CONTRACT DOCUMENTS
AND
DETAILED SPECIFICATIONS

TREATMENT PLANT UPGRADES FOR PFAS REDUCTION IN DRINKING WATER

AT BRITTANY DRIVE (CONTRACT A)
&
MAULDIN ROAD (CONTRACT B)

THROUGH THE COLLABORATIVE DELIVERY METHOD (CMAR)

FOR THE

CITY OF CALHOUN

JUNE 2026

C&S PROJECT NO.: C1075.004 & C1075.005

RELEASES

A	**REQUEST FOR QUALIFICATIONS AND PROPOSALS**	**JUNE 2026**

See Section 00 01 07, Design Professional Seals,
for delineation of Licensed Engineers'/Architects' responsibilities

PREPARED BY



Carter & Sloope
CONSULTING ENGINEERS

115 WOODLAND WAY, SUITE 120, CANTON, GA 30114
PHONE: (770) 479-8782

CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS

TREATMENT PLANT UPGRADES FOR PFAS REDUCTION IN DRINKING WATER

AT BRITTANY DRIVE (CONTRACT A)
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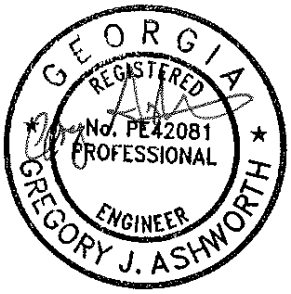
JUNE 2026

C&S PROJECT NO.: C1075.004 & C1075.005

CARTER AND SLOOPE, INC.
115 Woodland Way, Suite 120
Canton, GA 30114
(770) 479-8782

SECTION 00 01 07
DESIGN PROFESSIONAL SEALS

Part 1 – Gregory J. Ashworth, P.E.

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00 01 07	Seals Page	 Carter & Sloope, Inc. 115 Woodland Way, Ste. 120 Canton, GA 30114 770-479-8782 – tel. GA COA License #: PEF001004 Expires: 6/30/2028
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SECTION 00 11 14.08
REQUEST FOR QUALIFICATIONS ADVERTISEMENT

ADVERTISEMENT OF REQUEST FOR QUALIFICATIONS AND PROPOSALS

CITY OF CALHOUN
GORDON COUNTY, GEORGIA

TREATMENT PLANT UPGRADES FOR PFAS REDUCTION IN DRINKING WATER AT BRITTANY DRIVE (CONTRACT A) & MAULDIN ROAD (CONTRACT B) THROUGH THE COLLABORATIVE DELIVERY METHOD (CMAR)

General Notice

The City of Calhoun (Owner) will be requesting Statements of Qualifications and Proposals from Construction Manager at Risk (CMAR) organizations (Proposers) for the construction of the following Projects, and for related pre-construction and procurement CMAR services:

BRITTANY DRIVE WTP IMPROVEMENTS – CONTRACT A
C&S Project No.: C1075.004

&

MAULDIN ROAD WTP IMPROVEMENTS – CONTRACT B
C&S Project No.: C1075.005

Owner will receive Statements of Qualifications and cost proposals demonstrating the Proposer's qualifications and ability to provide CMAR services and construct one or both projects at Calhoun Utilities, 700 West Line St., Calhoun, GA 30701, until Thursday, July 30, 2026 at 10:00 a.m. local time. After that time, Owner will no longer accept Statements of Qualifications and Cost Proposals. See Requests for Qualifications and Requests for Proposals for details on preparing and submitting the Statement of Qualifications and Cost Proposals.

The CMAR Contract will include the following services and Work for **Contract A**:

- Construction of a new 12.8 MGD (hydraulically designed for an ultimate capacity of 18 MGD) reverse osmosis (RO) treatment facility for PFAS reduction, including:
    - MF Membranes
    - RO Membranes
    - Clean In Place (CIP) Equipment
    - Chemical Feed System(s)
    - Chemical Storage Area(s)
    - Integrated SCADA System with Remote Access Controls
    - New Building with:
        - Overhead Industrial Hoist System
        - Large Bay Doors
        - Climate Control w/ Humidity Control

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        - Operations Space (w/ Workstations for Operators, SCADA, etc.)
        - Laboratory Space (w/ Space for Testing Equipment (Owner Provided), Sinks, Sampling Equipment, etc.)
        - Maintenance and Storage Areas
        - Offices
        - Meeting Room
        - Break Room
        - Restroom/Locker Room Facilities
        - Electrical Room
        - Mechanical Room
    - Backwash Recovery System
    - Waste Stream Processing Facility, including Clarification, Thickening, and Dewatering
    - New Filters for filtration of all liquid waste streams prior to discharge
    - PFAS Removal treatment of waste stream
- Other site and yard piping improvements as necessary for a complete and functional project including connection to existing facilities and system, paving, grading, drainage, storm water detention (if required), yard piping, and site lighting.

The CMAR Contract will include the following services and Work for **Contract B**:

- Construction of a new 18MGD (hydraulically designed for an ultimate capacity of 24MGD) reverse Osmosis (RO) treatment facility for PFAS reduction, including:
    - MF Membranes (Located in New Building)
    - RO Membranes (Located in New Building)
    - Clean In Place (CIP) Equipment (Located in New Building)
    - Chemical Feed System(s) (Located in New Building)
    - Integrated SCADA System with Remote Access Controls
    - New Building with
        - Overhead Industrial Hoist System
        - Large Bay Doors
        - Climate Control w/ Humidity Control
        - Operations Space (w/ Workstations for Operators, SCADA, etc.)
        - Laboratory Space (w/ Space for Testing Equipment (Owner Provided), Sinks, Sampling Equipment, etc.)
        - Maintenance and Storage Areas
        - Offices
        - Meeting Room

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        - Break Room
        - Restroom/Locker Room Facilities
        - Electrical Room
        - Mechanical Room
    - Backwash Recovery System
    - Waste Stream Processing Facility, including Clarification, Thickening, and Dewatering
    - New Filters for filtration of all liquid waste streams prior to discharge
    - PFAS Removal treatment of waste stream
    - Hydraulic improvement issues within the existing treatment system
    - New Clearwell(s)
    - New Finished Water Pump Station
- Other site and yard piping improvements as necessary for a complete and functional project including connection to existing facilities and system, paving, grading, drainage, storm water detention (if required), yard piping, and site lighting.

The pre-construction and procurement services of the CMAR Contract has an expected start date of October 2026 and an estimated duration of pre-construction and procurement services of 300 days. The Notice to Proceed for construction is expected to occur October 2027 with a duration of 920 days. Final completion of the project is expected to be April 2030.

Obtaining the Proposal Documents

Project Information and Proposal Documents for the CMAR Contract can be found at the following designated website:

www.QuestCDN.com

Quest Number: 10233316

The Proposal Documents are available to view for free at the designated website. The fee to download the digital documents is $50.00 payable through the website. An SOQ will not be considered by the Owner unless the Bidder is on record as having purchased and received complete RFQ/SOQ documents.

All prospective Proposers are required to register with the designated website as an interested party, even if the Proposer has obtained the Proposal Documents from a source other than the designated website.

Neither Owner, Owner's Advisor, nor Engineer will be responsible for Proposal Documents, including addenda, if any, obtained from sources other than QuestCDN.com.

Information Conference

An Information Conference regarding the CMAR Contract and CMAR selection process will be held on Thursday, July 9, 2026 at 9:00 a.m. at Calhoun Utilities, 700 West Line St., Calhoun, GA 30701. **Attendance at the Information Conference is mandatory**.

Two-Step Process

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Selection of the Construction Manager at Risk (CMAR) will be made using a two-step process.

Step One: The Owner will receive Statements of Qualifications and Cost Proposals from interested Proposers. The Owner may decide to hold virtual interviews with all Proposers to clarify any potential questions regarding information provided in the SOQs. Please hold July 31, 2026 in your calendars for virtual interviews. Time slots for interviews will be sent out after the pre-bid information conference. The SOQs and Cost Proposals will be evaluated independently and scored based on established criteria.

Proposers shall submit one (1) SOQ addressing the Proposer's overall qualifications for delivery of the Project(s). The Owner intends to evaluate qualifications through a single SOQ submission applicable to both projects.

Proposers shall submit cost proposals for:

a. Contract A only,

b. Contract B only, and/or

c. Contract A and Contract B combined.

Submission of proposals for Contract A and Contract B only, without submission of a combined Contract A + Contract B proposal, will be interpreted by the Owner as the Proposer not seeking consideration for award of both projects to a single CMAR contract. The Owner reserves the right to award Contract A and Contract B separately to different Proposers, award both projects to a single Proposer, reject any or all proposals, or make such award(s) as determined to be in the Owner's best interest.

The combined scores will be used to develop a list of qualified, responsive Proposers. These shortlisted Proposers will be invited to participate in Step Two interviews.

Step Two: The shortlisted Proposers will be invited to participate in an interview, which will also be scored. The scores from Step One and Step Two will be combined to determine the final ranking of Proposers for award of the CMAR Contract.

Under the two-step process the selection of the Construction Manager at Risk will be made using the following selection criteria and scoring:

Satisfactory/Unsatisfactory Criteria:

Criterion	Description	Point Value
1	All addenda downloaded and acknowledged	Satisfactory/Unsatisfactory
2	Submission follows format & content requirements	Satisfactory/Unsatisfactory
3	Provides information on at least 5 similar projects completed by Proposer's team	Satisfactory/Unsatisfactory
4	Utility Contractor License	Satisfactory/Unsatisfactory
5	Debarment Status	Satisfactory/Unsatisfactory

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Weighted Criteria:

Criterion	Description	Weighting Value (Points)
A	Experience and Past Performance of Proposer on CMAR Projects	**10**
B	Experience and Past Performance of Proposer on Water/Wastewater & References	**25**
C	Experience and Qualifications of Proposed Key Personnel	**15**
D	Local Participation	**5**
E	Financial Capacity & Current Project Commitments	**20**
F	CMAR Preconstruction and Procurement Services	**3**
G	CMAR Construction Services	**22**
	Subtotal Points	**100**
H	Proposer's Approach to the Project/Construction Schedule/Interview	**20**
	Total Points	**120**

Proposal Documents

Details regarding the selection criteria and the selection process are included in the Request for Qualifications (CMAR-200) and the Request for Proposals (CMAR-400). Refer to the Proposal Documents for all further requirements regarding Statements of Qualifications, Proposals, CMAR selection, and other Proposal submittals, qualifications, and procedures. Please contact Greg Ashworth, P.E., Carter & Sloope, Inc. (gashworth@cartersloope.com) or Chrissy Garrison, Carter & Sloope, Inc. (cgarrison@cartersloope.com) with questions related to proposal documents and project scope.

This Advertisement is issued by:

Owner: City of Calhoun
By: Mr. Erik Henson
Title: Water and Wastewater Director

EJCDC® CMAR-111, Advertisement of Request for Qualifications—Construction Manager at Risk Series.
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SECTION 00 11 19.08
REQUEST FOR PROPOSALS

REQUEST FOR PROPOSALS
CONSTRUCTION MANAGER AT RISK SERIES

ARTICLE 1—REQUEST FOR PROPOSALS

1.01 The City of Calhoun (Owner) requests that all interested parties planning to submit a Statement of Qualifications also submit a Proposal.

1.02 As of the date of this Request for Proposals, Owner has not requested Proposals from any other prospective Construction Managers at Risk.

1.03 Owner reserves the right to amend this Request for Proposals based on new information or other relevant factors.

1.04 Consideration will be given to CMAR Services cost and CMAR Compensation cost in determining the Proposer to which an award of the CMAR Contract will be made.

ARTICLE 2—EXAMINATION OF THE PROPOSAL DOCUMENTS

2.01 In preparing the Proposal, each Proposer must thoroughly examine the Proposal Documents made available to all prospective Proposers; all duly issued Addenda; and all supplemental Proposal Documents listed in Paragraph 1.04 of the RFQ.

ARTICLE 3—COMPENSATION FOR CMAR SERVICES

3.01 CMAR Services

A. Each Proposer must provide a price for providing Basic CMAR Services as **described in EJCDC® CMAR-525, Agreement between Owner and Construction Manager at Risk (2023), Exhibit A—Scope of CMAR Services** **and defined in CMAR-700, Section 1.01.9. CMAR Services are capped at a maximum of $3,500,000 for Contract A. CMAR Services are capped at a maximum of $5,000,000 for Contract B.**

B. CMAR Additional Services—Compensation for CMAR Additional Services, if authorized by the Owner, as described in EJCDC® CMAR-525, Agreement between Owner and Construction Manager at Risk (2023), Exhibit A—Scope of CMAR Services, will be based on hourly Billing Rates set forth in the Proposal.

C. CMAR Special Services—Compensation for CMAR Special Services, if authorized by a Contract Amendment issued by the Owner, will be set forth in the Contract Amendment for these services. Price will be based on hourly Billing Rates set forth in the Proposal. The amount for the Contingency Allowance for CMAR Special Services presented in the Proposal is determined by multiplying the percentage prescribed for CMAR Special Services in the Proposal times the sum of the prices for Basic CMAR Services and Additional CMAR Services.

D. Hourly rates for providing CMAR Services are to include all costs, expenses, overhead, profit and mark-ups associated with providing these services. The Proposal will indicate whether the price requested by Owner is a lump sum amount for the Preconstruction Basic and Additional Services, or a not-to-exceed (maximum) amount for such services. Compensation will be based on the hours proposed for each task and the offered hourly Billing Rates indicated in the Proposal.

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ARTICLE 4—CMAR COMPENSATION

4.01 Consideration of CMAR Compensation Costs and other Factors

A. Owner will consider the following factors:

1. Construction Support Costs as described in Paragraph 4.02.

2. The CMAR Fee as described in Paragraph 4.03.

3. CMAR Contingency Allowance as described in Paragraph 4.04.

B. In addition to the CMAR Compensation costs, the Owner will consider the qualifications of each Proposer, the research and investigation into information presented in the Statement of Qualifications conducted by Owner and its representatives; and information from interviews, all as more thoroughly described in the RFQ.

4.02 Construction Support Costs

A. Construction Support Costs (sometimes referred to as "General Conditions" costs) are those costs associated with or in support of the construction of the Work, but not directly related to specific construction tasks and activities such as furnishing and installing materials and equipment (such specific tasks and activities are Costs of the Work, as defined in the Agreement, Article 8, and are compensated separately from Construction Support Costs).

B. CMAR is to propose prices for Construction Support Costs as follows:

1. Fixed Construction Support Costs—The fixed costs are Construction Support Costs that are one-time expenditures and do not vary with Project duration. **The cost for bonds, general liability insurance, builders risk insurance, and subcontractor default insurance (if used in lieu of subcontractor bonds) should be included in Fixed Construction Support Costs as lump sums. If the "cost of work" is different from the nominal value in the Proposal, then bonds and insurance will be adjusted proportionally to the amount in the Bid Form.** The detailed tabulation of Fixed Construction Support Cost is to be included in the Proposal, Table-3. Proposer will state a stipulated price (lump sum amount) as full compensation for all fixed Construction Support Costs.

2. Time Sensitive Construction Support Costs— The Time Sensitive Construction Support Costs are those Construction Support Costs that will vary with the Project duration. Proposer will determine a stipulated price (lump sum amount) for Time Sensitive Construction Support Costs based on the Project duration stated in the Proposal form. The detailed tabulation of time variable Construction Services Cost is shown in the Proposal Exhibit A, Table-4.

3. Construction Support Cost Extended Rate—Calculate a daily Construction Support Cost Extended Rate by dividing the stipulated price (lump sum amount) for Time Sensitive Construction Support Costs by the number of days between the date of the Notice to Proceed and the stipulated date for Final Completion in Proposal Exhibit A, Table-1. This rate will be used to determine the amount paid for Time Sensitive Construction Support Costs as compensation for Construction Support Costs for changes in the scope of the Work and compensable delays, if any.

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4.03 CMAR Fee on the Cost of the Work

A. Where indicated in Proposal Exhibit A, Table-1, the Proposer will propose a CMAR Fee. The estimated CMAR Fee will be determined by multiplying the **percentage by a nominal multiplier of $110,000,000 for Contract A and $180,000,000 for Contract B included in Proposal Exhibit A, Table-1.** The actual Construction Manager at Risk's Fee will be determined as a percentage of the actual Cost of the Work and is subject to increases or decreases for changes in the Work.

4.04 Construction Manager at Risk Contingency Allowance

A. Each Proposer will include its proposed CMAR Contingency Allowance in the Proposal form. The CMAR Contingency Allowance will be determined by multiplying the percentage (indicated in the Proposal Exhibit A, Table-1) times the Estimated Cost of the Work when the GMP is set. **For the purposes of scoring the proposals, the percentage provided will be multiplied by a nominal multiplier of $110,000,000 for Contract A and $180,000,000 for Contract B. CMAR Contingency must be a minimum of 2%, but Proposers can include a higher amount of CMAR Contingency based on perceived risk.** Use of the CMAR Contingency allowance is subject to the provisions of Paragraph 8.01 of the Agreement. The percentage assumes that the Design Documents will be at the 90% when the GMP for the project will be set, subject to any increases in the GMP made in accordance with the CMAR Contract. **Design development allowances are not expected to be used if GMP is set at 90% design, unless authorized by Owner. Design development allowances are expected to be used in addition to CMAR contingency allowances if GMP is established before 90%.**

4.05 An Owner's Contingency Allowance may be established by the Owner and included in the Estimated Contract Price. Owner's Contingency Allowance, if any, is used at the sole discretion of the Owner to cover unforeseen cost, Owner directed changes in the scope of the Work, or any other unanticipated change in the Contract Price. These funds can only be accessed by the CMAR when authorized by the Owner by Contract Amendment or Change Order.

ARTICLE 5—TIME OF COMPLETION

5.01 The Project is to be substantially complete and ready for use by **April 2030.**

ARTICLE 6—PROPOSAL SECURITY

6.01 Proposal Security

A. A Proposal must be accompanied by a Proposal Bond in an amount equal to 10% of the estimated contract cost. The Proposal Bond must be issued by the surety that will subsequently provide Performance and Payment Bonds. Use the Proposal Bond form included in the Procurement Documents.

B. The Proposal security of the apparent successful Proposer will be retained until Owner (1) awards the CMAR Contract to such Proposer, and such Proposer enters into the CMAR Contract, and (2) Owner issues the first Work Authorization to the CMAR, and CMAR has signed the Work Authorization and furnished the required Performance and Payment Bonds. If the apparent successful Proposer fails to enter into the CMAR Contract which has been awarded, or CMAR fails to execute and sign the Work Authorization and furnish the required Performance and Payment Bonds within 15 days, then Owner may consider such Proposer

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(CMAR) to be in default and the Proposal security of that Proposer will be forfeited (and when applicable Owner may terminate the CMAR Contract).

C. The Proposal security of other Proposers may be retained by Owner until the apparent successful Proposer has entered into the CMAR Contract. At that point, the Proposal security of the unsuccessful Proposers becomes void.

ARTICLE 7—PREPARATION OF THE PROPOSAL

7.01 Prepare the Proposal using the Proposal form and its Exhibit A that accompanies this Request for Proposals. Electronic versions of the Proposal form and Exhibit, with possible modifications, will be made available to each Proposer.

7.02 Complete each line in the Proposal form and its Exhibit A. Verify that the mathematical calculations are correct.

7.03 Acknowledge the receipt of Addenda in the manner prescribed in Article 1.09 of the RFQ.

7.04 Sign the Proposal in Paragraph 5.01.

7.05 Obtain and include the required Proposal Security in the form of the Proposal Bond.

7.06 Fill out and sign the following documents:

A. 00 45 19 – Non-Collusion Affidavit of Prime Bidder

B. 00 45 20 – Contractor Affidavit and Agreement

C. 00 45 33 – Certification of Nonsegregated Facilities

ARTICLE 8—SUBMITTAL OF PROPOSALS

8.01 The Proposal (Section CMAR-422 and its Exhibit A) is to be completed and submitted with the Proposal Bond (Section CMAR-430).

8.02 Owner will receive sealed Proposals no later than the date and time prescribed and at the place indicated in the advertisement. After that time, Owner will no longer accept Proposals.

8.03 Proposals shall be enclosed in an opaque, sealed envelope, plainly marked with the Project title, the name and address of Proposer, and shall be accompanied by the Proposal Bond. If a Proposal is sent by mail or other delivery system, the sealed envelope containing the Proposal shall be enclosed in a separate envelope plainly marked on the outside with the notation "PROPOSAL ENCLOSED – BRITTANY DRIVE AND MAULDIN ROAD WTP IMPROVEMENTS."

8.04 Owner will receive Proposals in a separate sealed envelope from Statements of Qualifications.

ARTICLE 9—MODIFICATION AND WITHDRAWAL OF PROPOSAL

9.01 An unopened Proposal may be withdrawn by an appropriate document duly executed in the same manner that a Proposal must be executed and delivered to the place where Proposals are to be

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submitted prior to the date and time for the opening of Proposals. Upon receipt of such notice, the unopened Proposal will be returned to the Proposer.

9.02 If a Proposer wishes to modify its Proposal prior to Proposal opening, Proposer must withdraw its initial Proposal in the manner specified in Paragraph 9.01 and submit a new Proposal prior to the date and time for the receipt of Proposals.

9.03 If within 24 hours after Proposals are opened any Proposer files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Proposal, the Proposer may withdraw its Proposal, and the Proposal security will be returned.

ARTICLE 10—OPENING OF PROPOSALS

10.01 Proposals will be opened at the time and place indicated in the Advertisement for Qualifications and Proposals and, unless obviously non-responsive, read aloud publicly.

ARTICLE 11—EVALUATION OF PROPOSALS AND AWARD OF CONTRACT

11.01 Proposals will be evaluated on the basis of the CMAR Services, Construction Support Costs, CMAR Fee, and CMAR Contingency Allowance with points awarded when comparing the offered costs of each Proposer to the lowest amount offered.

11.02 Points awarded on the basis of the CMAR Services, Construction Support Costs, CMAR Fee, and CMAR Contingency Allowance will be added to points awarded from evaluations of the Statements of Qualifications to determine the ranking of Proposers. Points awarded on Qualifications presented may be adjusted based on additional information gained by the Owner when evaluating Proposals.

11.03 Owner reserves the right to reject any or all Proposals, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Proposals. Owner also reserves the right to waive all minor Proposal informalities not involving price, time, or changes in the Work.

ARTICLE 12—NEGOTIATIONS

12.01 Owner may choose to negotiate with the most highly ranked Proposer to clarify and finalize any details related to the Proposal, scope of services, or other factors. If Owner and highest ranked Proposer are unable to reach a mutual agreement, Owner may choose to officially close negotiations with such Proposer and open negotiations with the next most highly ranked Proposer. Once Owner closes negotiations with a Proposer, negotiations cannot be reopened, and the offer of that Proposer will no longer be considered.

ARTICLE 13—ACCEPTANCE PERIOD

13.01 Proposal Acceptance Period

A. This Proposal will remain subject to acceptance for 60 days after the date for receipt of Proposals, or for such longer period that Proposer may agree to in writing upon request of Owner.

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SECTION 00 11 53.08
REQUEST FOR QUALIFICATIONS

REQUEST FOR QUALIFICATIONS—
CONSTRUCTION MANAGER AT RISK SERIES

ARTICLE 1—GENERAL INFORMATION

1.01 Definitions

A. Terms used in the Proposal Documents have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms have the meanings indicated below:

1. Proposal Documents—The Advertisement of Request for Qualifications (Advertisement), Request for Qualifications, Statement of Qualifications, Request for Proposals, Proposal, Proposal Bond, and other documents so designated in Paragraph 1.04.

2. Proposer—A Construction Manager at Risk (CMAR) entity that submits a Statement of Qualifications and, if invited to do so in a two-step selection process, submits a Proposal for the CMAR Contract.

3. Request for Qualifications (RFQ)—The document issued by Owner to prospective Proposers requesting that they submit qualifications and other information to be used by the Owner in ranking Proposers.

4. Statement of Qualifications (SOQ)—The document submitted to Owner by a Proposer in response to the RFQ, including any completed forms, attachments, and exhibits, to demonstrate experience, competence, and ability to successfully perform the CMAR Services and furnish and complete the Work.

5. Request for Proposal (RFP)—The document asking each Proposer to submit a Proposal for providing CMAR Services and furnishing and completing the Work.

6. Proposal—The document submitted to Owner by a Proposer in response to the RFP, including any completed forms, attachments, and exhibits presenting the compensation (price) terms to be included in the Agreement between Owner and Construction Manager at Risk if the selected Proposer is awarded the CMAR Contract.

7. Proposal Bond—The surety bond provided by Proposer at the time the Proposal is submitted and held by Owner until the Agreement is executed and the evidence of insurance and bonds required by the Contract Documents are provided.

B. In addition to terms specifically defined, terms with initial capital letters in the Proposal Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1.02 Project Description

A. The Projects are identified as:

City of Calhoun
Contract A – Brittany Drive WTP Improvements
Contract B – Mauldin Road WTP Improvements
C&S Project No.: C1075.004 & C1075.005

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B. The scope of the CMAR Contracts is provided in the Advertisement.

This work will primarily be accomplished in two phases, the Preconstruction and Procurement Phase (Phase One) and the Construction Phase (Phase Two). The Preconstruction and Procurement Phase Services will include but not be limited to:

1. Developing a subcontracting and procurement plan
2. Performing value engineering, constructability reviews at onboarding and on 30%, 60%, and 90% design milestones
3. Preparing and submitting formal preliminary cost estimates at onboarding and the 30%, 60% and 90% milestones. The cost estimates shall be detailed and open-book estimates that develop as the design progresses.
4. Submitting and negotiating a Guaranteed Maximum Price for the Construction Services
5. Additional Preconstruction Services as required to further define the project and generate a Guaranteed Maximum Price.
6. Determining if it is more cost effective to self-perform work or utilize a subcontractor to perform the work. This effort shall have the aim to "find savings" across the project.

The Construction Phase Services will include but not be limited to:

1. Determining if it is more cost effective to self-perform work or utilize a subcontractor to perform the work. This effort shall have the aim to "find savings" across the project. Even self-performing work should require competitive bids to ensure pricing and adequate time of delivery.
2. Procuring and managing the procurement of process equipment with the aim to "find savings" across the project. This includes issuing purchase orders for equipment.
3. Obtaining necessary permits.
4. Constructing the work agreed to based upon the Guaranteed Maximum Price.
5. Performing start-up services and performance testing as required to provide a working treatment facility. This includes training on process equipment by vendors.
6. Warrantying the work as indicated in the Contract Documents.

1.03 Selection Process

A. The selection process will follow the process outlined in the Advertisement of Request for Qualifications and Proposals.

1.04 Proposal Documents

A. Instructions for obtaining the Proposal Documents are set forth in the Advertisement.

B. Proposers must obtain a complete set of the Proposal Documents indicated below for use in preparation of the Statement of Qualifications. Proposers are responsible for ensuring that a complete set of documents is obtained and used and assume sole responsibility for errors or misinterpretations resulting from the use of incomplete Proposal Documents.

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The Proposal Documents available for the Statement of Qualifications and Cost Proposals step consist of the following:

1. Advertisement;
2. Request for Qualifications;
3. Statement of Qualifications;
4. Request for Proposals;
5. Proposal Forms;
6. Proposal Bond;
7. Front-End Contract Documents, including:
    a. 00 01 07 – Design Professional Seals
    b. 00 45 19 - Non-Collusion Affidavit of Prime Bidder
    c. 00 45 20 - Contractor Affidavit for E-Verify
    d. 00 45 21 - Subcontractor Affidavit for E-Verify
    e. 00 45 33 - Certification of Nonsegregated Facilities
    f. 00 51 00.08 - Notice of Award
    g. 00 52 31.08 - Agreement Between Owner and CMAR
    h. 00 52 32.08 - Subcontractor Agreement
    i. 00 54 01.08 - Contract Amendment
    j. 00 55 01.08 - Work Authorization
    k. 00 61 13.13 - Performance Bond
    l. 00 61 13.16 - Payment Bond
    m. 00 62 76.08 - Application for Payment
    n. 00 63 36.08 - Field Order
    o. 00 63 49.08 - Work Change Directive
    p. 00 63 63.08 - Change Order
    q. 00 65 16.08 - Certificate of Substantial Completion
    r. 00 72 23.08 - Standard Conditions
    s. 00 73 00.08 - Supplementary Conditions
1. General Requirements consisting of the following sections:
    a. 01 31 19 - Project Meetings
    b. 01 33 00 - Submittals
    c. 01 35 13 - Special Project Provision

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d. 01 42 13 - Abbreviations

e. 01 45 00 - Quality Control

f. 01 45 23 - Testing Services

g. 01 51 00 - Temporary Utilities

h. 01 52 13 - Field Offices

i. 01 57 19 - Environmental Controls

j. 01 66 00.01 - Shipment, Protection, and Storage

k. 01 71 23 - Surveying and Field Engineering

l. 01 74 23 - Final Cleanup

m. 01 76 00 - Restoration of Improvements

n. 01 77 00 - Contract Closeout Procedures

o. 01 78 23 - Operations and Maintenance Data

p. 01 78 33- Warranties and Bonds

q. 01 78 39 - Project Record Documents

2. Concept Site Plans

3. Intended Project Scope Reports

Additional documentation may be supplied by the Owner.

C. Owner makes copies of the Proposal Documents, including any Addenda and related supplemental data, available for the sole purpose of obtaining Statements of Qualifications and Cost Proposals, and does not confer a license or grant permission or authorization for any other use. Authorization to download documents includes the right for Proposers to print documents for their use. Electronic or printed documents may not be re-sold under any circumstances.

1.05 Information Conference

A. See Advertisement for instructions regarding date, time, and attendance at an Information Conference regarding the CMAR Contract and CMAR selection process.

1.06 Examination of Proposal Documents

A. Proposers have a responsibility to examine the Proposal Documents before submitting a Statement of Qualifications. Examination of the Proposal Documents shall include the responsibility to:

1. Carefully study the Proposal Documents, including any draft or supplemental information made available to the Proposer.

2. Become familiar with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of Work.

3. Make observations and investigations, correlate knowledge and observations with the requirements of the Proposal Documents and consider these in preparation of a Statement of Qualifications.

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4. Determine that the Proposal Documents, Addenda, and supplemental data are adequate to indicate and convey understanding of all terms and conditions for preparing a Statement of Qualifications.

5. Promptly notify the Owner's Advisor of all conflicts, errors, ambiguities, or discrepancies that the Proposer discovers in the Proposal Documents, Addenda, or supplemental information.

B. The submission of a Statement of Qualifications will constitute an incontrovertible representation by the Proposer that it has complied with every requirement of the RFQ and other Proposal Documents, that the Proposer has given the Owner's Advisor written notice of all conflicts, errors, ambiguities, and discrepancies that the Proposer has discovered in the Proposal Documents, and that the Proposal Documents indicate and convey understanding of all terms and conditions required for preparation of the Proposal.

1.07 Site Visit

A. Proposer is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. An opportunity to visit the Site will be made available the day of the information conference. If additional site visits are desired, please request through Owner's Advisor. Maps to the Site will be made available upon request. Proposers are required to arrange their own transportation to the Site. All access to the Site visit must be coordinated through the Owner's Advisor.

1.08 Questions regarding the Statement of Qualifications and Cost Proposal

A. Submit questions about the meaning or intent of the Proposal Documents, Addenda, and the related supplemental data to **QuestCDN.com**. All inquiries must be received no later than **7** days prior to the date for submittal of SOQs.

B. Responses to questions will be posted on the designated website for the benefit of all Proposers. Responses to questions do not modify or supplement the Proposal Documents, including any draft Contract Documents, unless set forth in an Addendum that expressly modifies or supplements such documents. Any response that requires a modification or supplementation of the Proposal Documents, including any draft Contract Documents, will be made by Addendum posted on the designated website. Owner will not be responsible for any explanations or interpretations other than those posted.

1.09 Addenda

A. The Owner reserves the right to issue Addenda to the Proposal Documents. Proposer is responsible for being aware of all Addenda issued by the Owner. Addenda will be issued via QuestCDN.com. Proposers are responsible for downloading all addenda, which shall serve as acknowledgement of addenda.

B. Failure to download all addenda shall constitute an incomplete proposal, and the Owner may elect to not consider it.

1.10 Confidentiality of Submitted Information

A. To the fullest extent permitted by Laws and Regulations:

1. Trade secrets and confidential information in Statements of Qualifications and Proposals, are not open for public inspection;

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2. Statements of Qualifications and Proposals will be opened in a manner that avoids disclosure of confidential information to competing Proposers and keeps the Statements of Qualifications and Proposals from the public until a CMAR Contract is awarded; and

3. If it is necessary to make Statements of Qualifications or Proposals open for public inspection after the CMAR Contract is awarded, trade secrets and confidential information in Statements of Qualifications or Proposals will be shielded from public inspection.

B. Each Proposer must clearly indicate in its SOQ submittal and Proposal which specific documents are considered to be trade secrets or confidential information by stamping or watermarking all such documents with the word "confidential" prominently on each page or sheet or on the cover of bound documents. Place "confidential" stamps or watermarks so that they do not obscure any of the required information on the document, either in the original or in a way that would obscure any of the required information in a photocopy of the document. Submit all confidential information in a distinct binder or electronic file so this confidential material is separate from the rest of the SOQ or Proposal.

C. The Owner is a governmental body subject to the limitations of Laws and Regulations and has limited authority to withhold confidential information submitted by Proposers when presented with an open records request. The Owner, upon receiving an application or other request for the disclosure of confidential information, will promptly notify Proposer of the request as required by Laws and Regulations. Proposer may request a ruling by the agency having jurisdiction as to whether any such information may be withheld.

D. Proposer acknowledges and agrees that it will be solely responsible for submitting any arguments, authorities, or other information to the agency having jurisdiction regarding release of the information marked as confidential as provided by Laws and regulations, and that if disclosure is required by the agency having jurisdiction, the Owner has no liability for releasing this information and Proposer will not be entitled to exercise any remedy for a disclosure made pursuant to the Laws and Regulations.

E. The obligations of the Owner, as recipient of information indicated to be confidential in a Statement of Qualifications or Proposal, are subject to the following exceptions:

1. If confidential information becomes a part of the public domain through publication or otherwise but through no fault of the Owner;

2. If Owner can demonstrate through suitable documentation that the confidential information was already in the Owner's possession or otherwise publicly available prior to the date of disclosure;

3. If the confidential information is subsequently disclosed to Owner by a third party who has a lawful right to disclose such information; or

4. If Owner is required to disclose the confidential information by court order or by applicable law.

F. If the Owner is requested or becomes legally compelled, by oral questions, interrogatories, requests for information or documents, subpoena, civil or criminal investigative demand, public information requests, including requests under Laws and Regulations, or similar process, or is required by a regulatory body to make any disclosure that is prohibited or

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otherwise constrained by this RFQ, the Owner will provide Proposer with prompt notice of this request so that Proposer may seek an appropriate protective order or other appropriate remedy.

G. By submitting a Statement of Qualifications and Proposal, the Proposer consents to the procedure outlined in this section of the RFQ as its sole remedy and waives any claim against the Owner because of actions taken under this procedure.

1. Notwithstanding any other provision of the RFQ, it is stipulated and agreed that by accepting a Statement of Qualifications and Proposal, the Owner has not and does not waive its sovereign immunity from suit and/or liability.

2. To the extent that the Owner withholds from disclosure all or any portion of Proposer's documents at Proposer's request, Proposer, by submitting a Statement of Qualifications and Proposal in response to this RFQ and RFP agrees to fully indemnify, defend, and hold harmless the Owner from all damages, penalties, attorneys' fees and costs the Owner incurs related to withholding information from public disclosure.

1.11 SOQ Submission Format & Content

A. The SOQ must be typed in eleven-point font or larger.

B. The SOQ should not contain standard marketing or other general materials. It is the Proposer's responsibility to modify such materials so that only directly relevant information is included in the Proposal.

The SOQ Package must include the following information in the order listed below.

1. Transmittal Letter (2 page maximum)

2. EJCDC CMAR-210 Statement of Qualifications

3. Appendix A – Operational Structure of Proposer's Organization (referenced in Article 4.02.B.)

4. Appendix B – Prepared Financial Statements (referenced in Article 4.02.C.1)

5. Appendix C – Previous Claims History and Litigation Experience

6. Appendix D – Resumes of Team Members and Alternates (2 page maximum per resume)

7. Appendix E – Proposed Construction Schedule

8. Appendix F – Additional Requested Items

Use this appendix to provide additional information specifically requested in the SOQ UNLESS the SOQ instructions call for specific space limitations.

Any submission that includes information not specifically requested as outlined above and in accordance with this RFQ may be considered non-conforming and may not be considered by Owner.

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ARTICLE 2—EVALUATION CRITERIA

2.01 Evaluation Categories

The two tables in this article list the rating categories by which Owner will make a final determination of the successful Proposer and make an award of the CMAR Contract. Failure to comply with criteria listed in categories 1-5 may result in the removal of the Proposer from consideration.

In Step One of the CMAR selection process, rating categories A through E will be applied to the evaluation of the Statements of Qualifications (Section CMAR-210). Rating categories F and G will be derived from the Proposals (Section CMAR-422). Scores from rating categories A through G will be used to identify the Proposers selected to proceed to Step Two. Shortlisted Proposers will be notified.

In Step Two of the CMAR selection process, the shortlisted Proposers will be invited to participate in an interview with the Owner's scoring committee. Rating category H will be applied to interviews with shortlisted Proposers. The scores from Step One and Step Two will be combined to determine the final ranking of Proposers for award of the CMAR Contract. The maximum point value for each category is indicated in the final column of the table:

Satisfactory/Unsatisfactory Criteria:

Criterion	Description	Point Value
1	All addenda downloaded and acknowledged	Satisfactory/Unsatisfactory
2	Submission follows format & content requirements	Satisfactory/Unsatisfactory
3	Provides information on at least 5 similar projects completed by Proposer's team	Satisfactory/Unsatisfactory
4	Utility Contractor License	Satisfactory/Unsatisfactory
5	Debarment Status	Satisfactory/Unsatisfactory

Weighted Criteria:

Criterion	Description	Weighting Value (Points)
A	Experience and Past Performance of Proposer on CMAR Projects (Appendix C and Tables 2, 3, & 4)	**10**
B	Experience and Past Performance of Proposer on Water/Wastewater (Appendix C and Tables 2, 3, & 4)	**25**
C	Experience and Qualifications of Proposed Key Personnel (Appendices A & D)	**15**
D	Community Participation & Inclusion (Appendix F)	**5**
E	Financial Capacity & Current Project Commitments (Appendices B & F and Table 1)	**20**
F	CMAR Preconstruction and Procurement Services (Proposal)	**3**
G	CMAR Construction Services (Proposal)	**22**
	Subtotal Points	**100**

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H	Proposer's Approach to the Project/Construction Schedule/Interview (Appendix E and Interview)	**20**
	Total Points	**120**

2.02 Evaluation for Rating Categories

A. Rating Category A—Experience and Past Performance of Proposer on CMAR Projects

1. Owner will consider the experience and past performance of the Proposer as a company. Consideration will include, but not be limited to:

a. Demonstrated experience in providing Preconstruction and Procurement Services if applicable;

1) Provide details on what (if any) experience the Proposer has in providing Preconstruction and Procurement Services.

b. Proposer's experience and performance on similar projects. Recent performance will be considered more important.

B. Rating Category B—Experience and Past Performance of Proposer on Water/Wastewater

1. Owner will consider the experience and past performance of the Proposer as a company. Consideration will include, but not be limited to:

a. Demonstrated experience in constructing water and wastewater treatment plants;

b. Proposer's experience and performance on similar projects. Recent performance will be considered more important.

