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**TMWRF FACILITY PLAN (RFP #18/19-007)**  
**CITY OF SPARKS, NEVADA**

THIS CONTRACT made and entered into on this 11th day of February, 2019, by and between the City of Sparks, Nevada, a municipal corporation, existing under and by virtue of the laws of the State of Nevada, hereinafter called "City", and **Brown and Caldwell**, a qualified consultant in the class of work required, hereinafter called "Consultant".

W I T N E S E T H

WHEREAS, the City desires to engage Consultant in the performance of providing Professional Services which are more fully described in Consultant's Proposal dated January 10, 2019, attached hereto and incorporated herein by reference. (Hereinafter referenced to as "Proposal");

WHEREAS, Consultant's legal status is an Independent Contractor and Consultant is in good standing in the State of Nevada;

WHEREAS, Consultant desires to perform the Program under the terms and conditions set forth herein;

NOW, THEREFORE, IT IS AGREED as follows:

**I. Scope of Work:**

The scope of work for this contract is generally defined as **TMWRF Facility Plan**. The City's Contract Documents and Consultant's Entire Proposal are on file with the City of Sparks and may be located within "Attachment A." All terms, conditions and requirements contained in these Documents, including any and all addenda issued by the City, are hereby incorporated into this Contract. The work scope will include, but not be limited to the tasks outlined in Attachment A.

The Consultant shall perform within the time stipulated, the Contract as herein defined and shall provide and furnish any and all of the labor, materials, methods or processes, equipment implements, tools, machinery and equipment, and all utility, transportation and other services required to complete all of the work covered by the Contract in connection with strict accordance with the plans, specifications or proposals, which were approved by said City and are on file with the City, including any and all addenda issued by the City, and with the other contract documents hereinafter enumerated. Consultant will have the right to control or direct the manner and the order in which it provides the services contemplated under this Agreement.

Consultant represents and warrants that Consultant is engaged in an independent calling and has complied and will continue to comply with all local, state and federal laws regarding business permits and licenses that may be required to carry out the independent calling and to perform the services to be performed under this Agreement.

Consultant understands that the services it has been retained to perform may be dangerous or may entail a peculiar unreasonable risk of harm to others unless special precautions are taken and Consultant agrees to exercise reasonable care to take such precautions.



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**2. Payment for Project Services**

As full consideration for the Professional Services to be performed by Consultant, City agrees to pay Consultant as set forth in accordance with the Fee Schedule set forth in the proposal and not to exceed fee of **\$1,240,231.00** for the project. The City will not hire or directly compensate the Consultant's employees, assistants or subcontractors, if any. It is expressly understood and agreed that all work done by Consultant shall be subject to review as to its result by the City at the City's discretion. Payment of any invoice shall not be taken to mean that the City is satisfied with Consultant's services to the date of payment and shall not forfeit City's right to require the correction of any service deficiencies.

**3. Term**

This Agreement shall become effective upon contract execution and will continue in effect until

MO/DY/YR, or

The Project is completed (Approximately April, 2020), or unless earlier terminated as provided herein.

**4. Time Devoted to Work:**

In performing the services contemplated under this Agreement, the services and the hours Consultant is to work on any given day will be on a mutually agreed upon basis, except for attendance at scheduled meetings, and City will rely upon Consultant to put in such number of hours as is reasonably necessary to fulfill the spirit and purpose of this Agreement.

City understands that Consultant is engaged in the same or similar activities for others and that City may not be Consultant's sole client or customer. However, Consultant represents and warrants that it is under no obligation or restriction, nor will it assume any such obligation or restriction, that would in any way interfere or be inconsistent with the services to be performed under this Agreement.

**5. No Unfair Employment Practices:**

In connection with the performance of work under this Agreement, Consultant agrees not to discriminate against any employee or applicant because of race, creed, color, national origin, sex, sexual orientation, disability or age. Any violation of these provisions by Consultant shall constitute a material breach of this contract.

**6. No Illegal Harassment:**

Violation of the City's harassment policy, which is incorporated by reference and available from the Human Resources Division, by the Consultant, its officers, employees, agents, consultants, subcontractors and anyone for whom it is legally liable, while performing or failing to perform Consultant's duties under this Contract shall be considered a material breach of this contract.

**7. Lawful Performance:**

Vendor shall abide by all Federal, State and Local Laws, Ordinances, Regulations, and Statutes as may be related to the performance of duties under this agreement. In addition, all applicable permits and licenses required shall be obtained by the vendor, at vendor's sole expense.

**8. Status of Consultant:**

It is the intent of the parties that Consultant shall be considered an independent contractor and that



Consultant, and anyone else for whom it is legally liable, shall not be considered employees, servants or agents of the City for any purpose. Furthermore, this Agreement shall not be construed to create a partnership or joint venture between the Consultant and the City.

Neither Consultant nor any of its employees or contractors shall be eligible to participate in City's industrial insurance, unemployment, disability, medical, dental, life or other insurance programs, or any other benefit or program that is sponsored, financed or provided by City for its employees.

Consultant agrees that it shall be Consultant's exclusive responsibility to pay all federal, state, or local payroll, social security, disability, industrial insurance, self-employment insurance, income and other taxes and assessments related to this Agreement. Neither FICA (Social Security), FUTA (Federal Employment), nor local, state or federal income taxes will be withheld from payments to Consultant. Consultant shall at Consultant's expense pay and be fully liable and responsible for, and indemnify and hold harmless City from, any assessments, fines or penalties relating to Consultant's failure to uphold any of these responsibilities.

**9. City Ownership of Proprietary Information:**

All reports, drawings, plans, specifications, and other documents prepared by Consultant as products of service under this Agreement shall be the exclusive property of the City and all such materials shall be remitted to the City by Consultant in a timely manner upon completion, termination or cancellation of this Agreement. 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 Agreement without the prior written consent of the City.

**10. Public Records:**

Consultant understands that City is subject to the provisions of NRS 239.010. As such, the City may have the duty to disclose the Consultant's reports or recommendations.

**11. Insurance:**

BIDDERS' ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF THE APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

**The City may, unless otherwise required by law, waive or reduce the insurance requirements itemized here, at the discretion of the city's Contracts and Risk Manager.**

Should work be required on City premises or within the public right-of-way, upon award of the contract, the bidder shall provide proof of insurance for the types of coverage, limits of insurance and other terms specified herein, prior to initiation of any services under City, Bid, Proposal or Contract. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks and shall meet the following minimum specifications:



Contractor shall at its own expense carry and maintain at all times the following insurance coverage and limits of insurance no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater. Contractor shall also cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified herein. All insurers must have AM Best rating not less than A-VII, and be acceptable to the City. Contractor shall furnish copies of certificates of insurance evidencing coverage for itself and for each subcontractor. Failure to maintain the required insurance may result in termination of this contract at City's option. If Contractor fails to maintain the insurance as set forth herein, City shall have the right, but not the obligation, to purchase said insurance at Contractor's expense.

Contractor shall provide proof of insurance for the lines of coverage, limits of insurance and other terms specified below prior to initiation of any services. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks. Contractor and any of its subcontractors shall carry and maintain coverage and limits no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater.

Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
Yes	General Liability/Umbrella (Excess) Liability	\$2,000,000	✓	✓	✓
Yes	Automobile Liability	\$1,000,000	✓	✓	
Yes	Workers' Compensation	Statutory	✓	N/A	✓
Yes	Employer's Liability	\$1,000,000	✓	N/A	
Yes	Professional Liability	\$1,000,000	✓	N/A	N/A
No	Pollution Legal Liability	\$1,000,000	✓	N/A	N/A

#### **Commercial General Liability**

Contractor shall carry and maintain Commercial General Liability (CGL) and, if necessary to meet required limits of insurance, commercial umbrella/excess liability insurance with a total limit of not less than the limits specified herein.

For contracts that are for the construction or improvement of public facilities, the Contractor shall obtain and maintain products and completed operations liability coverage through the statute of repose after completion of the project.

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, employment-related practices, or damage to the named insured's work unless Subcontractor carries and maintains separate policies providing such coverage and provides Contractor evidence of insurance confirming the



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coverage.

***Minimum Limits of Insurance***

**\$2,000,000** Each Occurrence Limit for bodily injury and property damage

**\$2,000,000** General Aggregate Limit

**\$2,000,000** Products and Completed Operations Aggregate Limit

**\$10,000** Medical Expense Limit

If Commercial General Liability Insurance or other form with a general aggregate limit is used, it shall be revised to apply separately to this PROJECT or LOCATION.

