

Appendix H  
CIP Projects



<b>CIP Abbreviations</b>	
<b>Abbreviation</b>	<b>Definition</b>
CIP	Capital Improvement Program
City	City of Lacey
Dr	Drive
FM	Force Main
LF	Lineal Feet
LOSS	Large On-site Septic System
LS	Lift Station
MH	Manholes
NE	Northeast
O&M	Operations and Maintenance
Rd	Road
SE	Southeast
St	Street
STEP	Septic Tank Effluent Pumping
ULID	Utility Local Improvement District



**Table H-1 6-Year CIP (2014-2019)**

CIP No.	Project	Type	Replacement	Upgrade	Expansion	Project Description
1	Wastewater Comprehensive Plan Update (recurring)	General		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Update the Wastewater Comprehensive Plan as necessary to address the needs of the City's sewer collection system.</li> </ul>
2	Lift Station 25 & 31 Retrofit	Capacity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Convert from solids handling submersible pumps to Orenco STEP pumps.</li> <li>▪ Upgrade electrical equipment.</li> <li>▪ Repair wet well coating.</li> </ul>
3	Steilacoom Road Lift Station	General		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Replace community STEP stations LS-26, LS-28, LS-29, LS-36, and LS-38 with a single lift station.</li> <li>▪ Construct approximately 3,700 lf of gravity sewer to convey wastewater to the new lift station.</li> <li>▪ Construct approximately 4,500 lf of force main from the new lift station to the Martin Way Interceptor.</li> </ul>
4	Tanglewilde East ULID	General			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Abandon the community septic system serving the Tanglewilde East area and connect the piping to Lacey sewer through a Utility Local Improvement District (ULID).</li> </ul>
5	College Street and Martin Way ULID	General			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Convert the parcels on the southeast corner of College Street and Martin Way from Olympia's sewer system to Lacey's. This would be done through a ULID.</li> </ul>
6	STEP Main Air Release/Vacuum Relief Valves	O&M		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Install air release/vacuum relief valves to remove air trapped in the Union Mills STEP area and to reduce operating pressures.</li> </ul>
7	Lift Station 18 Retrofit	O&M	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Convert from above ground vacuum prime to submersible pumps.</li> </ul>
8	Lakeview Dr Gravity Upsize (Phase 1)	Capacity			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Upsize approximately 850 lf of pipe MH VZD01 to MH VSV01 from 10-inch to 12-inch.</li> </ul>
9	Lift Station 15 Generator/Flow Meter	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Install a backup generator set.</li> <li>▪ Install a flow meter and pressure transducer and connect to SCADA.</li> </ul>
10	Avonlea Odor Control	O&M		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Replacement of existing odor control facility.</li> </ul>
11	Train Depot	Capacity			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Construct new 8-inch gravity sewer in Lebanon St to serve the future Train Depot/Lacey Museum</li> </ul>
12	Carpenter Road STEP Upgrades	O&M	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Replace air release/vacuum relief valves at Roo-Lan Road and 26th Street.</li> <li>▪ Replace manholes.</li> </ul>
13	Lift Station 2 - Lift Station, Gravity, and Force Main Replacement	O&M	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Replace Lift Station #2</li> <li>▪ Reroute force main for easier access and reduced liability.</li> <li>▪ Replace approximately 900 lf of gravity pipe and manholes in Westlake drive to reduce infiltration and inflow.</li> </ul>
14	Rumac St STEP Main	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Install approximately 4,400 lf of 6-inch STEP main along Rumac Street.</li> <li>▪ Reduce the number of odor control facilities and operating costs.</li> </ul>
15	Mullen Rd STEP Main	Capacity			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Install approximately 1,200 lf of missing 6-inch force main in Mullen Road from the city limits to Rumac Street.</li> <li>▪ Include odor control facility.</li> </ul>
16	College St / 26th Ave Gravity Repair	O&M	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Install approximately 1,300 lf of 8-inch CIPP to address deterioration in pipeline.</li> <li>▪ Spot repairs in 2 locations to address root problems in pipeline.</li> </ul>

**Table H-1 6-Year CIP (2014-2019)**

CIP No.	Project	Type	Replacement	Upgrade	Expansion	Project Description
17	Annual Sewer Line Replacement	Obsolescence	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Annual program to repair and replace deteriorating sewer mains</li> </ul>
18	FOG / Fibrous Wipes Program	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Conduct a second FOG pilot program to confirm preliminary findings of first program.</li> <li>▪ If successful, expand program to other high-FOG areas.</li> <li>▪ Coordinate program with other jurisdictions.</li> <li>▪ Include fibrous wipes.</li> </ul>
19	Generators / Flow Meters (LS-22, LS-23, LS-17, LS-20)	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Install backup generator set.</li> <li>▪ Install flow meter and pressure transducer and connect to SCADA.</li> </ul>
20	Lift Station 49 Land Purchase	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Purchase adjacent lot before it develops to prevent future odor and noise complaints from future resident</li> </ul>
21	Lift Station 12 Abandonment	Obsolescence Capacity		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Replace LS-12 with gravity sewer.</li> <li>▪ Abandon LS-12.</li> </ul>
22	Sleater Kinney Gravity Main Improvements	Capacity			<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>▪ Upsize approximately 2,100 lf of pipe between MH VQD02 to MH VGE01 from 15-inch to 21-inch.</li> </ul>
23	Lift Station Rehabilitation (Phase 1)	Obsolescence	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Upgrade mechanical and electrical equipment in LS-15, and LS-17.</li> </ul>
24	Lift Station Rehabilitation (Phase 2)	Obsolescence	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Upgrade mechanical and electrical equipment in LS-21, LS-20, and LS-19.</li> </ul>
25	Lift Station and STEP System Flow Meters	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Install 21 flow meters and pressure transducers at lift stations that do not currently have them and connect to SCADA.</li> <li>▪ Install 3 flow meters and pressure transducers in STEP mains and connect to SCADA.</li> </ul>
26	Sewer Main Replacement (50th Ave)	General		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Replace approximately 350 lf of 18-inch pipe with adverse grade, and install a manhole where the Cottages connect with the main.</li> </ul>
27	Chemical Storage Tank Replacement	O&M	<input checked="" type="checkbox"/>			<ul style="list-style-type: none"> <li>▪ Replace 3 existing odor control chemical storage tanks with new double containment tanks.</li> </ul>
28	Sewer Main Replacement (34 <sup>th</sup> Ave)	Capacity		<input checked="" type="checkbox"/>		<ul style="list-style-type: none"> <li>▪ Replace approximately 100 lf of existing 6-inch sewer with 8-inch sewer.</li> </ul>

<b>Wastewater Comprehensive Plan Update Summary</b>		
---	--	--

<b>CIP Number: 1</b>		
----------------------	--	--

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	<input checked="" type="checkbox"/>

**Project Description:** Update the Wastewater Comprehensive Plan as necessary to address the needs of the City's sewer collection system.

**Project Benefit:** These planning efforts provide the basis for the City's policies, capital improvements, and financing of the wastewater utility and allow the City to periodically reevaluate existing and projected flows, condition of existing infrastructure, the need future improvements, and the utility's financing plan. This ensures a long lasting and reliable utility.

**Comments:** Scheduled on an 8-year cycle according to RCW 36.70A-130.

<b>Schedule and Opinion of Probable Cost</b>	
--	--

Project Year	Recurring 8-year Cycle
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$500,000

THIS PAGE LEFT INTENTIONALLY BLANK

### Lift Station 25 & 31 Retrofit Summary

**CIP Number: 2**

<b>Project Type:</b> Capacity	Replacement	<input checked="" type="checkbox"/>
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

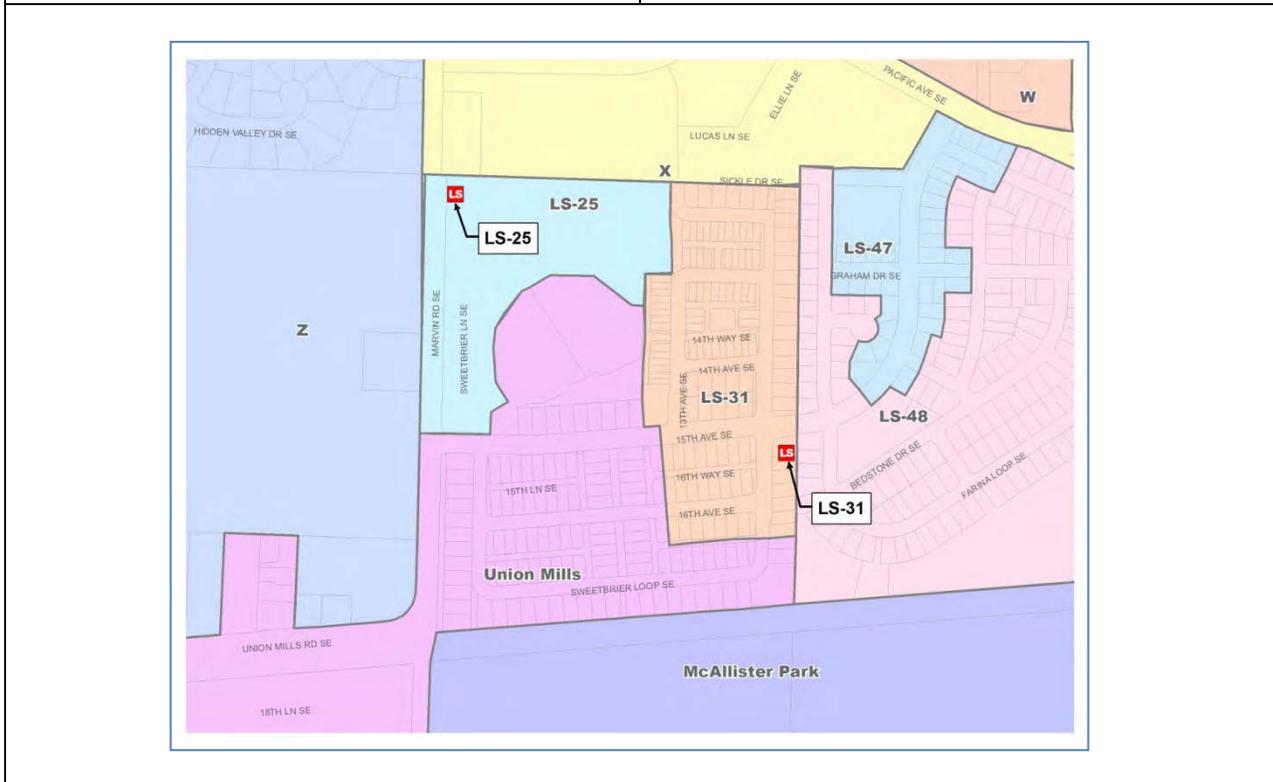
**Project Description:** For Lift Stations 25 and 31, replace existing solids handling pumps with new Orenco high-head pumps and replace electrical and mechanical equipment as needed.

**Project Benefit:** The new pumps will greatly improve the lift stations' ability to operate in variable head conditions and will also improve overall efficiency.

**Comments:** These lift stations were originally designed to be converted to conventional solids handling lift stations, but the City has determined it is not cost effective to do so.

### Schedule and Opinion of Probable Cost

Project Year	2014
Engineering and Allied Cost	\$245,000
Construction Cost	\$697,000
Contingency (35%)	\$330,000
<b>Total Project Cost</b>	<b>\$1,270,000</b>



**CIP 2: Lift Station 25 & 31 Retrofit**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$48,600	2	ls	\$97,200
2	Temporary Erosion & Sediment Control	\$9,700	2	ls	\$19,400
3	Sandblast, Caulk Jts and Coat Int Wet Well, Pipe & Equip.	\$10,000	2	ls	\$20,000
4	SST Pump Rails	\$3,500	2	ls	\$7,000
5	Disch Piping in Wet Well, incl. support/thrust restraint	\$6,000	2	ls	\$12,000
6	Duplex Submersible Pumps	\$42,500	4	ea	\$170,000
7	UG Power & Controls to Wet Well & Vaults	\$7,500	2	ls	\$15,000
8	Level Controls in Wet Well	\$1,500	2	ls	\$3,000
9	Pump Inst. & Controls in NEMA 3R Enclosures	\$30,000	2	ls	\$60,000
10	MCC in NEMA 3R Enclosures	\$15,000	2	ls	\$30,000
11	Eng-Generator Foundation	\$2,500	2	ls	\$5,000
12	Weather/Acoustical Enclosure w/Eng-Gen, fuel tank, critical silencer, ATS)	\$40,000	2	ls	\$80,000
13	Telemetry	\$10,000	2	ls	\$20,000
14	Flow Meter Vault	\$21,000	2	ls	\$42,000
15	Misc. Yard Piping (water, vault drains, site SD)	\$6,000	2	ls	\$12,000
16	Minor Landscaping	\$5,000	2	ls	\$10,000
17	Traffic Control	\$9,700	2	ls	\$19,400
18	General Restoration	\$9,700	2	ls	\$19,400
Subtotal					\$641,400
Sales Tax		8.7%			\$55,802
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$697,202</b>

Planning	5%	\$35,000
Design and Permitting	15%	\$105,000
Services During Construction	15%	\$105,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$245,000</b>
Contingency	35%	\$330,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,270,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Costs are in 2014 dollars

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.

## Steilacoom Road Lift Station Summary

**CIP Number: 3**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	<input checked="" type="checkbox"/>

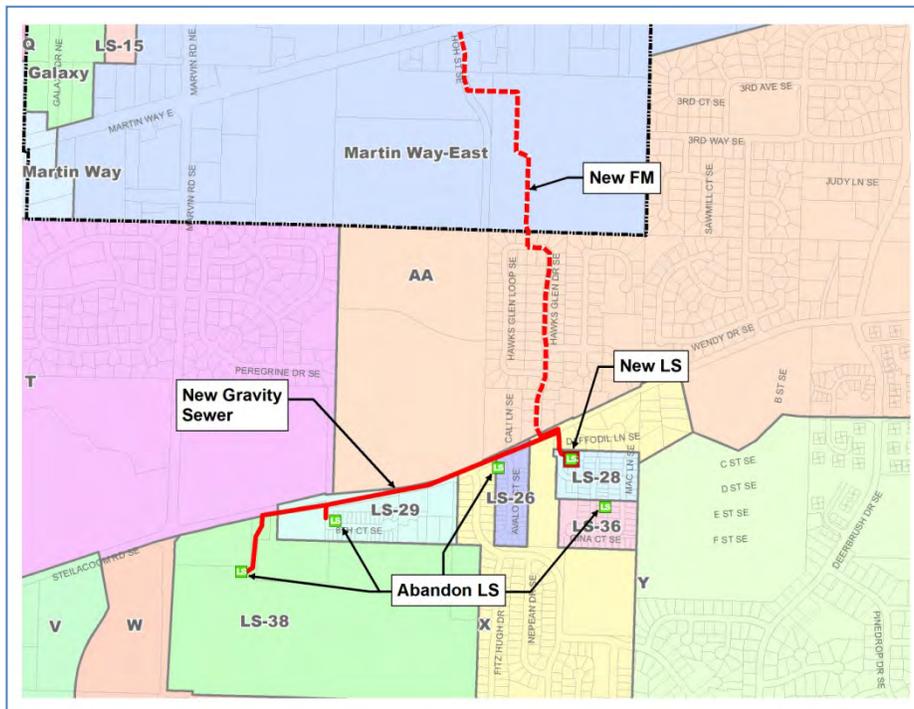
**Project Description:** Replace community STEP Stations LS-26, LS-28, LS-29, LS-36, and LS-38 with a single lift station. Construct approximately 3,700 lf of new gravity sewers to convey wastewater to the new lift station. Construct approximately 4,500 lf of new force main from the new lift station to the Martin Way Interceptor.

**Project Benefit:** Reduced number of lift stations and reduced maintenance cost. Increased capacity for future connections. Reduced flow and system pressures in the Union Mills STEP system.

**Comments:** This project is currently under design. Costs were provided by the City.

## Schedule and Opinion of Probable Cost

Project Year	2013-2017
Engineering and Allied Cost	\$800,000
Construction Cost	\$2,850,000
Contingency (35%)	N/A
Total Project Cost	\$3,650,000



**CIP 3: Steilacoom Road Lift Station**

Year	2013	2014	2015	2016	2017	Total
Cost	\$40,136	\$110,000	\$650,000	\$2,250,000	\$600,000	\$3,650,136

Notes

1. Costs for CIP 3 were provided by the City in an email dated 6/2/2014
2. Costs are in 2014 dollars

## Tanglewilde East ULID Summary

**CIP Number: 4**

<b>Project Type:</b> General	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

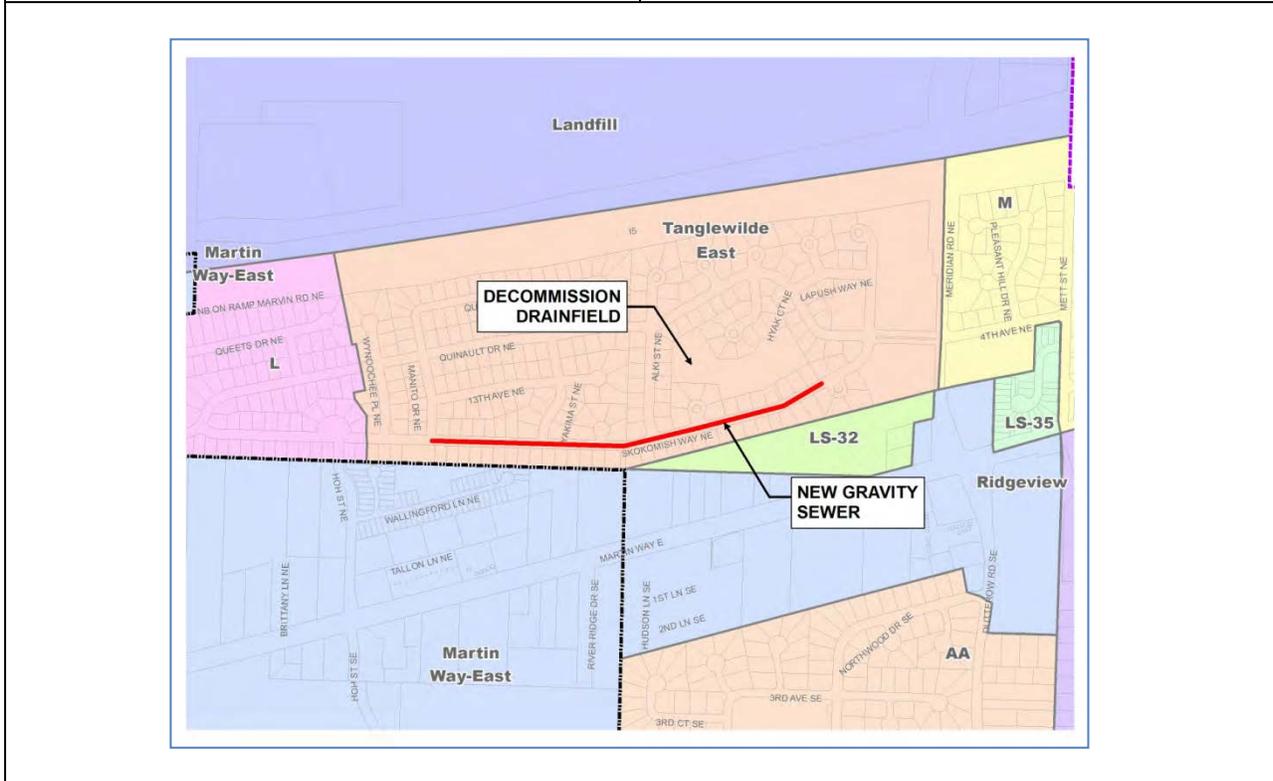
**Project Description:** Abandon the community septic system serving the Tanglewilde East area and connect the piping to Lacey gravity sewer through a Utility Local Improvement District (ULID).