C. Rating Category C—Experience and Qualifications of Proposed Key Personnel

1. Owner will consider the experience and qualification of the proposed Project Manager, CMAR Services Manager, and Project Superintendent for this Project, including:

a. Education, training, and personal experience in delivering similar projects while serving in the capacity for which they are being proposed;

b. Demonstrated ability to complete quality projects on time and within budget as demonstrated by proposal information and reference checks for offered individuals;

c. Demonstrated leadership, character, and capability of proposed individuals;

d. Availability and commitments to other projects.

D. Rating Category D—Community Participation & Inclusion

1. Owner will consider the Proposer's strategy to maximize opportunities for participation by local businesses.

E. Rating Category E—Financial Capacity & Current Project Commitments

1. Owner will consider the Proposer's financial strength and ability to successfully undertake and complete the proposed project without risk of overextension or financial instability. The evaluation will consider both current financial capacity and existing project obligations.

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2. Owner will consider performance on projects currently under construction for factors such as responsiveness, cleanliness, workmanship, professionalism, timeliness, and communication.

F. Rating Category F – CMAR Preconstruction and Procurement Services

1. Owner will consider the Proposer's proposed CMAR Services fee based on the following factors:

a. Basic Preconstruction Services Fee

b. Basic Procurement Services Fee

G. Rating Category G – CMAR Construction Services

1. Owner will consider the Proposer's proposed compensation for completion of the CMAR Contract as well as any specified intermediate milestones in determining best value to the Owner. Owner will consider the following factors:

a. Construction Support Costs

b. CMAR Fee

c. CMAR Contingency Allowance

H. Rating Category H – Approach to the Project/Construction Schedule/Interview

1. Owner will conduct interviews with shortlisted Proposers in which the Owner will consider the Proposer's understanding of the project and approach to constructing, completing, and commissioning projects.

ARTICLE 3—REQUIREMENTS FOR THE STATEMENT OF QUALIFICATIONS

3.01 The Statement of Qualifications (SOQ) as submitted must include the information described in this RFQ, as a minimum, to allow the Owner (a) to assess the qualifications of each Proposer to successfully perform CMAR Services and complete the Work, and (b) to rank the Proposer's qualifications objectively and as compared to the qualifications of other prospective Proposers. The information requested in the RFQ must be provided completely and in detail.

3.02 The SOQ as furnished to Proposers is set up to require that certain information be provided in forms included in the SOQ. The information in these forms will be used to make direct comparisons with the information provided by other Proposers in response to this RFQ. Failure to submit the required information in the Statement of Qualifications may result in the Owner considering the Proposer as non-responsive. Failure to provide the information completely and clearly may result in the Proposer not being short-listed for Step Two. Proposers may be required to provide supplemental information, if so requested by the Owner, to clarify, enhance, or supplement the information provided in the Statement of Qualifications.

3.03 Information requested in the forms that cannot be totally incorporated in the forms may be included as Appendix F to the form. This appendix must be clearly referenced by appendix number

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on the form, and the appended material must include the appendix number on every sheet of the appendix.

3.04 The information requested is used to address each of the selection categories presented in the RFQ and should be presented in that order and be keyed specifically for each selection category.

3.05 Proposal Format and Presentation

A. Provide six printed copies of the SOQ and one digital copy provided on a flash drive at the time and place set forth in the Advertisement. Submit the SOQ using the guidelines set forth in the RFQ.

B. Submit confidential information in accordance with the requirements in this RFQ. Information marked confidential, but not placed in a separate binder as required will not be considered confidential and will be treated as other non-confidential information in the SOQ.

ARTICLE 4—INSTRUCTIONS FOR PREPARING THE STATEMENT OF QUALIFICATIONS

4.01 The following Tables, provided in the Statement of Qualifications, are to be used in preparing the Statement of Qualifications:

Table	Document Title
	Statement of Qualifications Certification
1	General Information
2	Relevant Project Experience as Company (Completed Projects)
3	Demonstration of Budget Performance
4	Demonstration of On-Time Performance

4.02 Proposer's Organization and General Information

A. Provide general information about the Proposer's organization using copies of Table 1. Provide the same information for each joint venture partner if the Proposer is a joint venture.

B. Use Appendix A to provide information regarding the operational structure of the Proposer's organization, including a list of officers, the limits of authority for these individuals with regards to the proposed CMAR Contract, documentation of authority to execute documents, and a copy of organizations' certificate of authorization to conduct business in the state where the Project is located.

C. Financial Management

1. Provide Proposer's most recent prepared financial statement as Appendix B.

2. Provide the Proposer's financial summary information in Table 1.

D. Safety

1. Provide Experience Modification Ratio (EMR), and Recorded Man Hour history for the last 3 years for the Proposer and any proposed Subcontractors that will provide Work valued at 25 percent or more of the Contract Price. Provide this information in Table 1.

a. The Proposer's EMR is a computation by the insurance industry that compares a company's annual losses in workers' compensation insurance claims against its policy premiums over a three-year period, excluding the current year.

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E. Claims Experience and Litigation History: Provide a list of all claims or litigation which have been active within the last five years involving owners and/or Engineers and Owner's Advisors, subcontractors and suppliers on other construction projects. Include this information in Table 1. Use Appendix C to provide a narrative describing the issues being contested and when it is anticipated that the disputes will be resolved.

4.03 Project Experience

A. Provide the below requested information using Table 2.

1. Provide information on at least 5 projects which demonstrate the experience of the Proposer as a company with construction of similar projects.

4.04 Experience and Qualifications of Proposed Key Personnel

A. Provide resumes not exceeding two pages for each individual proposed for the key personnel positions and their alternates in Appendix D. The Proposer may provide information on an alternate individual if the Proposer is not able to commit to one individual for the Project at the time the Proposal is submitted. The Proposer must commit to providing the services of the proposed key personnel or alternate for the life of the Project as a condition of qualification. Unexcused failure to provide the proposed key personnel may provide the basis for termination of the CMAR Contract at the discretion of the Owner. Key Personnel are defined as the Project Manager, CMAR Services Manager, and Project Superintendent. Resumes must describe the qualifications of the individual and include the following as a minimum: technical experience, managerial experience, education and formal training, primary language, and a work history which describes project experience, including the roles and responsibilities for each assignment. Additional information highlighting the experience which makes them the best candidate for the assignment should also be included. Focus on projects on which the individuals proposed have had significant involvement in the last 5 years and which demonstrate their experience with similar projects.

4.05 Proposer's Ability to Complete Projects within the Contract Price and Contract Times

A. Provide a tabulation of Budget Performance on projects completed by the proposer within the last 5 years using Table 3. The Proposer should use this table to highlight their ability to "find savings" in a project. This savings should represent ideas developed by the Proposer during construction that resulted in an improved finished product and achieved capital or operational savings to the Owner. Provide the value of said savings in Table 3 and the Original Contract Price of the project.

B. Use Table 4 to provide a tabulation of all projects within the last 5 years in which the Proposer did not complete the project on time or are currently past the contract completion date. Notes may be added to the tabulations to indicate the reasons for not meeting the original completion dates.

C. As Appendix E, provide the Organization's proposed construction schedule provided the dates listed in the Advertisement and the RFQ.

4.06 References

A. Within Appendix F, provide a list of references for current or completed projects. References may be contacted directly, and their feedback will be used to assess the Proposer's reliability, competence, and suitability for the project. Reference information should include the following:

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1. Name of contact and title
2. Phone number and email address
3. Project name and description
4. Role of contact during referenced project

4.07 Current Project Obligations

A. Within Appendix F, provide a comprehensive list of all current project obligations. For each project, please provide the following information:

1. Name of contact and title
2. Phone number and email address
3. Project name and description
4. Role of contact during referenced project
5. Engineer/architect
6. Field inspector
7. Owner contact
8. Notice to Proceed date
9. Original contract substantial completion date
10. Amount and description of change orders

4.08 Community Participation & Inclusion

A. The Owner desires to maximize opportunities for participation by local businesses in connection with this project. Within Appendix F, please describe outreach efforts, communication methods, subcontracting strategies, and processes for identifying qualified local firms throughout preconstruction and construction activities.

ARTICLE 5—SUBMITTING THE STATEMENT OF QUALIFICATIONS

5.01 Delivery of Statement of Qualifications

A. SOQs shall be enclosed in an opaque, sealed envelope, plainly marked with the Project title, the name and address of Proposer, and shall be accompanied by the Proposal Bond. If an SOQ is sent by mail or other delivery system, the sealed envelope containing the SOQ shall be enclosed in a separate envelope plainly marked on the outside with the notation "STATEMENT OF QUALIFICATIONS ENCLOSED – BRITTANY DRIVE AND MAULDIN ROAD WTP IMPROVEMENTS".

B. SOQs and Proposals must be submitted in separate, sealed, opaque envelopes. Instructions regarding submitting the Proposal are outlined in the RFP.

C. Statements of Qualifications submitted in response to this RFQ will become the property of the Owner.

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ARTICLE 6—EVALUATION OF STATEMENTS OF QUALIFICATIONS

6.01 The Owner will evaluate each SOQ using the selection criteria within ±20 days after the date SOQs are received. The Owner will determine if SOQs comply with the prescribed requirements and will consider the qualifications of the Proposers, and other factors as described in this Article to determine which Proposers are best qualified to complete the Project.

6.02 Owner may conduct investigations as it deems necessary to establish the responsibility, qualifications, and capability of Proposers including requesting additional information and conducting virtual interviews or clarification meetings with Proposers.

6.03 Submission of a Statement of Qualifications indicates the Proposer's acceptance of the evaluation technique and methodology in this RFQ as well as the Proposer's recognition that some subjective judgments must be made by the Owner during the evaluation and selection process.

6.04 Ranking of Proposers

A. After qualification scores are complete, Owner will evaluate cost proposals. The combined scores determined for criteria A through G will be used to rank Proposers fit for the project. The highest scoring Proposers will be invited to participate in the second step of the CMAR procurement process. Interviews for those Proposers invited to the second step are currently estimated to occur on August 20, 2026 and August 21, 2026. These dates are subject to change.

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SECTION 00 42 23.08
PROPOSAL

PROPOSAL—CONSTRUCTION MANAGER AT RISK SERIES

ARTICLE 1—OWNER AND PROPOSER

1.01 This Proposal is submitted to: City of Calhoun, Calhoun Utilities, 700 West Line St., Calhoun, GA 30701 for the following Project(s):

Contract A – Brittany Drive WTP Improvements

Contract B – Mauldin Road WTP Improvements

C&S Project No.: C1075.004 & C1075.005

1.02 The undersigned Proposer agrees, if this Proposal is accepted and Owner issues an award of the CMAR Contract to Proposer, to enter into such contract, based on the proposed Contract Documents, including but not limited to the proposed Front-End Contract Documents. In such CMAR Contract the Proposer will agree to provide all CMAR Services and perform all Work as specified, indicated, and authorized, for the prices and within the times indicated in this Proposal, and in accordance with all other applicable contract terms and conditions.

ARTICLE 2—PROPOSAL TABLES

2.01 The following tables, provided in Exhibit A, are to be submitted with the Proposal:

Table No.	Table Title
1	Summary of Overall CMAR Compensation
2	Compensation for CMAR Services
3	Basis of Compensation for Fixed Construction Support Costs
4	Basis of Compensation for Time Sensitive Construction Support Costs

ARTICLE 3—PROPOSER'S REPRESENTATIONS AND CERTIFICATIONS

3.01 Proposer's Representations

A. In submitting this Proposal, Proposer represents the following:

1. Proposer has examined and carefully studied the Proposal Documents, including Addenda.
2. Proposer accepts all of the terms and conditions of the Request for Qualifications and the Request for Proposals, including without limitation those dealing with the Proposal security.
3. Proposer has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
4. Proposer is familiar with all Laws and Regulations that may affect cost, progress, and performance of CMAR Services and the Work.
5. Proposer has considered the information known to Proposer itself; information commonly known to contractors doing business in the locality of the Site; and the

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Proposal Documents on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Proposer, if selected as Construction Manager at Risk; and (c) Proposer's (Construction Manager at Risk's) safety precautions and programs.

6. Proposer is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Proposal Documents.

7. Proposer has given Owner's Advisor written notice of all conflicts, errors, ambiguities, or discrepancies that Proposer has discovered in the Proposal Documents and the written resolution thereof by Owner's Advisor is acceptable to Construction Manager at Risk.

8. The Proposal documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

9. The submission of this Proposal constitutes an incontrovertible representation by Proposer that without exception the Proposal and all prices in the Proposal are premised upon performing and furnishing the CMAR Services and the Work required by the Proposal documents.

3.02 Proposer's Certifications

A. The Proposer certifies the following:

1. This Proposal is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Proposer has not directly or indirectly induced or solicited any other Proposer to submit a false or sham Proposal.

3. Proposer has not solicited or induced any individual or entity to refrain from competing for the award of the CMAR Contract.

4. Proposer has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the CMAR Contract. For the purposes of this Paragraph 3.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the proposal process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the Proposal process to the detriment of Owner, (b) to establish proposal prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Proposers, with or without the knowledge of Owner, the purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the proposal process or affect the execution of the Contract.

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ARTICLE 4—PROPOSAL SIGNATURE

4.01 Proposer hereby submits this Proposal as set forth above:

Proposer:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Proposer is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Proposer's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

_____

_____

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Table 1—Summary of Overall CMAR Compensation

Compensation for CMAR Services (See **Table 2, Row 3**)							1	**$ -**
Construction Support Costs								
Fixed Construction Support Costs (see **Table 3, Row 1**)							2	$ -
Time Sensitive Construction Support Costs (see **Table 4, Row 1**)							3	$ -
Total Construction Support Costs							4	**$ -**
Estimated CMAR Fee with Nominal Multiplier								
Nominal Multiplier							5	$ 110,000,000.00
CMAR Fee Percentage	6		x Nominal Multiplier				7	$ -
CMAR Contingency Allowance								
CMAR Contingency Allowance	8		of	9	$ 110,000,000.00	Nominal Multiplier	10	$ -
Total of Overall CMAR Compensation							11	**$ -**

Contract Times			
CMAR agrees it will reach Project Substantial Completion in:	12	920	days
CMAR agrees it will reach Final Completion in additional days:	13	60	days
Estimated number of days in the Construction Period	14	980	days

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Table 2—Compensation for CMAR Services

a	b	c	d	e	f	g	h
Task	**Description**	**[Provider A] [Classification]** $ - **Hours**	**[Provider B] [Classification]** $ - **Hours**	**[Provider C] [Classification]** $ - **Hours**	**[Provider D] [Classification]** $ - **Hours**	**[Provider E] [Classification]** $ - **Hours**	**Amount**
1.00	**Preconstruction Basic Services**						
1.01	Project Management						$ -
1.02	Review of Preliminary Design Report						$ -
1.03	Design Related Preconstruction Services						$ -
1.04	Construction Management Plan and Implementation						$ -
1.05	Construction Contract Administration						$ -
1.06	Cost Management						$ -
1.07	**Value Engineering Studies**						$ -
1.08	Time Management						$ -
1.09	Quality Management						$ -
1.10	Risk Management						$ -
1.11	Safety Management						$ -
1.12	Site Management and Environmental Controls						$ -
1.13	Regulatory Requirements and Permits						$ -
1.14	Procurement Strategy Plan						$ -
1	**Total Cost for CMAR Preconstruction Basic Services**						**$ -**
3.00	**Procurement Basic Services**						
3.01	Project Management						$ -
3.02	Assembling Work Packages						$ -
3.03	Advertise for Bids						$ -
3.04	Pre-bid Conferences						$ -
3.05	Addenda						$ -
3.06	Opening Bids						$ -
2	**Total Cost for CMAR Procurement Basic Services**						**$ -**
3	**Total Cost for CMAR Services**						**$ -**

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Table 3—Basis of Compensation for Fixed Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	Contract Reference	Description	Quantity	Units	Unit Cost	Amount
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Fixed Construction Support Cost**					**$ -**

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Table 4—Basis of Compensation for Time Sensitive Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	**Contract Reference**	**Description**	**Quantity**	**Units**	**Unit Cost**	**Amount**
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Time Sensitive Construction Support Cost**					**$ -**
2	**Construction Period**	980	**days**			
3	**Construction Support Cost Extended Rate**	$ -	**per day**			

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Table 1—Summary of Overall CMAR Compensation

Compensation for CMAR Services (See **Table 2, Row 3**)							1	**$** -
Construction Support Costs								
Fixed Construction Support Costs (see **Table 3, Row 1**)							2	$ -
Time Sensitive Construction Support Costs (see **Table 4, Row 1**)							3	$ -
Total Construction Support Costs							4	**$** -
Estimated CMAR Fee with Nominal Multiplier								
Nominal Multiplier							5	$ 180,000,000.00
CMAR Fee Percentage	6		x Nominal Multiplier				7	$ -
CMAR Contingency Allowance								
CMAR Contingency Allowance	8		of	9	$ 180,000,000.00	Nominal Multiplier	10	$ -
Total of Overall CMAR Compensation							11	**$** -

Contract Times			
CMAR agrees it will reach Project Substantial Completion in:	12	920	days
CMAR agrees it will reach Final Completion in additional days:	13	60	days
Estimated number of days in the Construction Period	14	980	days

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Table 2—Compensation for CMAR Services

a	b	c	d	e	f	g	h
Task	**Description**	**[Provider A] [Classification]** $ -	**[Provider B] [Classification]** $ -	**[Provider C] [Classification]** $ -	**[Provider D] [Classification]** $ -	**[Provider E] [Classification]** $ -	**Amount**
		Hours	**Hours**	**Hours**	**Hours**	**Hours**	
1.00	**Preconstruction Basic Services**						
1.01	Project Management						$ -
1.02	Review of Preliminary Design Report						$ -
1.03	Design Related Preconstruction Services						$ -
1.04	Construction Management Plan and Implementation						$ -
1.05	Construction Contract Administration						$ -
1.06	Cost Management						$ -
1.07	**Value Engineering Studies**						$ -
1.08	Time Management						$ -
1.09	Quality Management						$ -
1.10	Risk Management						$ -
1.11	Safety Management						$ -
1.12	Site Management and Environmental Controls						$ -
1.13	Regulatory Requirements and Permits						$ -
1.14	Procurement Strategy Plan						$ -
1	**Total Cost for CMAR Preconstruction Basic Services**						**$ -**
3.00	**Procurement Basic Services**						
3.01	Project Management						$ -
3.02	Assembling Work Packages						$ -
3.03	Advertise for Bids						$ -
3.04	Pre-bid Conferences						$ -
3.05	Addenda						$ -
3.06	Opening Bids						$ -
2	**Total Cost for CMAR Procurement Basic Services**						**$ -**
3	**Total Cost for CMAR Services**						**$ -**

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Table 3—Basis of Compensation for Fixed Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	Contract Reference	Description	Quantity	Units	Unit Cost	Amount
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Fixed Construction Support Cost**					**$ -**

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Table 4—Basis of Compensation for Time Sensitive Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	**Contract Reference**	**Description**	**Quantity**	**Units**	**Unit Cost**	**Amount**
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Time Sensitive Construction Support Cost**					**$ -**
2	**Construction Period**	980	**days**			
3	**Construction Support Cost Extended Rate**	$ -	**per day**			

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Table 1—Summary of Overall CMAR Compensation

Compensation for CMAR Services (See **Table 2, Row 3**)							1	**$ -**
Construction Support Costs								
Fixed Construction Support Costs (see **Table 3, Row 1**)							2	$ -
Time Sensitive Construction Support Costs (see **Table 4, Row 1**)							3	$ -
Total Construction Support Costs							4	**$ -**
Estimated CMAR Fee with Nominal Multiplier								
Nominal Multiplier							5	$ 290,000,000.00
CMAR Fee Percentage	6		x Nominal Multiplier				7	$ -
CMAR Contingency Allowance								
CMAR Contingency Allowance	8		of	9	$ 290,000,000.00	Nominal Multiplier	10	$ -
Total of Overall CMAR Compensation							11	**$ -**

Contract Times			
CMAR agrees it will reach Project Substantial Completion in:	12	920	days
CMAR agrees it will reach Final Completion in additional days:	13	60	days
Estimated number of days in the Construction Period	14	980	days

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Table 2—Compensation for CMAR Services

a	b	c	d	e	f	g	h
Task	**Description**	**[Provider A] [Classification]** $ - **Hours**	**[Provider B] [Classification]** $ - **Hours**	**[Provider C] [Classification]** $ - **Hours**	**[Provider D] [Classification]** $ - **Hours**	**[Provider E] [Classification]** $ - **Hours**	**Amount**
1.00	**Preconstruction Basic Services**						
1.01	Project Management						$ -
1.02	Review of Preliminary Design Report						$ -
1.03	Design Related Preconstruction Services						$ -
1.04	Construction Management Plan and Implementation						$ -
1.05	Construction Contract Administration						$ -
1.06	Cost Management						$ -
1.07	**Value Engineering Studies**						$ -
1.08	Time Management						$ -
1.09	Quality Management						$ -
1.10	Risk Management						$ -
1.11	Safety Management						$ -
1.12	Site Management and Environmental Controls						$ -
1.13	Regulatory Requirements and Permits						$ -
1.14	Procurement Strategy Plan						$ -
1	**Total Cost for CMAR Preconstruction Basic Services**						**$ -**
3.00	**Procurement Basic Services**						
3.01	Project Management						$ -
3.02	Assembling Work Packages						$ -
3.03	Advertise for Bids						$ -
3.04	Pre-bid Conferences						$ -
3.05	Addenda						$ -
3.06	Opening Bids						$ -
2	**Total Cost for CMAR Procurement Basic Services**						**$ -**
3	**Total Cost for CMAR Services**						**$ -**

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Table 3—Basis of Compensation for Fixed Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	Contract Reference	Description	Quantity	Units	Unit Cost	Amount
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Fixed Construction Support Cost**					**$ -**

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Table 4—Basis of Compensation for Time Sensitive Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	**Contract Reference**	**Description**	**Quantity**	**Units**	**Unit Cost**	**Amount**
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Time Sensitive Construction Support Cost**					**$ -**
2	**Construction Period**	980	**days**			
3	**Construction Support Cost Extended Rate**	$ -	**per day**			

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SECTION 00 43 13.08
PROPOSAL BOND

PROPOSAL BOND

Proposer	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Proposal**
Name: City of Calhoun	Project *(name and location)*:
Address *(principal place of business)*:	CONTRACT A – BRITTANY DRIVE WTP IMPROVEMENTS
700 West Line St., Calhoun, GA 30701	CONTRACT B – MAULDIN ROAD WTP IMPROVEMENTS
	Calhoun, GA
	Proposal Due Date:
	July 30, 2026

Proposal Bond

Penal Sum: 10% of the Estimated Guaranteed Maximum Price

Date of Bond:

Surety and Proposer, intending to be legally bound hereby, subject to the terms set forth in this Proposal Bond, do each cause this Proposal Bond to be duly executed by an authorized officer, agent, or representative.

Proposer	Surety
_____	_____
(Full formal name of Proposer)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature) (Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

EJCDC® CMAR-430, Proposal Bond—Construction Manager at Risk Series.
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1. Proposer and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Proposer the penal sum set forth on the face of this Proposal Bond. Payment of the penal sum is the extent of Proposer's and Surety's liability. Recovery of such penal sum under the terms of this Proposal Bond will be Owner's sole and exclusive remedy upon default of Proposer.

2. Default of Proposer occurs upon the failure of Proposer to deliver within the time required by the Proposal Documents, or any extension thereof agreed to in writing by Owner, the executed Agreement required by the Proposal Documents and any performance and payment bonds required by the Proposal Documents. or an express written commitment by Surety to issue any such performance and payment bonds upon the first Work Authorization by Owner.

3. This obligation will be null and void if:

   3.1. Owner awards the CMAR Contract and Proposer delivers within the time required by the Proposal Documents, or any extension thereof agreed to in writing by Owner, the executed Agreement required by the Proposal Documents and any performance and payment bonds required by the Proposal Documents, or commitment to issue such bonds, or

   3.2. All Proposals are rejected by Owner, or

   3.3. Owner fails to issue a Notice of Award to Proposer within the time specified in the Proposal Documents, or any extension thereof agreed to in writing by Proposer and, if applicable, consented to by Surety when required by Paragraph 5 hereof.

4. Payment under this Proposal Bond will be due and payable upon default of Proposer and within 30 calendar days after receipt by Proposer and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Proposal Bond and the Project, and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Proposer, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Proposal due date without Surety's written consent.

6. No suit or action will be commenced under this Proposal Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Proposer and Surety, and in no case later than one year after the Proposal due date.

7. Any suit or action under this Proposal Bond will commence only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder must be in writing and sent to Proposer and Surety at their respective addresses shown on the face of this Proposal Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Proposal Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Proposal Bond on behalf of Surety to execute, seal, and deliver such Proposal Bond and bind the Surety thereby.

10. This Proposal Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Proposal Bond will be deemed to be included herein as if set forth at length. If any provision of this Proposal Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Proposal Bond that is not in conflict therewith continues in full force and effect.

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SECTION 00 45 16.08
STATEMENT OF QUALIFICATIONS

Statement of Qualifications Certification

Project: **Contract A – Brittany Drive WTP Improvements**
Contract B – Mauldin Road WTP Improvements

C&S Project Number: **C1075.004 & C1075.005**

By submitting this Statement of Qualifications and related information, Proposer certifies that it has read the Proposal Documents and that Proposer's representations are true and correct and contain no material misrepresentations, and that the individual signing below is authorized to make this certification on behalf of the Proposer's organization.

Proposer: _____
(typed or printed name of organization)

Signature: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed

Designated Representative:

Name: _____

Title: _____

Address for giving notices:

_____

_____

_____

Phone: _____ Email: _____

(Attach evidence of authority to sign if Proposer is a corporation, partnership, or a joint venture.)

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Table 1–General Information

Organization			
Legal Name of Business:			
Form of Business: ☐ Sole Proprietorship☐ General Partnership ☐ Limited Partnership ☐ Corporation			
☐ Limited Liability Company ☐ Joint Venture comprised of the following companies:			
1.			
2.			
3.			
Date Business was formed:		State under which Business was formed:	
Is this Business authorized to operate in the Project location: ☐ Yes ☐ No ☐ Pending			
Is this Business licensed as a general contractor in the Project location: ☐ Yes ☐ No ☐ Pending ☐ N/A			
Is this Business licensed as a utility contractor in the Project location: ☐ Yes ☐ No ☐ Pending ☐ N/A			
List of companies, firms, or organizations that own any part of this Business.			
Name of company, firm, or organization.			Percent ownership
Principal Office			
Primary contact		Main telephone number	
Email address		Website address	
Business address of principal office			
Regional Office			
Primary contact		Main telephone number	
Email address		Website address	
Business address of regional office			

Business officers, partners, and limits of authority			
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	
Name:		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	
Name		Title:	
Authorized to sign contracts: ☐ Yes ☐ No		Limit of Authority:	

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Table 1 –General Information (Continued)

Business History		
List of names that this Business currently has or anticipates operating under over the history of the Business, including the names of related companies presently doing business:		
Names of organization	From date	To date

Indicators of Organization Size	
Average number of current full-time employees	
Estimate of revenue for the current year	
Estimate of average revenue for the previous 3 years	

Licensure			
Name of License:	Utility Contractor (Required)		
Licensing Agency:			
License Number:		Expiration Date:	
Name of License:			
Licensing Agency:			
License Number:		Expiration Date:	
Name of License:			
Licensing Agency:			
License Number:		Expiration Date:	

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Table 1 –General Information (Continued)

Previous Contracting Experience			
Years of experience in projects similar to the proposed project:			
As a general contractor		As a joint venture partner	
As a utility contractor			
Has this or a participating or a predecessor organization ever been disqualified as a proposer by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No If yes provide full details in a separate attachment.			
Has this or a participating or a predecessor organization ever been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No If yes provide full details in a separate attachment.			
Has this or a participating or a predecessor organization been released from a proposal in the past 5 years? ☐ Yes ☐ No If yes provide full details in a separate attachment.			
Has this or a participating or a predecessor organization ever defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No If yes provide full details in a separate attachment.			
Has this or a participating or a predecessor organization ever refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No If yes provide full details in a separate attachment.			
Is this or a participating or a predecessor organization currently involved in any litigation or contemplating litigation? ☐ Yes ☐ No If yes provide full details in a separate attachment.			

Previous Claims History and Litigation Experience		
List all claims or litigation involving owners on other construction projects that have been active over the last 5 years or that are currently unresolved. Please use Appendix A to expound upon the nature of each claim.		
	Description of Claim or Litigation	Status
1		
2		
3		
4		
5		

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Table 1 –General Information (Continued)

Surety			
Surety Name			
Mailing address (principal place of business):		Physical address (principal place of business):	
Telephone (main number)		Telephone (claims notices)	
Name of Local Agent for Surety			
Telephone		Email	
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location? ☐ Yes ☐ No			
Is surety listed in the U.S. Department of the Treasury's Listing of Approved Sureties (Department Circular 570 "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies")? ☐ Yes ☐ No			

Financial Summary Information for Proposer		
Date of Proposer's most current prepared financial statement:		☐ Attached
Financial indicators from the most current financial statement:		
Proposer's Current Ratio (Current Assets / Current Liabilities)		
Proposer's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) / Current Liabilities))		
Describe the resources that are available to the Proposer to provide adequate cash flow for the project if Proposer's Current Ratio or Quick Ratio are less than 1.0:		

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Table 1 –General Information (Continued)

Insurance						
Name of Insurance Provider:						
Provider is a corporation organized and existing under the laws of the state of:						
Is Provider licensed or authorized to issue insurance policies in the Project location?					☐ Yes ☐ No	
Does Provider have an A.M. Best Rating of A-VIII or Better?					☐ Yes ☐ No	
Mailing Address (principal place of business)						
Physical Address (principal place of business)						
Telephone (Main)						
Telephone for Notice of Claims						
Local Agent for Provider						
Address for Local Agent						
Telephone for Local Agent						
Coverage Providers						
Insurance Provider			Type of Policy (Coverage Provided)			

Construction Site Safety Experience						
Provide Proposer's Worker's Compensation Experience Modification Ratio (EMR), Total Number of Recorded Manhours for the last 3 years and the EMR and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 25% or more of the Contract Price. Provide documentation of the EMR for the Proposer.						
Year						
Company	EMR	MH	EMR	MH	EMR	MH

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Table 2–Relevant Project Experience as Company

Project Name			
Project Owner Contact		**Title**	
Telephone Number		**Email Address**	
Engineer/Owner's Advisor Contact		**Engineer/Owner's Advisor Phone Number**	
Field Inspector Name		**Field Inspector's Phone Number**	
In the space below, please provide a brief narrative discussing aspects of the Work that are similar to the proposed project. This narrative should not exceed the space provided.			

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Table 3–Demonstration of Budget Performance

Project Name		**Project Delivery Method (DB, DBB, CMAR, etc.)**	
Project Owner Contact		**Title**	
Telephone Number		**Email Address**	
Original Contract Price		**Value of Capital and/or Operational Savings to Owner**	
Engineer/Owner's Advisor Contact		**Engineer/Owner's Advisor Phone Number**	
In the space below, please provide a brief description of how savings were achieved for this project. This description should not exceed the space provided.			

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Table 4–Demonstration of On-Time Performance

Name of Organization						
Provide information on all projects within the last 5 years in which the Proposer did NOT complete the project on time. Please provide additional notes to indicate reasons for not meeting the original completion dates. Notes should not exceed the space provided below.						
Owner Name	Original Contract Date for Substantial Completion	Original Contract Date for Final Completion	Amended Contract Date for Substantial Completion	Amended Contract Date for Final Completion	Actual Contract Date for Substantial Completion	Actual Contract Date for Final Completion
Notes:						
Notes:						
Notes:						

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SECTION 00 45 19
NON-COLLUSION AFFIDAVIT OF PRIME PROPOSER

SECTION 00 45 19
NON-COLLUSION AFFIDAVIT OF PRIME PROPOSER

State of Georgia

County of **Gordon**

_____, being first duly sworn, deposed and says that:

(1) He is

_____of
(owner, partner, officer, representative, or agent)

_____, the
Proposer that has submitted the attached Proposal;

(2) He is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal;

(3) Such Proposal is genuine and is not a collusive or sham Proposal;

(4) Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the Contract for which the attached Proposal has been submitted or to refrain from Proposing in connection with such contract, or has in any manner directly or indirectly sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached Proposal or of any other Proposer, or to fix any overhead, profit or cost element of the Proposal price or the Proposal price of any other Proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **City of Calhoun** (Local Public Agency) of any person interested in the proposed contract and;

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

By: _____

Title: _____

Subscribed and sworn to before me this ____day of _____, 20__.

_____
(Notary Public)

My commission expires _____

_____, 20___.

END OF SECTION

SECTION 00 45 20
CONTRACTOR AFFIDAVIT AND AGREEMENT

SECTION 00 45 20
CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or corporation which is engaged in the physical performance of services on behalf of the **City of Calhoun** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractor(s) who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Contractor

_____
Name of Project

City of Calhoun
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.
Executed on: _____, ____ 20__ in _____ (city), _____ (state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE
_____DAY OF _____ , 20_____

_____
NOTARY PUBLIC

My Commission Expires: _____

SECTION 00 45 21
SUBCONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned sub-contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract for _____(name of sub-contractor with whom such sub-contractor has privity of contract) and _____ _____ (name of contractor) on behalf of the **City of Calhoun** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned sub-contractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-contractor will contract for the physical performance of services in satisfaction of such contract only with sub-contractors who present an affidavit to the sub-contractor with the information required by O.C.G.A. § 13-10-91(b). The undersigned sub-contractor shall submit, at the time of such contract, this affidavit to _____ (name of sub-contractor with whom such sub-contractor has privity of contract). Additionally, the undersigned sub-contractor will forward notice of the receipt of any affidavit from a sub-contractor to _____ (name of sub-contractor with whom such sub-contractor has privity of contract). Sub-contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____ _____
Date of Authorization Name of Sub-Contractor

City of Calhoun _____ _____
Name of Public Employer

_____
Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____20___ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____,20___

_____
NOTARY PUBLIC

My Commission Expires:_____

SECTION 00 45 33
CERTIFICATION OF NONSEGREGATED FACILITIES

SECTION 00 45 33
CERTIFICATION OF NONSEGREGATED FACILITIES

(To be completed and submitted with Proposal)

Proposer certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Proposer agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this proposal. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Proposer agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certification in his files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. & 1001.

Date _____, 20___ _____
(Name of Proposer)

Official Address

_____

_____

BY: _____

TITLE: _____

END OF SECTION

SECTION 00 51 00.08
NOTICE OF AWARD

NOTICE OF AWARD

Date of Issuance: _____

Owner: _____ Project No.: _____

Owner's Advisor: _____ Project No.: _____

Project: _____

Contract Name: _____

Proposer: _____

Proposer's Address: _____

You are notified that Owner has accepted your Proposal dated _____for the above Contract, and that you are the successful Proposer and are awarded the Contract.

As defined in Article 3.03 of the Agreement, execution of the Agreement only authorizes the CMAR to begin providing the Basic Preconstruction and Procurement Services which are identified in Exhibit A for the amount of $_____.

If a GMP can be agreed upon between Owner and CMAR, the CMAR, upon issuance of a Work Authorization thereby setting the GMP, will be authorized to proceed with fixed and time sensitive construction support services in the amounts dictated in the Proposal. The CMAR Contingency Allowance will be determined by multiplying the percentage indicated in Proposal Exhibit A, Table-1 times the Estimated Cost of the Work when the GMP is set. The CMAR Fee will be determined by multiplying the percentage indicated in Proposal Exhibit A, Table-1 times the actual Cost of the Work and is subject to increases or decreases for changes in the Work. The Contract Price is subject to adjustment based on the provisions of the Contract.

__ unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award or has been transmitted or made available to Proposer electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner __ counterparts of the Agreement, signed by successful Proposer, as Construction Manager at Risk.
2. Deliver to Owner the required insurance documentation, as specified in the Request for Proposals and in the General Conditions, Articles 2 and 6, with the signed Agreement.
3. Deliver written confirmation that successful Proposer, as Construction Manager at Risk, will furnish Contract security, such as required performance and payment bonds, when the first Work Authorization is issued, as specified in the General Conditions, Articles 2 and 6. Such confirmation will identify the surety that will issue the bonds, if bonds are required.
4. Other conditions precedent, if any: None

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Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your proposal security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

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SECTION 00 52 31.08
AGREEMENT BETWEEN OWNER AND CMAR

AGREEMENT BETWEEN OWNER AND CONSTRUCTION MANAGER AT RISK

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AGREEMENT BETWEEN OWNER AND CONSTRUCTION MANAGER AT RISK

This Agreement is by and between the City of Calhoun ("Owner") and _____ ("Construction Manager at Risk" or "CMAR").

Terms used in this Agreement have the meanings stated herein and in the General Conditions and the Supplementary Conditions.

Owner and CMAR hereby agree as follows:

ARTICLE 1—THE PROJECT

1.01 The Project, of which the CMAR Services and the Work under the Contract Documents are a part, is generally described as follows:

Contract A – Brittany Drive WTP Improvements
Contract B – Maudlin Road WTP Improvements
C&S Project No.: C1075.004 & C1075.005

ARTICLE 2—OWNER'S ADVISOR AND ENGINEER; OWNER'S PROJECT TEAM

2.01 The Owner has retained Carter & Sloope, Inc. (Owner's Advisor or OA) to act as Owner's representative, assume all duties and responsibilities of advisor to Owner and construction contract administrator on behalf of Owner, and have the rights and authority assigned to Owner's Advisor in the Contract.

2.02 The Owner has retained InSite Engineering, LLC (Engineer) to design the Project, to assume all duties and responsibilities of Engineer during the construction of the Project, and to have the rights and authority assigned to Engineer in the CMAR Contract.

ARTICLE 3—CMAR SERVICES

3.01 Scope of CMAR Services

A. CMAR will perform the CMAR Services set forth in Exhibit A, Scope of CMAR Services, as authorized, and other specified CMAR Services as expressly set forth in a Contract Amendment. Services rendered by CMAR to meet its general construction and management obligations are not CMAR Services, and are not compensated as CMAR Services, unless expressly designated as such.

B. CMAR Services are categorized in Exhibit A as Basic Preconstruction Services; Additional Preconstruction Services; Basic Procurement Services; Additional Procurement Services; and Special Services.

C. In Exhibit A and in scope of CMAR Services provisions in Contract Amendments, imperative sentences with respect to the performance of services are directives to CMAR, unless expressly indicated otherwise.

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3.02 Basic Services, Additional Services, and Special Services

A. Basic Services are CMAR Services (categorized as Preconstruction or Procurement) that are identified as Basic Services in Exhibit A.

B. In addition to Basic Services, CMAR shall provide specific Additional Preconstruction Services and Additional Procurement Services within the scope set forth in Exhibit A, if Owner authorizes CMAR to do so. Owner or Owner's Advisor will authorize the specified Additional Services in a Contract Amendment. The Contract Amendment will describe the tasks to be performed, the compensation to be paid, the time for performance, the deliverables to be provided, and other applicable terms, if any. If a specific Additional Service has been priced during the CMAR selection process, such price will be binding on CMAR and Owner unless modified by mutual agreement.

C. In addition to the services identified as Basic Services and Additional Services, after the Effective Date of the Contract the Owner and CMAR may identify Project-related services that were not contemplated at the time the Agreement was executed, are necessary to the Project, and should be added to the scope of CMAR Services. If Owner and CMAR mutually agree, a Contract Amendment will be issued that specifies the scope of such Special Services, the compensation to be paid, the time for performance, the deliverables to be provided, and other applicable terms. Any amount included in the Agreement for Special Services will serve as the Owner's contingency for Special Services, if authorized by the Owner.

