

# Memorandum



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**To:** Sam Adams, Steve Wall - City of Camas

**From:** Tim Kraft

**Prepared By:** Tim Kraft

**Date:** May 8, 2017

**Subject:** North Shore-STS: Cost sharing with Camas School District

**Project No.:** 17628

The Camas School District (District) intends to build a new school near the intersection of NE 9<sup>th</sup> Street and NE 232<sup>nd</sup> Avenue. In order to serve this new school with water and telecommunication services, the District will install a new 12-inch waterline and fiber optic line in NE Leadbetter Road. To combine efforts and resources, these will be designed and constructed with the North Shore Sewer Transmission System and the District will enter into an agreement with the City of Camas to participate in cost-sharing for design and construction of the waterline and fiber optic line.

In addition, the City and the District are sharing the costs of the installation of a water line in NE 43<sup>rd</sup> Avenue, and the installation of a storm pipe in place of the roadside ditch in the same street.

The project also includes the installation of a 12-inch gravity sewer line from the 232<sup>nd</sup> Avenue Pump Station to the new school. These costs will be paid by the District.

This document describes the process for estimating cost-sharing of the preliminary design, final design, and construction management tasks for the North Shore STS project. The two enclosed tables show the split of costs, and Table 4, included with this document summarizes the cost sharing.

## **Cost Sharing Methodology**

### **Engineering Design**

The District's waterline is approximately 9,907 feet in length, and the city's sewer line is 24,675 feet long. Approximately 39 percent of the sewer pipeline will be installed in the same corridor as the District waterline, and approximately 325 feet of the waterline will not be parallel to the sewer line but will receive the same services with this phase of the work. Thus, the total length of waterline is 40 percent of the length of the sewer line. Therefore, the proposed method for cost-sharing between the city and district for design costs is to evenly split 40 percent of the design costs for tasks applicable to both the sewer pipeline and the water pipeline. Tables 1 and 2 lists the tasks and cost sharing for both agencies.

**Table 1: Preliminary Design Cost Sharing**

<b>Task</b>	<b>Description</b>	<b>Total Budget by Task</b>	<b>City of Camas</b>	<b>Camas School District</b>
1	Flow Projections	\$15,790	\$15,790	
2	Alternatives Evaluation	\$227,640	\$227,640	
3	Preliminary Design	\$401,208	\$401,208	
4	Survey and Mapping	\$95,450	\$57,270	\$38,180
5	Geotechnical Investigation	\$31,368	\$25,094	\$6,274
6	Environmental Services	\$13,556	\$13,023	\$533
7	Cultural and Historic Resource Assessments	\$108,795	\$87,036	\$21,759
8	Right of Way	\$2,000	\$2,000	
9	Project Management	\$89,636	\$81,665	\$7,971
10	Risk Register	\$12,495	\$12,495	
	Subconsultant Administration	\$29,900	\$17,691	\$12,209
	Expenses	\$61,936	\$44,666	17270
	<b>TOTALS</b>	<b>\$1,089,774</b>	<b>\$1,004,668</b>	<b>\$85,106</b>

**Table 2: Final Design Cost Sharing**

<b>Task</b>	<b>Description</b>	<b>Total Budget by Task</b>	<b>City of Camas</b>	<b>Camas School District</b>
1	Survey and Mapping	\$75,230	\$62,366	\$12,864
2	Environmental Services	\$24,681	\$20,997	\$3,684
3	Geotechnical Investigation	\$15,800	\$15,800	
4	Cultural and Historic Resource Assessments	\$184,258	\$179,033	\$5,225
5	Public Involvement	\$6,464	\$6,464	
6	Real Property Services	\$7,500	\$7,500	
7	Land Use Permitting	\$14,080	\$12,690	\$1,390
8	60 Percent Design	\$341,326	\$323,171	\$18,155
9	Contract Documents	\$549,534	\$501,795	\$47,739
10	Project Management	\$107,020	\$85,616	\$21,404

<b>Table 2: Final Design Cost Sharing</b>				
11	Camas North Shore School Design Support	\$18,658		\$18,658
	Subconsultant Administration	\$44,844	\$43,797	\$1,047
	Expenses	\$83,388	\$74,644	\$8,744
	<b>Project Total</b>	<b>\$1,472,783</b>	<b>\$1,333,873</b>	<b>\$138,910</b>

### Construction Management

As with the design, the intent for construction management is to evenly split 40 percent of the design costs for tasks applicable to both the sewer pipeline and the water pipeline. The costs applicable to both are shown in Table 3.