**Project Benefit:** The large on-site septic system (LOSS) has been directed by the State Department of Health to take corrective actions related to the operation of their system. The most favorable option for this system is to connect directly to Lacey’s collection system and decommission the LOSS

**Comments:** This project will be done as a ULID; in which the beneficiaries would reimburse the City for work done. This project will also be coordinated with a City water line replacement project to promote mutual cost savings. Costs were provided by the City.

### Schedule and Opinion of Probable Cost

Project Year	2013-2015
Engineering and Allied Cost	\$200,000
Construction Cost	\$3,576,000
Contingency (35%)	-----
Total Project Cost	\$3,776,000



**CIP 4: Tanglewilde East ULID**

Year	2013	2014	2015	Total
Cost	\$11,977	\$188,023	\$3,576,410	\$3,776,410

Notes

1. Costs for CIP 4 were provided by the City in an email dated 6/2/2014
2. Costs are in 2014 dollars

### College Street and Martin Way ULID Summary

**CIP Number: 5**

<b>Project Type:</b> General	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

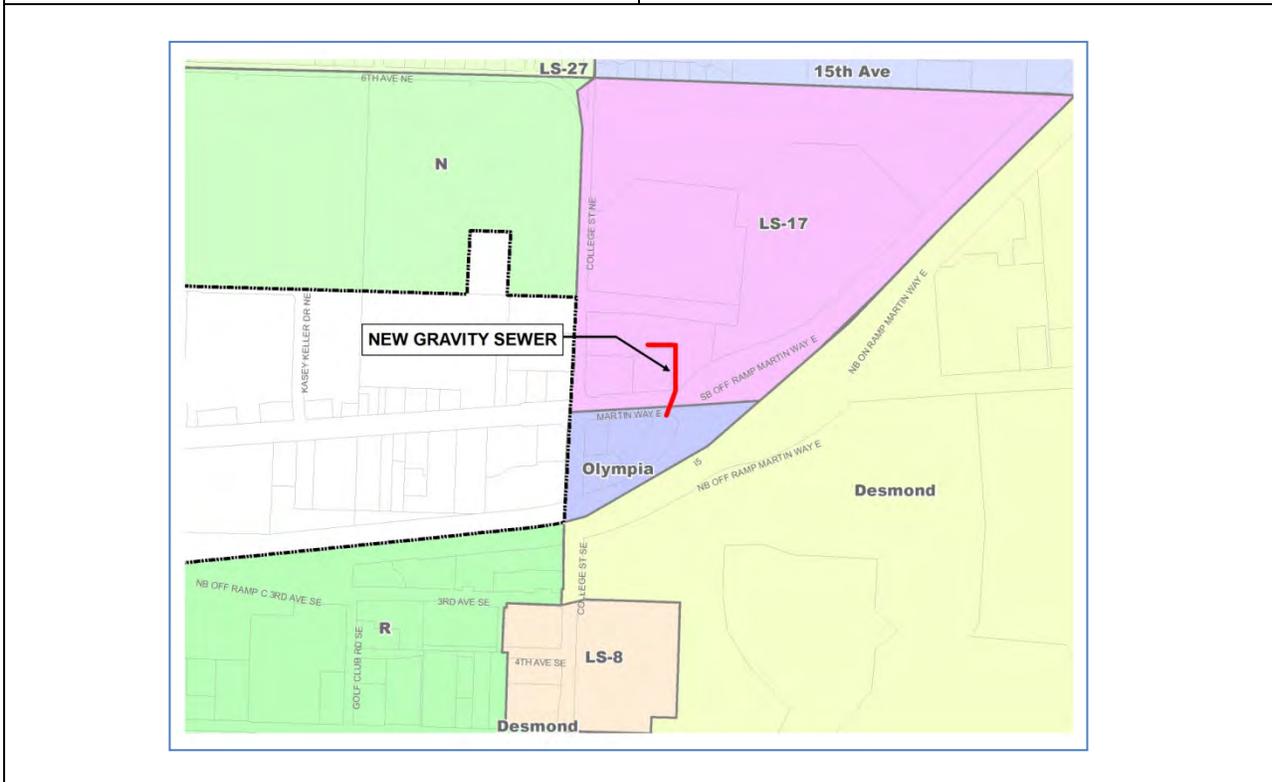
**Project Description:** Convert the parcels on the southeast corner of College Street and Martin Way from City of Olympia's sewer system to City of Lacey's. This will be done through a ULID.

**Project Benefit:** The City of Olympia currently serves four businesses, and has exercised its authority through the service agreement to terminate service. They must now connect to the City of Lacey's collection system.

**Comments:** The City has offered to take the lead on this project through the ULID process, were the beneficiaries would reimburse the City for its work. Costs were provided by the City.

### Schedule and Opinion of Probable Cost

Project Year	2013-2014
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$758,000



THIS PAGE LEFT INTENTIONALLY BLANK

**STEP Main Air Release/Vacuum Relief Valve Summary**

**CIP Number: 6**

<b>Project Type:</b> O&M	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

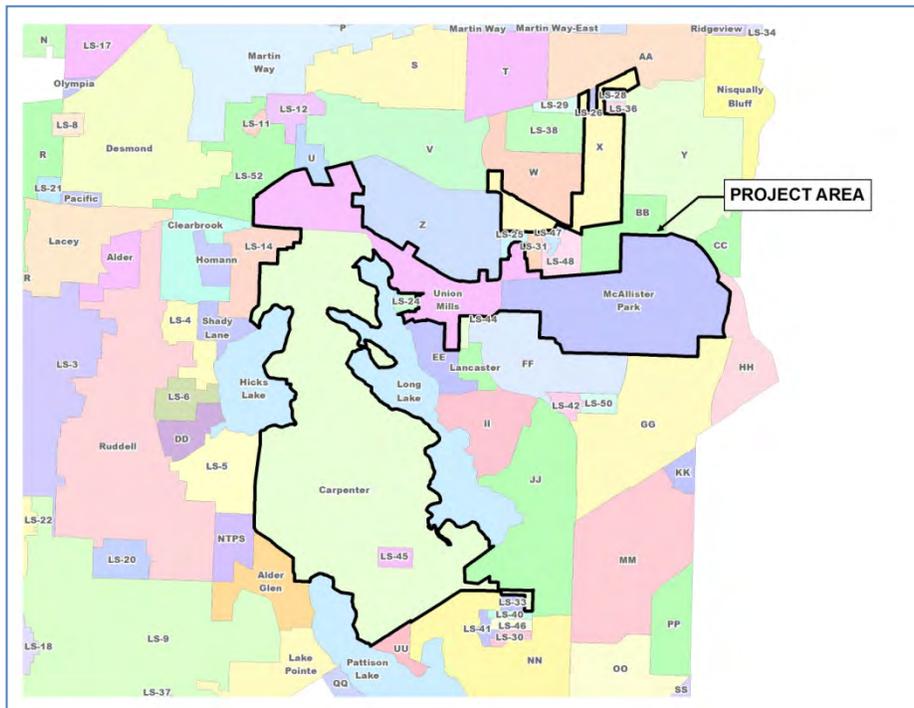
**Project Description:** Install air release/vacuum relief valves to remove air trapped in the Union Mills STEP area. Evaluate performance of the existing system to determine if existing air release/vacuum relief valves need to be replaced, and where to locate additional valves.

**Project Benefit:** Air release/vacuum relief valves will remove air trapped in the Union Mills STEP area that is causing air binding; higher system pressures are required to overcome air binding. By reducing air binding, this project will allow the pumps to operate more effectively and more efficiently, and increase the capacity in the system.

**Comments:** Costs were provided by the City.

**Schedule and Opinion of Probable Cost**

Project Year	2013-2015
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$232,000



THIS PAGE LEFT INTENTIONALLY BLANK

## Lift Station 18 Retrofit Summary

**CIP Number: 7**

<b>Project Type: O&amp;M</b>	Replacement	<input checked="" type="checkbox"/>
	Upgrade	<input type="checkbox"/>
	Expansion	<input checked="" type="checkbox"/>

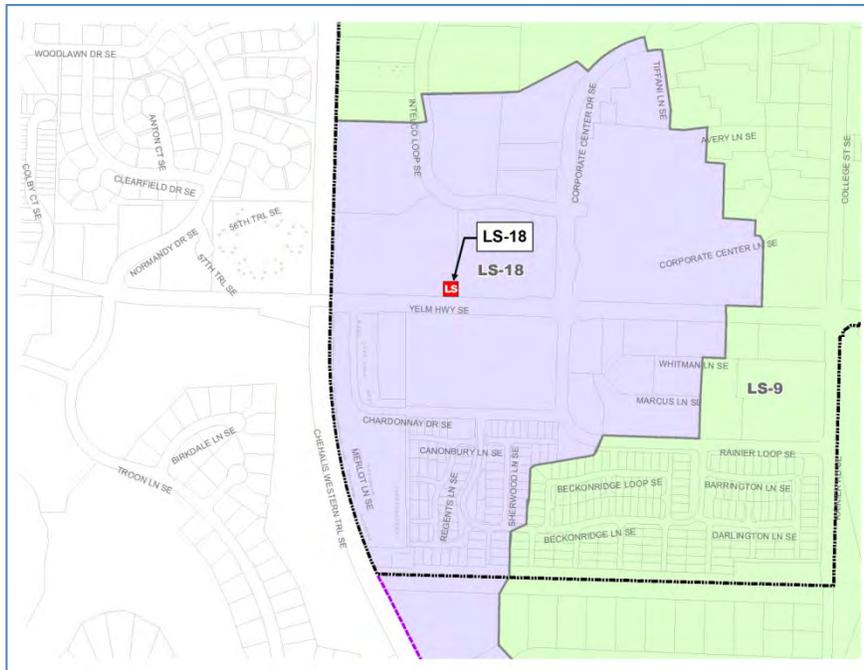
**Project Description:** Convert LS-18 from above ground vacuum prime station to submersible pump station.

**Project Benefit:** This station experiences an abnormally heavy FOG and fibrous debris load, requiring frequent maintenance and wet well cleaning. New chopper style pumps will better handle this waste stream and reduce maintenance requirements.

**Comments:** This project was bid in April 2014. The construction cost is the low bid from Cherokee Construction Services, LLC.

## Schedule and Opinion of Probable Cost

Project Year	2013-2014
Engineering and Allied Cost	-----
Construction Cost	\$470,000
Contingency (35%)	-----
Total Project Cost	\$470,000



THIS PAGE LEFT INTENTIONALLY BLANK



**CIP 8: Lakeview Dr Gravity Upsize (Phase 1)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$18,100	1	ls	\$18,100
2	Temporary Erosion & Sediment Control	\$3,600	1	ls	\$3,600
3	Dewatering	\$3,600	1	ls	\$3,600
4	12-inch PVC Sewer Pipe, SDR 35	\$125	850	lf	\$106,250
5	48-inch Manhole	\$5,000	5	ea	\$25,000
6	Side Sewer Connections	\$500	21	ea	\$10,625
7	HMA Trench Patch	\$200	194	tn	\$38,722
8	Traffic Control	\$3,600	1	ls	\$3,600
9	General Restoration	\$3,600	1	ls	\$3,600
Subtotal					\$213,097
Sales Tax		8.7%			\$18,539
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$231,637</b>

Planning	5%	\$12,000
Design and Permitting	15%	\$35,000
Services During Construction	15%	\$35,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$82,000</b>

Contingency	35%	\$110,000
City of Lacey Additional Contingency		\$80,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$500,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

### Lift Station 15 Generator/Flow Meter Summary

**CIP Number: 9**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

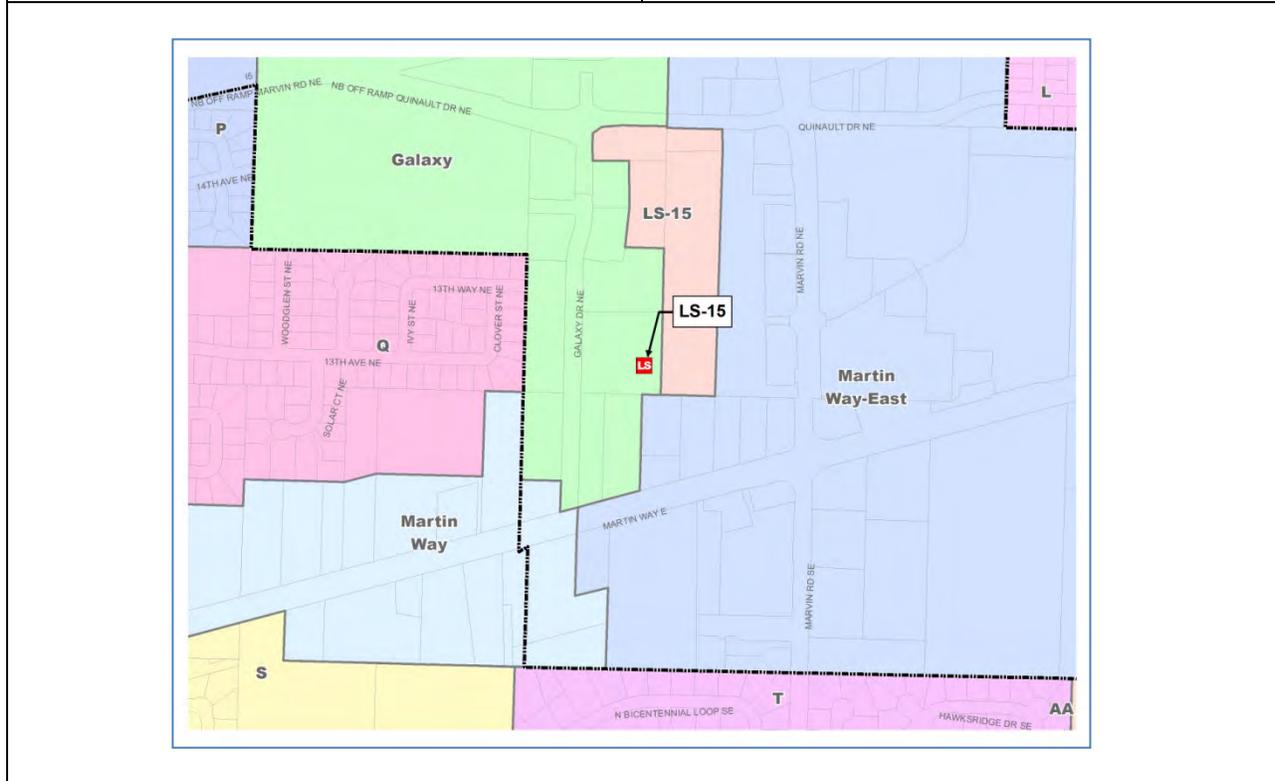
**Project Description:** Install a backup generator set, flow meter, pressure transducer, and connect to SCADA at LS-15.

**Project Benefit:** LS-15 serves an active commercial area and has relatively little emergency storage capacity in the wet well and no on-site auxiliary power. This project will reduce the risk of upstream surcharging during a power outage. The flow meter will allow the City to accurately track flow from this basin and monitor pump performance.

**Comments:** City requested additional contingency for this project. This project may be combined with CIP 23.

### Schedule and Opinion of Probable Cost

Project Year	2014
Engineering and Allied Cost	\$40,000
Construction Cost	\$110,000
Contingency (35% + \$150,000 per the City)	\$200,000
<b>Total Project Cost</b>	<b>\$350,000</b>



**CIP 9: Lift Station 15 Generator/Flow Meter**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$8,600	1	ls	\$8,600
2	Temporary Erosion & Sediment Control	\$1,720	1	ls	\$1,720
3	Flow Meter Vault	\$21,000	1	ea	\$21,000
4	Generator Set	\$60,000	1	ls	\$60,000
5	Equipment Pad	\$5,000	1	ls	\$5,000
6	Traffic Control	\$1,720	1	ls	\$1,720
7	Dewatering	\$1,720	1	ls	\$1,720
8	General Restoration	\$1,720	1	ls	\$1,720
Subtotal					\$101,480
Sales Tax		8.7%			\$8,829
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$110,309</b>

Planning	5%	\$6,000
Design and Permitting	15%	\$17,000
Services During Construction	15%	\$17,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$40,000</b>
Contingency	35%	\$50,000
City of Lacey Additional Contingency		\$150,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$350,000</b>

Notes

1. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Vault includes piping, fittings, valves, flow meter, excavation, foundation, backfill, and connection to existing force main
4. Costs are in 2014 dollars

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.

