

Item # 7

**City of Carson City
Agenda Report**

Date Submitted: February 13, 2009

Agenda Date Requested: March 5, 2009

Time Requested: 5 minutes

To: Mayor and Supervisors

From: Purchasing & Contracts

Subject Title: Action to determine that Contract No. 0809-189 is a contract for the services of a professional engineer where the selection was made on the basis of the competence and qualifications of the engineer for the type of services to be performed and not on the basis of competitive fees; and therefore not suitable for public bidding pursuant to NRS 625.530; and to approve Contract No. 0809-189 with Black and Veatch to provide Engineering Services to update the improvement program for the Marlette Hobart Water System through October 30, 2009, for a not to exceed cost of \$399,500.00 to be funded from the Water Fund Accounts as provided in FY's 2008/2009 and FY 2009/2010.

Staff Summary: This Contract provides for continuing the improvement program started several years ago for the Marlette Hobart Water System by determining the best alternative to maximize the water resource system, replace aging pipelines, while also addressing maintenance issues for the two dams and the opportunity to create hydropower from the significant elevation differences.

Type of Action Requested: (check one)

Resolution

Ordinance

Formal Action/Motion

Other (Specify)

Does This Action Require A Business Impact Statement: Yes No

Recommended Board Action: I move to determine that Contract No. 0809-189 is a contract for the services of a professional engineer where the selection was made on the basis of the competence and qualifications of the engineer for the type of services to be performed and not on the basis of competitive fees; and therefore not suitable for public bidding pursuant to NRS 625.530; and to approve Contract No. 0809-189 with Black and Veatch to provide Engineering Services to update the improvement program for the Marlette Hobart Water System through October 30, 2009, for a not to exceed cost of \$399,500.00 to be funded from the Water Fund Accounts as provided in FY's 2008/2009 and FY 2009/2010.

Explanation for Recommended Board Action: The Marlette Hobart Water System is owned and operated by the State of Nevada and supplies water to Storey County-Virginia City and Carson City. The City purchases water through a wholesale water purchase contract, which provides for costs to be borne by the users. Virginia City has first rights to systems water, but uses a very small amount compared to Carson City, so the majority of costs are borne by the City.

The State has been in the process of upgrading the Marlette portion of the system with a new pump system and pipeline for discharge to Hobart Reservoir. Replacement of the pipelines from the Red House diversion structure to the tanks and from the tanks to the City's Quill Water Treatment Plant is necessary. This contract will evaluate the best method to accomplish this task by examining size requirements, location, and method of construction while maximizing the water yield. In addition, control valves at both Marlette Lake and Hobart Reservoir are in need of replacement, which will be addressed in the contract.

Additionally, examination of the cost effectiveness of a small water treatment facility at Lakeview will be conducted to potentially reduce pumping costs as will the concept of adding storage to the City water system for late summer use. An exciting component of the contract is the evaluation of adding hydropower at the Quill Treatment Plant by utilizing the several thousand feet of elevation differences from Red House to Quill. Preliminary review indicates there may be a great potential for generating a significant amount of power, which could off-set costs for improvements and possibly other system operating costs.

This project is a collaborative effort between the State and the City. Because the City is leading this particular effort and a number of components of the contract relate only to City interests, the City has agreed to pay for the costs of the contract. Future costs of the pipeline replacement and control valve replacement will be done with State funding from bonds authorized by the Legislature with costs passed to the City through water purchases. Future hydropower, storage, and treatment costs would be borne directly by the City

Pursuant to **NRS 625.530**, staff is requesting the Board of Supervisors declare that this contract is not adapted to award by competitive bidding.

NRS 625.530 Restrictions upon public works. Except as otherwise provided in NRS 338.1711 to 338.1727, inclusive, and 408.3875 to 408.3887, inclusive:

1. The State of Nevada or any of its political subdivisions, including a county, city or town, shall not engage in any public work requiring the practice of professional engineering or land surveying, unless the maps, plans, specifications, reports and estimates have been prepared by, and the work executed under the supervision of, a professional engineer, professional land surveyor or registered architect.

2. The provisions of this section do not:

(a) Apply to any public work wherein the expenditure for the complete project of which the work is a part does not exceed \$35,000.

(b) Include any maintenance work undertaken by the State of Nevada or its political subdivisions.

(c) Authorize a professional engineer, registered architect or professional land surveyor to practice in violation of any of the provisions of chapter 623 of NRS or this chapter.

(d) Require the services of an architect registered pursuant to the provisions of chapter 623 of NRS for the erection of buildings or structures manufactured in an industrial plant, if those buildings or structures meet the requirements of local building codes of the jurisdiction in which they are being erected.

3. The selection of a professional engineer, professional land surveyor or registered architect to perform services pursuant to subsection 1 must be made on the basis of the competence and qualifications of the engineer, land surveyor or architect for the type of services to be performed and not on the basis of competitive fees. If, after selection of the engineer, land surveyor or architect, an agreement upon a fair and reasonable fee cannot be reached with him, the public agency may terminate negotiations and select another engineer, land surveyor or architect.

[12a:198:1919; added 1947, 797; A 1949, 639; 1943 NCL § 2875.06a]—(NRS A 1967, 953; 1971, 774; 1973, 1700; 1975, 208; 1977, 320; 1983, 807; 1989, 788; 1997, 1055; 1999, 3489; 2001, 2022; 2003, 119)

Applicable Statue, Code, Policy, Rule or Regulation: NRS 625.530

Fiscal Impact: \$399,500.00

Explanation of Impact: If approved the below list account could be reduced by \$399,600.00.

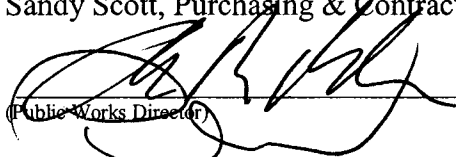
Funding Source: 520-3505-435-7392 Water Capital Tank Maintenance Fund and 520-3505-435-7857 Water Construction Production Wells Fund Accounts as provided in FY's 2008/2009 and 2009/2010.

Alternatives: Provide other direction pursuant to Board Action

Supporting Material: Contract for Services of Independent Contractor No. 0809-189

Prepared By: Sandy Scott, Purchasing & Contracts Coordinator

Reviewed By:



(Public Works Director)

Date: 2/24/09

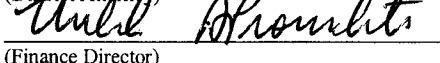
(City Manager)

Date: 2/24/09



(District Attorney)

Date: 2-24-09



(Finance Director)

Date: 2-24-09

Board Action Taken:

Motion: _____

1) _____

Aye/Nay

2) _____

(Vote Recorded By)

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

THIS CONTRACT, made and entered into this 5TH day of March, 2009, by and between the City and County of Carson City, a political subdivision of the State of Nevada, hereinafter referred to as the "**CITY**", and Black and Veatch Corporation hereinafter referred to as the "**CONSULTANT**".

W I T N E S S E T H :

WHEREAS, the Purchasing & Contracts Coordinator for the City and County of Carson City is authorized, pursuant to Nevada Revised Statutes Chapter 332 and Carson City Purchasing Resolution #1990-R71, to approve and accept this Contract as set forth in and by the following provisions; and

WHEREAS, it is deemed that the services of **CONSULTANT** for **CONTRACT No. 0809-189 Marlett/Hobart Water System Improvements-Quill WTP Supply Pipeline** are both necessary and in the best interests of **CITY**; and

NOW, THEREFORE, in consideration of the aforesaid premises, the parties mutually agree as follows:

1 **REQUIRED APPROVAL:**

1.1 This Contract shall not become effective until and unless approved by the Carson City Board of Supervisors.

2 **CONTRACT TERM:**

2.1 This Contract shall be effective from March 5, 2009, subject to Carson City Board of Supervisors' approval (anticipated to be on March 5, 2009) to October 30, 2009, unless sooner terminated by either party as specified in **Section 7 Contract Termination**.

3 **NOTICE:**

3.1 Unless otherwise specified, termination shall not be effective until thirty (30) calendar days after a party has served written notice of default, or without cause upon the other party. All notices or other communications required or permitted to be given under this Contract shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by e-mail with simultaneous regular mail, by telephonic facsimile with simultaneous regular mail, or by certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party at the address specified below.

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

For P&C Use Only
CCBL expires _____
GL expires _____
AL expires _____
PL expires _____
WC expires _____

3.1.1 Notice to **CONSULTANT** shall be addressed to:

Ira Rackley, P.E./Associate Vice President
Black and Veatch Corporation
503 North Division Street
Carson City, Nevada 89703
(775) 720-0410/FAX (775) 283-0494
RackleyIS@bv.com

3.1.2 Notice to **CITY** shall be addressed to:

Carson City Purchasing & Contracts
Sandy Scott, Purchasing & Contracts Coordinator
201 North Carson Street Suite 3
Carson City, NV 89701
775-887-2133 extension 30137 / FAX 775-887-2107
SScott@ci.carson-city.nv.us

4 SCOPE OF WORK:

4.1 **CONTRACTOR** shall provide and perform the following services set forth in **Exhibit A** attached hereto and incorporated herein by reference for and on behalf of **CITY** hereinafter referred to as the "**SERVICES**".

