



AGENDA ITEM FORM

SUBJECT: Request Authorization for CEO and General Manager to Execute Professional Services Agreement with Black & Veatch Corporation for Crystal Lake Intakes and Pumping Station Design

SUMMARY:

- In 2001, staff installed a temporary system to pump water out of the Raccoon River and into Crystal Lake and a secondary pump to pump water from the lake to the McMullen Plant. At the time of its installation, the temporary pumps were not used often; but in recent years, Crystal Lake has become an important part of McMullen's source waters.
- The Crystal Lake Intakes and Pumping Station project is important as a source of water for the McMullen Water Treatment Plant now and into the future.
- On January 17, 2017, staff issued a request for proposals to engineering consulting firms for an engineering study to evaluate the most cost-effective method for construction of the Crystal Lake Intakes and Pumping Station project.
- On February 17, 2017, staff received three proposals from qualified engineering consulting firms. These proposals were reviewed and scored by staff. All reviewing staff members agreed that Black & Veatch was the preferred selection.
- At the February 2017, Board Meeting board authorized staff to execute a Professional Services Agreement with Black & Veatch Corporation for a preliminary design report. At the time of award, it was expected that following the completion of a successful report, the selected engineering firm would be hired, at an additional fee, to complete the design.
- On July 7, 2017, Black & Veatch successfully completed a preliminary design report for the Crystal Lake Intakes and Pumping Station. This report recommended a screened intake from the Raccoon River, a single Caisson style wet well with above grade pump station, and an intake tower in Crystal Lake.
- Staff is in agreement with the recommendations of the Black & Veatch Report.
- Estimated construction cost for the Crystal Lake Intakes and Pumping Station project is \$5,765,000. Construction is expected to take place in 2019.
- Staff recommends the Board authorize the CEO and General Manager to execute a Professional Services Agreement with Black & Veatch Corporation, in the amount of \$668,680, for design of the Crystal Lake Intakes and Pumping Station project.

FISCAL IMPACT:

Funds for this project will come from the Crystal Lake Pump Station Work Plan. The 2017 budget for the included Work Plan is \$1,280,000. Based on the recommended consulting firm, our obligation for these funds will be \$668,680. Funds for the construction of this project will need to be budgeted in 2019.

RECOMMENDED ACTION:

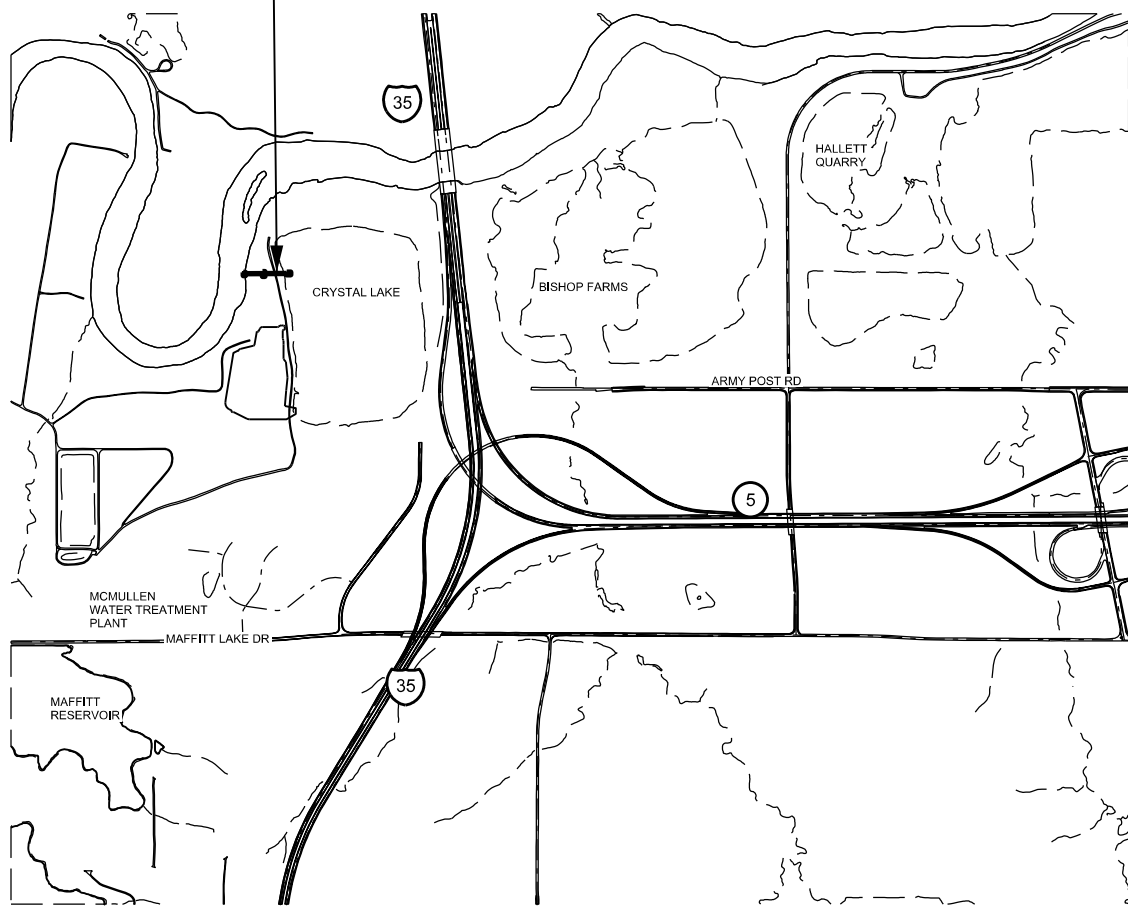
Authorize the CEO and General Manager to execute a Professional Services Agreement with Black & Veatch Corporation, in the amount of \$668,680, for design of the Crystal Lake Intakes and Pumping Station project.