<b>Table 3: Construction Management Costs Sharing</b>				
<b>Task</b>	<b>Description</b>	<b>Total Budget by Task</b>	<b>City of Camas</b>	<b>Camas School District</b>
1	Construction Management and Inspection	\$994,810.60	\$ 795,848.48	\$198,962.12
2	Survey and Mapping	\$159,563.00	\$127,650.40	\$31,912.60
3	Archeological Site Monitoring	\$86,827.98	\$86,827.98	
4	Design Services During Construction	\$247,250.73	\$197,800.58	\$49,450.15
5	Startup, Testing, and Commissioning Services	\$10,374.20	\$10,374.20	
6	Record Drawings	\$59,982.40	\$47,985.92	\$11,996.48
7	Public Involvement	\$37,280.73	\$29,824.58	\$7,456.15
8	NS-STs Operations and Maintenance Manual	\$18,790.56	\$18,790.56	
9	Remote Odor Control System De-Pressurization Test	\$8,028.28	\$8,028.28	
10	Control System Programming and Commissioning	\$95,524.85	\$95,524.85	
	Subconsultant Administration	\$36,904.27	\$36,274.27	\$630.00
	Expenses	\$29,644.00	\$27,264.20	\$2,379.80
	<b>Project Total</b>	<b>\$1,784,981</b>	<b>\$1,482,194</b>	<b>\$302,787</b>

### Electrical Service

Clark Public Utilities must run new power lines to the school to the Leadbetter Road Pump Station, and to the NE 232<sup>nd</sup> Avenue Pump Station. The total cost for this service is \$157,205, with the City paying \$94,026 and the District paying \$63,179.

## **Construction**

For construction, there are items to be paid by just the District or just the city, items to be shared by both where quantities cannot be determined (i.e. lump sum items such as mobilization), and items where quantities can be calculated for use in determining costs for both agencies. Bid items have been broken down per these 3 categories. Attached to this memo is Table 5 summarizing the bid items. They are highlighted as follows:

1. Bid items to be paid by one agency are not shaded.
2. Bid items to be paid by each agency where quantities can be determined are shaded in gray.
3. Bid items where separate quantities cannot be determined have been split the same way construction management and design costs were split – 80% to the city and 20 % to the District. These items are shaded in tan.

In addition, the attached Table 4 summarizes the costs for each agency for all items discussed in this memorandum.

**Table 4: Final North Shore-STS Phase 1 Costs Summary Table**

Component	Construction	Prelim & Final Engineering	Construction Management							ROW	Pvmt. Removal & Hazmat	Electrical Service	Total
			Mgmt and Inspection	Survey	Design Services	Test, O&M, Program	Public Involvement	Archaeo-logical	Expense/Sub Admin				
<b><u>City of Camas</u></b>													
<b>North Shore-STS</b>													
Pipelines	\$5,936,064									\$200,000	\$68,270		
Goodwin Road Pump Station	\$200,000												
232nd Ave Pump Station	\$999,000											\$76,253	
Leadbetter Rd Pump Station	\$1,000,000											\$17,773	
Remote Odor Control Facility	\$186,000												
<b>North Shore-STS SUBTOTAL</b>	<b>\$8,321,064</b>	\$2,338,541	\$795,848	\$127,650	\$245,787	\$132,718	\$29,825	\$86,828	\$63,538	\$200,000	\$68,270	\$94,026	\$12,504,096
43rd Ave Storm Pipe and Ditch Fill	\$28,255												\$28,255
<b>City of Camas Total</b>	<b>\$8,349,319</b>												<b>\$12,532,350</b>
 <b><u>CAMAS SCHOOL DISTRICT</u></b>													
Water Main & 12" Sewer	\$2,099,321												\$2,099,321
43rd Ave Storm Pipe and Ditch Fill	\$28,255												\$28,255
<b>School District Total</b>	<b>\$2,127,576</b>	\$224,016	\$198,962	\$31,913	\$61,447	\$0	\$7,456	\$0	\$3,010	\$0	\$0	\$63,179	<b>\$2,717,559</b>
<b>TOTAL</b>	<b>\$10,476,895</b>	<b>\$2,562,557</b>	<b>\$994,811</b>	<b>\$159,563</b>	<b>\$307,233</b>	<b>\$132,718</b>	<b>\$37,281</b>	<b>\$86,828</b>	<b>\$66,548</b>	<b>\$200,000</b>	<b>\$68,270</b>	<b>\$157,205</b>	<b>\$15,249,909</b>

