CITY COUNCIL WORKSHOP MEETING AGENDA
Monday, October 5, 2015, 4:30 PM
City Municipal Center, 616 NE 4th Avenue

I. CALL TO ORDER

II. ROLL CALL

III. PUBLIC COMMENTS

IV. WORKSHOP TOPICS

A. Request for Fire Department Items to be Listed as Surplus
Details: The Fire Department has recently vacated the old Grass Valley Fire Station and passed along its use to the Public Works Department. For many years the Fire Department had been using this station for storage of old and outdated equipment and no longer has the means to store it. The listed equipment being requested to list as surplus is also outdated, no longer meets required safety standards, and also will not pass required Underwriters Laboratories (UL) tests. The department will be requesting Council approval at a future regular meeting to have these items listed as surplus.
Presenter: Nick Swinhart, Fire Chief
Recommended Action: Staff recommends this item be placed on the October 26, 2015 Consent Agenda for Council's consideration.

Camas-Washougal Fire Department Surplus Items

B. Proposed Paid Time Off (PTO) Benefit for Non-Represented Employees
Details: This presentation will discuss the transition from a traditional vacation and sick leave accrual system to a PTO system for non-represented employees. This would allow current employees to switch to this system and all future new hires would be placed into the PTO system upon hire. This will also be discussed with the City bargaining groups for implementation with their members if desired. The change will need to be approved at a future meeting as a revision to the Non-Represented Employee Handbook.
Presenter: Jennifer Gorsuch, Administrative Services Director and Pete Capell, City Administrator
Recommended Action: This item is for Council's information only.

Draft Non-Represented Employee PTO Policy

C. 2016 Recommended Budget Readoption Presentation
Details: This presentation is to provide the 2016 Recommended Budget for readoption in compliance with State Law. The presentation will include the 2016 Recommended Budget as well as highlight changes that differ from the adopted 2015-2016 Budget. The City adopts a biennial budget and is required to re-adopt the budget in the second year of the biennium. There are items that have changed, such as, labor contract settlements which impact the 2016 budget, therefore staff recommends amendments to the adopted 2015-2016 Budget. Staff will provide more detailed presentations at future workshop meetings leading up to a budget public

hearing in November and City Council's consideration at the December 7, 2015 Regular Meeting.
Presenter: Cathy Huber Nickerson, Finance Director
Recommended Action: This item is for Council's information only.

2016 Recommended Budget

2016 Re-Adopt Recommended Budget Presentation

D. Consultant Services for Water System Plan Update
Details: Carollo Engineers was selected through a Request for Proposal process to update the City's 2010 Water System Plan. The work includes updating the System Plan, Operations and Maintenance Manual and providing a condition assessment of the above-ground system components. The 2015 Water/Sewer Budget included $200,000 for the Water System Plan update and $75,000 for the condition assessment for a total budget of $275,000. Carollo Engineers has submitted a scope of work for $289,964, which is approximately $15,000 over staff's estimate to complete the work. Staff has reviewed the scope of work and believes the additional dollar amount is reasonable for the level of effort required to complete the project. Staff proposes to include an additional $15,000 in the 2016 Budget Readoption to fully fund the scope of services. The Water System Plan will take approximately nine months to complete with a scheduled draft plan submittal to the Department of Health by June of 2016.
Presenter: Sam Adams, Utilities Manager
Recommended Action: Staff recommends this item be placed on the October 26, 2015 Consent Agenda for Council's consideration

Camas Water System Plan Scope of Work

Camas 2016 Water System Plan Budget

E. Consultant Services for North Urban Growth Area (NUGA) Sewer Transmission System Design
Details: OTAK Inc. was selected through a Request for Proposal process to provide civil engineering design services for the (NUGA) Sewer Transmission System. Staff has elected to have the consultant complete the project in two phases; the first being completion of a 30% design effort prior to moving forward with final engineering plans, specifications and estimates. This approach is due to the complexity of the project and key elements of the project that need to be addressed before moving forward on final design. OTAK, Inc. has submitted a scope of services and fee for the 30% project design in the amount of $1,089,773. The schedule for 30% design includes completion by March of 2016 with an anticipated final design being completed by February of 2017. The project will be funded with the 2015 Water/Sewer Revenue Bonds, which are supported by the City's current rate structure.
Presenter: Sam Adams, Utilities Manager
Recommended Action: Staff recommends this item be placed on the October 26, 2015 Consent Agenda for Council's consideration.

North Urban Growth Area (NUGA) Scope of Work

NUGA Fee Schedule V3

NUGA Design Schedule

F. Commute Trip Reduction Agreement
Details: Local agencies with 100 employees or more are required to participate in the Washington State Commute Trip Reduction (CTR) Program per RCW 70.94. The CTR program is intended to encourage public and private agencies with 100 employees or more to

use employee transportation modes other than the single occupancy vehicle. The City of Vancouver coordinates this program for Southwest Washington. The interlocal agreement between the City of Vancouver and the neighboring agencies is updated biannually in conjunction with the regional work plan for the area. This agreement transfers the Washington State Department of Transportation (WSDOT) CTR funds for the affected Camas employers to the CTR regional administrator, the City of Vancouver.
Presenter: James Carothers, Engineering Manager
Recommended Action: Staff recommends that this item be placed on the October 26, 2015 Consent Agenda for Council's consideration.

Commute Trip Reduction Agreement

G. Northwest Klickitat Street Storm Repair
Details: This project is an urgent repair of the slope, storm pipe, and outfall location on the west side of the culvert crossing in the Deer Creek Subdivision on NW Klickitat Street. Bids were opened on September 29, 2015. Due to the weather sensitive nature of this project, this item has been placed on the October 5, 2015 Consent Agenda for bid award consideration. The low bid is from Haag and Shaw, Inc. in the amount of $41,511.78. This project is funded by the repairs and maintenance budget from the Stormwater Drainage Utility account.
Presenter: James Carothers, Engineering Manager
Recommended Action: This item will be placed on the October 5, 2015 Consent Agenda for Council's consideration.

Klickitat Street Storm Repair Bids

H. Public Works Miscellaneous and Updates
Details: This is a placeholder for miscellaneous or emergent items.
Presenter: Steve Wall, Public Works Director

I. Zoning of Smoke Shops
Details: Schedule a public hearing on October 26, 2015 to consider amendments to Camas Municipal Code (CMC) Section 18.03.030 Definitions for Land uses and Section 18.07.030 Table 1 - Commercial and Industrial Uses, pertaining to Smoke Shops.
Presenter: Phil Bourquin, Community Development Director
Recommended Action: Staff recommends Council set a date of October 26, 2015, for a public hearing.

J. Retail Marijuana
Details: Schedule a public hearing to consider amendments to the zoning code related to marijuana retailers. The Camas Municipal Code (CMC) prohibits marijuana retail sales pursuant to Section 18.07.030 Table 1 with an expiration or sunset date of November 30, 2015. The Planning Commission held a public hearing on September 15, 2015, on the zoning of marijuana retailers and has by a 3-2 vote forwarded on to City Council a recommendation to allow marijuana retailing as a permitted use in the Community Commercial and Regional Commercial zones.
Presenter: Phil Bourquin, Community Development Director
Recommended Action: Staff recommends Council set a date of October 26, 2015, for a public hearing.

K. Community Development Miscellaneous and Updates
Details: This is a placeholder for miscellaneous or emergent items.
Presenter: Phil Bourquin, Community Development Director

L. City Administrator Miscellaneous Updates and Scheduling
Details: This is a placeholder for miscellaneous or scheduling items.
Presenter: Pete Capell, City Administrator

V. COUNCIL COMMENTS AND REPORTS

VI. PUBLIC COMMENTS

VII. ADJOURNMENT

NOTE: The City of Camas welcomes and encourages the participation of all of its citizens in the public meeting process. A special effort will be made to ensure that a person with special needs has the opportunity to participate. For more information, please call 360.834.6864.

Fire Department Items Requesting To Surplus

- 68 rolls 2 ½ “ fire hose
- 51 rolls 1 ¾ “ fire hose
- 1 – 35’ extension ladder
- 3 – 24’ extension ladders
- 4 – 14’ roof ladders
- 1 – 12’ Fresno ladder
- 1 – 10’ Fresno ladder
- 2 – 10’ folding attic ladder

PAID TIME OFF (PTO) POLICY – NON-REPRESENTED EMPLOYEES

Employees hired on or after January 1, 2016 and existing employees who elect the plan.
Paid Time Off (PTO) provides employees with flexible paid time off from work that can be used for vacation, personal or family illness, doctor appointments, school, volunteering, and other activities of the employee's choice.

Employees accrue PTO according to the schedule below.

Length of Service	Monthly Accrual (hours)	Hours per Year	Days per Year (based on an 8 hour day)	Maximum Accumulation and Payout (hours)
Start – Year 4	12	144	18	500
Year 5-9	14	168	21	500
Year 10-14	17	204	25.5	508
Year 15-19	19	228	28.5	556
Year 20+	22	264	33	628

PTO Accrual: Employees shall accrue PTO while in paid status. No accrual shall occur during unpaid leave or during hours worked beyond the employee's regular full time schedule. Part-time employees shall accrue PTO on a pro-rated basis. Non-exempt employees will receive a pro-rated accrual if they are in a paid status less than 80% of their regular schedule.

Eligible employees begin accruing PTO from the first day of employment. Generally, non-exempt employees are not entitled to use PTO until completion of six months of service. Exceptions may be granted by the Department Head.

Leave cannot be used until accrued, and must be available in the employee's account before available for use; hours accrued in a pay period cannot be used in the same pay period.

Sick leave incentives previously available to non-represented employees are not applicable to those employees on PTO.

Maximum Accumulation: Employees may accumulate accrued PTO up to 500 hours or a maximum of two-times their annual accrual rate, whichever is greater. Accruals cease upon reaching the maximum accumulation.

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The following rules govern the use and/or compensation for accrued PTO:

- All requests for PTO shall be approved through procedures established by the employee's supervisor.

- If a City recognized holiday falls on a PTO day, the holiday shall not be counted against the employee's PTO bank if the employee would otherwise be eligible for the holiday.

- PTO shall, when used, be charged in minimum units of one-quarter (.25) hour, rounding to the nearest quarter hour.

- PTO shall be compensated at the employee's regular base rate of pay, excluding out-of-classification pay and other premium and incentive pay.

Termination Pay Off: Upon termination of City employment the employee shall be paid for all accrued and unused PTO at his or her final base hourly rate of pay, up to the Maximum Payout shown in the chart above.

Transfer from one City department to another is not regarded as a termination of employment and the employee is not entitled to pay for the accrued leave as a result of the transfer.

Employees are not eligible to receive payoff unless they have completed their probationary period.

Annual Election: Employees hired on or before December 31, 2015 will have the option to change from the traditional vacation and sick leave accruals to the PTO accrual plan each year during open enrollment to take effect the following January. Employees are not eligible to move back to the prior traditional vacation and sick leave accrual system once the election has been made. You will enter the PTO accrual scale at your current length of service level.

Sick Leave Reserve: Employees hired on or before December 31, 2015 and who transfer to the PTO plan will have their sick leave balance placed in a sick leave reserve account. This account will no longer accrue leave.

Employees may access their sick leave reserve for their own illness or injury, or that of the employee's spouse, domestic partner or minor child, or any person living in the immediate household who requires treatment or supervision. The reserve may also be used for parents, including step-parents, parents-in-law, and grandparents. Special circumstances may be granted by the Department Head with consult from the Administrative Services Director or City Administrator.

This reserve may be accessed after the first twenty-four (24) consecutive work hours for each absence. PTO shall be utilized for the first twenty-four (24) hour work period, and if the absence continues beyond 24 consecutive work hours the employee may access their sick leave reserve.

Employees whose leave of absence is approved as Family Medical Leave or for medical care under the Domestic Violence Policy may access their sick leave reserve bank immediately. In order to accurately be considered and recorded as protected leave, employees must identify the reason for and anticipated duration of their absence when calling in under their department's call-in policy or

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schedule in advance. Employees accessing their reserve under this category must also contact the Administrative Services Department to ensure proper tracking and ensure all necessary forms are received to qualify for use of sick leave reserve.

Sick leave reserve balances are eligible for payoff upon retirement meeting LEOFF or PERS retirement requirements at a rate of 25% of accrued sick leave to be paid at the employee's final base rate of pay.

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City of Camas
Recommended Budget for 2016

Fund	Projected Beginning Fund Balance	2016 Revenues	2016 Appropriation	Projected Ending Fund Balance	Change in Fund Balance	
General	$ 2,908,280	$ 19,573,676	$ 19,552,260	$ 2,929,696	$ 21,416	15.0%
City Street	$ 147,020	$ 2,368,107	$ 2,475,124	$ 40,003	$ (107,017)	
C/W Fire and EMS	$ 584,968	$ 8,974,637	$ 8,695,578	$ 864,027	$ 279,059	
Lodging Tax	$ 11,317	$ 8,715	$ 14,000	$ 6,032	$ (5,285)	
Cemetery	$ 4,171	$ 164,848	$ 164,848	$ 4,171	$ -	
Unlimited G.O. Bond Debt Service	$ 31,733	$ 625,000	$ 622,637	$ 34,096	$ 2,363	
Limited G.O. Bond Debt Service	$ -	$ 1,350,829	$ 1,350,829	$ -	$ -	
GMA Capital Projects	$ 2,342,131	$ 3,582,154	$ 3,119,223	$ 2,805,062	$ 462,931	
Friberg/Strunk Street Construction	$ -	$ 20,000	$ 20,000	$ -	$ -	
Brady Road Construction	$ 644,938	$ 639,500	$ 1,278,000	$ 6,438	$ (638,500)	
NW 6th & Norwood Construction	$ 1,991,281	$ 3,000	$ 1,950,000	$ 44,281	$ (1,947,000)	
Street Lighting LED Project	$ 1,030,532	$ 703,500	$ 1,172,869	$ 561,163	$ (469,369)	
2015 Capital Projects	$ 804,763	$ 3,500	$ 800,000	$ 8,263	$ (796,500)	
Storm Water Drainage Utility	$ 1,575,898	$ 1,327,578	$ 1,351,867	$ 1,551,609	$ (24,289)	
City Solid Waste	$ 1,473,048	$ 2,461,846	$ 2,042,753	$ 1,892,141	$ 419,093	
Water-Sewer	$ 9,394,731	$ 21,071,340	$ 20,459,273	$ 10,006,798	$ 612,067	
NUGA Sewer Construction	$ 16,596,922	$ 214,000	$ 2,800,000	$ 14,010,922	$ (2,586,000)	
Water-Sewer Capital Reserve	$ 3,389,934	$ 1,674,218	$ -	$ 5,064,152	$ 1,674,218	
Water-Sewer Bond Reserve	$ 1,575,703	$ 15,000	$ -	$ 1,590,703	$ 15,000	
Equipment Rental	$ 982,075	$ 1,903,044	$ 1,774,243	$ 1,110,876	$ 128,801	
Firemen's Pension	$ 2,588,478	$ 31,811	$ 18,523	$ 2,601,766	$ 13,288	
Total City Proposed Budget 2016	**$ 48,077,923**	**$ 66,716,303**	**$ 69,662,026**	**$ 45,132,199**	**$ (2,945,724)**	

City of Camas
Summary of Budgeted Revenues, Expenditures and Reserves

	General Fund	Special Revenue Funds	Debt Funds	Capital Funds	Enterprise Funds	Internal Support Funds	Reserve Funds	Total
Estimated Beginning Fund Balance 1/1/2015	$ 2,908,280	$ 747,476	$ 31,733	$ 6,813,645	$ 34,006,236	$ 982,075	$ 2,588,478	$ 48,077,923
Revenues								
Taxes	$ 14,643,259	$ 1,275,477	$ 625,000	$ 1,848,712				$ 18,392,448
Licenses and Permits	$ 798,758	$ 24,329						$ 823,087
Intergovernmental	$ 576,223	$ 498,667		$ 1,549,000				$ 2,623,890
Charges for Services	$ 2,999,709	$ 4,448,456		$ 1,070,288	$ 17,143,168	$ 1,890,127		$ 27,551,748
Fines and Forfeitures	$ 237,589	$ 13,818						$ 251,407
Miscellaneous Revenue	$ 318,138	$ 24,921		$ 33,654	$ 960,814	$ 12,917	$ 31,811	$ 1,382,255
Non-Revenues					$ 8,660,000			$ 8,660,000
Transfers	$ -	$ 5,230,639	$ 1,350,829	$ 450,000				$ 7,031,468
Total Revenue	$ 19,573,676	$ 11,516,307	$ 1,975,829	$ 4,951,654	$ 26,763,982	$ 1,903,044	$ 31,811	$ 66,716,303
Total Available Resources	$ 22,481,956	$ 12,263,783	$ 2,007,562	$ 11,765,299	$ 60,770,218	$ 2,885,119	$ 2,620,289	$ 114,794,226
Expenditures								
Salaries and Benefits	$ 10,613,160	$ 8,096,592			$ 3,065,661	$ 430,910	$ 18,523	$ 22,224,846
Supplies and Services	$ 2,704,637	$ 2,180,903		$ -	$ 6,816,246	$ 527,289		$ 12,229,075
Intergovernmental	$ 963,087	$ 298,480			$ 563,431			$ 1,824,998
Capital	$ 62,000	$ 705,012		$ 6,948,000	$ 12,324,000	$ 816,044		$ 20,855,056
Debt Service		$ 68,563	$ 1,973,467		$ 3,454,555			$ 5,496,585
Transfers	$ 5,209,376			$ 1,392,092	$ 430,000		$ -	$ 7,031,468
Total Expenditures	$ 19,552,260	$ 11,349,550	$ 1,973,467	$ 8,340,092	$ 26,653,893	$ 1,774,243	$ 18,523	$ 69,662,028
Estimated Ending Fund Balance	$ 2,929,696	$ 914,233	$ 34,095	$ 3,425,207	$ 34,116,325	$ 1,110,876	$ 2,601,766	$ 45,132,198
Total Expenditures and Reserve Balance	$ 22,481,956	$ 12,263,783	$ 2,007,562	$ 11,765,299	$ 60,770,218	$ 2,885,119	$ 2,620,289	$ 114,794,226

City of Camas
Proposed Revenue Budget Summary for 2016

	2014 Actual	2015 Projected	Annual % Change	2016 Adopted Budget	2016 Proposed Budget	Annual % Change	2016 Variance
General Fund							
Taxes	$ 12,891,044	$ 13,540,492	5.0%	$ 14,776,531	$ 14,643,259	8.1%	$ (133,272)
Licenses and Permits	$ 695,332	$ 719,365	3.5%	$ 809,160	$ 798,758	11.0%	$ (10,402)
Intergovernmental	$ 544,225	$ 522,739	-3.9%	$ 551,054	$ 576,223	10.2%	$ 25,169
Charges for Services	$ 2,265,977	$ 2,741,542	21.0%	$ 2,668,167	$ 2,999,709	9.4%	$ 331,542
Fines and Forfeitures	$ 205,866	$ 200,941	-2.4%	$ 233,506	$ 237,589	18.2%	$ 4,083
Miscellaneous Revenue	$ 245,336	$ 287,903	17.4%	$ 269,438	$ 318,138	10.5%	$ 48,700
Non-Revenues	$ 51,952	$ 1,205	-97.7%		$ -		$ -
Transfers from other funds					$ -		$ -
Total General Fund	$ 16,899,732	$ 18,014,187	6.6%	$ 19,307,856	$ 19,573,676	8.7%	$ 265,820
Special Revenue Funds							
Street Fund							
Intergovernmental	$ 419,140	$ 433,986	3.5%	$ 439,330	$ 498,667	14.9%	$ 59,337
Miscellaneous Revenue	$ 359,691	$ 19,715	-94.5%	$ 11,891	$ 11,891	-39.7%	$ -
Non-Revenues	$ 84,906	$ -	-100.0%	$ -	$ -		$ -
Transfers from other funds	$ 1,935,044	$ 1,847,261	-4.5%	$ 1,850,375	$ 1,857,549	0.6%	$ 7,174
Total Street Fund	$ 2,798,781	$ 2,300,962	-17.8%	$ 2,301,596	$ 2,368,107	2.9%	$ 66,511
C/W Fire and EMS Fund							
Taxes	$ 1,189,272	$ 1,234,387	3.8%	$ 1,257,879	$ 1,266,902	2.6%	$ 9,023
Licenses and Permits	$ 6,380	$ 23,393	266.7%		$ 24,329	4.0%	$ 24,329
Intergovernmental	$ 167,371	$ 1,341	-99.2%		$ -	-100.0%	$ -
Charges for Services	$ 3,369,597	$ 4,533,808	34.6%	$ 4,274,454	$ 4,398,736	-3.0%	$ 124,282
Fines and Forfeitures	$ 12,468	$ 11,427	-8.3%	$ 13,818	$ 13,818	20.9%	$ -
Miscellaneous Revenue	$ 24,807	$ 12,346	-50.2%	$ 2,213	$ 12,691	2.8%	$ 10,478
Debt	$ 3,258	$ -	-100.0%				$ -
Transfers from other funds	$ 2,023,555	$ 2,971,439	46.8%	$ 3,021,770	$ 3,258,161	9.6%	$ 236,391
Total C/W Fire and EMS Fund	$ 6,796,708	$ 8,788,141	29.3%	$ 8,570,134	$ 8,974,637	2.1%	$ 404,503
Lodging Tax Fund							
Taxes	$ 8,042	$ 8,325	3.5%	$ 7,220	$ 8,575	3.0%	$ 1,355
Miscellaneous Revenue	$ 124	$ 182	46.8%	$ 140	$ 140	-23.1%	$ -
Total Lodging Tax Fund	$ 8,166	$ 8,507	4.2%	$ 7,360	$ 8,715	2.4%	$ 1,355
Cemetery Fund							
Charges for Services	$ 34,328	$ 48,427	41.1%	$ 49,356	$ 49,720	2.7%	$ 364
Miscellaneous Revenue	$ 135	$ 71	-47.4%	$ 199	$ 199	180.3%	$ -
Transfers from other funds	$ 103,901	$ 125,154	20.5%	$ 99,620	$ 114,929	-8.2%	$ 15,309
Total Cemetery Fund	$ 138,364	$ 173,652	25.5%	$ 149,175	$ 164,848	-5.1%	$ 15,673
Debt Funds							
Unlimited GO Debt Service Fund							
Taxes	$ 626,119	$ 625,000	-0.2%	$ 625,000	$ 625,000	0.0%	$ -
Total Unlimited GO Debt Srv Fund	$ 626,119	$ 625,000	-0.2%	$ 625,000	$ 625,000	0.0%	$ -
Limited Debt Service Fund							
Transfers from other funds	$ 806,626	$ 848,228	5.2%	$ 811,478	$ 1,350,829	59.3%	$ 539,351
Total Debt Service Fund	$ 806,626	$ 848,228	5.2%	$ 811,478	$ 1,350,829	59.3%	$ 539,351
Capital Fund							
Growth Management Capital Projects Fund							
Taxes	$ 1,091,645	$ 1,745,279	59.9%	$ 929,592	$ 1,848,712	5.9%	$ 919,120
Intergovernmental	$ 400,609	$ 25,658	-93.6%	$ 410,000	$ 210,000	718.5%	$ (200,000)
Charges for Services	$ 707,817	$ 1,039,114	46.8%	$ 844,930	$ 1,070,288	3.0%	$ 225,358
Miscellaneous Revenue	$ 14,606	$ 22,479	53.9%	$ 16,873	$ 23,154	3.0%	$ 6,281
Transfers from other funds	$ 52,800	$ 239,000	100.0%	$ 218,000	$ 430,000	79.9%	$ 212,000
Total GMA Capital Projects Fund	$ 2,267,477	$ 3,071,530	35.5%	$ 2,419,395	$ 3,582,154	16.6%	$ 1,162,759
Friberg/Strunk Street Construction Fund							
Intergovermental	$ 3,446,300	$ 299,500	-91.3%	$ -			$ -
Loan Proceeds	$ 300,000	$ 1,000,759	233.6%				$ -
Transfer from Other Funds	$ 145,377		-100.0%		$ 20,000	100.0%	$ 20,000
Total Friberg Street Fund	$ 3,746,300	$ 1,300,259	-65.3%	$ -	$ 20,000	100.0%	$ 20,000
Brady Road Construction Fund							
Intergovernmental		$ 339,000	100.0%	$ 554,000	$ 639,000	88.5%	$ 85,000
Miscellaneous Revenue		$ 1,430		$ 94,000	$ 500	-65.0%	$ (93,500)
Loan Proceeds		$ 504,508	100.0%			-100.0%	
Total Brady Road Const. Fund	$ -	$ 844,938	100.0%	$ 648,000	$ 639,500	-24.3%	$ (8,500)