## Avonlea Odor Control Summary

**CIP Number: 10**

<b>Project Type: O&amp;M</b>	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

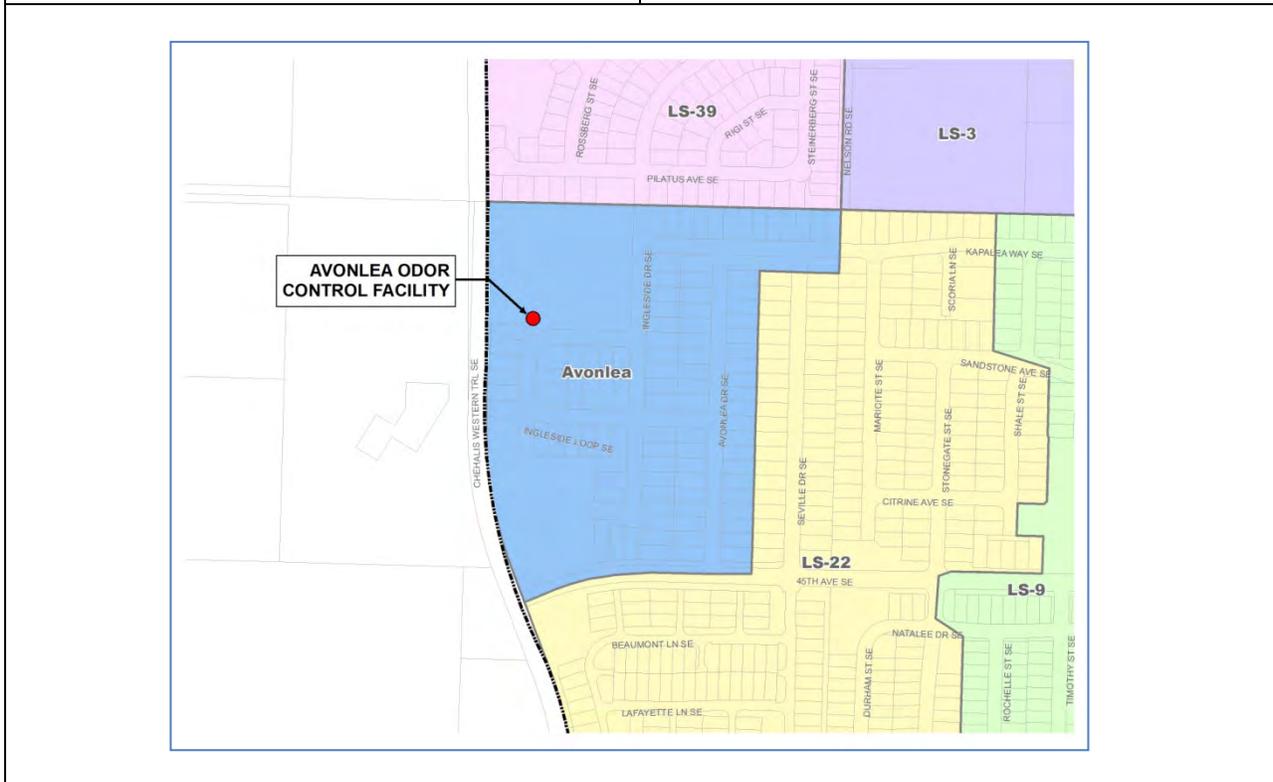
**Project Description:** This project includes the emergency cleanup associated with a faulty chemical storage tank used for odor control in the City's Avonlea STEP area. Also included is the replacement of the failed odor control facility on the existing site.

**Project Benefit:** This project will reduce maintenance requirements for the Avonlea odor control facility.

**Comments:** Costs were provided by the City.

## Schedule and Opinion of Probable Cost

Project Year	2014
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$100,000



THIS PAGE LEFT INTENTIONALLY BLANK

**Train Depot Summary**

**CIP Number: 11**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

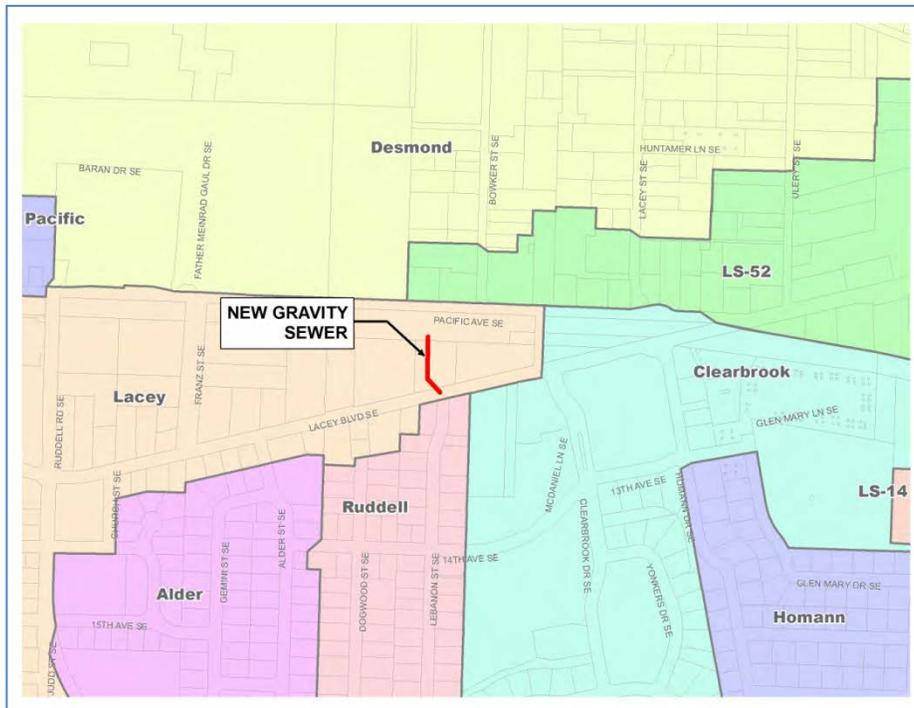
**Project Description:** Construct new 8-inch diameter gravity sewer in Lebanon St to serve the future Train Depot/Lacey Museum

**Project Benefit:** This project will provide sewer service to the future Train Depot/Lacey Museum.

**Comments:** Costs were provided by the City.

**Schedule and Opinion of Probable Cost**

Project Year	2014
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$62,000



THIS PAGE LEFT INTENTIONALLY BLANK

## Carpenter Road STEP Upgrades Summary

**CIP Number: 12**

<b>Project Type:</b> O&M	Replacement	<input checked="" type="checkbox"/>
	Upgrade	
	Expansion	

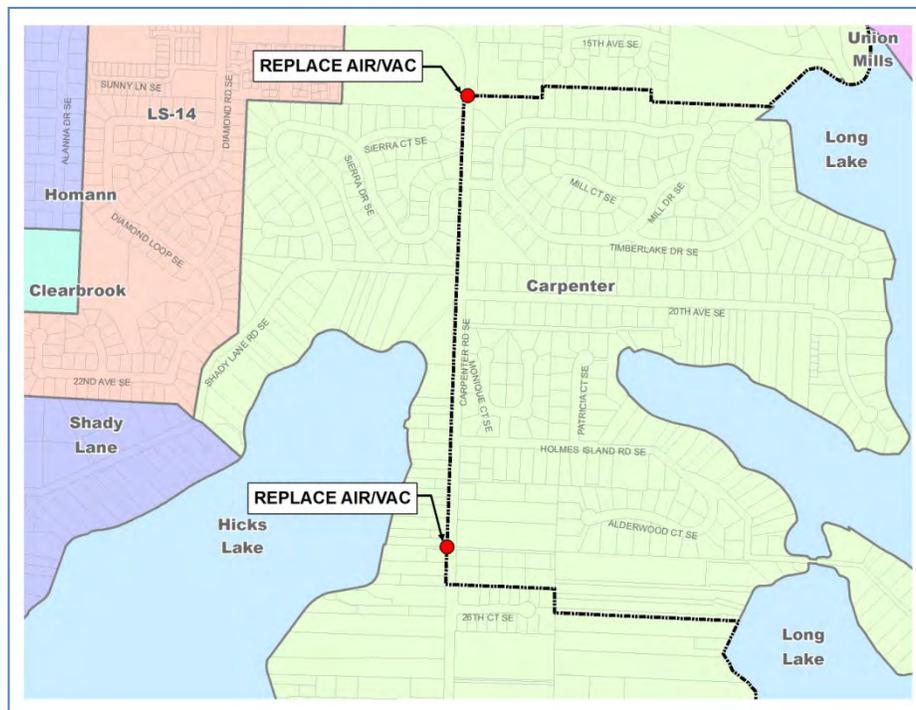
**Project Description:** Replace air release/vacuum relief valves and the manhole structures they are housed in. The two locations are at 1530 and 2417 Carpenter Rd SE.

**Project Benefit:** These air release valves are needed to ensure any air trapped in the STEP main is allowed to escape, preventing excessively high system pressure.

**Comments:** City requested additional contingency.

### Schedule and Opinion of Probable Cost

Project Year	2014
Engineering and Allied Cost	\$10,000
Construction Cost	\$20,000
Contingency (35% + \$10,000 per the City)	\$20,000
<b>Total Project Cost</b>	<b>\$50,000</b>



**CIP 12: Carpenter Road STEP Upgrades**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$1,200	1	ls	\$1,200
2	Temporary Erosion & Sediment Control	\$200	1	ls	\$200
3	Air Release/Vacuum Valve	\$2,000	2	ea	\$4,000
4	48-inch Manhole	\$5,000	2	ea	\$10,000
5	Temporary Bypass	\$2,000	1	ls	\$2,000
6	Dewatering	\$200	1	ls	\$200
7	General Restoration	\$200	1	ls	\$200
Subtotal					\$17,800
Sales Tax		8.7%			\$1,549
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$20,000</b>

Planning	5%	\$1,000
Design and Permitting	15%	\$3,000
Services During Construction	15%	\$3,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$10,000</b>

Contingency	35%	\$10,000
City of Lacey Additional Contingency		\$10,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$50,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Costs are in 2014 dollars

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.

**Lift Station 2 - Lift Station, Gravity, and Force Main Replacement Summary**

**CIP Number: 13**

<b>Project Type:</b> O&M	Replacement	<input checked="" type="checkbox"/>
	Upgrade	<input type="checkbox"/>
	Expansion	<input type="checkbox"/>

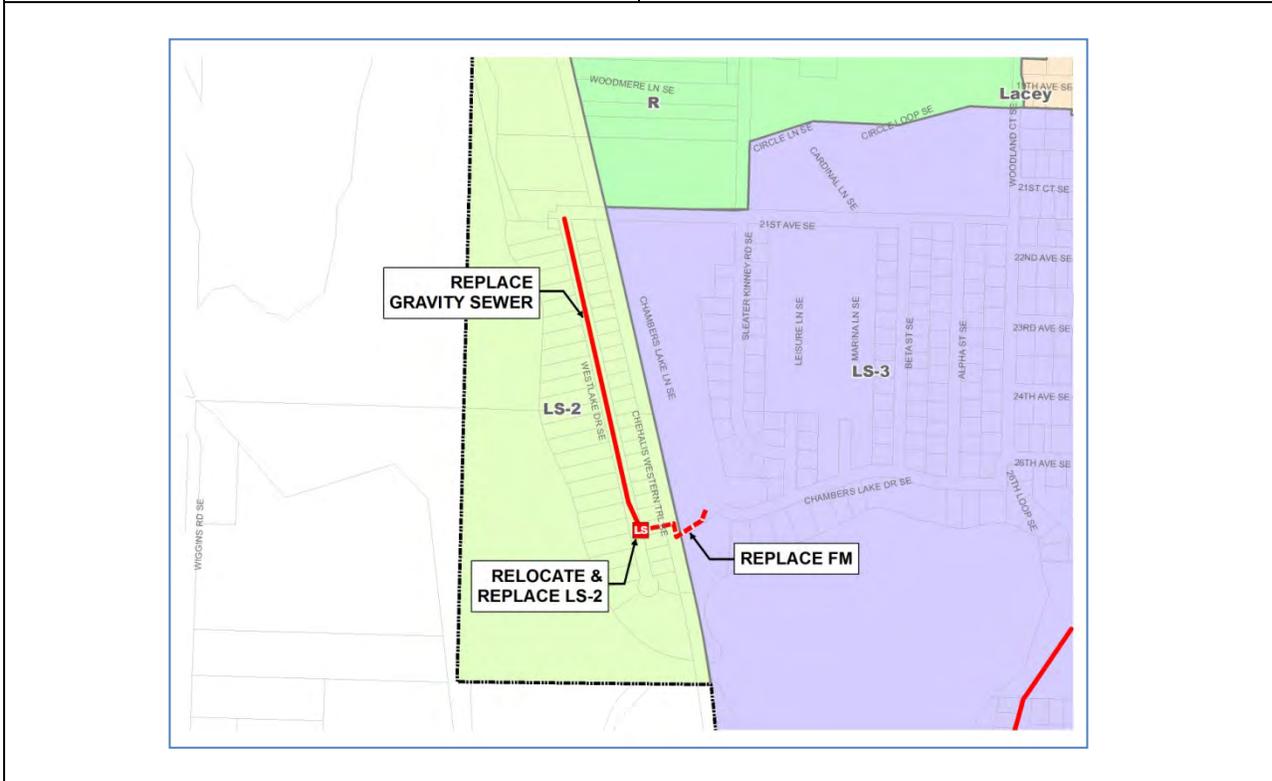
**Project Description:** Replace and relocate LS-2. Reroute 450 lf of 4-inch diameter force main. Replace approximately 900 lf of 8-inch diameter gravity pipe and manholes in Westlake Drive.

**Project Benefit:** LS-2 was built in 1970 and has reached the end of its useful life. It has limited space for maintenance tasks and is located near low hanging utility lines. Relocating will allow for easier maintenance. The force main crosses a private lot and is underneath a house for easier access. The gravity sewer has high levels of infiltration and inflow.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2015-2017
Engineering and Allied Cost	\$310,000
Construction Cost	\$880,000
Contingency (35%)	\$420,000
Total Project Cost	\$1,610,000



**CIP 13: Lift Station 2 - Lift Station, Gravity, and Force Main Replacement**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$68,700	1	ls	\$68,700
2	Temporary Erosion & Sediment Control	\$13,700	1	ls	\$13,700
3	Dewatering	\$13,700	1	ls	\$13,700
4	8-inch PVC Sewer Pipe, SDR 35	\$117	915	lf	\$107,055
5	48-inch Manhole	\$5,000	5	ea	\$25,000
6	Side Sewer Connections	\$500	23	ea	\$11,438
7	4-inch PVC C900 Force Main	\$76	450	lf	\$34,200
8	HMA Trench Patch	\$200	311	tn	\$62,183
9	Temporary Sewer Bypass Pumping	\$10,000	1	ls	\$10,000
10	Removal of Structures and Obstructions	\$20,000	1	ls	\$20,000
11	Utility Potholing	\$300	8	hr	\$2,400
12	Trench Safety System	\$2,000	1	ls	\$2,000
13	Roadway Excavation Incl. Haul	\$50	20	cy	\$1,000
14	Extra Excavation Incl. Haul	\$60	10	cy	\$600
15	Imported Pipe Bedding	\$50	32	tn	\$1,600
16	Bank Run Gravel for Trench Backfill	\$40	26	tn	\$1,040
17	CDF	\$100	8	cy	\$800
18	HMA Pavement Incl. CSTC & CSBC	\$150	45	sy	\$6,750
19	Cement Conc. Pavement Incl. CSBC	\$600	22	cy	\$13,200
20	Extruded Concrete Curb	\$100	43	lf	\$4,300
21	Sidewalk	\$100	29	sy	\$2,900
22	Raise Manhole to Grade	\$300	2	ea	\$600
23	Temporary Bypass Pumping	\$25,000	1	ls	\$25,000
24	2 Inch Water Main	\$75	45	lf	\$3,375
25	Reset Existing Hydrant	\$1,000	1	ls	\$1,000
26	Reset Existing RPBA	\$1,500	1	ea	\$1,500
27	Connect to Exist. Water Main	\$4,000	1	ls	\$4,000
28	Connect to Exist. San. Sewer Force Main	\$4,000	1	ls	\$4,000
29	Flow Meter Vault	\$12,000	1	ea	\$12,000
30	Lift Station	\$60,000	1	ls	\$60,000
31	Pumps & Mechanical; Grease Digester	\$55,000	1	ls	\$55,000
32	Valve Structure & Mechanical	\$60,000	1	ls	\$60,000
33	Electrical	\$140,000	1	ls	\$140,000
34	Replacement Pump-Around Vault Lid	\$6,000	1	ls	\$6,000
35	Remove and Replace Bollard	\$1,000	3	ls	\$3,000
36	Lawn and Landscape Restoration	\$500	1	ls	\$500
37	Minor Change	\$5,000	1	mc	\$5,000
38	Traffic Control	\$13,700	1	ls	\$13,700
39	General Restoration	\$13,700	1	ls	\$13,700
Subtotal					\$810,941
Sales Tax		8.7%			\$70,552
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$880,000</b>

Planning	5%	\$44,000
Design and Permitting	15%	\$132,000
Services During Construction	15%	\$132,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$310,000</b>
Contingency	35%	\$420,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,610,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

## Rumac St STEP Main Summary

**CIP Number: 14**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

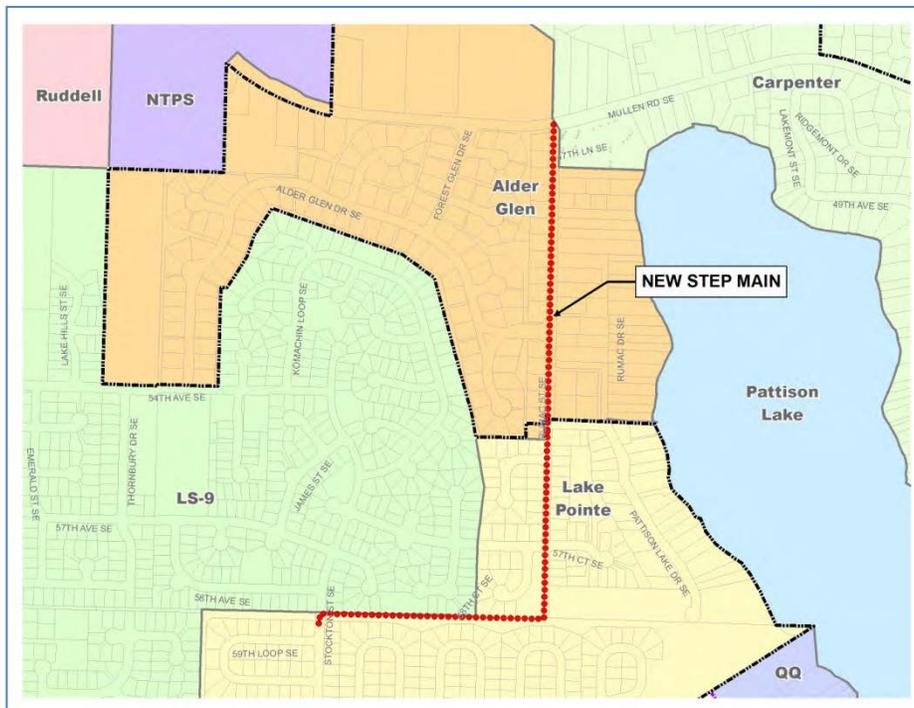
**Project Description:** Install approximately 4,400 lf of 6-inch diameter STEP main along Rumac Street. Reduce the number of odor control facilities.