3.03 Authorization to Provide CMAR Services

A. CMAR is authorized by the execution of this Agreement to begin providing Basic Preconstruction Services set forth in Article 1 in Exhibit A, Scope of CMAR Services, as of the Effective Date of the Contract.

B. CMAR shall provide Basic Procurement Services set forth in Article 3 in Exhibit A, Scope of CMAR Services, upon receipt of notice to commence such services **via a written notice** from Owner or the Owner's Advisor, or in a Contract Amendment establishing the scope and compensation for Procurement Services.

C. All other CMAR Services, including Additional Preconstruction Services, Additional Procurement Services, and Special Services, if any, must be authorized by Owner or Owner's Advisor.

3.04 Compensation for Basic CMAR Services

A. Basic Preconstruction Services—Owner will compensate CMAR for Basic Preconstruction Services, provided per Article 1, Exhibit A—Scope of Work for CMAR Services, for each hour earned at the Billing Rates shown in Exhibit B—Table 4, Compensation for CMAR Services. Such compensation is subject to the not-to-exceed limit shown for Price for CMAR Basic Preconstruction Services in Table 1.

B. Basic Procurement Services—Owner will compensate CMAR for CMAR Procurement Services, provided per Article 3, Exhibit A—Scope of Work for CMAR Services, for each hour earned at the Billing Rates shown in Exhibit B—Table 4, Compensation for CMAR Services. Such compensation is subject to the not-to-exceed limit shown for Price for CMAR Basic Procurement Services in Table 1.

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3.05 Compensation for Additional CMAR Services

A. For Additional Preconstruction Services and Additional Procurement Services, Owner will compensate CMAR for each hour earned at the Billing Rates shown in Exhibit B—Table 4, Compensation for CMAR Services.

3.06 Compensation for Special Services

A. Owner will compensate CMAR for Special Services pursuant to the specific compensation terms in the Contract Amendment establishing and authorizing such Special Services.

3.07 Payment for CMAR Services

A. Preparation and Submittal of Invoices

1. CMAR will prepare and submit invoices for CMAR Services to Owner's Advisor on a monthly basis in a format acceptable to Owner's Advisor.

2. CMAR may not submit invoices and is not entitled to compensation for Additional Services or Special Services unless Owner has authorized such services through execution of a Contract Amendment.

3. CMAR will provide documentation acceptable to the Owner to allow Owner to verify CMAR's charges included in invoices.

B. Payments

1. Payment for CMAR Services compensated using Hourly Billing Rate basis:

a. Owner shall pay CMAR an amount equal to the cumulative hours charged to the Project by CMAR's personnel times Hourly Billing Rates for each applicable Classification.

b. Hourly Billing Rates include all of the following—salaries and wages paid to personnel in each billing classification; the cost of customary and statutory benefits; general and administrative overhead; non-project operating costs; and operating margin or profit.

c. Hourly Billing Rates are to include all expenses related to providing CMAR Services including the following categories:

1) Transportation and subsistence;

2) Technology charges and data charges associated with the use of computers and tablets;

3) Printing and reproduction of documents;

4) Health and safety related equipment and training; and

5) Special equipment used for CMAR Services.

2. The amounts paid to CMAR under this Article are deemed to include full compensation for CMAR's overhead and profit associated with such labor and expenses.

C. Time of Payment

1. Owner will make payments for CMAR Services within 30 days after receiving an approved invoice from the Owner's Advisor.

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2. If Owner fails to make any payment due CMAR for CMAR Services within 30 days after receipt of CMAR's invoice, then:

   a. ~~Amounts due CMAR will be increased at the rate of 1.0% per month, or the maximum rate of interest permitted by law, if less, from said thirtieth day; and~~

   b. CMAR may, after giving 7 days' written notice to Owner, suspend services under this Agreement until Owner has paid all amounts due for services, expenses, and other related charges in full. Owner waives any and all claims against CMAR for this suspension.

3. Owner may withhold only the contested portions of an invoice and must pay the undisputed portion of the invoice.

D. Compensation for CMAR Services discussed in Article 3 is not compensation for the Work and is not included in the GMP. No retainage will be withheld from payments of CMAR Services; however, such payments are subject to the set-off provisions in General Conditions Article 15.

ARTICLE 4—COMPENSATION FOR PERFORMANCE AND COMPLETION OF THE WORK

4.01 Owner shall compensate CMAR for performance and completion of the Work in accordance with the Contract Documents. Payment for Work will consist of the following:

A. Payment for Construction Support Costs in accordance with Article 5, and as set forth in Exhibit B Table 1 lines 2-4;

B. Payment for Cost of the Work as provided in Article 6; and

C. Payment of a CMAR Fee as set forth in Article 7 and in Exhibit B Table 1.

4.02 This Agreement establishes a CMAR Contingency Allowance for use in paying for unforeseen costs as set forth in Article 8.

4.03 **This Agreement establishes a Design Development Allowance to address risks and scope uncertainties identified during design development as set forth in Article 18.**

4.04 The amounts for CMAR's compensation summarized in Paragraph 4.01 are subject to additions and deletions as provided in the Contract, up to limitations established in the Guaranteed Maximum Price (GMP) as provided in Article 11.

ARTICLE 5—CONSTRUCTION SUPPORT COSTS

5.01 Construction Support Costs

A. Construction Support Costs (field overhead or "general conditions" costs) are those costs associated with and in support of construction that are not directly related to specific construction activities. Construction Support Costs are not compensable as Cost of the Work and must not be included by CMAR in proposed Work Authorizations submitted to the Owner for approval and issuance. Construction Support Costs include without limitation:

1. CMAR project management costs, including project managers, superintendents, field engineering staff, and clerical support located at the Site;

2. Management of Subcontractors and Suppliers;

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3. Management of delegated professional design services, if any;
4. Costs associated with safety programs, including safety managers and safety representatives;
5. Quality management not specifically designated to be covered in a Work Authorization;
6. Costs associated with obtaining permits, or paying patent fees or royalties, if not specifically designated to be covered in a Work Authorization;
7. Costs for permit inspections, and other inspections required by Laws and Regulations not specifically designated to be covered in a Work Authorization;
8. Compliance with Laws and Regulations;
9. Taxes, other than those specifically designated to be covered in a Work Authorization;
10. Contract administration costs, including costs for:
    a. Meetings, reporting, notifications, and other communications and coordination,
    b. Document management,
    c. Submittals, record data, and other documentation,
    d. Creating and maintaining Project schedules per Article 4 of the General Conditions,
    e. Changes to the CMAR Contract per Article 11 of the General Conditions,
    f. Applications for Payment per Article 15 of the General Conditions,
    g. Maintenance of Record Documents, and
    h. Other contract administration costs included in the Contract Documents;
11. Performance, payment, and warranty bonds, if any, provided to cover the construction of the entire Project;
12. General insurance costs, excluding Builder's Risk or other coverage that applies specifically to Work and specifically designated to be covered in a Work Authorization, and Worker's Compensation Insurance which is to be included in payroll cost per Paragraph 6.02.A.1;
13. Costs associated with CMAR temporary facilities and temporary infrastructure at the Site;
14. The cost of purchasing, renting, or furnishing small tools and hand tools. These are defined as any tool or equipment whose current price, if purchased new at retail would be less than $500;
15. Costs for site maintenance, storage of materials, waste disposal, environmental controls, management of water, protection of site and adjacent property, cleaning during construction and final cleaning;
16. Costs associated with startup and commissioning of the Work, including training of Owner's personnel, temporary operation of facilities by the CMAR; and performance acceptance testing, if any;

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17. Costs associated with substantial completion, partial utilization, and final completion; and

18. Costs associated with general warranty, guarantees and correction of defective work during the Correction Period.

B. The organization of the Work into Work Packages will not result in changes to the CMAR's compensation for Construction Support Costs.

5.02 Fixed Construction Support Costs

A. Fixed Construction Support Costs are those costs which are not time sensitive and will not increase if the performance of the Work extends beyond the Construction Period designated for Substantial Completion of the Work described in Article 15. The amount for Fixed Construction Support Cost is shown in Exhibit B, Table 3–Basis of Compensation for Fixed Construction Support Costs.

5.03 Time-Sensitive Construction Support Costs

A. Time-Sensitive Construction Support Costs are those costs which will increase if the performance of the Work extends beyond the Construction Period designated for Substantial Completion described in Article 15. The amount for Time-Sensitive Construction Support Costs based on the Construction Period is shown in Exhibit B, Table 4–Basis of Compensation for Time-Sensitive Construction Support Costs.

B. The Construction Support Costs Extended Rate is determined by dividing the Time-Sensitive Construction Support Costs by the projected number of days in the Construction Period. CMAR will be entitled to additional compensation for Time-Sensitive Construction Support Costs at the Construction Support Extended Rate shown in Exhibit B, Table 4–Basis of Compensation for Time-Sensitive Construction Support Cost if the extended time is associated with a compensable delay under the provisions of the General Conditions.

5.04 Changes in Construction Support Costs

A. Owner and CMAR acknowledge that the Construction Support Costs stipulated amounts set forth in this Agreement's Exhibit B, Table 1, lines 2, 3, and 4 (Construction Support Costs Contract Amounts) and the Construction Support Costs Extended Rate (determined as set forth in Paragraph 5.03.B) are approximations of actual costs intended to liquidate and stipulate CMAR's compensation for Construction Support Costs, encourage efficiency and cost control, and reduce Owner's and CMAR's administrative and accounting effort. The Construction Support Costs Contract Amounts and the Construction Support Costs Extended Rate will not be increased except in cases in which CMAR demonstrates:

1. An excessive and unanticipated increase in Construction Support Costs resulting from scope changes in the Work or other causes directly attributable to Owner; and

2. Such increase in costs has not otherwise been compensated in a Work Authorization, Contract Amendment, or Change Order.

5.05 Compensation for Construction Support Costs

A. Payments for Fixed Construction Support Costs will be made in equal monthly increments determined by dividing the Fixed Construction Support Costs Contract Amount by the projected number of months in the Construction Period. No payment will be made for Fixed

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Construction Support Costs in excess of the Fixed Construction Support Costs Contract Amount unless this Amount is adjusted in accordance with provisions in Paragraph 5.04.

B. Payments for Time-Sensitive Construction Support Costs will be made in equal monthly increments determined by dividing the Time-Sensitive Construction Support Costs Contract Amount by the projected number of months in the Construction Period. No payment will be made for Time-Sensitive Construction Support Costs in excess of the Time-Sensitive Construction Support Contract Amount unless this Amount is adjusted in accordance with provisions in Paragraph 5.04.

C. Payments will be made for Time-Sensitive Construction Support Costs associated with compensable delays under the provisions of the General Conditions at the Construction Support Costs Extended Rate as described in Paragraph 5.03.B.

ARTICLE 6—COST OF THE WORK

6.01 Purposes for Determination of Cost of the Work

A. The term Cost of the Work is defined in the General Conditions, Article 1, as the sum of eligible costs incurred by CMAR for the performance of the Work, as allowed by the Cost of the Work provisions set forth in the Agreement; such provisions are set forth in this Article 6. Cost of the Work is determined for each Work Authorization, subject to any limits described in this Article. The provisions of this Article are used for two distinct purposes:

1. To determine Cost of the Work for purposes of CMAR's base compensation for construction under this Contract; or

2. When needed to determine the value of a Change Proposal, Change Order, Claim, set-off, or other adjustment to the Guaranteed Maximum Price. When the value of any such adjustment is determined based on Cost of the Work, CMAR is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. For purposes of determining CMAR's base compensation, Cost of the Work applies only to Work that has been duly authorized in a Work Authorization.

C. The Cost of the Work will include only those items identified in Paragraph 6.02.

6.02 Cost of the Work

A. Payroll Cost—Payroll costs for employees in the direct employ of CMAR performing Work described in Work Authorizations, and excluding those efforts covered in Construction Support costs per Paragraph 5.01. Payroll costs will be based on actual amounts paid as indicated on Certified Payroll reports. Payroll costs are to include salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation insurance, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturdays, Sundays, or legal holidays, will be included in the above to the extent authorized by Owner.

B. Incorporated Equipment and Material Cost—Cost of all materials and equipment furnished or incorporated in the Work, including costs for transportation and storage prior to delivery to the site. Cost for proper storage at the Site is to be included in Construction Support Cost

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per Paragraph 5.01. Cost for equipment is to include Suppliers' services for submittals, factory and field testing and inspections, installation checks, start-up assistance, and training, if any. All cash discounts accrue to CMAR unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and CMAR shall make provisions so that they may be obtained. **Owner is willing to pay equipment deposits if CMAR adequately reduces supplier default risk by receiving supply bond, coordinates the title transfer of raw materials upon payment and maintains inland marine insurance on equipment. CMAR is also expected to negotiate equipment payment terms to a level acceptable to the Owner.**

C. Consumable Equipment and Material Cost—Cost, including transportation and maintenance, of all materials, supplies, equipment, tools, and machinery at the Site, which are consumed in the performance of the Work, less market value of such items used but not consumed which remain the property of CMAR. In establishing costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. CMAR will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such items.

D. Subcontractor Cost–Payments made by CMAR to Subcontractors for Work performed by Subcontractors. CMAR shall obtain competitive bids from subcontractors acceptable to Owner and CMAR and shall deliver such bids to Owner, which will then determine, with the advice of Owner's Advisor, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as CMAR's Cost of the Work and fee as provided in this Article 6.

E. Construction Equipment Cost—Cost of providing construction equipment and machinery to construct the Work described in the Work Authorization.

1. Include all the costs for transporting, loading, unloading, assembly, dismantling, and removal of the equipment and machinery with Consumable Equipment and Material Cost per Paragraph 6.02.C.

2. Construction equipment and machinery cost will be billed at rates approved by the Owner's Advisor as part of each Work Authorization.

a. All operating costs will include costs for fuel, maintenance, parts, and associated labor. Billing rates for equipment fueling and maintenance do not include payroll costs for equipment operators, which will be included in Payroll cost per Paragraph 6.02.A.

b. Costs for equipment and machinery owned by CMAR or a Subcontractor cannot exceed the rates shown for equipment in the EquipmentWatch Cost Recovery Rental Rate Blue Book, (https://equipmentwatch.com/blue-book-cost-recovery) An hourly rate will be computed by dividing the monthly rates by 176. These rates will include all operating costs per Paragraph 6.02.E.2.a.

c. Payment for rented equipment will be in accordance with rental agreements as to price, including any surcharge or special rates applicable to overtime use of the construction equipment or machinery, and all such costs will be in accordance with

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the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

d. No markup is allowed on equipment rented or leased from any company owned in total or in part by CMAR or a Subcontractor, or is owned by the same holding company or a company with a close legal affiliation to CMAR or Subcontractor, since markups are included in rental or lease rates.

e. Equipment used for site maintenance is to be included in Construction Support Costs. Equipment used for multiple Work Authorizations must be billed on the basis of time worked on each Work Authorization.

3. With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Guaranteed Maximum Price (changed Work), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

F. Supplemental Costs which consist of the following:

1. The proportion of necessary transportation, travel, and subsistence expenses of CMAR's employees incurred in the discharge of duties connected with the Work Authorization.

2. Costs of special consultants including engineers, architects, testing laboratories, and surveyors, employed or retained for services specifically related to the Work Authorization and expressly excluding costs incurred by consultants performing CMAR Services.

3. Sales, consumer, use, and other similar taxes related to the Work, and for which CMAR is liable, as imposed by Laws and Regulations.

4. Deposits lost for causes other than the negligence of CMAR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable.

5. Royalty payments and fees for permits, patents, and licenses directly related to a Work Authorization.

6. The cost of premiums for performance, payment, and warranty bonds obtained by CMAR as a requirement of a Work Authorization, in addition to the bonds purchased for the construction as a whole within the scope of Construction Support Costs per Paragraph 5.01.A.11. Final compensation for such premium costs will be based on reconciled costs at the conclusion of the Work.

7. Cost for any Subcontractor bonds that must be required to protect Owner's and CMAR's interests in the event of a Subcontractor default associated with a Work Authorization. Final compensation for such premium costs will be based on reconciled costs at the conclusion of the Work. **Subcontractor default insurance, commonly known as subguard, if used, will not be paid as Cost of Work.**

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8. The cost of premiums for Builder's Risk insurance and other Work Authorization–specific insurance that CMAR is required by the Contract Documents to purchase and maintain, but not including costs of commercial general liability, automobile liability, and contractor's pollution liability insurance which are covered as Construction Support Costs per Article 5. The compensation for worker's compensation is included as part of payroll costs per Paragraph 6.01.A.1. Final compensation for such premium costs will be based on reconciled costs at the conclusion of the Work.

6.03 Specific Exclusions from Cost of the Work

A. The following items are not included in the Cost of the Work. This express itemization does not confer Cost of the Work or compensable status to otherwise ineligible items not listed here. Cost for any items not included in the Cost of the Work are to be included in the CMAR Fee unless specifically itemized at Construction Support Costs described in Article 5.

1. Payroll costs and other compensation of CMAR's officers, executives, principals, general managers, project managers, superintendents, safety managers, safety representatives, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by CMAR, whether at the Site or in CMAR's principal or branch office for general administration of the Work. The payroll costs and other compensation excluded here are to be considered administrative costs covered by Construction Support Cost or the CMAR Fee.

2. Expenses of CMAR's principal and branch offices.

3. Any part of CMAR's capital expenses, including interest on CMAR's capital employed for the Work and charges against CMAR for delinquent payments.

4. Costs due to the negligence of CMAR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable.

5. Cost for the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property not paid from CMAR's Contingency per Article 8.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 6.03.

8. Costs recovered or reimbursed under other Construction Support Cost or Cost of the Work provisions.

6.04 Compensation for the Cost of the Work

A. Compensation for the Cost of the Work is based on the amount earned for Work completed for each Work Authorization.

ARTICLE 7—CONSTRUCTION MANAGER AT RISK FEE

7.01 The CMAR Fee will be determined as follows:

A. The CMAR Fee is a specified percentage of the Cost of the Work as shown in Exhibit B Table 1. No fee will be payable on the basis of costs itemized as excluded in Paragraph 6.03.

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ARTICLE 8—CMAR CONTINGENCY ALLOWANCE

8.01 CMAR Contingency Allowance

A. The CMAR Contingency Allowance funds, shown in Exhibit B Table 1—Estimated Guaranteed Maximum Price, are for the exclusive use of CMAR while executing the Work, to reimburse CMAR for costs due to unforeseen causes, unintentional errors, or events which cannot specifically be anticipated at the time Work Authorizations are issued.

B. The CMAR Contingency Allowance funds may be used by CMAR for costs sustained by either CMAR itself or a Subcontractor, at CMAR's discretion. The CMAR contingency funds may not be used for costs which are reimbursable or recoverable under other provisions of the Contract.

C. Without excluding other possible uses of the CMAR Contingency Allowance, the following uses are expressly acknowledged as eligible uses of the CMAR Contingency Allowance funds:

1. Losses and damages, and related expenses, caused by damage to the Work, not compensated by insurance or otherwise, sustained by CMAR or a Subcontractor in connection with the performance of the Work;
2. Corrective work, regardless of fault if non-conformance is unintended;
3. Subcontractor defaults;
4. Overruns in Construction Support Costs;
5. Builder's Risk deductibles;
6. Verified excusable **quantity** errors in estimates; or
7. Non-compensable overtime and other acceleration costs.
8. **Cost increases on items that CMAR had opportunity to clarify during GMP development (conflict in details, scope gaps, interaction between systems, etc.). The CMAR has the option to request payment for these increases from Cost of Work within the same Work Authorization or from CMAR contingency.**
9. **Cost increases on items for which design differs from unstated CMAR assumptions. The CMAR has the option to request payment for these increases from Cost of Work within the same Work Authorization or from CMAR contingency.**

D. CMAR shall replenish the CMAR Contingency Allowance by restoring money withdrawn with money recovered (1) from bonds and insurance coverage payments for such expenditures, and (2) from defaulting Subcontractors or Suppliers.

E. The CMAR Contingency Allowance will not be used to fund Owner-directed changes in the Work. Such changes will be administered through the contractual procedures established for changes in the scope of the Work, including expenditures from the Owner's Contingency Allowance, if any, Work Authorizations as modified by Change Order, and Contract Amendments or other modifications that impact the Guaranteed Maximum Price.

F. The CMAR Contingency Allowance will not be used to recover the cost of items that are compensable as a Cost of the Work.

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G. The CMAR Fee does not apply to expenditures from the CMAR Contingency Allowance. CMAR will not be entitled to any additional overhead, profit, or other markup on any CMAR Contingency Allowance expenditure.

H. The designated CMAR Contingency Allowance, as duly replenished, is the maximum amount available to CMAR to recover eligible costs under this Article; Owner will not increase the CMAR Contingency Allowance or otherwise reimburse CMAR for eligible costs incurred in excess of the CMAR Contingency Allowance.

I. CMAR will submit applications for reimbursement from the CMAR Contingency Allowance to Owner's Advisor, in a format acceptable to Owner's Advisor, together with appropriate documentation. Payments from the CMAR Contingency Allowance will be recorded in the Application for Payment.

ARTICLE 9—WORK AUTHORIZATIONS

9.01 General Provisions Regarding Work Authorizations

A. Work Authorizations will be based on Work Packages prepared by Owner's Advisor and Engineer describing equipment and materials to be purchased for installation or Work to be performed in accordance with the approved Work Authorization.

B. All Work to be provided by CMAR must be authorized by the issuance of a Work Authorization specifying or referencing the scope of Work to be conducted.

C. Owner's Advisor will issue each Work Authorization using the Work Authorization form provided by the Owner's Advisor.

D. The Work Authorization will indicate the compensation to which CMAR is entitled for providing the authorized Work **and shall also identify the Design Development Allowance allocated for such work through use of a risk register.**

E. CMAR is not entitled to compensation for providing Work that Owner's Advisor has not authorized.

9.02 First Work Authorization

A. The first Work Authorization, authorizing the commencement of construction, will include, in addition to authorization for a specific Work Package, or multiple specific Work Packages, the authorization of expenditures by CMAR for Contract-specific (1) performance and payment bond premiums (2) Builder's Risk premiums, if CMAR is required to purchase and maintain Builder's Risk insurance, and (3) premiums for other specific insurance policies required by the Contract.

ARTICLE 10—PROCUREMENT OF SUBCONTRACTORS; CMAR SELF-PERFORMANCE OF AUTHORIZED WORK

10.01 Performance of the Authorized Work

A. CMAR will solicit and receive competitive bids on the Work included in each Work Authorization, including the purchase of materials and equipment. CMAR will prepare bid packages supporting the Work Authorization and make opportunities available to Subcontractors and Suppliers in a way that will increase competition and allow bids by trade

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contractors or specialty entities. **If Federal and/or State funding applies, CMAR shall also perform the Six Good Faith Efforts as they pertain to DBE solicitation. Good faith efforts must also be made to encourage local participation.** CMAR may prepare bid packages for Work the CMAR may wish to self-perform, so long as doing so will not limit bidding by competing bidders (prospective subcontractors).

B. CMAR may bid on Work Packages, or portions thereof, if fully qualified to self-perform the subject Work, subject to the following limitations:

C. CMAR must submit its bids in advance of receiving other bids, and in the same manner that other bids are to be submitted. Bids are to be opened in the presence of the Owner's Advisor.

D. **If CMAR is to self-perform Work on the project, CMAR must submit to Owner a complete, open book accounting of its costs to self-perform a Work Package, or portion thereof. CMAR must bid against other subcontractors on work the CMAR wishes to self-perform.**

E. CMAR will award the subcontract for the Work under the Work Authorization to the responsible bidder **(which may be CMAR)** submitting the ~~lowest responsive~~ bid for that portion of the Work for which bids are received **that is in the best interest of the Owner, as agreed to by Owner and CMAR**. ~~CMAR may self-perform Work when CMAR is the low bidder.~~ **If CMAR is selected to complete the Work, the cost to complete it will be treated as a subcontract and included in the cost of work.**

ARTICLE 11—GUARANTEED MAXIMUM PRICE

11.01 Subject to the provisions of Article 4, CMAR guarantees that the maximum amount payable by Owner (Guaranteed Maximum Price, or GMP) for the sum of the amounts for Paragraphs 12.01.A through D that follow will be the binding GMP established by the process stated in Paragraphs 12.02 and 12.03.

A. Construction Support Cost Amount (Article 5);

B. Cost of the Work (Article 6);

C. CMAR Fee (Article 7); and

D. CMAR's Contingency Allowance Amount (Article 8).

11.02 The Estimated GMP indicated in Exhibit B Table 1—Estimated Guaranteed Maximum Price is a preliminary figure as of the Effective Date of the Contract. The GMP will be revised as the design is continued and completed.

11.03 A binding GMP will be established at any time agreeable to Owner and CMAR, but not later than the following:

A. If the Work is performed under Work Packages released and authorized concurrently for the complete Project, then the binding GMP will be established on the basis of Contract Documents that are 90% complete.

B. If the Work will be authorized over time, as the design for individual Work Packages is completed, in a series of incremental Work Authorizations (fast tracking or similar design/construction process) then the binding GMP ~~will be developed in a series of incremental changes as the design for each Work Package reaches 90% completion, culminating, when all Work Packages have been authorized, in a binding GMP for the~~

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~~Contract.~~ **shall be established for each individual Work Authorization as the design for the Work Package(s) reaches 90% completion. Each such Work Authorization GMP shall apply only to the scope of the Work Authorized therein. The aggregate of all authorized Work Authorization GMPs shall constitute the binding GMP for the Contract upon authorization of all Work Packages.**

11.04 Owner's Construction Budget

A. Owner's Advisor will establish an updated Owner's Construction Budget (Budget) based on the CMAR's procurement strategy which identifies Work Packages used to construct the Work. Owner's Advisor, working with CMAR, will update this Budget with actual amounts for each line item as Work Authorization amounts identified in the updated Budget are determined.

B. Owner's Advisor will revise the Budget to incorporate Change Orders or authorized allocation of contingency funds which change the funds available for Budget line items. ~~When amounts for all Work Authorizations have been determined and the binding GMP is established for the Contract, the Budget must correlate to GMP line items, and the Budget must equal the GMP.~~ **As GMPs are established for individual Work Authorizations, the Budget shall be revised to correlate to the applicable Work Authorization GMP line items. When GMPs for all Work Authorizations have been established, the aggregate of all Work Authorization GMPs shall constitute the binding GMP for the Contract, and the budget shall correlate to such aggregate GMP line items and equal the binding GMP for the Contract.**

C. **CMAR will identify variances between the budgeted amount established in an executed Work Authorization and the actual cost incurred to complete the scope of work authorized therein.** ~~CMAR will identify variances between the budgeted amount and actual amounts as Work Authorization amounts are determined~~.

1. Positive variances are created when ~~actual~~ **the incurred** cost for a Work Authorization is less than the budgeted amount. ~~Positive variances identify unused funds that can be used to offset negative variances~~. **Positive variances from one Work Authorization may not be used to offset negative variances of a separate Work Authorization.**

2. Negative variances are created when ~~actual~~ **the incurred** cost for a Work Authorization is more than the budgeted amount. ~~Negative variances identify where additional funds are needed. Unused funds from positive variances can be used to offset these negative variances.~~ **Negative variances represent the amount for which the CMAR is at risk, and no additional compensation will be made to the CMAR. Except to the extent covered by approved use of the CMAR Contingency Allowance, CMAR shall be responsible for all costs associated with such negative variance.**

3. ~~Net variances for the Contract are used to determine the current status of the Owner's Construction Budget.~~ **The variance associated with each Work Authorization shall be used in determining the current status of the Owner's Construction Budget. A positive variance shall constitute savings to the Contract. Net savings shall be shared as follows:**

a. A net positive variance for the Contract represents a savings ~~to the Owner:~~ **to the contract. Net variance savings shall be shared as follows:**

1) **Forty percent (40%) of net variance to CMAR, and**

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2) **Sixty percent (60%) of net variance to Owner**

Unused CMAR Contingency will be shared 40% to CMAR and 60% to the Owner; unused Owner's Contingency and unused Design Development Allowance are 100% savings to the Owner. Savings shall be calculated and paid as a part of final payment. A final Contract Amendment will be issued at the completion of the Contract (Final Payment) to adjust the GMP to the actual amount of Contract costs.

b. A net negative variance for the Contract represents the amount for which the CMAR is at risk, and no additional compensation will be made to the CMAR.

11.05 Options for Costs Exceeding the Owner's Budget

A. The Guaranteed Maximum Price resulting from the tabulation of cost for self-performed CMAR Work, bids for Work by Subcontractors and Suppliers, Construction Support Costs, CMAR Contingency Allowances and CMAR Fee cannot exceed the Owner's Construction Budget. The Owner may exercise any of the following options at the sole discretion of the Owner if the proposed Guaranteed Maximum Price exceeds the Owner's Construction Budget:

1. Approve an increase in the Owner's Construction Budget in writing.
2. Authorize rebidding or renegotiation for some or all parts of the Project within a reasonable time without an increase in the Guaranteed Maximum Price.
3. Cooperate in the revision of the scope of the Project to reduce the actual cost of construction to the Owner's Construction Budget.
4. Abandon the Project, in whole or in part, and terminate this Contract in accordance with applicable termination for convenience provisions.

B. If Owner selects the option described in Paragraph 11.05.A.1, CMAR shall proceed with performance of the Work, and provide CMAR Services as described in these Contract Documents without additional compensation for Procurement Services. Other fees and expenses related to the Cost of Work will be adjusted in accordance with the revised Cost of Work.

C. If Owner selects the option described in Paragraph 11.05.A.2, Owner and CMAR shall proceed with rebidding or renegotiation of some or all parts of the Project. The OPT will work with CMAR to determine if rebidding or restructuring Work Packages is likely to lead to lower bid prices; if so determined, CMAR will rebid selected original Work Packages or restructured Work Packages identified as having the potential to reduce the overall cost of construction to the Owner's Construction Budget. CMAR will advise the OPT of the likely impact to the schedule resulting from rebidding Work Packages. CMAR will provide CMAR Services for rebidding these Work Packages without additional compensation.

D. If Owner selects the option described in Paragraph 11.05.A.3, CMAR shall assist the OPT in studies to revise the scope of the Project to bring the Project cost within the Owner's Construction Budget. CMAR will provide research and cost estimates to evaluate the potential cost savings of each proposed change in scope for Work Packages and advise the OPT of the likely impact to the schedule resulting from rebidding Work Packages and changes in Contract Times that will result from the changed Work Packages. CMAR will provide CMAR Services for consultation in modifying the Project scope and rebidding these Work Packages without additional compensation.

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E. CMAR shall revise the project schedule to incorporate delays caused by actions taken to bring the Project within the Owner's Construction Budget.

11.06 Conversion of Cost of Work to a Lump Sum Amount

A. If Owner and CMAR mutually agree, compensation for all Work on the Project, or for any Work Authorization, may be converted to a lump sum (stipulated amount). If compensation for all Work on the Project is converted to a lump sum amount, this lump sum amount will include costs for Construction Support Cost, Cost of the Work, the CMAR Fee, and all other costs associated with the Contract, all as if bid as a lump sum amount. CMAR will no longer have access to CMAR Contingency Allowance funds and bears all risk associated with delivering the Work for the lump sum amount.

B. If a Work Authorization is converted to a lump sum amount, this lump sum amount will include costs for Cost of the Work, the CMAR Fee, and all other costs associated with the Work Authorization, all as if bid as a lump sum amount; provided, however, that Construction Support Costs will continue to be compensated per Paragraph 5.05.

C. The following will continue to apply for conversions to lump sum covered in Paragraphs B and C:

1. The Cost of the Work provisions in Article 6 will continue to apply to pricing certain Change Orders and other similar matters, as set forth in Paragraph 6.01.A.2.

2. Construction Support Costs Extended Rate provisions of Paragraph 5.04 will continue to apply for Change Orders.

3. Owner's Contingency will continue to be available per Article 12.

ARTICLE 12—OWNER'S CONTINGENCY ALLOWANCE

12.01 Owner's Contingency Allowance

A. **When available, the** Owner's Contingency Allowance is used at the sole discretion of the Owner to cover unforeseen costs, Owner-directed changes in the scope of the Work, or any other unanticipated change in the Contract Price. These funds can only be accessed by the CMAR when and to the specific extent authorized by the Owner.

B. **If the Owner chooses to include** the Owner's Contingency Allowance**, it** is to be included in the Contract Amount awarded but is not part of the CMAR's GMP.

ARTICLE 13—PAYMENT PROCEDURES

13.01 Submittal and Processing of Payments

A. Billing and payment for CMAR Services are addressed in Article 3. The provisions in this Article 13 pertain to billing and payment for the Work.

B. CMAR shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will indicate the amount of the CMAR Fee then payable. Applications for Payment will be processed by Owner's Advisor as provided in the General Conditions.

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13.02 Progress Payments; Retainage

A. Owner shall make progress payments on the basis of CMAR's Applications for Payment as recommended by Owner's Advisor on or about the 10th day of each month during construction as provided in Article 14, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract.

B. Progress payments on account of the Cost of the Work will be made for each Work Authorization.

1. Prior to Substantial Completion, for each Work Authorization progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. 95 percent of the value of the Work completed, with the balance being 5% retainage.

1) ~~If 50 percent or more of the Work under a Work Authorization has been completed, as determined by Owner's Advisor, and if the character and progress of the Work have been satisfactory to Owner, Owner's Advisor, and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner, Owner's Advisor, and Engineer, there will be no additional retainage; and~~

b. 95 percent of cost of materials and equipment not incorporated in the Work, with the balance being 5% retainage.

2. Upon completion of the Work under a Work Authorization, including completion of all punch list items, Owner shall pay an amount sufficient to increase total payments to CMAR to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.02.E of the General Conditions, and less 200 percent of Owner's Advisor's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

13.03 Final Payment

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Article 15 of the General Conditions.

13.04 Consent of Surety

A. Owner will not make final payment or return or release retainage at Substantial Completion or any other time, unless CMAR submits written consent of the surety to such payment, return, or release.

13.05 Interest

A. All amounts not paid when due will bear interest at the ~~maximum~~ **current prime** rate **as published by the Wall Street Journal on the effective date of this Agreement.**

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ARTICLE 14—DOCUMENTATION AND AUDIT

14.01 Documentation

A. Whenever the Cost of the Work for any purpose is to be determined pursuant to this Contract, CMAR and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices.

B. CMAR will provide documentation of all Costs of the Work with the Application for Payment as directed by the Owner's Advisor.

14.02 Audit

A. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all CMAR's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and the CMAR Fee. CMAR shall preserve all such documents for a period of three years after the final payment by Owner. Subcontractors performing Work on a Cost of the Work basis will afford such access to Owner, and preserve such documents, to the same extent required of CMAR.

ARTICLE 15—CONTRACT TIMES

15.01 Contract Times—Days

A. The Work will be substantially complete within 920 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 980 days after the date when the Contract Times commence to run.

15.02 Liquidated Damages

A. CMAR and Owner recognize that all time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and CMAR agree that as liquidated damages for delay, but not as a penalty:

1. Substantial Completion–CMAR shall pay Owner **0.005% of the cost of the work** for each day that expires after the time, as duly adjusted pursuant to the Contract, specified above for Substantial Completion, until the Work is substantially complete. **The parties acknowledge that this amount is based on the Owner's anticipated financial interest expense, potential EPD fines, and additional observation and construction administration expenses resulting from delayed completion.**

2. Completion of Remaining Work–After Substantial Completion, if CMAR shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, as duly adjusted pursuant to the Contract, for completion and readiness for final payment, CMAR shall pay Owner **0.005% of the cost of the work** for each day that expires after such time until the Work is completed and ready for final payment. **The parties**

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acknowledge that this amount is based on the Owner's anticipated financial interest expense, potential EPD fines, and additional observation and construction administration expenses resulting from delayed completion.

3. If Owner recovers liquidated damages for a delay in completion of the Project by CMAR, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages, if any, specified in this Agreement.

ARTICLE 16—CONTRACT DOCUMENTS

16.01 Contents

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. General Conditions.
3. Supplementary Conditions.
4. **Certification of Nonsegregated Facilities.**
5. **Non-Collusion Affidavit of the Primer Bidder.**
6. **Contractor Affidavit and Agreement.**
7. **Subcontractor Affidavit and Agreement.**
8. General Requirements (Division 01 of the Specifications)
9. Drawings and Specifications completed as of the Effective Date of the Contract.
10. Exhibits to this Agreement (enumerated as follows):
    a. Exhibit A, Scope of CMAR's Services; and
    b. Exhibit B, Basis of Compensation;
11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Contract Amendments;
    b. Executed Work Authorizations, including any exhibits identified as Drawings, Specifications, or other Contract Documents;
    c. Work Authorization Modifications;
        1) Work Change Directives;
        2) Change Orders; and
        3) Field Orders.
    d. Performance and Payment Bonds; and
    e. Warranty Bonds, if any.

B. There are no Contract Documents other than those listed above in this Article 16.

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C. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 17—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

17.01 CMAR's Representations

A. To induce Owner to enter into this Contract, CMAR makes the following representations:

1. CMAR has examined and carefully studied the Contract Documents, including Addenda.

2. CMAR has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. CMAR is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. CMAR has carefully studied the reports, if any, of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings, if any, of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. CMAR has carefully studied the reports and drawings, if any, relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. CMAR has considered the information known to CMAR itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; with respect to the effect of such information, observations, on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by CMAR; and (c) CMAR's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, CMAR agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Guaranteed Maximum Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. CMAR is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. CMAR has given Owner's Advisor written notice of all conflicts, errors, ambiguities, or discrepancies that CMAR has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Owner's Advisor is acceptable to CMAR.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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11. CMAR's entry into this Contract constitutes an incontrovertible representation by CMAR that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

17.02 CMAR's Certifications

A. CMAR certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 17.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the proposal process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the Proposal process or the execution of the Contract to the detriment of Owner, (b) to establish proposal Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Proposers, with or without the knowledge of Owner, a purpose of which is to establish proposal prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the proposal process or affect the execution of the Contract.

ARTICLE 18—DESIGN DEVELOPMENT ALLOWANCE

18.01 Design Development Allowance

A. **The Design Development Allowance funds, as established for each Work Authorization, are for the exclusive use of Owner to address risks, uncertainties, and scope refinement associated with the ongoing development of the design, as identified through the Risk Register, which will follow the guidelines outlined in Exhibit A, Article 1.10.G.**

B. **The Design Development Allowance shall be used to fund costs attributable to risks and uncertainties identified during design development that were not sufficiently defined or quantifiable at the time a Work Authorization was issued, but which are subsequently incorporated into the Work as the design progresses.**

C. **Without excluding other possible uses of the Design Development Allowance, the following uses are expressly acknowledged as eligible uses:**

1. **Costs associated with refinement or clarification of scope resulting from design progression;**

2. **Resolution of design development risks identified in the Risk Register;**

3. **Adjustment to quantities, systems, or components based on advancing design documents;**

4. **Incorporation of coordination requirements identified during ongoing design and constructability review;**

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5. **Reconciliation of design assumptions made at the time of Work Authorization issuance.**

D. **The Design Development Allowance shall not be used to fund:**

1. **Owner-directed changes in the scope of the Work;**
2. **Costs attributable to CMAR errors, omissions, or lack of performance;**
3. **Costs that are otherwise recoverable under the CMAR Contingency Allowance or other provisions of the Contract;**
4. **Costs arising after establishment of the GMP, except as otherwise agreed in writing by Owner.**

E. **Use of the Design Development Allowance shall not constitute a Change in the Work, provided such use is consistent with the intended scope of the applicable Work Authorization and the identified risks documented in the Risk Register.**

F. **The Design Development Allowance shall be administered by Owner, with input from the CMAR, Engineer, and Owner's Advisor, and requests for use shall be submitted by CMAR with supporting documentation demonstrating that the cost is attributable to a risk or uncertainty identified in, or consistent with, the Risk Register.**

G. **The Design Development Allowance shall be incorporated into the basis of the Work Authorization and shall be considered in the development of the GMP; unused amounts, if any, shall be considered 100% savings to the Owner.**

H. **The CMAR Fee will apply to expenditures from the Design Development Allowance.**

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IN WITNESS WHEREOF, Owner and CMAR have signed this Agreement.