	2014 Actual	2015 Projected	Annual % Change	2016 Adopted Budget	2016 Proposed Budget	Annual % Change	2016 Variance
6th and Norwood Construction Fund							
Miscellaneous Revenue		$ 9,233		$ -	$ 3,000	-67.5%	$ 3,000
Loan Proceeds		$ 3,027,048	100.0%	$ -		-100.0%	$ -
Total 6th & Norwood Const. Fund	$ -	$ 3,027,048	100.0%	$ -	$ 3,000	-99.9%	$ -
Street Lighting Project Fund							
Intergovernmental			100.0%		$ 700,000		$ 700,000
Miscellaneous Revenue		$ 7,992			$ 3,500	-56.2%	$ 3,500
Loan Proceeds		$ 2,522,540	100.0%			-100.0%	
Total Street Lighting Proj. Fund	$ -	$ 2,530,532	100.0%		$ 703,500	-72.2%	$ 703,500
2015 Bond Projects Fund							
Miscellaneous Revenue		$ 4,158		$ -	$ 3,500	-15.8%	$ 3,500
Loan Proceeds		$ 2,320,736	100.0%	$ -		-100.0%	$ -
Total 6th & Norwood Const. Fund	$ -	$ 2,320,736	100.0%	$ -	$ 3,500	-99.8%	$ -
Enterprise Funds							
Storm Drainage Fund							
Intergovernmental	$ 132,336	$ 23,274	-82.4%		$ -		
Charges for Services	$ 1,175,304	$ 1,249,669	6.3%	$ 1,234,392	$ 1,312,152	5.0%	$ 77,760
Miscellaneous Revenue	$ 8,536	$ 17,847	109.1%	$ 9,151	$ 15,426	-13.6%	$ 6,275
Total Storm Drainage Fund	$ 1,316,176	$ 1,290,790	-1.9%	$ 1,243,543	$ 1,327,578	2.9%	$ 84,035
Solid Waste Fund							
Charges for Services	$ 2,215,677	$ 2,336,183	5.4%	$ 2,213,023	$ 2,447,038	4.7%	$ 234,015
Miscellaneous Revenue	$ 8,888	$ 14,377	61.8%	$ 9,419	$ 14,808	3.0%	$ 5,389
Total Sanitary Fund	$ 2,224,565	$ 2,350,560	5.7%	$ 2,222,442	$ 2,461,846	4.7%	$ 239,404
Water/Sewer Fund							
Intergovernmental	$ -	$ 178,000	100.0%				
Charges for Services	$ 10,336,308	$ 11,202,184	8.4%	$ 9,822,497	$ 11,747,519	4.9%	$ 1,925,022
Miscellaneous Revenue	$ 190,819	$ 229,209	20.1%	$ 194,274	$ 663,821	189.6%	$ 469,547
Loan Proceeds	$ 3,175,934	$ 7,640,000	140.6%		$ 8,660,000	13.4%	$ 8,660,000
Transfer from other funds							
Total Water/Sewer Fund	$ 13,703,061	$ 19,249,393	40.5%	$ 10,016,771	$ 21,071,340	9.5%	$ 11,054,569
NUGA Sewer Construction Fund							
Miscellaneous Revenue	$ -	$ 40,000			$ 214,000	435.0%	$ 214,000
Debt Proceeds	$ -	$ 17,004,922	100.0%			-100.0%	$ -
Total NUGA Sewer Construction Fund	$ -	$ 17,044,922	100.0%	$ -	$ 214,000	-98.7%	$ 214,000
Water/Sewer Capital Fund							
Charges for Services	$ 1,189,497	$ 1,588,796	33.6%	$ 1,446,845	$ 1,636,459	3.0%	$ 189,614
Miscellaneous Revenue	$ 16,970	$ 36,659	116.0%	$ 12,854	$ 37,759	3.0%	$ 24,905
Total Water/Sewer Cap. Fund	$ 1,206,467	$ 1,625,455	34.7%	$ 1,459,699	$ 1,674,218	3.0%	$ 214,519
Water/Sewer Bond Reserve Fund							
Miscellaneous Revenue	$ 1,358	$ 661,479		$ -	$ 15,000	-97.7%	$ 15,000
Total Water/Sewer Res. Fund	$ 1,358	$ 661,479		$ -	$ 15,000	-97.7%	$ 15,000
Internal Support Funds							
Equipment Rental Fund							
Charges for Services	$ 1,780,310	$ 1,812,454	1.8%	$ 1,890,127	$ 1,890,127	4.3%	$ -
Miscellaneous Revenue	$ 12,058	$ 14,229	18.0%	$ 12,917	$ 12,917	-9.2%	$ -
Non-Revenues	$ 30,246	$ 13,993	-100.0%				
Total Equipment Rental Fund	$ 1,822,614	$ 1,840,676	1.0%	$ 1,903,044	$ 1,903,044	3.4%	$ -
Reserve Funds							
Firemen's Pension Fund							
Miscellaneous Revenue	$ 19,941	$ 30,885	54.9%	$ 59,788	$ 31,811	3.0%	$ (27,977)
Total Firemen's Pension Fund	$ 19,941	$ 30,885	54.9%	$ 59,788	$ 31,811	3.0%	$ (27,977)

City of Camas
Recommended Budget Appropriation Summary for 2016

	2014 Estimated	2015 Projected	Annual % Change	2016 Adopted Budget	2016 Proposed Budget	Annual % Change	2016 Variance
General Fund							
Salaries and Benefits	$ 10,297,072	$ 10,178,104	-1.2%	$ 10,867,103	$ 10,613,160	4.3%	$ (253,943)
Supplies and Services	$ 2,589,633	$ 2,390,545	-7.7%	$ 2,503,394	$ 2,704,637	13.1%	$ 201,243
Intergovernmental	$ 972,533	$ 806,954	-17.0%	$ 963,369	$ 963,087	19.3%	$ (282)
Capital	$ 254,825	$ 254,790	0.0%	$ 144,592	$ 62,000	-75.7%	$ (82,592)
Transfers to other funds	$ 4,107,500	$ 4,946,228	20.4%	$ 4,971,765	$ 5,209,376	5.3%	$ 237,611
Total General Fund	$ 18,221,563	$ 18,576,621	1.9%	$ 19,450,223	$ 19,552,260	5.3%	$ 102,037
Special Revenue Funds							
Street Fund							
Salaries and Benefits	$ 605,662	$ 532,810	-12.0%	$ 543,993	$ 601,355	12.9%	$ 57,362
Supplies and Services	$ 1,113,746	$ 1,026,092	-7.9%	$ 714,310	$ 1,153,757	12.4%	$ 439,447
Intergovernmental	$ 1,171	$ 10,668	811.0%	$ 336,982	$ 15,000	40.6%	$ (321,982)
Capital	$ 597,620	$ 669,500	12.0%	$ 689,588	$ 705,012	5.3%	$ 15,424
Transfers to other funds	$ 145,377		-100.0%				
Total Street Fund	$ 2,463,576	$ 2,239,070	-9.1%	$ 2,284,873	$ 2,475,124	10.5%	$ 190,251
C/W Fire and EMS Fund							
Salaries and Benefits	$ 5,400,127	$ 7,051,330	30.6%	$ 6,944,939	$ 7,382,558	4.7%	$ 437,619
Supplies and Services	$ 729,973	$ 840,086	15.1%	$ 990,168	$ 960,977	14.4%	$ (29,191)
Intergovernmental	$ 208,675	$ 273,673	31.1%	$ 302,606	$ 283,480	3.6%	$ (19,126)
Capital	$ 182,568	$ 283,434	55.2%		$ -		$ -
Debt Payments	$ 30,999	$ 26,693	-13.9%	$ 29,648	$ 68,563	156.9%	$ 38,915
Total C/W Fire and EMS Fund	$ 6,552,342	$ 8,475,216	29.3%	$ 8,267,361	$ 8,695,578	2.6%	$ 428,217
Lodging Tax Fund							
Supplies and Services	$ 5,130	$ 14,196	176.7%	$ 14,000	$ 14,000	-1.4%	$ -
Total Lodging Tax Fund	$ 5,130	$ 14,196	176.7%	$ 14,000	$ 14,000	-1.4%	$ -
Cemetery Fund							
Salaries and Benefits	$ 82,309	$ 105,118	27.7%	$ 83,423	$ 112,679	7.2%	$ 29,256
Supplies and Services	$ 78,260	$ 68,533	-12.4%	$ 69,556	$ 52,169	-23.9%	$ (17,387)
Total Cemetery Fund	$ 160,569	$ 173,651	8.1%	$ 152,979	$ 164,848	-5.1%	$ 11,869
Debt Fund							
Unlimited GO Debt Service Fund							
Principal	$ 486,000	$ 500,000	2.9%	$ 519,000	$ 519,000	3.8%	$ -
Interest	$ 140,119	$ 122,137	-12.8%	$ 103,637	$ 103,637	-15.1%	$ -
Total Unlimited GO Debt Srv Fund	$ 626,119	$ 622,137	-0.6%	$ 622,637	$ 622,637	0.1%	$ -
Limited GO Debt Service Fund							
Principal	$ 672,795	$ 726,486	8.0%	$ 701,261	$ 936,201	28.9%	$ 234,940
Interest	$ 133,832	$ 121,742	-9.0%	$ 110,217	$ 414,629	240.6%	$ 304,412
Total Unlimited GO Debt Srv Fund	$ 806,627	$ 848,228	5.2%	$ 811,478	$ 1,350,830	59.3%	$ 539,352
Capital Fund							
Growth Management Capital Projects Fund							
Supplies and Services	$ 174,909	$ -	-100.0%	$ 372,722	$ -	-100.0%	$ (372,722)
Capital	$ 556,633	$ 130,449	-76.6%	$ 1,150,000	$ 1,900,000	1356.5%	$ 750,000
Transfers to other funds	$ 1,316,584	$ 887,796	-32.6%	$ 811,478	$ 1,219,223	37.3%	$ 407,745
Total GMA Capital Projects Fund	$ 2,048,126	$ 1,018,245	-50.3%	$ 2,334,200	$ 3,119,223	206.3%	$ 785,023
Friberg/Strunk Street Construction Fund							
Capital	$ 4,364,420	$ 1,300,259	-70.2%		$ 20,000	-98.5%	$ 20,000
Total Friberg Street Fund	$ 4,364,420	$ 1,300,259	-70.2%	$ -	$ 20,000	-98.5%	$ 20,000
Brady Road Construction Fund							
Capital		$ 200,000	100.0%	$ 639,000	$ 1,278,000	539.0%	$ 639,000
Total Brady Road Construction Fund	$ -	$ 200,000	100.0%	$ 639,000	$ 1,278,000	539.0%	$ 639,000
6th & Norwood Construction Fund							
Capital		$ 1,045,000	100.0%	$ -	$ 1,950,000	86.6%	$ 1,950,000
Total 6th & Norwood Constr. Fund	$ -	$ 1,045,000	100.0%	$ -	$ 1,950,000	86.6%	$ 1,950,000
Street Lighting Project Fund							
Capital		$ 1,500,000	100.0%		$ 1,000,000	-33.3%	$ 1,000,000

	2014 Estimated	2015 Projected	Annual % Change	2016 Adopted Budget	2016 Proposed Budget	Annual % Change	2016 Variance
Transfers to other funds					$ 172,869	100.0%	$ 172,869
Total Street Lighting Project Fund	$ -	$ -	100.0%		$ 1,172,869	100.0%	$ 1,172,869
2015 Bond Projects Fund							
Capital		$ 1,520,130	100.0%		$ 800,000	-47.4%	$ 800,000
Total Street Lighting Project Fund	$ -	$ 1,520,130	100.0%		$ 800,000	-47.4%	$ 800,000
Enterprise Funds							
Storm Drainage Fund							
Salaries and Benefits	$ 336,036	$ 363,889	8.3%	$ 378,057	$ 401,219	10.3%	$ 23,162
Supplies and Services	$ 390,083	$ 362,357	-7.1%	$ 555,936	$ 742,618	104.9%	$ 186,682
Intergovernmental	$ 33,333	$ 31,244	-6.3%	$ 48,030	$ 48,030	53.7%	$ -
Capital	$ 270,189	$ 105,957	-60.8%	$ 160,000	$ 160,000	51.0%	$ -
Transfers to other funds	$ 52,800	$ -	-100.0%				
Total Storm Drainage Fund	$ 1,082,441	$ 863,447	-20.2%	$ 1,142,023	$ 1,351,867	56.6%	$ 209,844
Sanitary Fund							
Salaries and Benefits	$ 433,302	$ 388,022	-10.4%	$ 359,793	$ 462,917	19.3%	$ 103,124
Supplies and Services	$ 1,552,573	$ 1,539,536	-0.8%	$ 1,259,746	$ 1,481,772	-3.8%	$ 222,026
Intergovernmental	$ 71,445	$ 104,834	46.7%	$ 98,064	$ 98,064	-6.5%	$ -
Total Sanitary Fund	$ 2,057,320	$ 2,032,392	-1.2%	$ 1,717,603	$ 2,042,753	0.5%	$ 325,150
Water/Sewer Fund							
Salaries and Benefits	$ 1,997,615	$ 2,049,524	2.6%	$ 2,159,878	$ 2,201,525	7.4%	$ 41,647
Supplies and Services	$ 3,301,834	$ 3,204,375	-3.0%	$ 4,295,983	$ 4,591,856	43.3%	$ 295,873
Intergovernmental	$ 352,515	$ 351,955	-0.2%	$ 417,337	$ 417,337	18.6%	$ -
Capital	$ 4,203,291	$ 7,809,202	85.8%	$ 454,000	$ 9,364,000	19.9%	$ 8,910,000
Debt Service Payments	$ 2,720,747	$ 3,078,719	13.2%	$ 3,077,253	$ 3,454,555	12.2%	$ 377,302
Transfers to other funds	$ -	$ -		$ 218,000	$ 430,000	100.0%	$ 212,000
Total Water/Sewer Fund	$ 12,576,002	$ 16,493,775	31.2%	$ 10,622,451	$ 20,459,273	24.0%	$ 9,836,822
NUGA Sewer Construction Fund							
Capital		$ 448,000	100.0%		$ 2,800,000		$ 2,800,000
Total NUGA Construction Fund	$ -	$ 448,000	100.0%	$ -	$ 2,800,000		$ 2,800,000
Water/Sewer Capital Fund							
Transfers	$ 291,159		-100.0%				$ -
Total Water/Sewer Cap. Fund	$ 291,159	$ -	-100.0%		$ -		$ -
Water/Sewer Bond Reserve Fund							
Transfers	$ -	$ -	0.0%		$ -	0.0%	$ -
Total Water/Sewer Res. Fund	$ -	$ -	0.0%		$ -	0.0%	$ -
Internal Support Funds							
Equipment Rental Fund							
Salaries and Benefits	$ 392,278	$ 440,543	12.3%	$ 430,294	$ 430,910	-2.2%	$ 616
Supplies and Services	$ 591,094	$ 415,531	-29.7%	$ 526,929	$ 527,289	26.9%	$ 360
Capital	$ 382,538	$ 1,200,919	213.9%	$ 286,853	$ 816,044	-32.0%	$ 529,191
Total Equipment Rental Fund	$ 1,365,910	$ 2,056,993	50.6%	$ 1,244,076	$ 1,774,243	-13.7%	$ 530,167
Reserve Funds							
Firemen's Pension Fund							
Salary and Benefits	$ 14,692	$ 17,983	22.4%	$ 16,919	$ 18,523	3.0%	$ 1,604
Total Firemen's Pension Fund	$ 14,692	$ 17,983	22.4%	$ 16,919	$ 18,523	3.0%	$ 1,604

City of Camas
Proposed General Fund Expenditure Budget Summary for 2016

	2014 Actual	2015 Estimate	% Annual Change	2016 Adopted Budget	2016 Proposed Budget	% Annual Change	$ Variance
Legislative							
Salaries and Benefits	$ 47,201	$ 106,300	125.2%	$ 120,468	$ 113,294	6.6%	$ (7,174)
Supplies and Services	$ 21,616	$ 8,421	-61.0%	$ 12,245	$ 13,299	57.9%	$ 1,054
Total Legislative	$ 68,817	$ 114,721	66.7%	$ 132,713	$ 126,593	10.3%	$ (6,120)
Judicial							
Salaries and Benefits	$ 22,588	$ 69,860	209.3%	$ 70,430	$ 74,399	6.5%	$ 3,969
Supplies and Services	$ 124,817	$ 127,538	2.2%	$ 125,547	$ 126,290	-1.0%	$ 743
Intergovernmental	$ 144,694	$ 93,592	-35.3%	$ 93,748	$ 93,748	0.2%	$ -
Total Judicial	$ 292,099	$ 290,990	-0.4%	$ 289,725	$ 294,437	1.2%	$ 4,712
Executive							
Salaries and Benefits	$ 229,312	$ 250,305	9.2%	$ 274,332	$ 265,599	6.1%	$ (8,733)
Supplies and Services	$ 31,019	$ 34,223	10.3%	$ 37,431	$ 42,471	24.1%	$ 5,040
Intergovernmental	$ 3,000	$ 3,000	0.0%	$ 3,000	$ 3,000	0.0%	$ -
Total Executive	$ 263,331	$ 287,528	9.2%	$ 314,763	$ 311,070	8.2%	$ (3,693)
Finance							
Salaries and Benefits	$ 837,359	$ 841,154	0.5%	$ 931,433	$ 913,996	8.7%	$ (17,437)
Supplies and Services	$ 129,173	$ 72,107	-44.2%	$ 78,807	$ 79,390	10.1%	$ 583
Intergovernmental	$ 34,832	$ 36,841	5.8%	$ 38,000	$ 39,000	5.9%	$ 1,000
Total Finance	$ 1,001,364	$ 950,102	-5.1%	$ 1,048,240	$ 1,032,386	8.7%	$ (15,854)
Legal							
Supplies and Services	$ 114,874	$ 115,018	0.1%	$ 115,358	$ 115,358	0.3%	$ -
Total Legal	$ 114,874	$ 115,018	0.1%	$ 115,358	$ 115,358	0.3%	$ -
Human Resources							
Salaries and Benefits	$ 106,454	$ 129,778	21.9%	$ 132,289	$ 134,801	3.9%	$ 2,512
Supplies and Services	$ 17,470	$ 17,397	-0.4%	$ 19,626	$ 20,539	18.1%	$ 913
Total Human Resources	$ 123,924	$ 147,175	18.8%	$ 151,915	$ 155,340	5.5%	$ 3,425
Administrative Services							
Salaries and Benefits	$ 122,732	$ 155,739	26.9%	$ 171,154	$ 168,131	8.0%	$ (3,023)
Supplies and Services	$ 94,610	$ 117,267	23.9%	$ 106,582	$ 119,586	2.0%	$ 13,004
Intergovernmental	$ 35,188	$ 41,643	18.3%	$ 9,084	$ 37,872	-9.1%	$ 28,788
Total Administrative Services	$ 252,530	$ 314,649	24.6%	$ 286,820	$ 325,589	3.5%	$ 38,769

	2014 Actual	2015 Estimate	% Annual Change	2016 Adopted Budget	2016 Proposed Budget	% Annual Change	$ Variance
Law Enforcement							
Salaries and Benefits	$ 3,519,969	$ 3,783,763	7.5%	$ 3,972,589	$ 3,791,447	0.2%	$ (181,142)
Supplies and Services	$ 538,483	$ 505,828	-6.1%	$ 577,656	$ 606,400	19.9%	$ 28,744
Intergovernmental	$ 264,269	$ 261,300	-1.1%	$ 290,000	$ 311,600	19.2%	$ 21,600
Capital	$ 52,686	$ 152,578	189.6%	$ 44,592	$ -	-100.0%	$ (44,592)
Total Law Enforcement	$ 4,375,407	$ 4,703,469	7.5%	$ 4,884,837	$ 4,709,447	0.1%	$ (175,390)
Fire							
Transfer to Fire	$ 1,017,890		-100.0%				
Total Fire	$ 1,017,890	$ -	-100.0%		$ -		
Detention and Correction							
Salaries and Benefits	$ 133,608	$ 128,647	-3.7%	$ 134,990	$ 131,073	1.9%	$ (3,917)
Supplies and Services	$ 19,640	$ 16,119	-17.9%	$ 20,793	$ 20,220	25.4%	$ (573)
Intergovernmental	$ 223,215	$ 186,210	-16.6%	$ 301,400	$ 271,400	45.7%	$ (30,000)
Total Detention and Correction	$ 376,463	$ 330,976	-12.1%	$ 457,183	$ 422,693	27.7%	$ (34,490)
Information Services							
Salaries and Benefits	$ 329,295	$ 337,321	2.4%	$ 459,654	$ 461,310	36.8%	$ 1,656
Supplies and Services	$ 230,260	$ 213,307	-7.4%	$ 249,556	$ 243,630	14.2%	$ (5,926)
Capital	$ 14,608	$ 7,785	-46.7%	$ -	$ 12,000	54.1%	$ 12,000
Total Information Services	$ 574,163	$ 558,413	-2.7%	$ 709,210	$ 716,940	28.4%	$ 7,730
Engineering							
Salaries and Benefits	$ 917,651	$ 1,043,645	13.7%	$ 1,000,368	$ 1,108,143	6.2%	$ 107,775
Supplies and Services	$ 62,567	$ 78,826	26.0%	$ 65,478	$ 89,348	13.3%	$ 23,870
Intergovernmental	$ 8,866		-100.0%	$ 18,581		-100.0%	$ (18,581)
Total Engineering	$ 989,084	$ 1,122,471	13.5%	$ 1,084,427	$ 1,197,491	6.7%	$ 113,064
Community Development							
Salaries and Benefits	$ 347,460	$ 224,457	-35.4%	$ 319,504	$ 233,113	3.9%	$ (86,391)
Supplies and Services	$ 44,249	$ 3,222	-92.7%	$ 23,735	$ 13,982	334.0%	$ (9,753)
Total Community Development	$ 391,709	$ 227,679	-41.9%	$ 343,239	$ 247,095	8.5%	$ (96,144)
Planning							
Salaries and Benefits	$ 443,283	$ 417,376	-5.8%	$ 458,310	$ 438,103	5.0%	$ (20,207)
Supplies and Services	$ 91,034	$ 120,144	32.0%	$ 137,803	$ 171,120	42.4%	$ 33,317
Intergovernmental	$ 112,025	$ 75,150	-32.9%	$ 93,089	$ 90,000	19.8%	$ (3,089)
Total Planning	$ 646,342	$ 612,670	-5.2%	$ 689,202	$ 699,223	14.1%	$ 10,021