BOARD REQUIRED ACTION:

Motion to authorize the CEO and General Manager to execute a Professional Services Agreement with Black & Veatch Corporation, in the amount of \$668,680, for design of the Crystal Lake Intakes and Pumping Station project.

_____ / _____ Nathan W. Casey, P.E. (date) Project Manager	_____ / _____ Danny J. Klopfer, P.E. (date) Engineering Services Manager	_____ / _____ William G. Stowe (date) CEO and General Manager
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PROJECT LOCATION



Des Moines
Water Works
Water You Can Trust for Life
ENGINEERING DEPARTMENT
Des Moines, Iowa

CRYSTAL LAKE INTAKES AND
PUMPING STATION

**AGREEMENT
FOR
ENGINEERING SERVICES**

THIS AGREEMENT (Agreement) is by and between Board of Water Works Trustees of the City of Des Moines, Iowa (Owner) and Black & Veatch Corporation (Engineer);

WITNESSETH:

WHEREAS, Owner intends to implement the Crystal Lake Intakes and Pumping Station Project (the Project);

WHEREAS, Owner requires certain engineering services in connection with the Project (the Services); and,

WHEREAS, Engineer is prepared to provide the Services.

NOW, THEREFORE, in consideration of the promises contained in this Agreement, Owner and Engineer agree as follows:

ARTICLE 1 - EFFECTIVE DATE

The effective date of this Agreement shall be _____.

ARTICLE 2 - GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Iowa without giving effect to the principles thereof relating to conflicts of law.

ARTICLE 3 - SERVICES TO BE PERFORMED BY ENGINEER

Engineer shall perform the Services described in Attachment A, Scope of Services. Engineer shall have no liability for defects in the Services attributable to Engineer's reliance upon or use of data, design

criteria, drawings, specifications, or other information furnished by Owner or third parties retained by Owner.

ARTICLE 4 – COMPENSATION

4.1 Payment shall be due and payable upon receipt by Owner to Engineer in accordance with Attachment B, Compensation.

4.2 Method of Payment. Payments due Engineer under this Agreement shall be electronically transferred either by ACH, specifically in CCD+ or CTX format, wire transfer to the bank account, or written check and in accordance with the bank instructions identified in Engineer's most recent invoice in immediately available funds no later than the payment due date. Invoice number and project name shall be referenced in the bank wire reference fields, the ACH addenda information, or on the written check.