This Agreement will be effective on _____, which is the Effective Date of the Contract.

Owner:	CMAR:
City of Calhoun *(typed or printed name of organization)*	_____ *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If CMAR is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices:	Address for giving notices:
Designated Representative:	Designated Representative:
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address:	Address:
Phone:	Phone:
Email:	Email:
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	License No.: _____ *(where applicable)* State: _____

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EXHIBIT A–SCOPE OF CMAR SERVICES

ARTICLE 1—BASIC PRECONSTRUCTION SERVICES

1.01 Project Management

A. Participate in Project Meetings

1. Participate in Project kick-off meeting. Be prepared to discuss CMAR's team and organizations structure, assignments for responsibilities and Teams CMAR's plan for implementation of Preconstruction Services.

2. Participate in periodic meetings with Owner, Owner's Advisor, and Engineer (collectively, Owner's Project Team or OPT) to review progress, coordinate efforts, and discuss planned activities for the next period. It is anticipated that these progress meetings will occur weekly.

B. Provide administration of Agreement for CMAR Preconstruction Services, including Applications for Payment, progress reporting, management of CMAR staff, schedule for services, and deliverables.

1.02 Review of Preliminary Design Report

A. As a priority first task, review Engineer's Preliminary Design Report as soon as it is available.

1. Provide input and advice, according to the general requirements of Exhibit A Paragraph 1.03.D below, regarding the Preliminary Design Report's content concerning coordination of utilities work (both above-ground utilities and Underground Facilities), Underground Facilities Procedure, and mitigation of utilities conflicts, for Engineer's use in the Final Design Phase of Engineer's services.

2. Recommend strategies for the division of the Work under design into Work Packages, and for phased design and authorization of construction of such Work Packages (fast tracking). Work collaboratively with the OPT to finalize the number of Work Packages and their approximate scope, and the schedule for preparation, authorization, and completion of such Work Packages.

1.03 Design-Related Preconstruction Services

A. Attend periodic design meetings to provide consultation on aspects of the design that will impact the budget, schedule, and quality of the completed Work.

B. Advise, assist, and provide recommendations on all aspects of the planning and design of the Work. Consult with the OPT regarding Site use and improvements, and the selection of materials, building systems, and equipment.

C. Provide recommendations: on construction feasibility; regarding actions designed to minimize adverse effects of labor or material shortages; on time requirements for procurement, installation, and construction completion; and on factors related to construction cost including estimates of alternative designs or materials, preliminary budgets, and possible opportunities for savings.

D. Review in-progress design documents, including the documents variously described as preliminary design documents, preliminary design report, design development documents,

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and the interim final drafts of the Drawings and Specifications, and provide input and advice on constructability, materials and equipment selections, and availability. **At onboarding, 30% design, 60% design, and 90% design, the CMAR is expected to provide a written report documenting the results of review for items 1 through 3 below in addition to providing ongoing** ~~Provide timely~~ suggestions **through regular OPT team meetings** for modifications to improve:

1. Ability to bid the Work:
    a. Identify Work elements that may be difficult to price as presented in the design documents. Provide suggestions to reduce risk and to obtain better pricing from Subcontractors and Suppliers.
    b. Provide suggestions on Work Packages to improve biddability, however, Engineer will not subdivide work into Work Packages for specific trades.
    c. Determine that specified products are readily available and notify Engineer if equal or substitute materials might be available.
2. Constructability, including sequencing or coordination issues:
    a. Adequacy of details for construction;
    b. Potential conflicts during construction;
    c. Feasibility of construction;
    d. Construction sequencing;
    e. Ability to coordinate among Subcontractors and Suppliers; and
    f. Coordination between Contract Documents.
3. Operability:
    a. Ability to minimize disruptions to existing operations;
    b. Ability to complete construction connections to existing facilities or utilities;
    c. Modifications to facilitate initial start-up and/or performance testing; and
    d. Ability of Owner to operate/maintain the facility when completed.
4. Possible use of patented, licensed, or copyrighted products.
5. Requirements for Subcontractor and equipment and materials procurement.
6. Completeness, consistency, and clarity.

E. Subsurface conditions and Underground Facilities
1. Review information made available by Owner.
    a. Review information pertaining to subsurface or physical conditions at the Site. Inform Owner's Advisor of additional examinations, investigations, explorations, testing, or studies (Supplemental Investigations) of subsurface or physical conditions at the Site that CMAR concludes would be beneficial if conducted prior to commencement of construction. See General Conditions Paragraph 5.03.E.

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b. Review information pertaining to Underground Facilities. Collaborate with the Engineer to improve the accuracy and completeness of information regarding Underground Facilities that Engineer incorporates into Work Authorizations in accordance with General Conditions Paragraph 5.05.

2. Owner's Advisor will issue a Work Authorization for any necessary potholing, exploratory excavations, or other field investigations related to Paragraph E if necessary.

F. Research potential substitutes, furnish data and prepare a Preconstruction Substitute Request prior to a Work Authorization requesting the Owner's Advisor to authorize the use of other items of equipment or material in accordance with General Conditions Paragraph 7.09.

G. Provide review comments in writing using the processes or procedures prescribed by the Owner's Advisor. Verify that the Project design can be executed within the Owner's Construction Budget, within the allotted Contract Times, and with available labor, equipment, and materials.

H. Report to Owner's Advisor and Engineer any elements of the design that appear to be in error or appear to require engineering review and possible resulting modification.

I. The CMAR is not responsible for design of the Project. The CMAR does not control the project design or contents of the Contract Documents and does not assume responsibility or liability for the project design by performing these reviews. The CMAR's review of the project design and Contract Documents and providing recommendations are only advisory to the OPT.

1.04 Construction Management Plan and Implementation

A. Provide and implement a written Construction Management Plan that incorporates the following elements:

1. CMAR's organization for the Construction Phase of the project, including assigned responsibilities and level of authority within Project management;

2. Communication plan, including plans for distribution of documents, implementation of Action Item and Decision registers, frequency of reporting and project controls;

3. Document management plan that incorporates Communications Plan and contractual Electronic Data Protocols;

4. Construction contract administration;

5. Cost management;

6. Value Engineering;

7. Time management;

8. Quality management;

9. Risk management;

10. Safety management;

11. Site management and environmental controls;

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12. Regulatory requirements and permits;

13. Procurement Strategy Plan.

B. Work with the OPT to incorporate requirements of the General Conditions and General Requirements (Division 01 of the Specifications) into the plan. Reference provisions in the General Conditions and General Requirements as appropriate. Prepare a draft plan and submit for review and comment by the OPT. Respond to comments and incorporate changes suggested by review comments as appropriate.

1.05 Construction Contract Administration

A. Work with the OPT to incorporate requirements of the General Conditions and General Requirements into administration of the Contract. Review the Owner's Construction Management Plan and suggest changes as appropriate.

B. Communications

1. Assist the Owner's Advisor with planning Project meetings, participate in these meetings and provide documentation as requested by the Owner's Advisor.

2. Plan, schedule, and document meetings held with Subcontractors and Suppliers. Include the members of the OPT as appropriate.

1.06 Cost Management

A. Provide a preliminary evaluation of the Owner's program and budget requirements to determine that CMAR will be able to construct the facilities described in that program within the Owner's Construction Budget (Budget) using conceptual estimating techniques. Discuss this initial review of the Budget with the OPT.

B. Work with OA to update the Budget with supporting data for review by the OPT at the following intervals:

1. Completion of preliminary design documents by the Engineer and approval by the Owner.

2. Completion of design development documents by the Engineer and approval by the Owner.

3. At appropriate intervals agreed to by the OPT and CMAR during the preparation of the Construction Documents to determine that changes to the design can be constructed within the Budget.

C. Assist OA in preparing an updated line-item Budget based on the CMAR's proposed Procurement Strategy Plan prepared per Paragraph 1.13. This Budget is to include a line item for each anticipated Work Package, as well as line items for Construction Support Costs, the CMAR Fee, and CMAR Contingency Allowances and other costs, if any, that will be incorporated into the GMP for the Project.

D. Assess current construction market to determine risk associated with the Budget. As an example, volatility in the cost of selected materials or equipment may drive cost above the Budget. Identify areas where costs may be lower than original estimates and if cost savings may be used to balance the Budget. Report the cost of various design and construction alternatives to the Owner, including the CMAR's assumptions in preparing its analysis, a

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variance analysis between budget and preliminary Budgets, and recommendations for any adjustments to the Budget. Work with the OPT to consider costs relating to efficiency, usable life, maintenance, energy, and operation as part of the cost analysis.

E. Notify the Owner and the Owner's Advisor immediately if any estimated construction cost will cause the projected GMP to exceed the Budget. Make appropriate recommendations to the OPT if cost projections exceed the Budget.

F. Provide the Budget-related services set out in Paragraph 11.04 of the Agreement.

1.07 **Value Engineering Studies**

A. **Participate in Value Engineering reviews at the level appropriate for the projects at the completion of the first draft of the Final Design Phase documents (approximately 60% completion) to assist in identifying ways to improve value to the owner or reduce the cost for the project. Provide cost estimates to quantify potential cost savings to reduce the overall cost for the Project.**

B. **Assist OA in conducting a workshop to identify potential changes which could reduce the cost of the Project or increase the value of the Project by more than the cost of the changes. Present selected alternatives for more detailed evaluation. The detailed evaluation will consider cost, ability to implement the changes, technical analysis, and the impact of changes on the Project. Ideas that pass the technical and economic analysis, and merit incorporation into the design of the project, will be presented, in a draft report, as a proposal to the OPT for consideration. Incorporate responses of the OPT in the final report.**

C. **Review and comment on deliverables which include draft and final value engineering recommendation reports.**

1.08 Time Management

A. Provide a preliminary master schedule for the Contract. Incorporate the Owner's Advisor's preliminary schedule and the schedule for design into the preliminary master schedule. Include allowances for reasonable periods required for the review and approval of items by the OPT and for approvals of governmental authorities having jurisdiction over the Project. Prepare the preliminary master schedule in a way that the detailed construction schedule can be incorporated into the master schedule as the Project becomes better defined.

B. Identify critical design Milestones that must be met to keep the Project on schedule. Coordinate and integrate the preliminary project schedule with the services and activities of the OPT and CMAR. Update the preliminary project schedule as design develops to indicate proposed activity sequences and durations, Milestone dates for receipt and approval of pertinent information, submittal of a GMP Proposal, preparation and processing of Shop Drawings and Samples, delivery of materials or equipment requiring long-lead time procurement, and the Owner's occupancy requirements.

C. Make appropriate recommendations to the Owner and Owner's Advisor if preliminary project schedule updates indicate that previously approved schedules may not meet Contract Time requirements.

D. Revise the master schedule after the GMP is established.

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1.09 Quality Management

A. **CMAR shall work with Owner's Advisor and third-party testing companies to ensure quality management as dictated in this contract.** ~~Prepare CMAR's Quality Control Plan (CQCP) in accordance with the General Requirements.~~

1. ~~Describe the quality control organization and lines of authority. Quality control plan is to identify the quality control manager and other key individuals involved in CMAR's quality control effort. Provide the services of a dedicated quality control manager unless Owner's Advisor determines that quality control manager may combine quality control duties with other responsibilities. If quality control manager is to serve in other capacities, identify those other responsibilities and the percentage of time spent in each role. Describe the qualifications of the quality control manager (in resume format) to demonstrate experience with quality management activities and performance on successful projects.~~

2. ~~Provide the name and qualifications, in resume format, of other persons assigned a quality control function. Define the roles and responsibilities and authorities for each person and the types of Work or portions of the work for which each person is responsible.~~

3. ~~Describe CMAR's approach to managing quality during construction. Describe how CMAR will integrate quality control procedures into the execution of the Work, provide testing and inspection required to control the quality of the Work in progress and verification or acceptance testing as required by the Contract Documents and CQCP.~~

4. ~~Include a testing plan with details of tests to be provided. Designate the organization (Owner, Owner's Advisor, CMAR, or Testing Agency) responsible for each type of testing. Coordinate CQCP Testing Plan with testing to be provided by the Owner.~~

5. ~~Describe CMAR approach for managing defective Work, including notification and documentation procedures, development and implementation of corrective action plans and documentation that record corrective action has been successful in producing Work that complies with the Contract Documents.~~

6. ~~Describe the approach for scheduling, reviewing, certifying, and managing documentation provided by Subcontractors and Suppliers. Include the approach for managing the quality of submittals, documentation procedures, and process for tracking and keeping documentation up to date.~~

1.10 Risk Management

A. Analyze construction risks to assess risk impact and develop appropriate risk management strategies to minimize associated costs.

B. Identify additional information that will help with risk assessment.

C. Provide recommendations for appropriate allocation of construction risks.

D. Review possible impacts associated with the use of patented, licensed, or copyrighted products.

E. Review legal requirements for subcontractor and equipment procurement for risk impacts.

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F. Suggest procurement strategies to minimize risk.

G. **Develop, maintain, and update a comprehensive Risk Register for the Project.**

1. **The Risk Register shall identify at a minimum, known and potential risks associated with design development, procurement, construction, schedule, cost, and site conditions, and shall include an assessment of the likelihood and potential impact of each identified risk.**

2. **For each identified risk, the CMAR shall recommend mitigation strategies, identify the responsible party for managing the risk, and provide an estimated cost or Design Development Allowance where applicable. The Risk Register shall be used as a basis for establishing and managing the Design Development Allowance.**

3. **CMAR shall review and update the Risk Register at regular intervals, and in conjunction with major design milestones and development of the GMP, and shall provide updated versions to the Owner and Engineer.**

4. **The Risk Register shall be used to support allocation of risk between the Owner and the CMAR and to inform determinations regarding inclusion of risks within the GMP.**

1.11 Safety Management

A. ~~Provide~~ **Maintain** a project-specific Health and Safety Plan for the Contract to address the safety concerns associated with construction activities, including potential hazards, that complies with **this contract and** applicable Laws and Regulations. ~~Write the manual with the ability to readily update the plan~~ **This plan may need to be updated** to incorporate needed revisions on a regular basis.

B. ~~The Health and Safety Plan is to include at least the following information:~~

1. ~~Background information identifying the CMAR, Project description, and location;~~

2. ~~Management accountability structure with authority to implement safety plans, stop work, or make other safety-related decisions;~~

3. ~~Role of safety representative (see General Conditions, Paragraph 7.16);~~

4. ~~Provide descriptions of qualifications and certifications related to the performance of safety representatives;~~

5. ~~Objectives of the Health and Safety Plan;~~

6. ~~Administration and enforcement of the Health and Safety Plan;~~

7. ~~Applicability of the Health and Safety Plan to various personnel categories, including the workforce, visitors, and members of the OPT;~~

8. ~~List of conditions at the Site that may pose a hazard to anyone, hazard types, and those potentially exposed;~~

9. ~~Procedures for first aid and medical attention;~~

10. ~~Emergency notifications procedures based on hazard type which specify the entity to be notified for each situation;~~

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11. ~~Site access control requirements to prohibit unauthorized persons from entering the Site;~~
12. ~~Orientation and training requirements for workers, visitors, and members of the OPT;~~
13. ~~Hazard communications and awareness plan;~~
14. ~~Required safety certifications for each type of work;~~
15. ~~CMAR's safety training program and effort to create and maintain a culture of safety;~~
16. ~~CMAR's written safety guidelines for project-specific issues as defined by Laws and Regulations;~~
17. ~~Plan for conducting safety inspection and the audit frequency and schedule;~~
18. ~~Process for conducting a Job Hazard Analysis for work activities and implementing countermeasures to ensure safety, including checklist specific the Project and type of work; and~~
19. ~~Accident / incident reporting procedures including monthly reporting.~~

C. Incorporate Owner's site safety requirements as appropriate.

1.12 Site Management and Environmental Controls

A. Develop a plan for managing the Site during construction. The plan should address, at a minimum, management of the following:

1. Office space for CMAR, Subcontractors and if required by Contract, the OPT;
2. Water, sanitation, electrical, internet, and other utilities for CMAR's and OPT's operations at the Site;
3. Storage facilities, parking, and construction equipment storage and maintenance;
4. Protection of existing structures, trees and other landscaping, buildings, utilities, and Underground Facilities;
5. Site security, site safety, and emergency responses;
6. Temporary roads, temporary signage, barricades, fencing, and other devices to manage traffic to and within the Site, including provisions for delivery of materials and equipment, and maintenance during construction;
7. Environmental conditions including storm water management, pollution control, care of water, soil management, and other temporary controls and their removal when no longer required;
8. Reference data and control points; and
9. Cleaning during construction and containment and disposal of waste materials.

B. Review plan with Owner's Advisor and Owner to identify potential conflicts with operating other facilities, on-going and anticipated construction by other entities. Revise if necessary.

1.13 Regulatory Requirements and Permits

A. **OPT will obtain the following permits:**

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1. **Erosion, Sedimentation & Pollution Control Plan**
2. **GA EPD Plans & Specification Concurrence**
3. **Local Land Disturbance Permit**

CMAR will obtain all remaining required permits.

B. Review regulatory requirements and permits required for construction. Develop a written plan for meeting applicable Laws and Regulations and obtaining permits. List the permit requirements, ~~entities responsible for obtaining permits~~, documentation required for permits and cost for obtaining and complying with these requirements.

C. Incorporate the associated cost into the Cost of Work and inform the Owner so these can be incorporated into the Owner's Construction Budget, or the Owner's Construction Budget may be adjusted as required.

D. Incorporate time for obtaining permits into the project schedule to ensure permits can be obtained and regulatory requirements met in time for the orderly progression of Work.

1.14 Procurement Strategy Plan

A. Provide input to OPT regarding the current construction market, bidding climate, status of key Subcontractor and Supplier markets, and other local economic conditions.

B. As the design develops, organize the Work into Work Packages that will (1) allow for phased construction that will shorten the overall completion schedule for the Work, (2) encourage price competition by prospective Subcontractors and Suppliers, and (3) enhance the quality and safety of the Work.

C. Develop Subcontractor and Supplier interest in the Project consistent with state Laws and Regulations. Furnish the Owner's Advisor a list of possible Subcontractors and Suppliers, from whom competitive bids will be requested for each principal portion of the Work. Identify preferred providers based on CMAR's previous experience for quality of work, on-time delivery, and ability to complete work within bid amounts. Submission of this list is for information and discussion purposes only and not for prequalification. The review of this list will not require the OPT to investigate the qualifications of proposed Subcontractors and Suppliers, nor does it waive the right of Owner to later object to or reject any proposed Subcontractor or Supplier when bids are considered. CMAR may submit a Change Proposal for any increase in the Guaranteed Maximum Price if this change is made after the GMP has been established.

D. Recommend to the OPT a schedule for procurement of long-lead time items required to meet the project schedule. Assist the OPT with the procurement of these long-lead items by obtaining competitive bids for these items under a separate Work Authorization.

E. Identify critical elements of the Work that may require special procurement processes, such as prequalification of Subcontractors or Suppliers, requirement of certified or prequalified installers, or alternative contracting methods.

F. Advise the Owner of market conditions, bid issues, design issues, or other factors which may have had an impact causing bid prices to be higher than estimated. Discuss opportunities for bringing the Project within budget with the Owner and the Owner's Advisor, in consultation with the Engineer to assist with deciding on how to proceed.

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ARTICLE 2—ADDITIONAL PRECONSTRUCTION SERVICES

2.01 ~~Diverse Business Enterprise (DBE) Program Implementation~~

A. ~~Identify potential contracting opportunities for DBE Subcontractors and Suppliers to meet Project DBE participation goals.~~

B. ~~Identify materials and equipment for which no opportunity for DBE participation exists to assist the Owner in developing realistic DBE participation goals based on available opportunities.~~

C. ~~Determine the eligible contract costs associated with each proposed Work Package.~~

D. ~~Propose realistic DBE participation goals for the Project, expressed as a percentage of eligible contract costs, considering the specific subcontracting opportunities identified and the availability of DBE participants for each specific subcontracting opportunity.~~

E. ~~Determine if Owner's DBE participation goals for the Project, expressed as a percentage of eligible contract costs, is achievable when considering the specific subcontracting opportunities identified and the availability of DBE participants for each specific subcontracting opportunity. Propose the participation goals which are considered to be achievable.~~

F. ~~Promote opportunities for DBE firms to participate in submitting offers for subcontracts. Provide potential Subcontractors and Suppliers with a copy of Owner's DBE policy with bid documents. Make a good faith effort to encourage DBE participation and make potential Subcontractors and Suppliers aware that participation is taken into consideration when awarding contracts.~~

2.02 ~~Value Engineering Studies~~

A. ~~Participate in Value Engineering reviews at the level appropriate for the projects at the completion of the first draft of the Final Design Phase documents (approximately 60% completion) to assist in identifying ways to improve value to the owner or reduce the cost for the project. Provide cost estimates to quantify potential cost savings to reduce the overall cost for the Project.~~

B. ~~Assist OA in conducting a workshop to identify potential changes which could reduce the cost of the Project or increase the value of the Project by more than the cost of the changes. Present selected alternatives for more detailed evaluation. The detailed evaluation will consider cost, ability to implement the changes, technical analysis, and the impact of changes on the Project. Ideas that pass the technical and economic analysis, and merit incorporation into the design of the project, will be presented, in a draft report, as a proposal to the OPT for consideration. Incorporate responses of the OPT in the final report.~~

C. ~~Review and comment on deliverables which include draft and final value engineering recommendation reports.~~

2.03 Start Up and Commissioning Program

A. Provide CMAR's organizational structure for startup and commissioning. Identify the individuals from CMAR, Subcontractors and Suppliers actively involved in the process. Identify testing personnel required for startup, including independent testing agencies. Work

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with Owner's Advisor to develop a table of roles and responsibilities for CMAR team and the OPT.

B. Develop a written start up and commissioning program consistent with the requirements of the Contract Documents. Write the plan in a way that will allow specific details to be added or information updated as equipment and materials are purchased and delivered.

C. Identify all systems to be included in the startup plan, each item of equipment involved with each system and the interface between each item of equipment and other operating equipment. Identify how each equipment component fits into operations of the completed facility.

D. Identify control systems associated with operating the system or facility, and how each is used to start-up, operate, and shut down its associated system. Identify prerequisite conditions for startup and testing for each system and facility. Identify conditions which would merit termination of startup or testing procedures.

E. Compile a list of all documents required for startup, including Contract Documents, Shop Drawings, operations and maintenance manuals, verification of warranty information, lists of spare parts and their location, and contact information for manufacturer's representatives to be included in startup readiness testing /verification and performance testing.

F. Identify testing required for factory witness testing, startup readiness verification, equipment and performance testing, and functional and performance testing.

G. Provide a preliminary schedule for startup and commissioning plans which can be updated as more detailed information is available. Incorporate this schedule in the master schedule and construction schedule for the Project.

2.04 Surveys and Drawings

A. Provide field surveying required for the preparation of designs and drawings.

B. Provide Geographic Information System (GIS) mapping services or assistance with these services.

C. Prepare property, boundary, and right-of-way surveys; prepare easement and deed descriptions; conduct related title searches and examination of deed records.

2.05 ~~Regulatory Agencies~~

A. ~~Assist OPT in preparing applications and supporting documents for government grants, loans, or planning advances, and providing data for detailed applications other than those described in **[include reference]**.~~

B. ~~Additional meetings with local, state, and federal agencies in excess of those described in **[include reference]**.~~

2.06 Additional Inspections and Quality Management

A. Provide shop, mill, or laboratory inspections of materials and equipment, or field inspections of materials and equipment other than as required as Basic Services.

B. ~~Unscheduled Post-Completion Inspections as required per Paragraph **[include reference]**.~~

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2.07 ~~Studies, Reports, and Investigations~~

A. ~~Provide geotechnical investigations, studies, and reports.~~

2.08 Additional Copies of Documents

A. Furnish additional sets of printed documents created by the CMAR.

ARTICLE 3—BASIC PROCUREMENT SERVICES

3.01 Project Management

A. Participate in Project Meetings

1. Participate in kick-off meeting for Procurement Services. Be prepared to discuss changes in CMAR's team and organization structure for Procurement Services, assignments of responsibilities, and CMAR's plan for implementation of Procurement Services.

2. Participate in periodic meetings with the OPT to review progress, coordinate efforts, and discuss planned activities related to procurement. It is anticipated that these progress meetings will occur weekly at times when procurement activities for Work Packages are underway.

B. Provide administration of Agreement for CMAR Procurement Services, including Applications for Payment, progress reporting, management of CMAR staff, schedule for services, and deliverables.

C. **Administer procurement activities, including coordination with suppliers and subcontractors, preparation and issuance of purchase orders for equipment and materials, execution and administration of procurement documents, and tracking of procurement status.**

D. **Review, coordinate, and finalize equipment requests for proposals (RFPs) within thirty (30) days of receipt from the Engineer to facilitate timely procurement of equipment and materials. Engineer will provide draft equipment RFPs.**

3.02 Assembling Work Packages

A. Assemble appropriate bid documents for distribution to prospective bidders for Work Packages in accordance with the procurement strategies defined in the Construction Management Plan and Procurement Strategy Plan (see Basic Preconstruction Services).

3.03 Advertise for Bids

A. ~~Publicly a~~ **A**dvertise each Work Package, soliciting bids from Subcontractors and Suppliers for each Work Package in accordance with the applicable provisions of Laws and Regulations.

B. Maintain a list of all entities that have requested bid documents for each Work Package (planholders) until bids are received. Provide updates of the planholders as required by the Owner's Advisor.

C. Encourage multiple Subcontractors and Suppliers to submit bids on the Work Package so a minimum of three bids are received for each Work Package.

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3.04 Pre-Bid Conferences

A. Conduct a pre-bid conference with prospective Subcontractor and Suppliers to familiarize them with **applicable laws, regulations, and funding requirements.**

1. ~~Bid opportunities for Work Packages;~~
2. ~~Special requirements of the Contract Documents;~~
3. ~~Prevailing wage requirements;~~
4. ~~Equal employment opportunity requirements; and~~
5. ~~Diverse Business Enterprise requirements, if any.~~

B. Obtain responses from the Owner's Advisor, in consultation with the Engineer, to all questions at pre-bid conferences requiring a modification to the Contract Documents. Prepare a record of the discussions at the pre-bid conference to assist the Owner's Advisor and Engineer in preparing Addenda as appropriate. Review and comment on Addenda prepared by the Owner's Advisor in consultation with the Engineer to incorporate responses to questions raised during or as a result of the pre-bid conference.

3.05 Addenda

A. Receive draft Addenda prepared by the Owner's Advisor in consultation with the Engineer. Review the draft Addenda for clarity, consistency, and coordination, and provide comments to Owner's Advisor and Engineer. By conducting such reviews and providing comments, CMAR does not assume responsibility or liability, in whole or in part, for all or any part of the Project design or the content of the Contract Documents.

B. Distribute Addenda regarding any changes in the bid process or Contract Documents to all planholders. Require verification from planholders that Addenda have been received.

3.06 Opening Bids

A. Open bids submitted by Subcontractors and Suppliers for all Work Packages at the time and location so indicated in the advertisement for bid or as altered by addendum sent to all planholders.

B. Where allowed by state Laws and Regulations, the CMAR may be able to self-perform portions of the Work. Require sealed bids for all Work Packages which the CMAR proposes to perform with its own resources. The CMAR must submit a sealed bid for any such Work Package to be opened at the same time and in the same manner **(opened by Owner's Advisor)** that other bids for this Work are to be opened. The CMAR will be allowed to self-perform that Work for which the CMAR's bid demonstrates that it will provide the best value in terms of cost, schedule, and quality of Work.

C. Review all bids submitted in the presence of the Owner and the Owner's Advisor in a way that does not disclose the contents of the bid during the selection process to any entity other than the OPT and CMAR.

D. Compare bids received to the line-item budget prepared for the Project prior to the opening of bids. Resolve discrepancies or overlaps in bid packages to eliminate duplications or the omission of elements of the Work that are not included in Construction Support Costs.

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Discuss each bid received with the OPT and recommend which bid received will provide best value for the Owner.

E. Evaluate any substitutions or alternate bids offered by bidders. Owner's Advisor, in consultation with the Engineer, will evaluate the substitutions or alternate bids to determine the technical merit and to determine that the modifications offered are consistent with the intent of the Contract Documents. The Owner, in consultation with the Owner's Advisor and Engineer, will determine if the substitution or alternate is acceptable.

F. The Owner will adjust the Guaranteed Maximum Price (GMP) if the Owner requires the CMAR to contract with a Subcontractor or Supplier different from the entity submitting the bid on which the GMP is based. This adjustment will be made in the GMP or by Change Order if the GMP has already been established by a Work Authorization.

G. In the case of the need to replace a Subcontractor or Supplier under the provisions of the General Conditions Paragraph 7.10.O, Owner may direct the CMAR to obtain competitive bids for this Work if the cost proposed by the CMAR or substitute Subcontractor or Supplier for this Work differs from the line-item estimate by more than 10 percent of the line-item amount. The CMAR will not be required to advertise this Work as required in Paragraph 1.02.

H. Make all bids public after the award of contracts or not later than 7 days after the date of the final selection of bids or proposals.

ARTICLE 4—ADDITIONAL PROCUREMENT SERVICES

4.01 ~~Diverse Business Program Implementation~~

A. ~~Promote opportunities for DBE firms to participate in submitting offers for subcontracts. Provide potential Subcontractors and Suppliers with a copy of Owner's DBE policy with bid documents. Make a good faith effort to encourage DBE participation and make potential Subcontractors and Suppliers aware that participation is taken into consideration when awarding contracts.~~

B. ~~Notify Owner if a qualified DBE Subcontractor or Supplier submits a bid but has submitted a higher bid price than a qualified non-DBE Subcontractor or Supplier. Work with the Owner to determine if the subcontract is to be awarded to the higher priced DBE subcontractor. Adjust the GMP accordingly.~~

4.02 Prequalification of Bidders

A. Prequalify bidders for the Project using the OPT's prequalification process. If the OPT does not have a prequalification process in place for this Project, CMAR will assist the OPT in developing and implementing a prequalification process. Any prequalification of bidders must also be in accordance with applicable state Laws and Regulations.

4.03 Additional Work Packages

A. Providing additional effort to procure Work Packages in addition to the number of Work Packages stipulated in Paragraph 3.02.

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4.04 ~~Regulatory Agencies~~

A. ~~Preparing applications and supporting documents for government grants, loans, or planning advances, and providing data for detailed applications other than those described in **[include reference]**.~~

B. ~~Additional meetings with local, state, and federal agencies in excess of those described in **[include reference]**.~~

4.05 Additional Copies of Documents

A. Furnishing additional sets of printed documents.

ARTICLE 5—SPECIAL SERVICES

5.01 The scope of services for Special Services, if any, will be the scope set forth in the Contract Amendment(s) establishing and authorizing such Special Services

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Table 1—Summary of Overall CMAR Compensation

Compensation for CMAR Services (See **Table 2, Row 3**)							1	$	-
Construction Support Costs									
Fixed Construction Support Costs (see **Table 3, Row 1**)							2	$	-
Time Sensitive Construction Support Costs (see **Table 4, Row 1**)							3	$	-
Total Construction Support Costs							4	$	-
Estimated CMAR Fee with Nominal Multiplier									
Nominal Multiplier							5		
CMAR Fee Percentage	6		x Nominal Multiplier				7	$	-
CMAR Contingency Allowance									
CMAR Contingency Allowance	8		of	9	$	-	Nominal Multiplier	10	$ -
Total of Overall CMAR Compensation							11	$	-

Contract Times			
CMAR agrees it will reach Project Substantial Completion in:	12	1,020	days
CMAR agrees it will reach Final Completion in additional days:	13	60	days
Estimated number of days in the Construction Period	14	1,080	days

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Table 2—Compensation for CMAR Services

a	b	c	d	e	f	g	h
Task	**Description**	**[Provider A] [Classification]** $ -	**[Provider B] [Classification]** $ -	**[Provider C] [Classification]** $ -	**[Provider D] [Classification]** $ -	**[Provider E] [Classification]** $ -	**Amount**
		Hours	**Hours**	**Hours**	**Hours**	**Hours**	
1.00	**Preconstruction Basic Services**						
1.01	Project Management						$ -
1.02	Review of Preliminary Design Report						$ -
1.03	Design Related Preconstruction Services						$ -
1.04	Construction Management Plan and Implementation						$ -
1.05	Construction Contract Administration						$ -
1.06	Cost Management						$ -
1.07	**Value Engineering Studies**						$ -
1.08	Time Management						$ -
1.09	Quality Management						$ -
1.10	Risk Management						$ -
1.11	Safety Management						$ -
1.12	Site Management and Environmental Controls						$ -
1.13	Regulatory Requirements and Permits						$ -
1.14	Procurement Strategy Plan						$ -
1	**Total Cost for CMAR Preconstruction Basic Services**						**$ -**
3.00	**Procurement Basic Services**						
3.01	Project Management						$ -
3.02	Assembling Work Packages						$ -
3.03	Advertise for Bids						$ -
3.04	Pre-bid Conferences						$ -
3.05	Addenda						$ -
3.06	Opening Bids						$ -
2	**Total Cost for CMAR Procurement Basic Services**						**$ -**
3	**Total Cost for CMAR Services**						**$ -**

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Table 3—Basis of Compensation for Fixed Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	Contract Reference	Description	Quantity	Units	Unit Cost	Amount
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
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						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Fixed Construction Support Cost**					**$ -**

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Table 4—Basis of Compensation for Time Sensitive Construction Support Cost

a	b	c	d	e	f	g
CMAR Number	Contract Reference	Description	Quantity	Units	Unit Cost	Amount
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
1	**Total Time Sensitive Construction Support Cost**					**$ -**
2	**Construction Period**	1,080	**days**			
3	**Construction Support Cost Extended Rate**	$ -	**per day**			

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SECTION 00 52 32.08
SUBCONTRACTOR AGREEMENT

CONSTRUCTION SUBCONTRACT—
CONSTRUCTION MANAGER AT RISK SERIES

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CONSTRUCTION SUBCONTRACT

This is a Construction Subcontract (Subcontract) between **[Name of Construction Manager at Risk]** (Construction Manager at Risk; CMAR) and **[Name of Subcontractor]** (Subcontractor).

Prime Contract—The Construction Manager at Risk has entered into a contract (Prime Contract) dated **[Date of Prime Contract]** with **[Name of Owner]** (Owner).

Construction Manager at Risk and Subcontractor further agree as follows:

ARTICLE 1—PRELIMINARY MATTERS

1.01 Prime Contract

A. The Prime Contract requires CMAR to perform and furnish construction labor, materials, equipment, and services (Prime Contract Work) in connection with the Project described therein. The Prime Contract, excluding compensation and other confidential information, is incorporated in this Subcontract by reference. Portions of the Prime Contract are attached as Exhibit 1 to this Subcontract; Subcontractor may review other non-confidential portions upon request. The Project described in the Prime Contract is summarized as follows:

[Describe project]

1.02 Scope of Subcontract Work

A. CMAR hereby retains Subcontractor to provide construction labor, materials, equipment, and services under this Subcontract (Subcontract Work) described as follows:

1. **[Here describe with specificity the scope of the Subcontract Work or incorporate a scope of work exhibit. The Subcontract Work will usually consist of one or more Work Packages—reference to or attachment of the specific Work Package(s) should be sufficient to describe the Subcontract Work. In some cases the Subcontract scope of work will include specific reference to the portions of the Prime Contract—the Specification sections, Drawing numbers, etc.—that Subcontractor is responsible for performing. The Subcontract scope of work should also expressly identify any materials, equipment, or services that will be provided by CMAR for installation by the Subcontractor]**.

B. The Subcontract Work is a part of the Prime Contract Work. Except as otherwise stated in this Subcontract, the provisions of the Prime Contract that apply to the performance and quality of the Prime Contract Work apply to the Subcontract Work.

C. The express terms of this Paragraph 1.02 govern in establishing the Subcontract scope of work. The divisions and sections of the Prime Contract's Specifications and the identifications and organization of the Prime Contract's drawings do not control or limit CMAR in dividing the Work among subcontractors or suppliers, or delineating the work to be performed by, or obligations of any specific trade, including Subcontractor.

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1.03 Subcontract Documents

A. The Subcontract Documents are identified in Article 13 of this Subcontract.

1.04 Independent Contractor

A. Subcontractor is an independent contractor, and is not an employee or partner of, or a joint-venturer with CMAR and has no contractual relationship or privity with Owner or Owner's advisors, engineers, or consultants.

ARTICLE 2—OBLIGATIONS OF THE PRIME CONTRACT

2.01 Incorporation of Prime Contract Obligations

A. Subcontractor shall conform to and comply with all requirements, terms, and conditions of the Prime Contract that relate in any way to the performance and completion of the Subcontract Work, and with respect to such requirements, terms, and conditions Subcontractor is bound to CMAR under the Subcontract to the same extent that the CMAR is bound to the Owner under the Prime Contract.

B. CMAR shall have the benefit of all rights, remedies, and redress against Subcontractor that the Owner, under the Prime Contract, has against the CMAR.

C. The obligation of the Subcontractor to comply with the requirements, terms, and conditions of the Prime Contract does not provide any rights, benefits, or third-party beneficiary standing to the Subcontractor with respect to the Prime Contract.

2.02 Precedence of Subcontract

A. If a provision of this Subcontract conflicts with a provision of the Prime Contract, the terms of this Subcontract govern, unless under controlling laws the conflicted provision of the Prime Contract cannot be waived.

ARTICLE 3—SUBCONTRACT TIMES

3.01 Commencement and Continuation of Subcontract Work

A. Subcontractor will not begin the Subcontract Work until CMAR issues a notice to commence Subcontract Work at the Site.

B. From time to time the schedule may require Subcontractor to temporarily pause its Subcontract Work, or to depart from the Site, while CMAR and other subcontractors perform portions of the Prime Contract Work.

C. Subcontractor will return to the Site to continue or resume the Subcontract Work after receipt of instructions to do so from CMAR.

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3.02 Subcontract Times

Notes to User—Select one of the options (1, 2, or 3) to complete the sentence in Paragraph 3.02.A. Delete those options not selected. Delete the number and return to make a complete continuous sentence.

A. The Subcontract Work will be completed in full:

1. on or before **[insert Subcontract completion date]**.

2. within **[insert number of days]** days after notice to commence work at the Site.

3. pursuant to the attached preliminary progress schedule.

B. Subcontractor shall provide all required submittals on a timely basis and provide sufficient labor and materials to comply with the CMAR's progress schedule to avoid delaying the progress of CMAR's Work under the Prime Contract. Subcontractor shall make modifications in the performance and completion of the Subcontract Work as necessary to comply with modifications, if any, in CMAR's progress schedule.

C. The time for completion of the Subcontract Work, as set forth in Paragraph 3.02.A, and compliance with the CMAR's progress schedule, as set forth in Paragraph 3.02.B, all as duly modified under this Subcontract, together will be referred to as "Subcontract Times."

3.03 Time is of the Essence

A. Subcontractor's obligation to comply with the Subcontract Times is of the essence of the Subcontract.

3.04 Damages for Late Completion

A. Subcontractor and CMAR recognize that CMAR will suffer financial loss if the Subcontract Work is not completed within the Subcontract Times.

B. The damages resulting to CMAR may include liquidated damages, special damages, and other damages, if any, assessed by the Owner, actual damages claimed by the Owner as a result of the delay, and CMAR's costs for extended general conditions, field overhead, and home office overhead.