	2014 Actual	2015 Estimate	% Annual Change	2016 Adopted Budget	2016 Proposed Budget	% Annual Change	$ Variance
Animal Control							
Supplies and Services	$ 315	$ 388	23.2%	$ 500	$ 500	28.9%	$ -
Intergovernmental	$ 103,558	$ 106,500	2.8%	$ 112,000	$ 112,000	5.2%	$ -
Total Animal Control	$ 103,873	$ 106,888	2.9%	$ 112,500	$ 112,500	5.3%	$ -
Parks and Recreation							
Salaries and Benefits	$ 901,903	$ 1,061,229	17.7%	$ 1,059,285	$ 1,070,874	0.9%	$ 11,589
Supplies and Services	$ 647,899	$ 645,912	-0.3%	$ 575,432	$ 695,131	7.6%	$ 119,699
Intergovernmental	$ 746	$ 2,100	100.0%	$ 2,435	$ 2,435	16.0%	$ -
Capital	$ 43,938		-100.0%				$ -
Total Parks and Recreation	$ 1,594,486	$ 1,709,241	7.2%	$ 1,637,152	$ 1,768,440	3.5%	$ 131,288
Building							
Salaries and Benefits	$ 385,793	$ 422,167	9.4%	$ 526,894	$ 508,751	20.5%	$ (18,143)
Supplies and Services	$ 25,454	$ 25,395	-0.2%	$ 33,744	$ 26,258	3.4%	$ (7,486)
Total Building	$ 411,247	$ 447,562	8.8%	$ 560,638	$ 535,009	19.5%	$ (25,629)
Central Services							
Salaries and Benefits	$ 26,661	$ 102,448	284.3%	$ 104,318	$ 105,780	3.3%	$ 1,462
Supplies and Services	$ 136,600	$ 127,746	-6.5%	$ 132,308	$ 150,705	18.0%	$ 18,397
Capital	$ 52,579		-100.0%				
Total Central Services	$ 215,840	$ 230,194	6.7%	$ 236,626	$ 256,485	11.4%	$ 19,859
Library							
Salaries and Benefits	$ 1,029,701	$ 1,103,915	7.2%	$ 1,131,085	$ 1,094,347	-0.9%	$ (36,738)
Supplies and Services	$ 178,287	$ 161,684	-9.3%	$ 190,796	$ 170,414	5.4%	$ (20,382)
Intergovernmental	$ 1,614	$ 618	-61.7%	$ 2,032	$ 2,032	228.8%	$ -
Capital	$ 91,014	$ 94,427	0.0%	$ 100,000	$ 50,000	-47.0%	$ (50,000)
Total Library	$ 1,300,616	$ 1,360,644	4.6%	$ 1,423,913	$ 1,316,793	-3.2%	$ (107,120)
Support to Other Funds							
Transfers to Other Funds	$ 4,107,500	$ 4,946,228	20.4%	$ 4,971,765	$ 5,308,884	7.3%	$ 337,119
Total Support to Other Funds	$ 4,107,500	$ 4,946,228	20.4%	$ 4,971,765	$ 5,308,884	7.3%	$ 229,999
TOTAL GENERAL FUND	**$ 18,221,559**	**$ 18,576,618**	**1.9%**	**$ 19,450,226**	**$ 19,651,773**	**5.8%**	**$ 94,427**
					$ 19,552,260		
					$ 99,513		

Capital Program List 2016

			Funding Options													
Department/Fund	Title	2016 Budget	General	Streets	TIF	PIF	FIF	REET 1	REET 2	Vehicle R&R	Grants/ Contributions	Debt	Storm Drainage	Water	Sewer	SDCs
Streets/Capital	ADA Access Upgrades	$ 15,000						$ 15,000								
Streets/Capital	Brady Road	$ 1,278,000									$ 639,000	$ 639,000				
Streets/Capital	NW 6th Ave. & Norwood	$ 1,950,000										$ 1,950,000				
Streets/Capital	Street Light LED Proj	$ 1,000,000										$ 1,000,000				
Streets/Capital	Franklin Street Rehab	$ 850,000									$ 420,000			$ 115,000	$ 315,000	
Parks/GMA	Fallen Leaf Improvements	$ 35,000							$ 35,000							
Parks/GMA	Heritage Trailhead Parking Exp.	$ 250,000							$ 250,000							
Parks/GMA	Cooper's View Park	$ 350,000							$ 350,000			X				
Parks/GMA	Restroom	$ 200,000							$ 200,000							
Parks/GMA	Open Space/Trails/Park Upgrades	$ 200,000						$ 200,000								
Parks/GMA	Crown Park Master Plan	$ 150,000				$ 150,000										
Streets/Friberg	Finish Construction & Close-out	$ 20,000						$ 20,000								
Storm Water	Columbia Storm Basin Modeling	$ 50,000											$ 50,000			
Storm Water	NUGA Storm Basin Analysis	$ 150,000											$ 150,000			
Storm Water	Wetland Maintenance & Monitoring	$ 160,000											$ 160,000			
PW/Water	544 Zone Water Main & Treatment	$ 6,000,000										$ 6,000,000				
PW/Water	544 Reservoir	$ 2,600,000										$ 2,300,000		$ 300,000		
PW/Water	Steigerwald Property Acquisition	$ 54,000												$ 54,000		
PW/Water	Well 17	$ 25,000												$ 25,000		
PW/Sewer	STEP Bypass	$ 360,000										$ 360,000				
PW/Sewer	STEP Odor Control Installations	$ 150,000													$ 150,000	
PW/Sewer	NUGA Sewer	$ 2,800,000										$ 2,800,000				
CW Fire and EMS	Fire Truck	$ 500,000										$ 500,000				
Facilities/GF	Annex Building	$ 300,000										$ 300,000				

City of Camas
2016 Recommended Re-Adoption Budget

October 5, 2016

2016 Recommended Budget Highlights

- Operating Budget
  - General Fund
    - Revenues exceed Expenditures by $21,416
  - Street Fund
    - Continued Preservation Program
  - C/W Fire and EMS Fund
    - Reduced Overtime
    - Fund Balance to 10%
  - Equipment Rental
    - Updated Rates assumed

2016 Recommended Budget Highlights

- Capital Projects
  - General
    - Fire Truck
    - Annex Building
  - Transportation
    - Street Lighting LED Project
    - 6th and Norwood
    - Brady Design
    - Franklin Street Rehap
  - Parks
    - Heritage Trailhead Parking
    - Cooper's View Park
    - Restroom at Dorothy Fox
    - Crown Park Master Plan

2016 Recommended Budget Highlights

- Capital Projects
  - Storm Drainage
    - NUGA Storm Basin Analysis
    - Wetland Mitigation and Monitoring
  - Water
    - Reservoir
    - 544 Zone Water Main and Treatment
  - Sewer
    - NUGA Sewer
    - STEP Bypass

2016 Recommended Budget Highlights

- General Fund Structural Deficit Mitigation
  - Defer Parks Maintenance Ongoing Project for Playground Equipment and Hazard Trees
  - Shortened Swimming Pool Season
  - Reduced Irrigation at Cemetery
  - Hiring Delays
  - Defer City Hall Roof Project
  - Defer Library Decision Packages
  - Reduce Fire Overtime

2016 Recommended Budget Highlights

- Fund Balance
  - General Fund at 15% vs. 17%
    - Average General Fund monthly expenses $1,629,355
    - Fund Balance equates to 1.8 months
    - 17% equates to $3,323,884 (short $394,188)

CITY OF CAMAS
WATER SYSTEM PLAN
SCOPE OF SERVICES

The following Scope of Services has been developed to assist the City of Camas (City) with the 2016 update of its Water System Plan (Plan). The objective of this project is to update and review of all elements of the Plan document, in accordance with WAC 246-290-100 and State of Washington Department of Health (DOH) regulations. The following tasks under this Scope of Services have been prepared based on Carollo Engineers' (Consultant) current understanding of the proposed project, and on discussions with City staff.

1.0 PROJECT BACKGROUND

The City initiated this Plan recognizing the importance of planning, developing, and financing water system facilities to provide reliable and efficient service for existing customers and to serve anticipated growth. The Plan is designed to meet state, county, and local requirements. The City's last Water System Plan was completed and approved by DOH in 2010. This plan will be a substantial update to the 2010 Plan and will include an above-ground asset condition assessment and O&M manual update. The 2010 Plan will be incorporated into the updated Plan, as appropriate. This Plan is being developed in conjunction with an update to the City's Comprehensive Plan, creating a cohesive and complementary set of documents.

2.0 PROJECT ASSUMPTIONS

- Carollo Engineers, Inc. will be referred to as "Consultant" in this document.
- The City of Camas and its staff will be referred to as "City" in this document.
- FCS GROUP will be referred to as "FCS" in this document.
- Pacific Groundwater Group will be referred to as "PGG" in this document.
- All meetings will be held at City offices.
- Draft Chapters will be provided in electronic copy (PDF and/or Microsoft Word) transmitted via email or secure file transfer.
- Calculation tables will be provided in Microsoft Excel (.xlsx format).
- Consultant to prepare an agenda, presentation materials, and document discussions, including action items and decisions, in meeting minutes for Consultant lead meetings. Meeting notes and related materials will be transmitted electronically in MS Word and PDF formats via email.
- The City will print and produce additional copies of all documents as necessary for its use.
- The City will provide available information related to the project and as requested by the Consultant in a timely manner. The City shall furnish Consultant available studies, reports, and other data pertinent to Consultant's services; obtain, or authorize Consultant to obtain, or provide additional reports and data as required; furnish to Consultant services of

others required for the performance of Consultant's services hereunder, and Consultant shall be entitled to use and rely upon all such information and services provided by the City or others in performing Consultant's services under this Agreement.

- The Consultant and City will develop the chapters for the Plan with the lead roles as described below.

Chapter / Appendix		Chapter Lead
Executive Summary Water System Plan		Consultant
Chapter 1:	Introduction	Consultant
Chapter 2:	Planning Considerations	Consultant
Chapter 3:	Existing System	Consultant
Chapter 4:	Operations and Maintenance	Consultant
Chapter 5:	Water Requirements	Consultant
Chapter 6:	Water Use Efficiency	City
Chapter 7:	Water Quality	Consultant
Chapter 8:	Water Resources	Consultant with PGG
Chapter 9:	Water System Analysis	Consultant
Chapter 10:	Capital Improvements Plan	Consultant
Chapter 11:	Financial	FCS

TASKS

To meet the objectives of this scope of services, the Consultant shall complete the tasks as summarized in the table below and discussed in detail in the text that follows.

Task	Title
Task 100	Introduction
Task 200	Planning Considerations
Task 300	Existing System
Task 400	Operations and Maintenance
Task 500	Water Requirements
Task 600	Water Use Efficiency
Task 700	Water Quality
Task 800	Water Resources
Task 900	Water System Analysis
Task 1000	Capital Improvements

Task	Title
Task 1100	Financial
Task 1200	Plan Integration
Task 1300	Condition Assessment
Task 1400	O&M Manual
Task 1500	Project Management
Task 1600	Management Reserve

TASK 100 – INTRODUCTION

The objective of this task is to review and update the City's introduction to the Plan. Chapter 1 documents important plan elements including purpose, objectives, ownership and management, and the approval process. This task will develop *Chapter 1 Introduction* of the Plan and includes the Project Kick-off meeting.

Task 100 Activities

101. *Data Request*. Develop and submit a request for data required for Chapter 2. The following data are anticipated to be required:
    a. Notice of Determination of Non-Significance (DNS).
    b. State Environmental Policy Act (SEPA) Checklist.
    c. Agency Comment Letters and Responses.
    d. Water System Plan Submittal Form.
    e. Municipal Water Law – Water System Plan Government Consistency Review Checklist.
102. *Meeting No. 1 - Project Kick-off*. Summarize the DOH Kick-off meeting, the Plan outline, the Draft PMP, and the initial data request list for Tasks 100 through 400.
103. *Develop Introduction Information*. Develop information for Chapter 1 to introduce the Plan contents. Document the purpose, objectives, ownership and management, and the approval process, including environmental and Agency review comments and ordinances.
104. *Draft and Final Chapter 1 – Introduction*. Prepare draft Chapter 1 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- It is anticipated the City will lead the environmental and agency Plan review and approval process. The City will provide all associated documentation to the Consultant.

City Deliverables

- Agency and adjacent purveyor review comments.

- Adopting resolution.
- Comments on draft Chapter 1 – Introduction.

Consultant Deliverables

- Project Kick-off Meeting Agenda, Materials, and Minutes.
- Draft Chapter 1 – Introduction.
- Final Chapter 1 – Introduction.

Meetings

- Meeting No. 1 - Project Kick-off.

TASK 200 – PLANNING CONSIDERATIONS

The objective of the chapter is to document the planning considerations that influence the Plan. These include the study area, policies, criteria, and related documents.

Task 200 Activities

201. *Data Request*. Develop and submit a request for data required for Chapter 2. The following data are anticipated to be required:
    a. Clark County's Coordinated Water Service Areas.
    b. City's Retail Water Service Area (RWSA) boundary.
    c. Service Area agreements.
    d. Interlocal agreements with adjacent purveyors.
    e. Related studies.
202. *Study Area*. Summarize the system background, including history, geology, water resources, and adjacent purveyors.
203. *Identify Legislation, Regulations, and Permits*: Identify and summarize key legislation, regulations, and permits relating to the City's water system.
204. *Review and Update of Policies and Criteria*. Review and update the policies and criteria in Chapter 2 of the 2010 Plan to reflect the latest information and reformat to maintain consistency throughout the Plan. Recommend areas where new policies or criteria may aid the City. Incorporate changes into draft Chapter 2 for the City's review and approval.
205. *Meeting No*. 2 - *Policies and Criteria*. Review and discuss existing policies and criteria, as well as recommendations.
206. *Summarize Related Documents:* List City, County, and Regional Planning documents related to the Plan. Summarize information that is important to the operation of the City's water system. It is expected that this will include the City and Clark County Comprehensive Plan Clark County Coordinated Water System Plan, adjacent purveyor water system plans, Watershed Assessment Water Resource Inventory Area (WRIA) 28, etc.
207. *Draft and Final Chapter 2 – Planning Considerations.* Prepare draft Chapter 2 for City's review and approval. City comments and Consultant responses will be tracked in the

Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- The City will provide the necessary related documents.

City Deliverables

- Requested data.
- Comments on draft Chapter 2 – Planning Considerations.

Consultant Deliverables

- Meeting No. 2 Agenda, Materials, and Minutes.
- Draft Chapter 2 – Planning Considerations.
- Final Chapter 2 – Planning Considerations.

Meetings

- Meeting No. 2 - Retail Water Service Area/Policies and Criteria.

TASK 300 – EXISTING SYSTEM

The purpose of this task is to document the City's existing water system, including supply, storage, booster pump stations, interties, treatment, and distribution. This task will develop *Chapter 3 – Existing System* of the Plan.

Task 300 Activities

301. *Data Request.* Develop and submit a request for data required for Chapter 3. The following data are anticipated to be required:
    a. System tables for City to review/complete
    b. Coordinate with City to obtain the most up-to-date GIS information.
    c. Water Facilities Inventory Form.
    d. Updated facilities information from 2010 Plan, including Summary Engineering and DOH Report of the Slow Sand Filtration Treatment Plant (SSFTP).
302. *Review and Update of Existing System*. Review and update Chapter 3 of the 2010 Plan to reflect the latest information and maintain consistency throughout the Plan, including storage, booster pump stations, and treatment. Facilities will be updated, as required, based information from the City and from Task 1500 - Condition Assessment. Prepare existing hydraulic profile of the existing system with new SSFTP.
303. *Draft and Final Chapter 3 – Existing System*. Prepare draft Chapter 3 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- City will provide pertinent information for missing or updated facility data.

- Chapter 3 will be developed in conjunction with Task 1500 - Condition Assessment.

City Deliverables

- Requested data.
- Comments on draft Chapter 3 – Existing System.

Consultant Deliverables

- Draft Chapter 3 – Existing System.
- Final Chapter 3 – Existing System.

Meetings

- None.

TASK 400 – OPERATIONS AND MAINTENANCE

The purpose of this task is review, update, and evaluate the City's Operations and Maintenance (O&M) Program and document in *Chapter 4 – Operations and Maintenance* of the Plan. This chapter will be developed in conjunction with Task 1400 - Operation and Maintenance Manual. An evaluation of the O&M programs will provide recommendations for new or updated maintenance programs, as needed.

Task 400 Activities

401. *Data Request*. Develop and submit a request for data required for Chapter 4. The following data are anticipated to be required:
    a. Water System organization chart and operator certifications.
    b. Coliform Monitoring Plan.
    c. Boil Water Notices.
    d. Public Works Emergency Response Plan.
    e. Cross-Connection Control Program (or enabling ordinance).
    f. Routine and preventive maintenance schedules for major system components.
402. *O&M Analysis*. Conduct O&M analysis to identify deficiencies and recommendations. Summarize the current operations and maintenance programs. Programs may include Operator certificates and training, lead free, routine, and preventive maintenance, Cross Connection Control Program, and Public Notification Plan/Procedures. Review current operation and maintenance program in relation to state and national water operation standards, including AWWA G200-09 Standards. Propose recommendations and develop CIPs, if needed, based on the review.
403. *Remaining Useful Life (RUL).* Evaluate the remaining useful life of water pipes considering age and material. City to review and update estimate of the assumptions of useful life and RUL based on the City's experience. Prepare annual pipeline replacement schedule based on the results.
404. *Draft and Final Chapter 4 – Operations and Maintenance.* Prepare draft Chapter 4 for City's review and approval. City comments and Consultant responses will be tracked in

the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- Chapter will be conducted in conjunction with Task 1400 - Operations and Maintenance Manual.

City Deliverables

- Requested data.
- Comments on Chapter 4 – Operations and Maintenance.

Consultant Deliverables

- Draft Chapter 4 – Operations and Maintenance.
- Final Chapter 4 – Operations and Maintenance.

Meetings

- None.

TASK 500 – WATER REQUIREMENTS

The purpose of this task is to perform a demographic and demand analysis to predict current and future demands within the City's RWSA. Six (6)-year, 10-year, and 20-year planning horizons will be evaluated using the best available information. This task will develop *Chapter 5 - Water Requirements* of the Plan.

Task 500 Activities

501. *Data Request*. Develop and submit a request for data required for Chapter 5. The following data are anticipated to be required:
    a. Growth rates by customer class through the end of the water supply planning horizon. The rates should be consistent with regional planning and may be population and employment projections on a Transpiration Analysis Zones (TAZ) basis.
    b. Historical connection and water use information by customer class for the past 6 to 10 years.
    c. Historical Production from each source for the past 6 to 10 years, including annual volume and maximum day production.
    d. Largest customer locations on a map and annual consumption by customer class.
    e. Accounted-for Non-Revenue Water for the past 6 to 10 years.
    f. Identify infill capacity and areas of redevelopment. Specific emphasis will be placed on those areas with a high potential for large scale residential or commercial development, as well as new industrial customers.
    g. GIS Data: land use and zoning data, vacant and redevelopable land, TAZ boundaries.

502. *Demographics Projections.* Demographic projections will be developed to project the future growth in customers.
    a. Use data from Clark County and the City to calculate rates of growth for each TAZ and each pressure zone. High, low, and average number of accounts will be prepared for the 6-year, 10-year, and 20-year by pressure zone, if sufficient data is available.
    b. Generate build-out, or ultimate, accounts by pressure zone, based on approved land use. Accounts per acre will be developed based on existing densities.
503. *Demand Projections.* Demand projections will be for the 6-year, 10-year, 20-year, and build-out planning horizons.
    a. Develop the historical average day demands (ADD) and maximum day demands (MDD), the accounted-for revenue water uses, estimated water loss and leakage planning values, and establish equivalent residential unit (ERU) values for the different customer classes.
    b. Estimate the future ADD and MDD water demand for each pressure zone based on the demographic projections and historical ERU demand. Estimates of the future water demand will be determined. The range will be based on the statistical variation in the historical ERU demand, leakage values, conservation goals, and the high and low ranges of the demographic projection and the effects of climate change. The City's largest connections, potential large scale industrial demands and future wholesale water customers will be evaluated and projected separately and added to other projected system demands. Peak hour demand (PHD) will be calculated using City specific peaking factors.
504. *Meeting No. 3 – Water Requirements/WUE Program Review*. Review demographic analysis and demand projection results. Confirm allocation of demand across customer classes and pressure zones. Review WUE program and conservation volumes.
505. *Draft and Final Chapter 5 – Water Requirements.* Prepare draft Chapter 5 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

<u>Assumptions</u>

- Current retail water service area and pressure zones are correctly delineated and do not require updating.
- No meeting will be held directly with Clark County.

<u>City Deliverables</u>

- Requested data.
- Comments on Chapter 5 – Water Requirements.

<u>Consultant Deliverables</u>

- Meeting No. 3 Agenda, Materials, and Minutes.

- Draft Chapter 5 – Water Requirements.
- Final Chapter 5 – Water Requirements.

Meetings

- Meeting No. 3 - Water Requirements/WUE Program Review.

TASK 600 – WATER USE EFFICIENCY

The City will lead the Water Use Efficiency (WUE) Chapter, which summarizes the WUE program, estimate the water savings from measures in the past 6 years, and project future conservation water demand. The City will author *Chapter 6 – Water Use Efficiency* of the. The City will summarize the existing and future WUE program, including program measures, effectiveness, costs, and benefits. The Consultant will develop future demand projections with the WUE program and review and format Chapter 6. The WUE work efforts will be presented as part of Meeting No. 3 - Water Requirements/WUE Program Review.

Task 600 Activities

601. *Data Request.* Develop and submit a request for data required for Chapter 6. The following data are anticipated to be required:
    a. Word Document of Chapter 6 - Water Use Efficiency
    b. Electronic version of figures and large tables.
    c. Conservation goals.
    d. Water Use Efficiency Public Meeting Minutes.
602. *Future Conservation Water Demand*. Calculate conservation demands (both MDD and ADD) based on the established conservation goals provided by the City. MDD and ADD conservation demands will be developed in the same demand years used in demand projections. Demands will be transmitted electronically to the City.
603. *Final Chapter 6 – Water Use Efficiency. Review the City* prepare draft Chapter 6 and provide comments electronically for City review and acceptance. Word process the Final Chapter 6 for consistency with other Chapters. Consultant comments and City responses will be tracked in the Comment Response Log.

Assumptions

- None.

City Deliverables

- Requested data.
- Draft Chapter 6 – Water Use Efficiency.

Consultant Deliverables

- Comments on draft Chapter 6 – Water Use Efficiency.
- Final Chapter 6 – Water Use Efficiency.

Meetings

- None.

TASK 700 – WATER QUALITY

The purpose of this task is to summarize the water quality regulations and reporting requirements, evaluate water quality against the regulations, summarize any water quality violations, and recommend improvements if necessary to meet anticipated or future water quality regulations. This task will develop *Chapter 7 - Water Quality* of the Plan. The water quality work efforts will be presented as part of Meeting No. 4 - Water Supply Analysis/Water Quality.

Task 700 Activities

701. *Data Request.* Develop and submit a request for data required for Chapter 7. The following data are anticipated to be required:
    a. Water Quality Monitoring Plan.
    b. Summary of water quality test results, including data from well water, treated water, and the distribution system.
    c. Testing Waivers.
702. *Water Quality Summary*. Summarize the City's water quality programs and activities. Identify key requirements of applicable water quality regulations.
703. *Water Quality Analysis.* Summarize water quality within the distribution system and existing treatment plant. Review City's compliance with current federal and state water quality regulations. Summarize the current treatment process types, capacity, overall performance and treatment system conditions. Evaluate City's ability to meet future potential water quality regulations. Identify improvements required to the City's water treatment systems to meet current and/or future regulations.
704. *Draft and Final Chapter 7 – Water Quality.* Prepare draft Chapter 7 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- This task does not include review or update of the City's Water Quality Monitoring Plan and other water quality programs and plans.
- This task does not include a blending study between surface water and groundwater.

City Deliverables

- Requested data.
- Comments on draft Chapter 7 – Water Quality.

Consultant Deliverables

- Draft Chapter 7 – Water Quality.

- Final Chapter 7 – Water Quality.

Meetings

- None.

TASK 800 – WATER RESOURCES

The purpose of this task is to evaluate the current and future water resources to identify potential deficiencies and proposed improvements. Evaluations will consider current water rights, Water Resources Inventory Areas (WRIA), and coordinated regional water system plans. This task will develop *Chapter 8 - Water Resources* of the Plan.

Task 800 Activities

801. *Data Request*. Develop and submit a request for data required by Chapter 8. The following data are anticipated to be required:
    a. Existing water rights certificates/permits and pending water rights applications.
    b. Existing well pump tests, surface water diversion capacity, and other evaluations and/or characterizations of supply capacity.
    c. Known limitations in supply transmission or treatment capacity.
    d. Electronic information for the City's existing monitoring wells and sampling protocol.
    e. Information required by PGG for updating the Wellhead Protection Report.
    f. Source Water Protection Plan.
802. *Water Supply Summary*. Review and summarize the existing sources of supply for the City's RWSA, including all surface water, groundwater, and interties. The "ability to pump" of each source will include an evaluation of capacity, water right, treatment capacity, auxiliary power, and other limitations. Identify the criticality of each source.
803. *Water Rights Assessment*. Summarize water right permits, claims, certificates, and pending water right applications and change applications. Complete DOH Water Rights Self-Assessment Tables 1, 2, and 3 for the existing, 6-year, and 20-year planning years, respectively.
804. *Water Supply Analysis*. Evaluate the City's ability to provide water supply in accordance with the City's confirmed reliability and supply criteria for the 6-, 10-, 20-year, and buildout projected demands within the whole system. Additional supplies or improvements will be identified and summarized, as needed. Summarize the City's water supply strategy plan and recommend program modifications, if needed, to meet all system demands for the planning period. The strategy will include consideration of the proposed Steigerwald regional well field. The ability to supply individual pressure zones will be addressed in the system analysis.
805. *Meeting No. 4 – Water Supply Analysis/Water Quality*. Present the supply, storage, pump station, and distribution system analysis results for the City's review and approval.

