3,000
23	Mobilization (10%)	\$16,000	1	ls	\$16,000
24	Temporary Erosion & Sediment Control (4%)	\$6,000	1	ls	\$6,000
<b>Construction Costs Subtotal</b>					\$186,650
Sales Tax @ 9.4%					\$17,545
Subtotal					\$204,195
Contingency					30% \$61,259
<b>Total Construction Cost</b>					\$265,454
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$39,818
Administration/Legal					\$7,964
Construction Services					\$18,582
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$331,817
<b>USE</b>					<b>\$340,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 14E**

**Cost Estimate for Problem Area 6 - East Main Downstream Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150	810	lf	\$121,500
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500	3	ea	\$16,500
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	16	ea	\$24,300
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	810	lf	\$4,050
17	HMA Trench Patch	\$150	170	TN	\$25,500
18	Half-Width Grind and Overlay	\$130	130	TN	\$16,900
19	Imported Trench Backfill	\$20	890	TN	\$17,800
20	Crushed Surfacing	\$25	340	TN	\$8,500
21	Traffic Control (2%)	\$6,000	1	ls	\$6,000
22	General Restoration (2%)	\$6,000	1	ls	\$6,000
23	Mobilization (10%)	\$28,000	1	ls	\$28,000
24	Temporary Erosion & Sediment Control (4%)	\$11,000	1	ls	\$11,000
<b>Construction Costs Subtotal</b>					<b>\$330,050</b>
Sales Tax @ 9.4%					\$31,025
Subtotal					\$361,075
Contingency 30%					\$108,322
<b>Total Construction Cost</b>					<b>\$469,397</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$70,410
Administration/Legal					\$14,082
Construction Services					\$32,858
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$586,746</b>
<b>USE</b>					<b>\$590,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 16A**

**Cost Estimate for Puyallup 16 - Costco Pump Station (#10) Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$70,000	1	LS	\$70,000
2	Pump Station - Electrical Upgrades	\$30,000	1	LS	\$30,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$35,000	1	LS	\$35,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$5,000	1	ls	\$5,000
14	General Restoration (2%)	\$5,000	1	ls	\$5,000
15	Mobilization (10%)	\$23,000	1	ls	\$23,000
17	Temporary Erosion & Sediment Control (4%)	\$9,000	1	ls	\$9,000
<b>Construction Costs Subtotal</b>					\$273,500
Sales Tax @ 9.4%					\$25,709
Subtotal					\$299,209
Contingency 30%					\$89,763
<b>Total Construction Cost</b>					\$388,972
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$58,346
Administration/Legal					\$11,669
Construction Services					\$27,228
Property/Easement Acquisition					\$7,779
<b>TOTAL ESTIMATED PROJECT COST</b>					\$493,994
<b>USE</b>					<b>\$500,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 19A**

**Cost Estimate for Problem Area 2 - SR 512 Crossing Upsize**

**YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110	950	lf	\$104,500
3	15-inch PVC Gravity - Jack and Bore under SR 512	\$400	450	lf	\$180,000
4	18-inch PVC Gravity Upsize	\$120		lf	
5	21-inch PVC Gravity Upsize	\$140		lf	
6	24-inch PVC Gravity Upsize	\$150		lf	
7	30-inch PVC Gravity Upsize	\$230		lf	
8	36-inch PVC Gravity Upsize	\$280		lf	
9	42-inch PVC Gravity Upsize	\$310			
10	48-inch Diameter Manhole	\$4,500	5	ea	\$22,500
11	54-inch Diameter Manhole	\$5,500		ea	
12	60-inch Diameter Manhole	\$6,500		ea	
13	Lateral Connection	\$1,500	28	ea	\$42,000
14	Dewatering	\$20,000	1	ls	\$20,000
15	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
16	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
17	Sheeting, Shoring, Bracing	\$5	1,400	lf	\$7,000
18	HMA Trench Patch	\$150	300	TN	\$45,000
19	Half-Width Grind and Overlay	\$130	220	TN	\$28,600
20	Imported Trench Backfill	\$20	1,540	TN	\$30,800
21	Crushed Surfacing	\$25	580	TN	\$14,500
22	Traffic Control (2%)	\$10,000	1	ls	\$10,000
23	General Restoration (2%)	\$10,000	1	ls	\$10,000
24	Mobilization (10%)	\$52,000	1	ls	\$52,000
25	Temporary Erosion & Sediment Control (4%)	\$21,000	1	ls	\$21,000
<b>Construction Costs Subtotal</b>					\$611,900
Sales Tax @ 9.4%					\$57,519
Subtotal					\$669,419
Contingency 30%					\$200,826
<b>Total Construction Cost</b>					\$870,244
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$130,537
Administration/Legal					\$26,107
Construction Services					\$60,917
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,087,805
<b>USE</b>					<b>\$1,090,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 20A**