**Project Benefit:** This project will extend a new STEP main along Rumac St, allowing the Lake Pointe STEP area to be diverted to the Mullen Rd STEP line. The three existing odor control facilities may be reduced due to increased contact times through the new Rumac St STEP Main.

**Comments:** This project should be completed concurrently with or after the Mullen Rd STEP Main project and covers only the STEP main along Rumac St; budget for a future odor control facility is included in the Mullen Rd STEP Main project. City has requested additional contingency.

### Schedule and Opinion of Probable Cost

Project Year	2015-2016
Engineering and Allied Cost	\$180,000
Construction Cost	\$510,000
Contingency (35% + \$70,000 per the City)	\$310,000
<b>Total Project Cost</b>	<b>\$1,000,000</b>



**CIP 14: Rumac St STEP Main**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$39,200	1	ls	\$39,200
2	Temporary Erosion & Sediment Control	\$7,800	1	ls	\$7,800
3	Dewatering	\$7,800	1	ls	\$7,800
4	6-inch PVC C900 Force Main	\$76	4,400	lf	\$334,400
5	Isolation Valve	\$1,000	2	ea	\$2,000
6	HMA Trench Patch	\$200	280	tn	\$56,000
7	Traffic Control	\$7,800	1	ls	\$7,800
8	General Restoration	\$7,800	1	ls	\$7,800
Subtotal					\$462,800
Sales Tax		8.7%			\$40,264
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$510,000</b>

Planning	5%	\$26,000
Design and Permitting	15%	\$77,000
Services During Construction	15%	\$77,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$180,000</b>
Contingency	35%	\$240,000
City of Lacey Additional Contingency		\$70,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,000,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

**Mullen Rd STEP Main Summary**

**CIP Number: 15**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

**Project Description:** Install approximately 1,200 lf of missing 6-inch diameter force main in Mullen Road from the city limits to Rumac Street, and install an odor control facility.

**Project Benefit:** This project will provide sewer service to the southeast corner of the City's UGA, and redirect some flow from the Carpenter Rd STEP Main to Ruddell Rd, preserving capacity in Carpenter Rd. The Lake Pointe STEP system will also be redirected, increasing contact time for odor control chemicals, thereby increasing the effectiveness.

**Comments:** This project should be constructed prior to, or concurrently with a planned county road project to reconstruct a portion of Mullen Rd.

**Schedule and Opinion of Probable Cost**

Project Year	2015-2016
Engineering and Allied Cost	\$100,000
Construction Cost	\$270,000
Contingency (35%)	\$130,000
Total Project Cost	\$500,000



**CIP 15: Mullen Rd STEP Main**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$21,400	1	ls	\$21,400
2	Temporary Erosion & Sediment Control	\$4,300	1	ls	\$4,300
3	Dewatering	\$4,300	1	ls	\$4,300
4	6-inch PVC C900 Force Main	\$76	1,200	lf	\$91,200
5	Isolation Valve	\$1,000	2	ea	\$2,000
6	Odor Control	\$65,000	1		\$65,000
7	HMA Trench Patch	\$200	280	tn	\$56,000
8	Traffic Control	\$4,300	1	ls	\$4,300
9	General Restoration	\$4,300	1	ls	\$4,300
Subtotal					\$252,800
Sales Tax		8.7%			\$21,994
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$270,000</b>

Planning	5%	\$14,000
Design and Permitting	15%	\$41,000
Services During Construction	15%	\$41,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$100,000</b>
Contingency	35%	\$130,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$500,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

**College St / 26th Ave Gravity Repair Summary**

**CIP Number: 16**

<b>Project Type:</b> O&M	Replacement	<input checked="" type="checkbox"/>
	Upgrade	
	Expansion	

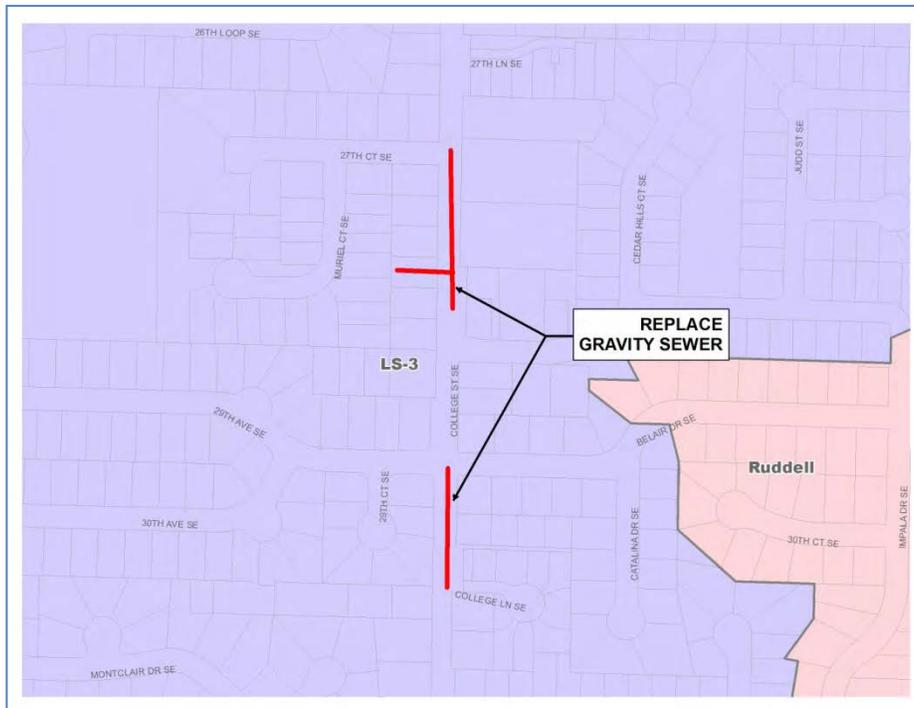
**Project Description:** Install approximately 1,300 lf of 8-inch diameter CIPP to address deterioration in pipeline. Spot repairs in 2 locations to address root problems in pipeline.

**Project Benefit:** This project may help to reduce heavy root intrusion and repair deteriorated concrete piping.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2015
Engineering and Allied Cost	\$19,000
Construction Cost	\$55,000
Contingency (35%)	\$26,000
<b>Total Project Cost</b>	<b>\$100,000</b>



**CIP 16: College St / 26th Ave Gravity Repair**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$4,400	1	ls	\$4,400
2	Temporary Erosion & Sediment Control	\$900	1	ls	\$900
3	8-inch Slipline	\$21	1,300	lf	\$27,300
4	Side Sewer Connections	\$500	33	ea	\$16,250
5	Traffic Control	\$900	1	ls	\$900
6	General Restoration	\$900	1	ls	\$900
Subtotal					\$50,650
Sales Tax		8.7%			\$4,407
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$55,000</b>

Planning	5%	\$3,000
Design and Permitting	15%	\$8,000
Services During Construction	15%	\$8,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$19,000</b>

Contingency	35%	\$26,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$100,000</b>

Notes

1. Gen. Rest., Traffic Control, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Costs are in 2014 dollars

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.

<b>Annual Sewer Line Replacement Summary</b>		
--	--	--

<b>CIP Number: 17</b>		
-----------------------	--	--

<b>Project Type:</b> Obsolescence	Replacement	<input checked="" type="checkbox"/>
	Upgrade	<input type="checkbox"/>
	Expansion	<input type="checkbox"/>

**Project Description:** Annual program to repair and replace problematic or deteriorating sewer mains.

**Project Benefit:** Proactive approach will keep infiltration and inflow rates low and preserves the overall functionality of the collection system. This will also reduce expensive emergency repairs.

**Comments:** This funding program is intended to increase throughout the planning horizon as the overall age of the City's collection system increases. Costs were provided by the City.

<b>Schedule and Opinion of Probable Cost</b>	
--	--

Project Year	Annual
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$50,000 through 2018; \$100,000 after 2018

THIS PAGE LEFT INTENTIONALLY BLANK

<b>FOG / Fibrous Wipes Program Summary</b>
--

<b>CIP Number: 18</b>
-----------------------

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

**Project Description:** Conduct a second FOG/fibrous wipes pilot program to confirm preliminary findings of first program. If successful, expand program to other high-FOG areas.

**Project Benefit:** FOG and fibrous wipes present a significant challenge to maintenance crews. These items have a tendency to build up in the collection system and lift stations, reducing capacity and performance, and can lead to sewer backups and frequent pump failures. This program seeks to reduce the input of these items into the sewer system by customers.

**Comments:** Coordinate program with other jurisdictions.

<b>Schedule and Opinion of Probable Cost</b>
--

Project Year	2015-2022
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$10,000 per year

THIS PAGE LEFT INTENTIONALLY BLANK

## Generators/Flow Meters (LS-17, LS-20, LS-22, LS-23) Summary

**CIP Number: 19**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

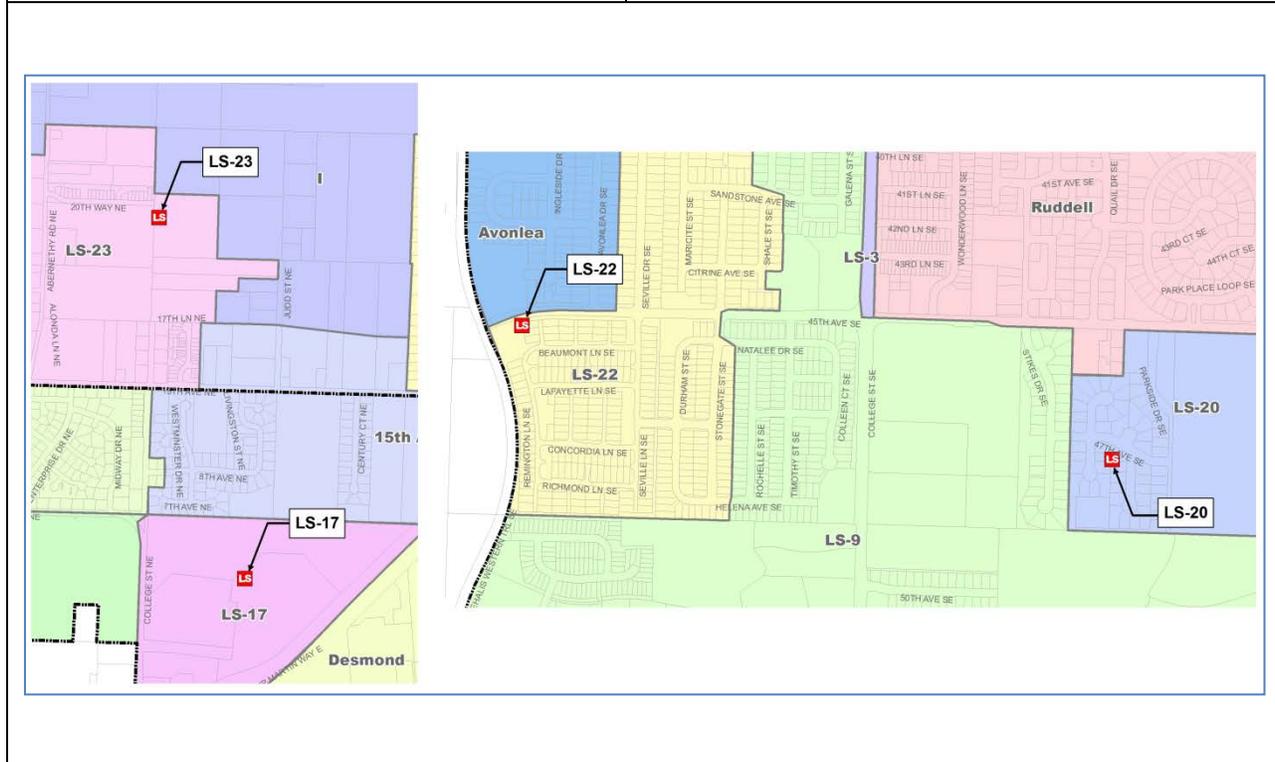
**Project Description:** Install a backup generator set, flow meter, and pressure transducer, and connect to SCADA for LS-17, LS-20, LS-22, and LS-23.

**Project Benefit:** This project will reduce the risk of upstream surcharging during a power outage, and reduce the time spent moving a portable generator set to each individual lift station. The flow meter will allow the City to accurately track flow from this basin and monitor pump performance.

**Comments:** Lift Station 17 may be combined with CIP 23.

## Schedule and Opinion of Probable Cost

Project Year	2016
Engineering and Allied Cost	\$150,000
Construction Cost	\$440,000
Contingency (35%)	\$210,000
Total Project Cost	\$800,000



**CIP 19: Generators/Flow Meters (LS-17, LS-20, LS-22, LS-23)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$34,400	1	ls	\$34,400
2	Temporary Erosion & Sediment Control	\$6,880	1	ls	\$6,880
3	Flow Meter Vault	\$21,000	4	ea	\$84,000
4	Generator Set	\$60,000	4	ea	\$240,000
5	Equipment Pad	\$5,000	4	ea	\$20,000
6	Traffic Control	\$6,880	1	ls	\$6,880
7	Dewatering	\$6,880	1	ls	\$6,880
8	General Restoration	\$6,880	1	ls	\$6,880
Subtotal					\$405,920
Sales Tax		8.7%			\$35,315
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$440,000</b>

Planning	5%	\$22,000
Design and Permitting	15%	\$66,000
Services During Construction	15%	\$66,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$150,000</b>
Contingency	35%	\$210,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$800,000</b>

Notes

1. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Vault includes piping, fittings, valves, flow meter, excavation, foundation, backfill, and connection to existing force main
4. Costs are in 2014 dollars

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.

**Lift Station 49 Land Purchase Summary**

**CIP Number: 20**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

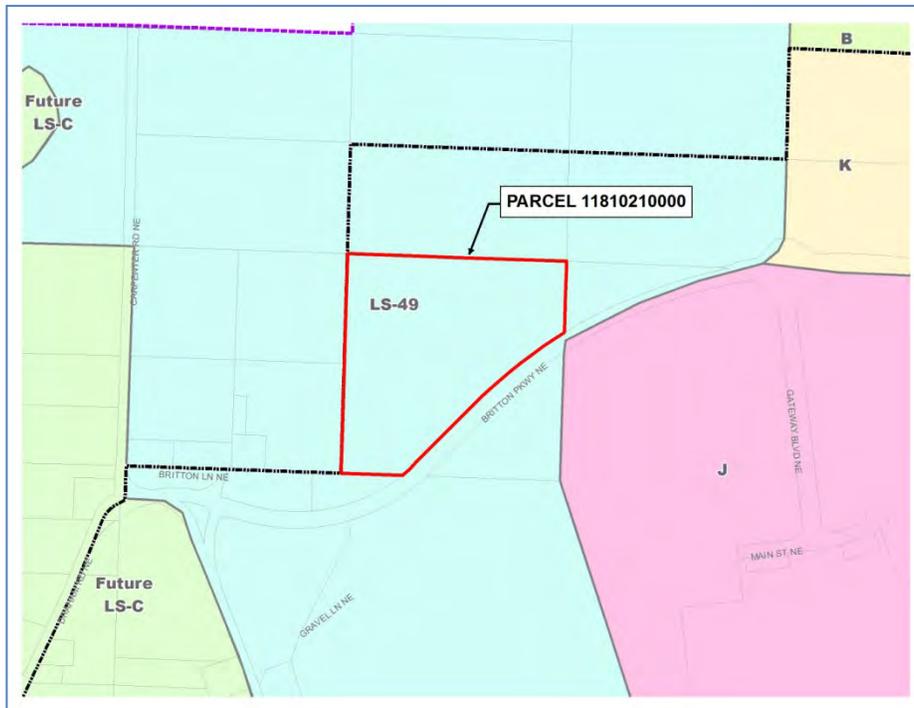
**Project Description:** Purchase adjacent lot (Parcel 11810210000) before it develops to prevent future odor and noise complaints from future resident.

**Project Benefit:** Prevent future odor and noise complaints from future resident, and provide maintenance crews with additional space when repairs are needed.