***Coverage Form***

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Commercial General Liability (CGL) "Occurrence" form CG 00 01 04/13 or substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

***Additional Insured***

City, its officers, agents, employees, and volunteers are to be included as insureds using the applicable ISO additional insured endorsement(s) or substitute forms providing equivalent coverage, in respects to damages and defense arising from: activities performed by or on behalf of Contractor, including the insured's general supervision of Contractor; products and completed operations of Contractor; premises owned, occupied, or used by Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.

Any failure by the Contractor to comply with reporting provisions of the policies shall not affect its obligations to the additional insureds.

***Primary and Non-Contributory***

Contractor's insurance coverage shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to City, its officers, agents, employees, and volunteers. There shall be no endorsement or modification of the CGL to make it excess over other available insurance; alternatively, if the CGL states that it is excess or pro rata, the policy shall be endorsed to be primary with respect to the additional insured. Any insurance or self-insurance maintained by City, its officers, employees, or volunteers shall be excess of Contractor's insurance and shall not contribute with it in any way.

***Separation of Insureds***

Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

***Waiver of Subrogation***

Contractor waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial



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umbrella liability insurance maintained pursuant to this agreement. Insurer shall endorse CGL policy as required to waive subrogation against the City with respect to any loss paid under the policy.

#### ***Endorsements***

A policy form or endorsement is required confirming coverage for all required additional insureds. The endorsement for CGL shall be at least as broad as the unmodified ISO additional insured endorsement CG 20 10 11/85 or substitute forms providing additional insured coverage for products and completed operations.

A waiver of subrogation in favor of City shall be endorsed to the policy using an unmodified Waiver of Transfer of Rights of Recovery of Others to Us ISO CG 24 04 05 09, or a substitute form providing equivalent coverage.

If any underground work will be performed, Contractor shall maintain electronic data liability insurance applicable to the Project and insuring against liability arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data. This coverage shall be maintained with a limit of liability of not less than \$1,000,000 and provide coverage at least as broad as electronic data liability coverage form CG 04 37 (or substitute form providing equivalent coverage).

#### **Business Automobile Liability**

##### ***Minimum Limits of Insurance***

**\$1,000,000** Combined Single Limit per accident for bodily injury and property damage or the limit customarily carried by Contractor, whichever is greater. No aggregate limit may apply. Coverage may be combined with Excess/Umbrella Liability coverage to meet the required limit.

##### ***Coverage Form***

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Business Automobile Coverage form CA 00 01 10/13, CA 00 25 10/13, CA 00 20 10/13 or substitute form providing equivalent coverage. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos).

Pollution liability coverage at least as broad as that provided under the ISO pollution liability—broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached for all contracts involving transportation of “hazardous material” as this term is defined by applicable law, including, but not limited to, waste, asbestos, fungi, bacteria and mold.

##### ***Additional Insured***

City, its officers, agents, employees, and volunteers are to be included as insureds with respect to damages and defense arising from the ownership, maintenance or use of automobiles owned, leased, hired, or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.



**Endorsements**

A policy endorsement is required listing all required additional insureds. The endorsement for Business Automobile Liability shall be at least as broad as the unmodified ISO CA 20 48 10/13 or a substitute form confirming City’s insured status for Liability Coverage under the Who Is An Insured Provision contained in Section II of the coverage form ISO CA 00 01 10/13.

**Workers’ Compensation and Employer’s Liability**

Contractor shall carry and maintain workers’ compensation and employer’s liability insurance as required by NRS 616B.627 or provide proof that compliance with the provisions of Nevada Revised Statutes Chapters 616A-D and all other related chapters is not required. It is understood and agreed that there shall be no coverage provided for Contractor or any Subcontractor of the Contractor by the City. Contractor agrees, as a precondition to the performance of any work under this Agreement and as a precondition to any obligation of the City to make any payment under this Agreement to provide City with a certificate issued by an insurer in accordance with NRS 616B.627 and with a certificate of an insurer showing coverage pursuant to NRS 617.210.

It is further understood and agreed by and between City and Contractor that Contractor shall procure, pay for and maintain the above mentioned coverage at Contractor's sole cost and expense.

Should Contractor be self-funded for workers’ compensation and employer’s liability insurance, Contractor shall so notify City in writing prior to the signing of this Contract. City reserves the right to approve said retentions, and may request additional documentation, financial or otherwise, for review prior to the signing of this Contract.

Nevada law allows the following to reject workers’ compensation coverage if they do not use employees or subcontractors in the performance of work under the contract:

- Sole proprietors (NRS 616B.627 and NRS 617.210)
- Unpaid officers of quasi-public, private or nonprofit corporations (NRS 616B.624 and NRS 617.207)
- Unpaid managers of limited liability companies (NRS 616B.624 and NRS 617.207)
- An officer or manager of a corporation or limited liability company who owns the corporation or company (NRS 616B.624 and NRS 617.207)

If a contractor has rejected workers’ compensation coverage under applicable Nevada law, the contractor must indicate the basis for the rejection of coverage and complete, sign and have notarized an Affidavit of Rejection of Coverage. The Affidavit must be completed, signed and notarized prior to performance of any work.

**Minimum Limits of Insurance**

Workers’ Compensation:	Statutory Limits
Employer’s Liability:	\$1,000,000 Bodily Injury by Accident – Each Accident
	\$1,000,000 Bodily Injury by Disease – Each Employee
	\$1,000,000 Bodily Injury by Disease – Policy Limit



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***Coverage Form***

Coverage shall be at least as broad as the unmodified National Council on Compensation Insurance (NCCI) Workers Compensation and Employer's Liability coverage form WC 00 00 07/11 or substitute form providing equivalent coverage.

**OTHER INSURANCE COVERAGES (IF APPLICABLE)**

**Professional Liability Insurance (if Applicable)** \$1,000,000 per occurrence limits of liability or whatever limit is customarily carried by the Contractor, whichever is greater, for design, design-build or any type of professional services with a minimum of three (3) years reporting of claims following completion of the project.

**Contractors Pollution Liability Insurance (If Applicable)-** \$1,000,000 per occurrence and \$2,000,000 aggregate or whatever amount is acceptable to the City for any exposure to "hazardous materials" as this term is defined in applicable law, including but not limited to waste, asbestos, fungi, bacterial or mold.

Lower tier sub-subcontractors, Truckers, Suppliers: Evidence confirming lower tier subcontractors, truckers and suppliers are maintaining valid insurance prior to beginning work on the project to meet the requirements set forth herein on Subcontractor, including but not limited to all additional insured requirements of Subcontractor.

**ALL COVERAGES**

Coverage shall not be suspended, voided, canceled, or non-renewed by either CONTRACTOR or by the insurer, reduced in coverage or in limits except after thirty (30) days' prior written notice has been given to CITY except for ten (10) days' notice for nonpayment of premium.

**OTHER INSURANCE PROVISIONS**

Should City and Contractor agree that higher coverage limits are needed warranting a project policy, project coverage shall be purchased and the premium for limits exceeding the above amount may be borne by City. City retains the option to purchase project insurance through Contractor's insurer or its own source.

Any failure to comply with reporting provisions of the policies shall not affect coverage provided to City, its officers, agents, employees, or volunteers.

**ACCEPTABILITY OF INSURERS**

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City.. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings upon review of financial information concerning Contractor and insurance carrier. City reserves the right to require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or on the Insurance Commissioner's approved but not admitted list.

**VERIFICATION OF COVERAGE**

Contractor shall furnish City with certificates of insurance and with original endorsements affecting coverage required by this contract. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.





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Prior to the start of any Work, Contractor must provide the following documents to City of Sparks, Attention: Purchasing Division, P.O. Box 857, Sparks, NV 89432-0857:

- A. **Certificate of Insurance.** Contractor must provide a Certificate of Insurance form to the City of Sparks to evidence the insurance policies and coverage required of Contractor.
  
- B. **Additional Insured Endorsements.** An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to the City of Sparks, by attachment to the Certificate of Insurance, to evidence the endorsement of the City of Sparks as additional insured.
  
- C. **Policy Cancellation Endorsement.** Except for ten (10) days' notice for non-payment of premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior written notice to the City of Sparks, the policy shall not be suspended, voided, cancelled or non-renewed, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance.
  
- D. **Bonds (as Applicable).** Bonds as required and/or defined in the original bid documents.

All certificates and endorsements are to be addressed to the City of Sparks, Purchasing Division and be received and approved by City before work commences. The City reserves the right to require complete certified copies of all required insurance policies at any time.

