

PROFESSIONAL ENGINEERING SERVICES CONTRACT



Water Facilities Planning and Jackson Springs Water Treatment Facility Reconstruction

City of Rapid City Project No. W04-1425/CIP 50570



Consultant: Burns & McDonnell Engineering Co., Inc.

PROFESSIONAL ENGINEERING SERVICES CONTRACT

October 18, 2005

Project: Water Facilities Planning and Jackson Springs Water Treatment Facility Reconstruction
City of Rapid City Project No. W04-1447/CIP 50570

Owner Information:

City of Rapid City
300 Sixth Street
Rapid City, South Dakota 57701-2724

Contact: Mr. Stacey Titus, P.E.
Phone: (605) 394-4154
Fax: (605) 394-6636

Consultant:

Burns & McDonnell Engineering Co., Inc.
9785 Maroon Circle, Suite 400
Centennial, Colorado 80112

Contact: Mr. Paul Fischer, P.E.
Phone: (303) 721-9292
Fax: (303) 721-0563

SCOPE OF SERVICES

General

Burns & McDonnell Engineering Company, Inc., (hereinafter ENGINEER) was selected by the City of Rapid City, South Dakota (hereinafter OWNER) to complete the Water Facilities Planning and Jackson Springs Water Treatment Facility Reconstruction project. After the consultant selection process, the professional services described in the "Request for Interviews" (Mr. Stacey Titus, August 8, 2005) were further refined by the OWNER. The Project shall be separated into the following major phases:

- **Phase 1A** – Existing Jackson Springs Infiltration Gallery Customer Water Supply Evaluation and evaluate the redundancy of backwash system at the existing Surface Water Treatment Plant.
- **Phase 1B** – Source Water Evaluation for Madison Wells, Infiltration Galleries, and Surface Water Source; and Facility Plans for Madison Wells, Girl Scout Infiltration Gallery, Meadowbrook Infiltration Gallery, Jackson Springs Infiltration Gallery and the existing Surface Water Treatment Plant.
- **Phase 1C** – Design, Bidding, and Construction Phase Services for the recommended Phase 1A alternative. (*Scope and Engineering Fee to be negotiated when the evaluation is completed*)
- **Phase 2** – Design, Bidding, and Construction Phase Services for recommended alternative. This will likely be the proposed Jackson Springs Water Treatment Facility. (*Scope and Engineering Fee to be negotiated when the alternative evaluation is completed*)

As such, the Scope of Services described herein is to be provided by ENGINEER for the OWNER.

Phase 1A – Existing Jackson Springs Infiltration Gallery Customer Water Supply Evaluation

1. In anticipation of a February 10, 2006, Jackson Springs Infiltration Gallery shutdown, the OWNER has requested an evaluation of how customers connected to the existing Jackson Springs Infiltration

Gallery finished water transmission line will continue to receive service. The alternatives that will be evaluated include:

- a. Utilize the Cleghorn Springs Fish Hatchery spring as a water source in lieu of the Jackson Springs Infiltration Gallery. Evaluate pumping options to convey water to the Jackson Springs Pump Station and treatment options for supersaturation of nitrogen gas. The Jackson Springs Pump Station would remain in service but would utilize the Cleghorn Springs Fish Hatchery spring as a water source in lieu of the Jackson Springs Infiltration Gallery.
 - b. Utilize the city's Cleghorn Springs Water Supply that was recently acquired from the Cleghorn Water Supply District. Evaluate pumping options to convey water to the Jackson Springs Pump Station. The Jackson Springs Pump Station would remain in service but would utilize the City's Cleghorn Springs Water Supply as a water source in lieu of the Jackson Springs Infiltration Gallery.
 - c. Pursue a short-term waiver from SDDENR to accommodate the current project schedule for the evaluation. The Jackson Springs Pump Station would remain in service and continue to use the Jackson Springs Infiltration Gallery as a water source. Note that the pumping rate may be decreased to 1400 gpm.
 - d. Evaluate the Criteria for Filtration Avoidance with ultraviolet disinfection or a package treatment plant as allowed by the Surface Water Treatment Rule. If filtration avoidance is granted, the Jackson Springs Pump Station would remain in service and continue to use the Jackson Springs Infiltration Gallery as a water source. Note that the pumping rate may be decreased to 1400 gpm.
 - e. If the Jackson Springs Infiltration Gallery is shut down, evaluate extending a water main to Cleghorn Canyon to provide water service to these customers and reconnecting customer's water service lines from the Jackson Springs Water transmission main to a Canyon Lake High Level water main.
 - f. If the Jackson Spring Infiltration Gallery is shut down, reconfigure distribution system by using Well No. 1 and Well No. 4 and isolating valve near Soo San Pump Station. Also evaluate connecting Pinedale Pump Station and possibly Cedar Hills Pump Station suction into Canyon Lake High Level Zone. Evaluation shall address stagnant water and pump station recirculation/cavitation concerns.
 - g. A combination of (e) and (f). Extend the water main to Cleghorn Canyon and make operational changes.
 - h. Prepare a Letter Report.
2. Conduct the following tasks related to the Surface Water Treatment Plant
 - a. Evaluate measures to provide redundancy in the backwash pumping system at the existing Surface Water Treatment Plant and prepare a Letter Report.

- b. Prepare a Technical Specification (no front end documents required) for procuring Nalco 8157 for the existing surface water treatment plant.
3. Initial/Status Meetings and Site Visits
- a. Project Kick-Off Meeting – The ENGINEER will conduct a project kick-off meeting at the OWNER’s facilities to include the following agenda items:
 - i. Review goals and objectives
 - ii. Identify key project issues/OWNER concerns
 - iii. Review project schedule/budget
 - iv. Discuss project team and roles (including subconsultants)
 - v. Outline communication protocol
 - b. Monthly Status Meetings – A maximum of two monthly status meetings will be held between the OWNER and ENGINEER. When possible, these meetings will be in person if meetings can be coordinated with other work or the Utility System Master Plan Project. Otherwise these meetings will be held by teleconference. The ENGINEER will provide a status report at each meeting and prepare meeting minutes for distribution to the Project Team.