4.3 In the event Owner disputes any invoice item, Owner shall give Engineer written notice of such disputed item within ten (10) days after receipt of such invoice and shall pay to Engineer the undisputed portion of the invoice according to the provisions hereof. If Owner fails to pay any invoiced amounts when due, interest will accrue on each unpaid amount at the rate of one and one-half percent (1 ½%) per month, or the maximum amount allowed by law, if less, from the date due until paid according to the provisions of this Agreement. Interest shall not be charged on any disputed invoice item finally resolved in Owner's favor. Payment of interest shall not excuse or cure any default or delay in payment of amounts due.

ARTICLE 5 - OWNER'S RESPONSIBILITIES

Owner shall at such times as may be required by Engineer for the successful and expeditious completion of the Services:

5.1 Obtain all permits and licenses required to be taken out in the name of Owner which are necessary for the performance of the Services;

5.2 Provide Engineer with all specifications necessary for the completion of the Services;

5.3 Provide Engineer with soil data evidencing that the site is clean and free of above ground and underground obstructions, fissures, faults and other similarly hidden features which will interfere with the completion of the Services;

5.4 Advise Engineer of the existence and undertake the abatement and disposal of all hazardous materials, including, but not limited to, asbestos, polychlorinated biphenyls (PCBs) and radioactive material and other toxic substances, encountered by Engineer in the performance of the Services to the extent required to allow performance of the services; and

5.5 Appoint an individual who shall be authorized to act on behalf of Owner, with whom Engineer may consult at all reasonable times, and whose instructions, requests, and decisions will be binding upon Owner as to all matters pertaining to this Agreement and the performance of the parties hereunder.

ARTICLE 6 - STANDARD OF CARE

Engineer shall exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily possessed and exercised by a professional engineer under similar circumstances. ***NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS INCLUDED IN THIS AGREEMENT OR IN ANY DRAWING, SPECIFICATION, REPORT, OR OPINION PRODUCED PURSUANT TO THIS AGREEMENT.***

ARTICLE 7 - LIABILITY AND INDEMNIFICATION

7.1 General. Having considered the potential liabilities that may exist during the performance of the Services, the benefits of the Project, and the Engineer's fee for the Services, and in consideration of the promises contained in this Agreement, Owner and Engineer agree to allocate and limit such liabilities in accordance with this Article. Indemnities against, releases from, and limitations on liability expressed in this Agreement shall apply even in the event of the breach of contract or warranty, tort (including negligence), strict liability or other basis of legal liability of the party indemnified or released, or of the party whose liability is limited. Such indemnities, releases, and limitations shall extend to the partners, licensors, subcontractors, vendors and related entities of such party, and all such parties' directors, officers, shareholders, employees, and agents.

7.2 Indemnification. To the fullest extent permitted by law, Engineer will indemnify, and hold harmless the Owner against damages, liabilities, and costs, including any and all outlay and expense connected therewith, and for any damages which may be asserted, claimed or recovered against or from the Owner by reason of personal injury, including bodily injury or death, and property damages, including loss of use thereof, which arises out of or results from Engineer's negligent acts, errors or omissions which are connected with the work and/or services provided by Engineer to the Owner pursuant to the provisions of this contract. It is the intention of the parties that the Owner shall not be liable or in any way responsible for injury, damage, liability, loss or expense incurred by Engineer, its officers, employees, subcontractors, and others affiliated with Engineer due to accidents, mishaps, misconduct, negligence or injuries either in person or property resulting from the work performed by, or the negligent acts, errors or omissions of Engineer.

7.3 Engineer will indemnify Owner for any and all damage or injuries which may result to any person or property by reason of Engineer's negligent acts, errors or omissions in connection with the work and/or services provided by Engineer to the Owner pursuant to this contract, and agrees to indemnify the Owner for all damages caused to the Owner premises resulting from the negligent acts, errors, or omissions of Engineer.

7.4 Engineer represents that its activities pursuant to the provisions of this contract will be performed and supervised by adequately trained and qualified personnel, and Engineer will observe, and cause its officers, employees, subcontractors, sub-consultants, and others affiliated with Engineer to observe all applicable safety rules.

7.5 The requirements of any party to this agreement to indemnify another party shall not include the obligation to indemnify, hold harmless, or defend any other part to the agreement, including the indemnitee's employees, consultants, agents, or others for whom the indemnitee is responsible, against liability, claims, damages, losses or expenses, including attorney fees, to the extent caused by or resulting from the negligent act or omission of the indemnitee or of the indemnitee's employees, consultants, agents, or others for whom the indemnitee is responsible. This limitation does not apply to an insurer's obligation to its insureds under any insurance policy or agreement, or any obligation of strict liability otherwise imposed by law.