**Cost Estimate for Problem Area 1 - Bradley Lake Sewer Line Abandonment  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	100	lf	\$10,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	1	ea	\$4,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	2	ea	\$3,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	100	lf	\$500
17	HMA Trench Patch	\$150	30	TN	\$4,500
18	Half-Width Grind and Overlay	\$130	20	TN	\$2,600
19	Imported Trench Backfill	\$20	110	TN	\$2,200
20	Crushed Surfacing	\$25	50	TN	\$1,250
21	Traffic Control (2%)	\$1,000	1	ls	\$1,000
22	General Restoration (2%)	\$1,000	1	ls	\$1,000
23	Mobilization (10%)	\$7,000	1	ls	\$7,000
24	Temporary Erosion & Sediment Control (4%)	\$3,000	1	ls	\$3,000
<b>Construction Costs Subtotal</b>					<b>\$84,550</b>
Sales Tax @ 9.4%					\$7,948
Subtotal					\$92,498
Contingency 30%					\$27,749
<b>Total Construction Cost</b>					<b>\$120,247</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$18,037
Administration/Legal					\$3,607
Construction Services					\$8,417
Property/Easement Acquisition					\$6,012
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$156,321</b>
<b>USE</b>					<b>\$160,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4" deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 21A**

**Cost Estimate for Fruitland SS Extension - Puy 21 - Extension on Fruitland to 9th Ave SW  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	2100	lf	\$210,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	7	ea	\$31,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	42	ea	\$63,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	2,100	lf	\$10,500
17	HMA Trench Patch	\$150	440	TN	\$66,000
18	Half-Width Grind and Overlay	\$130	330	TN	\$42,900
19	Imported Trench Backfill	\$20	2,310	TN	\$46,200
20	Crushed Surfacing	\$25	870	TN	\$21,750
21	Traffic Control (2%)	\$11,000	1	ls	\$11,000
22	General Restoration (2%)	\$11,000	1	ls	\$11,000
23	Mobilization (10%)	\$54,000	1	ls	\$54,000
24	Temporary Erosion & Sediment Control (4%)	\$21,000	1	ls	\$21,000
<b>Construction Costs Subtotal</b>					<b>\$632,850</b>
Sales Tax @ 9.4%					\$59,488
Subtotal					\$692,338
Contingency					30% \$207,701
<b>Total Construction Cost</b>					<b>\$900,039</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$135,006
Administration/Legal					\$27,001
Construction Services					\$63,003
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,125,049</b>
<b>USE</b>					<b>\$1,130,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 21B**

**Cost Estimate for Fruitland SS Extension - Puy 21 - Extension on Fruitland to 85th St  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	1650	lf	\$165,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	6	ea	\$27,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	33	ea	\$49,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,650	lf	\$8,250
17	HMA Trench Patch	\$150	350	TN	\$52,500
18	Half-Width Grind and Overlay	\$130	260	TN	\$33,800
19	Imported Trench Backfill	\$20	1,810	TN	\$36,200
20	Crushed Surfacing	\$25	680	TN	\$17,000
21	Traffic Control (2%)	\$9,000	1	ls	\$9,000
22	General Restoration (2%)	\$9,000	1	ls	\$9,000
23	Mobilization (10%)	\$43,000	1	ls	\$43,000
24	Temporary Erosion & Sediment Control (4%)	\$17,000	1	ls	\$17,000
<b>Construction Costs Subtotal</b>					\$511,250
Sales Tax @ 9.4%					\$48,058
Subtotal					\$559,308
Contingency					30% \$167,792
<b>Total Construction Cost</b>					\$727,100
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$109,065
Administration/Legal					\$21,813
Construction Services					\$50,897
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$908,875
<b>USE</b>					<b>\$910,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 21C**

