Exhibit "A1"

# 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 9th Street and NE 232nd 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 43rd 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 232nd 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*

| Task | Description | Total Budget by Task | City of Camas | Camas School District |
|---|---|---|---|---|
| 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 |
| | **TOTALS** | **$1,089,774** | **$1,004,668** | **$85,106** |

*Table 2: Final Design Cost Sharing*

| Task | Description | Total Budget by Task | City of Camas | Camas School District |
|---|---|---|---|---|
| 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 |

| *Table 2: Final Design Cost Sharing* | | | | |
|---|---|---|---|---|
| 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 |
| | **Project Total** | **$1,472,783** | **$1,333,873** | **$138,910** |

## 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.

*Table 3: Construction Management Costs Sharing*

| *Task* | *Description* | *Total Budget by Task* | *City of Camas* | *Camas School District* |
|---|---|---|---|---|
| 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 |
| | **Project Total** | **$1,784,981** | **$1,482,194** | **$302,787** |

## Electrical Service

Clark Public Utilities must run new power lines to the school to the Leadbetter Road Pump Station, and to the NE 232nd 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 | | | | |
| **City of Camas** | | | | | | | | | | | | | |
| **North Shore-STS** | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| **North Shore-STS SUBTOTAL** | **$8,321,064** | $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 |
| **City of Camas Total** | **$8,349,319** | | | | | | | | | | | | **$12,532,350** |
| | | | | | | | | | | | | | |
| **CAMAS SCHOOL DISTRICT** | | | | | | | | | | | | | |
| Water Main & 12" Sewer | $2,099,321 | | | | | | | | | | | | $2,099,321 |
| 43rd Ave Storm Pipe and Ditch Fill | $28,255 | | | | | | | | | | | | $28,255 |
| **School District Total** | **$2,127,576** | $224,016 | $198,962 | $31,913 | $61,447 | $0 | $7,456 | $0 | $3,010 | $0 | $0 | $63,179 | **$2,717,559** |
| **TOTAL** | **$10,476,895** | **$2,562,557** | **$994,811** | **$159,563** | **$307,233** | **$132,718** | **$37,281** | **$86,828** | **$66,548** | **$200,000** | **$68,270** | **$157,205** | **$15,249,909** |

**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** |