4.2 **CONSULTANT** represents that it is duly licensed by Carson City for the purposes of performing the **SERVICES**.

4.3 **CONSULTANT** represents that it is duly qualified and licensed in the State of Nevada for the purposes of performing the **SERVICES**.

4.4 **CONSULTANT** represents that it and/or the persons it may employ possess all skills and training necessary to perform the **SERVICES** described herein and required hereunder. **CONSULTANT** shall perform the **SERVICES** faithfully, diligently, in a timely and professional manner, to the best of its ability, and in such a manner as is customarily performed by a person who is in the business of providing such services in similar circumstances. **CONSULTANT** shall be responsible for the professional quality and technical accuracy of all **SERVICES** furnished by **CONSULTANT** to **CITY**.

4.5 **CONSULTANT** represents that neither the execution of this Contract nor the rendering of services by **CONSULTANT** hereunder will violate the provisions of or constitute a default

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

under any other contract or agreement to which **CONSULTANT** is a party or by which **CONSULTANT** is bound, or which would preclude **CONSULTANT** from performing the **SERVICES** required of **CONSULTANT** hereunder, or which would impose any liability or obligation upon **CITY** for accepting such **SERVICES**.

4.6 Before commencing with the performance of any work under this Contract, **CONSULTANT** shall obtain all necessary permits and licenses as may be necessary. Before and during the progress of work under this Contract, **CONSULTANT** shall give all notice and comply with all the laws, ordinances, rules and regulations of every kind and nature now or hereafter in effect promulgated by any Federal, State, County, or other Governmental Authority, relating to the performance of work under this Contract. If **CONSULTANT** performs any work that is contrary to any such law, ordinance, rule or regulation, he shall bear all the costs arising therefrom.

4.7 Special Terms and Conditions for Engineers, Architects, and Land Surveyors:

4.7.1 Use of **CONSULTANT'S** Drawings, Specifications & Other Documents:

4.7.1.1 The drawing, specifications and other documents prepared by **CONSULTANT** for this Contract are instruments of **CONSULTANT'S** service for use solely with respect to this Contract and, unless otherwise provided, **CONSULTANT** shall be deemed the author of these documents and shall retain all common law statutory and other reserved rights, including the copyright.

4.7.1.2 **CITY** shall be permitted to retain copies, including reproducible copies, of **CONSULTANT'S** drawings, specifications, and other documents for information and reference in connection with this Contract.

4.7.1.3 **CONSULTANT'S** drawings, specifications and other documents shall not be used by **CITY** or others without expressed permission of **CONSULTANT**.

4.7.2 Cost Accounting and Audits:

4.7.2.1 If required by **CITY**, **CONSULTANT** agrees to make available to **CITY** within two (2) years after the completion of the **SERVICES** under this Contract, such books, records, receipts, vouchers, or other data as may be deemed necessary by **CITY** to enable it to arrive at appropriate cost figures for the purpose of establishing depreciation rates for the various materials and other elements which may have been incorporated into the **SERVICES** performed under this Contract.

4.8 CITY Responsibilities:

4.8.1 **CITY** shall make available to **CONSULTANT** all technical data that is in **CITY'S** possession, reasonably required by **CONSULTANT** relating to the **SERVICES**.

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

4.8.2 **CITY** shall provide access to and make all provisions for **CONSULTANT** to enter upon public and private lands, to the fullest extent permitted by law, as reasonably required for **CONSULTANT** to perform the **SERVICES**.

4.8.3 **CITY** shall examine all reports, correspondence, and other documents presented by **CONSULTANT** upon request of **CITY**, and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the work of **CONSULTANT**.

4.8.4 It is expressly understood and agreed that all work done by **CONSULTANT** shall be subject to inspection and acceptance by **CITY** and approval of **SERVICES** shall not forfeit the right of **CITY** to require correction, and nothing contained herein shall relieve **CONSULTANT** of the responsibility of the **SERVICES** required under the terms of this Contract until all **SERVICES** have been completed and accepted by **CITY**.

5 CONSIDERATION:

5.1 The parties agree that **CONSULTANT** will provide the **SERVICES** specified in **Section 4 Scope of Work** and **CITY** agrees to pay **CONSULTANT** the **CONTRACT SUM** based upon time & materials and the attached fee schedule for a not to exceed maximum amount of Three Hundred Ninety-nine Thousand Five Hundred Dollars? (\$399,500.00).

5.2 **CONTRACT SUM** represents full and adequate compensation for the completed **WORK**, and includes the furnishing of all materials; all labor, equipment, tools, and appliances; and all expenses, direct or indirect, connected with the proper execution of the **WORK**.

5.3 **CITY** has provided a sample invoice and **CONSULTANT** shall submit its request for payment using said sample invoice.

5.4 Payment by **CITY** for the **SERVICES** rendered by **CONSULTANT** shall be due within thirty (30) calendar days from the date **CITY** acknowledges that the performance meets the requirements of this Contract or from the date the correct, complete, and descriptive invoice is received by **CITY** employee designated on the sample invoice, whichever is the latter date.

5.5 **CITY** does not agree to reimburse **CONSULTANT** for expenses unless otherwise specified.

6 TIMELINESS OF BILLING SUBMISSION:

6.1 The parties agree that timeliness of billing is of the essence to this Contract and recognize that **CITY** is on a fiscal year which is defined as the period beginning July 1 and ending June 30 of the following year. All billings for dates of service prior to July 1 must be submitted to **CITY** no later than the first Friday in August of the same year. A billing submitted after the first Friday in August will subject **CONSULTANT** to an administrative fee not to

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

exceed \$100.00. The parties hereby agree this is a reasonable estimate of the additional costs to **CITY** of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to **CONSULTANT**.

7 CONTRACT TERMINATION:

7.1 Termination Without Cause:

7.1.1 Any discretionary or vested right of renewal notwithstanding, this Contract may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.

7.2 Termination for Nonappropriation:

7.2.1 The continuation of this Contract beyond April 30, 2010 is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Carson City Board of Supervisors. **CITY** may terminate this Contract, and **CONSULTANT** waives any and all claim(s) for damages, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the funding is not appropriated or is withdrawn, limited, or impaired.

7.3 Cause Termination for Default or Breach:

7.3.1 A default or breach may be declared with or without termination.

7.3.2 This Contract may be terminated by either party upon written notice of default or breach to the other party as follows:

7.3.2.1 If **CONSULTANT** fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

7.3.2.2 If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or

7.3.2.3 If **CONSULTANT** becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or

7.3.2.4 If **CITY** materially breaches any material duty under this Contract and any such breach impairs **CONSULTANT'S** ability to perform; or

7.3.2.5 If it is found by **CITY** that any quid pro quo or gratuities in the form of money,

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

services, entertainment, gifts, or otherwise were offered or given by **CONSULTANT**, or any agent or representative of **CONSULTANT**, to any officer or employee of **CITY** with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

7.3.2.6 If it is found by **CITY** that **CONSULTANT** has failed to disclose any material conflict of interest relative to the performance of this Contract.

7.4 Time to Correct:

7.4.1 Termination upon a declared default or breach may be exercised only after service of formal written notice as specified in **Section 3 Notice**, and the subsequent failure of the defaulting party within fifteen (15) calendar days of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.

7.5 Winding Up Affairs Upon Termination:

7.5.1 In the event of termination of this Contract for any reason, the parties agree that the provisions of this paragraph survive termination:

7.5.1.1 The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;

7.5.1.2 **CONSULTANT** shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by **CITY**;

7.5.1.3 **CONSULTANT** shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by **CITY**;

7.5.1.4 **CONSULTANT** shall preserve, protect, and promptly deliver into **CITY** possession all proprietary information in accordance with **Section 23 City Ownership of Proprietary Information**.

8 REMEDIES:

8.1 Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorneys' fees and costs. The parties agree that, in the event a lawsuit is filed and a party is awarded attorney's fees by the court, for any reason, the amount of recoverable attorney's fees shall not exceed the rate of \$125 per hour. **CITY** may set off consideration

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

against any unpaid obligation of **CONSULTANT** to **CITY**.

9 LIMITED LIABILITY:

9.1 **CITY** will not waive and intends to assert available Nevada Revised Statutes Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Liquidated damages shall not apply unless otherwise specified in the incorporated attachments. Damages for any **CITY** breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to **CONSULTANT**, for the fiscal year budget in existence at the time of the breach. **CONSULTANT'S** tort liability shall not be limited.

10 FORCE MAJEURE:

10.1 Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including, without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Contract after the intervening cause ceases.

11 INDEMNIFICATION:

11.1 To the extent permitted by law, including, but not limited to, the provisions of Nevada Revised Statutes Chapter 41, each party shall indemnify, hold harmless and defend, not excluding the other's right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including but not limited to reasonable attorney's fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of the indemnity which would otherwise exist as to any party or person described in this paragraph.