**Cost Estimate for Fruitland SS Extension - Puy 21 - Extension on Fruitland to 96th St  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100	1950	lf	\$195,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	7	ea	\$31,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	39	ea	\$58,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,950	lf	\$9,750
17	HMA Trench Patch	\$150	410	TN	\$61,500
18	Half-Width Grind and Overlay	\$130	310	TN	\$40,300
19	Imported Trench Backfill	\$20	2,140	TN	\$42,800
20	Crushed Surfacing	\$25	810	TN	\$20,250
21	Traffic Control (2%)	\$10,000	1	ls	\$10,000
22	General Restoration (2%)	\$10,000	1	ls	\$10,000
23	Mobilization (10%)	\$50,000	1	ls	\$50,000
24	Temporary Erosion & Sediment Control (4%)	\$20,000	1	ls	\$20,000
<b>Construction Costs Subtotal</b>					<b>\$593,600</b>
Sales Tax @ 9.4%					\$55,798
Subtotal					\$649,398
Contingency					30% \$194,820
<b>Total Construction Cost</b>					<b>\$844,218</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$126,633
Administration/Legal					\$25,327
Construction Services					\$59,095
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,055,272</b>
<b>USE</b>					<b>\$1,060,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 21D**

**Cost Estimate for Fruitland Ph 2 - 2 Small Pump Stations to Divert from Clarks Creek Line  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical	\$100,000	1	LS	\$100,000
2	Pump Station - Electrical	\$100,000	1	LS	\$100,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$50,000	1	LS	\$50,000
5	6-inch Force Main	\$80	1,000	LF	\$80,000
6	8-inch PVC Gravity	\$85	400	lf	\$34,000
7	48-inch Diameter Manhole	\$4,500	1	ea	\$4,500
8	72-inch Dia Manhole, 15' deep	\$15,000	1	ea	\$15,000
9	Restoration	\$10,000	1	LS	\$10,000
10	Cleanup and Testing	\$10,000	1	LS	\$10,000
11	Dewatering	\$50,000	1	LS	\$50,000
12	Sheeting, Shoring, Bracing	\$40,000	1	LS	\$40,000
13	HMA Trench Patch	\$175	100	TN	\$17,500
14	Imported Trench Backfill	\$20	100	TN	\$2,000
15	Crushed Surfacing	\$25	100	TN	\$2,500
16	Traffic Control (2%)	\$11,000	1	ls	\$11,000
17	General Restoration (2%)	\$11,000	1	ls	\$11,000
18	Mobilization (10%)	\$53,000	1	ls	\$53,000
19	Temporary Erosion & Sediment Control (4%)	\$21,000	1	ls	\$21,000
<b>Construction Costs Subtotal</b>					<b>\$621,500</b>
Sales Tax @ 9.4%					\$58,421
Subtotal					\$679,921
Contingency 30%					\$203,976
<b>Total Construction Cost</b>					<b>\$883,897</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$132,585
Administration/Legal					\$26,517
Construction Services					\$61,873
Property/Easement Acquisition					\$17,678
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,104,872</b>
<b>USE</b>					<b>\$1,110,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 21E**

**Cost Estimate for Fruitland Ph 2 - 2 Small Pump Stations to Divert from Clarks Creek Line  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical	\$100,000	1	LS	\$100,000
2	Pump Station - Electrical	\$100,000	1	LS	\$100,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$50,000	1	LS	\$50,000
5	6-inch Force Main	\$80	1,000	LF	\$80,000
6	72-inch Dia Manhole, 15' deep	\$15,000	1	LS	\$15,000
7	Restoration	\$10,000	1	LS	\$10,000
8	Cleanup and Testing	\$10,000	1	LS	\$10,000
9	Dewatering	\$50,000	1	LS	\$50,000
10	Sheeting, Shoring, Bracing	\$40,000	1	LS	\$40,000
11	HMA Trench Patch	\$175	100	TN	\$17,500
12	Imported Trench Backfill	\$20	100	TN	\$2,000
13	Crushed Surfacing	\$25	100	TN	\$2,500
14	Traffic Control (2%)	\$10,000	1	ls	\$10,000
15	General Restoration (2%)	\$10,000	1	ls	\$10,000
16	Mobilization (10%)	\$49,000	1	ls	\$49,000
17	Temporary Erosion & Sediment Control (4%)	\$19,000	1	ls	\$19,000
<b>Construction Costs Subtotal</b>					\$575,000
Sales Tax @ 9.4%					\$54,050
Subtotal					\$629,050
Contingency 30%					\$188,715
<b>Total Construction Cost</b>					\$817,765
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$122,665
Administration/Legal					\$24,533
Construction Services					\$57,244
Property/Easement Acquisition					\$16,355
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,022,206
<b>USE</b>					<b>\$1,030,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 22A**