**SUBCONTRACTORS**

Contractor shall include all Subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each Subcontractor. All coverages for Subcontractors shall be subject to all of the requirements stated herein.

**MISCELLANEOUS CONDITIONS**

- 1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
- 2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it.
- 3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:
  - a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
  - b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance



- with the requirements hereof; or,  
c. Terminate the Agreement.

## 12. Indemnity:

To the fullest extent permitted by law, upon award, Contractor shall hold harmless and indemnify, City, its affiliates, officers, agents, employees, volunteers, successors and assigns ("Indemnified Parties"), and each of them from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorney's fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever ("Claims") to the extent that such Claims are caused by the negligence, errors, omissions, recklessness, or intentional misconduct of Contractor, its employees, agents, representatives, or Subcontractors in any way related to the performance of work under this Agreement by Contractor, or to work performed by others under the direction or supervision of Contractor, including but not limited to:

1. Personal injury, including but not limited to bodily injury, emotional injury, sickness or disease, or death to persons;
2. Damage to property of anyone, including loss of use thereof;
3. Penalties from violation of any law or regulation caused by Contractor's action or inaction;
4. Failure of Contractor to comply with the Insurance requirements established under this Agreement;
5. Any violation by Contractor of any law or regulation in any way related to the occupational safety and health of employees.

In determining the nature of the claim against City, the incident underlying the claim shall determine the nature of the claim, notwithstanding the form of the allegations against City.

In addition to Contractor's duty to hold harmless and indemnify the Indemnified Parties above, Contractor shall also defend the Indemnified Parties with respect to any Claims caused by the negligence, errors, omissions, recklessness or intentional misconduct of Contractor, its employees, agents, representatives, or Subcontractors which are not based upon or arising out of the professional services of Contractor. However, Contractor shall not be required to defend the Indemnified Parties with respect to Claims caused by the negligence, errors omissions, recklessness or intentional misconduct of Contractor, its employees, agents, representatives, or Subcontractors which are based upon or arising out of the professional services of Contractor. In such an event, if Contractor is adjudicated to be liable by a trier of fact, the trier of fact shall award reasonable attorney's fees and costs to be paid by Contractor to the Indemnified Parties, as reimbursement for the attorney's fees and costs incurred by the Indemnified Parties in defending against such Claims, in an amount which is proportionate to the liability of Contractor.

### **In cases of professional service agreements, requiring professional liability coverage:**

If the insurer by which a Consultant is insured against professional liability does not so defend the City and applicable agents and/or staff, and the Consultant is adjudicated to be liable by a trier of fact, the City shall be entitled to reasonable attorney's fees and costs to be paid to the City by the Consultant in an amount which is proportionate to the liability of the of the Consultant.



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Nothing in this contract shall be interpreted to waive nor does the City, by entering into this contract, waive any of the provisions found in Chapter 41 of the Nevada Revised Statutes.

**13. Material Breach of Contract:**

In the event Consultant fails to deliver the product and services as contracted for herein, to the satisfaction of the City of Sparks or otherwise fails to perform any provisions of this Contract, the City, after providing five (5) days written notice and consultant's failure to cure such breach, may without waiving any other remedy, make good the deficiencies and deduct the actual cost of providing alternative products and/or services from payment due the Consultant. Non-performance after the first notice of non-performance shall be considered a material breach of contract.

**14. Termination:**

The City may terminate the Contract for material breach of contract upon ten (10) days written notice and recover all damages, deducting any amount still due the Consultant from damages owed to the City, or seek other remedy including action against all bonds. The Consultant may terminate the Contract for material breach of contract upon thirty (30) days written notice to the City.

Notwithstanding the preceding paragraph, the City may immediately terminate the Agreement, and Consultant waives any and all claim(s) for damages, upon the Consultant's receipt of notice under the following conditions:

- a) If funding is not obtained, continued, or budgeted at levels sufficient to allow for purchase of the services contemplated under this Agreement per Section 23 of this Agreement;
- b) If any federal, state or local law, including but not limited to, statutes, regulations, ordinances and resolutions, is interpreted by a third party judicial, legislative or administrative authority in such a way that the services contemplated under this Agreement are no longer authorized for purchase or appropriate for City financial participation;
- c) If Consultant fails to comply with any local, state or federal law regarding business permits and licenses required to perform the services to be performed under this Agreement or
- d) If it is found that any quid pro quo or gratuities were offered or given by the Consultant to any officer or employee of the City with a view towards securing favorable treatment with respect to awarding, extending, amending or making any determination with respect to the performance of this Agreement.

The indemnity and conflict resolution obligations of this Agreement shall survive the termination of this Agreement and shall be binding upon the parties' and the parties' legal representatives, heirs, successors and assigns.

The City may terminate this agreement for any reason without penalty upon giving thirty (30) days written notice to the Consultant. In the event of termination, the full extent of City liability shall be limited to an equitable adjustment and payment for materials and/or services authorized by and received to the satisfaction of the City prior to termination.



**15. Licenses and Permits:**

The Consultant shall procure at his own expense all necessary licenses and permits and shall adhere to all the laws, regulations and ordinances applicable to the performance of this Contract.

All consultants doing business within the City of Sparks are required to obtain and maintain a current business license from the City of Sparks prior to commencement of this contract. Per Sparks Municipal Code Section 5.08.020A: "It is unlawful for any person to transact business in the City without first having obtained a license from the City to do so and without complying with all applicable provisions of this title and paying the fee therefore."

**16. Boycott of Israel (NRS 332.065) (This Section  IS  IS NOT Applicable to this bid):**

Pursuant to NRS 332.065 any Contract entered into under NRS Chapter 332 in which the estimated annual dollar amount exceeds \$50,000 will require written certification that the bidder is not, and will not be, engaged in a Boycott of Israel throughout the duration of the Contract. The term "Boycott of Israel" has the meaning ascribed in NRS 332.065(5). Bidder certifies that it is not, and will not be, engaged in a Boycott of Israel throughout the duration of the Contract.

**17. Drafting Presumption:**

The parties acknowledge that this Agreement has been agreed to by both parties, that both parties have consulted or have had the opportunity to consult with attorneys with respect to the terms, and that no presumption shall be created against the City as the drafter of the Agreement.

**18. Governing Law:**

The laws of the State of Nevada shall govern this Agreement without regard to conflicts of law principles.

**19. Jurisdiction and Venue:**

Any action or proceeding seeking to enforce any provision of, or based on any right arising out of, this Agreement must be brought against either of the parties in the courts of the State of Nevada, County of Washoe. Each of the parties consents to the jurisdiction of the court (and of the appropriate appellate court) in any such action or proceeding and waives any objection to venue laid therein.

**20. Claims:**

Pursuant to NRS 268.020, which the parties agree to abide by contractually, all demands and accounts against the City must be presented to the Council, in writing, within six (6) months from the time the demands or accounts become due. No demand or account may be audited, considered, allowed or paid by the City unless this requirement is strictly complied with.

**21. Assignment:**

All of the terms, conditions and provisions of this Contract, and any amendments thereto, shall inure to the benefit of and be binding upon the parties hereto, and their respective successors and assigns. The Consultant shall not assign this Contract without the written consent of the City which will not be unreasonably withheld.

**22. Notices:**



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All notices required to be given in writing by this Contract shall be deemed to be received (i) upon delivery if personally delivered, or (ii) when receipt is signed for if mailed by certified or registered mail, postage prepaid, or by express delivery service or courier, when addressed as follows (or sent to such other address as a Party may specify in a notice to the others):

CITY OF SPARKS - PURCHASING DIVISION  
431 PRATER WAY  
PO BOX 857  
SPARKS, NV 89432-0857

Michael Harrison  
Brown and Caldwell  
11020 White Rock Rd.  
Rancho Cordova, CA 95670

**23. Entire Contract:**

This Contract and all associated documents associated by reference constitute the entire agreement of the parties and shall supersede all prior offers, negotiations, agreements and contracts whether written or oral. Any modifications to the terms and conditions of this Contract must be in writing and signed by both parties.

**24. Waiver:**

No waiver of any term, provision or condition of this Contract, whether by conduct or otherwise, in any one or more instances, shall be deemed to be nor shall it be construed as a further or continuing waiver of any such term, provision or condition of this Contract. No waiver shall be effective unless it is in writing and signed by the party making it.