C. As a result of the losses, costs, and damages recognized in Paragraphs 3.03.A. and B., if Subcontractor fails to complete the Subcontract Work within the Subcontract Times, and without limiting any additional remedies available to CMAR, Subcontractor shall pay CMAR for losses, costs, and damages incurred by CMAR for Subcontractor's failure to comply with the Subcontract Times, including the share of delay damages and costs imposed on or levied against CMAR attributable to Subcontractor. CMAR has the right to set off any such amounts against payments due Subcontractor under this Subcontract.

ARTICLE 4—SUBCONTRACT PRICE

4.01 Payment Obligation

A. CMAR shall pay Subcontractor for completion of the Subcontract Work in accordance with the Subcontract Documents an amount equal to the sum of the amounts determined pursuant to the following paragraphs (Subcontract Price).

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B. For all Subcontract Work other than Unit Price Work, a lump sum of $**[Lump sum amount]**.

1. Cash Allowances—All specific cash allowances are included in the above price and include the cost to Subcontractor, less any applicable trade discounts, of materials and equipment required by the cash allowances to be delivered at the site, and all applicable taxes. Subcontractor's costs for unloading and handling on the site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Subcontract Price, and no demand for additional payment on account of any of the foregoing will be valid.

C. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work multiplied by the actual quantity of that item:

Unit Price Subcontract Work					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
Total of all Extended Prices					**$**

The extended prices for Unit Price Work set forth as of the Subcontract Date are based on estimated quantities. Estimated quantities are not guaranteed, and determinations of actual quantities will be verified by CMAR and will be subject to any applicable procedures for measurement and verification under the Prime Contract.

ARTICLE 5—PAYMENT PROCEDURES

5.01 Progress Payments

A. Applications for Payments

1. Ten days prior to the date established in the Prime Contract for submission by CMAR of CMAR's application for each progress payment, but not more often than once a month, Subcontractor shall submit to CMAR for review a draft progress payment application covering the Subcontract Work completed as of the date of the progress payment application. The amount requested under each progress payment application will be calculated in accordance with Article 4, and: (a) for lump sum work by determining the percentage of the Subcontract Work completed as of the date of the progress payment application; (b) for unit price work by applying unit prices to units provided; (c) subject to subtraction to account for amounts previously paid. Subcontractor's progress payments will be subject to the retainage provisions of the Prime Contract, or to retainage of **[number]** percent, whichever is greater.

2. Each Subcontractor progress payment application must be accompanied by supporting documentation required by the Prime Contract to be attached to the CMAR's progress payment submission. The Subcontract progress payment application must also be accompanied by required lien waivers; a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all liens; and for stored material and equipment, evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to

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protect Owner's interest therein. All such supporting documentation must be satisfactory to CMAR and Owner.

3. Beginning with Subcontractor's second progress payment application, each Subcontractor progress payment application must include a Subcontractor's affidavit stating that all previous progress payments received on account of the Subcontract Work have been paid to persons and entities providing labor, equipment, materials, and services on account of amounts received on behalf of said sub-subcontractors, suppliers, and vendors from prior progress payment applications. Each Subcontractor's affidavit must list all sub-subcontractors, suppliers, and vendors having contracts with Subcontractor to provide said labor, equipment, material, and services on the Project including the amount of each contract, the amount paid to date and the amount due or to become due to each sub-subcontractor, supplier, and vendor. Each progress payment application must also include lien waivers executed by each sub-subcontractor, supplier, and vendor listed on the Subcontractor's affidavit.

B. Review of Applications

1. Within five days after receipt of each draft progress payment application submitted by Subcontractor, CMAR will return the draft progress payment application with corrections, if any. Subcontractor will submit a final progress payment application, incorporating all resolved corrections, together with all supporting documentation, within three days thereafter.

2. CMAR may withhold amounts requested in one or more payment applications from the Subcontractor in whole or part if one or more of the following occurs:

   a. The Subcontract Work is defective, or completed Subcontract Work has been damaged, requiring correction or replacement;

   b. The Subcontract Price has been reduced by change orders;

   c. CMAR has been required to correct defective Subcontract Work or complete Subcontract Work;

   d. Claims have been made against CMAR on account of Subcontractor's performance or furnishing of the Subcontract Work;

   e. Liens have been filed in connection with the Subcontract Work, except where Subcontractor has delivered a specific bond satisfactory to CMAR and Owner to secure the satisfaction and discharge of such liens;

   f. Owner has exercised a set-off against payments to CMAR attributable to Subcontractor's activities or performance of the Subcontract Work; or

   g. Subcontractor has defaulted under the terms of the Subcontract.

C. Payment—CMAR shall pay Subcontractor any amounts due to Subcontractor under a payment application for Subcontract Work within 10 days after CMAR's receipt from the Owner of payment for such Subcontract Work.

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ARTICLE 6—FINAL PAYMENT AND COMPLETION

6.01 Final Payment

A. Upon final completion of obligations under the Subcontract, including acceptance by Owner, or its representative, of the Subcontract Work as part of the Work under the Prime Contract, and submission and acceptance of all close-out documents required under the Subcontract, Subcontractor shall submit to CMAR an application for final payment and release of retainage, if any.

B. Final payment becomes due 10 days after CMAR's receipt of payment from Owner of amounts requested on behalf of Subcontractor. CMAR's receipt of payment of retainage withheld by Owner from amounts due to CMAR for the Subcontract Work is an express condition precedent to CMAR's obligation to pay such retainage to Subcontractor.

6.02 Final Lien Waivers

A. Upon the request of CMAR, Subcontractor shall submit, as part of the application for final payment, a final waiver of lien and sworn statement indicating all sub-subcontractors, suppliers, and vendors, their contract amounts, and the final amounts paid to each sub-subcontractor, supplier, and vendor.

6.03 Warranty of Title

A. Subcontractor warrants and guarantees that title to all Subcontract Work, materials, and equipment furnished under the Subcontract will pass to Owner free and clear of all liens and other title defects, and all patent, licensing, copyright, or royalty obligations.

6.04 Waiver of Claims

A. Final payment by CMAR to Subcontractor constitutes:

1. A waiver of all claims by CMAR against Subcontractor, except claims arising from unsettled liens, from defective Subcontract Work appearing after final inspection, from failure to comply with the Subcontract Documents or the terms of any special guarantees specified therein, or from Subcontractor's continuing obligations under the Prime Contract; and

2. A waiver of all claims by Subcontractor against CMAR other than those previously made, in accordance with the requirements of this Subcontract, that remain unsettled.

ARTICLE 7—SUB-SUBCONTRACTORS

7.01 Subcontractor's Responsibility

A. Subcontractor shall be fully responsible to CMAR for all acts and omissions of the sub-subcontractors, suppliers, and other individuals or entities performing or furnishing any of the Subcontract Work, just as Subcontractor is responsible for Subcontractor's own acts and omissions.

7.02 No Third-Party Relationships

A. Nothing in the Subcontract creates for the benefit of any such sub-subcontractor, supplier, or other individual or entity any contractual relationship between CMAR, Owner, or Owner's

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advisors, engineers, or consultants and any such sub-subcontractor, supplier, or other individual or entity.

B. Nothing in the Subcontract creates any obligation on the part of CMAR, Owner, or Owner's advisors, engineers, or consultants to pay or to see to the payment of any money due any such sub-subcontractor, supplier, or other individual or entity, except as may otherwise be required by laws and regulations.

ARTICLE 8—PERFORMANCE OF THE SUBCONTRACT WORK

8.01 Subcontractor's Obligations

A. Subcontractor shall provide all material, equipment, services, and labor necessary for the completion of the Subcontract Work, except those materials, equipment, or services specifically identified in this Subcontract, in the description of the Subcontract Work or otherwise, as being provided by CMAR.

B. All materials and equipment must be as specified in the Subcontract Documents and be of good quality and new, except as otherwise provided in the Subcontract Documents. Subcontractor shall provide CMAR with such information and test results required under the Prime Contract to verify the quality of the materials and equipment furnished under the Subcontract Documents.

8.02 Verification of Existing Conditions

A. The dimensions, locations, and limits of the Subcontract Work are shown or indicated in the Subcontract Documents.

B. CMAR has used reasonable efforts to verify the accuracy of dimensions, locations, and limits in the Subcontract Documents, but takes no responsibility for the verification of information concerning actual conditions affecting the Subcontract Work. Subcontractor has an independent obligation to verify actual conditions, including but not limited to dimensions, locations, and limits, prior to ordering equipment and materials and performing the Subcontract Work, and shall be responsible for all costs and expenses resulting from the failure to verify such information.

C. When equipment and materials are to be provided by CMAR per Paragraph 8.01, Subcontractor is to verify dimensions provided by CMAR prior to beginning installation and will immediately notify CMAR of any discrepancies or issues that need to be resolved before CMAR-furnished equipment and materials are installed.

8.03 Supervision

A. At all times during the progress of the Subcontract Work, Subcontractor shall assign an authorized representative to provide competent, on-site supervision. Such representative must not be replaced without written notice to CMAR except under extraordinary circumstances.

B. Subcontractor shall be solely responsible for scheduling and coordinating the work of sub-subcontractors, suppliers, and other individuals or entities performing or furnishing any of the Subcontract Work under a direct or indirect contract with Subcontractor.

C. Subcontractor shall supervise, inspect, and direct the Subcontract Work competently and efficiently, devoting such attention to the Subcontract Work and applying such skills and

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expertise as may be necessary to perform the Subcontract Work in accordance with the Subcontract Documents.

8.04 Coordination with Other Subcontractors; Other Work at the Site

A. Subcontractor shall cooperate with other subcontractors and coordinate its Subcontract Work and schedule with other subcontractors on the Project. Subcontractor shall attend coordination meetings and endeavor to resolve all conflicts with other subcontractors without the intervention of CMAR. If a conflict cannot be resolved without the intervention of CMAR, the decision of CMAR regarding resolution of the conflict will be final.

B. Subcontractor shall not damage, delay, or interfere with the work of other subcontractors or of CMAR, Owner, or others working at the site, and shall be responsible for the cost of damage, delay, or interference caused by the operations of Subcontractor to the work of others.

8.05 Performance of the Subcontract Work

A. Clean-up—On not less than a daily basis, Subcontractor shall be responsible for cleaning up and removing all debris and waste resulting from the Subcontract Work, to avoid interference with the work and progress of others at the Site. If Subcontractor fails to clean up and remove waste and debris in accordance with this provision, CMAR may provide for clean-up and removal of waste and debris at Subcontractor's expense.

B. Hoisting and Lifting—Subcontractor shall provide all hoisting and lifting required for the Subcontract Work, unless CMAR has otherwise expressly agreed to provide hoisting, lifting, or both.

C. Temporary Utility Services and Temporary Facilities—Subcontractor shall at its expense provide temporary utility services and temporary facilities needed for the performance of the Subcontract Work, except those temporary utility services and temporary facilities that CMAR has expressly agreed to provide at its expense.

D. Safety and Protection

1. Subcontractor shall perform the Subcontract Work in a safe manner, taking full responsibility for the prevention of harm or injury to its workforce, and taking all reasonable steps necessary to protect from harm, injury, or damage all persons, property, structures, materials, and equipment at or adjacent to the Subcontractor's work areas.

2. Subcontractor shall comply with the safety programs of the Owner and CMAR when Subcontractor has been made aware of such requirements in writing.

3. Subcontractor shall coordinate the safety of its employees, Subcontractor's lower-tier subcontractors, and Subcontractor's suppliers with CMAR's safety representative and shall comply with all applicable federal Occupational Safety and Health Administration (OSHA) and other laws and regulations related to safety and protection. Subcontractor shall ensure that its employees and the on-site employees of Subcontractor's lower-tier subcontractors and suppliers are properly trained and understand (a) Owner's, CMAR's, and Subcontractor's safety requirements, and (b) applicable safety laws and regulations. Subcontractor is responsible for furnishing to CMAR and others as applicable all required safety data sheets.

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4. Subcontractor shall report promptly to CMAR all injuries, accidents, and damage that occurs during the performance of the Subcontract Work, and all failures or near-miss events that could have resulted in serious injury, even if no serious injury actually occurred.

E. Labor—Subcontractor shall comply with applicable labor and jurisdictional requirements to prevent strikes and other work stoppages and slowdowns that would interfere with the Subcontract Work and the work of others. Subcontractor shall be responsible for delays resulting from Subcontractor's violation of this provision.

F. Communications with Owner, Owner's Advisor, and Engineer—Subcontractor shall communicate with Owner and Owner's advisors, engineers, consultants, and other representatives solely through CMAR, with the following limited exceptions: (1) in the case of an emergency, Subcontractor may communicate directly with any entity or individual in the interests of safety and protection of property, (2) Subcontractor may directly request Owner to provide information about amounts paid to CMAR on account of Subcontract Work performed, and (3) Subcontractor may directly request Owner to provide Subcontractor with a copy of any payment bond furnished by CMAR.

8.06 Correction and Warranties

A. Subcontractor warrants and guarantees to CMAR that all Subcontract Work will be in accordance with the Subcontract Documents and will not be defective. Subcontractor's warranty and guarantee hereunder excludes defects or damage caused by abuse, modification, or improper maintenance or operation by persons other than Subcontractor and its sub-subcontractors, suppliers, or any other individual or entity for whom Subcontractor is responsible; or normal wear and tear under normal usage.

B. Subcontractor's obligation to perform and complete the Subcontract Work in accordance with the Subcontract Documents will be absolute and Subcontractor will be fully responsible for the Subcontract Work under the Subcontract to the same extent that CMAR is responsible to the Owner for the Prime Contract Work, including the Subcontract Work, under the Prime Contract.

C. Subcontractor shall correct the Subcontract Work to the same extent that CMAR is required to correct the Prime Contract Work, including the Subcontract Work, under the Prime Contract. Subcontractor shall correct Subcontract Work whether or not installed or completed. If the Subcontract Work has been rejected, Subcontractor shall remove such rejected Subcontract Work from the Project at the direction of CMAR and replace it with Subcontract Work that is not defective.

D. For a period of one year after substantial completion of the Prime Contract Work, and for any additional period beyond one year as required under the Prime Contract for correction by the CMAR of the Prime Contract Work, and promptly after receipt of written notice, Subcontractor shall correct all defective Subcontract Work as directed by CMAR. Subcontractor shall indemnify CMAR, Owner, and Owner's advisors, engineers, and consultants, for all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to any such correction or removal, including but not limited to all costs of repair or replacement of work of others.

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E. All such correction obligations are in addition to the warranty, guarantee, and contractual duties established above and elsewhere in the Subcontract Documents.

F. The obligations under this Paragraph 8.06 will survive completion of the Subcontract Work and, when the Prime Contract is complete and ready for final payment by Owner, CMAR may assign its rights under this Paragraph 8.06 to Owner upon agreement between Owner and CMAR and notice to Subcontractor.

ARTICLE 9—CHANGES TO THE SUBCONTRACT

9.01 Changes

A. Without invalidating the Subcontract, CMAR may, at any time or from time to time, order changes to the Subcontract Work including additions, deletions, or revisions in the Subcontract Work. Subcontractor shall promptly proceed with the Subcontract Work as changed. All changed Subcontract Work will be performed under the applicable conditions of the Subcontract Documents. Subcontractor shall not perform any changes to the Subcontract Work without express written authority from CMAR.

B. Subcontractor shall deliver notice of each request for a change in compensation or time within 7 days of the associated directive to perform changed Subcontract Work, and not later than 2 days before Prime Contract requirements relative to submitting claims and change proposals.

C. Changes in the Subcontract Price for changed Subcontract Work will be made on the basis of either a mutually acceptable lump sum price, or under unit prices consistent with the unit prices set forth in the Subcontract as of the Subcontract Date. To the extent the changed Subcontract Work has no predetermined costs or unit prices under the original Subcontract, and the parties do not agree to a lump sum for the changed Subcontract Work, the amount of the request for changed compensation will be based upon Subcontractor's cost of labor, consistent with any applicable rates negotiated under the original Subcontract, plus the direct costs of sub-subcontracts, materials and equipment to be consumed or incorporated in the changed Subcontract Work, plus overhead and profit consistent with the price negotiated for the original Subcontract Work and subject to approval by CMAR.

D. To the extent that a change to the Subcontract Work resulted from a revision of the Prime Contract, the compensation to Subcontractor for such changed Subcontract Work will be limited to the amount collected by CMAR from Owner on behalf of Subcontractor for such change in the Subcontract Work. In the event that the revision results in a deduction of the Subcontract Price, the deduction will be based upon the share of the deduction assessed against CMAR under the Prime Contract that is attributable to the change in Subcontract Work.

ARTICLE 10—BONDS, INSURANCE, AND INDEMNIFICATION

10.01 Performance Bond, Payment Bond, and Other Bonds

A. If expressly listed as Subcontract Documents in Article 13, or expressly required of Subcontractor elsewhere in the Subcontract Documents, Subcontractor shall at its expense furnish a performance bond and a payment bond, each in an amount equal to or greater than the Subcontract Price, as security for the faithful performance and payment of all of

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Subcontractor's obligations under the Subcontract Documents. If the Subcontract Documents as of the Subcontract Date do not require performance and payment bonds, but CMAR subsequently instructs Subcontractor to furnish such bonds, Subcontractor shall do so at CMAR's expense.

B. The performance and payment bonds must remain in effect until not less than the longer of: (1) one year after the date when final payment becomes due from CMAR; or (2) completion of the correction period specified in this Subcontract, except as provided otherwise by applicable laws or regulations. Subcontractor shall also furnish such other bonds as are required by the Subcontract Documents. The performance bond will be issued using EJCDC® C-610, Performance Bond (2018). The Payment Bond will be issued using EJCDC® C-615, Payment Bond (2018). Terms of these bonds apply except as expressly provided otherwise by laws or regulations.

C. If the Prime Contract requires that CMAR furnish a Warranty Bond, then Subcontractor shall furnish a Warranty Bond with respect to the Subcontract Work, under the same requirements. The bond will be issued using EJCDC® C-612, Warranty Bond (2018).

D. All bonds must be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

E. Subcontractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.

F. If the surety on a bond furnished by Subcontractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Subcontractor shall promptly notify CMAR and shall, within 20 days after the event giving rise to such notification, furnish another bond and surety, both of which must comply with the bond and surety requirements above.

G. If the Subcontract requires Subcontractor to provide its own performance bond and payment bond, as described in Paragraphs 10.01.A. through D., the CMAR may, at its sole discretion, provide such bonds for the Subcontractor, either as individual instruments or as a part of CMAR's bonding. In such case Subcontractor shall be responsible to CMAR for a proportionate share of CMAR's bond costs, computed as the percentage of the total Subcontract Price relative to the total bonded Contract Price, and the Subcontract Price will be adjusted accordingly.

H. If as of the Subcontract Date the Subcontractor is required to provide or contribute to the cost of performance bonds or payment bonds as described in this Paragraph 10.01, then subsequently CMAR may, at its sole discretion, waive such requirements for this Subcontract, and the Subcontract Price will be adjusted accordingly.

I. If Subcontractor has failed to obtain a required bond, CMAR may exclude the Subcontractor from the site and exercise CMAR's termination rights under Article 11.

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J. Upon request, CMAR shall provide a copy of the payment bond to any sub-subcontractor, supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Subcontract Work.

10.02 Insurance—General Provisions

A. Subcontractor shall obtain and maintain insurance as required in this Article and in any Subcontract exhibit or supplementary Subcontract Document regarding insurance.

B. All insurance required by the Subcontract to be purchased and maintained by Subcontractor must be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated elsewhere in the Subcontract Documents, all companies that provide insurance policies required under this Subcontract must have an A.M. Best Financial Strength Rating of A- or better, and an A.M. Best Financial Size Category of VII or larger.

C. Subcontractor shall deliver to CMAR, with copies to each named insured and additional insured, as identified here or elsewhere in the Subcontract Documents, certificates of insurance establishing that Subcontractor has obtained and is maintaining the policies, coverages, and endorsements required by the Subcontract. Upon request by CMAR or any other insured, Subcontractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Subcontractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

D. Failure of CMAR to demand such certificates or other evidence of the Subcontractor's full compliance with these insurance requirements, or failure of CMAR to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the Subcontractor's obligation to obtain, and maintain such insurance.

E. If Subcontractor does not purchase or maintain all of the insurance required of it by this Subcontract, the Subcontractor shall notify CMAR in writing of such failure to purchase prior to the start of the Subcontract Work, or of such failure to maintain prior to any change in the required coverage.

F. If Subcontractor has failed to obtain and maintain required insurance, CMAR may exclude the Subcontractor from the Site and exercise CMAR's termination rights under Article 11.

G. Without prejudice to any other right or remedy, if Subcontractor has failed to obtain required insurance, CMAR may elect to obtain equivalent insurance to protect CMAR's interests at the expense of Subcontractor, and the Subcontract Price will be adjusted accordingly.

H. CMAR does not represent that insurance coverage and limits established in this Subcontract necessarily will be adequate to protect Subcontractor or Subcontractor's interests.

I. The insurance and insurance limits required herein will not be deemed as a limitation on Subcontractor's liability under the indemnities granted to CMAR and other individuals and entities in the Subcontract Documents.

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10.03 Subcontractor's Insurance

A. Workers' Compensation—Subcontractor shall purchase and maintain workers' compensation and employer's liability insurance for:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.

2. United States Longshoreman and Harbor Workers' Compensation Act, if applicable, and Jones Act coverage, if applicable.

3. claims for damages because of bodily injury, occupational sickness or disease, or death of Subcontractor's employees by stop-gap endorsement in monopolist worker's compensation states.

4. Foreign voluntary worker compensation, if applicable.

Workers' Compensation and Related Policies	**Policy limits of not less than:**
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act, if applicable	
Bodily injury by accident—each accident	$
Bodily injury by disease—aggregate	$
Employer's Liability	
Each accident	$
Each employee	$
Policy limit	$
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	$

B. Commercial General Liability—Claims Covered. Subcontractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Subcontractor, on an occurrence basis, against:

1. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Subcontractor's employees;

2. Claims for damages insured by reasonably available personal injury liability coverage; and

3. Damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

C. Commercial General Liability—Form and Content. Subcontractor's commercial liability policy must be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage:

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a. Such insurance must remain in effect for three years after final payment.

b. Subcontractor shall furnish CMAR and each other additional insured, as identified in this Article or elsewhere in the Subcontract Documents, evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, including but not limited to coverage of Subcontractor's contractual indemnity obligations under the Subcontract Documents.

3. Severability of interest.

4. Underground, explosion, and collapse coverage.

5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through both ISO Endorsements CG 20 10 04 13 and CG 20 37 04 13.

7. For design professional additional insureds, ISO Endorsement CG 20 32 04 13, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured."

8. If governing law invalidates or restricts the use of a specified additional insurance endorsement, then Subcontractor will furnish an endorsement that is compliant with governing law while providing reasonable protection of the interests of the additional insureds.

D. Commercial General Liability—Excluded Content. The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract", except to delete the railroad protective liability exclusion if Subcontractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property.

2. Any exclusion for water intrusion or water damage.

3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the Subcontractor's vicarious liability, strict liability, or statutory liability, other than worker's compensation.

6. Any limitation or exclusion based on the nature of Subcontractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

Commercial General Liability	**Policy limits of not less than:**
General Aggregate	$
Products—Completed Operations Aggregate	$
Personal and Advertising Injury	$
Bodily Injury and Property Damage—Each Occurrence	$

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E. Automobile Liability—Subcontractor shall purchase and maintain automobile liability insurance against 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. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	**Policy limits of not less than:**
Each Accident	$

F. Umbrella or Excess Liability—Subcontractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	**Policy limits of not less than:**
Each Occurrence	$
General Aggregate	$

G. Contractor's Pollution Liability Insurance—Subcontractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Subcontractor's operations and completed operations. The completed operations coverage must remain in effect for no less than three years after final completion.

Contractor's Pollution Liability Insurance	**Policy limits of not less than:**
Each Occurrence/Claim	$
General Aggregate	$

H. Additional Insureds—The Subcontractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, and pollution liability policies must include and list as additional insureds CMAR, Owner, Engineer, Owner's Advisor, and the other individuals and entities listed below. Such policies will provide coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each additional insured; and the insurance afforded to these additional insureds must provide primary coverage for all claims covered thereby, including as applicable those arising from both ongoing and completed operations, on a non-contributory basis. Subcontractor shall obtain all necessary endorsements to support these requirements.

1. CMAR—identified above.
2. Owner—identified above.
3. Engineer **[legal name, address]**
4. Owner's Advisor **[legal name, address]**
5. Other additional insureds: **[Here list by legal name (not category, role, or classification) and address other persons or entities to be included as additional insureds.**]

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I. Subcontractor's Professional Liability Insurance—If Subcontractor will provide or furnish professional services under this Subcontract, through a delegation of professional design services to Subcontractor or otherwise, then Subcontractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by Subcontractor or others for whom Subcontractor is legally liable. The insurance must be maintained throughout the duration of the Subcontract and for a minimum of two years after Substantial Completion of the Project. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Subcontractor's Professional Liability	**Policy limits of not less than:**
Each Claim	$
Annual Aggregate	$

J. General provisions—The policies of insurance required by this Paragraph 10.03 must:

1. include at least the specific coverages provided in this Subcontract.
2. be written for not less than the limits of liability expressly provided in this Subcontract, including any Subcontract exhibit or supplementary Subcontract Document specifying insurance policy limits, or if no such express insurance limits are set forth in the Subcontract, then for not less than the limits required of CMAR by Owner in the Prime Contract, for the corresponding types of insurance. If laws or regulations require a higher limit, then Subcontractor shall meet such legal requirement.
3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 10 days prior written notice has been given to Subcontractor. Within three days of receipt of any such written notice, Subcontractor shall provide a copy of the notice to CMAR and each other insured under the policy.
4. remain in effect at least until final payment, and longer if expressly required herein, and at all times thereafter when Subcontractor may be correcting, removing, or replacing defective Subcontract Work as a warranty or correction obligation, or otherwise, or returning to the site to conduct other tasks arising from the Subcontract Documents.
5. be appropriate for the Subcontract Work being performed and provide protection from claims that may arise out of or result from Subcontractor's performance of the Subcontract Work and Subcontractor's other obligations under the Subcontract Documents, whether it is to be performed by Subcontractor, any lower-tier subcontractor or supplier, or by anyone directly or indirectly employed by any of them to perform any of the Subcontract Work, or by anyone for whose acts any of them may be liable.

K. Subcontractor waives all rights against Owner, CMAR, and all individuals or entities identified in the Prime Contract's Supplementary Conditions to be listed as insureds or additional insureds under the builder's risk, installation floater, or other forms of property insurance, and against the Owner's advisors, engineers, and consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any

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of the perils or causes of loss covered by such builder's risk, installation floater, or other form of property insurance applicable to the work under the Prime Contract; and CMAR waives all rights against Subcontractor for all such losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such builder's risk, installation floater, or other form of property insurance applicable to the work under the Prime Contract.

L. If CMAR is responsible under the Prime Contract and any builder's risk or other property insurance policy for the payment of a deductible, or an amount within a deductible, and the need to pay such deductible or amount within a deductible is attributable in whole or part to the actions or inactions of Subcontractor, its sub-subcontractors, employees, agents, or others for which Subcontractor is responsible, then Subcontractor shall pay its attributable share of such deductible.

M. Upon request the CMAR shall provide to Subcontractor a copy of any builder's risk, installation floater, or other property insurance policy applicable to the work under the Prime Contract. CMAR may block out (redact) any confidential premium or pricing information contained in any such policy. Subcontractor may elect to obtain other insurance at its expense, if it concludes that its interests are not insured under such policy.

N. Other Required Insurance—**[Identify any other policies that Subcontractor must obtain and maintain, such as Railroad Protective Liability Insurance or Unmanned Aerial Vehicle Liability Insurance]**.

10.04 Indemnification

A. To the fullest extent permitted by laws and regulations, Subcontractor shall indemnify and hold harmless CMAR, Owner, and Owner's advisors, engineers, and consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to the performance of the Subcontract Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, other than the Subcontract Work itself, including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Subcontractor, any sub-subcontractor or supplier to Subcontractor, or any individual or entity directly or indirectly employed by any of them to perform any of the Subcontract Work or anyone for whose acts any of them may be liable.

B. In addition to the indemnification obligations in the preceding paragraph, Subcontractor shall indemnify CMAR for all economic costs and expenses, including attorney's fees, for any claim against CMAR as a result of and to the extent caused by Subcontractor's breach of any obligation under the Subcontract.

C. In any and all claims against CMAR, Owner, or Owner's advisors, engineers, or consultants, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee, or the survivor or personal representative of such employee, of Subcontractor, any sub-subcontractor or supplier to Subcontractor, or any individual or entity directly or indirectly employed by any of them to perform any of the Subcontract Work, or anyone for whose acts any of them may be liable, the indemnification

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obligation under Paragraph 10.04.A. will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Subcontractor, sub-subcontractor, supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

D. With respect to the Subcontract Work, the breach of obligations under the Subcontract, and any negligent act or omission of Subcontractor, any sub-subcontractor or supplier to Subcontractor, or any individual or entity directly or indirectly employed by any of them to perform any of the Subcontract Work, or anyone for whose acts any of them may be liable, and to the fullest extent permitted by law, Subcontractor assumes the same or corresponding responsibilities as CMAR for indemnity obligations set forth in the Prime Contract.

ARTICLE 11—SUSPENSION AND TERMINATION

11.01 CMAR May Suspend Work

A. In the event that Owner suspends the work of CMAR under the Prime Contract, CMAR may suspend the performance of the Subcontract or any portion thereof for a period of not more than 90 consecutive days, by giving notice in writing to Subcontractor of such suspension. Subcontractor shall resume the Subcontract Work when instructed by CMAR to do so. Subcontractor shall be granted an adjustment in the Subcontract Price or an extension of the Subcontract Times, or both, directly attributable to any such suspension only to the extent that CMAR receives an adjustment of the Prime Contract price or the Prime Contract time for the Subcontractor's proportionate share of work under the Prime Contract.

B. CMAR may suspend the Subcontract Work for a period of not more than 90 days, or to the extent permitted by the progress schedule or any express provision of the Subcontract Documents, for CMAR's own purposes.

C. CMAR may suspend the work of Subcontractor with all costs and liability for any delay in the Subcontract Work and others to be assessed against the Subcontractor for the following Subcontract violations until the Subcontractor demonstrates it has cured the violations as follows:

1. Subcontractor fails to comply with Owner's or CMAR's safety program;
2. Subcontractor or its employees are in violation of OSHA or state or local safety laws or regulations;
3. Subcontractor has installed defective Subcontract Work that is not in compliance with the Subcontract Documents and has failed to cure the defective Subcontract Work;
4. Subcontractor has violated any laws or regulations applicable to the performance of the Subcontract Work; and
5. Subcontractor has failed to pay a supplier or sub-subcontractor pursuant to Subcontractor's legal or contractual obligations.

D. If Subcontractor fails to comply with the progress schedule, causing delay to the Subcontract Work or the Prime Contract work, after three days' notice by CMAR and failure of Subcontractor to demonstrate that it has implemented procedures to comply with the schedule through measures such as providing supplemental labor, materials, and tools, then

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CMAR may implement its own procedures to meet the schedule, by providing supplemental labor, materials, tools, or taking other measures, through its own or other forces, and CMAR may assess the cost of such supplemental procedures against the Subcontract.

11.02 Construction Manager at Risk May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Subcontractor's persistent failure to perform the Subcontract Work in accordance with the Subcontract Documents, including, but not limited to, failure to supply sufficient skilled workers, suitable materials, or equipment, or failure to adhere to the Subcontract progress schedule;

2. Subcontractor's disregard of laws or regulations of any public body having jurisdiction;

3. Subcontractor's repeated disregard of the authority of CMAR;

4. Subcontractor's failure to perform or otherwise to comply with a material term of the Subcontract, or

5. Failure to cure Subcontract violations for which Subcontractor has been suspended per Paragraph 11.01.C within the suspension period.

B. If one or more of the events identified in the preceding Paragraph occur, CMAR may, after giving Subcontractor 7 days written notice of its intent to terminate the services of Subcontractor, or in the event the Subcontractor provided a performance bond covering the Subcontract the CMAR may provide notice to the Subcontractor and surety in accordance with the requirements of the applicable performance bond of its intent to terminate the services of Subcontractor to preserve CMAR's rights under the performance bond. Upon termination of the Subcontract, CMAR may:

1. exclude Subcontractor from the Site, and take possession of the Subcontract Work;

2. incorporate in the Subcontract Work all materials and equipment stored at the Site, or for which CMAR has paid Subcontractor but which are stored elsewhere; and

3. complete the Subcontract Work as CMAR may deem expedient.

C. If CMAR proceeds as provided in Paragraph 11.02.B., Subcontractor shall not be entitled to receive any further payment until the Subcontract Work is completed. If the unpaid balance of the Subcontract Price exceeds all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, sustained by CMAR arising out of or relating to completing the Subcontract Work, such excess will be paid to Subcontractor. If such claims, costs, losses, and damages exceed such unpaid balance, Subcontractor shall pay the difference to CMAR. When exercising any rights or remedies under this paragraph, CMAR shall not be required to obtain the lowest price for the Subcontract Work performed.

D. Notwithstanding Paragraphs 11.02.A. and 11.02.B., Subcontractor's services will not be terminated if Subcontractor begins within four days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 14 days of receipt of said notice. If the Subcontractor fails to cure within 14 days of receipt of said notice, the Subcontract will be deemed terminated in accordance with the

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provisions of Paragraphs 11.02.A through 11.02.C upon two days' notice by the CMAR following the 14-day period.

E. Where Subcontractor's services have been so terminated by CMAR, the termination will not affect any rights or remedies of CMAR against Subcontractor then existing or which may thereafter accrue. Any retention or payment of money due Subcontractor by CMAR will not release Subcontractor from liability.

F. If and to the extent that Subcontractor has provided a performance bond, the termination procedures of that bond will supersede the procedures in this Paragraph 11.02.

11.03 Termination of CMAR or Rejection of Subcontract by Owner

A. The CMAR may terminate the Subcontract at any time, if the Prime Contract is terminated by the Owner, or if Owner rejects the Subcontract in accordance with the terms of the Prime Contract, the CMAR may terminate the Subcontract without penalty.

B. In the event of a termination pursuant to Paragraph 11.03, the costs and expenses to be paid to Subcontractor resulting from a termination under this provision must be limited to the costs and expenses recovered by CMAR from Owner on Subcontractor's behalf.

11.04 CMAR May Terminate for Convenience

A. Upon 7 days written notice to Subcontractor, CMAR may, without cause and without prejudice to any other right or remedy of CMAR, terminate the Subcontract. In such case, for which Subcontractor shall be paid, without duplication of any items:

1. Completed and acceptable Subcontract Work executed in accordance with the Subcontract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Subcontract Work;

2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Subcontract in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. Reasonable expenses directly attributable to termination.

B. Subcontractor will not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

11.05 Subcontractor May Stop Work or Terminate

A. If, through no act or fault of Subcontractor, CMAR after receipt of payment from Owner fails to make payment due Subcontractor, for more than 30 days after payment is due, then Subcontractor may, upon 7 days written notice to CMAR, and provided CMAR does not remedy such failure within 7 days thereafter, terminate the Subcontract and recover payment from CMAR subject to the terms of this Subcontract.

B. As an alternative to terminating the Subcontract and without prejudice to any other right or remedy, if a payment owed to Subcontractor is more than 30 days past due, then 7 days after written notice to CMAR, Subcontractor may stop the Subcontract Work until payment is made of all such amounts due Subcontractor, including interest thereon at an annual rate of **[number]** percent per annum, or if applicable at the rate prescribed by law, without penalty.

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C. If the CMAR suspends the Subcontractor's work for more than 120 days, the Subcontractor may, upon 7 days' written notice, terminate the Subcontract and recover the amounts due the Subcontractor for Subcontract Work completed as of the date of termination, including retainage withheld from the Subcontractor to date and interest thereon at an annual rate of **[number]**percent per annum, or if applicable at the rate prescribed by law, without penalty.

ARTICLE 12—CLAIMS AND DISPUTE RESOLUTION

12.01 Claims

A. As a condition precedent to any consideration, pursuit, or recovery by Subcontractor of any change proposal, request, demand, or claim (collectively referred to as "Claim") seeking an increase in Subcontract Price, Subcontract Time, or both, Subcontractor shall provide notice of any such Claim to CMAR no less than 30 days after the event giving rise to the Claim, and for Claims related in any way to the Owner or Prime Contract, within five days.

B. Subcontractor's recovery of additional cost, time, or both cost and time for any Claim attributable to the Owner will be limited to the proportionate recovery by CMAR against Owner for such Claim. Subcontractor will cooperate and assist CMAR in pursuing any Claim by CMAR against Owner on behalf of Subcontractor, including the timely preparation and delivery of supporting documentation.

C. If the pursuit of any Claim by CMAR against Owner on Subcontractor's behalf requires the expenditure by CMAR of legal or consulting fees, or results in litigation, arbitration, or any dispute resolution procedures, Subcontractor agrees to pay for a proportionate share of attorneys' fees, consultant fees, and litigation, arbitration, and other resolution costs incurred by CMAR in pursuing the claim on behalf of Subcontractor, based upon the amount claimed by Subcontractor as compared to the total value of the claim pursued by the CMAR.

D. Except as provided by applicable lien, bond, or prompt payment laws, Subcontractor shall not make any direct claims against Owner for compensation or additional compensation for performance of the Subcontract Work.

12.02 Dispute Resolution

A. Either CMAR or Subcontractor may request mediation of any dispute between CMAR and Subcontractor in connection with this Subcontract that has not been settled to their mutual satisfaction within the applicable notice or cure periods provided in this Subcontract, or that CMAR has not pursued against Owner as described above. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Subcontract Date. The request for mediation must be submitted in writing to the American Arbitration Association and the other party to this Subcontract.

B. CMAR and Subcontractor shall participate in the mediation process in good faith. The process must be concluded within 60 days of filing of the request. The date of termination of the mediation must be determined by application of the mediation rules referenced above.

C. If the dispute is not resolved by mediation, each party to this Subcontract shall be barred from further action to assert its claim after 30 days after termination of the mediation unless, within that time period, CMAR, or Subcontractor:

1. elects in writing to invoke any dispute resolution procedure expressly provided for in a Subcontract exhibit or elsewhere in the Subcontract Documents; or

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2. agrees with the other party to submit the dispute to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the claim to a court of competent jurisdiction.

D. If CMAR is engaged in an arbitration **or litigation** with Owner that relates, in whole or in part, to a dispute between CMAR and Subcontractor, then CMAR shall have the sole and exclusive discretion to join Subcontractor as a party to the CMAR-Owner arbitration **or litigation**. Subcontractor consents to the jurisdiction of any such arbitration **or litigation** proceeding to which it is joined pursuant to this provision.

ARTICLE 13—SUBCONTRACT DOCUMENTS

13.01 Subcontract Contents

A. The Subcontract Documents consist of the following:

Notes to User—Revise or supplement the list below to suit the specific needs of the specific Subcontract.

1. This Subcontract.
2. The Prime Contract, with the exception of confidential terms. The following portions of the Prime Contract are attached as Exhibit A:
    a. General Conditions.
    b. Supplementary Conditions.
    c. Specifications, Division 01.
    d. **[Other Specification sections]**.
    e. **[Drawings; incorporate by reference if not attached]**.
    f. **[Other Prime Contract items]**.
3. **[Work Package or other Subcontract scope of Subcontract Work exhibit]**.
4. **[Requirements for Subcontractor's insurance—limits, deductibles, special endorsements, etc.]**
5. Subcontract performance bond. **[Delete if not required]**.
6. Subcontract payment bond. **[Delete if not required]**.
7. Subcontractor's bid or proposal. **[Include as Subcontract Document only if necessary to avoid substantial rekeying of critical price or other information]**.
8. Subcontract dispute resolution procedures, if any. **[Delete if not required]**.
9. Other exhibits to this Subcontract, enumerated as follows:
    a. **[Identify such other exhibits]**.
10. The following which may be delivered or issued on or after the Subcontract Date and are not attached hereto:

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a. Notice to Commence Subcontract Work.

b. Work Change Directives.

c. Change Orders.

d. Field Orders.

e. Warranty Bond, if any.