**Comments:** Cost provided by City.

**Schedule and Opinion of Probable Cost**

Project Year	2016
Engineering and Allied Cost	-----
Construction Cost	-----
Contingency (35%)	-----
Total Project Cost	\$120,000



THIS PAGE LEFT INTENTIONALLY BLANK

### Lift Station 12 Abandonment Summary

**CIP Number: 21**

<b>Project Type:</b> Capacity, Obsolescence	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	<input checked="" type="checkbox"/>

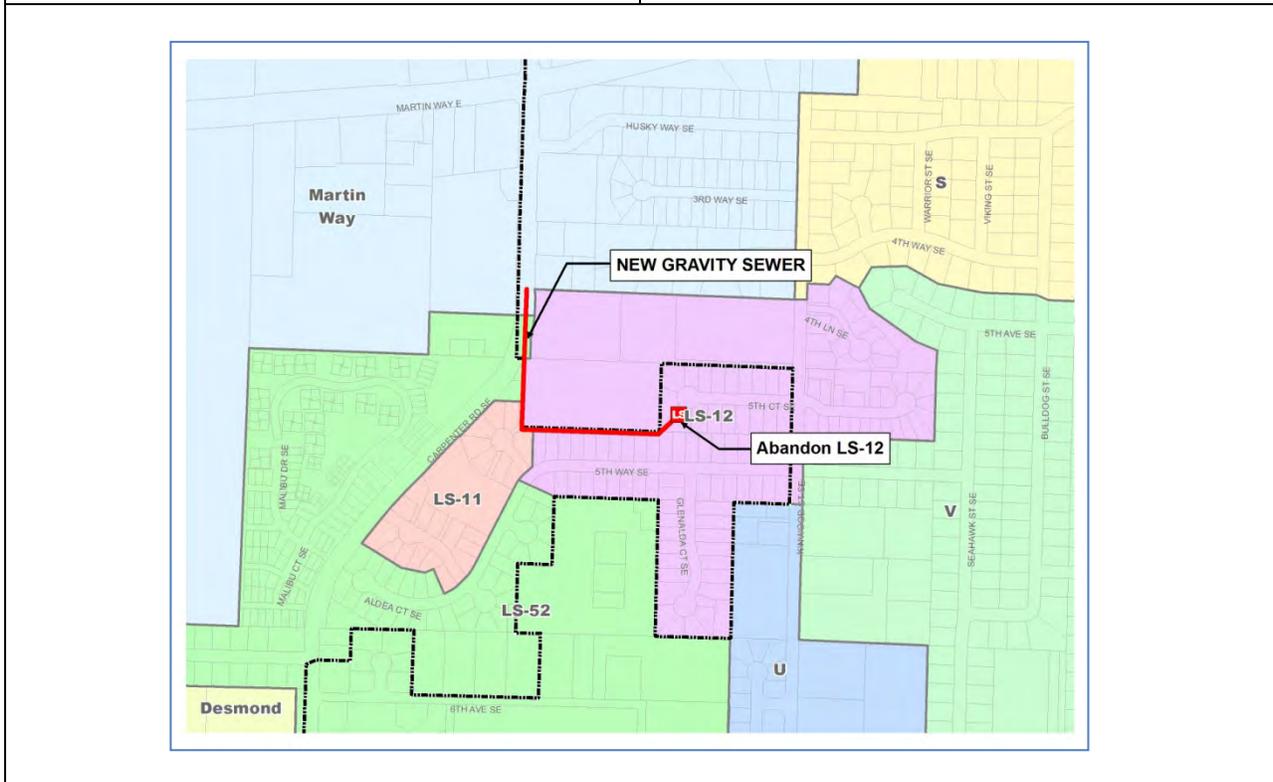
**Project Description:** Replace LS-12 with 2,000 lf of 12-inch diameter gravity sewer and abandon LS-12.

**Project Benefit:** LS-12 is an older above grade vacuum prime station and is near capacity. It can be replaced with a gravity sewer, which will reduce the need for costly upgrades and long term maintenance.

**Comments:** This project will require easements and/or property acquisition to provide a route for the new gravity line between the existing lift station and Carpenter Rd.

### Schedule and Opinion of Probable Cost

Project Year	2015-2020
Engineering and Allied Cost	\$185,000
Construction Cost	\$557,000
Contingency (35%)	\$160,000
Total Project Cost	\$902,000



**CIP 21: Lift Station 12 Abandonment**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$35,600	1	ls	\$35,600
2	Temporary Erosion & Sediment Control	\$7,100	1	ls	\$7,100
3	Dewatering	\$7,100	1	ls	\$7,100
4	12-inch PVC Sewer Pipe, SDR 35	\$125	2,000	lf	\$250,000
5	48-inch Manhole	\$5,000	3	ea	\$15,000
6	HMA Trench Patch	\$200	456	tn	\$91,111
7	Traffic Control	\$7,100	1	ls	\$7,100
8	General Restoration	\$7,100	1	ls	\$7,100
Subtotal					\$420,111
Sales Tax		8.7%			\$36,550
<b>ESTIMATED CONSTRUCTION COST</b>					<b>\$457,000</b>
<b>Construction Contingency</b>		35%			<b>\$160,000</b>
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>					<b>\$617,000</b>

Planning	5%	\$30,850
Design and Permitting	10%	\$61,700
Construction and Construction Management	15%	\$92,550
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$185,000</b>

Property Acquisition		\$100,000
<b>TOTAL ESTIMATED PROJECT COST</b>		<b>\$902,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

**Sleater Kinney Gravity Main Improvements (Phase 1) Summary**

**CIP Number: 22**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

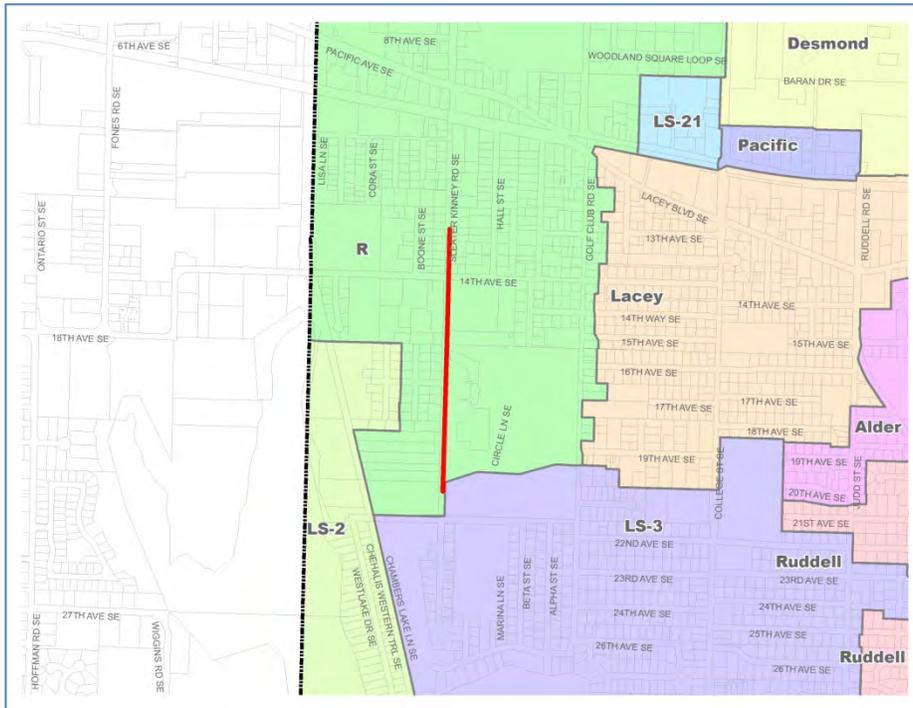
**Project Description:** Upsize approximately 2,590 lf of pipe between MH VQD02 to MH VGE01 from 15-inch diameter to 21-inch diameter.

**Project Benefit:** This section of gravity main serves a large number of customers along the City's western boundary and operates in excess of the City's 80% depth criteria during peak hour flows. This main consists of older concrete pipe that is showing signs of deterioration (exposed aggregate, root penetrations).

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2017-2018
Engineering and Allied Cost	\$250,000
Construction Cost	\$710,000
Contingency (35%)	\$340,000
Total Project Cost	\$1,300,000



**CIP 22: Sleater Kinney Gravity Main Improvements (Phase 1)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$18,000	1	ls	\$18,000
2	Temporary Erosion & Sediment Control	\$4,000	1	ls	\$4,000
3	Dewatering	\$4,000	1	ls	\$4,000
4	21-inch PVC Sewer Pipe, SDR 35	\$171	2,590	lf	\$442,890
5	48-inch Manhole	\$5,000	6	ea	\$30,000
6	Side Sewer Connections	\$500	65	ea	\$32,375
7	HMA Trench Patch	\$200	590	tn	\$117,989
8	Traffic Control	\$4,000	1	ls	\$4,000
9	General Restoration	\$4,000	1	ls	\$4,000
Subtotal					\$657,254
Sales Tax		8.7%			\$57,181
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$710,000</b>

Planning	5%	\$36,000
Design and Permitting	15%	\$107,000
Services During Construction	15%	\$107,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$250,000</b>
Contingency	35%	\$340,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,300,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

### Lift Station Rehabilitation (Phase 1) Summary

**CIP Number: 23**

<b>Project Type:</b> Obsolescence	Replacement	<input checked="" type="checkbox"/>
	Upgrade	<input type="checkbox"/>
	Expansion	<input type="checkbox"/>

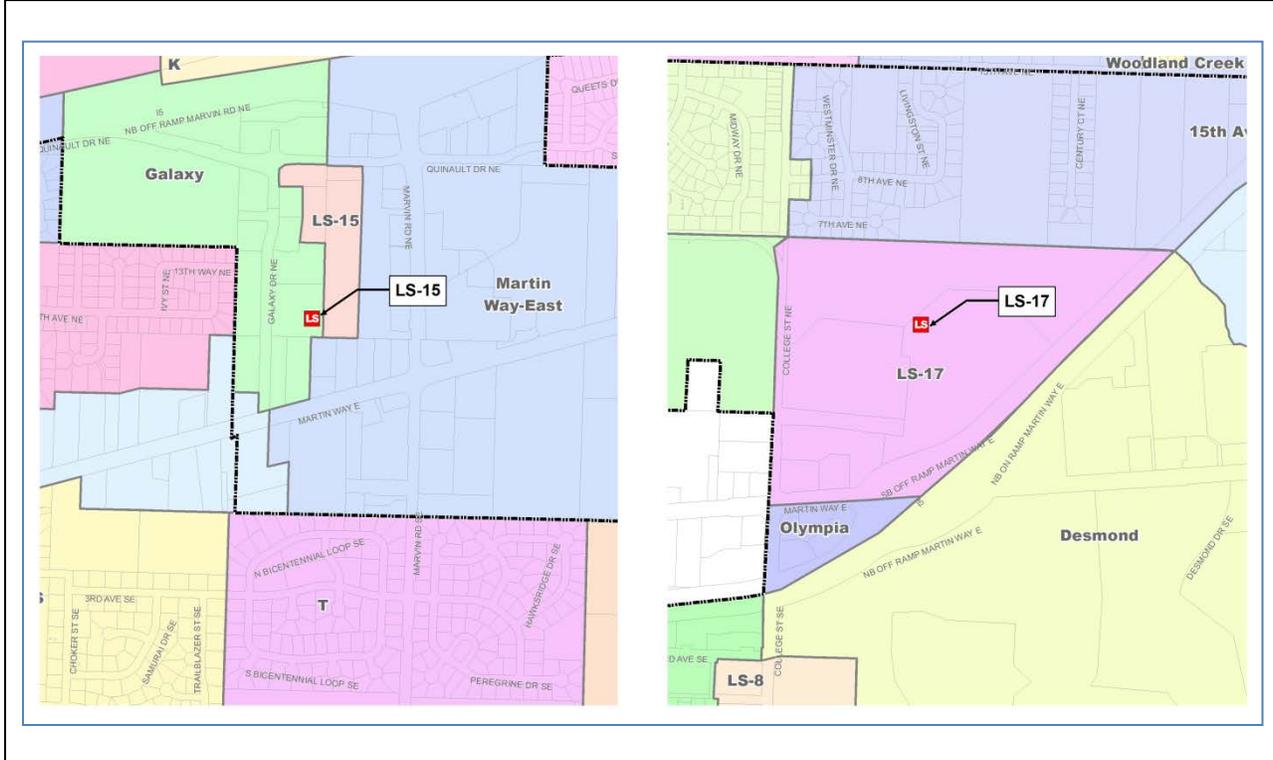
**Project Description:** Replace vacuum prime pumps with submersible pumps and upgrade mechanical and electrical equipment in LS-15 and LS-17. LS-17 will require the replacement of the upper section of the wet well to allow for mounting of the new pumps. Inspect and recoat wet wells as needed. Install on site generators and flow meters.

**Project Benefit:** Mechanical and electrical equipment will need to be replaced due to age. On site generators will increase reliability during power outages.

**Comments:**

### Schedule and Opinion of Probable Cost

Project Year	2017-2018
Engineering and Allied Cost	\$364,000
Construction Cost	\$1,043,000
Contingency (35%)	\$492,000
<b>Total Project Cost</b>	<b>\$1,900,000</b>



**CIP 23: Lift Station Rehabilitation (Phase 1)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$82,700	1	LS	\$82,700
2	Temporary Erosion & Sediment Control	\$16,500	1	LS	\$16,500
3	Wet Well Dewatering (wells)	\$40,000	2	EA	\$80,000
4	Wet Well Struct Excavation	\$40	280	CY	\$11,200
5	Wet Well Structural Shoring	\$30	2,000	SF	\$60,000
6	Wet Well Base (precast or CIP)	\$4,000	2	EA	\$8,000
7	Wet Well (8 ft inside dia precast MH)	\$7,500	2	EA	\$15,000
8	Wet Well Structural Backfill	\$35	200	CY	\$7,000
9	Wet Well Lid (CIP w/non-traffic hatch)	\$10,000	2	LS	\$20,000
10	Sandblast, Caulk Jts and Coat Int Wet Well, Pipe & Equip.	\$10,000	2	EA	\$20,000
11	SST Pump Rails	\$3,500	2	EA	\$7,000
12	Disch Piping in Wet Well, incl. support/thrust restraint	\$6,000	2	EA	\$12,000
13	Duplex Submersible Pumps	\$85,000	2	EA	\$170,000
14	Valve Vault Excav & Backfill	\$4,000	2	EA	\$8,000
15	Valve Vault Shoring	\$2,500	2	EA	\$5,000
16	Valve Vault (CIP vault, non-traffic hatch, piping & valves)	\$25,000	2	EA	\$50,000
17	Gravity Sewer from Wet Well to Ex. MH in Street	\$125	100	LF	\$12,500
18	Electrical Equipment Foundation (6-in gravel & 6-in reinf. conc. pad)	\$1,500	2	EA	\$3,000
19	Structural Aluminum Equipment Canopy/Shelter (~14ft x 10ft)	\$10,000	2	EA	\$20,000
20	Primary Power Supply	\$10,000	2	EA	\$20,000
21	UG Power & Controls to Wet Well & Vaults	\$7,500	2	EA	\$15,000
22	Level Controls in Wet Well	\$1,500	2	EA	\$3,000
23	Pump Inst. & Controls in NEMA 3R Enclosures	\$30,000	2	EA	\$60,000
24	MCC in NEMA 3R Enclosures	\$15,000	2	EA	\$30,000
25	Eng-Generator Foundation	\$2,500	2	EA	\$5,000
26	Weather/Acoustical Enclosure w/Eng-Gen, fuel tank, critical silencer, ATS)	\$40,000	2	EA	\$80,000
27	Telemetry	\$10,000	2	EA	\$20,000
28	Flow Meter Vault	\$21,000	2	EA	\$42,000
29	Misc. Yard Piping (water, vault drains, site SD)	\$6,000	2	EA	\$12,000
30	Minor Landscaping	\$5,000	2	EA	\$10,000
31	Site Parking Area (Gravel)	\$3,500	2	EA	\$7,000
32	Site Fencing (50' x 50' site)	\$35	400	LF	\$14,000
33	Traffic Control	\$16,500	1	LS	\$16,500
34	General Restoration	\$16,500	1	LS	\$16,500
Subtotal					\$958,900
Sales Tax		8.7%			\$83,424
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$1,042,000</b>

Planning	5%	\$52,000
Design and Permitting	15%	\$156,000
Services During Construction	15%	\$156,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$364,000</b>
Contingency	35%	\$492,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,900,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. 10" pipe includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

## Lift Station Rehabilitation (Phase 2) Summary

**CIP Number: 24**

<b>Project Type:</b> Obsolescence	Replacement	<input checked="" type="checkbox"/>
	Upgrade	
	Expansion	

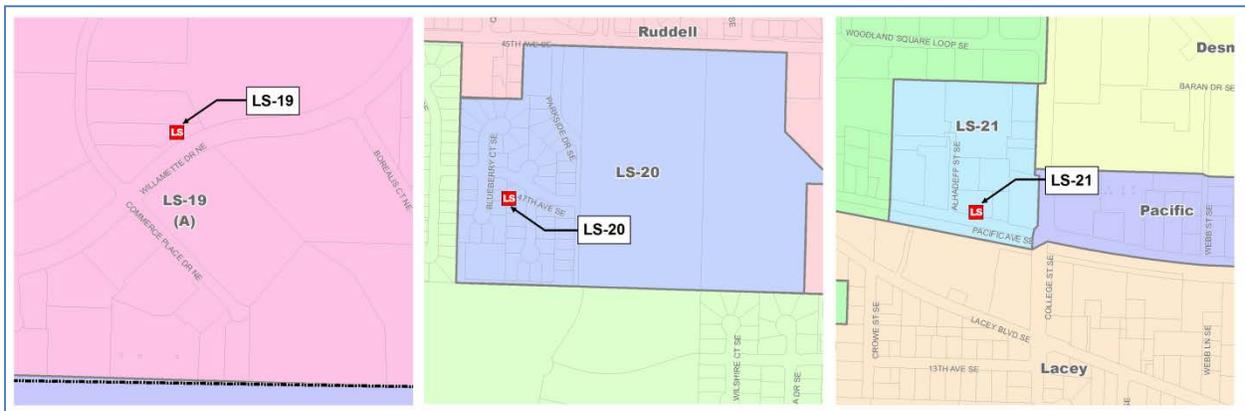
**Project Description:** Upgrade mechanical and electrical equipment in LS-19, LS-20, and LS-21. Inspect and recoat wet wells as needed. Install on site generators and flow meters.