7.6 For purposes of Article 7, the term “Engineer” means and includes the Engineer, its officers, agents, employees, subcontractors, and others affiliated with Engineer, and the term “Owner” means and includes the Water Works, its trustees, employees, volunteers, and others working on behalf of the Owner.

7.7 Consequential Damages. Notwithstanding any provision in this Agreement to the contrary, and to the fullest extent permitted by law, Engineer (including any of its related or affiliated companies) shall not be liable to Owner and Owner expressly waives all claims for loss of profits, revenue, use, opportunity, and goodwill; cost of substitute facilities, goods, and services; cost of capital; increased operating costs; and for any special, indirect, incidental, consequential, punitive, or exemplary damages resulting in any way from the performance or non-performance of the Services whether arising under breach of contract or warranty, tort (including negligence), indemnity, strict liability or other basis of legal liability.

7.8 Limitations of Liability. To the fullest extent permitted by law, Engineer's (including any of its related or affiliated companies) total liability to Owner for all claims, losses, damages, and expenses, whether arising under breach of contract or warranty, tort (including negligence), indemnity, strict liability or any other basis of legal liability, resulting in any way from the performance or non-performance of the Services shall not exceed \$5,700,000.

7.9 Survival. Upon completion of all Services, obligations, and duties provided for in this Agreement, or if this Agreement is terminated for any reason whatsoever, the terms and conditions of this Article shall survive.

ARTICLE 8 – INSURANCE

During the performance of the Services under this Agreement, Engineer shall maintain the following insurance:

A. General.

The Engineer shall purchase and maintain insurance to protect the Engineer and Owner throughout the duration of the Professional Services Agreement. All certificates of insurance shall be written by companies which hold an AM Best A-VII rating or higher and are licensed to do business in the state of Iowa. The selected companies must be satisfactory to the Owner. Each certificate of insurance shall state that thirty (30) days written notice will be given to the Owner before the policy is canceled. All certificates of insurance shall be delivered to the Owner prior to start of work.

B. Required Coverage. The Engineer shall purchase and maintain insurance which will protect the Engineer from the following type of claims:

- a. Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- b. Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- c. Claims for damages, insured by usual personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Engineer, or (2) by any other person;
- d. Claims for damages, other than to the work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- e. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle; and,
- f. Claims under workers' compensation, disability benefit, and other similar employee benefit acts.
- g. Claims arising out of the Engineer and any sub-consultant's professional services provided as part of the Professional Services Agreement.

Protection shall be provided whether the claim results from operations of the CONSULTANT, his subcontractors, employees of any of them, or anyone for whose acts any of them may be liable.

C.Limits. Policies for the insurance required for worker's compensation, disability benefit, and other similar employee benefit acts shall be written for the limits of liability specified as follows:

a. General Liability (including contractual, independent contractors, personal injury underground explosion and collapse hazards):

- i. Listing Owner as Additional Insured on a primary and non-contributory basis.
- ii. \$1,000,000 Per Occurrence.
- iii. \$2,000,000 Aggregate Per Project, endorsement to be included.

b. Automobile Liability (including all owned, non-owned, and hired automobiles):

- i. Listing Owner as Additional Insured.
- ii. \$1,000,000 Combined Single Limit.

c. Professional Liability Insurance, with a limit of \$2,000,000 per claim and in the aggregate.

d. Workers' Compensation Coverage B – Statutory Benefits:

\$100,000/\$500,000/\$100,000.

e. Umbrella Liability (applying directly in excess of above liability coverages):

\$5,000,000 Aggregate; \$5,000,000 per Occurrence.

D.Engineer's Liability Insurance. Engineer's liability insurance shall provide usual and customary exclusions, and shall include at a minimum full coverage for Engineer's indemnity obligations as provided herein and shall be in a form satisfactory to the Owner.

Additional Insured Endorsement shall apply to all liability policies except Workers' Compensation and Professional Liability insurance.

Additional insured endorsement shall be provided with the certificate of insurance naming the Owner, their employees, and their representatives as additional insured.