Phase 1B – Source Water Evaluation for Madison Wells, Infiltration Galleries, and Surface Water Source; and Facility Plans for Madison Wells, Girl Scout Infiltration Gallery, Meadowbrook Infiltration Gallery, Jackson Springs Infiltration Gallery, and the existing Surface Water Treatment Plant.

Phase 1B shall consist of an evaluation of the City’s existing water sources including the Madison wells, infiltration galleries (Girl Scout, Meadowbrook, and Jackson Springs) and surface water source (i.e., Rapid Creek). The ENGINEER shall compile a summary of source water alternatives consisting of water quantity and quality parameters. The evaluation shall also include a regulatory review of each of the sources to assist in determining to what extent the OWNER should rely on these existing water sources. The intent is to determine how the existing Madison wells, infiltration galleries, and surface water should be utilized as primary, secondary, etc. sources. It is intended that the Utility System Master Plan, being completed under separate contract, will provide recommendations pertaining to the continuing use of the water sources and potential new sources.

Phase 1B shall also include the development of Facility Plans for the OWNER’s existing water supply facilities including the wells (primarily Madison), Girl Scout Infiltration Gallery, Meadowbrook Infiltration Gallery, Jackson Springs Infiltration Gallery, and the existing Surface Water Treatment Plant. Note that the Facility Plan for the Jackson Springs Infiltration Gallery/Water Treatment Facility and the existing Surface Water Treatment Plant will be finalized in Phase 2. The Facility Plans are intended to address the physical condition and mechanical components of each facility. Evaluations of the facilities are envisioned to consist of physical, mechanical, process, structural, architectural, electrical, and controls.

Phase 1B shall consist of the following components:

1. Review and collate background information regarding water quality, quantity, and current and future regulatory concerns as it pertains to each facility for the source water assessment. The ENGINEER will assist the City in collecting information that is determined to be relevant by the project team.

Information collected under this task will include water quality data, water production information, and identification of large water demands. This data will be provided to the Utility Master Planning Project Team for utilization in the overall master plan.

2. Evaluate the City's water supply sources to determine to what extent the OWNER should utilize surface water, infiltration galleries, and Madison wells. The evaluation shall include water quantity and quality, system demands, and facility capacity, with an emphasis on current and future regulations. The evaluation for the Jackson Springs Infiltration Gallery shall consider the following:
 - a. Constructing a new water treatment facility at the existing site of Jackson Springs facilities. This will include a preliminary evaluation of floodplain issues by review of existing documentation. The evaluation will include potential regulatory requirements, technical requirements, and variance requirements.
 - b. Constructing a new water treatment facility at other locations. Other locations may include Canyon Lake, Meadowbrook, Girl Scouts, or areas adjacent to Jackson Springs and others. It is anticipated that between 3-6 sites will be evaluated. This will include a general review of the site to determine potential impacts on the floodplain/floodway. This will include a preliminary evaluation of floodplain issues by review of existing documentation. The evaluation will include potential regulatory requirements, technical requirements, and variance requirements.
 - c. Converting the existing Jackson Springs water transmission main into a raw water transmission main and treating the Jackson Springs water at the existing Surface Water Treatment Plant.
 - d. Transferring the Jackson Springs Water into Rapid Creek and conveying the water via Rapid Creek to the existing surface WTP for treatment.
 - e. If additional treatment is required at the Girl Scouts and Meadowbrook Infiltration Galleries, determine how the treatment will be incorporated into the City's treatment system. This evaluation will include the alternative of combining Jackson Springs, Meadowbrook, and Girl Scouts sources at one plant, treating Girl Scouts and Meadowbrook separately, or transferring these sources to the existing plant.
 - f. Incorporation of the Cleghorn Springs Water Users Association water source with the Jackson Springs water source.
 - g. Utilization of the Fish Hatchery Spring water source by the City, and allowing the fish hatchery to utilize the Jackson Springs source (i.e. source water swap).
 - h. Developing a combined water source complex with the fish hatchery. (i.e. combining the fish hatchery water source, the Cleghorn Springs Water Users Association water source, and the Jackson Springs water source as a single complex and allow the fish hatchery to use raw water for their facility.)
 - i. Provide a regulatory evaluation of existing and proposed potential compliance and regulatory issues for each existing source, and consider long-term disinfectant contact time for each feasible alternative.
 - j. Prepare a Letter Report.
3. Prepare a Facility Plan for the OWNER's existing water sources, including the existing Surface Water Treatment Plant, the existing Madison wells and well houses, the Girl Scout Infiltration

Gallery, the Meadowbrook Infiltration Gallery, and the Jackson Springs Infiltration Gallery. The Jackson Springs Infiltration Gallery and the existing Surface WTP shall be evaluated as it relates to source water utilization and physical condition in Phase 1B but the actual Facility Plan shall be finalized in Phase 2. Facility Planning services shall include the following:

- a. Analyze facility architectural, structural, process, mechanical, electrical, and control components at each facility. This task will include a one week site visit by the ENGINEER for facility evaluations. An OWNER's representative will accompany the team throughout the evaluations to provide access, make operational changes if necessary for evaluation, and assist in facility evaluations by identifying and providing operational and historical information in a timely manner. In addition, the ENGINEER will meet with the OWNER's Project Manager each morning to review work conducted the previous day, and review the daily activities that are planned. In advance of the evaluation trip, the project team will collect and review existing information identified by the City to include as-built drawings and other relevant documentation. Each facility evaluation will include general observations regarding facility limitations, space utilization, security, and storage availability.
- b. Evaluate pump performance, well drawdown, capacity, chemical feed, and motors at well sites and infiltration galleries. Pumps will be evaluated to determine if each pump is operating in the range of the original design. The ENGINEER will provide recommendations for replacements and/or upgrades (including the addition of VFD's if necessary). The City will provide current and historical drawdown and pump data, therefore no field tests are anticipated.
- c. Provide a general review of equipment condition based upon discussion with OWNER's operators to identify equipment problems. This will include a general discussion of current and future availability of replacement parts for electrical, mechanical, and control components. This is intended to be a general review based on observations made during the site visit. This task does not include in-depth equipment investigations or equipment testing, and is intended to be a general commentary on the facilities major components based on observations.
- d. Identify critical system components and evaluate redundancy options. In addition, identify critical facilities for the overall system. (i.e. Determine which well houses are the most critical, and determine which components are critical in each facility).
- e. Conduct a general review for compliance with codes (IBC, IFB), Ten State Standards, and SDDENR regulatory guidelines.
- f. Identify facilities that are located in the floodway or floodplain and potential resulting limitations.
- g. Evaluate adequacy of standby power. Where necessary, this will include identification of which facilities can use portable or permanent generators for backup, and recommendations for the addition of transfer switches for use with portable or permanent generators.
- h. Review existing operation and maintenance parameters for each facility including physical, mechanical, and chemical components and review staffing. The existing Surface WTP review will be completed in Phase 2. Evaluate what staff is doing currently and what they should be doing additionally or tasks that may not be needed or may be reduced. The evaluation and recommendations will be included in the Facility Plan.
- i. Develop a general AutoCAD line drawing of the electrical and control systems for each well and infiltration gallery (Girl Scout and Meadowbrook only) as well as a P&ID for each. The one-

line diagram and P&ID for the Jackson Springs Infiltration Gallery and the existing Surface Water Treatment Plant will be developed in Phase 2. It is assumed that as-built drawings exist for each facility and will be made available for the ENGINEER's use.

- j. Provide recommendations for facility renovations including timelines and probable costs. These recommendations pertain to the facility as it currently exists (physical recommendations) and are not intended to address recommended water quantity and capacity improvements that may be recommended under the OWNER's Utility System Master Plan Project. Provide recommendations to the OWNER's Utility System Master Plan Project for inclusion into the Capital Improvements Program (CIP). Prepare a presentation to summarize recommendations.
 - k. Review the City's Vulnerability Analysis and protection recommendations for each facility and provide general recommendations for physical security measures (fencing, hatch's, etc.)
 - l. Prepare a Facility Plan Report summarizing the evaluation and recommendations.
4. Demonstrate facility recommendations and needs to council members and other stakeholders as may be identified. Assume a maximum of two City Council meetings.
5. Meetings and Site Visits
- a. Monthly Status Meetings – A maximum of four status meetings will be held between the OWNER and ENGINEER. When possible, these meetings will be in person if meetings can be coordinated with other work or the Utility System Master Plan Project. Otherwise these meetings will be held by teleconference. The ENGINEER will provide a status report at each meeting and prepare meeting minutes for distribution to the Project Team.
 - b. Facility Evaluations – The ENGINEER will conduct a site visit for facility evaluations as outlined in the scope of services for a one week (5 day) period.
 - c. Council Meetings – Attend two council meetings as outlined above in Item 4.

Phase 1C (Scope of Services and Engineering Fee/Rate Schedule to be negotiated) – Phase 1C will include the Design, Bidding, and Construction Phase Services for the recommended Phase 1A alternatives.

Phase 2 (Scope of Services and Engineering Fee/Rate Schedule to be negotiated) – The Phase 2 activities will begin prior to Phase 1 activities being completed. The OWNER and ENGINEER will finalize the Phase 2 scope of work, deliverables, and schedule based upon partial Phase 1 activities. Phase 2 will finalize the Facility Plan for Jackson Springs Water Treatment Facility and existing Surface Water Treatment Plant. Phase 2 will also include the Design, Bidding, and Construction Phase Services for the Recommended Jackson Spring Water Treatment Facility Improvements or improvements to the existing Spring Surface Water Treatment Plant in the event Jackson Springs water is diverted, as appropriate.

RESPONSIBILITIES OF OWNER

The OWNER shall provide the following:

Assistance by placing at ENGINEER's disposal all available information pertinent to the assignment including each facility As-Built drawings and specifications, water quantity information, water quality information, equipment information, O&M Manuals, well drilling logs, well pumping levels, pump curves, utility billing, water use data, previous master plans, and physical data on treatment facilities, tanks and pump stations that are required and requested by ENGINEER. ENGINEER shall rely on information made available by the OWNER as accurate without independent verification.

DELIVERABLES

The OWNER shall be provided deliverables as outlined below. With the exception of the Preliminary Findings Reports, each document shall be submitted to the OWNER at the 90% complete stage for review and comment. Review comments shall then be incorporated, as appropriate, into a Final document. Any draft copies for review by the OWNER will be provided in electronic (.pdf) format and three hard copies. One final electronic copy (.pdf on CD) and twenty final hard copies shall be provided.

Phase 1A

- Preliminary Findings Report providing a brief bulleted summary of findings for each alternative. This is anticipated to be a 1-2 page document.
- Letter Report summarizing the Jackson Springs Infiltration Gallery Customer Water Supply Evaluation
- Technical Specification for Nalco 8157 for use at the Surface Water Treatment Plant.
- Letter Report for evaluation of backwash pumping system at the existing Surface Water Treatment Plant.

Phase 1B

- Preliminary Findings Report providing a brief bulleted summary of findings for each facility. This is anticipated to be a 1-2 page document.
- Letter report summarizing the Source Water Assessment and recommended improvements.
- Facility Plan Report for the Madison Wells, Girl Scout Infiltration Gallery, and Meadowbrook Infiltration Gallery. (Note that the Facility Plan for the Jackson Springs Infiltration Gallery/Water Treatment Facility and the existing Surface Water Treatment Plant will be finalized in Phase 2, including the one-line and P&ID drawings identified in task 3i.).

Phase 1C (Scope of Services and Engineering Fee/Rate Schedule to be negotiated at a later date.)

- Construction Documents as required for improvements identified in evaluation conducted in Phase 1A.

Phase 2 (Scope of Services and Engineering Fee/Rate Schedule to be negotiated at a later date.)