Table 5: NORTH SHORE SEWER TRANSMISSION SYSTEM COST SPLIT			
LEGEND			
		Split 80% City and 20% CSD	
		Split is based on calculated quantities	
BID ITEM DESCRIPTION	TOTAL	City	CSD
MOBILIZATION	\$670,700	\$536,560	\$134,140
MINOR CHANGE	\$20,000	\$20,000	\$0
RECORD DRAWINGS (MINIMUM BID \$10,000)*	\$10,000	\$8,000	\$2,000
CONSTRUCTION DOCUMENTATION (MINIMUM BID \$10,000)*	\$10,000	\$8,000	\$2,000
SPCC PLAN	\$5,000	\$4,000	\$1,000
ARCHAEOLOGICAL STANDBY TIME	\$20,000	\$16,000	\$4,000
SURFACE PROTECTION MATTING	\$49,000	\$49,000	
INCENTIVE (MILESTONE 1)	\$10,000	\$10,000	
INCENTIVE (MILESTONE 2)	\$10,000	\$10,000	
INCENTIVE (MILESTONE 3)	\$10,000	\$10,000	
INCENTIVE (MILESTONE 4)	\$20,000	\$20,000	
INCENTIVE (MILESTONE 5)	\$10,000	\$10,000	
TYPE B PROGRESS SCHEDULE (MINIMUM BID \$20,000)*	\$20,000	\$16,000	\$4,000
PROJECT TEMPORARY TRAFFIC CONTROL	\$35,000	\$28,000	\$7,000
FLAGGERS (EVERETT STREET)	\$159,000	\$159,000	
FLAGGERS (SURVEY SUPPORT)	\$5,300	\$4,240	\$1,060
PORTABLE CHANGEABLE MESSAGE SIGN	\$20,300	\$16,240	\$4,060
FIELD OFFICE BUILDING	\$20,000	\$16,000	\$4,000
CLEARING AND GRUBBING	\$100,000	\$100,000	
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	\$17,000	\$13,600	\$3,400
ROADWAY EXCAVATION INCL. HAUL	\$9,200	\$7,222	\$1,978
GRAVEL BORROW INCL. HAUL	\$7,200	\$7,200	
EMBANKMENT COMPACTION	\$450	\$450	
CONTROLLED DENSITY FILL BACKFILL SUBSTITUTION	\$23,800	\$13,440	\$10,360
CONSTRUCTION GEOTEXTILE FOR SEPARATION	\$2,790	\$2,790	
CRUSHED SURFACING TOP COURSE	\$31,815	\$31,815	
CRUSHED SURFACING BASE COURSE	\$156,600	\$98,172	\$58,428
HMA CL. 1/2 INCH PG 64-22 (TRENCH PATCH)	\$313,500	\$230,850	\$82,650
HMA CL. 1/2 INCH PG 64-22	\$240,000	\$113,600	\$126,400
PLANING BITUMINOUS PAVEMENT	\$10,120	\$4,968	\$5,152
CONCRETE CLASS 4000 FOR ABUTMENT	\$45,725	\$45,725	