**Cost Estimate for Problem Area 4 - Puy 22 - W. Pioneer Upgrades  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110	2400	lf	\$264,000
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	8	ea	\$36,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	48	ea	\$72,000
13	Dewatering	\$40,000	1	ls	\$40,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	2,400	lf	\$12,000
17	HMA Trench Patch	\$150	500	TN	\$75,000
18	Half-Width Grind and Overlay	\$130	380	TN	\$49,400
19	Imported Trench Backfill	\$20	2,640	TN	\$52,800
20	Crushed Surfacing	\$25	990	TN	\$24,750
21	Traffic Control (2%)	\$32,000	1	ls	\$32,000
22	General Restoration (2%)	\$13,000	1	ls	\$13,000
23	Mobilization (10%)	\$65,000	1	ls	\$65,000
24	Temporary Erosion & Sediment Control (4%)	\$26,000	1	ls	\$26,000
<b>Construction Costs Subtotal</b>					<b>\$785,950</b>
Sales Tax @ 9.4%					\$73,879
Subtotal					\$859,829
Contingency 30%					\$257,949
<b>Total Construction Cost</b>					<b>\$1,117,778</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$167,667
Administration/Legal					\$33,533
Construction Services					\$78,244
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,397,223</b>
<b>USE</b>					<b>\$1,400,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 23A**

**Cost Estimate for O&M Problems - Replacement of Aging Pipe due to Poor Conditions  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	8-inch PVC Gravity Replacement	\$90	2000	lf	\$180,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	7	ea	\$31,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	40	ea	\$60,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	2,000	lf	\$10,000
17	HMA Trench Patch	\$150	420	TN	\$63,000
18	Half-Width Grind and Overlay	\$130	320	TN	\$41,600
19	Imported Trench Backfill	\$20	2,200	TN	\$44,000
20	Crushed Surfacing	\$25	830	TN	\$20,750
21	Traffic Control (2%)	\$10,000	1	ls	\$10,000
22	General Restoration (2%)	\$10,000	1	ls	\$10,000
23	Mobilization (10%)	\$49,000	1	ls	\$49,000
24	Temporary Erosion & Sediment Control (4%)	\$20,000	1	ls	\$20,000
<b>Construction Costs Subtotal</b>					<b>\$583,850</b>
Sales Tax @ 9.4%					\$54,882
Subtotal					\$638,732
Contingency 30%					\$191,620
<b>Total Construction Cost</b>					<b>\$830,351</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$124,553
Administration/Legal					\$24,911
Construction Services					\$58,125
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,037,939</b>
<b>USE</b>					<b>\$1,040,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.



**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 24A**

**Cost Estimate for Puyallup 24 - Clark Creek Pump Station (#25) Improvements  
YEAR 2020 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Pump Station - Mechanical Upgrades	\$100,000	1	LS	\$100,000
2	Pump Station - Electrical Upgrades	\$50,000	1	LS	\$50,000
3	Above Grade Structure	\$10,000	1	LS	\$10,000
4	Emergency Generator	\$50,000	1	LS	\$50,000
5	4-inch Force Main	\$65		LF	
6	96-inch Dia Manhole, 20' deep		1	LS	
7	Cleanup and Testing	\$10,000	1	LS	\$10,000
8	Dewatering	\$30,000	1	LS	\$30,000
9	Sheeting, Shoring, Bracing	\$20,000	1	LS	\$20,000
10	HMA Trench Patch	\$175	100	TN	\$17,500
11	Imported Trench Backfill	\$20	200	TN	\$4,000
12	Crushed Surfacing	\$25	200	TN	\$5,000
13	Traffic Control (2%)	\$6,000	1	ls	\$6,000
14	General Restoration (2%)	\$6,000	1	ls	\$6,000
15	Mobilization (10%)	\$30,000	1	ls	\$30,000
17	Temporary Erosion & Sediment Control (4%)	\$12,000	1	ls	\$12,000
<b>Construction Costs Subtotal</b>					<b>\$350,500</b>
Sales Tax @ 9.4%					\$32,947
Subtotal					\$383,447
Contingency 30%					\$115,034
<b>Total Construction Cost</b>					<b>\$498,481</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$74,772
Administration/Legal					\$14,954
Construction Services					\$34,894
Property/Easement Acquisition					\$9,970
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$633,071</b>
<b>USE</b>					<b>\$640,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 25A**