11.2 Except as otherwise provided in Subsection 11.4 below, the indemnifying party shall not be obligated to provide a legal defense to the indemnified party, nor reimburse the indemnified party for the same, for any period occurring before the indemnified party provides written notice of the pending claim(s) or cause(s) of action to the indemnifying party, along with:

11.2.1 a written request for a legal defense for such pending claim(s) or cause(s) of action;
and

11.2.2 a detailed explanation of the basis upon which the indemnified party believes that the claim or cause of action asserted against the indemnified party implicates the culpable

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

conduct of the indemnifying party, its officers, employees, and/or agents.

11.3 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall not be obligated to fund or reimburse any fees or costs provided by any additional counsel for the indemnified party, including counsel through which the indemnified party might voluntarily choose to participate in its defense of the same matter.

11.4 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall be obligated to reimburse the reasonable attorney's fees and costs incurred by the indemnified party during the initial thirty (30) day period of the claim or cause of action, if any, incurred by separate counsel.

12 INDEPENDENT CONTRACTOR:

12.1 An independent contractor is a natural person, firm or corporation who agrees to perform services for a fixed price according to his or its own methods and without subjection to the supervision or control of the other contracting party, except as to the results of the work, and not as to the means by which the services are accomplished.

12.2 It is mutually agreed that **CONSULTANT** is associated with **CITY** only for the purposes and to the extent specified in this Contract, and in respect to performance of the contracted services pursuant to this Contract. **CONSULTANT** is and shall be an independent contractor and, subject only to the terms of this Contract, shall have the sole right to supervise, manage, operate, control, and direct performance of the details incident to its duties under this Contract.

12.3 Nothing contained in this Contract shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for **CITY** whatsoever with respect to the indebtedness, liabilities, and obligations of **CONSULTANT** or any other party.

12.4 **CONSULTANT** shall indemnify and hold **CITY** harmless from, and defend **CITY** against, any and all losses, damages, claims, costs, penalties, liabilities, expenses arising out of or incurred in any way because of, but not limited to, **CONSULTANT'S** obligations or legal duties regarding any taxes, fees, assessments, benefits, entitlements, notice of benefits, employee's eligibility to work, to any third party, subcontractor, employee, state, local or federal governmental entity.

12.5 Neither **CONSULTANT** nor its employees, agents, or representatives shall be considered employees, agents, or representatives of **CITY**.

13 INSURANCE REQUIREMENTS:

13.1 **CONSULTANT**, as an independent contractor and not an employee of **CITY**, must carry

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

policies of insurance in amounts specified and pay all taxes and fees incident hereunto. **CITY** shall have no liability except as specifically provided in this Contract.

13.2 **CONSULTANT** shall not commence work before: (1) **CONSULTANT** has provided the required evidence of insurance to Carson City Purchasing & Contracts, and (2) **CITY** has approved the insurance policies provided by **CONSULTANT**.

13.3 Prior approval of the insurance policies by **CITY** shall be a condition precedent to any payment of consideration under this Contract and **CITY'S** approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent this Contract. Any failure of **CITY** to timely approve shall not constitute a waiver of the condition.

13.4 Insurance Coverage:

13.4.1 **CONSULTANT** shall, at **CONSULTANT'S** sole expense, procure, maintain and keep in force for the duration of this Contract the following insurance conforming to the minimum requirements specified below. Unless specifically specified herein or otherwise agreed to by **CITY**, the required insurance shall be in effect prior to the commencement of work by **CONSULTANT** and shall continue in force as appropriate until the latter of:

13.4.1.1 Final acceptance by **CITY** of the completion of this Contract; or

13.4.1.2 Such time as the insurance is no longer required by **CITY** under the terms of this Contract.

13.4.2 Any insurance or self-insurance available to **CITY** shall be in excess of and non-contributing with any insurance required from **CONSULTANT**. **CONSULTANT'S** insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by **CITY**, **CONSULTANT** shall provide **CITY** with renewal or replacement evidence of insurance no less than thirty (30) calendar days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by this Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as **CONSULTANT** has knowledge of any such failure, **CONSULTANT** shall immediately notify **CITY** and immediately replace such insurance or bond with an insurer meeting the requirements.

13.5 General Requirements:

13.5.1 **Certificate Holder:** Each liability insurance policy shall list Carson City c/o Carson City Purchasing & Contracts, 201 N. Carson Street Suite 3, Carson City, NV 89701 as a certificate holder.

13.5.2 **Additional Insured:** By endorsement to the general liability insurance policy

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

evidenced by **CONSULTANT**, The City and County of Carson City, Nevada, its officers, employees and immune contractors shall be named as additional insureds for all liability arising from this Contract.

13.5.3 **Waiver of Subrogation:** Each liability insurance policy shall provide for a waiver of subrogation as to additional insureds.

13.5.4 **Cross-Liability:** All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

13.5.5 **Deductibles and Self-Insured Retentions:** Insurance maintained by **CONSULTANT** shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by **CITY**. Such approval shall not relieve **CONSULTANT** from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed \$5,000 per occurrence, unless otherwise approved by **CITY**.

13.5.6 **Policy Cancellation:** Except for ten (10) calendar days notice for non-payment of premium, each insurance policy shall be endorsed to state that; without thirty (30) calendar days prior written notice to Carson City Purchasing & Contracts, the policy shall not be canceled, non-renewed or coverage and /or limits reduced or materially altered, and shall provide that notices required by this paragraph shall be sent by certified mail to Carson City Purchasing & Contracts, 201 N. Carson Street Suite 3, Carson City, NV 89701.

13.5.7 **Approved Insurer:** Each insurance policy shall be issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to the State and having agents in Nevada upon whom service of process may be made, and currently rated by A.M. Best as "A-VII" or better.

13.5.8 **Evidence of Insurance:** Prior to commencement of work, **CONSULTANT** must provide the following documents to Carson City Purchasing & Contracts, 201 North Carson Street Suite 3, Carson City, NV 89701:

13.5.8.1 **Certificate of Insurance:** The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to Carson City Purchasing & Contracts to evidence the insurance policies and coverages required of **CONSULTANT**.

13.5.8.2 **Additional Insured Endorsement:** An Additional Insured Endorsement (CG20 10 or C20 26), signed by an authorized insurance company representative, must be submitted to Carson City Purchasing & Contracts to evidence the endorsement of **CITY** as an additional insured per Subsection 13.5.2.

13.5.8.3 **Schedule of Underlying Insurance Policies:** If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the Underlyer Schedule from the Umbrella

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

or Excess insurance policy may be required.

13.5.9 **Review and Approval:** Documents specified above must be submitted for review and approval by Carson City Purchasing & Contracts prior to the commencement of work by **CONSULTANT**. Neither approval by **CITY** nor failure to disapprove the insurance furnished by **CONSULTANT** shall relieve **CONSULTANT** of **CONSULTANT'S** full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not limit the liability of **CONSULTANT** or its sub-contractors, employees or agents to **CITY** or others, and shall be in addition to and not in lieu of any other remedy available to **CITY** under this Contract or otherwise. **CITY** reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements.

14 COMMERCIAL GENERAL LIABILITY INSURANCE:

14.1 Minimum Limits required:

14.1.1 Two Million Dollars (\$2,000,000.00) - General Aggregate

14.1.2 Two Million Dollars (\$2,000,000.00) - Products & Completed Operations Aggregate

14.1.3 One Million Dollars (\$1,000,000.00) - Each Occurrence

14.2 Coverage shall be on an occurrence basis and shall be at least as broad as ISO 1996 form CG 00 01 (or a substitute form providing equivalent coverage); and shall cover liability arising from premises, operations, independent contractors, completed operations, personal injury, products, civil lawsuits, Title VII actions and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

15 BUSINESS AUTOMOBILE LIABILITY INSURANCE:

15.1 Minimum Limit required:

15.1.1 One Million Dollars (\$1,000,000) per occurrence for bodily injury and property damage

15.2 Coverage shall be for "any auto", including owned, non-owned and hired vehicles. The policy shall be written on ISO form CA 00 01 or a substitute providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

16 PROFESSIONAL LIABILITY INSURANCE:

16.1 Minimum Limit required: One Million Dollars (\$1,000,000.00)

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

16.2 Retroactive date: Prior to commencement of the performance of this Contract

16.3 Discovery period: Three (3) years after termination date of this Contract.

16.4 A certified copy of this policy may be required.

17 WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE:

17.1 **CONSULTANT** shall provide workers' compensation insurance as required by Nevada Revised Statutes Chapters 616A through 616D inclusive and Employer's Liability insurance with a minimum limit of \$500,000 each employee per accident for bodily injury by accident or disease.

17.2 **CONSULTANT** may, in lieu of furnishing a certificate of an insurer, provide an affidavit indicating that **CONSULTANT** is a sole proprietor; that **CONSULTANT** will not use the services of any employees in the performance of this Contract; that **CONSULTANT** has elected to not be included in the terms, conditions, and provisions of Nevada Revised Statutes Chapters 616A-616D, inclusive; and that **CONSULTANT** is otherwise in compliance with the terms, conditions, and provisions of Nevada Revised Statutes Chapters 616A-616D, inclusive.