806. *Wellhead Protection Program Update*. Update City's Wellhead Protection Plan to maintain compliance with all requirements of the Washington State's wellhead protection rules. Work will be performed by PGG and will include the following subtasks:

1. Wellhead Protection Capture Zone Delineations. PGG previously modeled the City's wellhead capture zones at full buildout conditions (i.e. total water rights) for the lower Washougal well field area and do not anticipate the need for any updates to the those delineations in the 2015 WSP, therefore, were not included in the budget.
2. Assess Environmental Threats and Risk Reduction Strategies. Inventory and map potential and confirmed contaminant sources within the delineated capture zone areas using current data contained within Ecology Environmental Information Management (EIM) database system. Evaluate and rank potential risks to the City's supply sources and assess management strategies that can be employed to minimize risk.
3. Prepare Contingency Supply Plans. Prepare a contingency supply plan that considers the potential loss of the City's largest supply source due to groundwater contamination including options to use interties from the Cities of Vancouver and Washougal and use of the Camas surface water diversions on Boulder and Jones creeks.
4. Prepare Notification Letters. Prepare notification letters that will need to be sent to hazardous waste handlers, first responders, and regulatory agencies as required by WAC 246-290-135. The letters will include maps showing the locations of the wellhead protection capture zones, transportation corridors where spills might be of concern, and waste storage and handling sites. It is assumed that the City will transmit the letters using their letterhead. Electronic versions of the documents and mailing lists will be provided to the City for their transmittal. Copies of the letters will be provided for inclusion in the WSP.
5. Provide Assistance with Steigerwald Wellfield Supply Options and Analysis. PGG will assist with integrating information from the Steigerwald water supply work that we have completed to date as needed for the 2015 WSP. Up to two days of staff time has been included in the budget.
6. Prepare Wellhead Protection Plan Summary Report. Prepare a letter report which summarizes the findings of Subtasks 1 - 5. The document will serve as an appendix to the City's WSP document which will be submitted to DOH.
7. PGG Project Management. Conduct internal communication and management of personnel in accomplishing the project tasks. PGG will communicate regularly with City staff and other project team members to keep them informed on project status and will solicit input, as needed. PGG will prepare and submit invoices on a monthly basis.

807. *Meeting No. 5 – Wellhead Protection*. Present the Wellhead Protection results for the City's review and approval.

808. *Draft and Final Chapter 8 – Water Resources*. Prepare draft Chapter 8 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

Assumptions

- The City will provide assumptions on future sources and quantities of supply
- City staff will field-verify hazard sites.
- No sensitivity analyses have been budgeted.

City Deliverables

- Requested data.
- Field verification of hazard sites.
- Comments on draft Chapter 8 – Water Resources.

Consultant Deliverables

- Meeting No. 4 Agenda, Materials, and Minutes.
- Meeting No. 5 Agenda, Materials, and Minutes.
- Wellhead Protection Plan Report Update.
- Draft Chapter 8 – Water Resources.
- Final Chapter 8 – Water Resources.

Meetings

- Meeting No. 4 – Water Supply Analysis/Water Quality.
- Meeting No. 5 – Wellhead Protection.

TASK 900 – WATER SYSTEM ANALYSIS

The purpose of this task is to evaluate the distribution system using the City's calibrated InfoWater hydraulic model. Improvements will be developed for identified deficiencies. Improvements identified in other tasks will be incorporated into the model, as appropriate, to determine the effect of comprehensive improvements. It is assumed that the City's most recent Innovyze InfoWater hydraulic model will be available. Operational changes identified in the system analysis will be reflected in O&M Manual update and vice versa. Identified improvements will be reviewed as part of Meeting No. 7 - Capital Improvements.

Task 900 Activities

901. *Data Request*. Develop and submit a request for data required for Chapter 9. The following data are anticipated to be required:
    a. Potential future supplies or interties, including locations.
    b. Potential location for future storage facilities.
    c. SCADA data for diurnal curve development and calibration.

902. *Updated Hydraulic Profile*. Update the previous hydraulic profile according to data provided in the hydraulic model. Prepare a hydraulic profile figure for review by City.

903. *Storage Analysis.* Identify the storage volume required for each pressure zone based on the established storage criteria for equalizing, fire flow, operational and standby volumes. The storage analysis will be performed for the 6-, 10-, and 20-year projected demands. If storage deficiencies are identified, additional storage volume requirements will be identified by pressure zone and capacity. Potential storage size and location specifically identified by the City will be utilized if future storage needs are identified.

904. *Pump Station Analysis.* Identify the pumping capacity requirements per City specified criteria. Compare requirements to current pump station capacity to identify any deficiencies for the 6-, 10-, and 20-year projected demand scenarios. Required upgrades, modifications, or operational changes will be recommended, as necessary.

905. *Update Hydraulic Model.* The existing calibrated InfoWater hydraulic model will be updated with latest pipes and demands for the 6-, 10-, and 20-year conditions.

    a. Compare existing calibrated InfoWater model with the City's GIS and recent as-built drawings. It is assumed that the existing model was updated in the last year and does not require calibration. Complete limited updates to the model as required.

    b. Apply the estimated existing demands to nodes in the model using geocoding. Scale demands per pressure zone such that the total demand per pressure zone matches the demand projections. Demands for the 6-, 10-, and 20-year conditions will be applied in the model using a scaled multiplier.

    c. Review diurnal curves in the model and update using historical SCADA data. Apply diurnal curves into model. Calibrate model based on an extended period simulation (EPS) using a separate validation period. It is anticipated that the diurnal curves will be developed for up to four operating areas that may span multiple pressure zones.

    d. Review and update Fire flow requirements (FFR) assigned to the model nodes based on the latest land use data. In addition, a specific FFR will be assigned to the single node in each zone representing the account with the highest FFR.

    e. Establish settings and initial levels for seasonal operation of the system. The model will be updated to simulate the hydraulic changes due to supply from surface water versus groundwater sources.

906. *Fire and System Pressure Analysis*. Using the hydraulic model, perform steady state analysis of the system evaluating fire flow and system pressures per DOH regulations and guidelines based on the City's water system criteria. Identify improvements to address deficiencies under the MDD plus fire flow simulations and the peak hour simulations for the 6-year, 10-yea,r and 20-year scenarios. The model will also be used to identify minimum system pressures and velocities during peak-hour demands. Operational changes will be recommended in addition to physical improvements. The System Analysis will focus on distribution capacity deficiencies for pressure, velocity, and flow. The analysis will be conducted for both supply scenarios

907. *Meeting No. 6 - Desktop and System Analysis*. Present the Storage and Pump Station Analysis results for the City's review and approval. Discuss and validate, if possible, the deficiencies identified during the fire and system pressure analysis with City staff. Prepare figures showing pressure and fire flow deficiencies.

908. *Identification of Water Improvement Projects*. Identify improvements to address identified transmission/distribution deficiencies. Identified supply, storage, treatment, and water quality improvements included will be sized to meet 20-year demand conditions. Incorporate results from in Task 1300 - Condition Assessment. Incorporate water system projects in the existing CIP and summarize changes to projects, if required. Prepare figures showing results of pressure and fire flow after implementing recommended improvements.

909. *Draft and Final Chapter 9 – System Analysis*. Prepare Chapter 9 for City's review and approval. Document the methodology and results of the System Analysis of the system deficiencies and improvements. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

<u>Assumptions</u>

- Existing Innovyze Hydraulic Model that is up-to-date and well calibrated.

<u>City Deliverables</u>

- Requested data.
- Comments on draft Chapter 9 – System Analysis.

<u>Consultant Deliverables</u>

- Meeting No. 6 Agenda, Materials, and Minutes.
- Draft Chapter 9 – System Analysis.
- Final Chapter 9 – System Analysis.

<u>Meetings</u>

- Meeting No. 6 - Desktop and System Analysis.

TASK 1000 – CAPITAL IMPROVEMENTS

This Task will summarize the recommended improvements for the sources of supply, storage, distribution and transmission, and pressure zones in accordance with the City's Policy and Criteria. Total project costs will be developed for each recommended improvement and ranked by priority. This task will develop *Chapter 10 - Capital Improvement* for the Plan.

<u>Task 1000 Activities</u>

1001. *Cost Estimates.* Develop opinions of project cost for pipe replacement, pump station, reservoir, treatment, and other improvement projects identified by City. Summarize the recommended system improvements for the 6-year, 10-year, and 20-year terms. Costs

will be presented in current dollars and represents an American Association of Cost Engineering (AACE) Class V estimate.

1002. *Project Prioritization.* Obtain project prioritization criteria from City. Prioritize all projects into 6-year, 10-year, and 20-year schedules based on evaluation during the Plan. Projects not identified in the Plan will be identified by the City and included for prioritization during this task.

1003. *Meeting No. 7 - Capital Improvements.* Review CIP projects and develop project prioritization. Review and confirm all CIP project costs.

1004. *Electronic CIP.* Develop an electronic CIP spreadsheet tool to include a full sheet on each project and a summary CIP for all projects. Project costs and timing will be linked such that City staff may revise costs and timing and the CIP will automatically be updated.

1005. *Draft and Final Chapter 10 – Capital Improvements.* Prepare draft Chapter 10 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final Plan.

<u>Assumptions</u>

- City provides bid costs of recent projects, if available.

<u>City Deliverables</u>

- Comments on draft Chapter 10 – Capital Improvements.

<u>Consultant Deliverables</u>

- Meeting No. 7 Agenda, Materials, and Minutes.
- Draft Chapter 10 – Capital Improvements.
- Final Chapter 10 – Capital Improvements.
- Electronic CIP.

<u>Meetings</u>

- Meeting No. 7 - Capital Improvements

TASK 1100 – FINANCIAL

The purpose of this task is to develop Chapter 11 – Financial Plan, which will be conducted by FCS. Chapter 11 will identify the total cost of providing water service, assure that the utility improvement schedule will be implemented, and assist in establishing adequate fees for service. The financial program will be coordinated with the CIP. Specific tasks to be performed for the financial program will include the following:

1101. *Data Collection / Review*. Prepare an initial data request identifying financial and operational documents pertinent to the performance of the study. The Consultant will provide the CIP and relevant draft WSP chapters. Review, analyze, and validate data as necessary for use in formulating the technical analysis. Follow up with requests for any additional items or explanations as necessary.

1102. *Historical Financial Performance Review*. Review and document the financial operations (revenue and expenses) and financial condition (assets and liabilities) of the water utility for the previous six-year period. Summarize noteworthy financial trends.

1103. *Fiscal Policy Review*. Review the City's current fiscal policies for operating and capital reserves, system reinvestment funding, debt management, and debt service coverage.

1104. *Capital Financing Plan*. Evaluate capital funding options, and develop a capital financing plan for the six-year and 20-year Capital Improvement Programs (CIP). The analysis will include a forecast of capital funding needs, borrowing requirements, and associated cash flows and cash balances over the study period. Evaluate and recommend an appropriate balance of funding from cash, System Development Charges (SDCs), bonds, low interest loans and/or other available funding sources. Depending upon preliminary results, FCS will work closely with the Consultant and the City to perform sensitivity analyses for alternative scheduling of capital projects in order to smooth customer rate impacts. The budget provides for up to three (3) scenarios.

1105. *Operating Forecast*. The City's current water operating budgets will be used as the baseline for forecasting ongoing operating and maintenance (O&M) costs, debt service, and other financial obligations of the water utility over the six-year and 20-year study periods. Incorporate engineering planning growth forecasts and establish economic factors for cost escalation. Integrate additional O&M expenses, if any, resulting from the CIP and any other known changes in operational requirements.

1106. *Revenue Needs Assessment*. Integrate fiscal policies, capital financing impacts and the operating forecast, and develop an operating cash flow projection for the six-year and 20-year study periods. Compare forecasted financial requirements against forecasted revenue under existing rates to determine annual and cumulative revenue adjustments needed to ensure financial sustainability over time.

1107. *Rate Forecast & Affordability Test*. Develop a rate forecast for the six-year period. Apply annual rate adjustments to the City's existing water rate structures "across-the-board" to each rate class and rate charge (fixed and variable). Note: this scope does not include changes to the City's existing water rate structure. The Financial Chapter will include a narrative discussion of potential rate structure enhancements, if necessary.

    Perform an affordability test as an indication of a residential customer's ability to pay the existing and forecasted rates. This includes an analysis and comparison of the water system's existing and forecasted average residential bills to 1.5 percent of the median household income. This test will be conducted for the six-year and 20-year study periods.

1108. *Meeting No. 8 - Financial Analysis*. Review results before finalizing the Financial Chapter. Meeting will be attended by FCS and Carollo.

1109. *Documentation*. Draft Financial Chapter for Consultant and City staff review. An electronic copy of the draft Financial Chapter and Excel-based tables will be provided to Consultant for incorporation into the WSP document. Incorporate requested changes, as appropriate, and submit the final version of the Financial Chapter.

Assumptions

- City can provide elements listed under Task 1101.
- This scope does not include changes to the City's existing water rate structure or SDC.

Deliverables

- Meeting No. 8 Agenda, Materials, and Minutes.
- Draft Chapter 11 – Financial.
- Final Chapter 11 – Financial.

Meetings

- Meeting No. 8 – Financial Analysis.

TASK 1200 – PLAN INTEGRATION

The purpose of this task is to integrate comments on the Plan into a clear and comprehensive Water System Plan document. The City Draft Plan will be prepared, including an Executive Summary. This task also includes incorporating comments and developing the Agency Review Draft Plan and Final Plan.

1201. *Executive Summary*. Prepare an executive summary, summarizing each element of the Water System Plan.
1202. *City Draft Plan*. Prepare Cover Sheet, Table of Contents, and Executive Summary. Compile Chapters and develop Appendices. Prepare one PDF of City Draft document for City Staff review.
1203. *Meeting No. 9 - City Draft Plan*. Meet with City to discuss comments of draft document. Incorporate comments to be included into Agency Draft Plan.
1204. *Additional Meetings.* Up to two additional meetings for Plan review as determined by City staff. Aid City staff in preparing technical materials for meetings.
1205. *Agency Draft Plan*. Incorporate City comments into an Agency Draft plan to be submitted for agency review. Eight notebook binders, one camera-ready set, and one PDF will be developed for City reproduction and distribution of Plan to Agencies and Adjacent Purveyors.
1206. *Final Plan*. Consultant will review agency review letters for incorporation into the Final Plan. Delivery of the Final Plan will include one PE-stamped original notebook binder, one PE-stamped original camera-ready set, 7 PE-stamped reproduction notebook binders, one PDF, and all electronic files.

Assumptions

- City provides required documents for appendices, including acceptance ordinances.
- It is anticipated that City will distribute the Plan to DOH, County agencies, and adjacent purveyors review for approval. The City will collect public and agency review comments

and deliver to Consultant. City will develop written responses received during Agency Review process.

City Deliverables

- City Comments.
- Public and Agency Review Comments.

Consultant Deliverables

- Executive Summary.
- City Draft Plan - One PDF.
- Meeting No. 9 Agenda, Materials, and Minutes.
- Additional Meetings Agenda, Materials, and Minutes.
- Agency Draft Plan - Eight notebook binder, one camera-ready, and one PDF.
- Final Plan - Eight notebook binder, one camera-ready, and one PDF.

Meetings

- Meeting No. 9 - City Draft Plan.
- Up to two additional meetings.

TASK 1300 - CONDITION ASSESSMENT

The purpose of this task is to conduct a condition assessment on the City's above ground infrastructure. Condition assessment will field verify above-ground water system features, with the exception of water reservoirs, Pressure Reducing Valves (PRVs), and all surface water treatment facilities. Additionally, below-ground infrastructure will be assessed based on a Remaining Useful Life (RUL) analysis. The condition assessment will be made of other features on reservoir sites. Prepare a prioritized condition assessment with recommendations on system repair, replacement. Develop cost estimates for recommendations.

Task 1300 Activities

1301. *Compile Facility Information.* Compile existing information on facilities, including size, material, manufacturer, age, and known issues. Incorporate reservoir condition assessments into facility information from City and valves information from GC Systems. Prepare facility evaluation worksheets to aid in facility tour. It is assumed that all surface water treatment facilities are in acceptable condition and will not be assessed.
1302. *Meeting No. 10 – Facility Tour.* Coordinate a tour of the supply, treatment, pumping, and storage facilities listed in the below table. Verify and document infrastructure, including pictures and GPS coordinates. Note general condition of infrastructure for use in condition assessment. As a part of this scope of work, facility tours assume 16 hours for four (4) professionals.
1303. *Condition Assessment.* Prepare a high-level condition assessment of all above ground facilities using data gathered during Meeting No. 10. Complete evaluation worksheets for

each facility. Develop recommendations for the repair, replacement, or upgrade of facilities. With the City, establish overall RUL of each facility to aid in calculating risk and prioritizing recommendations.

1304. *Cost Estimates.* Develop opinions of project cost for recommended repair, replacement, or upgrade projects identified in the Condition Assessment. Costs will be presented in current dollars and represents an AACE Class IV estimate.

1305. *Meeting No. 11 – Condition Assessment and Prioritization.* Discuss the results of the condition assessment. Discuss estimate of risk for above-ground facilities based on facility RUL and criticality. Criticality will be established during the Condition Assessment meeting by City Staff using a scale of low, medium, and high. A numeric estimate will be based on RUL multiplied by Prioritize recommendations based on input from the City into the 6-year, 10-year, and 20-year planning horizons. Review and update prioritization of recommendations.

1306. *Draft and Final TM 1 – Condition Assessment.* Document condition assessment activities in Technical Memorandum (TM). Provide collected data electronically, including facility location in an ESRI ARCGIS compatible file format.

<u>Assumptions</u>

- City will provide available information on facilities.
- City will provide access to facility locations.
- Facilities listed in the below table will be evaluated.
- GPS coordinates will be made using consumer grade GPS devices. No survey grade equipment will be used.

<u>City Deliverables</u>

- Requested Data.
- Input on project prioritization.

<u>Consultant Deliverables</u>

- Meeting No. 10 Agenda, Materials, and Minutes.
- Meeting No. 11 Agenda, Materials, and Minutes.
- Additional Meetings Agenda, Materials, and Minutes.
- Draft TM 1.
- Final TM 1.

<u>Meetings</u>

- Meeting No. 10 - Facility Tour.
- Meeting No. 11 - Condition Assessment and Prioritization.

Facilities to be Evaluated			
Facility Type	**Name**	**Facility Type**	**Name**
Well/Treatment Facility	Well 5	Pump Station	Forest Home
Well	Well 6	Pump Station	Old Gregg
Well	Well 7	Pump Station	New Gregg
Well	Well 8	Pump Station	Lower Prune Hill
Well/Treatment Facility	Well 9	Pump Station	Lacamas
Well	Well 10	Pump Station	Angelo
Well	Well 11	Pump Station	Upper Prune Hill
Well	Well 12	Storage Facility	Butler
Well/Treatment Facility	Well 13	Storage Facility	Lower Prune Hill
Well/Treatment Facility	Well 14	Storage Facility	Upper Prune Hill
Treatment Facility	Main Chemical Feed Building	Storage Facility	Gregg
Pump Station	Butler	Storage Facility	Lacamas

TASK 1400 - O&M Manual

The purpose of this task is to update the City's existing O&M Manual. It is not anticipated that the task will require major revisions to O&M Manual.

Task 1400 Activities

1401. *Meeting No. 12 – O&M Workshop.* Facilitate a workshop to discuss and document existing system operations with City Staff. Prepare exhibits to aid in the workshop. Workshop discussions will serve as the basis for updating the O&M Manual.

1402. *Update Existing Information.* Update Chapters 1 through 5 and Appendixes A through J of the 2009 O&M Manual. Update photographs and figures used in the document. Incorporate operational changes from other tasks, including the System Analysis.

1403. *Add New Water System Components.* Add new water system components to the O&M Manual. This is expected to include Wells *9* and *14*. The Slow Sand Filtration Treatment Plant will not be added to the O&M Manual.

1404. *Meeting No. 13 – O&M Manual.* O&M Manual will be provided prior to meeting for City review. Discuss comments and confirm updates to the O&M Manual.

1405. *Draft and Final O&M Manual*. Produce three notebook binder copies and one PDF copy of Draft O&M Manual for City review and comment. Address City comments in a Final O&M Manual. Three notebook binder copies, one camera-ready, and one PDF of the Final O&M Manual will be developed for City reproduction.

Assumptions

- City will provide the existing O&M manual electronically.
- City will provide needed manufacturer information, maintenance schedules, screen shots, and other information needed to update O&M Manual.

City Deliverables

- Review of O&M Manual.

Consultant Deliverables

- Meeting No. 12 Agenda, Materials, and Minutes.
- Meeting No. 13 Agenda, Materials, and Minutes.
- Draft O&M Manual - Three notebook binder copies and one PDF copy.
- Final O&M Manual - Three notebook binder copies and one PDF copy.

Meetings

- *Meeting No. 12 - O&M Workshop.*
- *Meeting No. 13 - O&M Manual.*

TASK 1500 - PROJECT MANAGEMENT

The purpose of this task is to direct all activities within the Plan as assigned by the City and maintain the project within the contracted scope, schedule, and budget. This includes project administration, monthly invoicing, client and team coordination and quality assurance/quality control review necessary to successfully complete the assigned chapter of the Plan to the City's expectations. Additionally, the Consultant will develop a Project Management Plan (PMP) and lead the initial team kick-off meeting.

Task 1500 Activities

1501. *Monthly Progress Reports and Invoices.* This subtask includes assisting the project team members in the implementation of the task items, reviewing the work-in-progress reports and monthly invoices. Prepare and submit monthly activity reports showing current project scope, budget and schedule status and identifying key issues or elements of the project that will need to be addressed in the proceeding weeks. An electronic version of the monthly progress reports and invoices will be sent to the City for review and approval.

1502. *Project Management Plan.* Prepare a Project Management Plan (PMP) that describes project roles and responsibilities, lists contact information for the project team, describes communications protocols, quality management, and including the scope of services, schedule, and budget. Quality Management includes, but is not limited to, the following elements:

    a. Project Manager overview of all primary documents to verify technical consistency and compliance with contract requirements.

b. Designate and assign qualified consultant staff to develop assigned project deliverables, and manage consultant staff for schedule, quality and budget relative to assigned deliverables.
c. Develop a proposed timeline for project deliverables with a target DOH Plan submittal by June 2016.
d. Resolution of all review comments with a memorandum summarizing key comments and the manner in which each was addressed in the work.

The PMP will be introduced and discussed with the Consultant and the City project team at the Project kick-off meeting. A revised final PMP will be delivered after the Project Initiation Meeting.

1503. *Client Coordination*

a. Manage the consultant project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete the project.
b. Create and maintain a working project schedule based on the schedule in the PMP.
c. Review project status, including scope, budget, and schedule.

<u>Assumptions</u>

- The PMP will be updated with full incorporation of review comments after City review of the draft PMP.
- The total length of the project is eighteen (18) months.
- City provides required documents for appendices.

<u>City Deliverables</u>

- Team member contact information.
- PMP review for completeness.
- Receive, review, and process Consultant invoices in a timely manner.
- Respond to data request in a timely manner.

<u>Consultant Deliverables</u>

- Data request list.
- Draft Plan outline.
- Draft PMP.
- Final PMP.
- Eighteen (18) monthly progress reports and invoices.

<u>Meetings</u>

- None.

SUMMARY

The following tables provide a summary of the meetings and deliverables anticipated for this scope of services.