**Cost Estimate for Problem Area 3 - Puy 25 - Fairgrounds Upsize  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120	850	lf	\$102,000
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310			
9	48-inch Diameter Manhole	\$4,500	3	ea	\$13,500
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500	17	ea	\$25,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	850	lf	\$4,250
17	HMA Trench Patch	\$150	180	TN	\$27,000
18	Half-Width Grind and Overlay	\$130	140	TN	\$18,200
19	Imported Trench Backfill	\$20	940	TN	\$18,800
20	Crushed Surfacing	\$25	350	TN	\$8,750
21	Traffic Control (2%)	\$5,000	1	ls	\$5,000
22	General Restoration (2%)	\$5,000	1	ls	\$5,000
23	Mobilization (10%)	\$26,000	1	ls	\$26,000
24	Temporary Erosion & Sediment Control (4%)	\$10,000	1	ls	\$10,000
<b>Construction Costs Subtotal</b>					<b>\$308,000</b>
Sales Tax @ 9.4%					\$28,952
Subtotal					\$336,952
Contingency					30% \$101,086
<b>Total Construction Cost</b>					<b>\$438,038</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$65,706
Administration/Legal					\$13,141
Construction Services					\$30,663
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$547,547</b>
<b>USE</b>					<b>\$550,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 25B**

**Cost Estimate for Problem Area 10 - Puy 05 - Cross Valley Trunk Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	1,000	lf	\$280,000
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	4	ea	\$26,000
12	Lateral Connection	\$1,500	20	ea	\$30,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,000	lf	\$5,000
17	HMA Trench Patch	\$150	210	TN	\$31,500
18	Half-Width Grind and Overlay	\$130	160	TN	\$20,800
19	Imported Trench Backfill	\$20	1,100	TN	\$22,000
20	Crushed Surfacing	\$25	420	TN	\$10,500
21	Traffic Control (2%)	\$9,000	1	ls	\$9,000
22	General Restoration (2%)	\$9,000	1	ls	\$9,000
23	Mobilization (10%)	\$47,000	1	ls	\$47,000
24	Temporary Erosion & Sediment Control (4%)	\$19,000	1	ls	\$19,000
<b>Construction Costs Subtotal</b>					\$553,800
Sales Tax @ 9.4%					\$52,057
Subtotal					\$605,857
Contingency					30% \$181,757
<b>Total Construction Cost</b>					\$787,614
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$118,142
Administration/Legal					\$23,628
Construction Services					\$55,133
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$984,518
<b>USE</b>					<b>\$990,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 27A**

**Cost Estimate for Problem Area 6 - Relay pipe at adverse slope - 9th Ave SW and 14th St SW  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	850	lf	\$238,000
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	3	ea	\$19,500
12	Lateral Connection	\$1,500	17	ea	\$25,500
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	850	lf	\$4,250
17	HMA Trench Patch	\$150	180	TN	\$27,000
18	Half-Width Grind and Overlay	\$130	140	TN	\$18,200
19	Imported Trench Backfill	\$20	940	TN	\$18,800
20	Crushed Surfacing	\$25	350	TN	\$8,750
21	Traffic Control (2%)	\$8,000	1	ls	\$8,000
22	General Restoration (2%)	\$8,000	1	ls	\$8,000
23	Mobilization (10%)	\$40,000	1	ls	\$40,000
24	Temporary Erosion & Sediment Control (4%)	\$16,000	1	ls	\$16,000
<b>Construction Costs Subtotal</b>					<b>\$476,000</b>
Sales Tax @ 9.4%					\$44,744
Subtotal					\$520,744
Contingency					30% \$156,223
<b>Total Construction Cost</b>					<b>\$676,967</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$101,545
Administration/Legal					\$20,309
Construction Services					\$47,388
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$846,209</b>
<b>USE</b>					<b>\$850,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.