18 BUSINESS LICENSE:

18.1 **CONSULTANT** shall not commence work before **CONSULTANT** has provided a copy of his Carson City business license to Carson City Purchasing & Contracts.

18.2 The Carson City business license shall continue in force until the latter of: (1) final acceptance by **CITY** of the completion of this Contract; or (2) such time as the Carson City business license is no longer required by **CITY** under the terms of this Contract.

19 COMPLIANCE WITH LEGAL OBLIGATIONS:

19.1 **CONSULTANT** shall procure and maintain for the duration of this Contract any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or services of this Contract. **CONSULTANT** will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of **CONSULTANT** in accordance with Nevada Revised Statutes 361.157 and 361.159. **CONSULTANT** agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract. **CITY** may set-off against consideration due any delinquent government obligation.

20 WAIVER OF BREACH:

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

20.1 Failure to declare a breach or the actual waiver of any particular breach of this Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

21 SEVERABILITY:

21.1 If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the nonenforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

22 ASSIGNMENT/DELEGATION:

22.1 To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by **CITY**, such offending portion of the assignment shall be void, and shall be a breach of this Contract. **CONSULTANT** shall neither assign, transfer nor delegate any rights, obligations or duties under this Contract without the prior written approval of **CITY**.

23 CITY OWNERSHIP OF PROPRIETARY INFORMATION:

23.1 Any files, reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer programs, computer codes, and computer records (which are intended to be consideration under this Contract), or any other documents or drawings, prepared or in the course of preparation by **CONSULTANT** (or its subcontractors) in performance of its obligations under this Contract shall be the exclusive property of **CITY** and all such materials shall be delivered into **CITY** possession by **CONSULTANT** upon completion, termination, or cancellation of this Contract. **CONSULTANT** shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of **CONSULTANT'S** obligations under this Contract without the prior written consent of **CITY**. Notwithstanding the foregoing, **CITY** shall have no proprietary interest in any materials licensed for use by **CITY** that are subject to patent, trademark or copyright protection.

23.2 **CITY** shall be permitted to retain copies, including reproducible copies, of **CONSULTANT'S** drawings, specifications, and other documents for information and reference in connection with this Contract.

23.3 **CONSULTANT'S** drawings, specifications and other documents shall not be used by **CITY** or others without expressed permission of **CONSULTANT**.

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

24 PUBLIC RECORDS:

24.1 Pursuant to Nevada Revised Statute 239.010, information or documents received from **CONSULTANT** may be open to public inspection and copying. **CITY** will have the duty to disclose unless a particular record is made confidential by law or a common law balancing of interests. **CONSULTANT** may clearly label specific parts of an individual document as a "trade secret" or "confidential" in accordance with Nevada Revised Statute 332.061, provided that **CONSULTANT** thereby agrees to indemnify and defend **CITY** for honoring such a designation. The failure to so label any document that is released by **CITY** shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

25 CONFIDENTIALITY:

25.1 **CONSULTANT** shall keep confidential all information, in whatever form, produced, prepared, observed or received by **CONSULTANT** to the extent that such information is confidential by law or otherwise required by this Contract.

26 FEDERAL FUNDING:

26.1 In the event federal funds are used for payment of all or part of this Contract:

26.1.1 **CONSULTANT** certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to the regulations implementing Executive Order 12549, Debarment and Suspension, 28 C.F.R. pt. 67, § 67.510, as published as pt. VII of the May 26, 1988, Federal Register (pp. 19160-19211), and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

26.1.2 **CONSULTANT** and its subcontractors shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder contained in 28 C.F.R. 26.101-36.999, inclusive, and any relevant program-specific regulations.

26.1.3 **CONSULTANT** and its subcontractors shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, P.L. 93-112, as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions).

27 LOBBYING:

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

27.1 The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

27.1.1 Any federal, state, county or local agency, legislature, commission, counsel or board;

27.1.2 Any federal, state, county or local legislator, commission member, counsel member, board member, or other elected official; or

27.1.3 Any officer or employee of any federal, state, county or local agency; legislature, commission, counsel or board.

28 GENERAL WARRANTY:

28.1 **CONSULTANT** warrants that all services, deliverables, and/or work product under this Contract shall be completed in a workmanlike manner consistent with standards in the trade, profession, or industry; shall conform to or exceed the specifications as set forth in the incorporated attachments; and shall be fit for ordinary use, of good quality, with no material defects.

29 PROPER AUTHORITY:

29.1 The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. **CONSULTANT** acknowledges that this Contract is effective only after approval by the Carson City Board of Supervisors and only for the period of time specified in this Contract. Any services performed by **CONSULTANT** before this Contract is effective or after it ceases to be effective are performed at the sole risk of **CONSULTANT**.

30 ARBITRATION:

30.1 Any controversy of claims arising out of or relating to this Contract, or the breach thereof, provided both parties agree, may be settled by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

31 GOVERNING LAW; JURISDICTION:

31.1 This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction.

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

CONSULTANT consents and agrees to the jurisdiction of the courts of the State of Nevada located in Carson City, Nevada for enforcement of this Contract.

32 ENTIRE CONTRACT AND MODIFICATION:

32.1 This Contract and its integrated attachment(s) constitute the entire Contract of the parties and such are intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other Contracts that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto and approved by the Carson City Board of Supervisors.

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

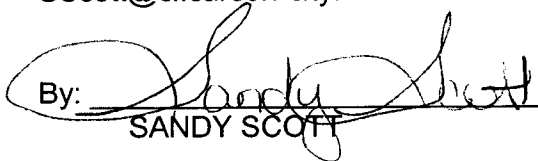
MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

33 ACKNOWLEDGMENT AND EXECUTION:

33.1 In witness whereof, the parties hereto have caused this Contract to be signed and intend to be legally bound thereby.

CARSON CITY

Finance Director
Attn: Sandy Scott, Purchasing &
Contracts Coordinator
201 North Carson Street Suite 3
Carson City, Nevada 89701
Telephone: 775-887-2133 ext. 30137
Fax: 775-887-2107
SScott@ci.carson-city.nv.us

By: 
SANDY SCOTT

DATED 2-24-09

CITY'S LEGAL COUNSEL

Neil A. Rombardo, District Attorney

I have reviewed this Contract and approve
as to its legal form.

By: 
Deputy District Attorney

DATED 2-24-09

CITY'S ORIGINATING DEPARTMENT

BY: Andrew Burnham, Director
Carson City Public Works Department
3505 Butti Way
Carson City, NV 89701
Telephone: 775-887-2355 Ext. 30367
Fax: 775-887-2164
ABurnham@ci.carson-city.nv.us

By: 

DATED 2/24/09

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

Ira Rackley, P.E. deposes and says: That he is the **CONSULTANT** or authorized agent of the **CONSULTANT**; that he has read the foregoing Contract; and that he understands the terms, conditions, and requirements thereof.

CONSULTANT

BY: Ira Rackley, P.E.

TITLE: Associate V.P.

FIRM: Black and Veatch Corporation

CARSON CITY BUSINESS LICENSE #: 09-24336

Address: 503 North Division Street

City: Carson City **State:** Nevada **Zip Code:** 89703

Telephone: 775-720-0410/ **Fax #:** 775-283-0494

E-mail Address: RackleyIS@bv.com

(Signature of **CONSULTANT**)

DATED _____.

STATE OF _____)
County of _____) **ss**

Signed and sworn (or affirmed) before me on this _____ day of February, 2009, by Ira Rackley, P.E..

(Signature of Notary)

(Notary Stamp)

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

SAMPLE INVOICE

Invoice Number: _____

Invoice Date: _____

Invoice Period: _____

Carson City Contract Number: 0809-189

Carson City Contract Name: Marlett/Hobart Water System Improvements-Quill WTP Supply Pipeline

Vendor Number: _____

Black & Veatch Corporation
503 North Division Street
Carson City, Nevada 89703

Invoice shall be submitted to:

Carson City Public Works
Attn: Karen White
3505 Butti Way
Carson City NV 89701

Line Item #	Description	Unit Cost	Units Completed	Total \$\$
Total for this invoice				

Original Contract Sum	\$	_____
Less amount previously billed	\$	_____
= contract sum prior to this invoice	\$	_____
Less this invoice	\$	_____
=Dollars remaining on Contract	\$	_____

ENCLOSE COPIES OF RECEIPTS & INVOICES FOR EXPENSES & OUTSIDE SERVICES

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

Contract No. 0809-189

MARLETT/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

CONTRACT ACCEPTANCE AND EXECUTION:

The Board of Supervisors for Carson City, Nevada at their publicly noticed meeting of March 5, 2009 approved the acceptance of **CONTRACT No. 0809-189**. Further, the Board of Supervisors authorizes the Mayor of Carson City, Nevada to set his hand to this document and record his signature for the execution of this contract in accordance with the action taken.

CARSON CITY, NEVADA

ROBERT L. CROWELL, MAYOR

DATED this 5th day of March, 2009.