**25. Annual Appropriation of Funds:**

Multi-year contracts and leases are subject to annual appropriation of funds by the City Council. The City plans and makes appropriations to the City Budget with respect to a fiscal year that starts July 1<sup>st</sup> and ends June 30<sup>th</sup> of each year. Payments made under term contracts and leases are considered items of current expense. Purchase Orders are funded when issued; therefore, they are current expense items and are not subject to any subsequent appropriation of funds. Continuance of a multi-year contract beyond the limits of funds available shall be contingent upon appropriation of the requisite funds in the ensuing fiscal year and the termination of this contract by lack of appropriation shall be without penalty.

**26. Severability:**

If any part of this Contract is found to be void it will not affect the validity of the remaining terms of this Contract which will remain in full force and effect.

**27. Headings:**

Paragraph titles or captions contained in this Contract are inserted only as a matter of convenience and for reference only, and in no way define, limit, extend, or describe the scope of this Contract or the intent of any provision hereof.

**28. Singular Includes the Plural; Gender; Title Reference:**

Whenever the singular number is used in this Contract and when required by the context, the same shall include the plural, and the use of any gender, be it masculine, feminine or neuter, shall include all of the genders, and the word "person" or "entity" shall include corporation, firm, partnership, or any other combination or association.



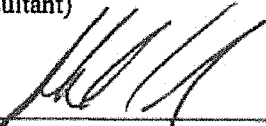
The use of the title "Bidder", "Vendor", "Contractor" or "Consultant" within this contract or associated bid documents shall be deemed interchangeable and shall refer to the person or entity with whom the City of Sparks is contracting for the service or product referenced within this contract.

**29. Execution:**

The parties agree to execute such additional documents and to take such additional actions as are reasonably necessary or desirable to carry out the purposes hereof. They also agree, acknowledge and represent that all corporate authorizations have been obtained for the execution of this Contract and for the compliance with each and every term hereof. Each undersigned officer, representative or employee represents that he or she has the authority to execute this Contract on behalf of the party for whom he or she is signing.

IN WITNESS WHEREOF, the City of Sparks has caused this Contract to be executed by its officers thereunto duly authorized and the Consultant has subscribed same, all on the day and year first above written.

Brown and Caldwell  
(Consultant)

By:   
\_\_\_\_\_

Ronald L. Ablin, PE, Vice President  
(Title)

APPROVED AS TO FORM

\_\_\_\_\_  
City Attorney

CITY OF SPARKS, NEVADA  
A Municipal Corporation

By: \_\_\_\_\_  
Ronald E. Smith, Mayor

ATTEST:

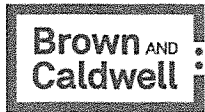
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City Clerk



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**Attachment A**

Price and scope per written proposal provided by Brown and Caldwell, dated January 10, 2019 (attached) and their responses to City of Sparks RFP #18/19-007 (incorporated by reference).



# Exhibit A – Scope of Work

City of Sparks

TMWRF Facility Plan

Truckee Meadows Water Reclamation Facility

January 10, 2019

## Background

Truckee Meadows Water Reclamation Facility (TMWRF), jointly owned by the Cities of Reno and Sparks, is completing a 2019 TMWRF Facility Plan (the Plan) to identify necessary improvements to allow TMWRF to treat and discharge up to 42 million gallons per day (mgd) of wastewater in compliance with all aspects of TMWRF's National Pollutant Discharge Elimination System (NPDES) Permit. The improvements may include new, modified or rehabilitated processes equipment and facilities. Brown and Caldwell (BC) has been retained to complete this Plan. The following sections describe the detailed Scope of Work to complete this Plan

### Task 1.0 Project Management

The Project Management Task includes project setup, internal project team and client coordination, preparation of project plan, QC Plan, Field Work Safety Plan (FWSP), monthly preparation of invoices/status reports, overall project tracking, and maintaining risk register and decision log.

### Task 2.0 Data Review and Existing Facilities Evaluation

#### Sub-Task 2.1 Review Existing Information

TMWRF will supply BC with all the applicable background information. Background information will be used to complete the plant process capacity evaluations; build a database of existing assets, such as treatment process equipment, structures, and buildings included in the project scope; perform Level 1 desktop condition assessments; and document the existing facility process performance and the status of associated activities currently underway at TMWRF. This data collection process will identify the baseline performance of the plant; process performance issues; plant flexibility; means by which plant staff have historically addressed operational issues; and historical elements of contingency and emergency operations.

At a minimum, the background information will include:

1. Electronic copies of as-built drawings or the most recent design drawings of all existing TMWRF facilities to be evaluated.
2. Plant operational data for the Primary Sedimentation Basins (BOD [biochemical oxygen demand], TSS [total suspended solids] removals); aeration basins (BOD and TSS removal, oxygen demand and uptake, SRT [solids retention time]); nitrification towers (loading rates, ammonia removal); fluidized bed reactors (loading rates, nitrate/nitrite removal, chlorine contact basins (chlorine use, CT); anaerobic digesters (VSS [volatile suspended solids] and TSS destruction, HRT [hydraulic retention time], SRT [solids retention time]);, and solids thickening and dewatering systems (percent solids and percent capture).
3. Asset information including: tag numbers; asset make, model, and manufacturer; type of service; materials of construction; year of installation/placed into service; maintenance history; repair records; previous inspections; known issues; consequence of failure (COF), likelihood of failure (LOF) scores; or related risk assessment criteria.
4. Previous studies related to condition assessment and process performance.

The plant performance data will be used to evaluate the existing plant processes while the asset information will be used to create an initial database of assets that will be used to develop inspection forms used for the visual field (Level 2) condition assessment inspections completed in Task 8.

#### Sub-Task 2.2 Develop Asset Database

BC will build a consolidate the database of the existing treatment process assets and add the structures and buildings, to be included in the project scope. This asset database will be the framework used to house and report the condition assessment information and results throughout the project, including the Level 1 Desktop Evaluations (Task 2); Risk



Assessments and Prioritization (Task 8); Level 2 Visual Inspections (Task 8); and Level 3 Physical Inspections and Testing (optional, Task 11). The draft database will be submitted for review and comment.

A workshop will be conducted by BC with TMWRF staff to confirm the assets to be included in the database. The number of structures and buildings will be verified and the level 1 budget will be revisited based on the final number of buildings and structures that will undergo level 1 desktop evaluations. At this workshop, BC will also conduct interviews with plant operations and maintenance staff with knowledge of the current physical and operating conditions of the assets as well as the treatment process performance.

### Sub-Task 2.3 Perform Level 1 Desktop Evaluations

BC will conduct desktop evaluations of the existing facilities and provide a baseline condition assessment. The desktop evaluations will be based on the review of the information provided and the results of the interviews with plant operations and maintenance staff.

Estimates of remaining useful service life of the assets will be determined. The results of Level 1 Desktop Evaluations will be inputted into the asset database.

### Sub-Task 2.4 Prepare Draft Existing Facilities Evaluation TM (TM No. 1)

A draft technical memorandum (TM) will be prepared that will summarize the findings from BC's review of the background information and results of the desktop evaluations. TM No. 1 will include sections covering:

- The current treatment process performance with the associated process flow diagrams;
- Existing electrical power system with plantwide single-line diagram;
- Description of the existing supervisory control and data acquisition (SCADA) system with SCADA block diagram;
- Description of current and planned projects at TMWRF;
- An inventory list of treatment process equipment, structures, and buildings included in the asset database; (attached as an appendix to the TM); and
- Summary of the results of the Level 1 Desktop Evaluations.

### Sub-Task 2.5 Prepare Final Existing Facilities Evaluation TM (TM No. 1)

BC will incorporate TMWRF comments into a final Existing Facilities TM.

#### Deliverables:

- Draft and final Existing Facilities TM (ten final hardcopies and final and draft pdf); and
- Responses to comments on the draft Existing Facilities TM (pdf).

#### Meetings:

- Two meetings with TMWRF staff and BC team; and
- Telephone meetings as required.

## Task 3.0 Influent Flow and Loading Evaluation

### Sub-Task 3.1 Influent Flow and Loading Data

The flow and load analysis will be based on an evaluation of at least 3 years of historical plant data provided by TMWRF in spreadsheet format with associated charts. This data review will be used to develop peaking factors for use in process evaluation. The design period for evaluation will be up to 30 years out but also will determine the design year where the 42-mgd trigger flow is expected. The resulting analysis will be compared with the existing plant design criteria with emphasis on identifying any relationships between growth in loadings and the need for expansion or improvement of any of the existing processes.

