

RESOLUTION NO. 892

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GIG HARBOR, WASHINGTON, AMENDING THE WASTEWATER COMPREHENSIVE PLAN BY REVISING THE SEWER COLLECTION BASIN BOUNDARY BETWEEN SEWER COLLECTION BASINS #3 AND #17.

WHEREAS, the Evergreen Business Center (EBC) Project (PL-PPLAT-09-0001) is a 40-acre commercial plat located off Bujacich Drive that is owned by Bay Estates Associates (Owner) and was issued a Mitigated Determination of Nonsignificance on March 30, 2011 through the SEPA process and received land use approval on May 3, 2011; and

WHEREAS, the Owner has proposed the EBC Project connect to the City's sewer collection through Basin #3 even though the EBC Project is located in Basin #17; and

WHEREAS, a SEPA mitigation condition requires the Owner, prior to approval of civil plans for the EBC Project, to either (1) successfully complete a technical amendment to the City's Wastewater Comprehensive Plan (WWCP) to amend the boundary between Basin #3 and Basin #17; or (2) revise the proposed sewer connection to the City's sewer system to comply with the existing sewer basin boundary; and

WHEREAS, the City of Gig Harbor adopted the most recent Wastewater Comprehensive Plan (WWCP) on December 14, 2009 through Ordinance No. 1181; and

WHEREAS, Section 1.4.2 of the WWCP requires technical amendments to be adopted by resolution by the City Council; and

WHEREAS, the City Engineer has reviewed a request and related technical information in a report from the Owner for a technical amendment to the WWCP that would amend the boundary between Basin #3 and Basin #17, which was prepared by Apex Engineering PLLC and dated November 23, 2011; and

WHEREAS, the City Engineer believes the information provided by the Owner sufficiently justifies an amendment to the WWCP.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Gig Harbor, Washington:

Section 1. Tables 2-1 and 2-4 of the WWCP shall be amended to reflect the revisions to the respective tables as provided in the November 23, 2011 EBC Project sewer hydraulic report; and

Section 2. Appendix B of the WWCP shall be amended to reflect the revisions to the Wastewater Basin Map as provided in the November 23, 2011 EBC Project sewer hydraulic report; and

Section 3. The Capital Improvement Program Project Details and Engineers Opinion of Probable Cost, and Forcemain System Curve for Lift Station 17A located in Appendix C of the WWCP shall be amended to reflect the revisions to the respective items as provided in the November 23, 2011 EBC Project sewer hydraulic report.

PASSED this 9th day of January, 2012.


Charles L. Hunter, Mayor

ATTEST:


Molly M. Towslee, City Clerk

FILED WITH THE CITY CLERK: 01/05/12
PASSED BY THE CITY COUNCIL: 01/09/12
RESOLUTION NO. 892

WASTEWATER
COMPREHENSIVE PLAN
AMENDMENT
FOR
EVERGREEN
BUSINESS CENTER

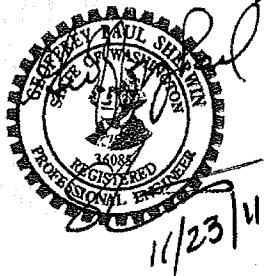
NOVEMBER 23, 2011

WASTEWATER COMPREHENSIVE PLAN AMENDMENT

FOR

EVERGREEN BUSINESS CENTER

Located in the NE Quarter
of Section 1, Township 21 North, Range 1 East, W.M.
Situating in Pierce County, Washington



Prepared for:
Bay Estates Associates
Attn: Mr. Douglas Howe
2025 First Avenue Suite 790
Seattle, Washington 98121

Prepared by:
Apex Engineering PLLC
2601 S. 35th Street, Suite 200
Tacoma, Washington 98409
(253) 473-4494
File #31228/2
November 23, 2011

Project Engineer: 
Kimberly Savage, P.E.