B. The documents listed in the Paragraph above are attached to this Subcontract, except as expressly noted otherwise.

C. There are no Subcontract Documents other than those listed above in this Article 13. The Subcontract supersedes prior negotiations, representations, and agreements regarding the Subcontract Work, whether written or oral.

D. The Subcontract Documents may only be amended, modified, or supplemented by written agreement of CMAR and Subcontractor.

ARTICLE 14—MISCELLANEOUS

14.01 Terms

A. Terms used in this Subcontract will have the meanings stated here, or in the Prime Contract's General Conditions and Supplementary Conditions.

14.02 Assignment of Subcontract

A. No assignment by Subcontractor of any rights under or interests in the Subcontract will be binding on CMAR without CMAR's written consent; and, specifically but without limitation, payments that may become due and money that is due may not be assigned by Subcontractor without such consent, except to the extent that the effect of this restriction may be limited by law, and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Subcontract Documents.

14.03 Successors and Assigns

A. CMAR and Subcontractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Subcontract.

14.04 Severability

A. Any provision or part of the Subcontract Documents held to be void or unenforceable under any law or regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon CMAR and Subcontractor.

ARTICLE 15—SUBCONTRACTOR'S REPRESENTATIONS AND CERTIFICATIONS

15.01 Subcontractor's Representations

A. In order to induce CMAR to enter into this Subcontract, Subcontractor makes the following representations:

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1. Subcontractor has examined and carefully studied the Subcontract Documents, and any data and reference items identified in the Subcontract Documents, including but not limited to initial schedules identified by CMAR.

2. Subcontractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and site conditions that may affect cost, progress, and performance of the Subcontract Work.

3. Subcontractor is familiar with and is satisfied as to all laws and regulations that may affect cost, progress, and performance of the Subcontract Work.

4. Subcontractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the site and drawings of physical conditions relating to existing surface or subsurface structures at the site that have been identified by the Prime Contract or Subcontract, especially with respect to technical data in such reports and drawings.

5. Subcontractor has carefully studied reports and drawings of hazardous environmental conditions, if any, at or adjacent to the Site that have been identified in the Prime Contract or Subcontract, especially with respect to technical data in such reports and drawings.

6. Subcontractor has considered the information known to Subcontractor itself; information commonly known to contractors and subcontractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Subcontract Documents; and the site-related reports and drawings, if any, identified in the Prime Contract or Subcontract, with respect to the effect of such information, observations, and documents on (a) the cost, progress, and performance of the Subcontract Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Subcontractor; and (c) Subcontractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraphs, Subcontractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Subcontract Work at the Subcontract Price, within the Subcontract Times, and in accordance with the other terms and conditions of the Subcontract.

8. Subcontractor is aware of the general nature of work to be performed by Owner, CMAR, other subcontractors, and others at the Site that relates to the Subcontract Work as indicated in the Subcontract Documents.

9. Subcontractor has given CMAR written notice of all conflicts, errors, ambiguities, or discrepancies that Subcontractor has discovered in the Subcontract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by CMAR is acceptable to Subcontractor.

10. The Subcontract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Subcontract Work.

11. Subcontractor's entry into this Subcontract constitutes an incontrovertible representation by Subcontractor that without exception all prices in the Subcontract are

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premised upon performing and furnishing the Subcontract Work required by the Subcontract Documents.

15.02 Subcontractor's Certifications

A. Subcontractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Subcontract. For the purposes of this paragraph:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Subcontract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Subcontract to the detriment of Owner or CMAR, (b) to establish bid or Subcontract prices at artificial non-competitive levels, or (c) to deprive Owner or CMAR of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner or CMAR, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Subcontract.

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Notes to User—The Subcontract Date and the dates of any Subcontract performance bond and Subcontract payment bond should be the same, if possible. In no case should the date of any performance or payment bond be earlier than the Subcontract Date.

This Subcontract is effective as of **[insert date]** (Subcontract Date).

Construction Manager at Risk:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Construction Manager at Risk is a corporation, partnership, or joint venture, attach evidence of

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

Phone: _____

Email: _____

Subcontractor:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Subcontractor is a corporation, partnership, or joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

Phone: _____

Email: _____

License No.: _____
(where applicable)

State: _____

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CMAR-943
CONTRACT AMENDMENT

CONTRACT AMENDMENT NO.: [N0. OF CONTRACT AMENDMENT]

Project No.

Owner: _____ _____

Owner's Advisor: _____ _____

Engineer: _____ _____

Construction Manager at Risk: _____ _____

Project: _____

Contract Name: _____

Contract Amendment: _____

Date Issued: _____ Effective Date of Contract Amendment: _____

The Contract is modified as follows upon execution of this Contract Amendment:

Reference (if applicable)**:**

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the modification. For modifications of the Contract's terms and conditions, include specific references to the modified Contract Document—for example, the General Conditions—and attach a mark-up or detailed description of the revision.].

Attachments:

[List documents related to the modification].

Change in Contract Price

Original Contract Price this Work Authorization _____

Net **[Increase] [Decrease]** from previously approved Contract Amendment(s) No. 1 to No. **[Number of previous Contract Amendment]** _____

Contract Price prior to this Contract Amendment _____

[Increase] [Decrease] this Contract Amendment: _____

Contract Price incorporating this Contract Amendment: _____

Change in Contract Times for Contract Amendment

☐ The completion dates are not modified by this Contract Amendment—CMAR is to complete Work so Project will reach Substantial Completion by the date designated in the Agreement.

☐ The completion dates are modified by this Contract Amendment as shown below.

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	Original	Previous	Current
Substantial Completion Date			
Final Completion Date			

	CMAR	Owner
By:		
Title:		
Date:		

	Recommended by Engineer (if required)	Approved by Funding Agency (if applicable)
By:		
Title:		
Date:		

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CMAR-545
WORK AUTHORIZATION

WORK AUTHORIZATION: [NUMBER OF WORK AUTHORIZATION]

		Project No.
Owner:		
Owner's Advisor:		
Engineer:		
CMAR:		
Project:		
Contract Name:		
Work Authorization:		
Date Issued:	Effective Date of Work Authorization:	

Terms used in this Work Authorization have the meanings stated in the General Conditions and the Supplementary Conditions.

The Contract is modified as follows upon execution of this Work Authorization:

ARTICLE 1—AUTHORIZED WORK

1.01 CMAR shall complete all Work that is specified or indicated in this Work Authorization. The authorized Work is generally described as follows:

A. Work Package **[number or name of authorized Work Package]**.

1.02 The authorized Work Package is more fully defined in Exhibit A.

ARTICLE 2—COMPENSATION

2.01 Owner shall pay CMAR for the completion of the Work Package described in this Work Authorization in accordance with the provisions set forth in the Agreement.

2.02 Lump Sum **[Unit Price]** Work

A. Compensation for all Work is a lump sum amount of $**[number].**

B. For all Unit Price Work, an amount equal to the sum of the extended prices established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item. Unit Price Work is itemized in Exhibit B. The extended prices for Unit Price Work set forth as of the Effective Date of the Work Authorization are based on estimated quantities. As provided in Paragraph 13.02 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Owner's Advisor.

2.03 Work Compensated on a Cost-Plus-Fee Basis

A. Owner shall pay CMAR for completion of the Work Package in this Work Authorization in accordance with the Contract Documents. Fees for Work in this Work Authorization are the same as those included in the Agreement. If a Subcontractor performs Work under this Work Authorization on a cost-plus-a-fee basis, in lieu of a stipulated price Subcontract amount, the applicable fee will be the same fee applied to CMAR's self-performed Work. The Guaranteed Maximum Price for this Work Authorization, subject to increases or decreases for change in the Work, is as shown in Exhibit B.

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ARTICLE 3—CONTRACT TIMES

3.01 CMAR agrees to perform the Work set forth in this Work Authorization pursuant to the schedule in Exhibit B. No Milestones have been established for the Work covered in this Work Authorization. CMAR will complete the Work covered in this Work Authorization in a timely manner that will (a) allow CMAR to meet the Substantial Completion and final completion requirements of the Contract, and (b) avoid any adverse impact on the completion of other Work Authorizations for which a Milestone has been established.

3.02 Milestones and Associated Damages

A. Work included in this Work Authorization is a Milestone and must be substantially completed on or before the number of days from the effective date of this Work Authorization shown in Exhibit B.

1. The Milestone will be considered substantially complete when the following requirements have been met:

a. **[Describe the specific part of the authorized Work that must be completed or describe a specific part of the authorized Work that can remain unfinished for the Work Authorization Milestone to be considered substantially complete]**.

2. CMAR shall pay Owner $**[number]** for each day that expires after the time, as duly adjusted pursuant to the Contract, specified above for Substantial Completion of this Work Authorization, until the Work is substantially complete.

B. The following parts of the Work required in this Work Authorization are Milestones and must be substantially completed on or before the number of days from the effective date of this Work Authorization shown in Exhibit B.

1. Milestone 1— **[Describe Milestone]**.

a. Work included in this Milestone must be substantially completed on or before the number of days from the effective date of this Work Authorization shown in Exhibit B.

b. The Milestone will be considered substantially complete when the following conditions have been met:

1) **[Describe the specific part of the authorized Work that must be completed or describe the specific part of the authorized Work that can remain unfinished for the Work Authorization Milestone to be considered substantially complete]**.

c. CMAR shall pay Owner $**[number]** for each day that expires after the time, as duly adjusted pursuant to the Contract, specified above for Substantial Completion of this Milestone, until the Work is substantially complete.

2. Milestone 2— **[Describe Milestone]**.

a. Work included in this Milestone must be substantially completed on or before the number of days from the effective date of this Work Authorization shown in Exhibit B.

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b. The Milestone will be considered substantially complete when the following conditions have been met:

1) **[Describe the specific part of the authorized Work that must be completed or describe the specific part of the authorized Work that can remain unfinished for the Work Authorization Milestone to be considered substantially complete]**.

c. CMAR shall pay Owner $**[number]** for each day that expires after the time, as duly adjusted pursuant to the Contract, specified above for Substantial Completion of this Milestone, until the Work is substantially complete.

ARTICLE 4—CONTRACT DOCUMENTS

4.01 Contract Documents for Work Authorization

A. The Contract Documents are identified in the Agreement, Article 16. The following provisions do not limit or modify the Contract Documents.

B. The Contract Documents with specific applicability to this Work Authorization consist of the following:

1. This Work Authorization, including any exhibits identified as Contract Documents.

2. Bonds

a. Performance bond, together with power of attorney.

b. Payment bond, together with power of attorney.

3. The following which may be delivered or issued on or after the Effective Date of the Work Authorization and are not attached hereto:

a. Contract Amendments pertaining to this Work Authorization

b. Change Orders, Work Change Directives, and Field Orders that modify this Work Authorization.

4. Drawings and Specifications shown in Exhibit A as included parts of the Work Package (or Work Packages) authorized in this Work Authorization.

C. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

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ARTICLE 5—EXECUTION

	Issued by Owner's Advisor	Authorized by Owner
By:		
Title:		
Date:		
	Accepted by CMAR	Approved by Funding Agency (if applicable)
By:		
Title:		
Date:		

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EXHIBIT A—DESIGN DOCUMENTS

Guidance Notes–Each Work Authorization should be based on one or more specific Work Packages, identified in Paragraph 1.01. This Exhibit A is used to identify the Specifications and Drawings that are incorporated in the Work Package(s).

Guidance Notes—The Specifications associated with this Work Authorization may include Specifications introduced for the first time and Specifications previously released in prior Work Authorizations. If Specifications from a previous Work Authorization are used, any changes made in those Specifications for this Work Authorization should include annotations to indicate the modifications made for this Work Authorization and the presence of changes should be noted in errata for the Specification using Paragraphs 1.03 and 1.04. If Specifications from a previous Work Authorization are used without modifications, enter "N/A" in the column for "Errata No." to indicate no changes were made.

Notes to User—Use Paragraph 1.01 to identify the Specification set. Use Paragraphs 1.02, 1.03, 1.04 and 1.05 as needed. Delete the paragraphs not used.

ARTICLE 1—SPECIFICATIONS

1.01 Specifications entitled **[Name of Specification Documents]** dated **[date].**

1.02 Specifications listed in the table of contents.

1.03 New Specifications as listed in the following table:

Section No.	Specification Title

1.04 Specifications from previous Work Authorizations (WA) as listed in the following table:

Section No.	Specification Title	WA No.	Errata No.

1.05 Errata as listed in the following table:

Errata No.	Description	Section No.	Paragraph No.	Date of Issue

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ARTICLE 2—DRAWINGS

Guidance Notes–The Drawings associated with this Work Authorization may include Drawings introduced for the first time and Drawings previously released in prior Work Authorizations. If Drawings (typically standard details) from a previous Work Authorization are used, any changes are made in those Drawings for this Work Authorization should include annotations to indicate the modifications made for this Work Authorization and the presence of changes should be noted as revisions to the Drawing in Paragraph 2.05.

Notes to User–Use Paragraph 2.01 to identify the Drawing set. Use Paragraphs 2.02, 2.03, 2.04 or 2.05 as needed to define the Drawings pertinent to this Work Authorization. Delete paragraphs not used.

2.01 Drawings, not attached but incorporated by reference, consisting of **[number]** sheets with each sheet bearing the following general title: **[Title on Drawings]**.

2.02 Drawings listed on the sheet index in the Drawings.

2.03 New Drawings as listed in the following table:

Sequence No.	Drawing No.	Drawing Title

2.04 Drawings from previous Work Authorizations (WA) as listed in the following table:

Sequence No.	Drawing No.	Drawing Title	WA No.	Revision No.

2.05 Revisions for this Work Authorization as listed in the following table:

Sequence No.	Drawing No.	Revision No.	Description	Date of Issue

ARTICLE 3—APPENDICES

Guidance Notes–Appendices that are Contract Documents

1. List appendices, if any, in Paragraph 3.01.A that merit the status of Contract Documents.
2. If a Geotechnical Baseline Report or a Geotechnical Data Report is used and is relevant to the specific Work Authorization, include these reports as Contract Documents by listing them as lettered items under Paragraph 3.01.A. For a further discussion of GBRs and GDRs see EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

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Notes to User— Delete this Article if appendices are not included.

3.01 The following appendices to this Work Authorization are hereby identified as Contract Documents:

A. **[List any such appendices]**.

3.02 Other appendices to this Work Authorization, enumerated as follows; are not Contract Documents:

A. **[List any such appendices]**.

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EXHIBIT B –WORK AUTHORIZATION COMPENSATION

Guidance Notes–Preparing Work Authorization Exhibit B: Work Authorization Compensation

General

1. Calculation for the Guaranteed Maximum Price for each Work Authorization is performed on Exhibit B Work Authorization Compensation. This exhibit provides instruction on the use of the Excel file.
2. Compensation for a Work Authorization can be for:
    a. A Lump Sum, which is entered as a single amount in Paragraph 2.02.A of the Work Authorization;
    b. Unit Prices;
    c. The application of a single CMAR fee which is applied to all Work;
    d. The application of a fee for different classifications of Work; or
    e. The application of a fixed fee.
3. Select the fee structure to be used or modify the one that most closely matches the fee structure selected to meet the Contract's needs. Delete the row for versions not used.

Unit Price

1. The Unit Price method is used when Owner and CMAR agree that Work will be performed on a Unit Price basis. OA and CMAR work together to develop the list of line items for which unit prices will be requested. Unit prices bid by Subcontractors, with actual cost based for actual quantities, represent the total Cost of the Work (COW) to the CMAR (see Agreement Paragraph 6.02.C.) The CMAR is entitled to its CMAR Fee and has access to the CMAR Contingency Allowance as a percentage of the Total of all Extended Prices for Unit Price Work. Should the CMAR self-perform this Work, the unit prices can include the CMAR Fee. If this is the case, enter “0” as the percentage for the CMAR Fee. If Unit Prices include only the Cost of the Work include the stipulated percentage for the CMAR Fee.
    a. Enter Item No. and Descriptions for each line item in the first two columns of the table.
    b. Determine how quantities will be measured for each unit, for example per Square Foot, Each, Lump Sum, Cubic Yard, etc. and enter this in the “Unit” column. The exact method of making measurements is typically included in a measurement and payment section in the General Requirements (Division 01 Specifications) and a method of measurement and payment should be provided for each line item. These can be included in the Description but doing so can make the Unit Price table awkward to use. This Item No. and Description will be incorporated into the Application for Payment so brevity of descriptions in this table is recommended.
    c. OA and CMAR should mutually agree on the Estimated Quantity for each line item. While these are estimated quantities, variations in quantities should reflect changes in scope, rather than an inaccurate estimate of quantities. It is recommended that contingencies not be built into the bid by using inflated quantities for line items. If pricing is based on 90% complete documents, some adjustments in quantities may be made later using the provisions in Paragraph 13.02 of the General Conditions. Funds for quantity overruns may be covered by using CMAR Contingency Funds or Owner Contingency Funds, if any, as appropriate.

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d. The CMAR will determine the Unit Price for each item. These Unit Prices are typically bid by Subcontractors or by the CMAR if the CMAR is allowed to submit its own bid to self-perform the Work under the provision set forth in the Agreement.

e. The Extended Amount is calculated by multiplying the Estimated Quantity by the Unit Price for each line item.

2. The prices bid by a Subcontractor will include its construction support costs, fees, and contingencies and represent Subcontractor's total compensation for the Work for each line item.

3. If the CMAR is allowed to submit a bid to self-perform the Work, the CMAR's unit prices bid must exclude the CMAR's Construction Support Costs since these are compensated on a different basis for the CMAR. Since each subcontractor will include its construction support costs in its unit prices, forethought should be given to how the CMAR's bid for self-performed Work will be compared to the bids of subcontractors when awarding Work on a unit price basis. CMAR is entitled to its CMAR Fee and CMAR Contingency Allowance, as a percentage of the subcontractor's bid (Total of All Extended Prices for Unit Price Work.) The CMAR Fee percentage and percentage for the CMAR Contingency Allowance should be the percentages for each set forth in the Agreement.

4. Enter the CMAR Fee (% of the Cost of the Work) from the Agreement Exhibit B in Cell G17. The Fee will be calculated in Cell L17.

5. Enter the CMAR Contingency Allowance (% of the Cost of the Work) from the Agreement Exhibit B in Cell G18. The available CMAR Contingency Allowance will be calculated in Cell L18.

6. The GMP for the Work Authorization will be calculated by adding the Total Cost of the Work, CMAR Fee, and CMAR Contingency Allowance in Cell L19.

Work Authorization—Single % Fee

1. The CMAR and OA determine the Cost of the Work amount for the Work Authorization. This number is entered into Cell L23.

2. Enter the CMAR Fee (% of the Cost of the Work) from the Agreement Exhibit B in Cell G24. The Fee will be calculated in Cell L24.

3. Enter the CMAR Contingency Allowance (% of the Cost of the Work) from the Agreement Exhibit B in Cell G25. The available CMAR Contingency Allowance will be calculated in Cell L25.

4. The GMP will be calculated by calculating the Total Cost of Work, CMAR Fee, and CMAR Contingency Allowance in Cell L26.

Work Authorization—Fee per Classification of Work

1. Enter the CMAR Fee, as a percentage of the COW for each classification of Work in accordance with Agreement Paragraph 6.02 from Agreement Exhibit B in Cells B31, B33, B35, B37, B39, and B41.

2. The CMAR determines the of the Cost of the Work amount for each classification of Work in accordance with Agreement Paragraph 6.02. Enter the amount of the COW for each classification of Work in Cells G30, G32, G34, G36, G38, and G40.

3. The CMAR Fee for each classification of Work will be calculated in Cells J31, J33, J35, J37, J39 and J41.

4. The COW with CMAR Fee will be calculated in Cells L30, L32, L34, L36, L38 and L40..

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5. Enter the CMAR's Contingency Allowance percentage of the COW in Cell G43. The amount for the CMAR Contingency Allowance will be calculated in Cell
6. The GMP will be calculated by calculating the Total Cost of Work, CMAR Fee, and CMAR Contingency Allowance in Cell L44.

Work Authorization—Fixed Fee

1. Enter the amount of the Cost of the Work for the Work Authorization in Cell L48.
2. The CMAR agreed to a Fixed Fee for the Contract. This fee is allocated to each Work Authorization in proportion of the amount of the COW for the Work Authorization to the amount of the COW for the Contract from the updated Owner's Construction Budget. Check to see that the cumulative fees paid for this, and previous Work Authorizations does not exceed the Fixed Fee for the Contract.
    a. Enter the CMAR Fixed Fee from the Agreement, Exhibit B in Cell G49.
    b. The Cost of the Work for this Work Authorization will automatically be entered in Cell J49 from the Cost of the Work previously entered into Cell L48.
    c. Enter the Cost of the Work for the Contract from the most recent Owner' Construction Budget in Cell J50.
3. Enter the CMAR's Contingency Allowance percentage of the COW in Cell G51. The amount for the CMAR Contingency Allowance will be calculated in Cell
4. The GMP will be calculated by calculating the Total Cost of Work and CMAR Fee, plus the CMAR Contingency Allowance in Cell L52.

Contract Times

In the section for Contract Times, lines are provided for time of completion of all Work authorized in the Work Authorization, and for Milestones 1 and 2. If Milestones are not used, delete these rows. The Work Authorization should indicate a time for performance of the authorized Work, even if liquidated damages will not be applied to the Work Authorization. This will be used to gauge the CMAR's progress and determine that the number of days is consistent with the Project Schedule.

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Exhibit B - Work Authorization Compensation

Work Authorization No.: _____ **Work Authorization:** _____

Guaranteed Maximum Price			
Cost of the Work			
CMAR Fee		of Cost of the Work	$ -
CMAR Contingency Allowance		of Cost of the Work	$ -
Guaranteed Maximum Price for this Work Authorization (Total Cost of the Work, CMAR Fee and CMAR Contingency Allowance)			**$** -

Contract Times		
CMAR agrees it will reach Substantial Completion for this Work Authorization within		days

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SECTION 00610
PERFORMANCE BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: City of Calhoun	Description *(name and location)*:
Mailing address *(principal place of business)*:	
700 West Line St., Calhoun, GA 30701	
	Contract Price:
	Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 15

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

   5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to

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the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must

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be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: None

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SECTION 00615
PAYMENT BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: City of Calhoun Mailing address *(principal place of business)*: 700 West Line St. Calhoun, GA 30701	Description *(name and location)*: Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
    5.1. Claimants who do not have a direct contract with the Contractor
        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
    7.2. Pay or arrange for payment of any undisputed amounts.
    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have

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reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

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16.1. *Claim*—A written statement by the Claimant including at a minimum:

16.1.1. The name of the Claimant;

16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: None

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CMAR-620
APPLICATION FOR PAYMENT

Application for Payment **Summary**

		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: **Application Date:**

Application Period from: **to**

		Contract Amount		Amount Earned
CMAR Services	1	$ -	2	$ -

		Contract Amount		Amount Earned
Construction Support Costs	3	$ -	4	$ -
Work Authorizations	5	$ -	6	$ -
Total Construction Costs	7	**$ -**	8	**$ -**
CMAR Contingency Allowance	9	$ -		
Guaranteed Maximum Price	10	$ -		
Owner's Contingency Allowance	11	$ -		
Contract Price	12	$ -		

Summary of Net Earned Amounts and Payment Due for CMAR Services and Construction		
Total Amount Earned for CMAR Services and Total Construction Costs	13	$ -
Total Net Retainage	14	$ -
Amount Earned this Application for Payment	15	$ -
Amount Earned from prior Application for Payment	16	
Net Amount Earned this Application for payment	17	$ -
Set-offs applied this Application for Payment	18	$ -
Payment Due	19	$ -

The undersigned Construction Manager at Risk certifies that all CMAR Services and Work, including materials, covered by this Application for Payment have been completed or delivered in accordance with the Contract Documents, that all amounts have been duly paid to Subcontractor and Suppliers for CMAR Services, Work, materials, and equipment for which previous Payment has been made by the Owner, and that the current payment amount shown in this Application for Payment is now due.

Construction Manager at Risk:

Signature: **Date:**

Recommended by Owner's Advisor	**Approved by Funding Agency**
By:	**By:**
Title:	**Title:**
Date	**Date:**
Approved by Owner	**Approved by Owner**
By:	**By:**
Title:	**Title:**
Date:	**Date:**

EJCDC CMAR-620 Application for Payment Exhibit A
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		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____ **Application Period from:** _____ **to** _____

a	b	c	d	e	f	g	h	i	j	k
			Amount for Services Completed						Services Remaining	
Task No.	**Description**	**Task Amount**	**% Earned Previous Pay App**	**Amount Earned Previous Pay App** (c x d)	**% Earned This Pay Period**	**Amount Earned this Pay Period** (c x f)	**% Earned to Date** (d + f)	**Amount Earned to Date** (e + g)	**% Remaining** (1 - h)	**Amount Remaining** (c - i)
Preconstruction Services										
Basic Services										
1.01	Project Management			$ -		$ -		$ -		$ -
1.02	Review of Preliminary Design Report			$ -		$ -		$ -		$ -
1.03	Design Related Preconstruction Services			$ -		$ -		$ -		$ -
1.04	Construction Management Plan and Implementation			$ -		$ -		$ -		$ -
1.05	Construction Contract Administration			$ -		$ -		$ -		$ -
1.06	Cost Management			$ -		$ -		$ -		$ -
1.07	Time Management			$ -		$ -		$ -		$ -
1.08	Quality Management			$ -		$ -		$ -		$ -
1.09	Risk Management			$ -		$ -		$ -		$ -
1.10	Safety Management			$ -		$ -		$ -		$ -
1.11	Site Management and Environmental Controls			$ -		$ -		$ -		$ -
1.12	Regulatory Requirements			$ -		$ -		$ -		$ -
1.03	Procurement Strategy Plan			$ -		$ -		$ -		$ -
1	**Totals for Preconstruction Basic Services**	**$ -**		**$ -**		**$ -**		**$ -**		**$ -**
Additional Services										
2.01	Diverse Business Program Implementation			$ -		$ -		$ -		$ -
2.02	Value Engineering Studies			$ -		$ -		$ -		$ -
2.03	Start Up and Commissioning Program			$ -		$ -		$ -		$ -
2.04	Surveys and Drawings			$ -		$ -		$ -		$ -
2.05	Regulatory Agencies			$ -		$ -		$ -		$ -
2.06	Additional Inspections and Quality Management			$ -		$ -		$ -		$ -
2.07	Studies, Reports, and Investigations			$ -		$ -		$ -		$ -
2.08	Additional Copies of Documents			$ -		$ -		$ -		$ -
2.09	**[Other Additional Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
2	**Totals for Preconstruction Additional Services**	**$ -**		**$ -**		**$ -**		**$ -**		**$ -**
3	**Totals for Preconstruction Services**	**$ -**		**$ -**		**$ -**		**$ -**		**$ -**

EJCDC CMAR-620 Application for Payment Exhibit A
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a	b	c	d	e	f	g	h	i	j	k
			Amount for Services Completed						Services Remaining	
Task No.	Description	Task Amount	% Earned Previous Pay App	Amount Earned Previous Pay App (c x d)	% Earned This Pay Period	Amount Earned this Pay Period (c x f)	% Earned to Date (d + f)	Amount Earned to Date (e + g)	% Remaining (1 - h)	Amount Remaining (c - i)
Procurement Services										
Basic Services										
3.01	Project Management			$ -		$ -		$ -		$ -
3.02	Assemble Work Packages			$ -		$ -		$ -		$ -
3.03	Advertise for Bids			$ -		$ -		$ -		$ -
3.04	Pre-Bid Conferences			$ -		$ -		$ -		$ -
3.05	Addenda			$ -		$ -		$ -		$ -
3.06	Opening Bids			$ -		$ -		$ -		$ -
4	**Totals for Procurement Basic Services**	$ -		$ -		$ -		$ -		$ -
Additional Services										
4.01	Diverse Business Program Implementation			$ -		$ -		$ -		$ -
4.02	Prequalification of Bidders			$ -		$ -		$ -		$ -
4.03	Additional Work Packages			$ -		$ -		$ -		$ -
4.04	Regulatory Agencies			$ -		$ -		$ -		$ -
4.05	Additional Copies of Documents			$ -		$ -		$ -		$ -
4.06	**[Other Additional Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
5	**Totals for Procurement Additional Services**	$ -		$ -		$ -		$ -		$ -
6	**Totals for Procurement Services**	$ -		$ -		$ -		$ -		$ -
Special Services										
5.01	**[Special Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
5.02	**[Special Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
5.03	**[Special Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
5.04	**[Special Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
5.05	**[Special Services, See Agreement Exhibit A]**			$ -		$ -		$ -		$ -
7	**Totals for Special Services**	$ -		$ -		$ -		$ -		$ -
8	**Total CMAR Service**	$ -		$ -		$ -		$ -		$ -

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		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____ **Application Period from:** _____ **to** _____

a	b	c	d	e	f	g	h	i	j	k
Task No.	**Description**	**Task Amount**	**Amount Earned Previous Pay App**	**[Provider A] [Classification]**	**[Provider B] [Classification]**	**[Provider C] [Classification]**	**[Provider D] [Classification]**	**[Provider E] [Classification]**	**Amount Earned this Pay Period**	**Amount Earned to Date**
				$ -	$ -	$ -	$ -	$ -		
				Hours for this Pay Period						
Preconstruction Services										
Basic Services										
1.01	Project Management								$ -	$ -
1.02	Review of Preliminary Design Report								$ -	$ -
1.03	Design Related Preconstruction Services								$ -	$ -
1.04	Construction Management Plan and Implementation								$ -	$ -
1.05	Construction Contract Administration								$ -	$ -
1.06	Cost Management								$ -	$ -
1.07	Time Management								$ -	$ -
1.08	Quality Management								$ -	$ -
1.09	Risk Management								$ -	$ -
1.10	Safety Management								$ -	$ -
1.11	Site Management and Environmental Controls								$ -	$ -
1.12	Regulatory Requirements and Permits								$ -	$ -
1.13	Procurement Strategy Plan								$ -	$ -
1	**Totals for Preconstruction Basic Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
Additional Services										
2.01	Diverse Business Program Implementation								$ -	$ -
2.02	Value Engineering Studies								$ -	$ -
2.03	Start Up and Commissioning Program								$ -	$ -
2.04	Surveys and Drawings								$ -	$ -
2.05	Regulatory Agencies								$ -	$ -
2.06	Additional Inspections and Quality Management								$ -	$ -
2.07	Studies, Reports, and Investigations								$ -	$ -
2.08	Additional Copies of Documents								$ -	$ -
2.09	**[Other Additional Services, See Agreement Exhibit A]**								$ -	$ -
2	**Totals for Preconstruction Additional Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
3	**Totals for Preconstruction Services**	$ -	$ -	-	-	-	-	-	$ -	$ -

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a	b	c	d	e	f	g	h	i	j	k
Task No.	Description	Task Amount	Amount Earned Previous Pay App	[Provider A] [Classification] $ -	[Provider B] [Classification] $ -	[Provider C] [Classification] $ -	[Provider D] [Classification] $ -	[Provider E] [Classification] $ -	Amount Earned this Pay Period	Amount Earned to Date
				Hours for this Pay Period						
Procurement Services										
Basic Services										
3.01	Project Management								$ -	$ -
3.02	Assemble Work Packages								$ -	$ -
3.03	Advertise for Bids								$ -	$ -
3.04	Pre-Bid Conferences								$ -	$ -
3.05	Addenda								$ -	$ -
3.06	Opening Bids								$ -	$ -
4	**Totals for Procurement Basic Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
Additional Services										
4.01	Diverse Business Program Implementation								$ -	$ -
4.02	Prequalification of Bidders								$ -	$ -
4.03	Additional Work Packages								$ -	$ -
4.04	Regulatory Agencies								$ -	$ -
4.05	Additional Copies of Documents								$ -	$ -
4.06	**[Other Additional Services, See Agreement Exhibit A]**								$ -	$ -
5	**Totals for Procurement Additional Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
6	**Totals for Procurement Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
Special Services										
5.01	**[Special Services, See Agreement Exhibit A]**								$ -	$ -
5.02	**[Special Services, See Agreement Exhibit A]**								$ -	$ -
5.03	**[Special Services, See Agreement Exhibit A]**								$ -	$ -
5.04	**[Special Services, See Agreement Exhibit A]**								$ -	$ -
5.05	**[Special Services, See Agreement Exhibit A]**								$ -	$ -
7	**Totals for Special Services**	$ -	$ -	-	-	-	-	-	$ -	$ -
8	**Total CMAR Service**	$ -	$ -	-	-	-	-	-	$ -	$ -

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Project Number

Owner: _____
CMAR _____
Owner's Advisor: _____
Engineer: _____
Project: _____
Contract: _____

Application No.: _____ **Application Date:** _____ **Application Period from:** _____ **to** _____

a	b	c	d	e	f	g	h	i	j	k	l
		Contract Information				Work Completed		Work Completed and Stored Materials			
Item No.	Description	Quantity	Units	Unit Price	Item Amount (c x e)	Completed to Date Units or % as Decimal	Amount Completed to Date (e x g) Units or (f x g) Lump Sum	Current Stored Materials SUMIF from Stored Materials	Work Completed and Stored Materials to Date (h + i)	Item % Complete (j / f)	Amount Remaining to Complete (f - j)
Construction Support Cost (CSC)											
Base Construction Support Cost											
CSC-B-01	Mobilization Costs				$ -		$ -	$ -	$ -		$ -
CSC-B -02	Fixed Construction Support Costs				$ -		$ -	$ -	$ -		$ -
CSC-B -03	Time Dependent Construction Support Costs				$ -		$ -	$ -	$ -		$ -
1	**Total Base Construction Support Cost**				**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
Construction Support Cost Contract Modifications (CM)											
CSC-CM-01					$ -		$ -	$ -	$ -		$ -
CSC-CM-02					$ -		$ -	$ -	$ -		$ -
CSC-CM-03					$ -		$ -	$ -	$ -		$ -
2	**Totals Construction Support Cost Contract Modifications**				**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
Construction Support Approved Owner's Contingency (OC) Expenditures											
CSC-OC-01					$ -		$ -	$ -	$ -		$ -
CSC-OC-02					$ -		$ -	$ -	$ -		$ -
CSC-OC-03					$ -		$ -	$ -	$ -		$ -
3	**Totals Construction Support Cost Approved Owner's Contingency Expenditures**				**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
4	**Total Construction Support Cost**				**$ -**		**$ -**	**$ -**	**$ -**		**$ -**

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Application for Payment **Work Authorization Summary**

		Project Number
Owner:		
CMAR		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____ **Application Period from:** _____ **to** _____

a	b	c	d	e	f	g	h	i	j
Work Authorization No.	**Description**	**Original WA Amount**	**Adjustments (CO and Contingency Expenditures)**	**Current WA Amount** (c + d)	**Amount for Work Completed to Date**	**Current Stored Materials**	**Work Completed and Stored Materials to Date** (f + g)	**WA % Complete** (h / e)	**Amount Remaining to Complete** (e - h)
WA-01				$ -			$ -		$ -
WA-02				$ -			$ -		$ -
WA-03				$ -			$ -		$ -
WA-04				$ -			$ -		$ -
WA-05				$ -			$ -		$ -
WA-06				$ -			$ -		$ -
WA-07				$ -			$ -		$ -
WA-08				$ -			$ -		$ -
WA-09				$ -			$ -		$ -
WA-10				$ -			$ -		$ -
1 **Work Authorization Totals**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**

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		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: **Application Date:** **Application Period from:** **to**

a	b	c	d	e	f	g	h	i
Item No.	**Description**	**Item Amount**	**Work Completed to Date (% Complete)**	**Amount for Work Completed to Date** (c x d)	**Current Stored Materials** SUMIF from Stored Materials	**Work Completed and Materials Stored to Date** (e + f)	**Item % Complete** (g / c)	**Amount Remaining to Complete** (c - g)
Base Work (B)								
WA[XX]-B-01				$ -	$ -	$ -		$ -
WA[XX]-B-02				$ -	$ -	$ -		$ -
WA[XX]-B-03				$ -	$ -	$ -		$ -
1 **Total Base Work**		$ -		$ -	$ -	$ -		$ -
Change Orders (CO)								
WA[XX]-CO-01				$ -	$ -	$ -		$ -
WA[XX]-CO-02				$ -	$ -	$ -		$ -
WA[XX]-CO-03				$ -	$ -	$ -		$ -
2 **Total Change Orders**		$ -		$ -	$ -	$ -		$ -
Approved CMAR Contingency (CC) Allowance Expenditures								
WA[XX]-CC-01				$ -	$ -	$ -		$ -
WA[XX]-CC-02				$ -	$ -	$ -		$ -
WA[XX]-CC-03				$ -	$ -	$ -		$ -
3 **Total CMAR Contingency Allowance Expenditures**		$ -		$ -	$ -	$ -		$ -
Approved Owner's Contingency (OC) Allowance Expenditures								
WA[XX]-OC-01				$ -	$ -	$ -		$ -
WA[XX]-OC-02				$ -	$ -	$ -		$ -
WA[XX]-OC-03				$ -	$ -	$ -		$ -
4 **Total Approved Owner's Contingency Allowance Expenditures**		$ -		$ -	$ -	$ -		$ -
5 **Total Work Authorization Adjustments**		$ -						
6 **Work Authorization Totals**		$ -		$ -	$ -	$ -		$ -

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Project Number

Owner:
CMAR:
Owner's Advisor:
Engineer:
Project:
Contract:
Work Authorization: **Work Authorization No.:**

Application No.: **Application Date:** **Application Period from:** **to**

a	b	c	d	e	f	g	h	i	j	k	l
Item No.	**Description**	**Quantity**	**Units**	**Unit Price**	**Item Amount** (c x e)	**Units of Work Completed to Date**	**Amount for Work Completed to Date** (e X g)	**Current Stored Materials** SUMIF from Stored Materials	**Work Completed and Stored Materials to Date** (h + i)	**Item % Complete** (j / f)	**Amount Remaining to Complete** (f - j)
Base Work (B)											
WA[XX]-B-01					$ -		$ -	$ -	$ -		$ -
WA[XX]-B-02					$ -		$ -	$ -	$ -		$ -
WA[XX]-B-03					$ -		$ -	$ -	$ -		$ -
1 **Total Base Work**					**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
Change Orders (CO)											
WA[XX]- CO-01					$ -		$ -	$ -	$ -		$ -
WA[XX]- CO-02					$ -		$ -	$ -	$ -		$ -
WA[XX]- CO-03					$ -		$ -	$ -	$ -		$ -
2 **Total Change Orders**					**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
Approved CMAR Contingency (CC) Allowance Expenditures											
WA[XX]-CC-01					$ -		$ -	$ -	$ -		$ -
WA[XX]-CC-02					$ -		$ -	$ -	$ -		$ -
WA[XX]-CC-03					$ -		$ -	$ -	$ -		$ -
3 **Total Approved CMAR Contingency Allowance Expenditures**					**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
Approved Owner's Contingency (OC) Allowance Expenditures											
WA[XX]-OC-01					$ -		$ -	$ -	$ -		$ -
WA[XX]-OC-02					$ -		$ -	$ -	$ -		$ -
WA[XX]-OC-03					$ -		$ -	$ -	$ -		$ -
4 **Total Approved Owner's Contingence Allowance Expenditures**					**$ -**		**$ -**	**$ -**	**$ -**		**$ -**
5 **Total Work Authorization Adjustments**					**$ -**						
6 **Work Authorization Totals**					**$ -**		**$ -**	**$ -**	**$ -**		**$ -**