Meetings	Title
Meeting No. 1	Project Kickoff Meeting
Meeting No. 2	Policies and Criteria
Meeting No. 3	Water Requirements/WUE Program Review
Meeting No. 4	Water Supply Analysis/Water Quality
Meeting No. 5	Wellhead Protection
Meeting No. 6	Desktop and System Analysis
Meeting No. 7	Capital Improvements
Meeting No. 8	Financial
Meeting No. 9	City Draft Plan
Meeting No. 10	Facility Tour
Meeting No. 11	Condition Assessment and Prioritization
Meeting No. 12	O&M Workshop
Meeting No. 13	O&M Manual
Additional Meetings	Up to 2 additional Plan Review Meetings TBD by City

Deliverables
Project Management Plan
All Meeting Agendas & Minutes
Monthly Progress Reports (with invoices)
Data Request Spreadsheet
Executive Summary
Draft & Final Chapter 1 – Introduction
Draft & Final Chapter 2 – Planning Considerations
Draft & Final Chapter 3 – Existing System

Deliverables
Draft & Final Chapter 4 – Operation and Maintenance
Draft & Final Chapter 5 – Water Requirements
Comments on Draft Chapter 6
Final Chapter 6 – Water Use Efficiency
Draft & Final Chapter 7 – Water Quality
Draft & Final Chapter 8 – Water Resources
Wellhead Protection Plan
Draft & Final Chapter 9 –System Analysis
Draft & Final Chapter 10 – Capital Improvements
Electronic CIP
Draft & Final Chapter 11 – Financial
Draft & Final TM1 Condition Assessment
Draft & Final O&M Manual
City Draft Plan
Agency Draft Plan
Final Plan & All Electronic Files

EXHIBIT C, Cost Estimate
2016 Water System Plan Update

	TASK / DESCRIPTION	PM Kammereck	QM Loper	PE Gresh	PE Various	PE Lanigan	Asst. PM Reisinger	EI Miner	GIS Varies	WP Varies	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS: Travel and Printing	OTHER DIRECT COSTS: PECE $11.70	OTHER DIRECT COSTS: Total ODC	TOTAL COST
	Total Labor Rate	$ 195	$ 226	$ 195	$ 195	$ 148	$ 148	$ 132	$ 118	$ 90									
	Task 100 - Introduction																		
101	*Meeting No. 1 - Project Kick-off*	4	0	4	0	4	8	0	0	0	20	$ 3,336	$ -	$ -	$ -	$ 500	$ 234	$ 734	$ 4,070
102	*Develop Introduction Information*	2	0	0	0	0	2	4	0	0	8	$ 1,214	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,308
103	*Draft and Final Chapter 1 – Introduction*	2	0	0	0	0	4	2	0	4	12	$ 1,606	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,746
	Subtotal - Task 100	**8**	**0**	**4**	**0**	**4**	**14**	**6**	**0**	**4**	**40**	**$ 6,156**	**$ -**	**$ -**	**$ -**	**$ 500**	**$ 468**	**$ 968**	**$ 7,124**
	Task 200 - Planning Considerations																		
201	*Data Request*	0	0	0	0	2	0	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
202	*Study Area*	0	0	0	0	2	0	2	2	0	6	$ 796	$ -	$ -	$ -	$ -	$ 70	$ 70	$ 866
203	*Identify Legislation, Regulations, and Permits*	0	0	0	0	2	0	4	0	0	6	$ 824	$ -	$ -	$ -	$ -	$ 70	$ 70	$ 894
204	*Review and Update of Policies and Criteria*	2	0	0	0	12	0	0	0	2	16	$ 2,346	$ -	$ -	$ -	$ -	$ 187	$ 187	$ 2,533
205	*Meeting No. 2 - Policies and Criteria*	4	0	0	0	8	0	0	0	2	14	$ 2,144	$ -	$ -	$ -	$ 500	$ 164	$ 664	$ 2,808
206	*Summarize Related Documents*	0	0	0	0	2	0	4	0	0	6	$ 824	$ -	$ -	$ -	$ -	$ 70	$ 70	$ 894
207	*Draft and Final Chapter 2 – Planning Considerations*	0	0	0	0	8	0	4	0	0	12	$ 1,712	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,852
	Subtotal - Task 200	**6**	**0**	**0**	**0**	**36**	**0**	**14**	**2**	**4**	**62**	**$ 8,942**	**$ -**	**$ -**	**$ -**	**$ 500**	**$ 725**	**$ 1,225**	**$ 10,167**
	Task 300 - Existing System																		
301	*Data Request*	0	0	0	0	0	2	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
302	*Review and Update of Existing System*	0	0	0	0	0	4	20	8	4	36	$ 4,536	$ -	$ -	$ -	$ -	$ 421	$ 421	$ 4,957
303	*Draft and Final Chapter 3 – Existing System*	2	0	0	0	0	4	8	0	4	18	$ 2,398	$ -	$ -	$ -	$ -	$ 211	$ 211	$ 2,609
	Subtotal - Task 300	**2**	**0**	**0**	**0**	**0**	**10**	**28**	**8**	**8**	**56**	**$ 7,230**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 655**	**$ 655**	**$ 7,885**
	Task 400 - Operation and Maintenance																		
401	*Data Request*	0	0	0	0	0	2	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
402	*O&M Analysis*	0	0	0	0	0	12	0	0	0	12	$ 1,776	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,916
403	*Remaining Useful Life*	0	0	0	0	0	4	16	8	0	28	$ 3,648	$ -	$ -	$ -	$ -	$ 328	$ 328	$ 3,976
404	*Draft and Final Chapter 4 – Operations and Maintenance*	2	0	2	0	0	8	2	0	4	18	$ 2,588	$ -	$ -	$ -	$ -	$ 211	$ 211	$ 2,799
	Subtotal - Task 400	**2**	**0**	**2**	**0**	**0**	**26**	**18**	**8**	**4**	**60**	**$ 8,308**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 702**	**$ 702**	**$ 9,010**
	Task 500 - Water Requirements																		
501	*Data Request*	0	0	0	0	2	0	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
502	*Demographics Projections*	0	0	0	0	8	0	8	0	0	16	$ 2,240	$ -	$ -	$ -	$ -	$ 187	$ 187	$ 2,427
503	*Demand Projections*	0	0	0	0	8	0	16	0	0	24	$ 3,296	$ -	$ -	$ -	$ -	$ 281	$ 281	$ 3,577
504	*Meeting No. 3 – Water Requirements / WUE Program Review*	4	0	0	0	12	0	0	0	0	16	$ 2,556	$ -	$ -	$ -	$ 500	$ 187	$ 687	$ 3,243

	TASK / DESCRIPTION	PM Kammereck	QM Loper	PE Gresh	PE Various	PE Lanigan	Asst. PM Reisinger	EI Miner	GIS Varies	WP Varies	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS: Travel and Printing	OTHER DIRECT COSTS: PECE $11.70	OTHER DIRECT COSTS: Total ODC	TOTAL COST
	Total Labor Rate	$ 195	$ 226	$ 195	$ 195	$ 148	$ 148	$ 132	$ 118	$ 90									
505	*Draft and Final Chapter 5 – Water Requirements*	0	0	0	0	16	0	8	0	4	28	$ 3,784	$ -	$ -	$ -	$ -	$ 328	$ 328	$ 4,112
	Subtotal - Task 500	**4**	**0**	**0**	**0**	**46**	**0**	**32**	**0**	**4**	**86**	**$ 12,172**	**$ -**	**$ -**	**$ -**	**$ 500**	**$ 1,006**	**$ 1,506**	**$ 13,678**
Task 600 - Water Use Efficiency																			
601	*Data Request*	0	0	0	0	1	0	0	0	0	1	$ 148	$ -	$ -	$ -	$ -	$ 12	$ 12	$ 160
602	*Future Conservation Water Demand*	0	0	0	0	8	0	4	0	0	12	$ 1,712	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,852
603	*Draft and Final Chapter 6 – Water Use Efficiency*	1	0	0	0	4	0	0	0	4	9	$ 1,147	$ -	$ -	$ -	$ -	$ 105	$ 105	$ 1,252
	Subtotal - Task 600	**1**	**0**	**0**	**0**	**13**	**0**	**4**	**0**	**4**	**22**	**$ 3,007**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 257**	**$ 257**	**$ 3,264**
Task 700 - Water Quality																			
701	*Data Request*	0	0	0	0	0	2	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
702	*Water Quality Summary*	0	0	0	0	0	8	0	0	0	8	$ 1,184	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,278
703	*Water Quality Analysis*	0	0	0	0	0	16	0	0	0	16	$ 2,368	$ -	$ -	$ -	$ -	$ 187	$ 187	$ 2,555
704	*Draft and Final Chapter 7 – Water Quality*	2	0	0	0	0	16	0	0	4	22	$ 3,118	$ -	$ -	$ -	$ -	$ 257	$ 257	$ 3,375
	Subtotal - Task 700	**2**	**0**	**0**	**0**	**0**	**42**	**0**	**0**	**4**	**48**	**$ 6,966**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 562**	**$ 562**	**$ 7,528**
Task 800 - Water Resources																			
801	*Data Request*	0	0	0	0	2	0	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
802	*Water Supply Summary*	0	0	0	0	6	0	0	0	0	6	$ 888	$ -	$ -	$ -	$ -	$ 70	$ 70	$ 958
803	*Water Rights Assessment*	0	0	0	0	8	0	0	0	0	8	$ 1,184	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,278
804	*Water Supply Analysis*	0	0	0	0	10	0	0	4	0	14	$ 1,952	$ -	$ -	$ -	$ -	$ 164	$ 164	$ 2,116
805	*Meeting No. 4 – Water Supply Analysis / Water Quality*	4	0	0	0	8	4	0	0	0	16	$ 2,556	$ -	$ -	$ -	$ 500	$ 187	$ 687	$ 3,243
806	*Wellhead Protection Program Update*	0	0	0	0	4	0	0	0	0	4	$ 592	$ -	$ -	$ -	$ -	$ 47	$ 47	$ 639
	Task 2 - Assess Environmental Threats and Risk Reduction Strategies	0	0	0	0	0	0	0	0	0	-	$ -	$ 3,740	$ 374	$ 4,114	$ -	$ -	$ -	$ 4,114
	Task 3 - Prepare Contingency Plan	0	0	0	0	0	0	0	0	0	-	$ -	$ 910	$ 91	$ 1,001	$ -	$ -	$ -	$ 1,001
	Task 4 - Prepare Notification Letter	0	0	0	0	0	0	0	0	0	-	$ -	$ 970	$ 97	$ 1,067	$ -	$ -	$ -	$ 1,067
	Task 5 - Provide Assistance with Steigerwald Wellfield Supply Options and Analysis	0	0	0	0	0	0	0	0	0			$ 1,210	$ 121	$ 1,331	$ -	$ -	$ -	$ 1,331
	Task 6 - Prepare WHP Summary Report	0	0	0	0	0	0	0	0	0			$ 4,130	$ 413	$ 4,543	$ 50	$ -	$ 50	$ 4,593
	Task 7 - PGG Project Management	0	0	0	0	0	0	0	0	0			$ 1,740	$ 174	$ 1,914	$ 20	$ -	$ 20	$ 1,934
807	*Meeting No. 5 – Wellhead Protection*	0	0	0	0	2	0	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319
808	*Draft and Final Chapter 8 – Water Resources*	2	0	0	0	16	0	0	0	6	24	$ 3,298	$ -	$ -	$ -	$ -	$ 281	$ 281	$ 3,579
	Subtotal - Task 800	**6**	**0**	**0**	**0**	**56**	**4**	**0**	**4**	**6**	**76**	**$ 11,062**	**$ 12,700**	**$1,270**	**$ 13,970**	**$ 570**	**$ 889**	**$ 1,459**	**$ 26,491**
Task 900 - Water System Analysis																			
901	*Data Request*	0	0	0	0	0	2	0	0	0	2	$ 296	$ -	$ -	$ -	$ -	$ 23	$ 23	$ 319

	TASK / DESCRIPTION	PM Kammereck	QM Loper	PE Gresh	PE Various	PE Lanigan	Asst. PM Reisinger	EI Miner	GIS Varies	WP Varies	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS: Travel and Printing	OTHER DIRECT COSTS: PECE $11.70	OTHER DIRECT COSTS: Total ODC	TOTAL COST
	Total Labor Rate	$ 195	$ 226	$ 195	$ 195	$ 148	$ 148	$ 132	$ 118	$ 90									
902	*Updated Hydraulic Profile*	1	0	0	0	0	0	4	8	0	13	$ 1,667	$ -	$ -	$ -	$ -	$ 152	$ 152	$ 1,819
903	*Storage Analysis*	0	0	0	0	0	8	0	0	0	8	$ 1,184	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,278
904	*Pump Station Analysis*	0	0	0	0	0	8	0	0	0	8	$ 1,184	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,278
905	*Update Hydraulic Model*	0	0	0	0	0	4	16	4	0	24	$ 3,176	$ -	$ -	$ -	$ -	$ 281	$ 281	$ 3,457
906	*Fire and System Pressure Analysis*	0	6	0	0	0	16	78	0	0	100	$ 14,020	$ -	$ -	$ -	$ -	$ 1,170	$ 1,170	$ 15,190
907	*Meeting No. 6 - Desktop and System Pressure Analysis*	4	0	0	0	0	4	16	4	0	28	$ 3,956	$ -	$ -	$ -	$ 500	$ 328	$ 828	$ 4,784
908	*Identification of Water Improvement Projects*	0	2	0	0	0	4	24	8	0	38	$ 5,156	$ -	$ -	$ -	$ -	$ 445	$ 445	$ 5,601
909	*Draft and Final Chapter 9 – System Analysis*	2	0	0	0	0	16	8	4	8	38	$ 5,006	$ -	$ -	$ -	$ -	$ 445	$ 445	$ 5,451
	Subtotal - Task 900	**7**	**8**	**0**	**0**	**0**	**62**	**146**	**28**	**8**	**259**	**$ 35,645**	**$ -**	**$ -**	**$ -**	**$ 500**	**$ 3,030**	**$ 3,530**	**$ 39,175**
Task 1000 - Capital Improvements																			
1001	*Cost Estimates*	0	0	4	0	0	0	16	0	0	20	$ 2,892	$ -	$ -	$ -	$ -	$ 234	$ 234	$ 3,126
1002	*Project Prioritization*	0	0	0	0	0	4	0	0	0	4	$ 592	$ -	$ -	$ -	$ -	$ 47	$ 47	$ 639
1003	*Meeting No. 8 - Capital Improvements*	4	0	0	0	0	8	12	0	0	24	$ 3,548	$ -	$ -	$ -	$ 500	$ 281	$ 781	$ 4,329
1004	*Electronic CIP*	0	0	0	0	0	0	20	0	0	20	$ 2,640	$ -	$ -	$ -	$ -	$ 234	$ 234	$ 2,874
1005	*Draft and Final Chapter 10 – Capital Improvements*	2	0	0	0	0	0	16	0	4	22	$ 2,862	$ -	$ -	$ -	$ -	$ 257	$ 257	$ 3,119
	Subtotal - Task 1000	**6**	**0**	**4**	**0**	**0**	**12**	**64**	**0**	**4**	**90**	**$ 12,534**	**$ -**	**$ -**	**$ -**	**$ 500**	**$ 1,053**	**$ 1,553**	**$ 14,087**
Task 1100 - Financial																			
1101	*Data Collection / Review*	0	0	0	0	0	0	0	0	0	-	$ -	$ 420	$ 42	$ 462	$ -	$ -	$ -	$ 462
1102	*Historical Financial Performance Review*	0	0	0	0	0	0	0	0	0	-	$ -	$ 2,284	$ 228	$ 2,512	$ -	$ -	$ -	$ 2,512
1103	*Fiscal Policy Review*	0	0	0	0	0	0	0	0	0	-	$ -	$ 840	$ 84	$ 924	$ -	$ -	$ -	$ 924
1104	*Capital Financing Plan*	0	0	0	0	0	0	0	0	0	-	$ -	$ 1,547	$ 155	$ 1,702	$ -	$ -	$ -	$ 1,702
1105	*Operating Forecast*	0	0	0	0	0	0	0	0	0	-	$ -	$ 1,547	$ 155	$ 1,702	$ -	$ -	$ -	$ 1,702
1106	*Revenue Needs Assessment*	0	0	0	0	0	0	0	0	0	-	$ -	$ 1,547	$ 155	$ 1,702	$ -	$ -	$ -	$ 1,702
1107	*Rate Forecast & Affordability Test*	0	0	0	0	0	0	0	0	0	-	$ -	$ 1,547	$ 155	$ 1,702	$ -	$ -	$ -	$ 1,702
1108	*Meeting No. 9 - Financial Analysis*	4	0	0	0	0	4	0	0	0	8	$ 1,372	$ 1,470	$ 147	$ 1,617	$ 500	$ 94	$ 594	$ 3,583
1109	*Documentation*	2	0	0	0	0	4	0	0	8	14	$ 1,702	$ 5,515	$ 551	$ 6,066	$ -	$ 164	$ 164	$ 7,932
	Subtotal - Task 1100	**6**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**8**	**22**	**$ 3,074**	**$ 16,716**	**$1,672**	**$ 18,388**	**$ 500**	**$ 257**	**$ 757**	**$ 22,219**
Task 1200 - Plan Integration																			
1201	*Executive Summary*	0	0	0	0	0	8	0	0	4	12	$ 1,544	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,684
1202	*City Draft Plan*	4	0	0	0	12	16	0	8	24	64	$ 8,028	$ -	$ -	$ -	$ -	$ 749	$ 749	$ 8,777
1203	*Meeting No. 10 - City Draft Plan*	4	0	0	0	8	8	0	0	0	20	$ 3,148	$ -	$ -	$ -	$ 500	$ 234	$ 734	$ 3,882
1204	*Additional Meetings*	8	0	0	0	8	8	0	0	0	24	$ 3,928	$ -	$ -	$ -	$ -	$ 281	$ 281	$ 4,209
1205	*Agency Draft Plan*	4	2	0	0	4	4	0	0	20	34	$ 4,216	$ 4,000	$ 400	$ 4,400	$ -	$ 398	$ 398	$ 9,014
1206	*Final Plan*	4	0	0	0	4	4	0	0	12	24	$ 3,044	$ 4,000	$ 400	$ 4,400	$ -	$ 281	$ 281	$ 7,725
	Subtotal - Task 1200	**24**	**2**	**0**	**0**	**36**	**48**	**0**	**8**	**60**	**178**	**$ 23,908**	**$ 8,000**	**$ 800**	**$ 8,800**	**$ 500**	**$ 2,083**	**$ 2,583**	**$ 35,291**

	TASK / DESCRIPTION	PM Kammereck	QM Loper	PE Gresh	PE Various	PE Lanigan	Asst. PM Reisinger	EI Miner	GIS Varies	WP Varies	Total Hours	Carollo Labor Cost	Sub Total Cost	Sub Markup @ 10%	Total Cost	OTHER DIRECT COSTS: Travel and Printing	OTHER DIRECT COSTS: PECE $11.70	OTHER DIRECT COSTS: Total ODC	TOTAL COST
	Total Labor Rate	$ 195	$ 226	$ 195	$ 195	$ 148	$ 148	$ 132	$ 118	$ 90									
Task 1300 - Condition Assessment																			
1301	*Compile Facility Information*	0	0	8	0	0	0	40	4	4	56	$ 7,672	$ -	$ -	$ -	$ -	$ 655	$ 655	$ 8,327
1302	*Meeting No. 11 – Facility Tour*	0	0	16	48	0	0	12	0	0	76	$ 14,064	$ -	$ -	$ -	$ 1,500	$ 889	$ 2,389	$ 16,453
1303	*Condition Assessment*	0	0	10	36	0	0	24	0	0	70	$ 12,138	$ -	$ -	$ -	$ -	$ 819	$ 819	$ 12,957
1304	*Cost Estimates*	0	0	8	16	0	0	24	0	0	48	$ 7,848	$ -	$ -	$ -	$ -	$ 562	$ 562	$ 8,410
1305	*Meeting No. 12 – Condition Assessment and Prioritization*	4	0	4	0	0	0	12	0	4	24	$ 3,504	$ -	$ -	$ -	$ 500	$ 281	$ 781	$ 4,285
1306	*Draft and Final TM 1 – Condition Assessment*	2	0	8	16	0	0	24	0	8	58	$ 8,958	$ -	$ -	$ -	$ -	$ 679	$ 679	$ 9,637
	Subtotal - Task 1300	**6**	**0**	**54**	**116**	**0**	**0**	**136**	**4**	**16**	**332**	**$ 54,184**	**$ -**	**$ -**	**$ -**	**$ 2,000**	**$ 3,884**	**$ 5,884**	**$ 60,068**
Task 1400 - O&M Manual																			
1401	*Meeting No. 13 – O&M Workshop*	0	0	4	0	0	0	4	0	0	8	$ 1,308	$ -	$ -	$ -	$ -	$ 94	$ 94	$ 1,402
1402	*Update Existing Information*	0	0	2	0	0	0	16	0	0	18	$ 2,502	$ -	$ -	$ -	$ -	$ 211	$ 211	$ 2,713
1403	*Add New Water System Components*	0	0	8	0	0	0	24	0	0	32	$ 4,728	$ -	$ -	$ -	$ -	$ 374	$ 374	$ 5,102
1404	*Meeting No. 14 – O&M Manual*	0	0	4	0	0	0	8	0	0	12	$ 1,836	$ -	$ -	$ -	$ -	$ 140	$ 140	$ 1,976
1405	*Draft and Final O&M Manual*	2	0	8	0	0	0	40	0	8	58	$ 7,950	$ -	$ -	$ -	$ 200	$ 679	$ 879	$ 8,829
	Subtotal - Task 1400	**2**	**0**	**26**	**0**	**0**	**0**	**92**	**0**	**8**	**128**	**$ 18,324**	**$ -**	**$ -**	**$ -**	**$ 200**	**$ 1,498**	**$ 1,698**	**$ 20,022**
Task 1500 - Project Management																			
1501	*Monthly Progress Reports and Invoices*	12	0	0	0	0	24	0	0	12	48	$ 6,972	$ -	$ -	$ -	$ -	$ 562	$ 562	$ 7,534
1502	*Project Management Plan*	2	0	0	0	0	4	0	0	4	10	$ 1,342	$ -	$ -	$ -	$ -	$ 117	$ 117	$ 1,459
1503	*Client Coordination*	24	0	0	0	0	0	0	0	0	24	$ 4,680	$ -	$ -	$ -	$ -	$ 281	$ 281	$ 4,961
	Subtotal - Task 1500	**38**	**0**	**0**	**0**	**0**	**28**	**0**	**0**	**16**	**82**	**$ 12,994**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 959**	**$ 959**	**$ 13,953**
Total		**120**	**10**	**90**	**116**	**191**	**254**	**540**	**62**	**158**	**1541**	**$ 224,506**	**$ 37,416**	**$3,742**	**$ 41,158**	**$ 6,270**	**$ 18,030**	**$ 24,300**	**$ 289,964**

Exhibit A
Camas NUGA Sewer Transmission Main
Scope of Work
FINAL
September 18, 2015

Project Understanding

The City of Camas has been studying ways to best provide sewer service to the North Urban Growth Area (NUGA), which is an area north of Lacamas Lake in the city's urban growth area. The April 2010 General Sewer Plan Amendment (GSPA) provides an overview of a proposed sewer layout, which includes a temporary service option for the Green Mountain area that directs effluent to the city's STEP sewer main. As development activity has picked up, Camas realized the need for a more fully developed plan to serve the area and limit the reliance on STEP systems and the city's STEP main.

In 2014 the City embarked on a review of the GSPA and development of an alternatives analysis for the NUGA sewer transmission system (NUGA STS). The June 23, 2015 Alternatives Analysis Memorandum recommended a preferred option (Alternative 4) and the basic parameters of a plan to construct a sewer transmission system to serve the area.

Because development at Green Mountain will be ahead of construction of the NUGA Sewer Transmission system, the Green Mountain developers will construct a temporary system to serve their development until the NUGA STS is operational. It will include initial construction of Pump Station 1 and a force main to pump effluent to the existing Camas STEP system. A hydraulic limitation of no more than 350 units for this temporary system is the primary driver of time constrains to complete the NUGA STS project.

This initial project scope includes development of a preliminary design for the entire NUGA STS, which consists of three pump stations, and associated force mains and gravity mains that will convey flows to the city's Main Lift Station. It will follow the route and concepts developed in the June 2015 Alternative Analysis memorandum.

A subsequent project scope will address final design, construction document preparation, and bidding services for Phase 1 of the NUGA- STS, which is expected to include all facilities from Pump Station 1 to a connection point with an existing sewer pipe at or near the intersection of NE 22nd Avenue and NE Franklin Street.

Our consultant team is shown in Table I. Individual team responsibilities are described in detail with each of the tasks listed in this scope of work.