BC will review the sampling results prepared by the University of Nevada at Reno (UNR) and provide recommendations on additional or supplemental sampling needed to fully assess plant capacity as part of Task 5.

BC will conduct an evaluation of primary clarifiers, secondary clarifiers, gravity belt thickener, anaerobic digesters, centrifuges and other plant recycle flows. The analysis will be used to determine loadings for existing conditions and for the anticipated design year conditions.

### Sub-Task 3.2 Prepare Draft Influent Flow and Loading Evaluation TM (TM No. 2)

A draft TM will summarize the mass balance results, flow and loading projections, and incorporate findings and conclusions from the Workshop.

### Sub-Task 3.3 Prepare Final Influent Flows and Loading Evaluation TM (TM No. 2)

BC team will incorporate TMWRF comments into a Final Influent Flows and Loading TM.

#### Deliverables:

- Responses to comments on the draft Flow and Loadings TM (pdf); and
- Draft and final Flow and Loadings TM (ten final hardcopies and draft and final pdf).

#### Meetings:

- Telephone meetings as required.

## Task 4.0 Regulatory Requirements

### Sub-Task 4.1 Evaluate Current and Future Permitting Requirements

Existing and future effluent discharge will be investigated as part of this task.

### Sub-Task 4.2 Prepare Draft Regulatory Requirements TM (TM No. 3)

A draft TM will summarize the current and future regulatory requirements and incorporate findings and conclusions from Workshop 2.

### Sub-Task 4.3 Prepare Final Regulatory Requirements TM (TM No. 3)

BC team will incorporate TMWRF comments into a Final Regulatory Requirements TM.

#### Deliverables:

- Responses to comments on the draft Regulatory Requirements TM (pdf); and
- Draft and final Regulatory Requirements TM (ten final hardcopies and draft and final pdf).

#### Meetings:

- Regulatory Requirements Workshop; and
- Telephone meetings as required.

## Task 5.0 Treatment Capacity Evaluation

BC will evaluate each of the major unit processes and the full plant. BC will calculate capacity ratings for each process and the plant as a whole and identify capacity bottlenecks. Both process treatment capacity and hydraulic capacity will be determined.

A calibrated BioWin model will be prepared by UNR and will be provided to BC to use to determine process capacities. BC will review the UNR BioWin model inputs and provide recommendations for any model input adjustments prior to initiating the capacity evaluation. The recommendations will be provided to UNR. BC will obtain the model created by UNR as a starting point to evaluate the treatment capacity.

### Sub-Task 5.1 Establish Design Criteria

BC team will confirm and establish design criteria for all the liquids and solids unit processes that will be evaluated in this task. Historical design criteria will be updated based on new TMWRF level of service requirements for reliability and redundancy.

### Sub-Task 5.2 Liquid Process Evaluation

BC will evaluate the major plant processes shown below and compare performance to industry published performance criteria. For the liquid process treatment capacity, the following tools will be used:

- Preliminary Treatment: Hydraulic capacity evaluation of influent pump station and a design components capacity analysis of the grit removal system.
- Primary Clarification: Spreadsheet analysis of historical data and data fitting to a mathematical model.

- Aeration Basins: BioWin results and spreadsheet evaluation of aeration basin capacity.
- Secondary Clarifiers: Spreadsheet evaluation using state point analysis to determine capacity.
- Nitrifying Trickling Filters: Stress test results performed by TMWRF staff, historical performance, and spreadsheet evaluation.
- Fluidized Bed Denitrification Reactors: Spreadsheet evaluation based on historical performance and design values.
- Tertiary Filters: Spreadsheet evaluation of historical data and comparison to published values to determine filter loading rates.
- Disinfection: Spreadsheet evaluation of historical data to estimate chlorine demand and disinfection efficiency.

The hydraulic evaluation of the plant will be performed using Visual Hydraulic software. The results of the evaluation will be compiled into a spreadsheet program that TMWRF will be able to use to estimate process capacity. Subtasks include:

- Review record drawings associated with the existing features and incorporate additional detail and/or revisions into the hydraulic model as appropriate;
- The hydraulic model will be developed in Visual Hydraulics and will include only gravity flow portions of the plant;
- The hydraulic model will be calibrated to an existing plant hydraulic profile;
- The model will be used to identify flow restrictions (bottlenecks) and modifications to achieve desired hydraulic capacity; and
- BC will organize and facilitate a workshop to cover the results of the hydraulic evaluation.

### Sub-Task 5.3 Solids Process Evaluation

The entire solids treatment process will be evaluated for the Facility Plan. The current solids unit processes consist of:

- Gravity belt thickeners;
- Dissolved air flotation thickeners;
- Anaerobic digesters include acid phase digester;
- Digester gas system (flare, boilers, COGEN, and gas conditioning);
- Dewatering centrifuges; and
- Truck loadout.

Unit process loadings will be developed based on current loadings and future projections.

BC will develop spreadsheet-based models for the solids treatment processes. The models will allow evaluation of existing treatment processes based on plant operating loading data and future expected loading. Each unit process model will estimate process outputs based on expected inputs and process operational performance. Unit process inputs could be projected loadings or output from another unit process. Operational performance will be based on past process performance data or expected performance if substantial process changes are proposed.

The overall goal of the solids process evaluation is to optimize process performance, maximize biogas production, and prioritize process improvements for scheduling future capital improvement projects (CIPs). The evaluation will focus on a long-range view of biosolids treatment and disposal with a goal of improving efficiency, increasing energy production, and advancing the current proven biosolids treatment at the plant.

Trigger Charts –The results of the liquid and solids stream evaluation will be used to develop trigger charts to assist in CIP prioritization. Trigger chart events may be related to either growth in capacity or changes in required levels of treatment plant performance (regulation changes).

### Sub-Task 5.4 Conduct Capacity Evaluation Workshop (Workshop 1)

BC team will summarize the results of both the solids and liquid capacity evaluations and confirm the capacities that were determined and present the associated expansion trigger charts.

### Sub-Task 5.5 Prepare Draft Capacity Evaluation TM (TM No. 4)

A draft TM will document the unit process capacities of both the solids and liquids treatment processes and incorporate the findings and conclusions from Workshop 3.

### Sub-Task 5.6 Prepare Final Capacity Evaluation TM (TM No. 4)

BC team will incorporate TMWRF comments into a Final Capacity Evaluation TM.

**Deliverables:**

- Draft and final Workshop 1 minutes (pdf);
- Responses to comments on the draft Capacity Evaluation TM (pdf); and
- Draft and final Capacity Evaluation TM (ten hardcopies and pdf).

**Meetings:**

- Capacity Evaluation Workshop 1; and
- Telephone meetings as required.

## Task 6.0 Alternatives Evaluation

### Sub-Task 6.1 Solids and Liquids Treatment Technology Screening Workshop (Workshop 2)

BC will identify a list of treatment alternatives for both liquid and solids treatment and present these alternatives to TMWRF as part of an initial screenings evaluation workshop. BC will provide an initial list of alternatives to consider and present to TMWRF in a workshop. The workshop will function to identify the evaluation criteria and to screen out solids and liquid treatment alternatives based on input from TMWRF staff, such that a short list of technologies (up to four different alternatives) are carried forward for detailed analysis. Critical constituents that will be addressed as part of the treatment screenings evaluation include: nitrogen, phosphorus, TDS, BOD, and TSS. Both solids and liquids processes will be considered together to determine the treatment alternatives for subsequent consideration.

Liquids treatment alternatives to be considered for initial screening may include (but are not limited to):

- Status Quo (in-kind expansion);
- Status Quo with optimization improvements;
- Conversion of A/O process to BioMag Process;
- Conversion of A/O process to Nereda Process;
- Conversion of A/O process to MLE plus chemical phosphorus removal;
- Conversion of A/O process to Bardenpho Process;
- Conversion of chlorine disinfection to UV disinfection;
- Add UV disinfection and keep chlorine disinfection for recycled water only; and
- Convert sidestream ammonia air stripping to biological process.

Solids Treatment Alternatives to be considered but are not limited to:

- Status Quo;
- Status Quo with optimization improvements;
- Elimination of anaerobic digestion and landfill disposal of dewatered solids;
- Addition of Airprex Process or other process technologies (up to three) to improve dewatering performance; and
- Addition of solids process to manage nutrients (CalPrex).