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Project Number

Owner:

CMAR

Owner's Advisor:

Engineer:

Project:

Contract:

Work Authorization:

Work Authorization No.:

Application No.:

Application Date:

Application Period from:

to

a	b	c	d	e	f	g	h	i	j	k	l	m
Item No.	Description	No. of Units	Unit Price	Item Amount	% of Item Amount	Amount per Unit	Unit 01	Unit 02	Unit 03	Unit 04	Unit 05	Amount Earned to Date
Base Contract (B)												
Goods and Special Services Paid at Specified Payment Milestones												
WA[XX]-B-01	**[Equipment / Material Package]**			$ -	0.0%	$ -						
WA[XX]-B-01.01	**[Payment Milestone 1]**					$ -						$ -
WA[XX]-B-01.02	**[Payment Milestone 2]**					$ -						$ -
WA[XX]-B-01.03	**[Payment Milestone 3]**					$ -						$ -
WA[XX]-B-01.04	**[Payment Milestone 4]**					$ -						$ -
WA[XX]-B-01.05	**[Payment Milestone 5]**					$ -						$ -
WA[XX]-B-01.06	**[Payment Milestone 6]**					$ -						$ -
WA[XX]-B-01.07	**[Payment Milestone 7]**					$ -						$ -
1	**Total Amount for Goods and Special Services Paid at Specific Payment Milestones**			**$ -**			$ -	$ -	$ -	$ -	$ -	**$ -**
Other Base Contract Items												
WA[XX]-B-02	Extended Warranty per Contract			$ -								$ -
WA[XX]-B-03	Travel Allowance for Factory Testing			$ -								$ -
WA[XX]-B-03				$ -								$ -
WA[XX]-B-03				$ -								$ -
WA[XX]-B-03				$ -								$ -
WA[XX]-B-03				$ -								$ -
2	**Total Base Work**			**$ -**								**$ -**
Change Orders (CO)												
WA[XX]-CO-01				$ -								**$ -**
WA[XX]-CO-02				$ -								**$ -**
WA[XX]-CO-03				$ -								**$ -**
3	**Total Change Orders**			**$ -**								**$ -**
Approved CMAR Contingency (CC) Allowance Expenditures												
WA[XX]-CC-01				$ -								**$ -**
WA[XX]-CC-02				$ -								**$ -**
WA[XX]-CC-03				$ -								**$ -**
4	**Total Approved CMAR Contingency (CC) Allowance Expenditures**			**$ -**								**$ -**
Approved Owner's Contingency (OC) Allowance Expenditures												
WA[XX]-OC-01				$ -								**$ -**
WA[XX]-OC-02				$ -								**$ -**
WA[XX]-OC-03				$ -								**$ -**
5	**Total Approved Owner's Contingency (OC) Allowance Expenditures**			**$ -**								**$ -**
6	**Total Work Authorization Adjustments**			**$ -**								
7	**Work Authorization Totals**			**$ -**								**$ -**

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Project Number

Owner: _____

CMAR: _____

Owner's Advisor: _____

Engineer: _____

Project: _____

Contract: _____

Application No.: _____ Application Date: _____ Application Period from: _____ to _____

a	b	c	d	e	f	g	h	i	j	k	l	m	n
							Stored Materials			Incorporated in Work			
Construction Support Cost / Work Authorization Item No	Supplier Invoice No.	Specification Section No.	Submittal No.	Description of Equipment or Materials Stored	Storage Location	Application No. When Products Entered into Inventory	Previous Amount Stored	Amount Stored this Period	Amount Stored to Date (h + i)	Amount Previously Incorporated in the Work	Amount Incorporated in the Work this Period	Total Amount Incorporated in the Work (k + l)	Materials Remaining in Storage (j - m)
									$ -			$ -	$ -
									$ -			$ -	$ -
									$ -			$ -	$ -
									$ -			$ -	$ -
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									$ -			$ -	$ -
1	**Stored Materials Totals**						$ -	$ -	$ -	$ -	$ -	$ -	$ -

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Application for Payment **Retainage**

		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

Retainage for Construction Support Costs

Retainage based on percentage of Construction Support Cost

1	[% Retainage]	x	2	$ -	Amount of Work Completed	=	3	
4	[% Retainage]	x	5	$ -	Amount of Stored Materials	=	6	
					Total retainage based on % of Work Completed and Stored Materials	=	7	
					Retainage at a stipulated amount of 8 _____		**Retainage Amount** 9	

Work Authorization No. 1 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
					Total retainage based on % of Work and Stored Materials	=	16	
					Retainage at a stipulated amount of 17 _____		**Retainage Amount** 18	

Work Authorization No. 2 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
					Total retainage based on % of Work and Stored Materials	=	16	
					Retainage at a stipulated amount of 17 _____		**Retainage Amount** 18	

Work Authorization No. 3 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
					Total retainage based on % of Work and Stored Materials	=	16	
					Retainage at a stipulated amount of 17 _____		**Retainage Amount** 18	

Work Authorization No. 4 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
					Total retainage based on % of Work and Stored Materials	=	16	
					Retainage at a stipulated amount of 17 _____		**Retainage Amount** 18	

Work Authorization No. 5 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
					Total retainage based on % of Work and Stored Materials	=	16	
					Retainage at a stipulated amount of 17 _____		**Retainage Amount** 18	

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Work Authorization No. 6 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
	Total retainage based on % of Work and Stored Materials					=	16	
	Retainage at a stipulated amount of		17				**Retainage Amount**	18

Work Authorization No. 7 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
	Total retainage based on % of Work and Stored Materials					=	16	
	Retainage at a stipulated amount of		17				**Retainage Amount**	18

Work Authorization No. 8 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
	Total retainage based on % of Work and Stored Materials					=	16	
	Retainage at a stipulated amount of		17				**Retainage Amount**	18

Work Authorization No. 9 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
	Total retainage based on % of Work and Stored Materials					=	16	
	Retainage at a stipulated amount of		17				**Retainage Amount**	18

Work Authorization No. 10 - [Description]

Retainage based on percentage of Work and Stored Materials

10	[% Retainage]	x	11	$ -	Amount of Work Completed	=	12	
13	[% Retainage]	x	14	$ -	Amount of Stored Materials	=	15	
	Total retainage based on % of Work and Stored Materials					=	16	
	Retainage at a stipulated amount of		17				**Retainage Amount**	18

Total Retainage	19	**$** -

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		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____
Application Period from: _____ **to** _____

a	b	c	d
Set-off Item No.	**Description and Purpose of Set-off**	**Set-off Application No.**	**Set-off Amount**
1	**Total Set-offs this Application for Payment**		$ -
2	**Total Net Set-offs**		$ -

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		Project Number
Owner:		
CMAR		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ Application Date: _____

Application Period from: _____ to _____

	a	b	c	d	e
	Work Authorization / Item No.	Contingency Authorization Number	Description and Purpose of Contingency Adjustment	Adjustment Amount	Current CMAR Contingency Amount
1	Original CMAR Contingency Allowance				
2	Total Net Adjustments to CMAR Contingency to Date			$ -	
3	Current CMAR Contingency				$ -

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		Project Number
Owner:		
CMAR:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

	a	b	c	d	e
	Work Authorization / Item No.	**Contingency Authorization Number**	**Description and Purpose of Contingency Adjustment**	**Adjustment Amount**	**Current Owner Contingency Amount**
1	**Original Owner's Contingency Allowance**				
2	**Total Net Adjustments to Owner's Contingency to Date**			$ -	
3	**Current Owner's Contingency**				$ -

EJCDC CMAR-620 Application for Payment Exhibit A
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Project Number

Owner: _____
CMAR: _____
Owner's Advisor: _____
Engineer: _____
Project: _____
Contract: _____

Application No.: _____ Application Date: _____ Application Period from: _____ to _____

a	b	c	d	e	f	g	h	i	j
		Budget			Cost			Variances	
Item	Description	Original Budget	Budget Adjustment	Current Budget (c+d)	Current Cost	Projected Changes in Cost	Projected Final Cost (f+g)	Variance with Original Budget (c-h)	Variance with Current Budget (e-h)
CMAR Services									
	Preconstruction Services			$ -			$ -	$ -	$ -
	Procurement Services			$ -			$ -	$ -	$ -
	Special CMAR Services			$ -			$ -	$ -	$ -
Totals for CMAR Services		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Construction Cost									
Construction Support Cost									
	Mobilization Costs			$ -			$ -	$ -	$ -
	Fixed Construction Support Cost			$ -			$ -	$ -	$ -
	Time Dependent Construction Support Cost			$ -			$ -	$ -	$ -
Total Construction Support Cost		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cost of the Work									
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
				$ -			$ -	$ -	$ -
Total Cost of the Work		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CMAR Fee				$ -			$ -	$ -	$ -
CMAR Contingency				$ -			$ -	$ -	$ -
Guaranteed Maximum Price		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Owner's Contingency				$ -			$ -	$ -	$ -
Budget Totals		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

EJCDC CMAR-620 Application for Payment Exhibit A
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Application for Payment **Cost of the Work Summary**

		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: **Application Date:**

Application Period from: **to**

Cost Summary

Payroll cost per Agreement Paragraph 6.02.A.	1	$ -
Incorporated Equipment and Materials Cost per Agreement Paragraph 6.02.B.	2	$ -
Consumable Equipment and Materials Cost per Agreement Paragraph 6.02.C.	3	$ -
Subcontractor Cost per Agreement Paragraph 6.02.D.	4	$ -
Construction Equipment Cost per Agreement Paragraph 6.02.E.	5	$ -
Supplemental Cost per Agreement Paragraph 6.02.F.	6	$ -
Total for Cost of the Work to Date	7	$ -

The undersigned certifies that all Work, including materials, covered by this Cost of Work Summary have been completed or delivered in accordance with the Contract Documents and payment is due.

Submitted by:

Signature: **Date:**

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Cost of the Work **Payroll Cost**

		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f	g	h	i	j	k
Item No.	**Employee Number**	**Employee Name**	**Job Description**	**Payroll Period Ending**	**Regular Hours**	**Overtime Hours**	**Total Hours** (f + g)	**Regular Salary Rate**	**Overtime Salary Rate**	**Labor Cost** (f x i) + (g x j)
										$ -
										$ -
										$ -
										$ -
										$ -
										$ -
										$ -
										$ -
										$ -

Total Payroll Hours	1	-	**Total Payroll Cost**	2	$ -
Fee for Payroll Cost with markup factor of	3			4	$ -
Payroll Cost with Fee this Application Period				5	$ -
Previous Payroll Cost with Fee				6	
Total Payroll Cost with Fee to Date				7	$ -

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Cost of the Work **Incorporated Equipment and Materials Cost**

			Project Number
Owner:			
CMAR:			
Subcontractor:			
Owner's Advisor:			
Engineer:			
Project:			
Contract:			
Work Authorization:		**Work Authorization No.:**	

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f
Item No.	**Name of Provider**	**Invoice Date**	**Invoice Number**	**Description of Equipment or Materials**	**Equipment / Materials Cost**

Total Amount for Incorporated Equipment and Materials Cost			**1**	$ -
Fee for Incorporated Equipment & Materials Cost with markup factor of	**2**		**3**	$ -
Incorporated Equipment and Materials Cost with Fee this Application Period			**4**	$ -
Previous Incorporated Equipment and Materials Cost with Fee			**5**	
Total Incorporated Equipment and Materials Cost with Fee to Date			**6**	$ -

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Cost of the Work **Consumable Equipment and Materials Cost**

		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f
Item No.	**Name of Provider**	**Invoice Date**	**Invoice Number**	**Description of Equipment or Materials**	**Equipment / Materials Cost**

Cost of the Work **Subcontractor Cost**

		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f
Item No.	**Subcontractor Name**	**Invoice Date**	**Invoice Number**	**Description of Work Provided**	**Subcontract Cost this Application**
			Total Amount for Subcontractor Cost	1	$ -
			Fee for Subcontractor Cost with markup factor of 2	3	$ -
			Subcontractor Cost with Fee this Application Period	4	$ -
			Previous Subcontractor Cost with Fee	5	
			Total Subcontractor Cost with Fee to Date	6	$ -

EJCDC CMAR-620 Application for Payment Exhibit B
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		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f	g	h
Item No.	**Equipment Identification Number**	**Description of Equipment**	**Time Used this Period**	**Units**	**Ownership / Rental Cost per Unit**	**Fuel and Maintenance Costs per Unit**	**Equipment Costs this Period** d x (f + g)
Owned Equipment and Equipment Rented from Independent Vendors							
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -

Total Amount for Owned and Rented Construction Equipment			1	**$ -**
Fee for Construction Equipment Cost with markup factor of	2		3	**$ -**
Owner and Rented Construction Equipment with Fee			4	**$ -**

Equipment Rented from Affiliated Company							
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -

Total Amount for Construction Equipment Rented/Leased from Affiliated Company	5	**$ -**
Total Amount for All Construction Equipment with Fee this Application Period	6	**$ -**
Previous Total Amount for All Construction Equipment with Fee	7	
Total Amount for All Construction Equipment with Fee to Date	8	**$ -**

EJCDC CMAR-620 Application for Payment Exhibit B
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Cost of the Work **Supplemental Cost**

		Project Number
Owner:		
CMAR:		
Subcontractor:		
Owner's Advisor:		
Engineer:		
Project:		
Contract:		
Work Authorization:		**Work Authorization No.:**

Application No.: _____ **Application Date:** _____

Application Period from: _____ **to** _____

a	b	c	d	e	f
Item No.	**Name of Provider**	**Invoice Date**	**Invoice Number**	**Description of Work or Services Provided**	**Supplemental Cost**

Total Amount for Supplemental Cost		1	$ -
Fee for Supplemental Cost with markup factor of	2	3	$ -
Supplemental Cost with CMAR Fee this Application Period		4	$ -
Previous Supplemental Cost with Fee		5	
Total Supplemental Cost with Fee to Date		6	$ -

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CMAR-942
FIELD ORDER

FIELD ORDER NO.: [N0. OF FIELD ORDER]

		Project No.
Owner:		
Owner's Advisor:		
Engineer:		
Construction Manager at Risk:		
Project:		
Contract Name:		
Work Authorization:		

Date Issued: _____ Effective Date of Field Order: _____

Construction Manager at Risk is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in the Guaranteed Maximum Price or Contract Times. If Construction Manager at Risk considers that a change in Guaranteed Maximum Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

	Approved by Engineer	Issued by Owner's Advisor
By (signature):		
Name (printed):		
Title:		

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CMAR-940
WORK CHANGE DIRECTIVE

WORK CHANGE DIRECTIVE NO.: [N0. OF WORK CHANGE DIRECTIVE]

		Project No.
Owner:		
Owner's Advisor:		
Engineer:		
Construction Manager at Risk:		
Project:		
Contract Name:		
Work Authorization:		

Date Issued: _____ Effective Date of Work Change Directive: _____

Construction Manager at Risk is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work].

Attachments:

[List documents related to the change to the Work].

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work].

This directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Guaranteed Maximum Price:	$		**[increase] [decrease] [not yet estimated]**.
Contract Time:		days	**[increase] [decrease] [not yet estimated]**.

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Issued by Owner's Advisor	Authorized by Owner
By:			
Title:			
Date:			

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CMAR-941
CHANGE ORDER

CHANGE ORDER NO.: [N0. OF CHANGE ORDER]

		Project No.
Owner:		
Owner's Advisor:		
Engineer:		
Construction Manager at Risk:		
Project:		
Contract Name:		
Work Authorization:		

Date Issued: _____ Effective Date of Change Order: _____

The Contract is modified as follows upon execution of this Change Order:

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change].

Attachments:

[List documents related to the change].

Change in Guaranteed Maximum Price

Original Guaranteed Maximum Price this Work Authorization	
Net **[Increase] [Decrease]** from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**	
Guaranteed Maximum Price prior to this Change Order	
[Increase] [Decrease] this Change Order:	
Guaranteed Maximum Price incorporating this Change Order:	

Change in Contract Times for Work Authorization

☐ Work in this Work Authorization has not been designated as a Milestone—CMAR is to complete Work in this Work Authorization so the Work as a whole will reach Substantial Completion by the date designated in the Agreement.

☐ Work in this Work Authorization has been designated as a Milestone—The completion dates for this Work Authorization are modified by this Change Order as shown below.

	Original	Previous	Current

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Substantial Completion Date			
Final Completion Date			

	Issued by Owner's Advisor	Authorized by Owner
By:		
Title:		
Date:		
	Recommended by Engineer (if required)	Approved by Funding Agency (if applicable)
By:		
Title:		
Date:		

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CMAR-625
CERTIFICATE OF SUBSTANTIAL COMPLETION

CERTIFICATE OF SUBSTANTIAL COMPLETION OF THE WORK

		Project No.
Owner:		
Owner's Advisor:		
Engineer:		
Construction Manager at Risk:		
Project:		
Contract Name:		
Contract Amendment:		
Date Issued:	Date of Substantial Completion:	

This ☐ Preliminary ☐ Final Certificate of Substantial Completion of the Work applies to:

☐ All Work ☐ All Work for Work Authorization No. **[Work Authorization No.]** ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion of the Work is issued].

Date of Substantial Completion of the Work: **[Enter date, as determined by Owner's Advisor]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Construction Manager at Risk, Owner's Advisor, and Engineer, and found by Owner's Advisor, in consultation with Engineer, to be substantially complete. The Date of Substantial Completion of the Work, the Work authorized under the specific Work Authorization, or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion of the Work. Subject to the provisions of the Contract, the date of Substantial Completion of the Work in the final Certificate of Substantial Completion of the Work marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Construction Manager at Risk to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Construction Manager at Risk; see Paragraph 15.04.D of the General Conditions.

The responsibilities between Owner and Construction Manager at Risk for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Construction Manager at Risk's Responsibilities: ☐ None ☐ As follows:

[List amendments to Construction Manager at Risk's Responsibilities]

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The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Construction Manager at Risk's obligation to complete the Work in accordance with the Contract Documents.

	Approved by Engineer	Issued by Owner's Advisor
By (signature):		
Name (printed):		
Title:		

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION MANAGER AT RISK CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION MANAGER AT RISK CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Proposal Documents or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and Paragraphs, and the titles of other documents or forms.

1. Addenda—Written or graphic instruments issued prior to the receipt of Proposals by the Owner which clarify, correct, or change the Proposal Documents or the proposed Contract Documents.

2. Agreement—The written instrument, including its attached exhibits, executed by Owner and Construction Manager at Risk, that sets forth the Contract Price and Contract Times, identifies the Owner, Construction Manager at Risk, Owner's Advisor, and Engineer, and designates the specific items that are Contract Documents.

3. Application for Payment—The document prepared by Construction Manager at Risk, in a form acceptable to Owner's Advisor, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. Change Order—A document which is signed by Construction Manager at Risk and Owner after the Effective Date of a governing Work Authorization and authorizes an addition, deletion, or revision in the authorized Work, an adjustment in the applicable incremental Guaranteed Maximum Price or Contract Times, or other revision to such Work Authorization.

5. Change Proposal—A written request by Construction Manager at Risk, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Guaranteed Maximum Price or Contract Times; contesting a decision by Owner's Advisor, in consultation with Engineer, concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

6. Claim

a. A demand or assertion by Owner directly to Construction Manager at Risk, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting a decision rendered by Owner's Advisor, in consultation with Engineer, concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents, or regarding a Change Proposal; or seeking other relief with respect to the terms of the Contract.

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b. A demand or assertion by Construction Manager at Risk directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Owner's Advisor's decision, made in consultation with Engineer, regarding a Change Proposal.

c. A demand or assertion by Owner or Construction Manager at Risk, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.3, concerning disputes arising after Owner's Advisor has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

7. CMAR Contingency Allowance—An allowance used to reimburse CMAR for costs due to unforeseen causes, unintentional errors, or events which cannot specifically be anticipated at the time Work Authorizations are issued, as set forth in the Agreement, Article 8.

8. CMAR Fee—The component of the Guaranteed Maximum Price that supplements the CMAR's compensation for the Cost of the Work, consisting of either a fixed fee (a stipulated price or lump sum amount) or a percentage of the Cost of the Work, as set forth in the Agreement.

9. CMAR Services—Those specific planning, organizational, and advisory services to be performed or furnished by CMAR, consisting collectively of Preconstruction Services, Procurement Services, and any other services authorized by Owner's Advisor and expressly identified in such authorization as CMAR Services. CMAR Services are not part of the Work.

10. Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

11. Construction Manager at Risk (CMAR)—The entity that has entered into the Contract with Owner. Under the Contract the CMAR will provide CMAR Services and construct the Work set out in the Drawings and Specifications, as duly authorized, using the Construction Manager at Risk project delivery method.

12. Construction Period—The period from the commencement of Work on the first Work Authorization until Substantial Completion of the Work. This is the number of days for which Construction Support Costs will be compensated.

13. Construction Support Costs—See Agreement, Article 5.

14. Contract—The entire and integrated written agreement between Owner and Construction Manager at Risk concerning the CMAR Services and the Work.

15. Contract Amendment—A document signed by Owner and Construction Manager at Risk which modifies the terms and conditions of the Contract, including but not limited to modifications of the time or compensation provisions of the Agreement and the scope of CMAR Services. A Contract Amendment is not used to make changes in the Work or

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to a Work Authorization, such changes properly being made in a Change Order or supplemental Work Authorization.

16. Contract Documents—Those items so designated in the Agreement, and which together comprise the Contract.

17. Contract Price—The money that Owner has agreed to pay Construction Manager at Risk for performance and completion of the CMAR Services and the Work, in accordance with the Contract Documents. The Contract Price may be subdivided into component parts based on authorized CMAR Services and Work Authorizations. The Contract Price includes the CMAR's compensation for CMAR Services, Construction Support Costs, Cost of the Work, the CMAR Fee, CMAR Contingency Allowances, and the Owner's Contingency Allowance.

18. Contract Times—The number of days or the dates by which Construction Manager at Risk shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work and all required services. The Contract Times may be subdivided into component parts based on Work Authorizations and authorized CMAR Services.

19. Contractor—The term "Contractor," if used in the Contract, means Construction Manager at Risk.

20. Cost of the Work—The sum of eligible costs incurred by CMAR for the performance of the Work, as allowed by the Cost of the Work provisions set forth in the Agreement. Cost of the Work as a defined term does not include Construction Support Costs.

21. Drawings—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Construction Manager at Risk.

22. Effective Date of the Contract—The date indicated in the Agreement, on which the Contract becomes effective.

23. Electronic Document—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

24. Electronic Means—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, ~~Twitter,~~ **X,** Instagram, or similar social media services for transmission of Electronic Documents.

25. Engineer—The individual or entity that has primary responsibility for preparing or furnishing the Drawings and Specifications and is named as Engineer in the Agreement.

26. Estimated Cost of the Work—An estimate of the Cost of the Work prepared by the Owner for use (a) during the CMAR selection process in evaluating Proposals submitted in response to the Request for Proposals and (b) during the early stages of the Contract in calculating an Estimated Guaranteed Maximum Price until the design has progressed

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to the point where Owner and CMAR can mutually agree upon a Guaranteed Maximum Price.

27. Estimated Guaranteed Maximum Price—A preliminary Guaranteed Maximum Price calculated on the basis of the Estimated Cost of the Work. This is a non-binding price used on an interim basis for comparison or estimation of Owner's Construction Budget until the design has progressed to the point that a Guaranteed Maximum Price for the Work is established, or a Guaranteed Maximum Price for a portion of the Work is established by issuance of a Work Authorization by the Owner's Advisor.

28. Field Order—A written order issued by Owner's Advisor which requires minor changes in the Work but does not change the Guaranteed Maximum Price or the Contract Times.

29. Final Completion—The point at which the Work is complete in accordance with the Contract Documents, items and documents required by the Contract Documents have been accepted by the Owner, all required services have been completed, and the Contract is ready for final payment.

30. Guaranteed Maximum Price (GMP)—The maximum amount to be paid by Owner to CMAR for the sum of the Construction Support Costs, plus Cost of the Work, plus the CMAR Fee, all as set forth in the Agreement.

31. Hazardous Environmental Condition—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

32. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

33. Liens—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

34. Milestone—A principal event in the performance of the Work that the Contract requires Construction Manager at Risk to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

35. Notice of Award—The written notice by Owner stating that Owner will enter into the Construction Manager at Risk contract with the selected Construction Manager at Risk.

36. Owner—The entity with which Construction Manager at Risk has contracted regarding the CMAR Services and the Work, and which has agreed to pay Construction Manager

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at Risk for the performance of the CMAR Services and the Work, pursuant to the terms of the Contract.

37. Owner's Advisor (OA)—The individual or entity named as Owner's Advisor in the Agreement. The Owner's Advisor provides services to the Owner, as an advisor and representative.

38. Owner's Construction Budget (Budget)—The amount budgeted by the Owner to pay CMAR to perform and complete the Work in accordance with the Contract Documents. This amount includes compensation for Cost of the Work, the CMAR Fee, and Construction Support Costs, but does not include compensation for CMAR Services.

39. Owner's Project Team (OPT)—As used in this Contract, refers to Owner, Owner's Advisor and Engineer, collectively.

40. Preconstruction Services—Those planning, management, and support services to be performed or furnished by CMAR as set forth in the Scope of CMAR Preconstruction Services Exhibit to the Agreement. Preconstruction Services are separate and distinct from Procurement Services, and from the performance of the Work itself, and are a component of CMAR Services.

41. Preconstruction Services Price—The total amount to be paid to CMAR for the Preconstruction Services described in the Scope of CMAR Preconstruction Services Exhibit to the Agreement.

42. Procurement Services—Those services relating to assembling Work Packages and procurement of construction Subcontractors, Suppliers, and materials and equipment, to be performed or furnished by CMAR as set forth in the procurement-related provisions of the Scope of CMAR Services Exhibit to the Agreement. Procurement Services are separate and distinct from Preconstruction Services, and from the performance of the Work itself, and are a component of CMAR Services.

43. Procurement Services Price—The total amount to be paid to CMAR for providing the Procurement Services described in the Scope of CMAR Procurement Services Exhibit to the Agreement.

44. Progress Schedule—A schedule, prepared and maintained by Construction Manager at Risk, describing the sequence and duration of the activities comprising Construction Manager at Risk's plan to accomplish the Work within the Contract Times.

45. Project—The total undertaking to be accomplished for Owner by construction managers, engineers, contractors, advisors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the CMAR Services and the Work to be performed under the Contract are a part.

46. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

47. Schedule of Submittals—A schedule, prepared and maintained by Construction Manager at Risk, of required Submittals and the time requirements for review of the Submittals.

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48. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Construction Manager at Risk and submitted by Construction Manager at Risk to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

49. Site—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Construction Manager at Risk.

50. Specifications—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

51. Subcontractor—An individual or entity having a direct contract with Construction Manager at Risk or with any other Subcontractor for the performance of a part of the Work.

52. Submittal—A written or graphic document, prepared by or for Construction Manager at Risk, which the Contract Documents require Construction Manager at Risk to submit to Owner's Advisor, or that is indicated as a Submittal in the Schedule of Submittals accepted by Owner's Advisor. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether approved or accepted by Owner's Advisor or Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

53. Substantial Completion—The time at which the Work, or a specified part thereof, has progressed to the point where, the Work, or the specified part thereof, is sufficiently complete, in accordance with the Contract Documents, so that the Work, or the specified part thereof, can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

54. Supplementary Conditions—The part of the Contract that amends or supplements these General Conditions.

55. Supplier—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Construction Manager at Risk or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Construction Manager at Risk or a Subcontractor.

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56. Technical Data

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures, except Underground Facilities, or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Construction Manager at Risk.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated in the Drawings.

57. Underground Facilities—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

58. Unit Price Work—Work to be paid for based on unit prices.

59. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

60. Work Authorization—A document issued by Owner's Advisor and signed by Owner and CMAR which identifies and defines new Work Packages and establishes the amount to be paid, times for completion, and any special or supplementary provisions applicable to the authorized Work.

61. Work Change Directive—A written directive issued by Owner's Advisor to Construction Manager at Risk on or after the Effective Date of a governing Work Authorization, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

62. Work Package–A specific portion of the Work developed by Engineer and Owner's Advisor in collaboration with the CMAR and subsequently authorized by a Work Authorization.

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1.02 Terminology

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Proposal Documents or Contract Documents, have the indicated meaning.

B. Intent of Certain Terms or Adjectives–The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Owner's Advisor or Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Owner's Advisor or Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective is not intended to and will not be effective to assign to Owner's Advisor or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. Day–The word "day" means a period of 24 hours measured from midnight to the next midnight.

D. Defective–The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Owner's Advisor's recommendation of final payment unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.04 or Paragraph 15.05.

E. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site, or some other specified location ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for their intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for their intended use.

4. If the Contract Documents establish an obligation of CMAR with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then CMAR shall furnish and install said services, materials, or equipment complete and ready for their intended use.

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F. Contract Price or Contract Times–References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance

A. Performance and Payment Bonds–When CMAR delivers the signed counterparts of a Work Authorization to Owner, CMAR shall also deliver to Owner the performance bond and payment bond, if the Contract requires CMAR to furnish such bonds, or confirm that existing performance and payment bonds have been supplemented to account for the additional authorized Work.

B. Evidence of CMAR's Insurance–When CMAR delivers the signed counterparts of the Agreement to Owner, CMAR shall also deliver to Owner, with copies to each additional insured, as identified in the Contract, the certificates, endorsements, and other evidence of insurance required to be provided by CMAR in accordance with Article 6, except to the extent the Supplementary Conditions or Agreement expressly establish other dates for delivery of specific insurance policies.

C. Evidence of Owner's Insurance–After receipt of the signed counterparts of the Agreement and all required insurance documentation, Owner shall promptly deliver to CMAR, with copies to each additional insured, as identified in the Contract, the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

A. Owner shall furnish to CMAR four printed copies of the Contract, including one fully signed counterpart of the Agreement, and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to CMAR for review. Owner may delegate the responsibilities under this provision to Owner's Advisor.

2.03 Electronic Transmittals

A. Except as otherwise stated elsewhere in the Contract, the Owner, Owner's Advisor, Engineer, and CMAR may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Owner's Advisor, and CMAR shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-

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term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

2.04 Construction Management

A. In addition to providing CMAR Services, during the course of the Contract, and especially during the performance of the Work, CMAR will:

1. Organize and manage the resources required for construction of the Work, commissioning, and correction of defective Work after Substantial Completion of the Work.

2. Administer, coordinate, monitor, and report on construction progress and associated activities.

3. Assist the Owner's Advisor in collecting, disseminating, and storing documents and information.

4. Manage the Work to meet Contract goals and objectives.

5. Recommend action to the Owner related to the management of the Work.

6. Develop schedule and cost control systems to monitor and report on the progress of the overall Contract.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project, or part thereof, to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents, including any printed copies derived from such electronic versions, and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Owner's Advisor, in consultation with Engineer, will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and CMAR, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

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G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner, Owner's Advisor, or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner, Owner's Advisor, or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of receipt of Proposals, except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, CMAR, Owner's Advisor, or Engineer from those set forth in the Contract Documents. No such provision or instruction will be effective to assign to Owner, Owner's Advisor, or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. CMAR's Verification of Figures and Field Measurements–Before undertaking each part of the Work, CMAR shall carefully study the applicable Drawings and Specifications, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. CMAR shall promptly report in writing to Owner's Advisor any conflict, error, ambiguity, or discrepancy that CMAR discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Owner's Advisor, in consultation with Engineer, and, if appropriate, an amendment or supplement to the Contract is issued by Owner's Advisor pursuant to Paragraph 11.01.

2. CMAR's Review of Drawings and Specifications–If, while performing or providing CMAR Services, or during the performance of the Work, CMAR discovers any conflict, error, ambiguity, or discrepancy within the Drawings and Specifications, whether in draft or final form, or between such documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then CMAR shall promptly report it to Owner's Advisor in writing. CMAR shall not proceed with the Work affected thereby, except in an emergency as required by Paragraph 7.18, until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Owner's

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Advisor, in consultation with Engineer, and, if appropriate, an amendment or supplement to the Contract is issued by Owner's Advisor pursuant to Paragraph 11.01.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Drawings and Specifications take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Drawings and Specifications and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier, whether or not specifically incorporated by reference as a Contract Document; or

b. the provisions of any Laws or Regulations applicable to the performance of the Work, unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation.

3.04 Interpretation of the Contract Documents

A. During the performance of the Work and until final payment, CMAR and Owner shall submit to the Owner's Advisor in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation) or relating to the performance or acceptability of the Work under the Contract Documents, as soon as possible after such matters arise.

B. Owner's Advisor will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, and if appropriate initiate a change to the Contract Documents. In determining its response, Owner's Advisor will consider CMAR's prior involvement and obligations with respect to reviewing and commenting on draft design documents during CMAR's provision of CMAR Services. Owner's Advisor's written clarification, interpretation, or decision (1) will be based, when applicable, on consultation with Engineer, and (2) will be final and binding on CMAR, unless CMAR appeals by submitting a Change Proposal, and on Owner, unless Owner appeals by filing a Claim.

3.05 Reuse of Documents

A. CMAR and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents, or copies of any thereof, prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes CMAR from retaining copies of the Contract Documents for record purposes.

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ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the Effective Date of the Contract, or as specified in Work Authorizations.

4.02 Starting the Work

A. CMAR shall start to perform the Work promptly upon receipt of the first Work Authorization. No Work may be done at the Site prior to such authorization.

4.03 Reference Points

A. Owner shall provide engineering surveys to establish reference points for construction. CMAR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. CMAR shall report to Owner's Advisor whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and CMAR shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 Progress Schedule

A. CMAR shall adhere to the Progress Schedule established as part of Preconstruction Services, as it may be adjusted from time to time as provided below.

1. CMAR shall submit to Owner's Advisor for its information proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. CMAR shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and CMAR may otherwise agree in writing.

4.05 Delays in CMAR's Progress

A. If Owner, Owner's Advisor, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then CMAR shall be entitled to an equitable adjustment in Guaranteed Maximum Price or Contract Times.

B. CMAR shall not be entitled to an adjustment in Guaranteed Maximum Price or Contract Times for delay, disruption, or interference caused by or within the control of CMAR. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier will be deemed to be within the control of CMAR.

C. If CMAR's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, CMAR, and those for which they are responsible, then CMAR shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be CMAR's sole and exclusive remedy for the delays, disruption, and interference described in this Paragraph. Causes of delay, disruption, or interference that

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may give rise to an adjustment in Contract Times under this Paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions;
3. Acts or failures to act of third-party utility owners or other third-party entities, other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8; and
4. Acts of war or terrorism.

D. CMAR's entitlement to an adjustment of Contract Times or Guaranteed Maximum Price is limited as follows:

1. CMAR's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. CMAR shall not be entitled to an adjustment in Guaranteed Maximum Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of CMAR. Such a concurrent delay by CMAR shall not preclude an adjustment of Contract Times to which CMAR is otherwise entitled.
3. Adjustments of Contract Times or Guaranteed Maximum Price are subject to the provisions of Article 11.

E. Each CMAR request or Change Proposal seeking an increase in Contract Times or Guaranteed Maximum Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed because of each such cause of delay, disruption, or interference; and
5. The impact on Guaranteed Maximum Price, in accordance with the provisions of Paragraph 11.07.

CMAR shall also furnish such additional supporting documentation as Owner or Owner's Advisor may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with

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reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify CMAR in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CMAR must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish CMAR with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CMAR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. CMAR shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that CMAR has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. CMAR shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for CMAR's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the CMAR or those for which CMAR is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the CMAR or those for which CMAR is responsible, CMAR shall (a) take immediate corrective or remedial action as required by Paragraph 7.18, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against

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all costs, losses, and damages, including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Owner's Advisor, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, CMAR's performance of the Work, or because of other actions or conduct of the CMAR or those for which CMAR is responsible.

B. Removal of Debris During Performance of the Work–During the progress of the Work the CMAR shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. Cleaning—Prior to Substantial Completion of the Work CMAR shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work CMAR shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading of Structures—CMAR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CMAR subject any part of the Work or adjacent structures or land to stresses or pressures that could damage said structures or decrease their durability.

5.03 Subsurface and Physical Conditions

A. Reports and Drawings—The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site, except Underground Facilities, that contain Technical Data; and

3. Technical Data described in such reports and drawings.

B. Underground Facilities—Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. Reliance by CMAR on Technical Data—CMAR may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then CMAR may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.55.b.

D. Limitations of Other Data and Documents—Except for such reliance on Technical Data, CMAR may not rely upon or make any claim against Owner, Owner's Advisor, or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

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1. the completeness of such reports and drawings for CMAR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CMAR, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to CMAR, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any CMAR interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

E. Confirmation of Site Conditions—As a part of Preconstruction Services CMAR will inform Owner if CMAR concludes that additional examination, investigation, exploration, testing, or study (Supplemental Investigations) of subsurface or physical conditions at the Site prior to commencement of construction would be advantageous, practical, and cost-effective, specifically identifying the nature and scope of any such recommended Supplemental Investigations. If Owner authorizes CMAR to conduct such Supplemental Investigations, through CMAR's own personnel or through a qualified consultant, or if Owner conducts such Supplemental Investigations, through Owner's Advisor, the Engineer, or a consultant, then CMAR will be entitled to rely on the results of the Supplemental Investigations, together with the Technical Data cited above, in planning and pricing construction at the Site.

F. If Owner does not authorize any Supplemental Investigations of Site conditions, then CMAR will proceed with planning and pricing construction based on the Technical Data made available to it.

G. CMAR will be bound by any additional knowledge regarding Site conditions that CMAR gains while providing Preconstruction services.

5.04 Differing Subsurface or Physical Conditions

A. Notice by CMAR–If CMAR believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data or Supplemental Investigations results on which CMAR is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CMAR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith, except in an emergency as required by Paragraph 7.18, notify Owner's Advisor in writing about such condition. CMAR shall not further disturb such condition or perform any Work in connection

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therewith, except with respect to an emergency, until receipt of a written statement permitting CMAR to do so.

B. Owner's Advisor's Review–After receipt of written notice as required by the preceding paragraph, Owner's Advisor, in consultation with Engineer, will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from CMAR; prepare recommendations to Owner regarding the CMAR's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Owner's Advisor's findings, conclusions, and recommendations.

C. Owner's Statement to CMAR Regarding Site Condition–After receipt of Owner's response and instructions regarding Owner's Advisor's written findings, conclusions, and recommendations, Owner's Advisor will issue a written statement to CMAR regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and informing CMAR of Owner's Advisor's written findings, conclusions, and recommendations, as revised based on Owner's response and instructions.

D. Early Resumption of Work–If at any time Owner's Advisor, in consultation with Engineer, determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Owner's Advisor's review or Owner's Advisor's issuance of its statement to CMAR, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then Owner's Advisor may instruct CMAR to resume such Work.

E. Possible Price and Times Adjustments

1. CMAR shall be entitled to an equitable adjustment in Guaranteed Maximum Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in CMAR's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

    b. With respect to Work that is paid for on a unit price basis, any adjustment in Guaranteed Maximum Price will be subject to the provisions of Paragraph 13.02; and

    c. CMAR's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. CMAR shall not be entitled to any adjustment in the Guaranteed Maximum Price or Contract Times with respect to a subsurface or physical condition if:

    a. CMAR knew of the existence of such condition at the time CMAR made a commitment to Owner with respect to Guaranteed Maximum Price and Contract Times through a Work Authorization;

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b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Proposal Documents or Contract Documents to be conducted by or for CMAR prior to CMAR's making such commitment;

c. The existence of such condition reasonably could have been discovered or revealed as a result of practical and cost-effective Supplemental Investigations, as defined in Paragraph 5.03.E, but CMAR did not recommend any such Supplemental Investigations to Owner; or

d. CMAR failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and CMAR agree regarding CMAR's entitlement to and the amount or extent of any adjustment in the Guaranteed Maximum Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. CMAR may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Guaranteed Maximum Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to CMAR regarding the subsurface or physical condition in question.