Table I: Design Team and Roles	
Firm	Role / Task Assignments
Otak	• Project Management • Flow projections • Pipeline Routing • Pipeline structures and appurtenances • Pipeline sizing and material selection • Pump Station site layouts • Preliminary Design Report • Structural Engineering • Landscape architecture • Topographic Surveys • Pipeline alignment and profile • Cost estimates
CH2M	• Hydraulics • Transient Analysis • Odor and Corrosion Control • Pump Station Design Drawings • Telemetry • Pipeline structures and appurtenances • Preliminary Design Report • Cost Estimates
Normandeau	• Environmental Permitting
GRI	• Geotechnical Investigations and Report
BergerABAM	• Alternatives Analysis • Flow projections • Preliminary Design Report
EPIC Land Services	• Real Property Services

Table I: Design Team and Roles	
Firm	Role / Task Assignments
Archaeological Investigations Northwest	• Cultural and Historic resource surveys

Design Objectives

The primary objective is to finalize design concepts for the project such that it can be advertised and constructed beginning in the first quarter of 2017. The services provided by the Otak, Inc. project team include the following tasks:

- Review and update prior studies
- Completion of aerial and field surveys for each pump station site and pipeline route.
- Environmental assessments to determine permit requirements and conditions.
- Geotechnical field investigations for the pump stations and pipeline routes.
- Hydraulic transient analysis of the force mains.
- Development of 30 percent plans and a design report.

Scope of Work

Task 1 Flow Projections

This task will confirm or revise the flow projections stated in the NUGA study and provide additional support for flow projections in next five (5) years.

- Review potential transmission system service areas.
- Review existing flow projections in the City of Camas, including those produced in 2014 for the NUGA Sewer study, and those in the City's General Sewer Plan Amendment.
- Review peaking factors for use in newer and developing portions of Camas.
- Assess status of current property ownership and development prospects in the NUGA.
- Revise the 2014 flow projections within the 20-year planning time frame as necessitated by this review. The review will focus on the first five (5) years, and the 20-year flows will remain as currently defined.
- Provide estimates of flow projections at three to four key intermediate points in the 20-year planning horizon. Intermediate points include start-up flows as well as two to three trigger points that will be tied to dates or major changes in flow contributions.

Assumptions:

- 20-year UGA and zoning shape files are available from Clark County.

- Sewer basin maps are available from previous NUGA Sewer studies in CAD or GIS form.
- The flow characteristics, such as per capita flow and peaking factors, used in this analysis will be as defined in the city's General Sewer Plan Amendment.

Deliverables:

- Map of service areas for each pump station.
- Population and flow projections through the end of Camas's current planning period, including three to four intermediate points.

Task 2: Alternatives Evaluation

Perform an evaluation of NUGA Sewer Transmission system pipelines routing alternatives, and for sites for Pump Stations 2 and 3.

Subtask 2.1: Camp Currie Alignment:

This task includes the review of an alternative pipeline alignment from Pump Station #1 through Camp Currie to Leadbetter Road. The alternative analysis will include an analysis of cultural resources, environmental resources, and ROW impacts. The tasks will include:

Cultural Resource Assessment

To assess whether significant archaeological resources are within the Camp Currie alignment, the resource survey will be a phased approach, designed to first assess the most likely areas, then verify whether archaeological sites are present, followed by determining whether impacts to resources can be avoided. The approach will be to:

- Conduct a pedestrian survey of the proposed alternative.
- Shovel test areas that appear most likely for an archaeological site, based on the landform, historical research, or presence of artifacts nearby. Up to 100 shovel tests may be excavated.
- Delineate the resources found, if any. Up to 40 shovel tests may be excavated.
- Conduct additional survey near resources to determine whether a shift in the corridor will avoid resources.

Once the Camp Currie option alignment has been investigated, the rest of the corridor will be surveyed and shovel tested, where needed. This is covered in Task 9.

Environmental Assessment

The proposed alignment requires an evaluation of natural resources to determine if resource impacts in this segment (particularly wetland and stream impacts), when added to impacts from the remaining corridor segment, can be addressed with a U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) that requires less than 0.5 acres of impact (fill). Also, the general extent of buffer impacts from wetlands off the corridor needs to be estimated and what the extent of buffer mitigation, if any, would be. This task will include:

- Traversing the proposed alternative alignment to identify presence of wetlands and streams

along and adjacent to the alignment and associated corridor. Wetland limits and location of streams will not represent complete delineations, rather identify presence of wetlands and approximate boundaries.

- Completing preliminary functional assessments and categorizations of wetlands according to Washington State Department of Ecology's (Ecology's) Wetland Rating System.
- Coordinating with City staff to determine lead agency status with Clark County for Critical Areas located in Clark County.

Survey

- Establish survey control on Project Datum along the preliminary alternate alignment, from NE 232nd Avenue to NE Goodwin Road (Approx. 7500');
- Stake preliminary alternate alignment between NE 232nd Avenue and NE Goodwin Road with lath every 100' and at angle points (Approx. 100 stakes);
- Map locations of archeological, wetland, and geotechnical flagging, plots, pits, etc., along the preliminary alternate alignment;
- Supplement survey control as necessary for an alignment revised to miss cultural and/or environmental resources. (Approx. 3500');
- Stake secondary alternate alignment where different than preliminary alternate alignment. (Approx. 40 stakes);
- Map locations of archeological, wetland, and geotechnical flagging, plots, pits, etc., along the secondary alternate alignment.

Real Property Services Assessment (Clark County, Lacamas Creek Communities and BPA)

Otak will evaluate the ability to get easements from Clark County, from Lacamas Creek Communities, and from the BPA. This will be done by meeting with each agency and owner to confirm their willingness to allow the pipeline on their property and for the city to purchase an easement.

Hydraulics Assessment

CH2M will perform hydraulic assessment of pipeline alternatives between Pump Station 1 and Pump Station 2. This effort includes the following activities:

- Develop Pump Station #1 criteria associated with the both the baseline alignment and the Camp Currie alignment.
- Provide input into pipeline sizing for each alternative and perform a cursory transient evaluation to define requirements.
- Investigate options for pumping equipment to meet criteria associated with each alternative; determine if proposed criteria limit or eliminate equipment options, or drive the need for differing approaches (e.g. series pumping).
- Define upgrade requirements to Pump Station #1 for both pipeline alternatives (designed and constructed by others)

Alignment Evaluation

Once the assessments have been completed the two alternatives (base alternative versus Camp Currie alternative) will be evaluated as follows:

- Prepare budget-level capital and life cycle cost estimates for both pump station alternative. The costs will not be all-inclusive but will be for comparative purposes. The intent is for the costs to be accurate relative to each other for selection purposes.
- Develop criteria to evaluate each option. Criteria are expected to include life-cycle costs, environmental impacts, cultural resource impacts, availability and reliability of pumps, and easement acquisition potential.
- Develop narrative guidelines on the qualitative measurement of each criterion.
- Review criteria and weighting with the city.
- Qualitatively score the performance of the alternatives against the criteria (Scale of 1 to 5).
- While performing the analysis, assumed fatal flaws to the Camp Currie alignment include:
- Wetland impacts such that the project will not quality for a nationwide permit.
- Significant, unavoidable cultural resource sites are found.
- Unable to receive a permit from the BPA.
- Unable to obtain an easement from the Lacamas Creek Communities.

Upon completion of this evaluation, a meeting will be held with city staff to review the analysis and select a route.

Assumptions:

- The Camp Currie portion is 7,500 feet long and 50 feet wide.

Deliverables:

- Decision matrix with selection criteria
- Meeting minutes from selection meeting

Subtask 2.2: Pump Station Alternatives

This task is to determine locations for Pump Stations 2 and 3:

- Establish the location of Pump Station 2. This will be determined based on the ability to provide gravity service to the tributary basin (Basin 3), and critical lands avoidance. GIS topography indicates that Pump Station 2 should be located between 500 to 1000 feet south of NE 9th Street to allow for gravity service from Basin 3 to the pump station.
- Establish the location of Pump Station 3. This location will be based upon the ability to serve Basin 4 (the CJ Dens parcel). It will be assumed that the pump station will be located just off of Leadbetter Road on the CJ Dens property.
- Review City standards for pump station configuration and provide a summary of proposed

enhancements for consideration by Owner. Meet with Owner to review enhancements and facilitate endorsement by City of configuration for all three new stations.

- Develop two alternative site layouts at each site. This will include activities such as: (1) determine structure size, location, and orientation; (2) layout roadways/truck access corridors and define maneuvering requirements (design vehicle); (3) size and locate parking lots for employees and visitors to the facility; (4) determine emergency vehicle access requirements. (4) evaluate flood plain impacts and constraints; (5) locate storm water management facilities. (6) locate utility and piping corridors (horizontal and vertical).
- Review concepts and draft work products with the city for selection of a preferred alternative.

Assumptions:

- None

Deliverables:

- Draft and final memorandum describing the selection process, along with a map showing the pump station locations.

Subtask 2.3: Pipeline Route Alternatives - SR 500 to Downtown

This task is to review options for installing the pipeline in State Route 500, and to review routes to the Main Pump Station. This task will include:

- Determining the best approach for crossing the channel between Lacamas and Round Lakes. Options include crossing on the existing bridge, installing a new bridge, or using trenchless technology to cross under the channel.
- SR 500 between Leadbetter Road and NE 35th Avenue has limited room for new pipelines, as there are many utilities in the road. In addition, this is a main traffic corridor, including a main route for school buses.
- Reviewing options to install the pipeline on the route of a new road west of SR 500 to serve Fallen Leaf Park.
- Review routes previously considered between Lacamas Lake and the Main Pump Station.

Assumptions:

- None

Deliverables:

- Draft and final memorandum describing the selection process, along with maps showing alternative and preferred routes.

Subtask 2.4: Define Odor and Corrosion Control Approach

- Based on the proposed system configuration establish the recommended alternatives for odor and corrosion control for the NUGA STS. The alternatives will be evaluated based on life cycle cost, treatment effectiveness, space availability, installation requirements, and ease of

O&M.

- Develop a layout and summarize the design criteria for the recommended odor and corrosion treatment/prevention alternatives based on successfully installed systems and performance. The design criteria will include air flow rate, size of the unit(s), tank sizes, performance efficiency, space requirements, chemical feed, water flow rate, fan size, effectiveness and utility requirements such as water, drainage, and electrical and other factors, as applicable.
- Develop alternatives for ventilation and air collections methods. Evaluate ventilation rates and source containment of odors and recommend the economical and effective alternative that minimizes the size of the odor treatment system and limits annual operating costs associated with liquid chemical addition to the extent possible.. Incorporate recommendations for material selection for those components subject to corrosive gases.

Assumptions:

- None

Deliverables:

- Draft and final memorandum describing the selection process, and describing the proposed odor/corrosion control method.

Task 3 Preliminary Design

The purpose of this task is to use the data and guidelines developed in Tasks 1 and 2, develop and evaluate alternative design concepts, and agree upon a single design concept. The end products from this task will include sketches and preliminary drawings which will provide sufficient information for Owner and agency review and design team coordination and review. Drawings and other materials that may be required exhibits for environmental permit applications will be available at the conclusion of this phase (assumed 30 percent level of design). The preliminary design work will be performed by Otak and CH2M, and specific work activities and deliverables from this task are as identified below.

Subtask 3.1: Transient/Surge Analysis

CH2M will perform a preliminary surge evaluation of the forcemain and pump station systems for Pump Stations 1, 2 and 3. This analysis will consist of a power failure pump shutdown scenario to determine the potential surge pressures associated with the pipeline system. This analysis will be performed for the maximum flow condition. The analysis will include separate analyses for each pump station and forcemain system. .If the initial analysis indicates that surge conditions may be leading to excessive positive or negative pressures, additional surge analysis will be performed to evaluate potential surge mitigation alternatives. This analysis will also provide a description of the steady state flow conditions for the pipeline. It is anticipated that commercially available analysis tools will be used such as Bentley Hammer. A technical memorandum will be prepared for the initial analysis and revised for the final analysis that will occur at 90% design.

- Gather necessary data required to create a computer model of the pump station and force main system under both initial and ultimate flow conditions.

- Establish initial non-transient hydraulic grade line elevations for pump power failure and start-up analysis under initial and future flow conditions.
- Perform simulations for pump power failure and start-up of the pump station under initial and future flow conditions.
- Review the results of the analysis and, if deemed necessary, incorporate surge protection measures for the force main and pump station to eliminate possible adverse surges created as a result of the power failure and start-up.
- Provide preliminary recommendations for sizes and locations of air/vacuum facilities, and/or other mitigating measures (surge tanks) if necessary for protection from surge conditions.

Subtask 3.2: Preliminary Pump Station Design

The scope components assumed for this task include Pump Stations 1, 2 and 3 as well as odor and corrosion control systems for the transmission system. It is assumed that preliminary design will be developed for all three stations.

Objectives and Standards

Document the Owner's institutional standards as well as external standards and criteria that influence the project design work. The standards and criteria in the following areas will be considered:

- Owner design criteria standards and preferences: Identify any Owner standards for design criteria or standard products. Discuss any Owner preferred equipment types, suppliers and vendors.
- Graphic standards: Standard drawing size/border, standard symbols/legends, CAD software standards (including software versions), requirements for electronic deliverables, standards/preferences for P&IDs, process flow stream IDs etc.
- Procurement policies: Bidding/procurement requirements, sole source restrictions, any existing master agreement for the purchase of materials, and equipment.
- Labor standards and policies: Design provisions for staff/visitors with accessibility limitations, any existing noise restrictions, any existing labor union restrictions, site security requirements, parking requirements etc.
- Equipment and materials: Preferences on indoor versus outdoor locations for equipment, preferred equipment types and suppliers, local control/local disconnect preferences (lockable MCCs versus local disconnect switches), standby power provisions, preferences regarding the use of adjustable frequency drives etc.
- Structural/Mechanical: Identify local permitting agency, obtain current local design codes and standards that are in effect, define permitting requirements.
- Electrical/I&CS: Define redundancy requirements, identify primary contact at local utility, Owner telemetry standards and approaches.

Civil and Site Development

Schematic design work will include the following activities.

- Confirm adequacy of topographical and boundary mapping. Evaluate legal, ownership, permitting and zoning constraints. Identify environmentally sensitive areas such as wetlands, flood plains, known hazardous waste areas, etc
- Coordinate with geotechnical engineer on boring locations; record boring locations on site drawings.
- Develop preliminary erosion control plan for project. Prepare preliminary storm water calculations suitable for submission to local site permitting authorities. Develop preliminary storm water control concepts (swales, curb, and gutter). Meet with local storm water and erosion and sediment control agency to determine permitting requirements for site plans, and impact of requirements on preparation of contract documents. Document findings.
- Set preliminary finished floor levels for new structures. Establish preliminary finished grades; overall major surfaces, road profiles, etc. Iterate preliminary surfaces and structures to optimize earthwork if necessary.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Structural

Schematic design for structural will include the following activities:

- Consult with lead process engineer on building/structure layouts.
- Develop structure foundation and concepts based on schematic layouts.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Geotechnical

Geotechnical work will include the following:

- Determine site specific geotechnical conditions for each facility and structure. Develop specific foundation requirements.
- Verify constructability (shoring and bracing requirements, dewatering issues).
- Prepare foundation and corrosion control recommendations.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Mechanical

Schematic design for mechanical will include the following:

- Select and size all major process equipment including pumps. Prepare sizing calculations and obtain review. Establish level of redundancy required for all process equipment.
- Prepare equipment list with sizing for major equipment. Coordinate with the owner on preferences of equipment manufacturer and processes.
- Prepare preliminary drawings for equipment arrangements.

- Review concepts and draft work products with and seek approval from quality control reviewer.

Odor Control/Plumbing

Schematic design for Odor Control and plumbing will include the following:

- Select type of ventilation system to be used in pump station and other structures inlet air tempered with inlet and outlet fans, simple exhaust fan system).
- Determine overall potable water requirements for the project. Confirm adequate quantity and pressure can be obtained from the local potable water supply utility.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Instrumentation and Control Systems (I&CS)

Schematic design work for the instrumentation and control will include the following activities:

- Prepare a process flow drawing (PFD) for each system. Information to be included on each PFD includes at a minimum: Process configuration, flow streams, valve and gate locations (manual and powered), chemical additions points/types, equipment location/type including packaged control panels and adjustable-speed drives, flow meters and other process control devices.
- Develop equipment/instrument tag numbering, naming, and abbreviation conventions.
- Review existing telemetry systems and client goals and develop a needs assessment
- Develop recommendations for communications systems for new pump stations, considering integration into existing City communications network.
- Prepare written operational description of each pump station, reflecting system wide operations (developed in Task 3.4).
- Develop overall control philosophy including local control approach, control system, level of automation, telemetry approach and supervisory control.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Electrical

Schematic design work for electrical will include the following:

- Prepare preliminary one-line diagrams for proposed facilities.
- Prepare preliminary load calculations.
- Size electrical systems
- Coordinate with local power utility to determine locations of power feeds, voltage, billing details (peak usage rates), requirements for reduced voltage starters, substation requirements
- Determine redundancy requirements for power supplies and power distribution.

- Establish preferred voltages for power distribution and utilization equipment.
- Compile list of chemicals and amounts to be used. Coordinate with other disciplines (mechanical and I&CS) to resolve code compliance issues specific to these disciplines (e.g., National Electrical Code and National Fire Protection Association 820 issues). Develop preliminary schedule of hazardous and corrosive locations. Review concepts and draft work products with and seek approval from quality control reviewer.
- Evaluate potential incentive funding from Clark Public Utilities for which the City may be eligible.

Assumptions:

No buildings will be provided for at-grade equipment.

Deliverables:

- Process & Instrumentation Diagrams (P&IDs)
- Process Control Narratives.

Subtask 3.3: Pipeline Design

Pipeline Alignments

Pipeline alignments will be developed and refined using field survey information. Locations within roadways will be identified, and exact alignments in non-roadway areas will be determined. Existing utility locations and environmental information will be reviewed, and pipeline alignments will be adjusted to avoid utility conflicts and environmental areas where possible. Topographic considerations (reducing the number of high and low points) and surge analysis will dictate the size and quantity of combined air release/vacuum valves, which will also influence final alignment routes and profile.

Design Standards

Determine design standards to be applied to the pipelines. Identify Washington Department of Ecology (Ecology) requirements for sanitary force main construction.

Pipeline sizing

The size of each gravity pipeline will be reviewed, along with the use of a single force main versus dual force mains.

Pipe Materials Evaluation

Pipe materials will be reviewed and evaluated based on criteria such as corrosion resistance, hydraulics, pressure and transients, longevity, ease of installation, local experience, and availability in the northwest. These criteria will be used to rate and rank different pipeline materials, and this analysis will be summarized in a Technical Memorandum, which will be incorporated into the Design Report.

Pipeline Design Criteria

Criteria to be evaluated include internal pressures, external loading, thrust restraint, buoyancy and

uplift.

Subtask 3.4: Flow Management and Operation/Maintenance Plan

This task will include:

- Develop a written plan for the NUGA system addressing flow management, system operations, and maintenance of the NUGA STS. Develop and evaluate O&M and flow management for extreme low flow, average flow, and peak flow at startup and at system capacity for each of the phases of the NUGA sewer transmission project. The plan will also address:
- Flow Monitoring Plan including flow triggers and operational queues indicating capacity needs
- Emergency Response for key system failures (pump station failure, force main failure, gravity trunk failure)
- Develop advantages/disadvantages for all flow scenarios, including considerations for solids management in force mains and gravity sewers, capital costs, operating costs, and odor and corrosion control requirements.

Assumptions:

- The plan will not address infrastructure downstream of the NUGA STS discharge point.

Deliverables:

- Draft and final technical memorandum.

Subtask 3.5: Preliminary Design Workshops

Otak and CH2M will conduct a series of half day workshops throughout the preliminary design phase to review preliminary design concepts, make design decisions.

These tasks will be performed by Otak and CH2M and will consist of bi-weekly workshops throughout the preliminary design phase with the Engineer's design team and client staff. Tentative topics include:

- Flow management and overall system operation.
- Phasing and flow triggers associated with improvements.
- Pump station design criteria (elevation, capacity, redundancy requirements, capacity for expansion).
- Pump station configuration.
- City's preferred O&M features.
- Odor and corrosion control options
- Draft control loop descriptions.
- Draft P&IDs.
- Emergency power supply.

- Draft electrical design standards.
- Draft mechanical design standards.
- Draft instrumentation design standards.
- Remote operational capability and telemetry.
- Site plan features.
- Identify permitting issues along the force main routing and develop an action plan to resolve potential issues.
- Meeting agendas, complete with anticipated attendees, will be developed with key staff early enough to facilitate scheduling of staff members.

Assumptions:

- Approximately 10 four-hour workshops will be held at city offices. Assume approximately 4 consultant team members will attend each meeting.

Deliverables:

- Meeting minutes and action item lists from each meeting, which will be reviewed at the following meeting.
- A report will be prepared that documents the approach and findings of the preliminary design. The report will document the design process and equipment selection performed for this phase of the project and will include the following information:
    - Pipelines
        - Force main size and material selection (including dual versus single force main selection)
        - Gravity trunk size and material selection
        - Trenchless technology design parameters, if these methods are proposed.
        - Locations for air/vacuum release valves, drainage piping, isolation valves, pigging facilities and other appurtenances.
        - Basis of Design calculations
        - Route evaluation and final route selection
    - Pump Stations
        - Wet well/Pump Configuration and Sizing
        - Discipline Technical Memoranda
        - Odor control for pump station and force main
        - Corrosion control for wet well and force main
    - Work Sequence
    - Flow Management (TM from Task 3.5, revised to address city comments).
    - Project programming and phasing

- Thirty percent pipeline drawings, which will include:
    - General Overview: Indexes to Drawings and Legends, Project Location Overview
    - Plan and profiles for the pipelines.
    - Trench detail showing width and bedding and backfill requirements.
- Thirty percent pump station drawings, which will include:
    - Pump Station arrangement drawings
    - Odor Control system arrangement drawings
    - Process flow drawing (PFD) for each system
    - Preliminary Process Control Narratives
    - Control System Block Diagram
    - Equipment List
    - Preliminary one-line diagram
- 30 percent cost estimate with a 25 percent contingency and an escalation factor to the estimated midpoint of construction for each project.

Task 4: Survey and Mapping

Survey will be performed for the final alignment pipeline route, CARV and pump station locations. Survey will be a combination of aerial and ground survey techniques, as described below.

1. Aerial mapping services

- Establish survey control for aerial photography of final alignment;
- Aerial photo acquisition;
- Aero triangulation and preparation of digital orthophoto/orthomosaic;
- Mapping of planimetric features;
- Digital terrain model development;
- Mapping specifications:
- 1' contours
- 0.25' pixel density of photo
- 0.33' vertical accuracy on visible, hard surfaces

2. Field/Ground mapping services

- Supplement aerial photo control as necessary to perform ground mapping work;
- Field review of mapping to determine areas obscured by vegetation/overhangs;
- Mark for utility locates;
- Map areas obscured from aerial mapping by vegetation;
- Map underground utilities;

- Bathymetric surveying near SR 500 bridge over Lacamas/Round Lake;
- Detailed mapping of SR 500 bridge over Lacamas/Round Lake ;
- Tie environmental/resource areas identified and flagged;
- Tie soil boring and piezometer locations;
- Up to 10 pot holes of existing underground utilities to verify location, depth, and size.

3. Office mapping services

- Prepare topographic/right-of-way base map which includes:
- Aerial and ground topographic data;
- Existing ground digital terrain model;
- Centerline, right-of-way along route;
- Underground utilities and inverts (where available);
- Locations of all archeological, natural resource, and geotechnical flagging, test plots, etc.
- Compile utility as-built records and locations for public and private utilities (water, sanitary sewer, storm sewer, electric, telephone, gas, etc.)

Task 5 Geotechnical Investigation

This task will be performed by GRI and will include:

Subtask 5.1: Geotechnical Data Review

- Review available geotechnical and geological information for the sewer alignments, including well log reports.
- Review available aerial photographs and topographic maps of the project area for topographic conditions, areas of obvious shallow bedrock, and obvious indications of slope instability.