ATTEST:

ALAN GLOVER, CLERK-RECORDER

DATED this 5th day of March, 2009.



DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

PROJECT UNDERSTANDING

The Project is a collaborative effort between the State of Nevada (State) and Carson City (City). The Project seeks to maximize delivery of the State's raw water sources in the Marlette/ Hobart conveyance system, Franktown Creek and the East Slope system (State System) to the City Quill Water Treatment Plant (Quill) with maximization of the hydraulic capacities of the State System. The completed system will meet the demands for the Virginia City water system. In conjunction with the adjustments to the State System, optimization of the flow capabilities from the Ash and Kings Canyons to Quill will be evaluated. Storage options will be considered for the State System and the City Ash and Kings Canyon system to improve the seasonal flow capabilities to Quill. Hydropower will be evaluated prior to the delivery of State System water to Quill.

Quill has an existing stated capacity of approximately 10 MGD (7,000 GPM). The current State System does not have the capacity to deliver this quantity of water to Quill. Preliminary hydraulic analysis conducted by Black & Veatch indicates the hydraulic capacities of the State resource system may be able to provide approximately 8,000 GPM to Quill with frequent system capacities in excess of 9,000 GPM. These levels of flow generally occur during the spring runoff period on all of the tributaries included in this analysis. The proposed design capacity of the Project will be determined and may accommodate this level of raw water supply. It is envisioned that the operation of Quill will take water from the State System first and that Ash and Kings Canyons will provide the secondary supply to make Quill operate at or near full capacity.

This initial phase of the Project involves the evaluation of alternatives that will increase the flow capture and conveyance capacity of the State System and the Cities Ash and Kings Canyon water delivery system to maximize raw water supply to Quill. The goal of this evaluation is to provide a supply of raw water to allow Quill to operate at its design capacity of 10 MGD or greater.

PROJECT APPROACH

The project can be broken down into the following phases:

- Phase 1 – Alternatives Assessment
- Phase 2 – Design and Construction of Selected Alternative from Phase 1

The following discusses the element included in the alternative assessments. A Systems Evaluation Report will be prepared under Phase 1 which will include recommendations for the sequencing and phasing of design and construction packages.

The assessments will consider upgrades to the current State System that may consist of combinations of micro tunneling and replacement pipelines, increasing flow capture capabilities, and storage to increase system efficiency for conveying surface water to Quill. Similar adjustments to the Cities Ash and Kings Canyon delivery system will be considered. The expected increase in raw water supply to Quill will require, at a minimum, the following adjustments:

1. Repair of the damaged 18-inch line between the Tanks and Sawmill Canyon. There is a minimum of two sections of this line that was damaged by heavy vehicle traffic during the recent construction upgrades. The City and State will make every attempt to complete these repairs to the existing line prior to August 1, 2009.





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

2. The State has determined that the valve controls on Marlette Lake and Hobart Reservoir are in poor condition and need immediate replacement. Each dam now has two small diameter outlet pipes with one valve on each pipe. The valves are difficult to operate and at least one of the valves on Hobart Reservoir is in-operative. The State is very concerned the valves could fail during yearly maintenance; the lakes could drain prior to implementation of repairs. For Marlette Lake, this would mean draining of water to Lake Tahoe, which would be an environmentally sensitive issue, and loss of water supply to Carson City. The State has identified the need for the design of replacement of the valve controls for both reservoirs and has requested an assessment of the condition of the existing pipes and valves. The State will provide plans and/or descriptions for the valve housing for each reservoir. Initial work will consist evaluation of the information provide by the State to determine the extent of improvements required. Based on this assessment, a Scope of Services, budget and schedule to complete the design of selected improvements will be submitted. The State has requested that the actual construction needs to be completed by the fall of 2010.

The next flow constraint in the State System is a combination of the flow capabilities through the meter house at the Tanks and the flow capacity of the 10-inch line from the Tanks to Quill. The current flow capacity of the Tanks meter house to Quill is limited to approximately 1,950 GPM. The existing 10-inch pipeline has two structures in its alignment that break the head generated by the fall in elevation prior to reaching the Quill WTP. An inventory of the system needs to be completed to assess the flow capabilities of the 10-inch pipe. The City desires to receive as much of this flow as possible. The City and State will provide B&V data and information to complete an evaluation of this segment of the system to determine the extent of improvements required. Based on this assessment, a Scope of Services, budget and schedule to complete the design of selected improvements will be submitted. .

3. The source of water from the State System will be supplemented with the City owned raw water sources in Ash and King Canyons to provide a stabilized flow to Quill. A parallel task to items 1 through 3 above will be the evaluation of the flow regimes that are available for capture at Red House. This flow capture will consist of the pumping of 1,500 GPM to capture spring Marlette Lake spills, summer pumping of Marlette Lake at 1,500 GPM from July 1 through October 31, determination of the flow capture from Franktown Creek, including Marlette Lake pumping, and the capture of flows from the East Slope System. A conceptual level of analysis will determine the method of flow capture of the combined flows at either Red House or possibly directly from Hobart Reservoir. The size and capacity of the piping system between Red House and Quill will be determined.

The following summarizes the alternatives that will be considered:

- Alternative 1 – Construct a non-pressurized pipeline from the Red House Structure to the Tanks and construct a new pressurized pipeline from the Tanks to the Quill WTP to either replace or supplement the existing 10 inch pipeline. With this option, approximately 2100 ft of head is available for a potential power generating facility at the end of the pipeline.
- Alternative 2 – Construct a pressure pipeline from the Red House Structure directly to the Quill WTP. This alternative will consider:
 - Routing the new pipeline along the existing 18 inch pipeline alignment, or





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

- A combination of new pipeline and boring a pipeline from Red House to a location in the existing pipeline alignment at approximately Sawmill Canyon, between Red House and the Tanks. Another option would be to bore a pipeline from Red House directly to the Tanks. Both of the boring options would reduce the pipeline length in the existing pipeline alignment and in the road between the Tanks and Sawmill Canyon. A branch connection from this pipeline with an appropriate pressure reducing valve will be provided to supply water to the Tanks to serve the Virginia City pipeline. If the Lakeview WTP option is selected, a pipeline from the Tanks will be incorporated into the system to provide water supply to the Lakeview WTP. Under this option, approximately 2350 ft of head would be available for a potential power generating facility at the end of the Tanks to Quill pipeline.
 - Alternative 3 -- Micro tunneling from the Tanks to Hobart Reservoir. This option would collect the Marlette pumping and Franktown/Hobart Creek raw water in a junction facility adjacent to Hobart Reservoir. This water could be collected by discharging Marlette Water into Hobart Reservoir through the current system and having the water flow into the junction box from Hobart Reservoir, or, by constructing a pipeline from the now existing Marlette Lake pipeline directly to the Hobart junction box. A sub-option would consider a below surface intake structure in Hobart Reservoir to catch the Marlette Lake pumping and the available runoff from the Franktown Creek and Hobart Creek drainage basins. This would further increase the available head for a potential power generating facility at the end of the pipeline. The East Slope water would continue to flow to the Tanks on the existing pipeline alignment but the capacity of new pipe that would carry this flow would be downsized to carry the expected flow from the East Slope System and the contribution to Franktown Creek that originates below Hobart Reservoir. The connection to the Tanks would make sure the storage tank at the Tanks is full at all times.
 - Alternative 4 – Construct a Lifting Station near Hobart Reservoir. This option would include constructing a new lift pump station in the Hobart Reservoir Intake Facility. Water from the Intake Facility will be pumped over the summit above Sawmill Canyon (at approximately EL 7800 feet) between the Hobart Reservoir Drainage Basin and the Tanks. A new pressure pipeline would be constructed from the Sawmill Canyon summit, following an existing road down Sawmill Canyon to intersect with the existing pipeline between Red House and the Tanks and then to the Quill WTP. Under this alternative, approximately 2,900 feet of hydraulic head would be available for a potential power generating facility at the end of the pipeline. This alternative would also consider collecting Marlette Water in the Intake Facility by either discharging it to the Hobart Reservoir or connecting it directly to the Hobart Reservoir Intake Facility. However, the flows to the proposed hydro power facility may be reduced by the amount of water entering the system from below Hobart Reservoir and from the East Slope system through the Red House structure.
4. Prior work has identified a correlation between the Marlette Lake SNOTEL Station and the Marlette Lake spills. This evaluation will be developed further to assess the viability of





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

using the NRCS SNOTEL database to estimate the spring and summer pumping from Marlette Lake.

5. After a flow regime and the method of capture are determined, the evaluation of hydropower recovery in the vicinity of Quill will be evaluated. This evaluation will include either a new water line parallel to the existing 10-inch line between the Tanks and Quill or replacement of the 10-inch water line.

For all four pipeline improvements alternatives described above, the consideration of a hydro power recovery at the end of the raw water pipeline system near Quill will be considered. Due to the potentially large variation in flows, the hydro power recovery will consider the possibility of two or more turbines to maximize power recovery. Once the raw water has passed through the hydro facility, it will be first directed to Quill WTP. If there is any excess water from the State system, it will be considered available for future storage facilities between Quill WTP and Ash and Kings Canyons or injection into storage through the City's existing Aquifer Storage and Recovery wells.