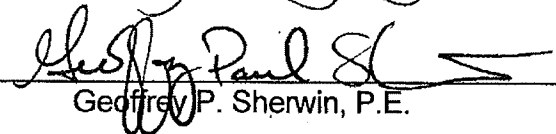
Project Manager: 
Geoffrey P. Sherwin, P.E.



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SECTION I: INTRODUCTION AND SUMMARY

This document summarizes the proposed sanitary sewer design to serve the Evergreen Business Center project and provides supporting documentation for a Wastewater Comprehensive Plan Amendment to the 2009 Plan.

Based upon the information provided, this amendment to the 2009 Wastewater Comprehensive Plan to revise the basin line between Wastewater (WW) Basin 3 and 17 according to the attached map in Appendix A should be sufficiently justified and supported. The overall associated demand projections will still be accounted for according to the existing Wastewater Comprehensive Plan, the amendment is only a reconfiguration of the demand. This reconfigured demand will not adversely impact basin 3, Lift Station 3A, or the City's wastewater treatment plant, as this project was designed to flow into Basin 3 and these facilities directly after Basin 17. Finally, since Lift Station 17A has not been designed this revision can be included when it gets designed in the future.

SECTION II: PROPOSED DEVELOPMENT

The project is located in the northern portion of Gig Harbor within Section 1, Township 21 North, Range 1 East of the Willamette Meridian. Evergreen Business Center is a light industrial development comprised of 24 lots with accompanying internal plat road and servicing utilities. The overall plat is 37.76+/- acres.

The infrastructure for this project is currently proposed to be completed in one phase. Individual lot development will occur in subsequent phases. Based upon preliminary building layout the total building square footage is 251,974 SF.

SECTION III: EXISTING CONDITIONS

The existing site is undeveloped with scattered mature evergreen trees, grasses and heavy brush; slopes vary throughout the site ranging from approximately 5-12%. There are six wetlands and associated buffers located onsite.

The existing zoning is Employment District and the existing land use is Employment Center with 24 lots for the 37.76+/- acre site.

There is an existing 8" PVC sewer main along Bujacich Road, an existing sanitary sewer manhole located at the northeast corner of the project site with an invert approximately 6.2 feet deep, followed by another manhole approximately 275 feet to the east with an invert approximately 8.5 feet deep. The existing sanitary sewer line does not currently extend along the frontage of the project site.

According to Section 5B.010 of the Public Works Standards, the City of Gig Harbor prefers to have all sites served by gravity sanitary sewer where feasible. However, the current City of Gig Harbor 2009 Wastewater Comprehensive Plan includes the subject project within the Wastewater (WW) Basin 17, which is designed to be collected in a future lift station, 17A, and discharge north to Basin 3 at some point in the future.

According to 2.4.2 Demographic Forecast Allocation Model for Wastewater (DFAM-WW) Overview Existing Wastewater Basin Descriptions, Basin 3 is the largest basin, where "All wastewater flows generated in the City's service area flow through Lift Station 3A, which discharges directly to the City's wastewater treatment plant."

SECTION IV: PROPOSED DESIGN

As noted above, the proposed project use is a combination of commercial office, light manufacturing, service, and small warehouse.

To provide sanitary sewer service to this project, the proposed gravity sanitary sewer main will extend the existing sewer main westward along Bujacich Road from the intersection of 96th Street Northwest and Bujacich Road, to the west entrance of the Evergreen Business Center Project. The City of Gig Harbor limits end at the west property line this project, therefore future extension of this main is not needed nor is it necessary to extend this main along the entire frontage of this project. From both the east and the west entrances of the project along Bujacich Road, the sanitary sewer will extend south to internally serve the individual lots of this project.