Subtask 5.2: Geotechnical Reconnaissance

- A licensed engineering geologist from GRI will complete a geologic reconnaissance of the transmission main alignments, pump stations, and bridge locations.
- Subsurface conditions along the alignment will be evaluated with up to 12 push-probe borings and 10 geotechnical borings.
- The push-probe borings will be advanced to depths of 15 to 20 feet, unless refusal on rock is encountered at a lesser depth. The push-probe method of investigation provides a cost-effective approach to rapidly explore subsurface conditions, particularly if hard rock is present. A metal tube with a sleeve is advanced into the ground to the depth desired, or to refusal on hard rock. A continuous core of the soils and, in some cases, soft rock, is obtained in the sleeve. Due to the relatively small (2 in.) diameter of the push-probe core, testing of the soil sample is limited to classification tests, such as moisture content and grain size analysis. The push-probe unit will be provided and operated by an experienced subcontractor. The push-

probe field work will be coordinated by a geotechnical engineer or engineering geologist from GRI who will document the work and obtain soil samples. It is anticipated that most, if not all, of the push-probe borings will be made on or along roadways, and traffic control will be required.

- Geotechnical borings will be completed using a truck-mounted hollow-stem auger unit. The borings will be completed in the sewer alignment including at the proposed pump stations and bridge crossing to supplement the information from the push-probes and further characterize the engineering properties of the soils and rock. Borings will be drilled to depths of between 20 and 30 ft. The total estimated drilling footage will be on the order of 260 ft. If hard rock is encountered within the proposed depth of excavation rock coring methods will be used to advance the borings to the maximum depth planned and rock core samples will be collected. Disturbed split-spoon samples will be obtained from the borings at about 2.5-ft intervals of depth in the upper 10 ft and at 5-ft intervals below this depth. The Standard Penetration Test will be conducted while the disturbed split-spoon samples are being taken.
- Vibrating-wire piezometers with data loggers will be installed in up to eight borings to measure the depth to groundwater and the seasonal variation. The vibrating-wire piezometers will allow for near-continuous measurement of the groundwater, which will be particularly useful for planning construction dewatering. Data from the data logger will be collected by GRI personnel on a three-month interval for a period of one year after drilling.
- The data logger will be protected at the ground-surface with a highway-rated, flush-mounted monument. The pavement at the borings locations not completed as piezometers will be patched with permanent cold-patch asphalt.
- Geotechnical laboratory testing will include standard classification tests, such as natural water content, grain size analysis, and Atterberg limit determinations to evaluate the suitability of the on-site material for structural fill and provide information to the contractor for construction dewatering. Unconfined compression testing will be performed on rock core samples to help evaluate rock excavation.

Subtask 5.3: Geotechnical Report

- Engineering studies and analyses will be accomplished that will lead to the preparation of conclusions and recommendations concerning
- Trenching conditions and considerations, including rock excavation;
- Earthwork, including cut and fill slopes, wet-weather construction, and the suitability of on-site soils for the use as structural fill;
- Foundation design criteria for the pump stations;
- Design lateral and uplift pressures and coefficient of base friction;
- Shoring;
- Dewatering; and
- Other geotechnical design or construction considerations that may arise during the course of

the study

- A report will be prepared that discusses the work accomplished and presents the results of the various tests and office studies. The report will provide our characterization of the soil, rock, and groundwater conditions along the alignment.

Assumptions:

- Abandonment of the vibrating-wire piezometers is not included in our scope of services and should be made part of the construction documents.
- A traffic control plan will be submitted to the City of Camas. GRI will subcontract the traffic control personnel.
- The borings will be subcontracted to a drilling contractor experienced in drilling and sampling soils for engineering purposes.
- The geotechnical boring field work will be completed under the direction of an experienced geotechnical engineer or engineering geologist from GRI, who will locate the general areas for drilling and maintain a detailed log of the materials and conditions disclosed during the course of the work.
- It is anticipated that most, if not all, of the geotechnical borings will be made on or along roadways, and traffic control will be required.

Deliverables:

- Draft and final electronic and three paper copies of the Geotechnical Reports

Task 6 Environmental Services

Subtask 6.1: Stream and Wetland Field Review and Report

A number of small streams and associated wetlands along the preferred option (Alternative 4) need to be identified to facilitate 30% (Phase 1) project design, for example, constraints regarding pump station locations. Also, the City's Stormwater Capital Improvement Plan includes upsizing culverts under Leadbetter Road. All streams and wetlands in this Alternative need to be reviewed for potential project impacts to Waters of the U.S. In addition, the Ordinary High Water Marks (OHWMs) of Lacamas Creek and Lacamas Lake need to be determined to identify extent of shoreline jurisdiction (the OHWM defined in the Shoreline Management Act [SMA] is a biological vegetation mark). For this subtask (in Phase 1), Normandeau will:

- Flag the OHWM, per Ecology guidance, of streams and limits of associated wetlands beyond the OHWM
- Flag the OHWM at the inlet to Round Lake from the SR-500 bridge eastward for approximately 125 feet.
- Conduct office work and field work to complete a functional assessment and categorize wetlands according to Ecology's Wetland Rating System (2014).
- Prepare a memorandum summarizing field methods and findings

Assumptions:

- Demarcating of the OHWM on small streams will follow *Determining the Ordinary High Water Mark on Streams in Washington State*, March 2010 Second Review Draft, Ecology Publication 08-06-001.
- The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, ver. 2.0 (2010) will be followed.
- Wetland buffers terminate at the edge of the road prism and thus wetland abutting roadways do not need to be delineated.
- Normandeau will coordinate with Otak to survey the location of OHWM and wetland flags in the field.
- Four small stream crossings and associated wetlands will be delineated.
- Flagging of streams and associated wetland will extend approximately 50 feet from either side of the proposed centerline of alignment.
- Memorandum will not exceed 10 pages, not including appendices.

Deliverables:

- OHWM and wetland delineation memorandum (one internal draft electronic copy to Otak and the City; one final electronic copy to Otak and City).

Subtask 6.2: Joint Aquatic Resources Permit Application (JARPA) and Clean Water Act (CWA) Compliance

During Phase 1, the design team will coordinate with agency and City staff regarding project design/goals and issuance of a permit under CWA §404 and certification by Ecology under CWA §401. For this subtask (in Phase 1), Normandeau will:

- Attend an office visit with USACE and Ecology staff (if the latter elect to attend) to review the project and discuss concerns or recommendations agency staff may have regarding issuance of authorizations under the CWA.

Assumptions:

- Engineering drawings, impact acreages and drawings showing same, Best Management Practices, and related design and construction information will be provided by others.
- The project will meet Ecology's §401 General Conditions and thus is Certified under Nationwide Permit (NWP) 12 and NWP 14.
- No compensatory mitigation will be required by any agency.

Deliverables:

- Attend an office visit with USACE and Ecology staff (not to exceed 4 hours including travel and meeting time).

Subtask 6.3: Washington Department of Natural Resources (WDNR) Aquatic Use

Authorization

If the project plans include constructing a utility bridge adjacent to the SR-500 bridge over the inlet to Round Lake and the land beneath the inlet is owned by the State of Washington, then an aquatic resources authorization will be required from WDNR. This authorization is not a regulatory permit, but a legal contract with terms and conditions between the City and WDNR that allows the City to lease space above state-owned aquatic land. For this subtask (in Phase 1), Normandeau will:

- Telephone WDNR staff and explain the details of the project and discuss ownership of the Round lake inlet.
- Attend a site visit with WDNR staff to review project and discuss concerns or recommendations that agency staff may have regarding project.

Assumptions:

- OHWM demarcated at the inlet to Round Lake following Ecology guidance is acceptable to WDNR, and additional field work will not be required.
- The site visit with WDNR will last not more than four hours (including travel).

Deliverables:

- Email summary of telephone call and site visit to Otak and City.

Subtask 6.4: Washington Department of Fish & Wildlife (WDFW) Hydraulic Project Approval (HPA)

The project plans to cross the inlet to Round Lake; install new sewer line beneath several small streams along the preferred option route (Alternative 4); and upsize culverts under Leadbetter Road. The streams associated with those specific culverts will require a review for potential impacts to Waters of the State by WDFW. For this subtask (in Phase 1) Normandeau will:

- Attend an office meeting with WDFW staff to review project and discuss concerns or recommendations agency staff may have regarding the project.

Assumptions:

- OHWM demarcations following Ecology guidance are acceptable to WDFW.
- New and replacement culverts will follow WDFW culvert criteria.
- The office meeting with WDFW will be concurrent with the USACE and Ecology meeting of subtask 8.1.

Deliverables:

- Attend office meeting with WDFW, Otak, and City staff.

Subtask 6.5: City and County Critical Areas and Significant Tree Permit

A Critical Areas report(s) will be required (in Phase 2) to address resources (wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat

conservation areas) impacted, but not addressed under the Shoreline Conditional Use Permit. Clark County GIS identifies Riparian Habitat Conservation Areas associated with small streams along the preferred alignment, particularly between the intersection of NE 28th Street and NE 232nd Avenue and the intersection of NE Everett Street (SR-500) and NW Lake Road. There may also be wetlands associated with these small streams.

During Phase 1 there should be coordination with City and County staff regarding project design/goals and issuance of a permit under Critical Areas. For this subtask (in Phase 1), Normandeau will:

- Attend an office visit with County and City staff to review the project and discuss concerns or recommendations agency staff may have regarding jurisdiction and critical area issues.

Assumptions:

- The Critical Area report will address the project area outside the Shoreline Master Program (SMP) jurisdiction. A shoreline-specific Critical Area analysis within those boundaries will be included with the SMP application.
- The each agency will act as a lead agency and will be responsible for processing of the Critical Area application under its regulations.

Deliverables:

- Attend an office meeting with county and city staff (two meetings not to exceed 4 hours each including travel and meeting time) and summary email of each meeting.

Task 7 Cultural and Historic Resource Assessments

This task will be performed by Archaeological Investigations Northwest (AINW), with support from Otak, to address Section 106 of the National Historic Preservation Act (due to a potential wetland impact that will require federal permitting) and local ordinances. The study will be an inventory or survey of the Area of Potential Effect (APE), and will include the following tasks.

Subtask 7.1: Background Review

Historic-period maps, such as early USGS quadrangles and General Land Office maps, will be reviewed. Areas where previous archaeological or historic resource studies have been conducted and where archaeological and historic resources have been recorded will be identified and shown on project maps. Previous studies that meet current standards and need no additional fieldwork will be identified. AINW will contact selected Tribes to assess whether ethnographic sites may be within the project.

This task also includes a review of the Area of Potential Effect (APE) maps prepared by others.

Subtask 7.2: Site Reconnaissance

A site reconnaissance of the project will be conducted. Goals for this reconnaissance include identifying areas where there is no need for pedestrian survey or shovel testing, and to verify the coverage of previous field studies.

Since the project alignment will be within roads for much of its length, it will be important to determine if there are areas that do not need archaeological study because they are deeply cut or filled. These include:

- Portions of the project where impacts are within roads—especially in road cuts that are well below grade—may need no additional exploration as impacts may occur in geologic layers deposited well before the time people were in the area.
- Determining whether the alignment will be within native soils—and have potential for an archaeological site—or will be entirely in fill or bedrock, for example, is likely to reduce the risk of encountering archaeological resources in some areas.

Subtask 7.3: Resource Surveys

After the reconnaissance is done, pedestrian surveys will be conducted, followed by shovel testing of areas where archaeological sites are deemed likely. Archaeological and historic resources will be documented during the survey.

Archaeological Survey and Shovel Testing

Archaeological survey of the roadway areas that the Camp Currie option will replace will be difficult to accomplish due to heavy traffic. Because construction trenching may intersect archaeological sites buried under the existing roadway, some areas may be targeted for probes through the roadway, if this can be accomplished, although archaeological investigation much prior to construction might be impossible.

- Areas along roads that are considered likely could be approached by investigating the shoulder areas and considering those areas to be a proxy for the undisturbed area under the road bed; a constraint may be the narrowness of road right of way.
- Alternatively, if shovel probes could be done ahead of construction in the high probability areas within roads, that will reduce risk. This may be possible in some low trafficked areas, but this strategy is not likely to address most of the project.
- It may be very difficult to adequately test for buried archaeological resources in some high risk areas, and monitoring may be appropriate for those areas; this is not the preferred situation as interruptions during construction would increase cost.
- Areas where an archaeological site is considered likely but the visibility of native soils is poor due to vegetation may be recommended for shovel testing. If artifacts are found during shovel testing, they will not be collected but will be documented, and a site or isolated find form will be prepared. Shovel tests will be excavated to meet the City's archaeological ordinance and the DAHP's standards and guidelines. They will be excavated 30 centimeters in diameter at the surface to at least 50 centimeters deep, and soils will be screened using ⅛-inch mesh hardware cloth, all to meet the City of Camas archaeological ordinance.

Historic Resource Field Inventory

Historic-period buildings and structures—those constructed more than 45 years ago—that are within the APE will be inventoried and a preliminary evaluation of significance assessed. At this time, two

previously identified resources that are significant are likely to be within the project APE include:

- The Pittock House on Leadbetter Road, also known as the Lakeside Leadbetter House, has been listed in the NRHP.
- The Camas Mill Ditch is crossed by the alignment near the southern end of the project, along Garfield Street; this is part of the complex making up the paper mill, which is considered to be a significant resource.

Other historic resources that are within the APE also will be identified and included in the inventory of historic resources. Historic resources will need to be documented on the DAHP's current inventory forms and the forms appended to the report. A preliminary evaluation will need to be provided as part of the documentation.

Subtask 7.4: Report

The report will be prepared to meet the survey-level standards of the City's archaeological ordinance, given the strong likelihood of an archaeological site within the APE and to meet SEPA review. The report will document the work performed to the level that will meet the standards for review by the Corps of Engineers.

The report will provide a project description and information on the environmental and historical/cultural setting of the project, summarize the background review and fieldwork, provide information about areas where additional survey may be needed, and provide an evaluation of resources. A preliminary Finding of Effect will be recommended. Forms for identified archaeological and historic resources will be appended to the report, and map atlases will note areas where the study has been completed as well as where resources are located and show where additional effort, such as monitoring during construction, may be recommended.

Assumptions:

- APE maps will be provided by others. AINW will review and make recommendations for adjustments.
- The DAHP database will be a main source of background information.
- AINW's library will be used to identify reports written prior to the start of the database compilation in the late 1990s.
- The project will be reviewed by the City of Camas, including the portions that are within Clark County (unincorporated).
- AINW will assist with identification of the project APE, in coordination with the project team.
- The project corridor (assumed APE for the alignment) is 8.8 kilometers (5.5 miles) long and the corridor is 50-feet wide on each side of pipeline, or along the right of way where along roads.
- The archaeological fieldwork will include a pedestrian survey using transects spaced 33 to 50 feet (10 to 15 meters) apart for all of the APE except paved areas, impenetrable areas, and private land where no permission has been obtained.

- Up to **190 shovel tests** will be excavated at high probability areas, where the surface visibility is inadequate to determine whether an archaeological site is present. The shovel tests will also be used to delineate resource boundaries.
- Shovel tests will be 30 centimeters at the surface and excavated at least 50 centimeters deep, to meet the City of Camas archaeological ordinance. (County standards require 50-centimeter diameter shovel tests.)
- Soils will be screened using ⅛-inch mesh hardware cloth. No artifacts will be collected.
- Up to 20 archaeological resources may be documented.
- Up to 10 historic resources may be identified.
- The study and report will be done to meet the "survey-level" of the City's archaeological ordinance; the report also will be prepared to meet standards of DAHP for a survey, so that it will meet standards of the Corps of Engineers, if needed.
- After review of the draft report and acceptance by the project team and the City, the draft report will be finalized for submittal to the City of Camas for its review under the City's archaeological ordinance and SEPA.
- Copies of the report will be sent to seven Tribes and DAHP via certified mail, to meet the City's ordinance.
- If resources are found that appear to be eligible for listing in the NRHP, and if impacts or adverse effects cannot be avoided, additional study may be needed.
- Archaeological sites that cannot be avoided and that may be significant may need additional testing. If the project is being done to meet Section 106, no permit from the DAHP would be needed for evaluation excavations or for mitigation excavation for sites found to be eligible for listing in the NRHP that cannot be avoided. By identifying these resources early in the project design, it may be possible to find avoidance measures. A site evaluation report would be prepared to present the information from evaluation testing, if this phase of work is needed.

Deliverables:

- Draft and final Cultural Resources report and resource forms (Five (5) paper copies).

Task 8: Right-of-Way Services

These tasks will be performed by Universal Field Services and will include:

- Contacting property owners to discuss the potential for a right of way subsurface easement across their property and discuss the process for obtaining these easements.
- Preparation of a preliminary project funding estimate based on proposed easements and will estimates of land values for identified properties and estimate of values for easements. The draft will include estimated values for land, improvements, damages and any relocations that may be required.

Assumptions:

- Up to 6 property owners will be contacted.

Deliverables:

- A written contact report will be submitted concerning property owners willingness to grant easements in the future.
- Preliminary Project Funding Estimate – 3 copies

Task 9 Project Management

These tasks will be performed by the consultant team and will include:

Subtask 9.1: Project Management and QA/QC

The Project Team will plan, manage, and execute the tasks described herein in accordance with the schedule, budget, and quality expectations that are established. This project management task includes the following work activities:

- Develop project work plan and quality assurance/quality control (QA/QC) plan. This plan will include:
- Agreement highlights including invoicing and billing procedures
- Project description
- Scope of work
- Work plan including project budget and schedule
- Progress evaluation for monitoring budget and schedule
- Quality assurance/quality control (QA/QC) plan
- Communication plan
- Documentation plan
- Scope change management procedures
- Decision making protocol
- Coordinate between tasks and team members. Document meeting decisions and action items, assign activities to team members, and follow up to ensure timely resolution.
- Manage the quality control review of all work activities and project deliverables.
- Preparation and ongoing maintenance of a comprehensive design schedule with individual task milestones, task duration, individual responsibilities of subconsultants and County staff, agencies, utilities, etc.
- Monthly progress reports to be submitted with billings. Monthly progress reports will reflect hourly/percent complete progress for each activity and identify budget status and tasks performed to date during the billing period.

Subtask 9.2: Project Meetings

- A project kick-off meeting to introduce the team players and discuss roles and schedule.
- Project team meetings at Otak's office throughout the project duration at appropriate intervals based upon design activities (Scope assumes 12 meetings).
- Preliminary Design Decision meetings (Assume 12 meetings)
- Project update meetings with the client project manager. Assume bi-weekly meetings through the duration of the project (Scope assumes 12 meetings).
- Attend and present at City Council work sessions (Scope assumes one (1) meeting).

Assumptions:

- Workshops with the consultant and client team for plan review and making project-related decisions is included elsewhere.

Deliverables:

- Meeting minutes from each meeting
- Action Item list, updated before each Client project manager meeting
- Monthly status reports and invoices
- Development and maintenance of the project schedule (Scope assumes four (4) updates)

Task 10 Risk Management

Risk management is an organized decision-making process that assesses the risks associated with achieving overall program objectives. By identifying, analyzing, forecasting, and quantifying the likelihood of risk, the City can allocate appropriate resources and contingencies to mitigate the risk—increasing the likelihood of project success. The purpose of this task is to establish and maintain a Risk Register throughout the project in order to bring certainty to project cost while creating opportunities to avoid using contingency funds.

Subtask 10.1: Establish Risk Register

- Plan and lead a Risk Management Workshop.
- Develop a SharePoint-driven Risk Management tool. Meet with team to develop and populate initial risk register. Register will include a documentation of risks and opportunities and assign potential monetary impact was well as probability of occurrence.
- Work with City staff to develop Risk Management strategies as well as project contingencies.

Subtask 10.2: Risk Register Updates

- Meet with City staff as well as other team members to update the Risk Register on a monthly basis.
- Assume monthly Risk Register meetings are performed via conference call or as part of regular project meetings.

Meetings:

- Initial Risk Register workshop with District staff and Designers.
- Assumed attendance at monthly (assume ten (10)) Risk Register meetings with City staff. Assume meetings are performed via conference call or as part of regular project meetings.

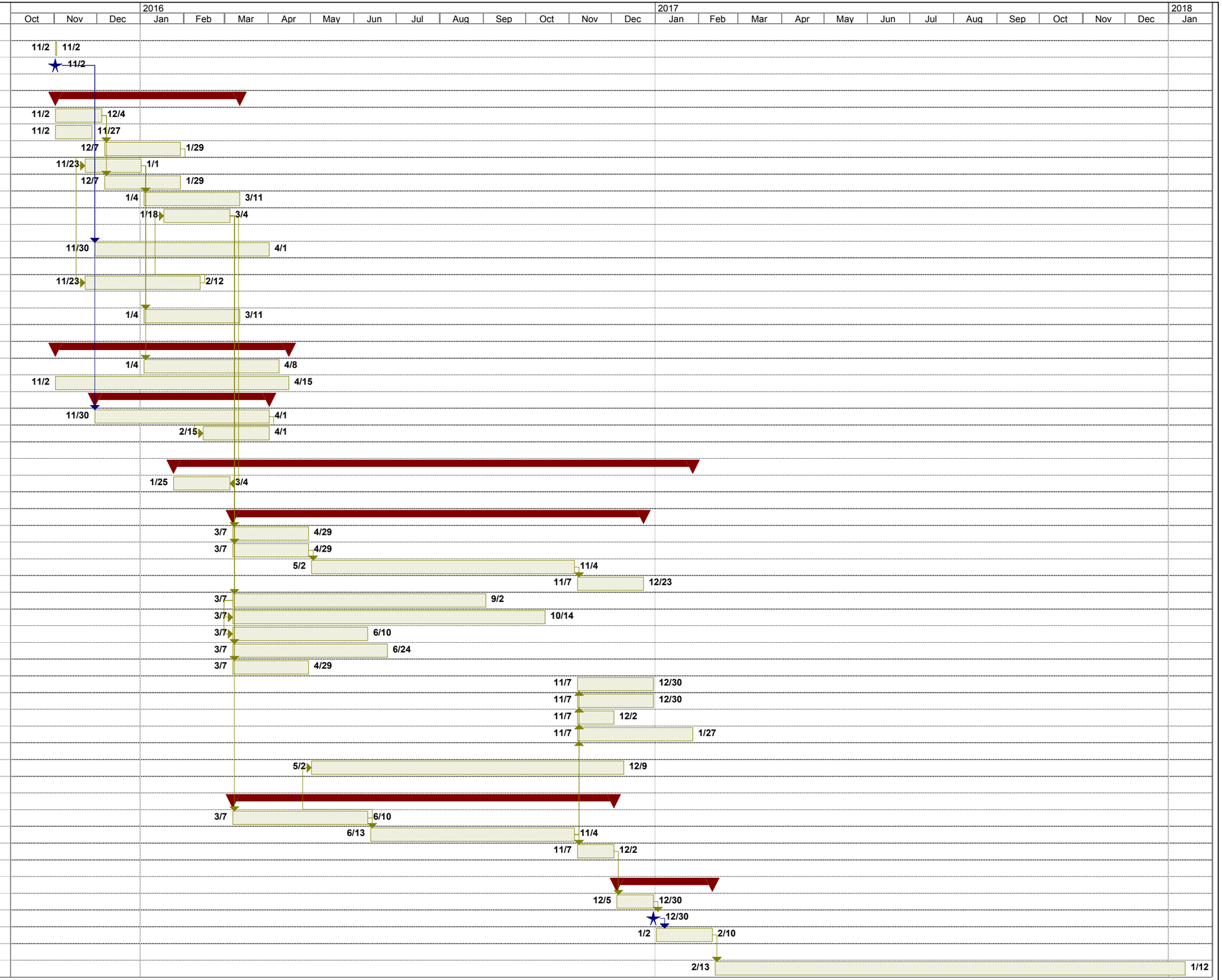
Deliverables:

- Initial Risk Register
- Regular updates to Risk Register

North Urban Growth Area Sewer Transmisstion System
Fee Estimate
Summary of Otak, Inc. and subconsultants
Otak Project # 17628