6. The optimization of flow to Quill with and without seasonal storage on either the State System or the Ash and Kings Canyon System will also be considered during this task. Prior work has identified the benefits of storage on a conceptual basis. This work effort will advance that conceptual determination by evaluation of potential off-stream storage sites, conceptual costs, and the benefits to the City water supply. If storage above Red House can be found, additional benefits to hydropower recovery may also be derived.

The following alternatives have been identified for improvement of storage capacity of the existing system:

- Storage Option 1 – This option considers minor adjustments to the existing dam structure on Marlette Lake to increase the water delivery out of Marlette Lake. The dam on Marlette Lake is a small concrete structure with an approximate 10 foot by 4 foot rectangular weir, open without any controls. The preliminary hydraulic analysis conducted by Black and Veatch indicates that a single 12 to 14-inch wooden board placed in the weir would allow for: 1) installation of a reservoir level monitoring system that will either start or increase the pumping as spring and summer spills are occurring, and 2) a level of management of the seasonal withdrawals of water from Marlette Lake with the hydrologic cycle of Franktown and Hobart Creeks. The State Engineer has expressed concern with the integrity of the existing dam structure. An assessment of what would be needed to accommodate placement of a wooden board on the existing weir will be completed.
- Storage Option 2 – The Ash and King Canyon flows enter the Quill water supply system through a separate pipeline system. Currently the City system is unable to utilize the available spring flows due, to a large degree, to a lack of storage. The City had constructed a series of recharge basins for these water supply sources but the basins are subject to damage during high flow events and require frequent maintenance. Recent data suggests that the alluvial fans for these systems may have a limited amount of storage capacity. This alternative will assess a combination of





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

storage facilities and recharge facilities to optimize the raw water supply from Ash and Kings Canyons to the Quill WTP. These storage facilities may also be used to store raw water from the State system after power recovery. Black & Veatch will work with the Cities water rights specialist, Bruce Scott with Resource Concepts, Inc., on the feasibility of permitting storage options for this alternative.

7. Alterations to the piping from the Red House to Quill pipeline at the Tanks will be determined to provide a stabilized flow to the Tanks. It is envisioned that this will include a larger storage vessel at the Tanks. The operations of the Tanks will be determined so any overflow from the Tanks will be eliminated.
8. The City is completing a water system model through other work efforts. This model will be used to evaluate the benefits of a Lakeview Water Treatment Facility to the City delivery system. If a Lakeview Water Treatment Facility is selected, the following assessments will be completed:

The City owns a Forty-Acre parcel of land immediately down gradient from the Tanks and above the Lakeview subdivision development. The City currently pumps water from the Quill WTP up to developments known as Lakeview, Timberline and Combs Canyon areas. There is a series of three lift stations to provide water to these areas. This alternative would consider a water treatment plant on the existing City owned lands above the Lakeview developed area and below the Tanks. This assessment will consider utilizing a takeoff from the existing pipeline from the Tanks to Quill for water supply or a dedicated pipeline from the Tanks to the proposed water treatment facility. The primary purpose of the Lakeview facility would be to provide the water supply for the Lakeview, Timberline and Combs Canyon areas and eliminate the need for the current lift stations. Any treated water not utilized by the Lakeview, Timberline and Combs Canyon areas would be distributed to the lower pressure zones within the City water delivery system.

A joint storage tank in the vicinity of the Tanks will be considered that will provide improved management of the State Tanks system to Virginia City and can also provide needed storage for the Lakeview WTP and the Tanks. Adjustments to the Tanks system will eliminate discharges from the system.

Based on the assessment of the alternatives, a Systems Evaluation Report will be prepared. The Systems Evaluation Report will recommend improvements to the State and City water transmission systems to supply raw water to Quill. The Systems Evaluation Report will present the priority for the City and State to complete detailed design and construction. The Project's delivery requires defining the appropriate conveyance provisions, assessing economic feasibility and compatibility of hydropower generation, and prioritizing the executing traditional design-bid-build services.

State and City review are critical at each decision milestone associated with the above work elements. It is anticipated that a preferred alternative involving a combination of a series of pipelines, possible pumping stations, possible off stream storage, alterations to the Marlette pumping system, collection of water through the Hobart Reservoir, Red House improvements, and alterations to the Tanks will be selected. This selected alternative will then enter into the Design Phase, which will involve design of components of the selected alternative based on a priority system set by the State and City. It is anticipated that the overall improvements will involve more





than one construction project scheduled to meet the demands of water by Carson City and the priority of repairs needed by the State.

PHASE 1 SCOPE OF WORK

The Scope of Work presented below focuses on Phase 1 - Alternatives Assessment.

Prior studies and reports will be utilized as much as possible in project development. For Phase 1 of the Project, the following major scope elements are proposed to achieve a completed project based on the description of the project components presented earlier.

Phase 1 – Preliminary Alternatives Evaluation Study

- Task 1 - Project Management and Coordination
- Task 2 - Marlette Dam Valve and Tanks Meter House Investigation and Evaluation (including items 2, and 3 from the Project Approach)
- Task 3 - Pipeline Alternatives Evaluation (including Items 4, 5, 6, 7, 8, and 9 from the Project Approach)
 - ▶ Alternatives Development
 - ▶ Hydroelectric Feasibility
 - ▶ Alternatives Evaluation
 - ▶ Systems Evaluation Report

TASK 1 – PROJECT MANAGEMENT AND COORDINATION

The purpose of this task is to manage the efforts of project team members including any subconsultants; review work progress; coordinate QA/QC procedures; and otherwise direct work so as to ensure satisfactory completion of work elements on schedule, within budget, and in conformance with City and State standards. This includes reviewing former work pertaining to the project; reporting budget and status; conducting and documenting project correspondence and meetings; and performing quality control reviews of deliverables. These activities are further explained below.

Subtask 1.1 – Project Administration

The Black & Veatch (B&V) Project Manager will function as the primary point of contact with the City and State to ensure continuity in communications. Internal coordination meetings will be conducted as needed to ensure schedule landmarks are met and deliverables submitted on-time. B&V will provide the City and State with formal monthly progress reports to apprise key participants of project development and status. Each progress report will contain the following information: a description of project status in terms of both schedule and budget, work completed in the last month, and work planned for the next month. Informal meetings and phone contact will be maintained with City and State representatives and other team members regarding project status between regular reports.

Subtask 1.2 – Project Management Work Plan





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS – QUILL WTP SUPPLY PIPELINE

B&V will prepare and maintain a Project Management Work Plan (PM Work Plan) throughout the term of the Project. The PM Work Plan will include, at a minimum, the following information:

- Final scope of services
- Project communications protocol
- Project team organization and roles
- Project team contact information
- Detailed schedule of activities
- Document filing procedures
- Invoice format and invoicing procedures

B&V's project manager will update the PM Work Plan on a quarterly basis to reflect the progress of the work and to account for changed conditions since the previous update.

Subtask 1.3 – Quality Assurance and Control

A Quality Assurance/Quality Control (QA/QC) plan will be prepared. The QA/QC plan details will be developed from B&V's standard continuous QC plan, tailored to this project, and as otherwise agreed to by the City and State. B&V will implement the QA/QC plan to check, as a minimum, design methods, calculations, drawings, specifications, cost estimates, field investigations and measurements, and other technical issues associated with the Project design.

The QA/QC plan will define requirements and procedures for checking, reviewing, distributing, tracking, and controlling documents for QA/QC.

Subtask 1.4 – Collection of Background Information

Data relevant to the engineering work to be performed will be identified, collected, and assembled. The primary purpose will be to identify data required from the City and State to ensure that the work proceeds in accordance with the requirements of the entities involved. Information shall include, but not be limited to, existing maps, reports, and other data that are readily available in hardcopy or electronic format. B&V will conduct a thorough review of available documents, hydraulic data, as-builts of existing facilities, survey data, and any other information made available by the City and/or State that has bearing on the Project. B&V will not be responsible for accuracy of data and documentation prepared by others and used in the development of deliverables.

Subtask 1.5 – Kick-Off Meeting/Workshop

Once Subtask 1.4 – Following the collection of Background Information, B&V will prepare and distribute a project review meeting agenda for a half-day workshop at the City's Public Works office involving key personnel from the City and State and other identified stakeholders. This Workshop will clarify the project requirements, review pertinent available data, review project staffing and organization, present the initial work plan and initial work schedule, and will serve to transfer information prior to the beginning of the work and to define required performance criteria for the preliminary design activities. An agenda, meeting preparation materials, and draft and final meeting minutes will be prepared and distributed to all attendees.