The demand associated with this project has been accepted by the City Engineer and an approved concurrency letter was received from the City of Gig Harbor, dated October 21, 2010, accepting the estimated 84 equivalent residential units (ERUs). Utilizing the DFAM-WW for Basin 3 and Basin 17, as described in the 2009 Comprehensive Plan, these aforementioned 84 ERU's would be proposed to be transferred from Basin 17 to Basin 3. Refer to the revised Tables 2-1 and 2-4 found in Appendix B; this revision will still maintain the total overall projected growth, the proposed amendment is only redistributing this demand.

Due to the revision in ERUs there will be a slight revision to the peak hour flow for the proposed Lift Station 17. Refer to Appendix C for these revisions.

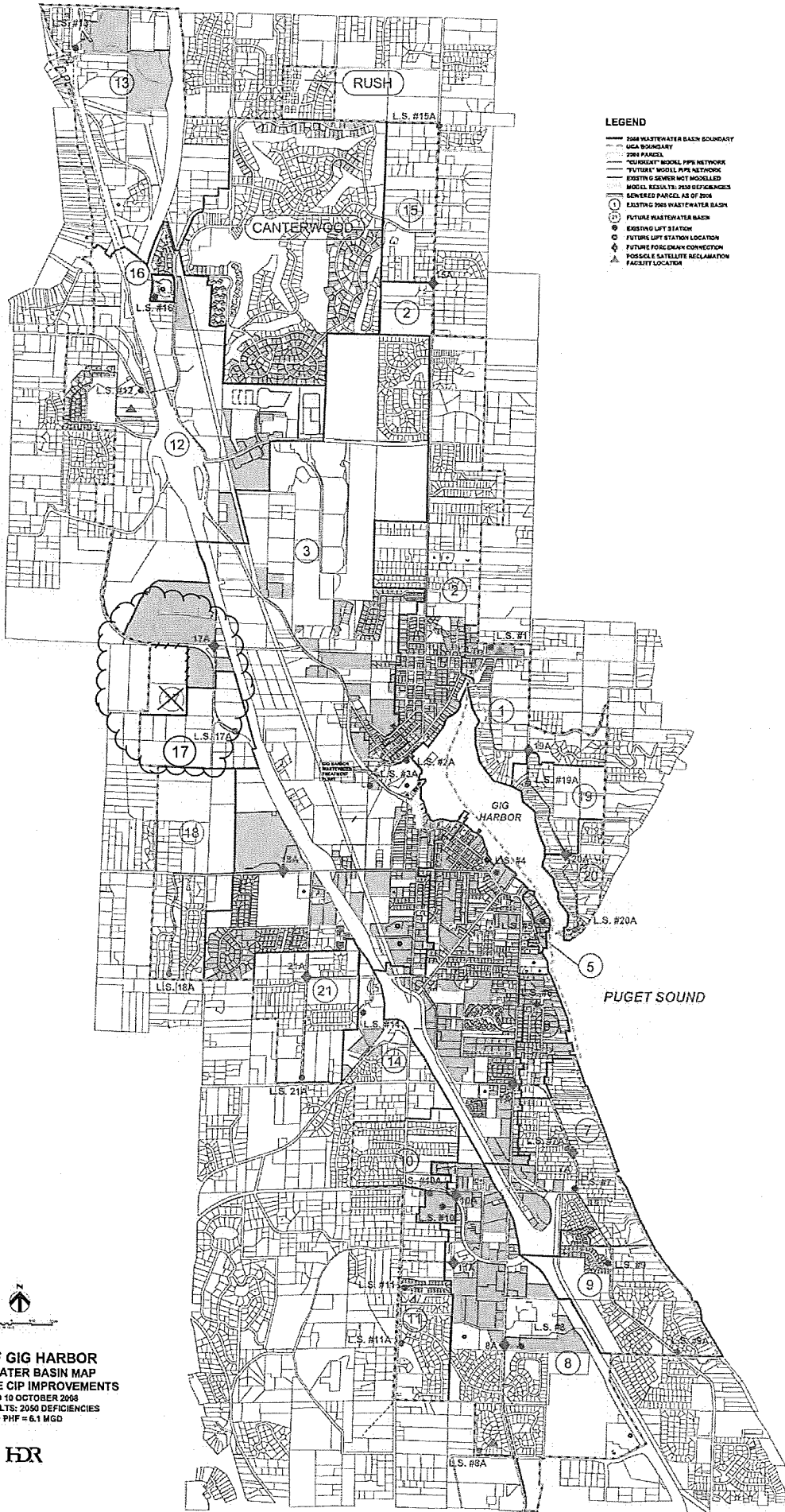
Due to timing, costs, and the fact there is another viable option via gravity flow, it is our proposal to modify the boundary line between Basin 3 and Basin 17 to now include the above mentioned parcels in Basin 3; refer to the revised Wastewater Basin Map attached. With all discharge being conveyed through Lift Station 3A, the reconfiguration of the demand from Basin 17 directly to Basin 3 should not adversely affect this lift station or the wastewater treatment plant. Since Lift Station 17A is still a future lift station, and according to the current Comprehensive Plan does not have a scheduled