**Project Benefit:** Mechanical and electrical equipment will need to be replaced due to age. On site generators will increase reliability during power outages.

**Comments:**

### Schedule and Opinion of Probable Cost

Project Year	2018-2019
Engineering and Allied Cost	\$548,000
Construction Cost	\$1,564,000
Contingency (35%)	\$739,000
<b>Total Project Cost</b>	<b>\$2,850,000</b>



**CIP 24: Lift Station Rehabilitation (Phase 2)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$124,000	1	LS	\$124,000
2	Temporary Erosion & Sediment Control	\$24,800	1	LS	\$24,800
3	Wet Well Dewatering (wells)	\$40,000	3	EA	\$120,000
4	Wet Well Struct Excavation	\$40	420	CY	\$16,800
5	Wet Well Structural Shoring	\$30	3,000	SF	\$90,000
6	Wet Well Base (precast or CIP)	\$4,000	3	EA	\$12,000
7	Wet Well (8 ft inside dia precast MH)	\$7,500	3	EA	\$22,500
8	Wet Well Structural Backfill	\$35	300	CY	\$10,500
9	Wet Well Lid (CIP w/non-traffic hatch)	\$10,000	3	LS	\$30,000
10	Sandblast, Caulk Jts and Coat Int Wet Well, Pipe & Equip.	\$10,000	3	EA	\$30,000
11	SST Pump Rails	\$3,500	3	EA	\$10,500
12	Disch Piping in Wet Well, incl. support/thrust restraint	\$6,000	3	EA	\$18,000
13	Duplex Submersible Pumps	\$85,000	3	EA	\$255,000
14	Valve Vault Excav & Backfill	\$4,000	3	EA	\$12,000
15	Valve Vault Shoring	\$2,500	3	EA	\$7,500
16	Valve Vault (CIP vault, non-traffic hatch, piping & valves)	\$25,000	3	EA	\$75,000
17	Gravity Sewer from Wet Well to Ex. MH in Street	\$125	150	LF	\$18,750
18	Electrical Equipment Foundation (6-in gravel & 6-in reinf. conc. pad)	\$1,500	3	EA	\$4,500
19	Structural Aluminum Equipment Canopy/Shelter (~14ft x 10ft)	\$10,000	3	EA	\$30,000
20	Primary Power Supply	\$10,000	3	EA	\$30,000
21	UG Power & Controls to Wet Well & Vaults	\$7,500	3	EA	\$22,500
22	Level Controls in Wet Well	\$1,500	3	EA	\$4,500
23	Pump Inst. & Controls in NEMA 3R Enclosures	\$30,000	3	EA	\$90,000
24	MCC in NEMA 3R Enclosures	\$15,000	3	EA	\$45,000
25	Eng-Generator Foundation	\$2,500	3	EA	\$7,500
26	Weather/Acoustical Enclosure w/Eng-Gen, fuel tank, critical silencer, ATS)	\$40,000	3	EA	\$120,000
27	Telemetry	\$10,000	3	EA	\$30,000
28	Flow Meter Vault	\$21,000	3	EA	\$63,000
29	Misc. Yard Piping (water, vault drains, site SD)	\$6,000	3	EA	\$18,000
30	Minor Landscaping	\$5,000	3	EA	\$15,000
31	Site Parking Area (Gravel)	\$3,500	3	EA	\$10,500
32	Site Fencing (50' x 50' site)	\$35	600	LF	\$21,000
33	Traffic Control	\$24,800	1	LS	\$24,800
34	General Restoration	\$24,800	1	LS	\$24,800
Subtotal					\$1,438,450
Sales Tax		8.7%			\$125,145
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$1,564,000</b>

Planning	5%	\$78,000
Design and Permitting	15%	\$235,000
Services During Construction	15%	\$235,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$548,000</b>
Contingency	35%	\$739,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$2,850,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. 10" pipe includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

<b>Lift Station and STEP System Flow Meters Summary</b>
---

<b>CIP Number: 25</b>
-----------------------

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

**Project Description:** Install 21 flow meters and pressure transducers at lift stations that do not currently have them and connect to SCADA. Install 3 flow meters and pressure transducers in STEP mains and connect to SCADA.

**Project Benefit:** Flow meters and pressure transducers are an important tool in establishing the performance, remaining capacity, and in troubleshooting of pressurized sewer systems.

**Comments:**

<b>Schedule and Opinion of Probable Cost</b>
--

Project Year	2018-2020
Engineering and Allied Cost	\$230,000
Construction Cost	\$650,000
Contingency (35%)	\$300,000
Total Project Cost	\$1,180,000

**CIP 25: Lift Station and STEP System Flow Meters**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$50,400	1	ls	\$50,400
2	Temporary Erosion & Sediment Control	\$10,080	1	ls	\$10,080
3	Flow Meter Vault	\$21,000	24	ea	\$504,000
4	Traffic Control	\$10,080	1	ls	\$10,080
5	Dewatering	\$10,080	1	ls	\$10,080
6	General Restoration	\$10,080	1	ls	\$10,080
Subtotal					\$594,720
Sales Tax					8.7%
					\$51,741
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$650,000</b>

Planning	5%	\$33,000
Design and Permitting	15%	\$98,000
Services During Construction	15%	\$98,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$230,000</b>

Contingency	35%	\$300,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$1,180,000</b>

Notes

1. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Vault includes piping, fittings, valves, flow meter, excavation, foundation, backfill, and connection to existing force main
4. Costs are in 2014 dollars

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.

## Sewer Main Replacement (50th Ave) Summary

**CIP Number: 26**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

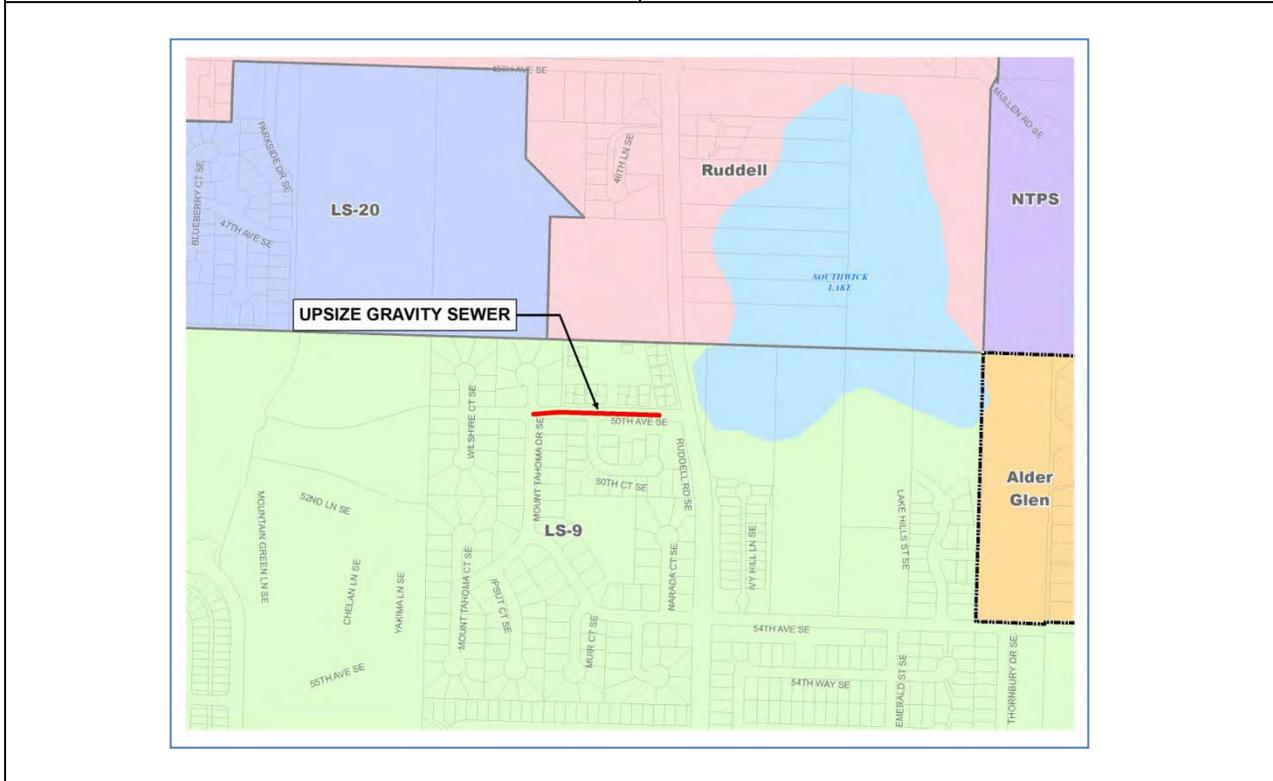
**Project Description:** Replace approximately 350 lf of 18-inch diameter gravity sewer with adverse grade between MH 5KK02 and 5KJ02, and install a manhole where the Cottages connect with the main.

**Project Benefit:** A section of this main was laid at a reverse slope which needs to be corrected. The private sewer system serving the Cottages is currently connected as a single service lateral; due to the size of this connection it should be reconfigured to connect at a manhole to facilitate maintenance and to prevent potential backups

**Comments:**

### Schedule and Opinion of Probable Cost

Project Year	2019
Engineering and Allied Cost	\$40,000
Construction Cost	\$116,000
Contingency (35%)	\$55,000
<b>Total Project Cost</b>	<b>\$210,000</b>



**CIP 26: Sewer Main Replacement (50th Ave)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$9,100	1	ls	\$9,100
2	Temporary Erosion & Sediment Control	\$1,800	1	ls	\$1,800
3	Dewatering	\$1,800	1	ls	\$1,800
4	18-inch PVC Sewer Pipe, SDR 35	\$159	350	lf	\$55,650
5	48-inch Manhole	\$5,000	3	ea	\$15,000
6	Side Sewer Connections	\$500	9	ea	\$4,375
7	HMA Trench Patch	\$200	80	tn	\$15,944
8	Traffic Control	\$1,800	1	ls	\$1,800
9	General Restoration	\$1,800	1	ls	\$1,800
Subtotal					\$107,269
Sales Tax		8.7%			\$9,332
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$116,000</b>

Planning	5%	\$6,000
Design and Permitting	15%	\$17,000
Services During Construction	15%	\$17,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$40,000</b>
Contingency	35%	\$55,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$210,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

## Chemical Storage Tank Replacement Summary

**CIP Number: 27**

<b>Project Type: O&amp;M</b>	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

**Project Description:** Replace 3 existing odor control chemical storage tanks with new double containment tanks at the 5800 Rumac St SE, 6100 Stockton St SE, and 9165 31<sup>st</sup> Ave NE odor control facilities.

**Project Benefit:** This project will provide secondary containment for odor control chemical storage.

**Comments:**

## Schedule and Opinion of Probable Cost

Project Year	2019
Engineering and Allied Cost	\$28,000
Construction Cost	\$82,000
Contingency (35%)	\$40,000
<b>Total Project Cost</b>	<b>\$150,000</b>



**CIP 27: Chemical Storage Tank Replacement**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$6,600	1	ls	\$6,600
2	Temporary Erosion & Sediment Control	\$1,300	1	ls	\$1,300
3	3,000 Gallon Double Wall Storage Tank	\$17,000	3	ea	\$51,000
4	Equipment Pad	\$5,000	3	ea	\$15,000
5	General Restoration	\$1,300	1	ls	\$1,300
Subtotal					\$75,200
Sales Tax		8.7%			\$6,542
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$82,000</b>

Planning	5%	\$4,000
Design and Permitting	15%	\$12,000
Services During Construction	15%	\$12,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$28,000</b>

Contingency	35%	\$40,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$150,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Costs are in 2014 dollars

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.

**Sewer Main Replacement (34th Ave) Summary**

**CIP Number: 28**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

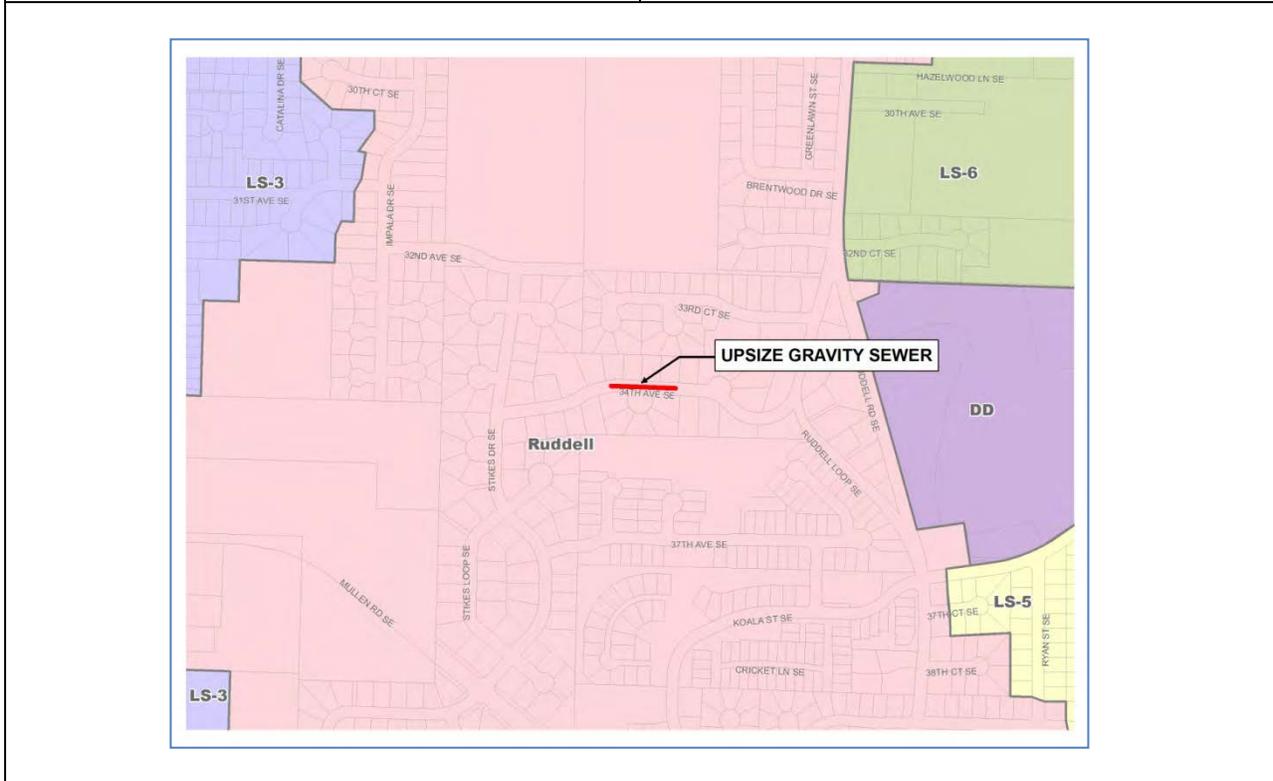
**Project Description:** Replace approximately 100 lf of existing 6-inch diameter gravity sewer with 8-inch diameter gravity sewer along 34<sup>th</sup> Avenue between MH W3R01 and W3R02.

**Project Benefit:** This section of sewer main is a smaller diameter than City standards allow and was laid at a slope that is less than the minimum for this pipe size. It requires regular cleaning by the City's maintenance crews and it is recommended that it be replaced with an 8-inch diameter gravity sewer pipe installed at an appropriate slope.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2019
Engineering and Allied Cost	\$12,000
Construction Cost	\$32,000
Contingency (35%)	\$15,000
<b>Total Project Cost</b>	<b>\$60,000</b>



**CIP 28: Sewer Main Replacement (34th Ave)**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$2,500	1	ls	\$2,500
2	Temporary Erosion & Sediment Control	\$500	1	ls	\$500
3	Dewatering	\$500	1	ls	\$500
4	8-inch PVC Sewer Pipe, SDR 35	\$110	90	lf	\$9,900
5	48-inch Manhole	\$5,000	2	ea	\$10,000
6	Side Sewer Connections	\$500	2	ea	\$1,125
7	HMA Trench Patch	\$200	21	tn	\$4,100
8	Traffic Control	\$500	1	ls	\$500
9	General Restoration	\$500	1	ls	\$500
Subtotal					\$29,625
Sales Tax		8.7%			\$2,577
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$32,000</b>

Planning	5%	\$2,000
Design and Permitting	15%	\$5,000
Services During Construction	15%	\$5,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$12,000</b>
Contingency	35%	\$15,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$60,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

## 26th Loop SE Replacement Summary

**CIP Number: 101**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

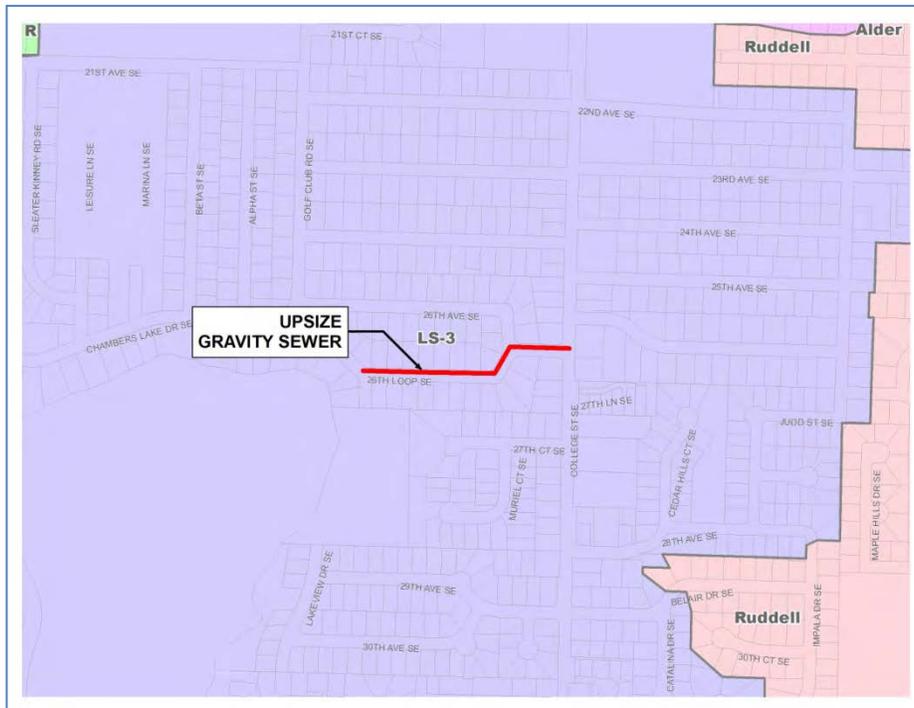
**Project Description:** Upsize approximately 1,150 lf of gravity sewer pipe between MH WVM01 to MH VSM01 from 8-inch diameter to 10-inch diameter.