The focus of the workshop will be to discuss project constraints and alternatives as follows:





- Review previous hydrologic assessment by B&V
- Work Scope and Purpose
- Existing Facilities and Functions
- Utility Identification and Conflict Avoidance
- Environmental and Permitting Constraints
- City and State Property Requirements
- Pipeline Alignments, Technologies and Material Alternatives
- Flow and Pressure Considerations
- Hydroelectric Facility Options
- Operations and Maintenance
- City/End User Preferences
- Constructability Issues

Subtask 1.6 – Project Coordination Meetings

Project coordination meetings will be scheduled with the City and State and other identified key stakeholders. These meetings will provide a platform for issues and concerns to be discussed so that the project may be shaped according to the input of key participants. Up to three (3) project coordination meetings are included (excluding the workshops included under other tasks). It is assumed all meetings will be held in Carson City. B&V will be responsible for maintaining agendas, meeting notes, and attendance records.

Subtask 1.7 – Project Coordination

This subtask covers the communications and coordination with the City and State and other project team members as well as internal team coordination of design activities across the various project elements. Such coordination will be by meeting, email, or telephone exchange. Information exchanged will be recorded and tracked as part of the project documentation.

Subtask 1.8 – Project Administrative Record

B&V will manage and implement record keeping for the Project, including filing of calculations, meeting notes, correspondence, memoranda, pertinent information pertaining to this scope of services, and all documents created, prepared, or used during the execution of the work. A project file log will be prepared and maintained throughout the project.

TASK 2 – MARLETTE DAM VALVE AND TANK METER HOUSE IMPROVEMENTS

The Marlette Water System / Buildings and Grounds Division of the State of Nevada Department of Administration has identified the following work that would be done as part of this project upon approval of an interlocal agreement between Carson City and State Buildings and Grounds:

Subtask 2.1 - Evaluation and Recommendation

1. Review of existing data and information provided by the State on the outlets for Marlette Lake dam and Hobart Reservoir dam. Based on the information provided, a





- recommendation for an alternative to repair or replace the existing reservoir outlets will be provided. A Scope of Service, budget and schedule for completion of the recommended design will be submitted with the recommended alternative.
2. Review of existing data and information provided by the State on the adjustments to the existing piping and meter configurations in the Tanks meter house. Based on the information provided, a recommendation for an alternative to repair or replace the existing pipe and meter configurations to provide the passage of up to 2,000 GPM will be provided.
 3. A one day site visit will be made as part of this investigation.

In addition to reviewing the existing as-built data provided by the City and State, field investigation of the existing valves and outlet pipes would be necessary. It is anticipated that an underwater investigation would be required to accurately characterize the configuration and condition of the existing facilities that are submerged. The scope of work assumes that the City/State will contract directly with a local diving company that specializes in performing underwater investigations. The scope of work does not include the effort associated with doing underwater investigation. B&V will coordinate with the City/State selected firm in terms of the information needed to ascertain the condition of existing facilities.

Based on the evaluation, recommended improvements will be presented to the City/State in the form of a letter memorandum. After the City/State has made a decision on the recommended improvements, the scope of work, budget and schedule for the design and implementation of the improvements can be finalized.

TASK 3 – ALTERNATIVES EVALUATION

Subtask 3.1 – Site Visit

As part of the alternatives development, B&V's Project Manager, Project Engineer, and other staff as appropriate, will coordinate with the City and State to make a one day site visit for the visual inspection of the terrain and existing facilities. Findings from the site visit will be incorporated into the evaluation.

Subtask 3.2 – Pipeline Improvements Alternatives

B&V will evaluate the pipeline alternatives described in the Project Approach section under this task.

Subtask 3.2.1. State Water System Yield Analyses

Previous work completed by Black & Veatch has assessed the yield of Marlette Lake based on capture of spring spills and the summer pumping. The assessments will be reviewed with the City and State. The State and City will review and select a flow rate from the combination of the flows from the tributary systems in the State System. This flow rate will be used in the alternative evaluations in Subtask 3.2.3 Pipeline Alternatives.

There may be a benefit from placement of flashboards on the existing Marlette Lake dam. A meeting with the City, State and the State Engineer will be held as part of the progress meetings under subtask 1.6 to review any potential Dam safety issues and other issues with this option. A





memorandum report of possible mitigation measures will be prepared and submitted to the City and State.

Subtask 3.2.2 – Correlation between Snowpack and Marlette Lake Spills

Prior work has identified a strong correlation between the Marlette Lake SNOTEL Station and Marlette Lake spills based on annual/seasonal basis. However, in order for the State to capture spills before they occur, the State will require a predictive operational approach based on real-time meteorological conditions. If such an approach can be developed, the loss of flows from Marlette Lake to Lake Tahoe would be reduced and the State would be able to provide increased supplies from the MHWS.

Within this task we propose an evaluation to assess the viability of using both the NRCS SNOTEL database and daily temperatures data to predict the potential for winter and spring pumping from Marlette Lake. These efforts will consider data from the following sources:

- USGS flow data for Marlette Creek,
- USGS level data for Marlette Lake, and
- the NRCS Marlette Lake SNOTEL database.
- NOAA Meteorological Data

SNOWTEL data is available on the first and fifteenth day of each month from January through June. Correlations between spills (flows in Marlette Creek), temperatures and snowpack will be investigated on a bi-weekly basis. The daily correlation between maximum daily temperatures and daily spills will also be investigated.

Subtask 3.2.3 – Pipeline Alternatives.

Each pipeline alternative (described in the Project Approach section) will be described using the following:

- Yield at the Tanks and Quill with and without the Lakeview WTP
- Hydraulics and conceptual design features
- Constructability
- Geologic Condition (based on the review of existing reports provided by the City/State)
- Accessibility
- Maintenance of Service
- Environmental and Permitting Issues
- Order of Magnitude Construction Costs
- Conceptual figures developed using the existing topography indicating the major components including the pipeline alignment, new facilities and modifications to existing structures, etc.

The following subtasks elaborate the work that will be performed:

Subtask 3.2.3.1 – Pipeline from Red House to the Tanks





The following will be evaluated:

1. Constructing a new gravity pipeline in the existing 18-inch alignment will be evaluated. If the yield assessment indicates that hydropower recovery is not warranted, the pipeline will be sized to capture additional yield from Red House. This additional yield will include Marlette Lake spills and summer pumping and capture of additional spring runoff from the Franktown/Hobart basin. The maximum flows captured are expected to be approximately 7,000 to 9,000 GPM.
2. If the hydropower assessment indicates hydropower is warranted, then following will be evaluated:
 - a. Install a pressure pipeline from Red House to the Tanks in the existing alignment.
 - b. At approximately the intersection of Sawmill Canyon and the existing alignment, a micro-tunnel from the existing alignment to Red House and then continue in a pressure pipeline to the Tanks.
3. The Red House diversion structure will require major modifications or replacement. This option will determine the configuration, size and location for a replacement Red House diversion structure to accommodate the agreed to flow regime.

Subtask 3.2.3.2 – Pipeline Hobart Reservoir to the Tanks.

The following options will be evaluated:

1. Assessment of a micro-tunnel from the Tanks to a proposed Hobart Intake Facility near Hobart Reservoir. The Hobart Intake Facility will draw water either directly from Hobart Reservoir or through a pipeline connecting with a submerged intake structure in Hobart Reservoir. The location, configuration and capacity of the Hobart Intake Facility will be established through this work task. The pipeline from the Hobart Intake Facility to the Tanks and subsequently to Quill will be a pressure pipeline with the ability to accommodate the hydropower facility. If the option for a hydropower facility is not selected, the pipeline will be designed as a gravity pipeline with energy relief and/or dissipation prior to discharge to Quill or storage facilities. This option will assess connecting the existing pipeline from Marlette Reservoir directly to the Hobart intake structure.
2. Assessment of a lift station in the proposed Hobart Intake Facility that will pump the water through a pipeline over the Sawmill Canyon summit, then follow the existing Sawmill Canyon road to an intersection with the now existing 18-inch Red House to Tanks pipeline, approximately 3,800 feet upstream from the Tanks, then follow the existing pipeline alignment to the Tanks and subsequently to the Quill WTP. This option will also assess connecting the existing pipeline from Marlette Reservoir directly to the Hobart intake structure.
3. The size, capacity and materials for a replacement pipeline between Red House and the Tanks to convey the raw water available from that reach of Franktown Creek between the Hobart Reservoir and Red House and the East Slope water to the Tanks. The water from this pipeline would provide supply directly to the Tanks for use to meet the Story County system



demands and, if selected, supplement the supply for the Lakeview WTP. The Tanks would have a supplemental supply connection from the Hobart Reservoir to the Tanks pipeline.

Subtask 3.2.3.3 – Improvement to the Tanks

The size and location for a new storage tank will be determined for the operations of the Tanks. This new storage tank will provide an increased management capability to the State for the Virginia City water delivery system and will provide a storage capacity for the operation of the proposed Lakeview WTP for the City. The new Storage tank will be configured to maintain flows to the Virginia City system and to the Lakeview WTP without spillage.

Subtask 3.2.4. Hydraulics

Hydraulics conditions will be evaluated for all proposed pipeline alternatives. A simplified model of each conveyance alternative will be developed with a specialized hydraulic program or with a spreadsheet-type calculation, suitable for single line transfer systems.