GRAVEL BACKFILL FOR WALLS	\$1,950	\$1,950	
ST. REINF. BAR FOR ABUTMENT	\$4,690	\$4,690	
BRIDGE UTILITY SUPPORTS	\$27,500	\$27,500	
150 FT PREFABRICATED STEEL TRUSS BRIDGE	\$350,000	\$350,000	
DUCTILE IRON CULVERT PIPE 12 IN. DIAM	\$3,740	\$3,740	
MANHOLE COATING	\$39,650	\$39,650	
MANHOLE 48 IN. DIAM. TYPE 1	\$45,500	\$42,000	\$3,500
MANHOLE 60 IN. DIAM. TYPE 1	\$20,700	\$20,700	
CONNECTION TO DRAINAGE STRUCTURE	\$520	\$520	
REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL	\$30,000	\$24,000	\$6,000
SHORING**	\$36,011	\$24,080	\$11,931
ROCK EXCAVATION (SEWER)***	\$150,000	\$150,000	
TRENCH SECTION E (12 INCH DIAM. GRAVITY)	\$138,890	\$138,890	
TRENCH SECTION H (18 INCH DIAM. GRAVITY)	\$254,448	\$254,448	
TRENCH SECTION K (8 INCH DIAM. GRAVITY)	\$9,288	\$9,288	
TESTING SEWER PIPE	\$7,180	\$6,530	\$650
CONNECT EXIST. SANITARY SEWER LATERAL	\$8,000	\$8,000	
TRANSITION STRUCTURE	\$45,600	\$45,600	
AIR -VACUUM VAULT AND ASSEMBLY	\$210,000	\$210,000	
AIR - VACUUM VAULT AND ASSEMBLY (BRIDGE SITE)	\$15,000	\$15,000	
ODOR CONTROL VAULT ASSEMBLY (BRIDGE SITE)	\$16,500	\$16,500	
TRENCH SECTION A (DUAL 6 INCH DIAM. FM, 2 INCH DIAM. CONDUIT)	\$182,682	\$182,682	
TRENCH SECTION B (DUAL 6 INCH DIAM. FM, 2 INCH DIAM. CONDUIT)	\$240,746	\$240,746	
TRENCH SECTION C (6 INCH DIAM. FM, 8 INCH DIAM. FM)	\$656,115	\$656,115	
TRENCH SECTION F (DUAL 8 INCH DIAM. FM)	\$111,628	\$111,628	
TRENCH SECTION G (DUAL 8 INCH DIAM FM, 4 INCH DIAM. CONDUIT)	\$47,672	\$47,672	
TRENCH SECTION I (8 INCH DIAM FM)	\$370,624	\$370,624	
TRENCH SECTION J (8 INCH DIAM DI FM)	\$17,325	\$17,325	
FORCE MAIN LOCATOR STATION	\$9,900	\$9,900	
PIPELINE PIGGING	\$43,000	\$43,000	
SANITARY SEWER BYPASS SYSTEM	\$12,700	\$12,700	
ESC LEAD	\$8,800	\$7,040	\$1,760
INLET PROTECTION	\$3,450	\$2,760	\$690