- Construction Documents of recommended Phase 1B improvements
- Final Facility Plans for Jackson Springs Infiltration Gallery and the existing Surface Water Treatment Plant including the one-line and P&ID drawings identified in task 3i.).
- Updated Process Flow Schematic of the existing Surface Water Treatment Plant to include all modifications to the original schematic from 1968 (ex. Bar screen, corrections to chemical addition points, etc.) This task is dependent on the recommendations developed under Phase 1.

Reuse of Documents: All documents including Contract Drawings and Specifications prepared or furnished by ENGINEER (and ENGINEER'S independent professional associates and consultants) pursuant to this Agreement are instruments of service in respect of the Project, and ENGINEER shall have the ownership and property interest therein whether or not the Project is completed. OWNER may make and retain copies for information and reference in connection with the use and occupancy of the Project by OWNER and others; however, such documents are not intended or represented to be suitable for reuse by OWNER or others on extensions of the Project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER'S sole risk and without liability or legal exposure to ENGINEER, or to ENGINEER'S independent professional associates or consultants, and OWNER shall indemnify and hold harmless ENGINEER and ENGINEER'S independent professional associates and consultants from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting therefrom. Any such verification or adaptation will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

Electronic Media: Any electronic media (computer disks, tapes, and similar items) furnished with respect to ENGINEER'S services are for OWNER'S information and convenience only. Such media are not to be considered part of ENGINEER'S instruments of service. (Due to the potential that information contained in electronic media can be modified by OWNER or others, ENGINEER, at its option, may remove all indicia of ENGINEER'S ownership and involvement from each electronic display.) ENGINEER shall not be liable for loss or damage directly or indirectly, arising out of use of electronic media including, but not limited to, any loss of business or incidental or consequential damage. OWNER shall assume all risk and release, indemnify, and hold harmless ENGINEER, its officers, directors, employees, servants, agents, successors, and assigns, from and against each and every claim or cause of action that OWNER or others may have or which may arise in the future respecting use of the electronic media.

TIME OF SERVICE

ENGINEER will proceed with providing the services set forth herein immediately upon execution of this Agreement. The Phase 1A and 1B services will be completed within 300 calendar days of the Notice to Proceed. The Preliminary Findings Report for Phase 1A, Task 1 (*Evaluation of the continuing service to Jackson Springs customers in the event of the Jackson Springs Infiltration Gallery shutdown*) will be submitted to the Owner by December 30, 2005.

COST REIMBURSIBLE NOT TO EXCEED

A. Amount of Payment:

1. For services performed, OWNER shall pay ENGINEER the sum of amounts determined as follows:
 - a. For time spent by personnel, payment at the hourly rates indicated on **Exhibit A**. Such rates include overhead and profit and are effective through Phase 1A and 1B of this project.
 - b. For expenses incurred by ENGINEER, such as authorized travel and subsistence including airfare, food, lodging, automobile rental, commercial services, and incidental expenses, the cost to ENGINEER.
 - c. For reproduction, printing, long-distance telephone calls, facsimile transmissions, company vehicle usage, testing apparatus, computer services and computer-assisted drafting (CAD), amounts will be charged according to the ENGINEER's standard rates as identified in **Exhibit B**. Engineer's Standard rates are updated annually on the first day of each calendar year.
 - d. For professional services rendered by others as subcontractor(s) to ENGINEER will be billed at the cost to ENGINEER plus 10 percent.
2. Total payment for the Scope of Services described herein shall not exceed Four Hundred Eighty-Seven Thousand Two-Hundred Twenty dollars (\$487,220) without written approval of OWNER. **Exhibit C** presents a detailed Professional Engineering Services Fee Estimate.
3. ENGINEER shall not begin work on any phase of the project without written authorization by the OWNER.

TERMS AND CONDITIONS

The attached Terms and Conditions for Professional Services is incorporated and made a part of this Agreement.

BURNS & MCDONNELL ENGINEERING CO.

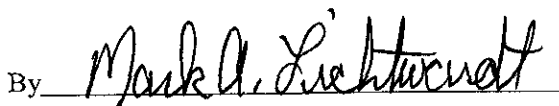
ACCEPTED:

By 

Title Vice President

Date Oct. 24, 2005

ATTEST:

By 

Title Associate

Date Oct. 24, 2005

CITY OF RAPID CITY

ACCEPTED:

By _____

Title Mayor

Date _____

ATTEST:

By _____

Title Finance Officer

Date _____


REVIEWED BY:

By _____

Title Project Manager

Date _____

APPROVED AS TO FORM
CITY ATTORNEY'S OFFICE

 10-25-05
Attorney Date

CONFIDENTIAL**EXHIBIT A: SCHEDULE OF HOURLY PROFESSIONAL SERVICE BILLING RATES**

Position Classification	Classification level	Hourly Billing Rate
General Office*	5	\$51.00
Technician*	6	\$53.00
Assistant'	7	\$61.00
	8	\$82.00
	9	\$90.00
Staff*	10	\$100.00
	11	\$109.00
Senior	12	\$118.00
	13	\$128.00
Associate	14	\$142.00
	15	\$147.00
Principal	16	\$156.00
	17	\$162.00

Notes:

1. Position classifications listed above refer to the firm's internal classification system for employee compensation. For example, "Associate", "Senior", etc., refer to such positions as "Associate Engineer", "Senior Architect", etc.
2. The hourly rates shown above are effective for services in Phase 1A and 1B, and are subject to revision thereafter.
3. For outside expenses incurred by Burns & McDonnell, other than authorized travel expenses and subsistence, and for services rendered by others such as subcontractors, the client shall pay the cost to Burns & McDonnell plus 10%.
4. Monthly invoices will be submitted for payment covering services and expenses during the preceding month. Invoices are due upon receipt.