A holistic plantwide evaluation will be completed to determine plantwide impacts. The respective solids and liquids evaluations will be documented in separate TMs and separate evaluation workshops to identify the recommended alternatives. For the solids and liquids evaluations, electrical requirements will be considered and specific electrical requirements will be identified. For the solids evaluation, the facility heating requirements will be considered. Since the waste heat from the plant processes is used to heat the facilities, future increase in digester gas production will need be compared with the increase in heating requirements for new buildings. To aid in this assessment, a preliminary design report prepared by CR engineering will be used for the baseline heating requirement.

### Sub-Task 6.2 Conduct Liquids Treatment Alternatives Evaluation

Upon completion of the Screenings Workshop, a further detailed evaluation will be conducted for the shortlist of alternatives identified in the workshop which will use the evaluation criteria identified as part of the Screenings Workshop. For each liquid treatment alternative, capital costs, select annual operation and maintenance (O&M) costs and existing plant impacts to the electrical system will be considered in the evaluation. Existing optimization alternatives as well as treatment alternatives will be considered for the evaluations.

### Sub-Task 6.3 Conduct Liquid Treatment Alternatives Workshop (Workshop 3)

BC will present the results of the liquid treatment evaluations and confirm the recommended alternative(s) in the workshop.

#### Sub-Task 6.4 Prepare Draft Liquid Treatment Alternatives Evaluation TM (TM No. 5)

A draft TM will summarize the results of the liquid treatment alternative evaluation and incorporate comments and findings from Workshop 5.

#### Sub-Task 6.5 Prepare Final Liquid Treatment Alternatives TM (TM No. 5)

BC will incorporate TMWRF comments and finalize the Liquid Treatment Alternatives Evaluation TM.

#### Sub-Task 6.6 Conduct Solids Treatment Alternatives Evaluation

Upon completion of the Screenings Workshop, solids treatment evaluation will be conducted for the alternatives identified in the Workshop and using the evaluation criteria identified as part of the initial Workshop. For each solids treatment alternative, capital costs, annual O&M costs and existing plant impacts to the electrical system will be considered in the evaluation. Existing optimization alternatives as well as treatment alternatives will be considered for the evaluations

#### Sub-Task 6.7 Conduct Solids Treatment Alternatives Workshop (Workshop 4)

BC team will summarize the results of the solids treatment evaluations and confirm the recommended alternative(s) in the Workshop.

#### Sub-Task 6.8 Prepare Draft Solids Treatment Alternatives Evaluation TM (TM No. 6)

A draft TM will summarize the results of the solids treatment alternative evaluation and incorporate comments and findings from Workshop 6.

#### Sub-Task 6.9 Prepare Final Solids Treatment Alternatives TM (TM No. 6)

BC team will incorporate TMWRF comments and finalize the Solids Treatment Alternatives Evaluation TM.

#### Deliverables:

- Draft and final Workshop 2 minutes (pdf);
- Draft and final Workshop 3 minutes (pdf);
- Draft and final Workshop 4 minutes (pdf);
- Responses to comments on the draft Solids Treatment Alternatives Evaluation TM (pdf);
- Responses to comments on the draft Liquids Treatment Alternatives Evaluation TM (pdf);
- Draft and final Liquids Treatment Evaluation TM (ten final hardcopies and final and draft pdf); and
- Draft and final Solids Treatment Evaluation TM (ten final hardcopies and final and draft pdf).

#### Meetings:

- Solids and Liquids Screening Workshop;
- Liquids Treatment Alternatives Workshop;
- Solids Treatment Alternatives Workshop; and
- Telephone meetings as required.

### Task 7.0 Support Facilities and Staffing

#### Sub-Task 7.1 Staffing Evaluation and Interviews

Current staffing workload will be confirmed by conducting up to four 2-hour interviews with TMWRF O&M staff; reviewing existing staff organization chart; reviewing work rules; and reviewing equipment lists and associated O&M activities. Future additional staffing will be estimated based on the future planned facilities. The results of the evaluation will be documented in an O&M Readiness Hiring Plan which will provide TMWRF guidance on when future staff should be hired and their specific classification.

#### Sub-Task 7.2 Support Facilities Evaluation

Siting of facilities will be addressed as part of Task 6. This task will look at the occupied buildings (laboratory, administration, maintenance) and prepare floor plans and space usage summaries for current and future staffing. Construction costs will be prepared for facilities that will require relocation or consolidation. This information will be summarized in a TM.

### Sub-Task 7.3 SCADA System Evaluation

This task will evaluate SCADA alternatives to the current distribution control system (DCS) used at TMWRF. The evaluation will consider the following: future SCADA support, training requirements, software costs, and system features. This evaluation and recommended system and associated construction costs will be documented in a TM.

### Sub-Task 7.4 Future Electrical System Requirements

This task will identify the specific electrical system improvements needed to accommodate the future facilities at TMWRF. Construction costs will be prepared for these specific improvements. This information will be documented in a TM.

### Sub-Task 7.5 Conduct Staffing Recommendation and Readiness Plan Workshop (Workshop 5)

BC team will present the results of the staffing evaluation and confirm the Readiness Plan.

### Sub-Task 7.6 Conduct Support Facilities Workshop (Workshop 6)

BC team will present the recommendations for support facility relocations, SCADA system recommendations and electrical system improvements.

### Sub-Task 7.7 Prepare Draft Electrical and SCADA Evaluation TM (TM No. 7)

A draft TM will summarize the results of the electrical system and SCADA system evaluation and incorporate comments and findings from Workshop 8.

### Sub-Task 7.8 Prepare Final Electrical and SCADA Evaluation TM (TM. No 7)

BC team will incorporate TMWRF comments and finalize the Electrical and SCADA Evaluation TM.

### Sub-Task 7.9 Prepare Draft Support Facilities Requirements TM (TM. No 8)

A draft TM will summarize the results of the support facility siting evaluation and incorporate comments and findings from Workshop 8.

### Sub-Task 7.10 Prepare Final Support Facilities Requirements TM (TM No. 8)

BC team will incorporate TMWRF comments and finalize the Support Facilities Requirements TM.

### Sub-Task 7.11 Prepare Draft Staffing Requirements TM (TM No. 9)

A draft TM will summarize the results of the staffing evaluations and will incorporate the findings from Workshop 7. TM will include an O&M Readiness Hiring Plan as an appendix.

### Sub-Task 7.12 Prepare Final Staffing Requirements TM (TM No 9)

BC team will incorporate TMWRF comments and finalize the Staffing Requirements TM.

#### Deliverables:

- Draft and final Workshops 5 and 6 minutes (pdf);
- Draft and final Support Facilities Evaluation TM (ten final hard copies and final and draft pdf);
- Draft and final Staffing Requirements TM (ten final hard copies and final and draft pdf); and
- Draft and final Electrical and SCADA Evaluation TM (ten final hard copies and final and draft pdf).

#### Meetings:

- Staffing recommendation and Readiness Plan Workshop 5;
- Support Facilities Workshop 6; and
- Conference call meetings as required.

## Task 8.0 Risk Assessment and Visual Inspections

Upon completion of the alternatives evaluation and support facilities evaluation, BC will utilize the asset database and baseline condition assessment established in Task 2 to conduct a risk assessment and prioritization; perform Level 2 Visual Inspections for further condition assessment of selected assets; and identify assets recommended for renewal via major repair, rehabilitation, and replacement (R/R/R) projects.

Outcomes of Task 8 will be an updated asset database, including the detailed results of the risk assessment and visual inspections and a TM summarizing the findings and recommended R/R/R projects and associated opinion of probable construction costs (OPCCs).

### Sub-Task 8.1 Conduct Risk Assessment

BC will develop a risk assessment methodology, including establishing a set of criteria for numerical scoring of the likelihood and consequence of assets' failure. BC will present the draft methodology in a workshop (workshop 7) and work collaboratively with TMWRF staff to confirm the LOF and COF criteria.

BC will then conduct the risk assessment by assigning numerical scores for LOF and COF for each of the assets and prioritizing the assets based on overall risk. Risk can be defined as the "likelihood" that an asset is unable to provide the function for which it was installed, combined with the impacts, or "consequences," resulting from failure of the asset. Assets will be ranked a low-, medium-, or high-risk. The results of the risk assessment will be inputted into the asset database and combined with the results of the baseline condition assessment from Task 2.

BC and TMWRF staff will use these results to identify and select assets for further evaluation during the Level 2 onsite visual inspections.

### Sub-Task 8.2 Plan and Perform Level 2 Visual Inspections

BC will work with the TMWRF staff to develop a plan to efficiently, comprehensively, and safely complete Level 2 Visual Inspections.