Table 5: NORTH SHORE SEWER TRANSMISSION SYSTEM COST SPLIT			
LEGEND			
		Split 80% City and 20% CSD	
		Split is based on calculated quantities	
BID ITEM DESCRIPTION	TOTAL	City	CSD
HIGH VISIBILITY SILT FENCE	\$30,713	\$24,570	\$6,143
WATTLE	\$25,800	\$20,640	\$5,160
HIGH VISIBILITY FENCE	\$6,409	\$5,127	\$1,282
EROSION/WATER POLLUTION CONTROL	\$20,000	\$16,000	\$4,000
SEEDING, FERTILIZING, AND MULCHING (SEED MIX 1 UPLAND)	\$4,000	\$4,000	
STORMWATER DISCHARGE SAMPLING	\$3,400	\$2,720	\$680
TOPSOIL TYPE A	\$2,128	\$2,128	
TOPSOIL TYPE B	\$3,376	\$3,376	
BARK MULCH	\$480	\$480	
PSIPE – SHRUBS, #1 CONT.	\$8,390	\$8,390	
PSIPE - SHRUBS, #3 CONT.	\$512	\$512	
PSIPE - SHRUBS, #5 CONT.	\$252	\$252	
PSIPE – SHRUBS, 1.5 FT HT., BARE ROOT	\$7,728	\$7,728	
PSIPE – EVERGREEN TREE, 2 - 3 FT HT., BARE ROOT	\$14,478	\$14,478	
PSIPE – DECIDUOUS TREE, 2" CAL	\$20,160	\$20,160	
PSIPE – CONIFER TREE, 6' MIN. HT.	\$5,400	\$5,400	
BROWSE CONTROL TUBE AND STAKE	\$26,901	\$26,901	
CEMENT CONC. TRAFFIC CURB	\$3,680	\$3,680	
COATED CHAIN LINK FENCE WITH TOP RAIL	\$4,125	\$4,125	
SINGLE 6FT COATED CHAIN LINK GATE	\$350	\$350	
CEMENT CONCRETE SIDEWALK	\$3,630	\$3,630	
CEMENT CONCRETE TERRACE	\$1,170	\$1,170	
POWER SERVICE TO 232nd AVE PS SITE	\$26,000	\$26,000	
POWER SERVICE TO LEADBETTER ROAD PS SITE	\$88,000	\$88,000	
PULL BOX	\$207,200	\$84,000	\$123,200
PAINT LINE	\$10,850	\$8,000	\$2,850
PAINTED STOP LINE	\$143	\$143	
PLASTIC CROSSWALK LINE	\$1,829	\$1,711	\$118
PLASTIC TRAFFIC ARROW	\$1,029	\$1,029	
STONE MASONRY WALL	\$8,850	\$8,850	
GRAVITY BLOCK WALL	\$27,235	\$24,960	\$2,275
BOLLARD, TYPE 3	\$2,800	\$2,800	
HORIZONTAL DIRECTION DRILLING (6 INCH FM)	\$81,900	\$81,900	
HORIZONTAL DIRECTION DRILLING (6 INCH FM & 2 INCH CONDUIT)	\$81,900	\$81,900	
GOODWIN ROAD PUMP STATION MODIFICATIONS	\$200,000	\$200,000	
NE 232ND AVE PUMP STATION	\$999,000	\$999,000	
LEADBETTER ROAD PUMP STATION	\$1,000,000	\$1,000,000	
REMOTE ODOR CONTROL FACILITY	\$186,000	\$186,000	
ROCK EXCAVATION (WATERLINE)	\$10,000		\$10,000
DUCTILE IRON PIPE FOR WATER MAIN 8 INCH DIAM	\$16,344		\$16,344
TRENCH SECTION L (12 INCH DIAM. WATER)	\$202,368		\$202,368
TRENCH SECTION D (12 INCH DIAM. WATER, 4 INCH DIAM. CONDUIT)	\$958,290		\$958,290
BLOWOFF ASSEMBLY	\$1,900		\$1,900
GATE VALVE 8 IN.	\$3,450		\$3,450
BUTTERFLY VALVE 12 IN.	\$15,600		\$15,600
COMB. AIR RELEASE/AIR VACUUM VALVE ASSEMBLY	\$11,250		\$11,250
TAPPING SLEEVE AND VALVE ASSEMBLY 10 IN.	\$5,850		\$5,850
HYDRANT ASSEMBLY	\$58,850		\$58,850
TRENCH SECTION E (12 INCH GRAVITY)	\$30,875		\$30,875
NE 43rd Avenue			
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	\$2,380	\$1,190	\$1,190
GRAVEL BORROW INCL. HAUL	\$5,662	\$2,831	\$2,831
CORRUGATED POLYETHELENE STORM SEWER PIPE, 24 IN. DIAM.	\$32,175	\$16,088	\$16,088
24 IN. DRAIN BASIN WITH PEDESTRIAN GRATE	\$9,380	\$4,690	\$4,690
INLET PROTECTION	\$280	\$140	\$140
SEEDING, FERTILIZING, AND MULCHING (SEED MIX 1 UPLAND)	\$414	\$207	\$207
TOPSOIL TYPE B	\$1,840	\$920	\$920
CONSTRUCTION COST SUBTOTAL	\$9,665,032	\$7,702,324	\$1,962,708
	\$811,862	\$646,995	\$164,867
	\$10,476,894.10	\$8,349,318.63	\$2,127,575.47