Task	*Description*	Otak	CH2M	Normandeau	GRI	EPIC	AINW	BA	*Total Hours*	*Total Budget by Task*
1	**Flow Projections**	36						92	**128**	**$15,790**
2	**Alternatives Analysis**									
2.1	Camp Currie Alignment	799	263	55			516		**1633**	**$161,055**
2.2	Pump Station Site Alternatives	176	84						**260**	**$32,189**
2.3	Pipeline Route Alternatives - SR 500 to Downtown	124						54	**178**	**$18,292**
2.4	Define Odor and Corrosion Control Approach	10	88						**98**	**$16,104**
3	**Preliminary Design**									
3.1	Transient Analysis	4	170						**174**	**$24,967**
3.2	Preliminary Pump Station Design	260	1018						**1278**	**$177,722**
3.3	Pipeline Design	1208						44	**1252**	**$137,572**
3.4	Flow Management and Operations/Maintenance Plan	6	66						**72**	**$13,506**
3.5	Preliminary Design Workshops	160	104					8	**272**	**$46,092**
4	**Survey and Mapping**									
4.1	Topographic Survey	1176							**1176**	**$95,450**
5	**Geotechnical Investigation**									
5.1	Geotechnical Data Review				6				**6**	**$820**
5.2	Geotechnical Reconnaissance				140				**140**	**$14,760**
5.3	Geotechnical Report	10			124				**134**	**$15,788**
6	**Environmental Services**									
6.1	Stream and Wetland Field Review and Report	5		56					**61**	**$7,892**
6.2	JARPA and CWA Compliance			6					**6**	**$996**
6.3	WDNR Aquatic Use Authorization	5		6					**11**	**$1,670**
6.4	WDFW Hydraulic Project Approval									
6.5	Endangered Species Act Compliance	5							**5**	**$674**
6.6	Sole Source Program Compliance									
6.7	SEPA Compliance	5							**5**	**$674**
6.8	Shoreline Master Program Permit									
6.9	Camas Critical Areas and Signficant Tree Permit	5		14					**19**	**$2,998**
7	**Cultural and Historic Resource Assessments**									
7.1	Background Review						54		**54**	**$5,852**
7.2	Site Reconnaissance						72		**72**	**$6,138**
7.3	Resource Surveys						750		**750**	**$54,446**
7.4	Report	6					428		**434**	**$42,359**
8	**Right of Way**					20			**20**	**$2,000**
9	**Project Management**									
9.1	Project Management and QA/QC	164	56	10	6	4		6	**246**	**$39,854**
9.2	Project Meetings	140	120	6	8	2		8	**284**	**$49,782**
10	**Risk Management**									
10.1	Establish Risk Register	12	24						**36**	**$6,739**
10.2	Risk Register Updates	32	6						**38**	**$5,756**
	Total Hours	**4348**	**1999**	**153**	**284**	**26**	**1820**	**212**	**8842**	
	Total Labor Cost	$446,281	$320,613	$21,342	$32,420	$2,600	$147,648	$27,034		**$997,938**
	Direct Expenses	$15,600	$3,160		$38,780	$200	$3,996	$200		**$61,936**
	Subconsultant Administration	$29,900								**$29,900**
	Project Total	$491,781	$323,773	$21,342	$71,200	$2,800	$151,644	$27,234		**$1,089,773**

ID	Task Name	Start	Finish
1			
2	**PHASE I**	11/2	11/2
3	**Notice to Proceed**	11/2	
4			
5	**Preliminary Design**		
6	Review of prior study (flows and alignments)	11/2	12/4
7	Pump Station 2/3 Siting	11/2	11/27
8	PS Modeling/Hydraulic Analysis/Pipeline sizing	12/7	1/29
9	Pipeline Alignment Options	11/23	1/1
10	Preliminary Pump Station Design	12/7	1/29
11	Preliminary Design Report	1/4	3/11
12	Preliminary (30% Plans)	1/18	3/4
13			
14	**Risk Management**	11/30	4/1
15			
16	**Topographic Survey**	11/23	2/12
17			
18	**Geotechnical Analysis and Report**	1/4	3/11
19			
20	**Project Permitting**		
21	Cultural/Historic Resource Survey and Report	1/4	4/8
22	Archeological Permit Process	11/2	4/15
23	**Environmental Permits (401, 404, HPS, SEPA)**		
24	Field Work and Documentation Review	11/30	4/1
25	Agency (USACE, WDFW, City) Coordination	2/15	4/1
26			
27	**PHASE II**		
28	**Scoping and Contracting**	1/25	3/4
29			
30	**Environmental and Land Use Permits**		
31	ESA Compliance	3/7	4/29
32	Prepare JARPA and supporting documents	3/7	4/29
33	USACE 404 NWP 12 Review / Issuance	5/2	11/4
34	WDFW HPA Review / Issuance	11/7	12/23
35	SEPA	3/7	9/2
36	Shoreline Prepare/Review/Issuance	3/7	10/14
37	Camas Critical Areas Permit	3/7	6/10
38	County Critical Areas Permit (if necessary)	3/7	6/24
39	**Preliminary Site Plan Review (City and County)**	3/7	4/29
40	**Final Site Plan Review and Building Permits (City and County)**	11/7	12/30
41	**Construction Permits (City and County)**	11/7	12/30
42	**WSDOT Utility Permit**	11/7	12/2
43	**NPDES Construction Site Stormwater Discharge Permit**	11/7	1/27
44			
45	**Right of Way Services**	5/2	12/9
46			
47	**Final Engineering**		
48	60 percent PS&E (including City review)	3/7	6/10
49	90 percent PS&E (including City review)	6/13	11/4
50	99 percent PS&E (including City review)	11/7	12/2
51			
52	**Final Bid Documents and Advertise**		
53	Incorporate City Comments/Develop Final (Bid Ready) PS&E	12/5	12/30
54	Deliver Final (Bid Ready) Documents	12/30	
55	Advertise and Award	1/2	2/10
56			
57	**Construction**	2/13	1/12



INTERLOCAL AGREEMENT
FOR
COMMUTE TRIP REDUCTION

I. Effective Date: July 1, 2015.

II. Parties: City of Vancouver, a municipal corporation of the State of Washington; and

Clark County ("the County"), a municipal corporation of the State of Washington;

City of Camas, a municipal corporation of the State of Washington; and,

City of Washougal, a municipal corporation of the State of Washington

III. Recitals:

A. In 2006 the Washington legislature passed the " Commute Trip Reduction (CTR) Efficiency Act requiring local governments in urban area with traffic congestion to develop programs that reduce drive-alone trips and vehicle miles traveled per capita. The CTR Efficiency Act amended the1991, Commute Trip Reduction Law, codified as §70.94.521-.551 RCW.

B. As required by § 70.94.527(1) RCW of the CTR law as amended, the parties have adopted Commute Trip Reduction ordinances and plans for the purpose of reducing the number of commute trips to work in single occupant vehicles, alleviating air pollution, reducing energy consumption, and addressing traffic congestion problems.

C. As authorized under the CTR law and the Interlocal Cooperation Act, Chapter 39.34 RCW, the parties desire to enter into this Agreement to achieve and maintain compliance with the requirements of the CTR law.

NOW, THEREFORE, BE IT RESOLVED that in consideration of covenants, conditions, performances, and promised hereinafter set forth, the parties hereto agree as follows:

IV. Purpose. The purpose of this Agreement is to establish a mechanism for ensuring compliance with the CTR law, to enable the parties of this Agreement to meet the statutory requirements by the applicable deadlines, and to specifically provide for the definition and coordination of each of the tasks for which the parties to this Agreement will be responsible in achieving the goals and requirements of the CTR law.

V. Funding.

A. The City of Vancouver will utilize funds received from the Washington State Department of Transportation in the manner described in the *2015-2017 Commute Trip Reduction Work Plan* that is attached hereto and incorporated herein, by this reference, as part of this Agreement. The City of Vancouver is authorized to redistribute funds as necessary due to changes in program responsibilities and would do so using an amendment to this agreement if necessary.

B. The expenditure of funds is subject to the requirements of Washington State Department of Transportation guidelines.

C. The parties to this Agreement shall use best efforts to jointly apply for additional grant funds to support continued and coordinated implementation of the CTR law.

VI. Service Provisions. Funds provided to the parties under this Agreement shall be used exclusively for activities undertaken to fulfill the requirements of §§70.94.521-.551 RCW and to implement the tasks as described in the *2015-2017 Commute Trip Reduction Work Plan*.

VII. Agreement Period. The effective date of this Agreement shall be July 1, 2015. The termination date shall be June 30, 2017.

VIII. Coordination of Work: Each of the parties to this Agreement agrees to use its best efforts to coordinate with the other parties hereto in order to best achieve the purposes of the CTR law.

IX. Disbursement Provisions:

A. Acting as Program Administrator, the City of Vancouver shall submit an invoice, with an estimate of expenditures by budget categories used by the City for all state CTR funds expended for the purpose of CTR implementation. The period for which these invoices cover all expenses can be determined by the party submitting the invoices, but shall not be submitted more frequently, or cover periods of less than three months.

B. The City of Vancouver shall submit progress reports, to be forwarded to the Washington State Department of Transportation, accompanying the invoices for covered expenses. These reports should summarize:

1. Recent CTR events and projects;

2. A detailed summary of implementation assistance provided to affected employers within each jurisdiction;

3. A list of scheduled CTR events, projects, and implementation assistance to be provided to affected employers including all CTR training classes

C. All invoiced items shall be exclusively for activities undertaken to fulfill the requirement of §70.94.521-.551 RCW and in accordance with Washington State Department of Transportation guidelines on the expenditure of funds. Such funds may only be used to implement tasks as described in the *2015-2017 Commute Trip Reduction Work Plan*.

X. Employment Provisions: There shall be no discrimination against any employee who is paid by the funds indicated in the Agreement or against any applicant for such employment because of race, religion, color, sex, marital status, creed, national origin, age, Vietnam era or disabled veterans status, or the presence of any sensory, mental, or physical handicap. This provision shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, lay-off or termination, rate of pay or other forms of compensation, and selection for training.

XI. Agreement Modifications. The governing bodies of the parties hereto may request modifications to this Agreement. Any such changes that are mutually agreed upon by the parties hereto shall be incorporated herein by written amendment of this Agreement. It is mutually agreed and understood that no alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the parties hereto and that any oral understanding or agreements not incorporated herein shall not be binding.

XII. Hold Harmless: It is understood and agreed that this Agreement is solely for the benefit of the parties hereto and gives no right to any other party. No joint venture or partnership is formed as a result of this Agreement. Each party hereto agrees to be responsible and assumes liability for its own negligent acts or omissions, or that of its officers, agents or employees to the fullest extent required by law, and agrees to save, indemnify, defend, and hold the other party harmless from any such liability. In the case of negligence of both parties, any damages allowed shall be levied in proportion to the percentage of negligence attributable to the other party. This indemnification clause shall also apply to any and all causes of action arising out of performance of work activities under this Agreement. Each contract for services or activities utilizing funds provided in whole or in part by this Agreement shall include a provision that neither the State of Washington nor the parties to this Agreement are liable for damage or claims for damages arising from any subcontractor's performance or activities under the terms of the contracts.

XIII. Governing Law and Venue: The Agreement shall be construed and enforced in accordance with, and the validity and performance thereof shall be governed by the laws of the State of Washington. Venue of any suit between the parties arising out of this Agreement shall be the Superior Court of Clark County, Washington.

XIV. Severability: In the event any term or condition of this Agreement or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other terms, conditions or applications of this Agreement which can be given effect without the invalid term, condition or application. To this end the terms and conditions of this Agreement are declared severable.

XV. Recapture Provision:

A. In the event that a party fails to expend state funds in accordance with state law and/or the provisions of this Agreement, the City of Vancouver reserves the right to recapture state funds in an amount equal to the extent of noncompliance.

B. Such right of recapture shall exist for a period not to exceed three (3) years following termination of the Agreement. Repayment by the party of state funds under this recapture provision shall occur within thirty (30) days of demand. In the event that the City of Vancouver is required to institute legal proceedings to enforce the recapture provision, the City of Vancouver shall be entitled to its cost thereof, including reasonable attorney's fees, to be compensated by the party.

C. This Agreement shall be subordinate to and governed by all provisions and terms contained in the *Commute Trip Reduction Implementation Agreement* between City of Vancouver and the Washington State Department of Transportation attached hereto

XVI. Reduction in Funds: The City of Vancouver may unilaterally terminate all or part of this agreement, or may reduce its scope of work or budget under this Agreement, if there is a reduction of funds by the source of those funds, and if such funds are the basis for this Agreement.

XVII. Americans with Disabilities Act of 1990, Public Law 101-336 (ADA): Parties to this Agreement must comply with the ADA, which provides comprehensive civil rights protection to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications.

XVIII. Termination: Notwithstanding any provisions of this Agreement, any party may terminate their participation in this Agreement by providing written notice of such termination to all other parties, specifying the effective date thereof, at least thirty (30) days prior to such date. Reimbursement for services performed by any party and not otherwise paid for prior to the effective date of such termination shall be made according to the terms of this Agreement.

XIX. Property: All equipment, property, or improvement used to effectuate this Agreement shall become the sole property of the Party who provided the equipment, property, or improvement.

IN WITNESS THEREOF the undersigned entities have executed this Agreement as of the date and year written below.

City of Vancouver

Approved as to Form only: AUTHORIZED SIGNATURE:

By:_____ By:_____ 9-21-15

E. Bronson Potter, City Attorney Eric Holmes, City Manager Date

Attest:

By:_____

R. Lloyd Tyler, City Clerk

By: Carrie Lewellen, Deputy City Clerk

Clark County

Approved as to Form only: AUTHORIZED SIGNATURE:

By:_____ By:_____ _____

Deputy Prosecuting Attorney Chair, Clark County Commissioners Date

City of Camas

Approved as to Form only: AUTHORIZED SIGNATURE:

By:_____ By:_____ _____

City Attorney Mayor / City Manager Date

City of Washougal

Approved as to Form only: AUTHORIZED SIGNATURE:

By:_____ By:_____ _____

City Attorney Mayor / City Manager Date

ATTACHMENTS: *2015-2017 Commute Trip Reduction Work Plan*

COMMUTE TRIP REDUCTION WORK PLAN

For the Interlocal Agreement
covering the
2015-2017 Biennium
July 1, 2015 - June 30,2017

COMMUTE TRIP REDUCTION
WORK PLAN

I. Introduction

The purpose of this work plan is to establish commute trip reduction (CTR) task descriptions and responsibilities, and associated budgets for each public agency party to the Interlocal Agreement, effective July 1, 2015 – June 30, 2017, between the City of Vancouver, Clark County, City of Camas and City of Washougal.

The work plan is divided into four sections: Introduction, Agency Task Descriptions and Responsibilities, Major Goals and Budget.

II. Agency Task Descriptions and Responsibilities

City of Vancouver:

A. Shall provide regular opportunities for an employer's ETC to network with other local Employee Transportation Coordinators ETCs;

B. Shall supply informational materials (posters, clip art, forms, brochures, webpage) which will assist the employer in implementing a worksite CTR program on requirements of the CTR ordinance to help the employer achieve the CTR goals of the local ordinance;

C. Shall participate in local implementation of the statewide CTR public awareness and recognition programs when applicable;

D. Shall pursue contact of potential new affected worksites in Clark County region;

E. Shall provide (ETC) training classes, using the WSDOT provided ETC Handbook or other training materials;

F. Shall offer services that contribute to an increase in CTR program participants (ClarkCommute.org, Carpool Only Parking Program signs and posts, Emergency Ride Home Program, Transportation Fairs, Vanpools);

G. Shall be the Clark County Administrator for the regional carpool matching Web site, www.clarkcommute.org.

H. Shall work collaboratively with and provide technical guidance and support to affected employers in developing, implementing, and/or modifying an employer's CTR program;

I. Shall supply state-supplied employee survey forms and training for employers to achieve a successful survey process;

J. Shall supply forms for annual progress reports that are consistent with the WSDOT requirements and help employers prepare their CTR annual program reports;

K. Shall implement the regional CTR plans to achieve the carpool and bicycle targets.

L. Shall submit an annual work plan to WSDOT which outlines the major tasks and activities, including, but not limited to, employer training and networking activities, employer program review, survey activities, and advertising and promotional campaigns to be conducted for the coming year.

M. Shall serve as a liaison between WSDOT, Clark County, City of Camas and City of Washougal for the purposes of RCW 70.94.521.551.

N. Coordinate with the Southwest Washington Regional Transportation Council (RTC), the region's Regional Transportation Planning Organization.

O. Shall submit invoice to WSDOT on WSDOT approved invoice format along with progress reports, in the format provided in Attachment 1 of the State CTR Contract, that accurately assesses the progress made by the county and affected jurisdictions in implementing RCW 70.94.521—.551. These reports and invoices are to be submitted within forty-five (45) days of the end of each six month period.

P. Shall distribute funds to affected jurisdictions within the county implementing CTR plans and ordinances as required by RCW 70.94.544 and in accordance with the Interlocal Agreement.

All Parties to this Agreement (as appropriate)

A. Shall meet as needed with the Commute Trip Reduction Steering Group which is made up of Clark County, the City of Vancouver, the City of Camas, City of Washougal and other city jurisdictional representatives if applicable.

B. Shall maintain and administer a CTR ordinance and local CTR plans for affected employers in their respective jurisdictions.

C. Shall provide WSDOT with a public hearing notice and copies of any proposed amendments to the CTR ordinance, local CTR plans, and/or administrative guidelines within the first week of the public review period and final copies of all actions within one (1) month of adoption.

D. Shall establish and maintain books, records, documents, and other evidence and accounting procedures and practices sufficient to properly reflect all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred solely for the performance of this Agreement. To facilitate the administration of the work described in this agreement, separate accounts shall be established and maintained within the existing accounting system or independently set up. Such accounts are referred to herein collectively as the "CTR Account". All costs charged to the CTR Account, including any approved services contributed by the jurisdictions or others, shall be supported by properly executed payrolls, time records, invoices, contracts, vouchers, or products, proving in proper detail, the nature and propriety of the charges.

E. Shall maintain an appeals process. This process must be consistent with RCW 70.94.534(6) and procedures contained in the Commute Trip Reduction Task Force Guidelines whereby employers in the local jurisdictions may obtain an exemption or modification of CTR requirements, including the establishment of alternative SOV/VMT goals. The county, affected jurisdictions, or their designee, will submit requests for exemptions or modifications including requests for goal modifications, to the WSDOT for review and comment within five (5) days of receiving such requests. The county, affected jurisdictions, or their designee, shall not approve or deny any such request until receiving comment on the request as specified by the Clark County/WSDOT CTR Agreement under WSDOT Task, Section 2 Exemption and Modifications.

Washington State Department of Transportation, SW Region

A. Washington State Department of Transportation is not a formal signatory to the interlocal Agreement. It has, however, provided support for commute trip reduction activities over the past ten years. It has assisted with training, surveying, developing marketing materials, and has led the effort to make Clark County's CTR program a successful county-wide effort. The Washington State Department of Transportation will be encouraged to continue its involvement and provide its expertise for local commute trip reduction efforts.

III. Major Goals

- Implement work site clusters strategy outlined in the Regional CTR plan to increase the carpool and bicycle mode shares by 2%
- Cultivate private/public partnerships for implementation of incentive coupon book featuring local businesses near the identified work site clusters
- Pursuant to funding, update the ClarkCommute.org website
- Systematically contact all sites and review how many new carpools and bicycle participants needed to meet the 2% targets of the CTR plan and cultivate new commitments from these sites to achieving the goals of the program

IV. Budget

There is $204,011 available for the 2015-2017 biennium as is outlined in this workplan. Additionally performance funding from the Trip Reduction Performance grant (2007-2009) will be used to support implementation of the 2015-2017 CTR Plan. The projected budget allocation is outlined below:

Project / Task	**2015-2017 Budget**
Regional CTR Coordination	
ETC Network Meetings/Carpool Matching Events	$ 800
Emergency Ride Home	$ 700
Postage/Mailroom Charge	$ 1,038
Program Materials (ex. Brochures, Campaign Rewards, Posters, Carpool Signs, ETC Training, etc.)	$ 31,148
Program Administration/Implementation	$ 211,753
City of Vancouver Computer/Phone Charge	$ 8,572
2015-2017 Biennium Total	**$254,011**
2015-2017 CTR Implementation Grant	**$204, 011**
Performance Funds TRPP Grant	**$ 50, 000**
Total:	**$ 254,011**

I, Jennifer Gorsuch, Deputy City Clerk hereby certify
that these bid tabulations are correct.

_____

Jennifer Gorsuch Date

PROJECT NO. SS-605

DESCRIPTION: NW Klickitat St. Storm Repair

DATE OF BID OPENING: September 29, 2015, at 10:30 AM

ITEM NO	DESCRIPTION	UNIT	QTY	Ent. By RLS	Engineer's Estimate: $53,598.00 UNIT PRICE	ENGRG TOTAL	Haag & Shaw, Inc. 636 SE 3rd Ave. Camas, WA 98607 360.834.2514 UNIT PRICE	CONTRACT TOTAL	Thompson Bros. Excavating, Inc. 18211 NE Fourth Plain Rd. Vancouver, WA 98682 360.254.7056 UNIT PRICE	CONTRACT TOTAL	Nutter Corporation 7211-A NE 43rd Avenue Vancouver, WA 98661 360.573.2000 UNIT PRICE	CONTRACT TOTAL	McDonald Excavating, Inc. 2719 Main Street Washougal, WA 98671 360.835.8794 UNIT PRICE	CONTRACT TOTAL	Schmid & Sons, Inc. PO Box 799 Camas, WA 98607 360.834.3376 UNIT PRICE	CONTRACT TOTAL
1	Mobilization	LS	1.00		$4,495.00	$4,495.00	$2,500.00	$2,500.00	$7,000.00	$7,000.00	$7,994.04	$7,994.04	$10,500.00	$10,500.00	$7,450.00	$7,450.00
2	Project Temporary Traffic Control	LS	1.00		$1,000.00	$1,000.00	$1,500.00	$1,500.00	$1,000.00	$1,000.00	$500.00	$500.00	$2,000.00	$2,000.00	$1,900.00	$1,900.00
3	Clearing & Grubbing	LS	1.00		$1,500.00	$1,500.00	$2,300.00	$2,300.00	$1,000.00	$1,000.00	$4,000.00	$4,000.00	$2,580.00	$2,580.00	$2,225.00	$2,225.00
4	Structure Excavation Class B, Incl. Haul	CY	340.00		$30.00	$10,200.00	$22.50	$7,650.00	$16.00	$5,440.00	$31.00	$10,540.00	$44.00	$14,960.00	$90.00	$30,600.00
5	Construction Geotextile for Separation	SY	100.00		$2.00	$200.00	$3.50	$350.00	$5.00	$500.00	$3.00	$300.00	$3.50	$350.00	$5.30	$530.00
6	Crushed Surfacing Base Course	TONS	100.00		$22.50	$2,250.00	$21.53	$2,153.00	$28.00	$2,800.00	$13.00	$1,300.00	$43.00	$4,300.00	$41.00	$4,100.00
7	Corrugated Polyethylene Storm Sewer Pipe, 15 In. Diam.	LF	60.00		$60.00	$3,600.00	$81.00	$4,860.00	$43.00	$2,580.00	$75.00	$4,500.00	$125.00	$7,500.00	$145.00	$8,700.00
8	Erosion/Water Pollution Control	LS	1.00		$1,000.00	$1,000.00	$1,500.00	$1,500.00	$1,000.00	$1,000.00	$750.00	$750.00	$4,100.00	$4,100.00	$2,875.00	$2,875.00
9	Light Loose Riprap	CY	100.00		$45.00	$4,500.00	$43.50	$4,350.00	$48.00	$4,800.00	$1.00	$100.00	$50.00	$5,000.00	$46.00	$4,600.00
10	Quarry Spalls, 3 In. - 8 In.	TONS	400.00		$45.00	$18,000.00	$21.18	$8,472.00	$33.00	$13,200.00	$33.00	$13,200.00	$32.50	$13,000.00	$28.00	$11,200.00
11	Gabion Cribbing	CY	14.00		$175.00	$2,450.00	$140.00	$1,960.00	$200.00	$2,800.00	$320.00	$4,480.00	$450.00	$6,300.00	$398.00	$5,572.00
12	Concrete Pipe Anchor	EA	2.00		$125.00	$250.00	$350.00	$700.00	$500.00	$1,000.00	$1,300.00	$2,600.00	$850.00	$1,700.00	$1,368.00	$2,736.00
	SUBTOTAL:					**$49,445.00**		**$38,295.00**		**$43,120.00**		**$50,264.04**		**$72,290.00**		**$82,488.00**
	SALES TAX (8.4%):					**$4,153.38**		**$3,216.78**		**$3,622.08**		**$4,222.18**		**$6,072.36**		**$6,928.99**
	CONTRACT TOTAL: (Basis of Award Bid Items 1-12)					**$53,598.38**		**$41,511.78**		**$46,742.08**		**$54,486.22**		**$78,362.36**		**$89,416.99**