- E. Engineer's Insurance for Other Losses. The Engineer shall maintain insurance to cover all loss or damage to any tools, machinery, equipment, or motor vehicles, used for the work of the Professional Services Agreement, by the Engineer, his subcontractors, material men or employees of any of them.
- F. Notification in Event of Liability or Damage. The Engineer shall immediately notify the Owner in writing, upon the occurrence of any event covered by this Article. This notice shall describe the event, give the cause, as far as it can be determined, provide an estimate of loss or damage, list the witnesses, if any, and state the amount of any claim.
- G. Cancellation Endorsement. Thirty (30) days advance written notice of cancellation, non-renewal, and ten (10) days written notice of non-payment of premium shall be sent to:

Des Moines Water Works
Attn: Nathan W. Casey, P.E.
Engineering Department
2201 George Flagg Parkway
Des Moines, Iowa 50321-1190

This endorsement supersedes the standard cancellation statement on the certificate of insurance to which this endorsement is attached.

- H. Proof of Insurance. The Engineer shall provide to Owner a Certificate(s) of Insurance evidencing all required insurance coverage above utilizing the latest version of the ACORD form.
- I. Waiver of Subrogation. Waiver of subrogation by Engineer's carriers is required, except for Professional Liability.

Engineer shall, upon written request, furnish Owner certificates of insurance which shall include a provision that such insurance shall not be canceled without at least thirty days' written notice to

Owner. If Owner purchases, or causes a contractor to purchase, a builders' risk or other property insurance policy for the Project, Owner shall require that Engineer be included as a named insured on such policy without liability for the payment of premiums.

Owner assumes sole responsibility and waives all rights and claims against Engineer for all loss of or damage to property owned by or in the custody of Owner and any items at the job site or in transit thereto (including, but not limited to, construction work in progress), however such loss or damage shall occur, including the fault or negligence of Engineer. Owner shall require its insurers to waive all rights of subrogation against Engineer for claims covered under any property insurance that Owner may carry.

Owner shall require all Project contractors under contract with Owner to include Owner and Engineer as additional insureds on their general, automobile, excess, and umbrella liability insurance policies. Further, Owner shall obtain and maintain for the benefit of Engineer the same indemnities, waivers of subrogation rights and insurance benefits obtained for the protection of the Owner from any construction contractor and subcontractor working on the Project and shall obtain from that contractor and subcontractor insurance certificates evidencing the required coverages.

ARTICLE 9 - LIMITATIONS OF RESPONSIBILITY

Engineer shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project; (2) the failure of any contractor, subcontractor, vendor, or other Project participant, not under contract to Engineer, to fulfill contractual responsibilities to the Owner or to comply with federal, state, or local laws, regulations, and codes; or (3) procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Attachment A, Scope of Services.

ARTICLE 10 - OPINIONS OF COST AND SCHEDULE

Since Engineer has no control over the cost of labor, materials, or equipment furnished by others not under contract to Engineer, or over the resources provided by others not under contract to Engineer to meet Project schedules, Engineer's opinion of probable costs and of project schedules for construction shall be made on the basis of experience and qualifications as a professional engineer. Engineer does not guarantee that proposals, bids, or actual Project costs will not vary from Engineer's opinions of probable cost or that actual schedules will not vary from Engineer's projected schedules.

ARTICLE 11 - REUSE OF DOCUMENTS

All documents, including, but not limited to, drawings, specifications, and computer software prepared by Engineer pursuant to this Agreement are instruments of service in respect to the Project. They 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 prior 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. Owner shall defend, indemnify, and hold harmless Engineer against all claims, losses, damages, injuries, and expenses, including attorneys' fees, arising out of or resulting from such reuse. Any verification or adaptation of documents will entitle Engineer to additional compensation at rates to be agreed upon by Owner and Engineer.

Any files delivered in electronic media may not work on systems and software different than those with which they were originally produced. Engineer makes no warranty as to the compatibility of these files with any other system or software. Because of the potential degradation of electronic medium over time, in the event of a conflict between the sealed original drawings/hard copies and the electronic files, the sealed drawings/hard copies will govern.