The hydraulic analysis will determine the characteristics of the conveyance facilities required for each alternative. Typical pipeline characteristics including length, diameter, rated pressure, lining and material will be identified. Other facilities to be evaluated include tunnels, control structures, diversion structures, pumping stations, turbines and storage facilities. Complex hydraulic structures typically required with hydro facilities and at diversion structures will be modeled in separate spreadsheets as needed.

The analysis will also consider operational criteria such as operation of pumping stations, and hydro facilities, management and/or prevention of transient conditions (surges), management and ventilation of air carried through the conveyance systems, operation of control structures and general maintenance and reliability.

Subtask 3.3 – Hydroelectric Feasibility

For each of the pipeline alternatives evaluated under Subtask 3.2.3, B&V will evaluate feasibility of constructing a hydroelectric facility. Evaluation will consist of reviewing the hydraulics, and conceptual sizing and configuration of the facility.

B&V will investigate the option of generating hydroelectric power for sale to prospective power purchasers. B&V will contact NV Energy, formally known as Sierra Pacific Power Company, for determining the potential value of hydroelectric power sales. B&V will consult with NV Energy regarding the local electric grid capacity to support generation of electrical power. B&V will identify and evaluate alternatives for electrical generation. B&V will also investigate possible subsidies through the Nevada State Office of Energy and other potential programs (both governmental and nongovernmental). Evaluation will include:

- Preparation of conceptual level layouts and sections
- Modes of operation and operating conditions,
- Order of magnitude construction costs
- Energy generation potential and revenue





B&V will perform a site visit as required to identify potential electric connection sites and to gather existing data. B&V will meet with NV Energy to discuss general project details, physical requirements for connecting to the power grid, necessary agreements and permits, required fees, schedule, electrical load studies, and any operation and maintenance issues.

A payback calculation for the hydroelectric facility will be developed in a spreadsheet which will include:

- Initial Capital Cost
- Annual Revenue
- Annual O&M Cost

Subtask 3.4 – Storage Improvements

Subtask 3.4.1 Ash and Kings Canyons Storage Yield Analysis. As part of this task, a yield analysis will be performed which will include the following:

Prior work efforts by Black & Veatch have completed yield assessments for Ash Canyon and Kings Canyon. This work task will provide an estimate for storage requirements that will enable the City to maximize the use of the City's water rights from these sources under normal flow and drought flow conditions, using the 1992 hydrology as the drought conditions.

Conjunctive storage of surplus flows from both the State's System and from Ash Canyon and Kings Canyon system will be assessed. A group of the existing City wells that are immediately down gradient from Ash and Kings Canyons are configured as Aquifer Storage and Recovery wells. B&V will review existing reports to assess the potential level of recharge and recovery of water from these wells. A groundwater hydrologic assessment of the recharge area is not included in this Scope of Services.

The use of City's water rights will be used to supplement State system flows to Quill to allow Quill to operate at the selected flow rate for the system improvements. Any flows not used as supplemental Quill flows from Ash and Kings Canyons will be considered as usable for Eagle Valley Basin aquifer storage and recovery.

Storage options will consider seasonal storage and the potential for annual carryover storage. Benefits from storage under the drought conditions will be evaluated.

Subtask 3.4.2. Storage Facilities Description

Based on the results of the Ash and Kings Canyons yield analyses, for each alternative, conceptual design criteria and conceptual level cost estimates will be developed for the storage facilities. Existing storage and recharge facilities will be reviewed and reusing these facilities for future storage will be considered.

Subtask 3.5 – Lakeview and Timberline Area Improvements

Based on demands estimated under the current Hydraulic Modeling and Integrated Water Supply Planning project with Carson City, the feasibility of a small package water treatment plant for the





Lakeview, Timberline and Combs Canyon developments will be considered. The feasibility evaluation will consider the full range of costs associated with this option compared to existing costs for supplying these developments from Quill WTP. The City's distribution model (Water – GEMS) will be used to evaluate the expected benefits from this option.

Conceptual layout will be developed as required using the existing topography and the order of magnitude cost will be presented for the new plant.

Subtask 3.6 – Cost and Benefits Assessment

A conceptual level Cost and Benefits Assessment will be completed for the alternatives and options incorporated in Task 3. This assessment will provide a decision matrix listing the attributes of each option and summarizing the costs and benefits.

A Project Progress meeting will be held with the State and City to review the conceptual level Cost and Benefits Assessment. The Cost and Benefits Assessment will be incorporated in the Systems Evaluation Report.

Subtask 3.7 – Systems Evaluation Report

The work performed under previous subtasks will be presented in the Systems Evaluation Report. A draft report will be prepared and five copies will be distributed to the City and State. The prioritization and implementation of recommended improvements to the existing system will be presented in the report. A full day (8 hour) workshop will be held with the City and State and other stakeholders to review the evaluation and recommendations of the report. Following the review and receipt of comments from the City and State, and other stakeholders, B&V will incorporate the comments and submit five copies and one electronic copy (PDF) of the final report.

The Final Systems Evaluation Report will include a detailed System Improvement Schedule, and individual project component descriptions.

A detailed Scope of Work for Phase 2 will be prepared based on the selected pipeline alternative from Phase 1.

BASIS FOR PHASE 1 SCOPE OF WORK

The following presents our basis for the Scope of Work developed for Phase 1 above:

- Alternatives development will be based on the desktop study of the material gathered from the City/State and B&V's site visit.
- Figures, layouts, pipeline alignment and profiles will be developed at conceptual level for the purposes of this study.
- Work assumes that existing records related to the site topography and geologic conditions are available and will be provided by the City/State. If site topography is not available, then USGS maps will be used as the basis for conceptual pipeline alignments. Detailed survey,





DRAFT SCOPE OF WORK

MARLETTE/HOBART WATER SYSTEM IMPROVEMENTS - QUILL WTP SUPPLY PIPELINE

topographic mapping, geotech investigations and field investigations will be performed during Phase 2 .

- Environmental assessment and permitting support is not included. The report will identify environmental and permitting issues associated with each alternative.



**Carson City and State of Nevada
Marlette/Hobart Water System Improvements - Quill WTP Supply Pipeline
Appendix B - Project Budget**

Project Element & Task Descriptions	Labor Hours	Labor Cost	Expenses	Total Cost
PROJECT DESIGN				
TASK 1 - PROJECT MANAGEMENT AND COORDINATION	610	\$108,500	\$5,500	\$114,000
Subtask 1.1 – Project Administration	48	\$9,600	\$0	\$9,600
Subtask 1.2 – Project Management Work Plan	8	\$1,100	\$0	\$1,100
Subtask 1.3 – Quality Assurance and Control	92	\$18,800	\$0	\$18,800
Subtask 1.4 – Collection of Background Information	80	\$13,400	\$500	\$13,900
Subtask 1.5 – Kick-Off Meeting/Workshop	64	\$11,700	\$1,000	\$12,700
Subtask 1.6 – Project Progress Meetings (3 meetings)	166	\$30,000	\$4,000	\$34,000
Subtask 1.7 – Project Coordination	84	\$14,200	\$0	\$14,200
Subtask 1.8 – Project Administrative Record	68	\$9,700	\$0	\$9,700
TASK 2 - MARLETTE VALVE AND TANKS METERHOUSE IMPROVEMENT (Fee Included as an allowance)	0	\$0	\$15,000	\$15,000
Subtask 2.1 Information Gathering and Field Investigation	0	\$0	\$5,000	\$5,000
Subtask 2.2 Evaluation	0	\$0	\$10,000	\$10,000
TASK 3 – ALTERNATIVES EVALUATION	2092	\$326,600	\$9,900	\$336,500
Subtask 3.1 – Site Visit	48	\$8,800	\$2,000	\$10,800
Subtask 3.2 – Pipeline Improvements Alternatives				
3.2.1 Yield Analysis	162	\$27,700	\$200	\$27,900
3.2.2 Corelation between Snow Pack and Marlette Spills	104	\$15,400	\$200	\$15,600
3.2.2 Pipeline Alternatives	282	\$46,300	\$0	\$46,300
3.2.3 Hydraulic Analysis	208	\$31,800	\$0	\$31,800
Subtask 3.3 – Hydroelectric Feasibility	248	\$37,600	\$1,000	\$38,600
Subtask 3.4 – Storage Improvements				
3.4.1 Storage Analysis	144	\$22,700	\$2,000	\$24,700
3.4.2 Storage Facilities Description	56	\$9,000	\$0	\$9,000
Subtask 3.5 – Lakeview and Timberline Area Improvements	168	\$25,000	\$500	\$25,500
Subtask 3.6 - Cost and benefits Assessment	84	\$13,700	\$0	\$13,700
Subtask 3.7 – Preliminary Alternatives Evaluation Report				
Prepare Draft Preliminary Alternatives Report	320	\$46,700	\$1,000	\$47,700
Draft Report Review Workshop	52	\$8,800	\$1,000	\$9,800
Final Report Submittal	216	\$33,100	\$2,000	\$35,100
Sub-total	2702	\$435,100	\$30,400	\$465,500
Fee Reduction				\$66,000
TOTAL FEE				\$399,500