Onsite visual observations of selected assets will be performed by subject matter experts (SMEs) from accessible locations such as plant walkways, stairwells, and platforms. It is anticipated that assets will be observed in their operational state and not modified (e.g., removed from service, bypassed, dewatered, etc.) during inspections. SMEs will document interviews with plant O&M staff, field observations, photographs, and assessments, noting structural and operational conditions for each asset. If, at any time, our field teams observe conditions that pose operational or safety concerns requiring urgent attention, we will inform the TMWRF staff immediately.

It is anticipated that a team consisting of the following SMEs will conduct the visual inspections:

- Electrical SME;
- Structural SME;
- Mechanical SME; and
- Process and Operations SME.

BC will coordinate with the City's operations staff to maximize the value of the inspections by scheduling the work to coincide with any planned tank or equipment outages.

Following the site visits, the BC team will update the database and asset priorities with the field data. BC will submit the updated database to the City for review, highlighting significant field observations and findings. BC will meet with the City to review the prioritized findings and discuss R/R/R recommendations (workshop 8)

### Sub-Task 8.3 Prepare Draft Condition Assessment and R/R/R Projects TM (TM No. 10)

BC team will prepare a TM documenting the findings, results, and recommended R/R/R projects from the completed risk assessment and Level 1 and Level 2 condition assessment activities. This TM will include the final prioritized risk rankings of the assets, along with the final asset database output in summary format, as well as the completed field inspection forms as appendices. The TM will also include conceptual-level OPCCs for the recommended R/R/R projects.

### Sub-Task 8.4 Prepare Final Condition Assessment and R/R/R Projects TM (TM No. 10)

BC team will incorporate TMWRF comments and finalize the Condition Assessment and R/R/R TM.

Deliverables:

- Draft and final Risk Assessment Methodology Workshop 7 minutes (pdf);
- Draft and final Risk Assessment Workshop 8 minutes (pdf);
- Updated asset database with risk assessment;
- Completed Level 2 field inspection forms (pdf);
- Updated asset database with visual inspection findings; and
- Draft and final Condition Assessment and R/R/R Recommendations TM (ten final hardcopies and draft and final pdf).

## Meetings:

- Risk Assessment Methodology Workshop 7;
- Risk Assessment Workshop 8; and
- Conference call meetings as required.

## Task 9.0 Final CIP and Recommendations

Task will review the existing CIP and integrate the new projects identified in prior tasks. The new projects will be consolidated and prioritized and an Implementation Plan will be developed based on looking at all the projects. The output for this work will include an annual CIP expenditure chart incorporating both capital projects and annual additional O&M expenditures.

### Sub-Task 9.1 Conduct CIP Prioritization Workshop 9

BC team will use this workshop with TMWRF to discuss and validate the revised CIP and present the annual cost outlays and associated Implementation Plan.

### Sub-Task 9.2 Prepare Draft CIP and Recommendations TM

BC team will prepare a TM documenting the workshop results and findings from the CIP evaluation work and previous tasks.

### Sub-Task 9.3 Prepare Final CIP and Recommendations TM

BC team will incorporate TMWRF comments into a final CIP and Recommendations TM.

### Sub-Task 9.4 Prepare Facility Plan

BC team will summarize all the previously finalized TMs into an executive summary and include the final TMs into a Facility Plan Report.

### Sub-Task 9.5 Present Final Facility Plan

BC team will present the final Facility Plan to the Joint Committee consisting of City of Sparks and City of Reno Stakeholders. Activities include preparation of a PowerPoint presentation and answering questions during the presentation.

## Deliverables:

- Draft and final Workshop 9minutes (pdf);
- Draft and final CIP Recommendation TM (ten final hardcopies and draft and final pdf); and
- Final Facility Plan (ten hardcopies and pdf).

## Meetings:

- CIP and Recommendation Workshop;
- Final Facility Plan presentation; and
- Telephone meetings as required

## Task 10.0 Contingency

A contingency amount of \$75,000 will be included in this task that will only be used for additional scope items identified during the project. Approval by TMWRF is needed prior to release of Contingency money.

## Assumptions

1. A project duration of 16 months for this Scope is assumed for project management tasks (monthly invoices and project tracking).
2. TMWRF comments on deliverables will be compiled prior to delivering to the BC team.
3. TMWRF will provide electronic copies of all original design and as-built drawings for each of the areas affected
4. TMWRF shall provide flow and loading projections (Average, flow, BOD, TSS, TKN/Ammonia, and total Phosphorus) to BC.
5. It is assumed that existing hydraulic profiles are available for calibration of the hydraulic model.
6. It is assumed that no existing hydraulic models are available.



7. Level 1 Desktop Inspections assume up to a total of 50 distinct assets and structures.
8. Level 2 Visual Inspections assumes 1 week (5 consecutive working days) and detailed inspections of up to 5 structures.
9. For Task 6, order-of-magnitude estimates will be prepared for up to ten distinct alternatives as defined by the Association for the Advancement of Cost Engineering International (AACE) for a Class 5 estimate.
10. For Task 7, order-of-magnitude estimates will be prepared for up to four distinct projects as defined by AACE for a Class 5 estimate.
11. For Task 8, it is assumed that a total of seven R/R/R projects will be developed and seven order-of-magnitude estimates as defined by AACE criteria for a Class 5 estimate will be prepared.
12. Up to five different "whole-plant alternatives" will be evaluated.

## Fee Estimate

Exhibit B attached is a detailed fee estimate for the services provided in this Scope, including all tasks and deliverables. The table provides the estimated hours by task and by staff and the associated billing rates. It also includes sub-consultant costs, other direct costs and other associated expenses.

## Cost Assumptions

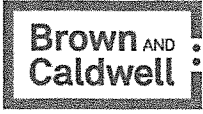
- Hourly rates are based on BC rate schedule
- Subcontractors include cost plus 5% service charge; and
- Travel and reproduction costs are billed at cost, with no markups.

## Project Schedule

A preliminary Project Schedule is attached as Exhibit C.

## Schedule Assumptions

- Notice to Proceed provided on February 15, 2019; and
- TMWRF review is between 8 and 9 working days for deliverables.



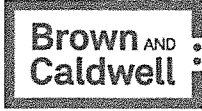
## **Exhibit B – Fee Estimate**

**City of Sparks**

**TMWRF Facility Plan**

**Truckee Meadows Water Reclamation Facility**

Table with columns for activity codes (e.g., 001, 002, 003) and activity descriptions (e.g., Project Management, Review Existing Site, Conduct Risk Assessment). The table contains a large grid of numerical values representing resource requirements or costs for each activity across various categories.