**Project Benefit:** It is projected that this section of sewer main will exceed the City’s design threshold for gravity mains during peak hour flow within the 20 year planning horizon. This project will provide capacity through build-out conditions.

**Comments:**

## Schedule and Opinion of Probable Cost

Project Year	2020
Engineering and Allied Cost	\$100,000
Construction Cost	\$286,000
Contingency (35%)	\$135,000
Total Project Cost	\$520,000



**CIP 101: 26th Loop SE Replacement**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$22,300	1	ls	\$22,300
2	Temporary Erosion & Sediment Control	\$4,500	1	ls	\$4,500
3	Dewatering	\$4,500	1	ls	\$4,500
4	10-inch PVC Sewer Pipe, SDR 35	\$110	1,150	lf	\$126,500
5	48-inch Manhole	\$5,000	6	ea	\$30,000
6	Side Sewer Connections	\$500	29	ea	\$14,375
7	HMA Trench Patch	\$200	262	tn	\$52,389
8	Traffic Control	\$4,500	1	ls	\$4,500
9	General Restoration	\$4,500	1	ls	\$4,500
Subtotal					\$263,564
Sales Tax		8.7%			\$22,930
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$286,000</b>

Planning	5%	\$14,000
Design and Permitting	15%	\$43,000
Services During Construction	15%	\$43,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$100,000</b>
Contingency	35%	\$135,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$520,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

### Lift Station #3 Pumps and Inlet Piping Summary

**CIP Number: 102**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

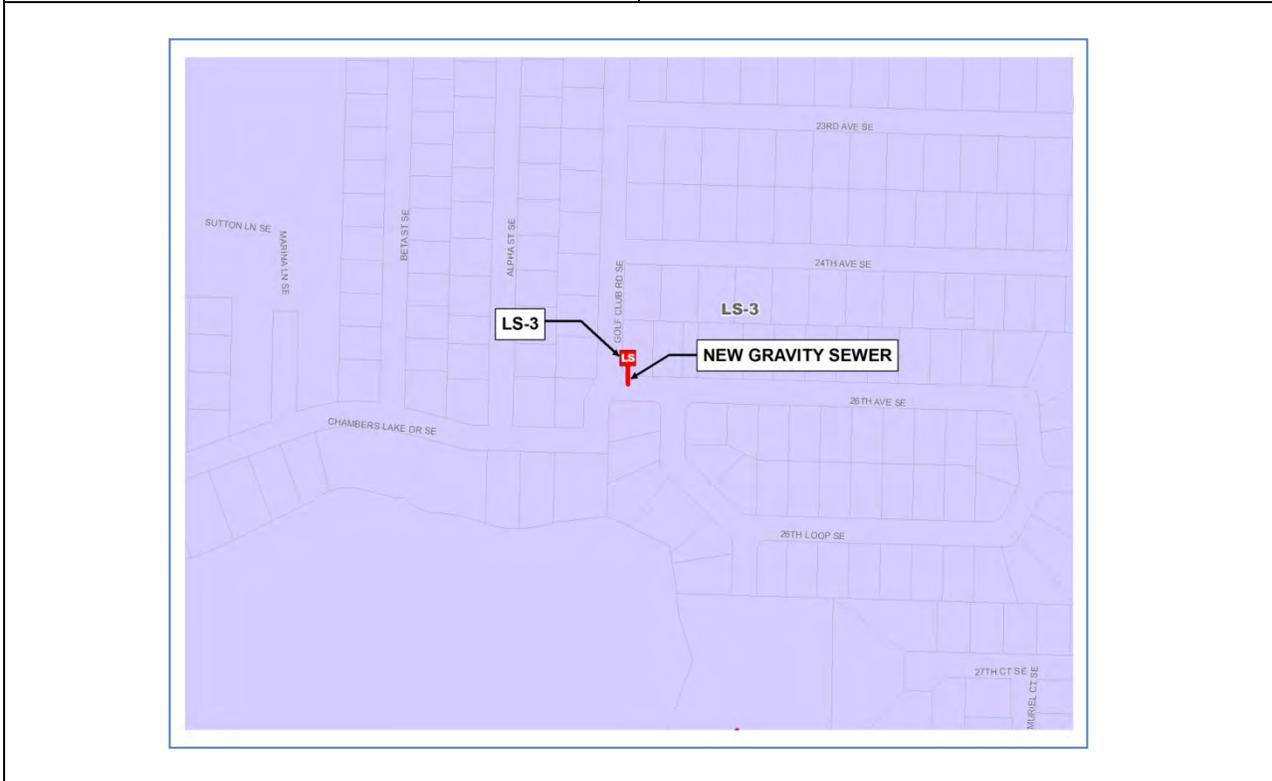
**Project Description:** Replace pumps at LS-3 with new higher capacity pumps. Construct approximately 60 lf of new 15-inch diameter inlet pipe to divert flow from southern and eastern portions of the basin directly to wet well to alleviate surcharging between MH VTA02 and MH VTA01.

**Project Benefit:** The pumps and inlet piping at LS-3 are expected to reach capacity within the 20 year planning horizon and should be upsized to accommodate full build-out flows.

**Comments:** The City should reevaluate pump capacity needs for this site after flows from LS-2 have been diverted around LS-3.

### Schedule and Opinion of Probable Cost

Project Year	2020
Engineering and Allied Cost	\$44,000
Construction Cost	\$125,000
Contingency (35%)	\$59,000
<b>Total Project Cost</b>	<b>\$230,000</b>



**CIP 102: Lift Station #3 Pumps and Inlet Piping**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$8,500	1	ls	\$8,500
2	Duplex Submersible Pumps	\$85,000	1	ls	\$85,000
3	15-inch PVC Sewer Pipe, SDR 35	\$159	60	lf	\$9,527
4	48-inch Manhole	\$5,000	1	ea	\$5,000
5	Side Sewer Connections	\$500	2	ea	\$750
6	HMA Trench Patch	\$200	14	tn	\$2,733
7	Traffic Control	\$1,700	1	ls	\$1,700
8	General Restoration	\$1,700	1	ls	\$1,700
Subtotal					\$114,910
Sales Tax		8.7%			\$9,997
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$125,000</b>

Planning	5%	\$6,000
Design and Permitting	15%	\$19,000
Services During Construction	15%	\$19,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$44,000</b>
Contingency	35%	\$59,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$230,000</b>

Notes

1. Gen. Rest., Traffic Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Costs are in 2014 dollars

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.

**LS-8 Generator and Flow Meter Summary**

**CIP Number: 103**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

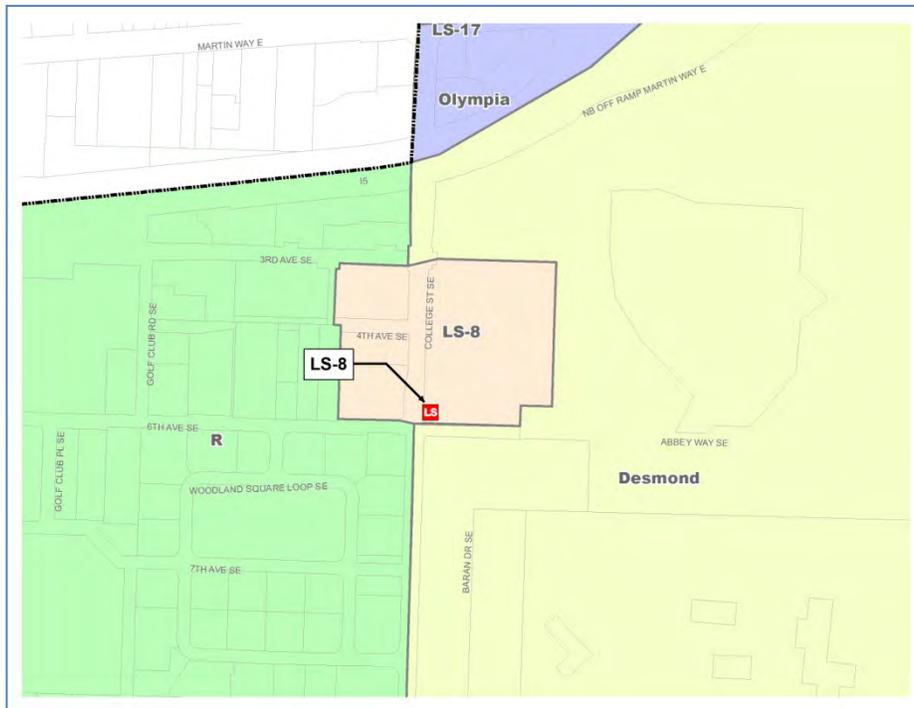
**Project Description:** Install a backup generator set at LS-8, or connect LS-8 to the City Hall generator. Install a flow meter and pressure transducer and connect to SCADA.

**Project Benefit:** LS-8 serves City Hall and should be equipped with auxiliary power to ensure continued operation during power outages or other emergencies.

**Comments:** It may be possible to operate this station with the existing generator currently serving City Hall.

**Schedule and Opinion of Probable Cost**

Project Year	2020
Engineering and Allied Cost	\$40,000
Construction Cost	\$110,000
Contingency (35%)	\$50,000
Total Project Cost	\$200,000



**CIP 103: LS-8 Generator and Flow Meter**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$8,600	1	ls	\$8,600
2	Temporary Erosion & Sediment Control	\$1,720	1	ls	\$1,720
3	Flow Meter Vault	\$21,000	1	ea	\$21,000
4	Generator Set	\$60,000	1	ls	\$60,000
5	Equipment Pad	\$5,000	1	ls	\$5,000
6	Traffic Control	\$1,720	1	ls	\$1,720
7	Dewatering	\$1,720	1	ls	\$1,720
8	General Restoration	\$1,720	1	ls	\$1,720
Subtotal					\$101,480
Sales Tax		8.7%			\$8,829
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$110,000</b>

Planning	5%	\$6,000
Design and Permitting	15%	\$17,000
Services During Construction	15%	\$17,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$40,000</b>
Contingency	35%	\$50,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$200,000</b>

Notes

1. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Vault includes piping, fittings, valves, flow meter, excavation, foundation, backfill, and connection to existing force main
4. Costs are in 2014 dollars

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.

**LS-37 Discharge Manhole Improvements Summary**

**CIP Number: 104**

<b>Project Type:</b> General	Replacement	
	Upgrade	<input checked="" type="checkbox"/>
	Expansion	

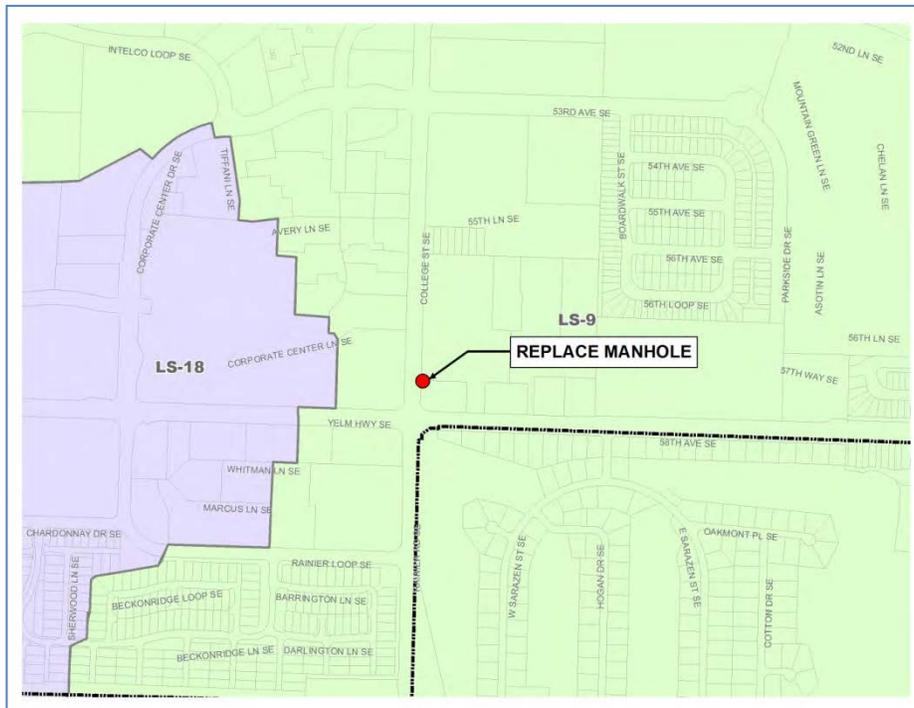
**Project Description:** Repair or install appurtenances to relieve surcharging at existing discharge manhole for LS-37, located at the intersection of Yelm Highway and College Street.

**Project Benefit:** The manhole directly receiving the discharge from Lift Station 37 experiences minor surcharging while the station is pumping. This manhole should be replaced with a larger structure to facilitate the transition of flow from the force main to the gravity system.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2020
Engineering and Allied Cost	\$3,000
Construction Cost	\$9,000
Contingency (35%)	\$4,000
Total Project Cost	\$16,000



**CIP 104: LS-37 Discharge Manhole Improvements**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$700	1	ls	\$700
2	Temporary Erosion & Sediment Control	\$100	1	ls	\$100
3	Replace Appurtanences	\$5,000	1	ea	\$5,000
4	HMA Trench Patch	\$200	10	tn	\$2,000
5	Traffic Control	\$100	1	ls	\$100
6	General Restoration	\$100	1	ls	\$100
Subtotal					\$8,000
Sales Tax		8.7%			\$696
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$9,000</b>

Planning	5%	\$1,000
Design and Permitting	15%	\$1,000
Services During Construction	15%	\$1,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$3,000</b>
Contingency	35%	\$4,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$16,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Costs are in 2014 dollars

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.

**Lift Station 11 Abandonment Summary**

**CIP Number: 105**

<b>Project Type:</b> General	Replacement	<input checked="" type="checkbox"/>
	Upgrade	
	Expansion	

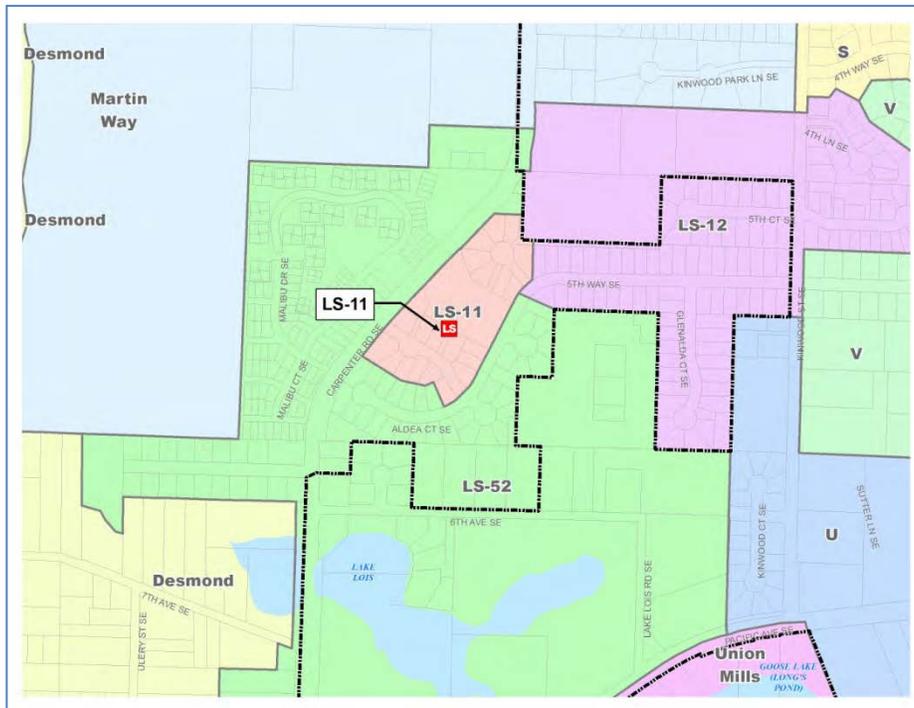
**Project Description:** Replace LS-11 with 20 individual grinder pumps and install 650 lf of 2-inch diameter force main. Abandon LS-11.

**Project Benefit:** LS-11 is an aging facility that serves approximately 20 single family residences. This project will allow the City to avoid high replacement, operation, and maintenance costs generally associated with lift stations.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2021
Engineering and Allied Cost	\$93,000
Construction Cost	\$268,000
Contingency (35%)	\$126,000
Total Project Cost	\$490,000



**CIP 105: Lift Station 11 Abandonment**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$21,200	1	ls	\$21,200
2	Temporary Erosion & Sediment Control	\$4,200	1	ls	\$4,200
3	Grinder Pump Structure	\$3,000	20	ea	\$60,000
4	Grinder Pump	\$2,000	20	ea	\$40,000
5	Electrical House Connect	\$1,000	20	ea	\$20,000
6	Side Sewer Connection	\$1,000	20	ea	\$20,000
7	2-inch Force Main	\$73	650	lf	\$47,450
8	LS-11 Demolition	\$25,000	1	ls	\$25,000
9	Dewatering	\$4,200	1	ls	\$4,200
10	General Restoration	\$4,200	1	ls	\$4,200
Subtotal					\$246,250
Sales Tax		8.7%			\$21,424
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$268,000</b>

Planning	5%	\$13,000
Design and Permitting	15%	\$40,000
Services During Construction	15%	\$40,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$93,000</b>
Contingency	35%	\$126,000
<b>TOTAL OPINION OF PROBABLE PROJECT</b>		<b>\$490,000</b>

Notes

1. Gen. Rest., Dewatering, Erosion Control at 2% Construction Costs
2. Mobilization is assumed to be 10% of Construction
3. Costs are in 2014 dollars

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.