date, the design can reflect this change in the future and a cost savings will also be incurred for the City by the need for a smaller lift station.


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APPENDIX A

BASIN MAP



- LEGEND**
- 2050 WASTEWATER BASIN BOUNDARY
 - UGA BOUNDARY
 - ZONING PANELS
 - 2050/2060 MODEL SPPN NETWORK
 - FUTURE MODEL SPPN NETWORK
 - EXISTING SEWER NOT MODELLED
 - MODEL RESULTS PER DEFICIENCIES
 - GENERATED PARCEL AS OF 2008
 - EXISTING 2050 WASTEWATER BASIN
 - FUTURE WASTEWATER BASIN
 - EXISTING LIFT STATION
 - FUTURE LIFT STATION LOCATION
 - FUTURE FORCE MAIN CONNECTION
 - POSSIBLE SATELLITE RECLAMATION FACILITY LOCATION


CITY OF GIG HARBOR
WASTEWATER BASIN MAP
GRAVITY PIPE CIP IMPROVEMENTS
 PRINTED 10 OCTOBER 2008
 MODEL RESULTS: 2050 DEFICIENCIES
 2050 PHF = 6.1 MGD

HDR

APPENDIX B

GROWTH PROJECTIONS

Table 2-1. Dataset for Use in DFAM-WW

Area Code (1)	Households		Total Future Capacity (3)				Employment		
	Current Estimate (2)		2025		Buildout		Current Estimate (2)	Total Future Capacity (3)	
	SF	MF	SF	MF	SF	MF	2025	Buildout	
WWB-1	103	45	197	88	233	103	219	96	107
WWB-2	433	206	641	278	718	315	210	323	364
WWB-3	550	366	1,572	926	1,688	1,003	5,747 5,831	12,829	14,215 14,299
WWB-4	366	420	438	527	461	553	3,067	3,522	12,913
WWB-5	14	9	17	11	17	11	57	46	57
WWB-6	98	31	133	32	147	36	--	16	20
WWB-7	189	121	270	189	304	211	703	819	877
WWB-8	209	313	181	370	189	383	3,749	3,954	4,958
WWB-9	184	83	223	103	245	113	--	30	38
WWB-10	154	145	175	156	183	163	207	309	339
WWB-11	143	12	227	17	258	19	138	312	358
WWB-12	67	2	771	28	824	30	2,427	7,256	7,724
WWB-13	124	34	217	56	252	66	2,509	3,920	4,520
WWB-14	52	33	114	55	126	63	976	1,664	1,985
WWB-15	43	92	73	168	91	205	--	48	60
WWB-16	--	94	--	65	--	65	--	--	--
WWB-17	--	--	--	--	--	--	411 327	4,263 4,179	4,930 4,846
WWB-18	137	13	309	22	356	26	--	52	64
WWB-19	45	9	88	15	101	18	--	13	16
WWB-20	59	1	97	2	107	2	--	9	11
WWB-21	115	42	260	75	298	89	308	731	836
WWB-Canterwood	548	--	784	--	941	--	--	138	173
WWB-Rush	--	--	71	--	71	--	--	--	--