ARTICLE 12 - OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Owner shall own and have unlimited rights to copy and use all project specific documents, including, but not limited to, drawings, specifications, and computer software provided by Engineer. Owner shall own all copyrights to the work products that are provided by Engineer under the Professional Services Agreement. All work provided to Owner shall be considered

work for hire under the United States Copyright Act and, at all stages of development, shall be and remain the sole and exclusive property of the Owner. Engineer shall, however, retain its rights in its standard drawing details, specifications, data bases, computer software, and other proprietary property.

ARTICLE 13 – TERMINATION

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

Owner may terminate or suspend performance of this Agreement for Owner's convenience upon written notice to Engineer. Engineer shall terminate or suspend performance of the Services on a schedule acceptable to Owner. If termination or suspension is for Owner's convenience, Owner shall pay Engineer for all the Services performed and termination or suspension expenses, including, but not limited to, demobilization, remobilization and cancellation charges. Upon restart, an equitable adjustment shall be made to Engineer's compensation.

ARTICLE 14 - DELAY IN PERFORMANCE

Except for Owner's payment obligation, neither Owner nor Engineer shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include, but are not limited to: unusually severe weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either Owner or Engineer under this Agreement.

Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume

performance of this Agreement. Engineer shall be entitled to an equitable adjustment in schedule and compensation in the event such circumstances occur.

ARTICLE 15 - PRE-EXISTING CONTAMINATION

Anything herein to the contrary notwithstanding, title to, ownership of, and legal responsibility and liability for any and all pre-existing contamination shall at all times remain with Owner. "Pre-existing contamination" is any hazardous or toxic substance, material, or condition present at the Project site or sites concerned which was not brought onto such site or sites by Engineer for the exclusive benefit of Engineer. Owner shall release, defend, indemnify, and hold Engineer harmless from and against any and all liability which may in any manner arise from or be in any way directly or indirectly caused by such pre-existing contamination except if, and then only to the extent, such liability is caused by Engineer's sole negligence or willful misconduct.

ARTICLE 16 – COMMUNICATIONS

Any communication required by this Agreement shall be made in writing to the address specified below:

Engineer:

Black & Veatch Corporation

Attn. Mr. Patrick A. O'Neill, P.E.

8400 Ward Parkway

Kansas City, Missouri 64114

Owner:

Board of Water Works Trustees of the City of Des Moines, Iowa

Attn: Engineering Services Manager

2201 George Flagg Parkway

Des Moines, Iowa 50321

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of Engineer and Owner.

ARTICLE 17 – WAIVER

A waiver by either Owner or Engineer of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

ARTICLE 18 – SEVERABILITY

The invalidity, illegality, or unenforceability of any provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any void provision shall be deemed severed from this Agreement, and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Article shall not prevent this entire Agreement from being void should a provision which is of the essence of this Agreement be determined void.

ARTICLE 19 – INTEGRATION

This Agreement represents the entire and integrated agreement between Owner and Engineer. It supersedes all prior and contemporaneous communications, representations, and agreements, whether oral or written, relating to the subject matter of this Agreement. This Agreement may only be modified by a written amendment executed by both parties.

ARTICLE 20 - SUCCESSORS AND ASSIGNS

Owner and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns, and legal representatives to the other party to this Agreement and to the directors, officers, partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all provisions of this Agreement.

ARTICLE 21 – ASSIGNMENT

Neither Owner nor Engineer shall assign any rights or duties under this Agreement without the prior written consent of the other party, except that Engineer may do so to any of its related, affiliated, or successor entities upon written notice to Owner of same. Unless otherwise stated in the written consent to an assignment, no assignment will release or discharge the assignor from any obligation under this Agreement. Nothing contained in this Article shall prevent Engineer from employing independent consultants, associates, and subcontractors to assist in the performance of the Services.

ARTICLE 22 - THIRD PARTY RIGHTS


Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than Owner and Engineer.

IN WITNESS WHEREOF, Owner and Engineer have executed this Agreement effective as of the date first written above.

Des Moines Water Works
OWNER

Black & Veatch Corporation
ENGINEER

By _____

By  _____

Printed Name William G. Stowe

Printed Name Patrick O'Neill

Title CEO & General Manager

Title Associate Vice President

Date _____

Date 9/28/2017

**ATTACHMENT A
To
AGREEMENT FOR ENGINEERING SERVICES**

**SCOPE OF SERVICES
For
CRYSTAL LAKE INTAKES AND PUMPING STATION**

Engineer agrees to perform certain engineering services in connection with the Crystal Lake Intakes and Pumping Station project, as recommended in the Preliminary Design Report. The project is generally defined as:

- A new retrievable intake on the Raccoon River (not including any improvements to the river, such as a bendway weir, to direct water to the intake).
- A new intake tower on Crystal Lake.
- A new pumping station to convey flows to the settling basin and to the WTP.
- A new sedimentation basin for settling of river solids prior to flowing into Crystal Lake.