CONFIDENTIAL

EXHIBIT B - SCHEDULE OF REIMBURSABLE EXPENSES

Schedule of Reimbursable Expenses		
Description	Unit Cost	
Personal Mileage:	\$0.485	
Reproduction/Printing:	8.5"x 11" Copies White	\$0.09/sheet
	24" x 34" Drawings White Bond	\$0.48/sheet
	24" x 34" Drawings Mylar	\$9.90/sheet
	8.5"x 11" Copies Color	\$1.00/sheet
Long Distance Telephone:	Cost + 10%	
Postage:	Cost + 10%	
Courier:	2 hour	\$22
	1 hour	\$35
Travel Expenses:		
Airfare:	Cost	
Lodging:	Cost	
Meals:	Cost	
Rental Car:	Cost	
Vehicle Expense:		
Sedan (4-door)	\$58/day + \$0.27/mile	
Van	\$65/day + \$0.32/mile	
Van (12-15 passenger)	\$107/day + \$0.33/mile	
SUV - 4WD	\$65/day + \$0.34/mile	

Total of billable hours plus reimbursable expenses shall not exceed the maximum Cost Reimbursable Not to Exceed Amount allowed under the contract, without a written amendment executed by the parties.

EXHIBIT C
PROFESSIONAL ENGINEERING SERVICES FEE AND PERSONNEL EFFORT ESTIMATE
CITY OF RAPID CITY, SOUTH DAKOTA
WATER FACILITIES PLANNING AND JACKSON SPRINGS WATER TREATMENT FACILITY RECONSTRUCTION

ACTIVITY NAME	Principal/Asst Project Mgrs		Engineering Staff		Admin/CADD		Ferber Engineering		Total Labor		Direct Expenses	Subtotals
	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Cost	Costs
Phase 1A - Existing Jackson Springs Infiltration Gallery, Customer Water Supply and Surface Water Treatment Plant Filter Backwash System Evaluations	194	\$ 28,444	196	\$ 24,872	66	\$ 4,719	140	\$ 13,882	596	\$ 71,917	\$ 7,192	\$ 79,109
1. Evaluation of the continuing service to Jackson Springs customers in the event of the Jackson Springs Infiltration Gallery shutdown.												
a Use of Cleghorn Springs Fish Hatchery spring as an alternative water source	14	\$ 2,016	14	\$ 1,760	4	\$ 286	20	\$ 2,002	52	\$ 6,064	\$ 606	\$ 6,670
b Utilize the City's Cleghorn Springs Water Supply that was recently acquired	14	\$ 2,016	14	\$ 1,760	4	\$ 286	20	\$ 2,002	52	\$ 6,064	\$ 606	\$ 6,670
c Short-term waiver from SDDENR to continue use of Jackson Springs Infiltration Gallery	16	\$ 2,328	16	\$ 2,044	4	\$ 286	-	\$ -	36	\$ 4,658	\$ 466	\$ 5,124
d Evaluate Criteria for Filtration Avoidance to continue use of Jackson Springs Infiltration Gallery	12	\$ 1,760	18	\$ 2,252	4	\$ 286	-	\$ -	34	\$ 4,298	\$ 430	\$ 4,728
e Evaluate Jackson Blvd water main extension	10	\$ 1,448	10	\$ 1,268	8	\$ 572	28	\$ 2,750	56	\$ 6,038	\$ 604	\$ 6,642
f Reconfigure distribution system and connect Pinedale Pump Station and Cedar Hills Pump Station suction into Canyon Lake High Level 1 Zone	18	\$ 2,328	18	\$ 2,252	8	\$ 572	20	\$ 1,958	62	\$ 7,110	\$ 711	\$ 7,821
g Combination of (e) and (f)	12	\$ 1,760	14	\$ 1,760	8	\$ 572	20	\$ 1,958	54	\$ 6,050	\$ 605	\$ 6,655
h Prepare letter Report	20	\$ 2,952	18	\$ 2,252	12	\$ 858	12	\$ 1,166	62	\$ 7,228	\$ 723	\$ 7,951
2. Related Surface WTP evaluations												
a Evaluation of redundancy of the filter backwash pumping system at the existing Surface WTP and prepare letter report	24	\$ 3,520	34	\$ 4,452	8	\$ 572	-	\$ -	66	\$ 8,544	\$ 854	\$ 9,398
b Prepare Technical Specifications for procuring NALCO 8157 for the Surface WTP	8	\$ 1,164	16	\$ 1,968		\$ 0	-	\$ -	24	\$ 3,132	\$ 313	\$ 3,445
3. Initial and Status Meetings and Site Visits.												
a Project Kick-Off Meeting	16	\$ 2,384	16	\$ 2,120	2	\$ 143	8	\$ 792	42	\$ 5,439	\$ 544	\$ 5,983
b Monthly Status Meetings	32	\$ 4,768	8	\$ 984	4	\$ 286	12	\$ 1,254	56	\$ 7,292	\$ 729	\$ 8,021
Phase 1B - Source Water Evaluation for Madison Wells, Infiltration Galleries, and Surface Water Source, and Facility Plans for Madison Wells, Girl Scout, Meadowbrook, and Jackson Springs Infiltration Galleries, and the existing Surface WTP.	731	\$ 107,694	1,484	\$ 187,362	344	\$ 24,598	376	\$ 35,688	2935	\$ 355,338	\$ 35,534	\$ 390,871
1. Review and collate background information regarding water quality, quantity, and regulatory concerns as it pertains to each facility for the source water assessment.												
2 Evaluate City's water supply sources to determine extent of City's use of surface water, infiltration galleries, and Madison wells.	48	\$ 7,040	52	\$ 6,624	12	\$ 858	32	\$ 3,168	144	\$ 17,690	\$ 1,769	\$ 19,459
a Construct a new WTP at existing Jackson Springs site including floodplain evaluation	40	\$ 5,904	62	\$ 7,764	12	\$ 858	32	\$ 3,080	146	\$ 17,606	\$ 1,761	\$ 19,367
b Construct a new WTP at another location including floodplain evaluations (anticipated 3-6 sites to be evaluated)	48	\$ 7,152	80	\$ 10,336	16	\$ 1,144	32	\$ 3,080	176	\$ 21,712	\$ 2,171	\$ 23,883
c Convert existing Jackson Springs water transmission main into a raw water transmission main and treating the water at existing Surface WTP	18	\$ 2,640	16	\$ 2,044	8	\$ 572	10	\$ 1,023	52	\$ 6,279	\$ 628	\$ 6,907
d Transfer Jackson Springs water into Rapid Creek and conveying to existing WTP for treatment	16	\$ 2,356	16	\$ 2,044	8	\$ 572	8	\$ 770	48	\$ 5,742	\$ 574	\$ 6,316
e Incorporate Girl Scouts and Meadowbrook Infiltration Galleries	28	\$ 4,144	26	\$ 3,236	8	\$ 572	6	\$ 583	68	\$ 8,535	\$ 854	\$ 9,389
f Incorporate Cleghorn Springs Water Users Association water source	6	\$ 880	6	\$ 776	8	\$ 572	12	\$ 1,210	32	\$ 3,438	\$ 344	\$ 3,782
g Utilize Fish Hatchery Spring water source as a water swap	14	\$ 2,072	8	\$ 1,080	4	\$ 286	12	\$ 1,166	38	\$ 4,584	\$ 458	\$ 5,042
h Utilize Fish Hatchery Spring water source as a combined source	14	\$ 2,072	8	\$ 1,060	4	\$ 286	12	\$ 1,166	38	\$ 4,584	\$ 458	\$ 5,042
i Provide Regulatory evaluation	36	\$ 5,280	48	\$ 6,056	12	\$ 858	-	\$ -	96	\$ 12,194	\$ 1,219	\$ 13,413
j Prepare a Letter Report	32	\$ 4,712	56	\$ 6,940	20	\$ 1,430	20	\$ 1,914	128	\$ 14,996	\$ 1,500	\$ 16,496
3 Prepare Facility Plan for the City's existing water sources.												