SF = Single Family; MF = Multifamily

Minor PSA ID: i=inside city limits; o=outside city limits

1. PSA refers to the geographic areas that the Gig Harbor UGA was divided into for the purposes of this analysis. The "o" in the minor ID refers to outside the city limits, while "i" refers to inside city limits.
2. Current refers to the current estimated number of households or employees, irrespective of the BLI classification parcels are assigned to.
3. Total Future Capacity refers to the total estimated number of households or employees that is potentially available by 2025 or buildout. This is the sum of developed and future additional capacity.

Table 2-4. Sewered Employment Based on Current and Developed Parcels by Basin for the Gig Harbor UGA

Area Code (1)	Current Employment (2)				Developed Parcel Employment (3)			
	Active Sewer Connection	No Sewer Connection	Total Current Employment	Percent Sewered	Active Sewer Connection	No Sewer Connection	Total Developed Employment	Percent Sewered
WWB-1	219	--	219	100.0%	51	--	51	100.0%
WWB-2	71	139	210	33.7%	45	118	163	27.7%
WWB-3	4,828	949	5,777	84.0%	3,831	454	4,285	89.4%
WWB-4	2,716	351	3,067	88.5%	2,163	133	2,296	94.2%
WWB-5	56	1	57	98.9%	3	1	4	83.7%
WWB-6	--	--	--	0.0%	--	--	--	0.0%
WWB-7	587	117	703	83.4%	552	85	637	86.7%
WWB-8	2,781	968	3,749	74.2%	1,735	224	1,959	88.6%
WWB-9	--	--	--	0.0%	--	--	--	0.0%
WWB-10	79	127	207	38.4%	79	108	187	42.4%
WWB-11	16	122	138	11.7%	--	122	122	0.0%
WWB-12	1,379	1,048	2,427	56.8%	620	1,035	1,655	37.5%
WWB-13	1,527	982	2,509	60.9%	1,493	587	2,080	71.8%
WWB-14	271	705	976	27.7%	217	497	714	30.4%
WWB-15	--	--	--	0.0%	--	--	--	0.0%
WWB-16	--	--	--	0.0%	--	--	--	0.0%
WWB-17	--	444	327	0.0%	--	--	--	0.0%
WWB-18	--	--	--	0.0%	--	--	--	0.0%
WWB-19	--	--	--	0.0%	--	--	--	0.0%
WWB-20	--	--	--	0.0%	--	--	--	0.0%
WWB-21	--	308	308	0.0%	--	308	308	0.0%
WWB-Canterwood	--	--	--	0.0%	--	--	--	0.0%
WWB-Rush	--	--	--	0.0%	--	--	--	0.0%

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2. Current refers to the current estimated number of employees, irrespective of the BLI classification parcels are assigned to.
3. Developed employees are those employees that are currently in place, classified as developed, and are anticipated to remain unchanged.



PUBLIC WORKS DEPARTMENT

October 21, 2010

Geoffrey Sherwin, P.E.
Apex Engineering
2601 S. 35th Street, Suite 200
Tacoma, WA 98409

Re: Evergreen Business Center (PL-SPR-10-0002)
--Alternative Sewer Usage Calculation Approval

Dear Mr. Sherwin:

The City of Gig Harbor has reviewed the revised ERU value and requested table information utilized to determine the approximate sewer use for the Evergreen Business Center as provided in your letter dated September 27, 2010.

In accordance with the Gig Harbor Municipal Code (GHMC), Section 13.32.060, the City may use actual or projected flow calculations approved by the City Engineer. If projected flow calculations are used, the general facilities charge shall be adjusted after the first year of operation of the establishment to reflect actual flow usage in the event the flows were underestimated.