These services include the services defined in this Attachment A - Scope of Services, Design and Bidding Assistance, as follows:

PHASE 1 - PRELIMINARY DESIGN

A. Preliminary and General Work

1. Conduct a project initiation meeting to clarify Owner's requirements for the project; review available data and project organization and staffing; and present initial work plan and schedule.
2. Contact regulatory agencies concerning the project to determine their requirements. Communicate findings to Owner.
3. Conduct a site visit to inspect the existing facilities for coordination with the design of the proposed facilities.

B. Design Memorandum

1. Prepare a detailed design memorandum and preliminary drawings as required to establish agreement on scope, parameters, performance requirements, and project schedule and approach. The memorandum will include a project description and the facility design criteria. Submit three copies to Owner for review.
2. Meet with Owner and obtain Owner's comments on the design memorandum and preliminary drawings. Resolve any questions, revise documents if necessary, and resubmit three copies to Owner.

3. Submit Design Memorandum to the Iowa Department of Natural Resources (IDNR) for review and comment.
4. Receive comments from IDNR and revise Design Memorandum if necessary. Submit final Design Memorandum to IDNR.

C. Hydraulic Modeling

1. Perform 2D hydraulic modeling of the Raccoon River in the vicinity of the intake to determine the optimal location for the new intake on the river.
2. Conduct HEC-RAS hydraulic modeling to assess the impact on the backwater curve during a flood event.

D. Bathymetric Survey

1. Perform, through a subcontract, a bathymetric survey of the Raccoon River in the vicinity of the intake.

PHASE 2 – DESIGN AND CONSTRUCTION CONTRACT DOCUMENTS

A. Preliminary and General Items

1. Conduct periodic conference calls with Owner to review progress and exchange ideas and information. Prepare and distribute notes for these conference calls.
2. Communicate with regulatory agencies and reach an understanding on design objectives and performance requirements.

B. Permits Acquisition

1. Provide assistance to Owner in obtaining permits from Federal, State, and local agencies, including the following:
 - a. Iowa Department of Natural Resources (IDNR)
 - Public Drinking Water Construction Permit
 - Flood Plain Permit
 - b. U.S. Army Corps of Engineers (USACE)
 - Section 404 Permit
 - Section 401 Permit
 - Section 10 Permit
 - Section 408 Clearance
 - c. Federal Emergency Management Agency (FEMA)
 - No-rise Certification

2. Contractor will be responsible for obtaining IDNR NPDES Storm Water Permit, obtaining the services of a firm to prepare and submit the Storm Water Pollution Prevention Plan (SWPPP), and obtaining any local county permits.

C. Construction Contract Documents

1. Prepare detailed drawings and specifications for the proposed construction work and for the materials and equipment required.
2. Prepare an opinion of probable construction cost (OPCC) for the proposed work covered by the contract documents. An OPCC will be prepared at the 50 percent, 90 percent, and 100 percent completion milestones.
3. Review contract documents for completeness, bidability, and constructability.
4. Provide Owner four (4) hard copies and one (1) electronic copy of the drawings and specifications for review at the 50 and 90 percent stages of project completion.
5. Meet with Owner after documents have been reviewed to discuss comments and to resolve any questions. A total of two meetings are anticipated.
6. After the 90 percent review meeting with Owner, make any necessary modifications and submit revised contract documents to the regulatory agencies for review and to Owner for record purposes.
7. Upon completion of the review of the contract documents, review the opinion of probable construction cost, and revise as required.
8. Prepare Bidding Requirements, Bid Forms, Contract Forms, and Conditions of Contract for the construction contract documents. Owner's standard front-end documents will be used and incorporated with Engineer's technical specifications.