EXHIBIT C
PROFESSIONAL ENGINEERING SERVICES FEE AND PERSONNEL EFFORT ESTIMATE
CITY OF RAPID CITY, SOUTH DAKOTA
WATER FACILITIES PLANNING AND JACKSON SPRINGS WATER TREATMENT FACILITY RECONSTRUCTION

ACTIVITY NAME	Principal/Asst Project Mgrs		Engineering Staff		Admin/CADD		Ferber Engineering		Total Labor		Direct Expenses	Subtotals
	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Cost	Costs
a Analyze facility architectural, structural, process, mechanical, electrical, and controls components	36	\$ 5,280	124	\$15,756	12	\$858	8	\$ 792	180	\$22,686	\$2,269	\$24,955
b Evaluate Pump performance, well drawdown, capacity, chemical feed, and motors at well sites and infiltration galleries	12	\$ 1,760	86	\$10,782	12	\$858	8	\$ 792	118	\$14,192	\$1,419	\$15,611
c General review of equipment condition	16	\$ 2,328	64	\$8,172	8	\$572	8	\$ 836	96	\$11,908	\$1,191	\$13,099
d Identify additional redundancy requirements for critical systems	18	\$ 2,840	30	\$3,792	4	\$286	-	\$ -	52	\$6,718	\$672	\$7,390
e General code review	10	\$ 1,448	98	\$12,312	4	\$286	4	\$ 418	116	\$14,464	\$1,448	\$15,912
f Identify if each facility is in the floodplain	5	\$ 724	12	\$1,402	8	\$429	36	\$ 3,498	59	\$6,053	\$605	\$6,658
g Evaluate standby power	6	\$ 880	28	\$3,776	2	\$143	-	\$ -	36	\$4,799	\$480	\$5,279
h Review existing operation and maintenance parameters for each facility including physical, mechanical, and chemical components and review staffing	28	\$ 4,032	68	\$8,868	12	\$858	20	\$ 2,002	128	\$15,560	\$1,556	\$17,116
i Develop a general AutoCAD line drawing of the electrical and control systems for each well and Girl Scout and Meadowbrook Infiltration Galleries	18	\$ 2,584	96	\$11,312	84	\$4,576	4	\$ 374	182	\$18,846	\$1,885	\$20,731
j Provide construction recommendation for renovations including timelines and probable costs	32	\$ 4,656	124	\$15,548	8	\$572	16	\$ 1,584	180	\$22,360	\$2,236	\$24,596
k Review the City's Vulnerability Analysis and protection recommendations for each facility and provide general recommendations	12	\$ 1,760	24	\$3,260	4	\$286	-	\$ -	40	\$5,306	\$531	\$5,837
l Prepare a Facility Plan	48	\$ 7,040	96	\$11,964	32	\$2,288	24	\$ 2,332	200	\$23,624	\$2,362	\$25,986
4. Meet with City Council.	32	\$ 4,768	24	\$3,180	12	\$858	16	\$ 1,584	84	\$10,390	\$1,039	\$11,429
5. Meetings and Site Visits.												
a Monthly Status Meetings	84	\$ 9,536	32	\$3,936	16	\$1,144	24	\$ 1,146	136	\$15,762	\$1,576	\$17,338
b Facility Evaluations	94	\$ 14,006	200	\$25,562	36	\$2,574	32	\$ 3,168	362	\$45,310	\$4,531	\$49,840
c Attend City Council Meetings (included in Item 4 above)	-	\$ -	0	\$0		\$0	-	\$ -	-	\$0	\$0	\$0
Phase 1C - Design, Bidding, and Construction Phase Services for the recommended Phase 1A alternatives. (To be negotiated after completion of Phase 1A)		\$ -		\$0	0	\$0	-	\$ -		\$0	\$0	\$0
Tasks TBD	-	\$ -	0	\$0		\$0	-	\$ -	-	\$0	\$0	\$0
Phase 2		\$ -		\$0	0	\$0	-	\$ -		\$0	\$0	\$0
Tasks TBD	-	\$ -	0	\$0		\$0	-	\$ -	-	\$0	\$0	\$0
Travel Expenses =											\$17,240	
TOTAL PROFESSIONAL ENGINEERING FEE												\$487,220

BURNS & MCDONNELL ENGINEERING COMPANY, INC.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