## Lacey Boulevard SE Replacement Summary

**CIP Number: 106**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

**Project Description:** Upsize approximately 900 lf of gravity sewer pipe between MH VBQ01 to MH VCJ01 from 8-inch diameter to 10-inch diameter.

**Project Benefit:** The gravity sewer main in Lacey Blvd is projected to reach its allowable capacity within the 20 year planning horizon. This project will provide capacity through build-out conditions.

**Comments:**

## Schedule and Opinion of Probable Cost

Project Year	2021
Engineering and Allied Cost	\$77,000
Construction Cost	\$222,000
Contingency (35%)	\$100,000
Total Project Cost	\$399,000



**CIP 106: Lacey Boulevard SE Replacement**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$17,300	1	ls	\$17,300
2	Temporary Erosion & Sediment Control	\$3,500	1	ls	\$3,500
3	Dewatering	\$3,500	1	ls	\$3,500
4	10-inch PVC Sewer Pipe, SDR 35	\$117	900	lf	\$105,300
5	48-inch Manhole	\$5,000	3	ea	\$15,000
6	Side Sewer Connections	\$500	23	ea	\$11,250
7	HMA Trench Patch	\$200	205	tn	\$41,000
8	Traffic Control	\$3,500	1	ls	\$3,500
9	General Restoration	\$3,500	1	ls	\$3,500
Subtotal					\$203,850
Sales Tax		8.7%			\$17,735
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$222,000</b>

Planning	5%	\$11,000
Design and Permitting	15%	\$33,000
Services During Construction	15%	\$33,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$77,000</b>

Contingency	35%	\$100,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$399,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

**Lakeview Drive Gravity Main Replacement Phase 2 Summary**

**CIP Number: 107**

<b>Project Type:</b> Capacity	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

**Project Description:** Upsize approximately 500 lf of gravity sewer pipe between MH VYR01 to MH VZD01 from 10-inch diameter to 12-inch diameter.

**Project Benefit:** The existing Lakeview Dr gravity main which serves a large area adjacent to Chambers Lake is nearing its maximum capacity and needs to be upsized to reduce the risk of surcharging and to serve future growth. This project will provide capacity through build-out conditions.

**Comments:**

**Schedule and Opinion of Probable Cost**

Project Year	2021
Engineering and Allied Cost	\$49,000
Construction Cost	\$137,000
Contingency (35%)	\$65,000
Total Project Cost	\$251,000



**CIP 107: Lakeview Drive Gravity Main Replacement Phase 2**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$10,700	1	ls	\$10,700
2	Temporary Erosion & Sediment Control	\$2,100	1	ls	\$2,100
3	Dewatering	\$2,100	1	ls	\$2,100
4	12-inch PVC Sewer Pipe, SDR 35	\$125	500	lf	\$62,500
5	48-inch Manhole	\$5,000	3	ea	\$15,000
6	Side Sewer Connections	\$500	13	ea	\$6,250
7	HMA Trench Patch	\$200	114	tn	\$22,778
8	Traffic Control	\$2,100	1	ls	\$2,100
9	General Restoration	\$2,100	1	ls	\$2,100
Subtotal					\$125,628
Sales Tax		8.7%			\$10,930
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$137,000</b>

Planning	5%	\$7,000
Design and Permitting	15%	\$21,000
Services During Construction	15%	\$21,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$49,000</b>
Contingency	35%	\$65,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$251,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Costs are in 2014 dollars

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.

### LS-23 and Force Main Upgrade to 8-inch Summary

**CIP Number: 108**

<b>Project Type:</b> Capacity, Obsolescence	Replacement	
	Upgrade	
	Expansion	<input checked="" type="checkbox"/>

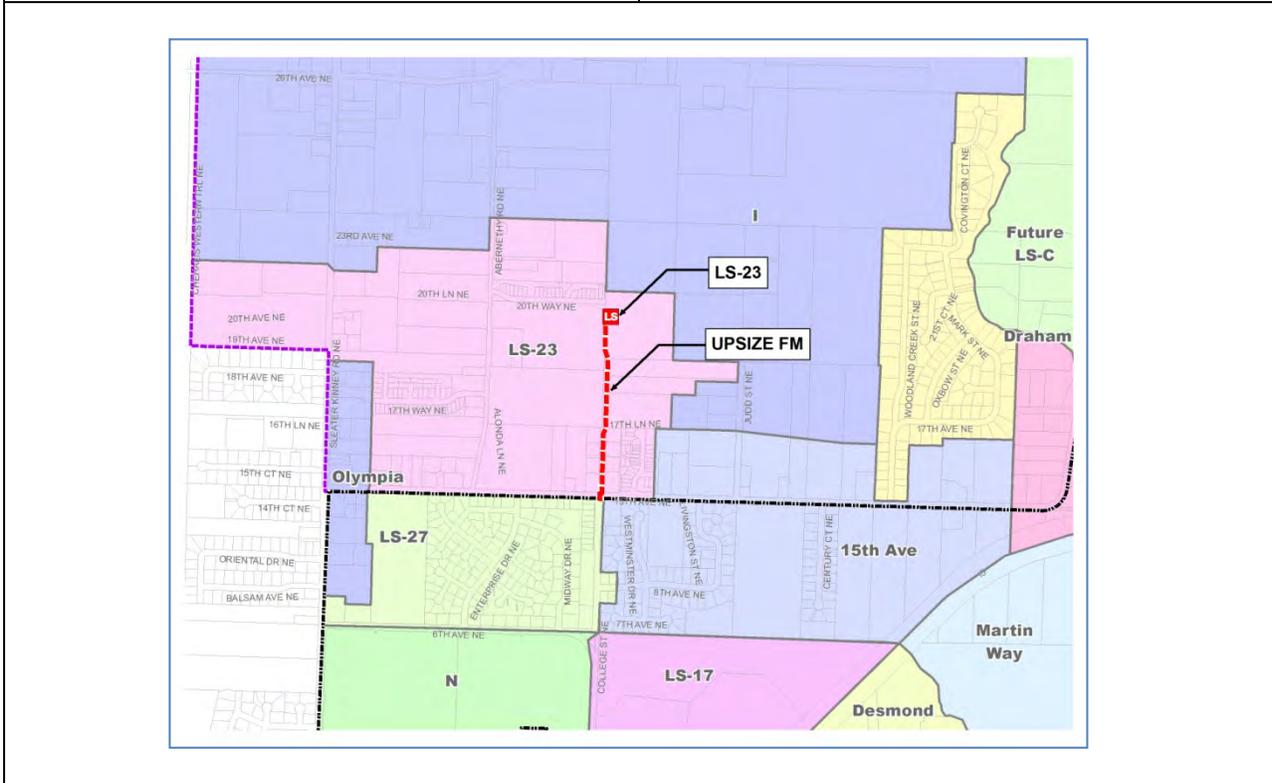
**Project Description:** Upsize 1,850 lf of force main from 4-inch diameter to 8-inch diameter in 2022. Upgrade mechanical and electrical equipment at LS-23.

**Project Benefit:** Lift Station 23 is not able to meet the anticipated increase in flows over the 20 year planning horizon. The existing pumps should be upsized along with the associated mechanical and electrical equipment. The existing 4-inch diameter force main is also undersized and limiting the station's capacity.

**Comments:**

### Schedule and Opinion of Probable Cost

Project Year	2021-2022
Engineering and Allied Cost	\$254,000
Construction Cost	\$727,000
Contingency (35%)	\$343,000
<b>Total Project Cost</b>	<b>\$1,324,000</b>



**CIP 108: LS-23 and Force Main Upgrade to 8-inch**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$56,700	1	ls	\$56,700
2	Temporary Erosion & Sediment Control	\$11,300	1	ls	\$11,300
3	Dewatering	\$11,300	1	ls	\$11,300
4	8-inch PVC Sewer Force Main, C900	\$92	1,850	lf	\$170,200
5	HMA Trench Patch	\$200	421	tn	\$84,278
6	Sandblast, Caulk Jts and Coat Int Wet Well, Pipe & Equip.	\$10,000	1	LS	\$10,000
7	SST Pump Rails	\$3,500	1	LS	\$3,500
8	Disch Piping in Wet Well, incl. support/thrust restraint	\$6,000	1	LS	\$6,000
9	Duplex Submersible Pumps	\$85,000	1	LS	\$85,000
10	Valve Vault Excav & Backfill	\$4,000	1	LS	\$4,000
11	Valve Vault Shoring	\$2,500	1	LS	\$2,500
12	Valve Vault (CIP vault, non-traffic hatch, piping & valves)	\$25,000	1	LS	\$25,000
13	Gravity Sewer from Wet Well to Ex. MH in Street	\$125	50	LF	\$6,250
14	Electrical Equipment Foundation (6-in gravel & 6-in reinf. conc. pad)	\$1,500	1	LS	\$1,500
15	Structural Aluminum Equipment Canopy/Shelter (~14ft x 10ft)	\$10,000	1	LS	\$10,000
16	Primary Power Supply	\$10,000	1	LS	\$10,000
17	UG Power & Controls to Wet Well & Vaults	\$7,500	1	LS	\$7,500
18	Level Controls in Wet Well	\$1,500	1	LS	\$1,500
19	Pump Inst. & Controls in NEMA 3R Enclosures	\$30,000	1	LS	\$30,000
20	MCC in NEMA 3R Enclosures	\$15,000	1	LS	\$15,000
21	Eng-Generator Foundation	\$2,500	1	LS	\$2,500
22	Weather/Acoustical Enclosure w/Eng-Gen, fuel tank, critical silencer, ATS)	\$40,000	1	LS	\$40,000
23	Telemetry	\$10,000	1	LS	\$10,000
24	Flow Meter Vault	\$21,000	1	LS	\$21,000
25	Misc. Yard Piping (water, vault drains, site SD)	\$6,000	1	LS	\$6,000
26	Minor Landscaping	\$5,000	1	LS	\$5,000
27	Site Parking Area (Gravel)	\$3,500	1	LS	\$3,500
28	Site Fencing (50' x 50' site)	\$35	200	LF	\$7,000
29	Traffic Control	\$11,300	1	ls	\$11,300
30	General Restoration	\$11,300	1	ls	\$11,300
Subtotal					\$669,128
Sales Tax		8.7%			\$58,214
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$727,000</b>

Planning	5%	\$36,000
Design and Permitting	15%	\$109,000
Services During Construction	15%	\$109,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$254,000</b>

Contingency	35%	\$343,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$1,324,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Lift Station costs include new mechanical and electrical equipment, valve vault, rehabilitation of existing wet well, generator set, flow meter, and site restoration
7. Costs are in 2014 dollars

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.

**LS-9 and LS-24 Rehabilitation Summary**

**CIP Number: 109**

<b>Project Type:</b> Obsolescence	Replacement	<input checked="" type="checkbox"/>
	Upgrade	
	Expansion	

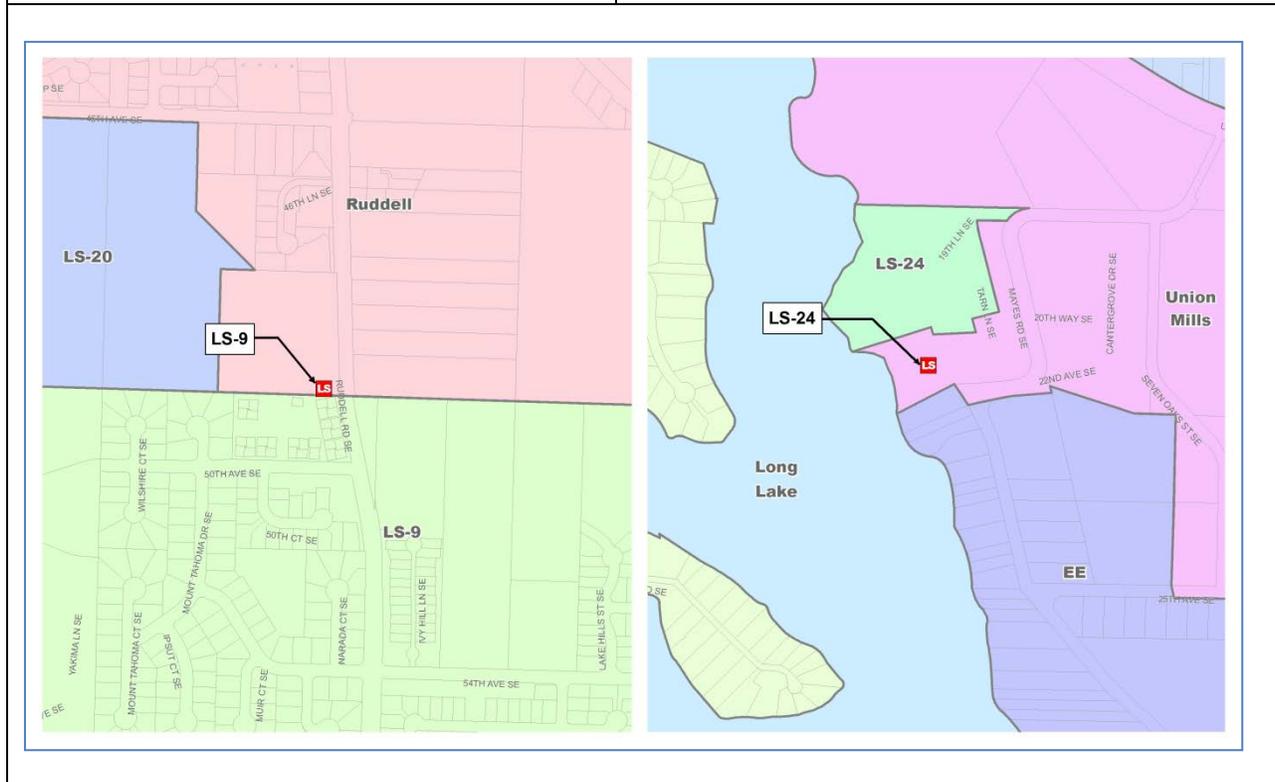
**Project Description:** For LS-9 and LS-24, replace mechanical and electrical equipment, and install flow meters, pressure transducers, and on-site generators. Inspect and repair wet wells as needed.

**Project Benefit:** Lift stations have reached the end of their useful life.

**Comments:** Significant reconfiguration of the wet-well or site layout is not anticipated at these stations.

**Schedule and Opinion of Probable Cost**

Project Year	2023-2024
Engineering and Allied Cost	\$275,000
Construction Cost	\$789,000
Contingency (35%)	\$372,000
<b>Total Project Cost</b>	<b>\$1,436,000</b>



**CIP 109: LS-9 and LS-24 Rehabilitation**

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$62,600	1	LS	\$62,600
2	Temporary Erosion & Sediment Control	\$12,500	1	LS	\$12,500
3	Sandblast, Caulk Jts and Coat Int Wet Well, Pipe & Equip.	\$10,000	2	EA	\$20,000
4	SST Pump Rails	\$3,500	2	EA	\$7,000
5	Disch Piping in Wet Well, incl. support/thrust restraint	\$6,000	2	EA	\$12,000
6	Duplex Submersible Pumps	\$42,500	4	EA	\$170,000
7	Valve Vault Excav & Backfill	\$4,000	2	EA	\$8,000
8	Valve Vault Shoring	\$2,500	2	EA	\$5,000
9	Valve Vault (CIP vault, non-traffic hatch, piping & valves)	\$25,000	2	EA	\$50,000
10	Gravity Sewer from Wet Well to Ex. MH in Street	\$125	100	LF	\$12,500
11	Electrical Equipment Foundation (6-in gravel & 6-in reinf. conc. pad)	\$1,500	2	EA	\$3,000
12	Structural Aluminum Equipment Canopy/Shelter (~14ft x 10ft)	\$10,000	2	EA	\$20,000
13	Primary Power Supply	\$10,000	2	EA	\$20,000
14	UG Power & Controls to Wet Well & Vaults	\$7,500	2	EA	\$15,000
15	Level Controls in Wet Well	\$1,500	2	EA	\$3,000
16	Pump Inst. & Controls in NEMA 3R Enclosures	\$30,000	2	EA	\$60,000
17	MCC in NEMA 3R Enclosures	\$15,000	2	EA	\$30,000
18	Eng-Generator Foundation	\$2,500	2	EA	\$5,000
19	Weather/Acoustical Enclosure w/Eng-Gen, fuel tank, critical silencer, ATS)	\$40,000	2	EA	\$80,000
20	Telemetry	\$10,000	2	EA	\$20,000
21	Flow Meter Vault	\$21,000	2	EA	\$42,000
22	Misc. Yard Piping (water, vault drains, site SD)	\$6,000	2	EA	\$12,000
23	Minor Landscaping	\$5,000	2	EA	\$10,000
24	Site Parking Area (Gravel)	\$3,500	2	EA	\$7,000
25	Site Fencing (50' x 50' site)	\$35	400	LF	\$14,000
26	Traffic Control	\$12,500	1	LS	\$12,500
27	General Restoration	\$12,500	1	LS	\$12,500
Subtotal					\$725,600
Sales Tax		8.7%			\$63,127
<b>TOTAL OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$789,000</b>

Planning	5%	\$39,000
Design and Permitting	15%	\$118,000
Services During Construction	15%	\$118,000
<b>TOTAL OPINION OF PROBABLE ALLIED COST</b>		<b>\$275,000</b>
Contingency	35%	\$372,000
<b>TOTAL OPINION OF PROBABLE PROJECT COST</b>		<b>\$1,436,000</b>

Notes

1. Import backfill assumed to be 100%
2. Foundation Gravel assumed to be 100%
3. Gen. Rest., Dewatering, Traffic Control, Erosion Control at 2% Construction Costs
4. Mobilization is assumed to be 10% of Construction
5. Pipe costs includes all fittings, pipe, bedding, excavation, haul, and pavement restoration
6. Lift Station costs include new mechanical and electrical equipment, valve vault, rehabilitation of existing wet well, generator set, flow meter, and site restoration
7. Costs are in 2014 dollars

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.