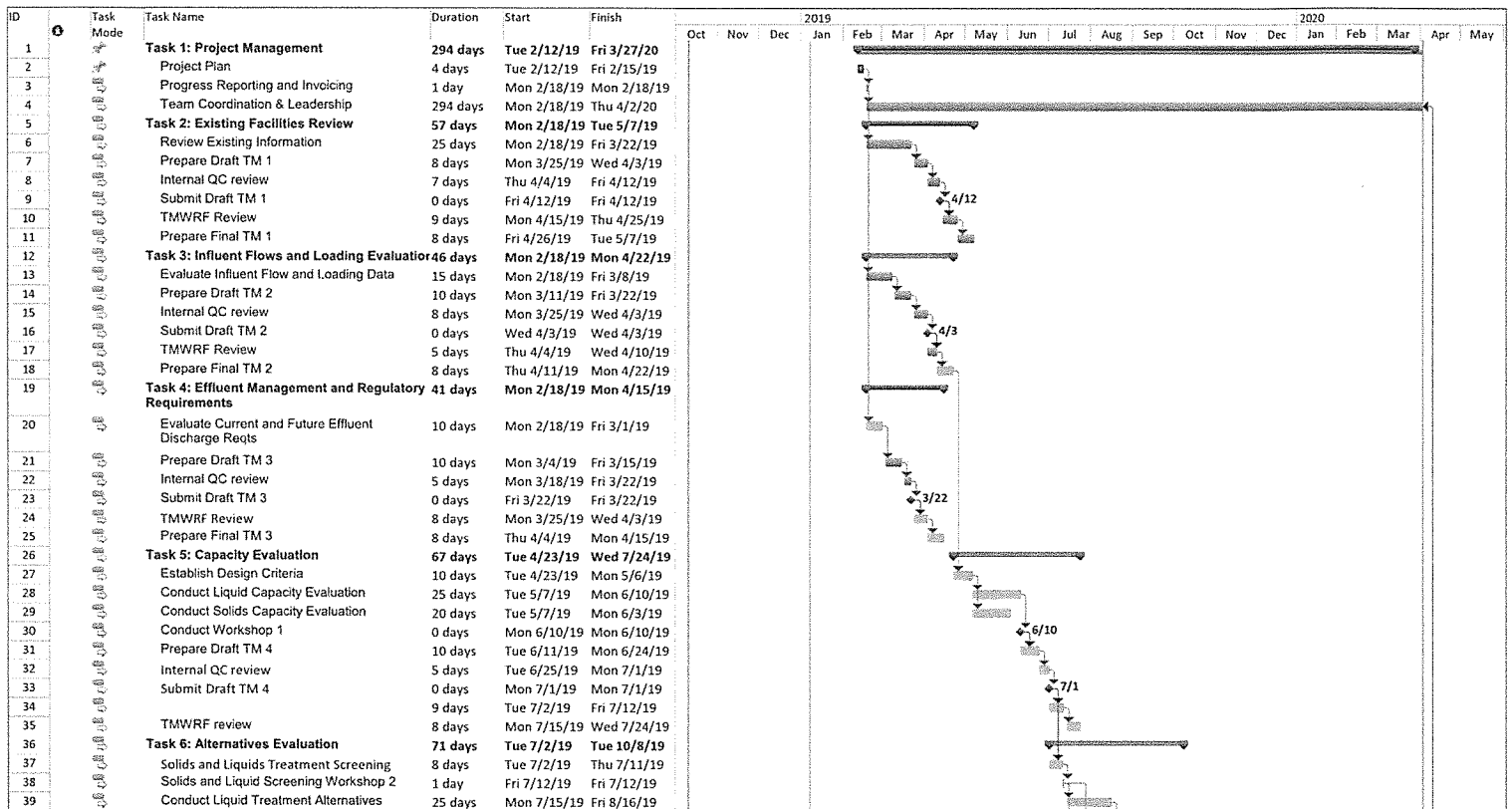


## **Exhibit C – Project Schedule**

**City of Sparks**

**TMWRF Facility Plan**

**Truckee Meadows Water Reclamation Facility**

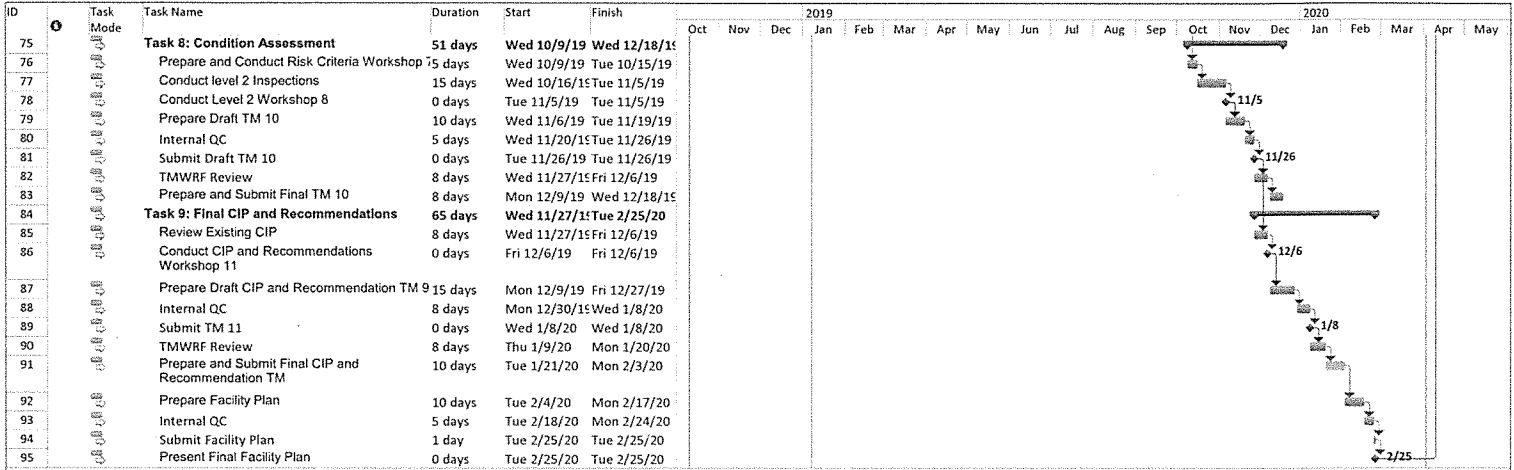


Project: Revised Project Schedule  
Date: Tue 1/8/19

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	
Summary	Inactive Task	Duration-only	Finish-only	

ID	Task Mode	Task Name	Duration	Start	Finish	2019												2020							
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
40		Satellite/Scalping Plant Feasibility Evaluation	1 day	Mon 7/29/19	Mon 7/29/19																				
41		Conduct Liquids Treatment Evaluation Workshop 3	1 day	Mon 8/19/19	Mon 8/19/19																				
42		Prepare Draft TM 5	10 days	Tue 8/20/19	Mon 9/2/19																				
43		Internal QC review	8 days	Tue 9/3/19	Thu 9/12/19																				
44		Submit Draft TM 5	0 days	Thu 9/12/19	Thu 9/12/19																				
45		TMWRF Review	10 days	Fri 9/13/19	Thu 9/26/19																				
46		Prepare Final TM 5	8 days	Fri 9/27/19	Tue 10/8/19																				
47		Conduct Solids Treatment Evaluation	15 days	Mon 7/15/19	Fri 8/2/19																				
48		Conduct Solids Evaluation Workshop 4	0 days	Fri 8/2/19	Fri 8/2/19																				
49		Prepare Draft TM 6	8 days	Mon 8/5/19	Wed 8/14/19																				
50		Internal QC	7 days	Thu 8/15/19	Fri 8/23/19																				
51		Submit Draft TM 6	0 days	Fri 8/23/19	Fri 8/23/19																				
52		TMWRF Review	10 days	Mon 8/26/19	Fri 9/6/19																				
53		Prepare Final TM 6	8 days	Mon 9/9/19	Wed 9/18/19																				
54		<b>Task 7: Support Facilities and Staffing</b>	45 days	Fri 9/13/19	Thu 11/14/19																				
55		Conduct Staffing Interviews	5 days	Fri 9/13/19	Thu 9/19/19																				
56		Evaluate Future SCADA and Electrical Requirements	10 days	Fri 9/20/19	Thu 10/3/19																				
57		Support Facility Siting Evaluation	10 days	Fri 9/20/19	Thu 10/3/19																				
58		Conduct Support Facilities Workshop 5	0 days	Thu 10/3/19	Thu 10/3/19																				
59		Conduct Staffing Workshop 7	0 days	Thu 9/19/19	Thu 9/19/19																				
60		Prepare Draft TM 7 Electrical and SCADA Evaluation	10 days	Fri 9/20/19	Thu 10/3/19																				
61		Internal QC	5 days	Fri 10/4/19	Thu 10/10/19																				
62		Submit Draft TM 7	0 days	Thu 10/10/19	Thu 10/10/19																				
63		TMWRF Review	10 days	Fri 10/11/19	Thu 10/24/19																				
64		Prepare and Submit Final TM 7 Electrical and SCADA Evaluation	6 days	Fri 10/25/19	Fri 11/1/19																				
65		Prepare Draft TM 8 Support Facilities Requirer	10 days	Fri 10/4/19	Thu 10/17/19																				
66		Internal QC	5 days	Fri 10/18/19	Thu 10/24/19																				
67		Submit Draft TM 8	0 days	Thu 10/24/19	Thu 10/24/19																				
68		TMWRF Review	10 days	Fri 10/25/19	Thu 11/7/19																				
69		Prepare and Submit Final TM 8 Support Facilities Requirements	5 days	Fri 11/8/19	Thu 11/14/19																				
70		Prepare Draft TM 9 Staffing Requirements	8 days	Fri 10/4/19	Tue 10/15/19																				
71		Internal QC	5 days	Wed 10/16/19	Tue 10/22/19																				
72		Submit Draft TM 9	0 days	Tue 10/22/19	Tue 10/22/19																				
73		TMWRF Review	8 days	Wed 10/23/19	Fri 11/1/19																				
74		Prepare and Submit Final TM 9 Support Facilities Requirements	7 days	Mon 11/4/19	Tue 11/12/19																				

Project: Revised Project Schedule Date: Tue 1/8/19	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			



Project: Revised Project Schedule  
 Date: Tue 1/8/19

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	C
Summary	Inactive Task	Duration-only	Finish-only	☐

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