Project: FACILITY PLAN/JACKSON SPRINGS - PHASE 1A:1B Date of Letter, Proposal or Agreement: OCT. 18, 2005

Client: CITY OF RAPID CITY
 1. SCOPE OF SERVICES

For the above-referenced Project, Burns & McDonnell Engineering Company, Inc ("BMCD") will perform the services set forth in the above-referenced Letter, Proposal or Agreement, in accordance with these Terms and Conditions. BMCD has relied upon the information provided by Client in the preparation of the Proposal, and shall rely on the information provided by or through Client during the execution of this Project as complete and accurate without independent verification

2. PAYMENTS TO BMCD

A Compensation will be as stated in the above-referenced Letter, Proposal or Agreement. Statements will be in BMCD's standard format and are payable upon receipt. Time is of the essence in payment of statements, and timely payment is a material part of the consideration of this Agreement. A late payment charge will be added to all amounts not paid within 30 days of statement date and shall be calculated at 1.5 percent per month from statement date. Client shall reimburse any costs incurred by BMCD in collecting any delinquent amount, including reasonable attorney's fees if a portion of BMCD's statement is disputed, Client shall pay the undisputed portion by the due date. Client shall advise BMCD in writing of the basis for any disputed portion of any statement

B Taxes as may be imposed on professional consulting services by state or local authorities shall be in addition to the payment stated in the above-referenced Letter, Proposal or Agreement.

3. INSURANCE

A During the course of performance of its services, BMCD will maintain Worker's Compensation insurance with limits as required by statute, Employer's Liability insurance with limits of \$1,000,000 and Commercial General Liability and Automobile Liability insurance each with combined single limits of \$1,000,000

B. If the Project involves on-site construction, construction contractors shall be required to provide (or Client may provide) Owner's Protective Liability Insurance naming Client as a Named Insured and BMCD as an Additional Insured or to endorse Client and BMCD using ISO form CG 20 10 11 85 endorsement or its equivalent as Additional Insureds on all construction contractor's liability insurance policies covering claims for personal injuries and property damage in at least the amounts required of BMCD in 3 A above. Construction contractors shall be required to provide certificates evidencing such insurance to Client and BMCD. Contractor's compensation shall include the cost of such insurance including coverage for contractual and indemnification obligations herein

C Client and BMCD release each other and waive all rights of subrogation against each other and their officers, directors, agents, or employees for damage covered by property insurance during and after the completion of BMCD's services. A provision similar to this shall be incorporated into all construction contracts entered into by Client, and all construction contractors shall be required to provide waivers of subrogation in favor of Client and BMCD for damage covered by any construction contractor's property insurance.

4. INDEMNIFICATION

A To the extent allowed by law, Client will require all construction contractors to indemnify, defend and hold harmless Client and BMCD from any and all loss where loss is caused or alleged to be caused in whole or in part by the construction contractors, their employees, agents, subcontractors or suppliers

B If this Project involves construction and BMCD does not provide consulting services during construction including, but not limited to, on-site monitoring, site visits, site observation, shop drawing review and/or design clarifications, Client agrees to indemnify and hold harmless BMCD from any liability arising from this Project or Agreement, except to the extent caused by BMCD's negligence.

Client Signature: _____
5. PROFESSIONAL RESPONSIBILITY - LIMITATION OF REMEDIES

A. BMCD will exercise reasonable skill, care and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted professional practices. If BMCD fails to meet the foregoing standard, BMCD will perform at its own cost, the professional services necessary to correct errors and omissions reported to BMCD in writing within one year from the completion of BMCD's services for the Project. No warranty, express or implied, is included in this Agreement or regarding any drawing, specification, or other work product or instrument of service.

~~B. In no event will BMCD be liable for any special, indirect or consequential damages including, without limitation, damages or losses in the nature of increased Project costs, loss of revenue or profit, lost production, claims by customers of Client or for governmental fines or penalties.~~

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C. BMCD's aggregate liability for all damages connected with its services for the Project not excluded by the preceding subparagraph, whether or not covered by BMCD's insurance, will not exceed the greater of \$100,000 or the compensation paid for BMCD's services. ~~\$2,000,000.~~

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D These mutually negotiated obligations and remedies stated in this Paragraph 5, Professional Responsibility - Limitation of Remedies, are the sole and exclusive obligations of BMCD and remedies of Client, whether liability of BMCD is based on contract, warranty, strict liability, tort (including negligence), indemnity or otherwise.

6. PERIOD OF SERVICE AND SCHEDULE

The provisions of this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion of the services stated in the Proposal. BMCD's obligation to render services hereunder will extend for a period, which may reasonably be required for the completion of said services. BMCD shall make reasonable efforts to comply with deliverable schedules (if any) and consistent with BMCD's professional responsibility

7. COMPUTER PROGRAMS OR MODELS

Any use, development, modification, or integration by BMCD of computer models or programs does not constitute ownership or a license to Client to use or modify such computer models or programs.

8. ELECTRONIC MEDIA AND DATA TRANSMISSIONS

A. Any electronic media (computer disks, tapes, etc.) or data transmissions furnished (including Project Web Sites or CAD file transmissions) are for Client information and convenience only. Such media or transmissions are not to be considered part of BMCD's instruments of service. BMCD, at its option, may remove all indicia of its ownership and involvement from each electronic display.