**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 27B**

**Cost Estimate for Clarks Creek Siphon - Install Siphon to abandon above-grade creek crossing  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	HDD 12-inch HDPE Gravity Upsize (double barrel)	\$600	350	lf	\$210,000
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280	850	lf	\$238,000
8	42-inch PVC Gravity Upsize	\$310		lf	
9	48-inch Diameter Manhole	\$4,500	2	ea	\$9,000
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500	3	ea	\$19,500
12	Lateral Connection	\$1,500	24	ea	\$36,000
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	1,200	lf	\$6,000
17	HMA Trench Patch	\$150	250	TN	\$37,500
18	Half-Width Grind and Overlay	\$130	190	TN	\$24,700
19	Imported Trench Backfill	\$20	1,320	TN	\$26,400
20	Crushed Surfacing	\$25	500	TN	\$12,500
21	Traffic Control (2%)	\$13,000	1	ls	\$13,000
22	General Restoration (2%)	\$13,000	1	ls	\$13,000
23	Mobilization (10%)	\$66,000	1	ls	\$66,000
24	Temporary Erosion & Sediment Control (4%)	\$27,000	1	ls	\$27,000
<b>Construction Costs Subtotal</b>					<b>\$782,600</b>
Sales Tax @ 9.4%					\$73,564
Subtotal					\$856,164
Contingency					30% \$256,849
<b>Total Construction Cost</b>					<b>\$1,113,014</b>
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$166,952
Administration/Legal					\$33,390
Construction Services					\$77,911
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					<b>\$1,391,267</b>
<b>USE</b>					<b>\$1,400,000</b>

Assumptions, Notes

1. All Costs in 2014 Dollars
2. One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
3. Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
4. Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
5. Assume one manhole per every 300 linear feet of gravity pipe, on average.
6. Assume one Lateral Reconnection every 50 lineal feet

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**Comprehensive Sewer Plan 2015  
Capital Improvement Projects**

**CIP #PUY 27C**

**Cost Estimate for Problem Area 10 - Puy 05 - Cross Valley Trunk Improvements  
YEAR 2034 IMPROVEMENTS**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	12-inch PVC Gravity Upsize	\$100		lf	
2	15-inch PVC Gravity Upsize	\$110		lf	
3	18-inch PVC Gravity Upsize	\$120		lf	
4	21-inch PVC Gravity Upsize	\$140		lf	
5	24-inch PVC Gravity Upsize	\$150		lf	
6	30-inch PVC Gravity Upsize	\$230		lf	
7	36-inch PVC Gravity Upsize	\$280		lf	
8	42-inch PVC Gravity Upsize	\$310	2,150	lf	\$666,500
9	48-inch Diameter Manhole	\$4,500		ea	
10	54-inch Diameter Manhole	\$5,500		ea	
11	60-inch Diameter Manhole	\$6,500		ea	
12	Lateral Connection	\$1,500		ea	
13	Dewatering	\$20,000	1	ls	\$20,000
14	Temporary Flow Bypass	\$5,000	4	ea	\$20,000
15	Plug and Cap Abandoned Pipe	\$1,000	4	ea	\$4,000
16	Sheeting, Shoring, Bracing	\$5	2,150	lf	\$10,750
17	HMA Trench Patch	\$150	450	TN	\$67,500
18	Half-Width Grind and Overlay	\$130	340	TN	\$44,200
19	Imported Trench Backfill	\$20	2,360	TN	\$47,200
20	Crushed Surfacing	\$25	890	TN	\$22,250
21	Traffic Control (2%)	\$18,000	1	ls	\$18,000
22	General Restoration (2%)	\$18,000	1	ls	\$18,000
23	Mobilization (10%)	\$90,000	1	ls	\$90,000
24	Temporary Erosion & Sediment Control (4%)	\$36,000	1	ls	\$36,000
<b>Construction Costs Subtotal</b>					\$1,064,400
Sales Tax @ 9.4%					\$100,054
Subtotal					\$1,164,454
Contingency					30% \$349,336
<b>Total Construction Cost</b>					\$1,513,790
<b>Allied Costs</b>					
Engineering/Survey/Permits					\$227,068
Administration/Legal					\$45,414
Construction Services					\$105,965
Property/Easement Acquisition					
<b>TOTAL ESTIMATED PROJECT COST</b>					\$1,892,237
<b>USE</b>					<b>\$1,900,000</b>

Assumptions, Notes

- All Costs in 2014 Dollars
- One Lane HMA Overlay at 2-inches by 12' wide, 4"deep x 8' HMA patch and 12-inches x 6' Wide Crushed Surfacing.
- Each pipe unit price includes all fittings, pipe, bedding, shoring, testing, compaction, excavation, haul and disposal
- Assume 48-inch MH for Pipe up to 18-inches, 54-inch MH for pipe 21-inch to 24-inch, 60-inch MH above 24-inch pipe.
- Assume one manhole per every 300 linear feet of gravity pipe, on average.
- Assume one Lateral Reconnection every 50 lineal feet

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