Based on the information contained in the September 27, 2010 letter and the City's evaluation of the projected water consumption, the City finds the following:

Findings:

Based on the documentation that you have provided and my analysis, it is estimated that eighty-four (84) sewer Equivalent Residential Units (ERU's) will be needed for the project at this time. In accordance with GHMC 13.32, the City will re-evaluate the actual water flow after one year of continuous operation to determine if the actual usage is consistent with the flows you projected in your documentation. If the actual calculated usage is found to be greater than eighty-four (84) ERU's, the owner shall pay the general facilities charge related the actual calculated usage.

Thank you for your work in the City of Gig Harbor.

Sincerely,

Stephen Misiurak, P.E.
City Engineer

Encl. September 27, 2010 Letter

c: Amy Londgren, Engineering Technician
Cliff Johnson, Associate Planner

APPENDIX C

CAPITAL IMPROVEMENT PROGRAM



City of Gig Harbor
Wastewater Comprehensive Plan Update
Capital Improvement Program
Project Details

Project ID: Project Title: Staff Preferred Priorities (by project grouping):

Identified Need or Deficiency Project will Address:

Project Description: Project Justification:

167 gpm

Lift Station Pump Design Flow: Lift Station Pump Design Head: Forcemain Diameter:

Estimated Total Project Cost (2008 dollars): Annual Inflation Factor:

Year Scheduled for Implementation: Estimated Total Project Cost at Year of Implementation:

Cost Estimate Basis:

Cost Allocation:

Existing Customers: Future Customers: Developer:

**City of Gig Harbor
Lift Station 17A
Engineers Opinion of Probable Cost**

Bid Item	Unit	Quantity	Unit Price	Extended Amount
<i>Mobilization/Demobilization</i>				
Mobilization/Demobilization	LS	1	\$ 72,300	\$72,300
<i>Site/Civil</i>				
Clearing and Grubbing	LS	1	\$ 10,000	\$10,000
Site Grading	LS	1	\$ 5,000	\$5,000
Sawcut ex. ACP	LS	1	\$ 3,000	\$3,000
Removal of Existing Pump Station	LS	1	\$ 30,000	\$30,000
Site Haul	LS	1	\$ 10,000	\$10,000
Construction Surveying	LS	1	\$ 5,000	\$5,000
Traffic Control	LS	1	\$ 5,000	\$5,000
Dewatering	LS	1	\$ 10,000	\$10,000
			<i>Estimated Cost</i>	\$78,000
<i>Electrical/Instrumentation</i>				
Electrical	LS	1	\$ 103,000	\$103,000
Instrumentation	LS	1	\$ 51,500	\$51,500
			<i>Estimated Cost</i>	\$154,500
<i>Structural</i>				
Wetwell (20-foot deep precast)	LS	1	\$ 60,000	\$60,000
PreCast Lid/Riser	LS	1	\$ 10,000	\$10,000
Footing	LS	1	\$ 30,000	\$30,000
Waterproofing	LS	1	\$ 15,000	\$15,000
Paint and Protective Coatings	LS	1	\$ 20,000	\$20,000
Ladder-up Safety Extension	LS	1	\$ 5,000	\$5,000
			<i>Estimated Cost</i>	\$140,000
<i>Mechanical</i>				
Submersible Pumps and Appurtenances	EA	2	\$ 20,000	\$40,000
Pump Design Flow	GPM	470 167		
Pump Design Head	FT	65		
Dry Primed Pump	EA	1	\$ 15,000	\$15,000
Ductile Iron Pipe	LS	1	\$ 5,000	\$5,000
HVAC	LS	1	\$ 20,000	\$20,000
Odor Control	LS	1	\$ 30,000	\$30,000
			<i>Estimated Cost</i>	\$110,000
Estimated Construction Subtotal				\$554,800

City of Gig Harbor Lift Station Planning (L.S. No.17A)