B. BMCD shall not be liable for loss or damage directly or indirectly, arising out of Client's use of electronic media or data transmissions

9. DOCUMENTS

A. All documents prepared by BMCD pursuant to this Agreement are instruments of service in respect of the Project specified herein. They are not intended or represented to be suitable for reuse by Client or others in extensions of the Project beyond that now contemplated or on any other Project. Any reuse, extension, or completion by Client or others without written verification, adaptation, and permission by BMCD for the specific purpose intended will be at Client's sole risk and without liability or legal exposure to BMCD

B. In the event that BMCD is to reuse, copy or adapt all or portions of reports, plans or specifications prepared by others, Client represents that Client either possesses or will obtain permission and necessary rights in copyright, patents or other proprietary rights and will be responsible for any infringement claims by others. Client warrants the completeness, accuracy and efficacy of the information, data, and design provided by or through Client (including prepared for Client by others), for which BMCD shall rely on to perform and complete its services

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10. ESTIMATES, SCHEDULES, FORECASTS, AND PROJECTIONS

Estimates, schedules, forecasts, and projections prepared by BMCD relating to loads, interest rates and other financial analysis parameters, construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating results are opinions based on BMCD's experience, qualifications and judgment as a professional. Since BMCD has no control over weather, cost and availability of labor, material and equipment, cost of fuel or other utilities, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, government regulations and laws (including the interpretation thereof), competitive bidding or market conditions and other factors affecting such estimates or projections, BMCD does not guarantee that actual rates, costs, quantities, performance, schedules, etc., will not vary significantly from estimates and projections prepared by BMCD

11. POLLUTION

In view of the uncertainty involved in investigating and recommending solutions to environmental problems and the abnormal degree of risk of claims imposed upon BMCD in performing such services, notwithstanding the responsibility of BMCD set forth in Paragraph 5.A, to the maximum extent allowed by law, Client agrees to release, defend, indemnify and hold harmless BMCD and its officers, directors, employees, agents, consultants and subcontractors from all liability, claims, demands, damages, losses, and expenses, including, but not limited to, claims of Client and other persons and organizations, reasonable fees and expenses of attorneys and consultants, and court costs, except where there has been a final adjudication that the damages were caused by BMCD's willful disregard of its obligations under this Agreement. Such indemnification includes claims arising out of or in any way relating to the actual, alleged, or threatened dispersal, escape, or release of, or failure to detect or contain, chemicals, wastes, liquids, gases or any other material, irritant, contaminant or pollutant.

12. ON-SITE SERVICES

A. Project site visits by BMCD during investigation, observation, construction or equipment installation, or the furnishing of Project representatives shall not make BMCD responsible for construction means, methods, techniques, sequences or procedures; for construction safety precautions or programs; or for any construction contractor(s)' failure to perform its work in accordance with the contract documents

B Client shall disclose to BMCD the location and types of any known or suspected toxic, hazardous or chemical materials or wastes existing on or near the premises upon which work is to be performed by BMCD's employees or subcontractors. If any hazardous wastes not identified by Client are discovered after a Project is undertaken, Client and BMCD agree that the scope of services, schedule and compensation may be adjusted accordingly. Client agrees to release BMCD from all damages related to any pre-existing pollutant, contaminant, toxic, or hazardous substance at the site.

13. CHANGES

Client shall have the right to make changes within the general scope of BMCD's services, with an appropriate change in compensation and schedule, upon execution of a mutually acceptable amendment or change order signed by authorized representatives of Client and BMCD

14. TERMINATION

Services may be terminated by Client or BMCD by seven (7) days' written notice in the event of substantial failure to perform in accordance with the terms hereof by the other party through no fault of the terminating party. If so terminated, Client shall pay BMCD all amounts due BMCD for all services properly rendered and expenses incurred to the date of receipt of notice of termination, plus reasonable costs incurred by BMCD in terminating the services. In addition, Client may terminate the services for Client's convenience upon payment of twenty percent of the yet unearned and unpaid estimated, lump sum, or not-to-exceed fee, as applicable.

15. DISPUTES, NEGOTIATIONS, MEDIATION

~~A. If a dispute arises relating to the performance of the services to be provided and should that dispute result in litigation, it is agreed that the substantially prevailing party (as determined in equity by the court) shall be entitled to recover all reasonable costs of litigation, including staff time, court costs, attorney's fees and other related expenses.~~

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~~B. The parties shall participate in good faith negotiations to resolve any and all disputes. Should negotiations fail, the parties agree to submit to and participate in a third party facilitated mediation as a condition precedent to resolution by litigation. Unless otherwise agreed to, mediation shall be conducted under the rules of the American Arbitration Association.~~

C. Causes of action between the parties shall accrue, and applicable statutes of limitation shall commence to run the date BMCD's services are substantially complete.

16. WITNESS FEES

A. BMCD's employees shall not be retained as expert witnesses, except by separate written agreement

B. Client agrees to pay BMCD pursuant to BMCD's then current schedule of hourly labor billing rates for time spent by any employee of BMCD responding to any subpoena by any party in any dispute as an occurrence witness or to assemble and produce documents resulting from BMCD's services under this Agreement.

17. CONTROLLING LAW AND VENUE

This Agreement shall be subject to, interpreted and enforced according to the laws of the State of ~~Colorado~~, without regard to any conflicts of law provisions. Parties agree to submit to the exclusive venue and jurisdiction of the ~~18th Judicial District in the County of Douglas, State of Colorado, or the United States District Court for the District of Colorado.~~ **SOUTH DAKOTA, 7th JUDICIAL**

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18. RIGHTS AND BENEFITS - NO ASSIGNMENT

BMCD's services will be performed solely for the benefit of Client and not for the benefit of any other persons or entities. Neither Client nor BMCD shall assign or transfer interest in this Agreement without the written consent of the other

19. ENTIRE CONTRACT

These Terms and Conditions and the above-referenced Letter, Proposal or Agreement contain the entire agreement between BMCD and Client relative to BMCD's services for the Project herein. All previous or contemporaneous agreements, representations, promises and conditions relating to BMCD's services for the Project are superseded. Since terms contained in purchase orders do not generally apply to professional services, in the event Client issues to BMCD a purchase order, no preprinted terms thereon shall become part of this Agreement. Said purchase order documents, whether or not signed by BMCD, shall be considered only as an internal document of Client to facilitate administrative requirements of Client's operations

20. SEVERABILITY

Any unenforceable provision herein shall be amended to the extent necessary to make it enforceable, if not possible, it shall be deleted and all other provisions shall remain in full force and affect

- END -

APPROVED AS TO FORM
CITY ATTORNEY'S OFFICE

JPL
Attorney

10-25-05
Date