SUPPLEMENTAL SERVICES

If agreed to by the Owner and Engineer, we will provide Supplemental Services related to the Project. Supplemental Services are those not included as part of the Scope of Services above and shall be paid for by the Owner in addition to payment for the Scope of Services, in accordance with Engineer's prevailing fee schedule, in effect at the time that such services are rendered, or as otherwise agreed to by the Owner and Engineer.

A. Permitting

1. Additional permits not listed in the Scope of Services, including, but not limited to Water Rights and Allocation permitting and bendway weir permitting.

B. Environmental

1. Provide a wetland delineation, architectural, cultural and historic resources assessment, mitigation for wetlands, mitigation for threatened or endangered species, Phase I environmental site assessment, USFWS or IDNR threatened and endangered species review, or any other environmental concerns not listed in the Scope of Services.

C. Property Surveys

1. Provide, through a subcontract, field design surveys for the preparation of construction drawings and specifications. Surveys will determine site topography, contours, and insofar as possible, utility locations.

D. Design

1. Design of a bendway weir to direct water into the Raccoon River intake.

E. Bidding Services

1. Assist Owner with bidding phase of the project.

F. Construction Services

1. Assist Owner with construction phase of the project.

ATTACHMENT B
To the
AGREEMENT FOR ENGINEERING SERVICES
For
CRYSTAL LAKE INTAKES AND PUMPING STATION

COMPENSATION

For the services covered by this Agreement, Owner agrees to pay Engineer as follows:

1. Billing Limit - The maximum amount billed for this service shall not exceed Six Hundred Sixty Eight Thousand Six Hundred Eighty Dollars and No Cents (\$668,680.00) without further authorization.
2. An amount for the actual time billed to the project at the hourly billing rates specified for personnel performing the Services plus reimbursable expenses. The hourly billing rates for the classifications of individuals performing services on the project are as follows:

<u>Job Classification</u>	<u>2018 Hourly Billing Rate</u>
Project Director	\$285
Project Manager	\$260
Project Admin	\$80
Engineering Manager	\$190
Civil Engineer	\$155
Senior Architect	\$195
Architect	\$145
Senior Structural Engineer	\$205
Structural Engineer	\$150
Senior Mechanical Engineer	\$185
Mechanical Engineer	\$160
Senior Electrical Engineer	\$240
Electrical Engineer	\$150
Electrical Technician	\$115
Senior I&C Engineer	\$160
I&C Engineer	\$120
I&C Technician	\$120
Senior Water Resources Engineer	\$180
Water Resources Engineer	\$100
Environmental Scientist	\$130
Geotechnical Engineer	\$150
Senior Technician	\$135
Technician	\$120

<u>Job Classification</u>	<u>2018 Hourly Billing Rate</u>
Estimator	\$150
Quality Control Engineer	\$175
Senior Process Engineer	\$240
Process Engineer	\$220
Pump Specialist	\$180
Construction Engineer	\$125

Such billing rates shall be adjusted effective January 1 of each successive year during the term of this Agreement

ATTACHMENT C
To the
AGREEMENT FOR ENGINEERING SERVICES
For
CRYSTAL LAKE INTAKES AND PUMPING STATION

OWNER'S RESPONSIBILITIES

The Owner will furnish, as required by the work and not at the expense of the Engineer, the following items:

1. Existing property, boundary, easement, right-of-way, and utility surveys, and property descriptions when such information is required, unless acquired directly by the Engineer through subcontracted services.
2. All maps, drawings, reports, records, audits, annual reports, and other data that are available in the files of the Owner and which may be useful in the work involved under this Agreement.
3. All of Owner's requirements for the project, including but not limited to, schedule milestones; any financial constraints; and any Owner criteria, standards, design objectives or design constraints.
4. Assistance of the Owner's staff as required in performance of Engineer's services.
5. Access to public and private property when required in performance of the Engineer's services.
6. Obtaining required easements and rights-of-way and property appraisals with engineering assistance provided by the Engineer.
7. Royalties and fees for patented processes used in the work, except those required to be paid by construction contractors as part of the construction contract.
8. Shop, mill, or laboratory inspection of materials, laboratory and field testing, and field sampling services. The Engineer will review the reports furnished by such laboratories which are required for the construction contract.
9. Permits required for the projects with engineering assistance provided by the Engineer.

10. Payments for review of permits, drawings, and specifications by governmental agencies.
11. Payments for special consultants requested by the Owner.