F. Underground Facilities; Hazardous Environmental Conditions–Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 Underground Facilities

A. CMAR's Responsibilities–Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all the following is included in the Guaranteed Maximum Price, and CMAR shall have full responsibility for:

1. collaborating with Engineer during the design phase, as part of Preconstruction Services, to improve the accuracy and completeness of information regarding Underground Facilities that Engineer gathers and depicts in the final Contract Documents;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities prior to construction;

4. coordination of the Work with the owners, including Owner, of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site and repairing any damage thereto resulting from the Work.

B. Notice by CMAR–If CMAR believes that an Underground Facility that is uncovered or revealed at the Site during construction was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then CMAR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or

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performing any Work in connection therewith, except in an emergency as required by Paragraph 7.18, notify Owner and Owner's Advisor in writing regarding such Underground Facility.

C. Owner's Advisor's Review

1. Owner's Advisor will:

a. promptly review the Underground Facility in consultation with Engineer, and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

b. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner, and if necessary, issue any preliminary instructions to CMAR regarding the CMAR's resumption of Work in connection with the Underground Facility in question;

c. obtain any pertinent cost or schedule information from CMAR; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

d. advise Owner and Engineer in writing of Owner's Advisor's findings, conclusions, and recommendations.

During such time, CMAR shall be responsible for the safety and protection of such Underground Facility.

D. Owner's Advisor's Statement to CMAR Regarding Underground Facility–After receipt of Owner's response to and recommendations regarding Owner's Advisor's written findings, conclusions, and recommendations, Owner's Advisor will issue a written statement to CMAR regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and informing CMAR of Owner's Advisor's written findings, conclusions, and recommendations, as revised based on Owner's response and instructions.

E. Early Resumption of Work–If at any time Owner's Advisor, in consultation with Engineer, determines that Work in connection with the Underground Facility may resume prior to completion of Owner's Advisor's review or Owner's Advisor's issuance of its statement to CMAR, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then Owner's Advisor may instruct CMAR to resume such Work.

F. Possible Price and Times Adjustments

1. CMAR shall be entitled to an equitable adjustment in the Guaranteed Maximum Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in CMAR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Guaranteed Maximum Price will be subject to the provisions of Paragraph 13.02;

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b. CMAR's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. CMAR gave the notice required in Paragraph 5.05.B.

2. If Owner and CMAR agree regarding CMAR's entitlement to and the amount or extent of any adjustment in the Guaranteed Maximum Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. CMAR may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Guaranteed Maximum Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to CMAR regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE Manual 38, Standard Guideline for Investigating and Documenting Existing Utilities, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, CMAR's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

A. Reports and Drawings–The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data described in such reports and drawings.

B. Reliance by CMAR on Technical Data Authorized–CMAR may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then CMAR may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.55.b. Except for such reliance on Technical Data, CMAR may not rely upon or make any claim against Owner, Owner's Advisor, or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for CMAR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CMAR, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CMAR interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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C. CMAR shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. CMAR shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by CMAR, Subcontractors, Suppliers, or anyone else for whom CMAR is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If CMAR encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if CMAR or anyone for whom CMAR is responsible creates a Hazardous Environmental Condition, then CMAR shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby, except in an emergency as required by Paragraph 7.18; and (3) notify Owner, Owner's Advisor, and Engineer, and promptly thereafter confirm such notice in writing. Owner shall promptly consult with Owner's Advisor and Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Owner's Advisor and Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide CMAR with the written notice required by Paragraph 5.06.E. If CMAR or anyone for whom CMAR is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition and impose a set-off against payments to account for the associated costs.

F. CMAR shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to CMAR either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and CMAR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Guaranteed Maximum Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by CMAR, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, CMAR may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, CMAR does not agree to resume such Work based on a reasonable belief it is unsafe or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless CMAR, Subcontractors, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of

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them, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs, arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by CMAR or by anyone for whom CMAR is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, CMAR shall indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by CMAR or by anyone for whom CMAR is responsible, or to a Hazardous Environmental Condition created by CMAR or by anyone for whom CMAR is responsible. Nothing in this Paragraph 5.06.J obligates CMAR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

A. No later than the execution of the first Work Authorization the CMAR shall furnish a performance bond and a payment bond, each in an amount at least equal to the Guaranteed Maximum Price, as security for the faithful performance and payment of CMAR's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment on the Contract becomes due or until completion of the correction period for the Contract specified in Paragraph 15.09, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract. The premium costs of such bonds are:

1. included in Construction Support Cost if purchased for the Work based on the Estimated Guaranteed Maximum Price established with the Agreement; or

2. a reimbursable Cost of the Work if the bonds are purchased with the first Work Authorization and increased as subsequent Work Authorizations are approved.

B. CMAR shall also furnish such other bonds, if any, as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Contract Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding

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Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570, as amended and supplemented by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. CMAR shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by CMAR is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then CMAR shall promptly notify Owner and Owner's Advisor in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If CMAR has failed to obtain a required bond, Owner may exclude the CMAR from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to CMAR from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, CMAR shall provide a copy of the payment bond to such person or entity.

I. Performance Bonds required of certain Subcontractors and Suppliers—see Paragraph 7.10.O.

6.02 Insurance—General Provisions

A. Owner and CMAR shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or CMAR shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract must have an A.M. Best Financial Strength Rating of A- or better, and an A.M. Best Financial Size Category of VII or larger.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not adequate to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. CMAR shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that CMAR has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, CMAR shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-

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insured retentions, if allowed, and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, CMAR, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to CMAR, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract, if any. Upon request by CMAR or any other insured, Owner shall also provide other evidence of such required insurance, if any, including but not limited to copies of policies, documentation of applicable self-insured retentions, if allowed, and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or CMAR to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or CMAR to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain, and maintain such insurance.

G. In addition to the liability insurance required to be provided by CMAR, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by CMAR, and CMAR cannot rely upon Owner's liability policies for any of CMAR's obligations to the Owner, Owner's Advisor, Engineer, or third parties.

H. CMAR shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner, Owner's Advisor and Engineer, and any other individuals or entities identified in the Supplementary Conditions as additional insureds on CMAR's liability policies, on each Subcontractor's commercial general liability policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any cancellation of the required coverage.

J. If CMAR has failed to obtain and maintain required insurance, CMAR's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs, including but not limited to the cost of purchasing necessary insurance coverage, and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect, but is in no way obligated, to obtain equivalent

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insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect CMAR or CMAR's interests. CMAR is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that CMAR deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on CMAR's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder must provide a copy of the notice to Owner's Advisor and each other insured.

6.03 CMAR's Insurance

A. Required Insurance–CMAR shall purchase and maintain worker's compensation, commercial general liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. General Provisions–The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete, as set forth in Paragraph 15.07.D, and longer if expressly required elsewhere in this Contract, and at all times thereafter when CMAR may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by CMAR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. Additional Insureds–The CMAR's commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner, Owner's Advisor, and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

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3. afford primary coverage to these additional insureds for all claims covered thereby, including as applicable those arising from both ongoing and completed operations;

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by CMAR's acts or omissions, or the acts and omissions of those working on CMAR's behalf, in the performance of CMAR's operations.

6.04 Builder's Risk and Other Property Insurance

A. Builder's Risk–Unless otherwise provided in the Supplementary Conditions, beginning at the commencement of construction CMAR shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost, subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations. The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

For purposes of the builder's risk and other required property insurance, "commencement of construction" first occurs when materials are in the course of delivery to the Site or an off-site storage location required to be insured if transit coverage is required, or if transit coverage is not required, when materials are delivered to the Site, or an off-site storage location required to be insured.

B. Property Insurance for Facilities of Owner Where Work Will Occur–Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.07.D.

C. Property Insurance for Substantially Complete Facilities–Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.07.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. Partial Occupancy or Use by Owner–If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.05, then Owner, directly, if it is the purchaser of the builder's risk policy, or through CMAR, will provide advance notice of such occupancy or use to the builder's risk insurer and obtain coverage or an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. Insurance of Other Property; Additional Insurance–If the express insurance provisions of the Contract do not require or address the insurance of a property Item or interest, then the entity or individual owning such property Item will be responsible for insuring it. If CMAR

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elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, CMAR may do so at its expense.

6.05 Property Losses; Subrogation

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04, or an installation floater policy if authorized by the Supplementary Conditions, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Owner's Advisor, Engineer, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and CMAR waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Owner's Advisor, Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or CMAR as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.05, after Substantial Completion pursuant to Paragraph 15.04, or after final payment pursuant to Paragraph 15.07, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against CMAR, Subcontractors, Owner's Advisor, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

C. Owner waives all rights against CMAR, Subcontractors, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

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D. CMAR shall assure that each subcontract contains provisions whereby the Subcontractor waives all rights against Owner, CMAR, Owner's Advisor, Engineer, all individuals or entities identified in the Supplementary Conditions as insureds, their consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 Receipt and Application of Property Insurance Proceeds

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured will act as fiduciary for the other insureds and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 must maintain such proceeds in a segregated account and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, CMAR shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CMAR'S RESPONSIBILITIES

7.01 CMAR's Means and Methods of Construction

A. CMAR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or CMAR determines, that professional engineering or other design services are needed to carry out CMAR's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then CMAR shall cause such services to be provided by a properly licensed design professional, at CMAR's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner, Owner's Advisor, nor Engineer has any responsibility with respect to (1) CMAR's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by CMAR, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 Supervision and Superintendence

A. CMAR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

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B. At all times during the progress of the Work, CMAR shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Owner's Advisor except under extraordinary circumstances.

7.03 CMAR Services—Key Personnel and Subconsultants

A. CMAR will provide the services of the key individuals identified in the Agreement for CMAR Services (Preconstruction Services and Procurement Services) for the duration of the time required to provide these services. CMAR may substitute other individuals for the key individuals identified in the Agreement or for individuals previously approved only upon good cause and with the written consent of the Owner. Subject to the foregoing, not providing the individuals proposed may be the grounds for termination of this Contract.

B. CMAR may provide CMAR Services through one or more subconsultants under contract to CMAR provided, however, that CMAR remains responsible to the Owner for all duties and obligations of the CMAR under this Contract, and in rendering services any such subconsultant must comply with all applicable terms and conditions of the Contract Documents. If the Agreement identifies a specific subconsultant, CMAR will provide the services of such subconsultant for the duration of the time required to complete the subcontracted tasks. CMAR may substitute other subconsultants for the subconsultants identified in the Agreement or previously approved only with the written consent of the Owner. Subject to the foregoing, not providing the subconsultants proposed may be the grounds for termination of this Contract.

7.04 Quality of CMAR Services

A. The Owner's Advisor, with the concurrence of Owner and Engineer, has the right to reject or disapprove any substandard portion of the CMAR Services. Owner's Advisor will provide written notice stating the reason for the rejection or disapproval. CMAR will revise the services in question to address the inadequacies identified by Owner's Advisor.

B. CMAR acknowledges that any review or approval of CMAR Services by the Owner or Owner's Advisor does not relieve CMAR of its responsibility to properly and timely perform such services.

7.05 Continuation or Termination of CMAR Services

A. Owner may terminate this Contract for Owner's convenience at the completion of Preconstruction Services if Owner determines that doing so is in Owner's best interest. Owner is not obligated to cite a reason for such a termination, but in making its determination Owner may wish to consider factors such as the quality of the CMAR Services, facts that indicate that the Project cannot be constructed for a cost within the Owner's budget, and changes in key personnel.

B. The Owner may terminate the Contract for Owner's convenience at the end of Procurement Services if Owner determines that doing so is in Owner's best interest. Owner is not obligated to cite a reason for such a termination, but in making its determination Owner may wish to consider factors such as whether CMAR is unable to offer a Guaranteed Maximum Price within the Owner's Construction Budget, or whether it will be advantageous to bid out the Work as a whole on a stipulated price basis.

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7.06 Labor; Working Hours

A. CMAR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CMAR shall maintain good discipline and order at the Site.

B. CMAR shall provide or furnish:

1. Construction-related services as described in Division 00 and Division 01 of the Contract Documents;

2. Post-construction services as described in Division 00 and Division 01 of the Contract Documents; and

3. All other construction-related and post-construction services described in the Contract Documents.

C. CMAR shall be fully responsible to Owner, Owner's Advisor, and Engineer for all acts and omissions of CMAR's employees; of subconsultants, Suppliers, and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the CMAR Services or the Work, just as CMAR is responsible for CMAR's own acts and omissions.

D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. CMAR will not perform Work on a Saturday, Sunday, or legal holiday. CMAR may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.07 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, CMAR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Owner's Advisor, the CMAR shall furnish satisfactory evidence, including reports of required tests, as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

D. CMAR will be fully responsible for the quality and effectiveness (1) of all services performed or provided by CMAR, including but not limited to CMAR Services and general services in support of construction, and (2) of the deliverables and documentation associated with all such services.

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7.08 "Or Equals"

A. CMAR's Request; Governing Criteria–Whenever an Item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Guaranteed Maximum Price has been based upon CMAR furnishing such Item as specified. The specification or description of such an Item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" Item is permitted, CMAR may request that Owner's Advisor authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Owner's Advisor, in consultation with Engineer, determines that an Item of equipment or material proposed by CMAR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Owner's Advisor will deem it an "or equal" item. For the purposes of this paragraph, a proposed Item of equipment or material will be considered functionally equal to an Item so named if:

a. in the exercise of reasonable judgment Owner's Advisor, in consultation with Engineer, determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. CMAR certifies that if the proposed Item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the Item will conform substantially to the detailed requirements of the Item named in the Contract Documents.

B. CMAR's Expense–CMAR shall provide all data in support of any proposed "or equal" Item at CMAR's expense.

C. Owner's Advisor's Evaluation and Determination–Owner's Advisor, in consultation with Engineer, will be allowed a reasonable time to evaluate each "or-equal" request. Owner's Advisor may require CMAR to furnish additional data about the proposed "or-equal" item. Owner's Advisor, in consultation with Engineer, will be the sole judge of acceptability. No "or-equal" Item will be ordered, furnished, installed, or utilized until Owner's Advisor's review is complete and Owner's Advisor, in consultation with Engineer, has determined that the proposed Item is equal, which will be evidenced by an approved Shop Drawing or other written communication. Owner's Advisor will advise CMAR in writing of any negative determination.

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D. Effect of Owner's Advisor's Determination–Neither approval nor denial of an "or-equal" request will result in any change in Guaranteed Maximum Price. The Owner's Advisor's denial of an "or-equal" request will be final and binding and may not be reversed through an appeal under any provision of the Contract.

E. Treatment as a Substitution Request–If Owner's Advisor determines that an Item of equipment or material proposed by CMAR does not qualify as an "or-equal" item, CMAR may request that Owner's Advisor consider the Item a proposed substitute pursuant to Paragraph 7.09.

7.09 Substitutes

A. CMAR's Request; Governing Criteria–Unless the specification or description of an Item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, CMAR may request that Owner's Advisor authorize the use of other items of equipment or material under the circumstances described below.

B. To the extent possible such requests must be made as part of Preconstruction Services, before the completion of the applicable portion of the design, the Procurement of Subcontractors, construction pricing, and execution of the governing Work Authorization (Preconstruction Substitute Requests). Preconstruction Substitute Requests are further addressed in Paragraph 7.09.E below; substitute requests made after the applicable Work Authorization are addressed in Paragraph 7.09.F.

C. The following provisions apply to all substitute requests:

1. CMAR shall submit adequate information as provided below to allow Owner's Advisor, in consultation with Engineer, to determine if the Item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Owner's Advisor will not accept requests for review of proposed substitute items of equipment or material from anyone other than CMAR.

2. The requirements for review by Owner's Advisor, in consultation with Engineer, will be as set forth in Paragraph 7.09.D, as supplemented by the Specifications, and as Owner's Advisor may decide is appropriate under the circumstances.

3. CMAR shall make written application to Owner's Advisor for review of a proposed substitute Item of equipment or material that CMAR seeks to furnish or use. The application:

a. will certify that the proposed substitute Item will:

1) adequately perform the functions and achieve the results called for by the general design;

2) be similar in substance to the Item specified; and

3) be suited to the same use as the Item specified.

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b. will state:

1) the extent, if any, to which the use of the proposed substitute Item will necessitate a change in Contract Times;

2) whether use of the proposed substitute Item in the Work will require a change in any of the Contract Documents, or in the provisions of any other direct contract with Owner for other work on the Project, to adapt the design to the proposed substitute item; and

3) whether incorporation or use of the proposed substitute Item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute Item from the Item specified; and

2) available engineering, sales, maintenance, repair, and replacement services.

d. will contain, to the extent applicable, an itemized estimate of all costs, anticipated price impacts, or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Guaranteed Maximum Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

D. Owner's Advisor's Evaluation and Determination–Owner's Advisor, in consultation with Engineer, will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Owner's Advisor may require CMAR to furnish additional data about the proposed substitute item. Owner's Advisor, in consultation with Engineer, will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Owner's Advisor's review is complete and Owner's Advisor determines that the proposed Item is an acceptable substitute.

E. Preconstruction Substitute Requests—CMAR will research potential substitutes, furnish data, and prepare a Preconstruction Substitute Request as compensable Basic Preconstruction Services. CMAR will not be responsible for costs incurred by Owner, Owner's Advisor, or Engineer in response to a Preconstruction Substitute Request. If such a request is approved, CMAR will not be required to issue a special guarantee with respect to the substitute's inclusion in the final design.

F. For substitute requests made after a Work Authorization, or in an untimely manner such that the substitution cannot be made part of the final design on which binding construction pricing is based, the following apply:

1. Owner's Advisor's determination will be evidenced by a Field Order, or a proposed Change Order issued by the Owner's Advisor accounting for the substitute itself and all related impacts, including changes in Guaranteed Maximum Price or Contract Times. Owner's Advisor will advise CMAR in writing of any negative determination.

2. Special Guarantee –Owner's Advisor may require CMAR to furnish at CMAR's expense a special performance guarantee or other surety with respect to the substitute.

3. Reimbursement of Review Cost–Owner's Advisor and Engineer will record their costs in evaluating the substitute proposed or submitted by CMAR. Whether or not Owner's Advisor approves a substitute so proposed or submitted by CMAR, CMAR shall

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reimburse Owner for the reasonable charges of Owner's Advisor and Engineer for evaluating each such proposed substitute. CMAR shall also reimburse Owner for the reasonable charges of Owner's Advisor and Engineer for making changes in the Contract Documents, or in the provisions of any other direct contract with Owner resulting from the acceptance of each proposed substitute.

4. CMAR's Expense–CMAR shall provide all data in support of any proposed substitute at CMAR's expense.

5. Effect of Owner's Advisor's Determination–If Owner's Advisor approves the substitute request, CMAR shall execute a Change Order and proceed with the substitute. The Owner's Advisor's denial of a substitution request will be final and binding and may not be reversed through an appeal under any provision of the Contract. CMAR may challenge the scope of reimbursement costs imposed under Paragraph 7.09.F.3, by timely submittal of a Change Proposal.

7.10 Concerning Subcontractors and Suppliers

A. CMAR may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The CMAR's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve CMAR's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. CMAR shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. As a general matter, CMAR shall retain Subcontractors and Suppliers for Work Packages through the procurement process described in the Agreement, including but not limited to the Procurement Strategy Plan and Exhibit A Article 3 of the Agreement. If there is a conflict between such provisions of the Agreement and this paragraph, the provisions of the Agreement will govern.

D. Subsequent to the submittal of CMAR's Proposal or final negotiation of the terms of the Contract, Owner may not require CMAR to retain any Subcontractor or Supplier against which CMAR has reasonable objection to furnish or perform any of the Work.

E. Prior to entry into any binding subcontract or purchase order, CMAR shall submit to Owner the identity of the proposed Subcontractor or Supplier, unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the CMAR selection process, the Subcontractor and Supplier procurement process, or otherwise. Such proposed Subcontractor or Supplier will be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

F. Owner may require the replacement of a Subcontractor or Supplier. Owner also may require CMAR to retain specific replacements; provided, however, that Owner may not require a replacement to which CMAR has a reasonable objection. If CMAR has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, through the Subcontractor and Supplier procurement process or otherwise, and Owner has accepted it, either in writing or by failing to make written objection thereto, then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of

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substantive, reasonable objection after due investigation. CMAR shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

G. If Owner requires the replacement of any Subcontractor or Supplier retained by CMAR to perform any part of the Work, then CMAR shall be entitled to an adjustment in Guaranteed Maximum Price or Contract Times, with respect to the replacement; and CMAR shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

H. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

I. On a monthly basis, CMAR shall submit to Owner's Advisor a complete list of all Subcontractors and Suppliers having a direct contract with CMAR, and of all other Subcontractors and Suppliers known to CMAR at the time of submittal.

J. CMAR shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

K. The divisions and sections of the Specifications and the identifications of any Drawings do not control CMAR in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

L. All Work performed for CMAR by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner, Owner's Advisor, and Engineer.

M. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to CMAR for Work performed for CMAR by the Subcontractor or Supplier.

N. CMAR shall restrict all Subcontractors and Suppliers from communicating with Owner's Advisor or Owner, except through CMAR or in case of an emergency, or as otherwise expressly allowed in this Contract.

O. CMAR will perform or undertake the responsibilities of any Subcontractor or Supplier that defaults, fails to perform, declares bankruptcy, or meets any of the other requirements for termination for cause listed as applying to the CMAR as described in Paragraph 16.02 of the General Conditions.

1. If, for a specific Subcontractor or Supplier, CMAR determines that CMAR would not reasonably be able to self-perform the Subcontractor's work or meet the Supplier's obligations in the event of the Subcontractor or Supplier default, then CMAR may require a subcontract/supplier performance bond, the costs of which will be reimbursed as a Cost of the Work under the Subcontract costs category (Paragraph 6.02, Agreement). Before requiring such a bond, CMAR will consult with Owner's Advisor and consider whether other protective measures are feasible and more cost-effective.

2. If Owner requires that CMAR enter into a subcontract with a Subcontractor to which the CMAR has reasonable objections, CMAR may require subcontract performance and payment bonds, the costs of which will be reimbursed as a Cost of the Work under the Subcontract costs category (Paragraph 6.02, Agreement).

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7.11 Patent Fees and Royalties

A. CMAR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner, Owner's Advisor, or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, then the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless CMAR, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs, arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, CMAR shall indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.12 Permits

A. Unless otherwise provided in the Contract Documents, CMAR shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist CMAR, when necessary, in obtaining such permits and licenses. CMAR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of CMAR's Proposal. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.13 Taxes

A. CMAR shall pay all sales, consumer, use, and other similar taxes required to be paid by CMAR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.14 Laws and Regulations

A. CMAR shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of CMAR Services or the Work. Neither Owner, Owner's

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Advisor, nor Engineer will be responsible for monitoring CMAR's compliance with Laws or Regulations.

B. If CMAR performs any CMAR Services or Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, CMAR shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to such CMAR Services, Work, or other action.

C. It is not CMAR's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve CMAR of its obligations under Paragraph 3.03.

D. Owner or CMAR may give written notice to the other party of any changes after the Effective Date of the Contract in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and CMAR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Guaranteed Maximum Price or Contract Times resulting from such changes, then within 30 days of such written notice CMAR may submit a Change Proposal, or Owner may initiate a Claim.

7.15 Record Documents

A. CMAR shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, Contract Amendments, Work Packages, Work Authorizations, written interpretations and clarifications, and approved Shop Drawings. CMAR shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Owner's Advisor and Engineer for reference. Upon completion of the Work, CMAR shall deliver these record documents to Owner's Advisor.

7.16 Safety and Protection

A. CMAR shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. CMAR shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. CMAR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

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2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.16.C.2 or 7.16.C.3 caused, directly or indirectly, in whole or in part, by CMAR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, will be remedied by CMAR at its expense, except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner, Owner's Advisor, or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CMAR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them.

E. CMAR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. CMAR shall notify Owner's Advisor; Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities, if the identity of such owners is known to CMAR; and other contractors and utility owners performing work at or adjacent to the Site, in writing, when CMAR knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. CMAR shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. CMAR shall inform Owner, Owner's Advisor, and Engineer of the specific requirements of CMAR's safety program with which Owner's, Owner's Advisor's, and Engineer's employees and representatives must comply while at the Site.

I. CMAR's duties and responsibilities for safety and protection will continue until all the Work is completed, Owner's Advisor has issued a written notice to Owner and CMAR in accordance with Paragraph 15.07.C that the Work is acceptable, and CMAR has left the Site, except as otherwise expressly provided in connection with Substantial Completion.

J. CMAR's duties and responsibilities for safety and protection will resume whenever CMAR or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.17 Hazard Communication Programs

A. CMAR shall be responsible for coordinating any exchange of safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

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7.18 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CMAR is obligated to act to prevent damage, injury, or loss. CMAR shall give Owner's Advisor prompt written notice if CMAR believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency or are required as a result of CMAR's response to an emergency. If Owner's Advisor, in consultation with Engineer, determines that a change in the Contract Documents is required because of an emergency or CMAR's response, a Work Change Directive or Change Order will be issued.

7.19 Submittals

A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, CMAR shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to CMAR's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that CMAR has satisfied CMAR's obligations under the Contract Documents with respect to CMAR's review of that Submittal, and that CMAR approves the Submittal.

3. With each Shop Drawing or Sample, CMAR shall give Owner's Advisor specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

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B. Submittal Procedures for Shop Drawings and Samples–CMAR shall label and submit Shop Drawings and Samples to Owner's Advisor for review by Engineer in accordance with the accepted Schedule of Submittals.

1. Shop Drawings

a. CMAR shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show the services, materials, and equipment CMAR proposes to provide, and to enable the information to be reviewed for the limited purposes required by Paragraph 7.19.D.

2. Samples

a. CMAR shall submit the number of Samples required in the Specifications.

b. CMAR shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Owner's Advisor may require to enable Engineer to review the Sample for the limited purposes required by Paragraph 7.19.D.

C. Proceeding without Engineer's Approval—Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, Owner will not pay for related Work, including equipment or materials, until Engineer approves the Shop Drawing or Sample. If CMAR proceeds without such approval, CMAR will bear the full risk of all resulting delays, costs, and losses, including but not limited to removal, corrective, purchase, and installation costs, if such approval is not granted.

D. Engineer's Review of Shop Drawings and Samples

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval, if any, will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval, if any, of a separate Item as such will not indicate approval of the assembly in which the Item functions.

4. Engineer's review and approval, if any, of a Shop Drawing or Sample will not relieve CMAR from responsibility for any variation from the requirements of the Contract Documents unless CMAR has complied with the requirements of Paragraph 7.19.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Owner's Advisor, in consultation with Engineer, will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

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5. Engineer's review and approval, if any, of a Shop Drawing or Sample will not relieve CMAR from responsibility for complying with the requirements of Paragraphs 7.19.A and B.

6. Engineer's review and approval, if any, of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Guaranteed Maximum Price, unless such changes are included in a Change Order.

7. Neither receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such Item becoming a Contract Document.

8. CMAR shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.19.D.4.

E. Resubmittal Procedures for Shop Drawings and Samples

1. CMAR shall make required corrections and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. CMAR shall direct specific attention in writing to revisions other than the corrections called for on previous Submittals.

2. CMAR shall furnish required Shop Drawing and Sample submittals with adequate information and accuracy to obtain required approval of an Item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and CMAR shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due CMAR to secure reimbursement for such charges.

3. If CMAR requests a change of a previously approved Shop Drawing or Sample, CMAR shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due CMAR to secure reimbursement for such charges, unless the need for such change is beyond the control of CMAR.

F. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

a. CMAR shall submit all such Submittals to Owner's Advisor in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

b. A timely review will be made of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

c. Review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, CMAR shall confer with Owner's Advisor regarding the reason for the non-acceptance and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 4.04, 7.19, and 15.02.

G. Owner-delegated Designs–Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.22.

7.20 CMAR's General Warranty and Guarantee

A. CMAR warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Owner's Advisor and Engineer are entitled to rely on CMAR's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.09. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.20 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.09:

1. Owner shall give CMAR written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. CMAR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than CMAR, Subcontractors, Suppliers, or any other individual or entity for whom CMAR is responsible; or

2. normal wear and tear under normal usage.

D. CMAR shall perform or provide CMAR Services in accordance with the Contract Documents and good construction management practice.

E. CMAR's obligation to perform and complete the CMAR Services and the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of CMAR Services or Work that is not in accordance with the Contract Documents, a release of CMAR's obligation to perform the CMAR Services or Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.20:

1. Observations by Owner's Advisor or Engineer;

2. Recommendation by Owner's Advisor or payment by Owner of any progress or final payment;

3. The acceptance of CMAR Services without objection;

4. The issuance of a certificate of Substantial Completion by Owner's Advisor or any payment related thereto by Owner;

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5. Use or occupancy of the Work or any part thereof by Owner;
6. Any review and approval of a Shop Drawing or Sample submittal;
7. The issuance of a notice of acceptability by Owner's Advisor;
8. The end of the correction period established in Paragraph 15.09;
9. Any inspection, test, or approval by others; or
10. Any correction of defective Work by Owner.

F. If the Contract requires CMAR to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to CMAR's performance obligations to Owner for the Work described in the assigned contract.

7.21 Indemnification

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of CMAR under the Contract or otherwise, CMAR shall indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments, including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs, arising from third-party claims or actions relating to or resulting from the performance or furnishing of CMAR Services or the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property, other than the Work itself, including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of CMAR, any Subcontractor, any Supplier, subconsultant, or any individual or entity directly or indirectly employed by any of them to perform any of the CMAR Services or Work, or anyone for whose acts any of them may be liable.

B. In claims against Owner, Owner's Advisor, or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any CMAR employee, or the survivor or personal representative of such employee, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.21.A will not be limited by a limitation on the amount or type of damages, compensation, or benefits payable by or for CMAR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.22 Delegation of Professional Design Services

A. Owner may require CMAR to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that CMAR must furnish to Owner's Advisor with respect to the Owner-delegated design.

B. CMAR shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications,

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certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by CMAR, a Subcontractor, or others for submittal to Owner's Advisor, then such Shop Drawing or other Submittal must bear the written approval of CMAR's design professional when submitted by CMAR to Owner's Advisor.

D. Owner, Owner's Advisor, and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by CMAR under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.22, Engineer's review, approval, and determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by CMAR pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.22;

2. Confirming that CMAR, through its design professionals, has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by CMAR is consistent with the design concept expressed in the Contract Documents.

F. CMAR shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. CMAR is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 Other Work

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give CMAR written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to CMAR.

C. CMAR shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

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D. CMAR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CMAR shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that CMAR may cut or alter others' work with the written consent of Owner's Advisor and the others whose work will be affected.

E. If the proper execution or results of any part of CMAR's Work depends upon work performed by others, CMAR shall inspect such other work and promptly report to Owner's Advisor in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CMAR's Work. CMAR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CMAR's Work except for latent defects and deficiencies in such other work.

F. The provisions of this Article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by CMAR is governed by the provisions of Paragraph 4.05.C.3.

8.02 Coordination

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to CMAR prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 Legal Relationships

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of CMAR or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then CMAR shall be entitled to an equitable adjustment in the Guaranteed Maximum Price or the Contract Times. CMAR must submit any Change Proposal seeking an equitable adjustment in the Guaranteed Maximum Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will consider information, if any regarding such other work that was provided to CMAR in the Contract Documents prior to the submittal of the Proposal or the final negotiation of the terms of the Contract, and any remedies available to CMAR under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable

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adjustment in Guaranteed Maximum Price will be conditioned on CMAR assigning to Owner all CMAR's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. CMAR's entitlement to an adjustment of the Contract Times or Guaranteed Maximum Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. CMAR shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If CMAR fails to take such measures, and as a result, damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due CMAR, and assign to such other contractor or utility owner the Owner's contractual rights against CMAR with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, CMAR shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of CMAR's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due CMAR.

C. If CMAR damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through CMAR's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of CMAR's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against CMAR, Owner, Owner's Advisor, or Engineer, then CMAR shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner, Owner's Advisor, and Engineer, and their officers, directors, members, partners, employees, agents, consultants and subcontractors from and against any such claims, and against all costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 Communications to CMAR

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to CMAR through Owner's Advisor.

9.02 Replacement of Owner's Advisor or Engineer

A. Owner may at its discretion appoint a replacement for Owner's Advisor, provided CMAR makes no reasonable objection to the replacement. The replacement's status under the Contract Documents will be that of the former Owner's Advisor.

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B. Owner may at its discretion appoint an engineer to replace Engineer, provided CMAR makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 Pay CMAR

A. Owner shall make payments to CMAR when they are due as provided in the Agreement.

9.05 Lands and Easements; Reports, Tests, and Drawings

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to CMAR copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 Insurance

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 Change Orders

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 Inspections, Tests, and Approvals

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 Owner's Tasks in Support of CMAR Services

A. Owner shall provide CMAR with all criteria and full information as to Owner's requirements for the Project including drafts of proposed Contract Documents, general schedules and completion requirements, reports, surveys, permits, record documents from related previous projects, and other information as required for CMAR to provide services. Owner shall be responsible for, and CMAR may rely upon, the accuracy and completeness of all such criteria and information, and of any other programs, instructions, data, and other information furnished by Owner to CMAR pursuant to this Agreement. CMAR may use such criteria and information in performing or furnishing CMAR Services.

B. Owner shall provide reasonable assistance to CMAR in securing the release of documents and information held by private entities and by public agencies as needed to provide services required by this Agreement.

C. Owner shall arrange for safe access to and make all provisions for CMAR to enter upon public and private property as required for CMAR to perform services.

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D. Owner shall review documents presented by CMAR, make decisions, and carry out Owner's other responsibilities in a timely manner so as not to delay the CMAR's performance of its services.

E. Owner shall provide the services of attorneys, insurance consultants, financial advisors, and other professional advisors or consultants required for the Project, but not provided by the CMAR.

1. Advise CMAR of the identity and scope of services of any independent consultant, designer, contractor, or other construction manager employed by Owner to perform or furnish services in regard to the Project, including cost estimating, project peer reviews, value engineering, and constructability reviews.

2. Define and set forth the duties, responsibilities, and limitations of authority of these other parties as they relate to the duties, responsibilities, and authority of CMAR.

F. Owner is not responsible for discovering deficiencies in the CMAR's Services. CMAR will correct any deficiencies without additional compensation, except to the extent this corrective action is directly attributable to deficiencies in Owner-furnished information.

9.10 Limitations on Owner's Responsibilities

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, CMAR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CMAR to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for CMAR's failure to perform the Work in accordance with the Contract Documents.

9.11 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.12 Evidence of Financial Arrangements

A. Upon request of CMAR, Owner shall furnish CMAR reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract, including obligations under proposed changes in the Work.

9.13 Safety Programs

A. While at the Site, Owner's employees and representatives will comply with the specific applicable requirements of CMAR's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to CMAR.

ARTICLE 10—STATUS OF OWNER'S ADVISOR AND ENGINEER DURING CONSTRUCTION

10.01 Owner's Advisor

A. Owner's Advisor will be Owner's representative during the construction period.

B. The general duties, responsibilities, and the limitations of authority of Owner's Advisor and Engineer during construction are set forth below.

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10.02 Visits to Site

A. Owner's Advisor will either be based at the Site or make visits to the Site on a regular basis. Owner's Advisor will observe the Work; check the quality, quantity, and progress of the Work; implement Owner's quality assurance program; and administer the Contract as Owner's representative.

B. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of CMAR's executed Work. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer will report to Owner's Advisor regarding information obtained during such Site visits and observations.

C. Owner's Advisor's and Engineer's visits and observations are subject to all the limitations on Owner's Advisor's and Engineer's authority and responsibility set forth in Paragraph 10.05. Particularly, but without limitation, during or as a result of Owner's Advisor's and Engineer's visits or observations of CMAR's Work, neither Owner's Advisor nor Engineer will supervise, direct, control, or have authority over or be responsible for CMAR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CMAR to comply with Laws and Regulations applicable to the performance of the Work.

10.03 Determinations for Unit Price Work

A. Owner's Advisor will determine the actual quantities and classifications of Unit Price Work performed or furnished by CMAR as set forth in Paragraph 13.02.

10.04 Decisions on Requirements of Contract Documents and Acceptability of Work; Exercise of Authority

A. Owner's Advisor will render decisions regarding the requirements of the Contract Documents, and judge the quality and acceptability of the Work, pursuant to the specific procedures set forth herein for interpretations, Change Proposals, Applications for Payment, and acceptance of the Work.

1. Before rendering such decisions or judgments, and before exercising its authority with respect to differing subsurface or physical conditions, Underground Facilities, "or equal" and substitute requests, emergencies, Field Orders, and similar matters, Owner's Advisor will consult with Engineer as to all matters in question involving (a) the design, as set forth in the Drawings, Specifications, or otherwise, (b) the quality or acceptability of the Work under the Contract Documents, or (c) other engineering matters.

2. With respect to such matters, Owner's Advisor's decisions and judgments as rendered will be in accord with Engineer's professional analysis, opinions, recommendations, and conclusions.

B. In rendering such decisions and judgments, exercising such authority, or providing professional analysis, opinions, recommendations, or conclusions underlying such decisions and judgments, neither Owner's Advisor nor Engineer will show partiality to Owner or CMAR, and neither Owner's Advisor nor Engineer will be liable to Owner, CMAR, or others in

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connection with any proceedings, interpretations, analysis, opinions, recommendations, conclusions, decisions, or judgments conducted or rendered in good faith.

C. Owner's Advisor may at any time request that CMAR furnish proposed changes to Guaranteed Maximum Price and Contract Times that would result from specified proposed changes to the Contract Documents.

10.05 Limitations on Owner's Advisor's and Engineer's Authority and Responsibilities

A. Neither Owner's Advisor's nor Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Owner's Advisor or Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Owner's Advisor or Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Owner's Advisor or Engineer to CMAR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Neither Owner's Advisor nor Engineer will supervise, direct, control, or have authority over or be responsible for CMAR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CMAR to comply with Laws and Regulations applicable to the performance of the Work. Neither Owner's Advisor nor Engineer will be responsible for CMAR's failure to perform the Work in accordance with the Contract Documents.

C. Neither Owner's Advisor nor Engineer will be responsible for the acts or omissions of CMAR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Owner's Advisor's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by CMAR under Paragraph 15.07.A, will only be to determine generally that their content complies with the requirements of the Contract Documents, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

10.06 Compliance with Safety Program

A. While at the Site, Owner's Advisor's and Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and CMAR's safety programs of which Owner's Advisor and Engineer have been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

A. The Contract may be amended or supplemented by a Contract Amendment, Work Authorization, Change Order, Work Change Directive, or Field Order.

B. A Work Authorization, as more fully defined in Paragraph 1.01, is used to authorize specified Work, and establish related compensation. Change Orders, Work Change Directives, and Field Orders are used to modify a Work Authorization, including but not limited to

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modifications of the authorized Work and changes to the Guaranteed Maximum Price and Contract Times associated with the Work Authorization.

If a modification under a Work Authorization includes a change in the Guaranteed Maximum Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. A Contract Amendment, as more fully defined in Paragraph 1.01, is used for general contract modification purposes.

D. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design, as set forth in the Drawings, Specifications, or otherwise, or (3) other engineering matters, must be supported by Engineer's recommendation. Owner and CMAR may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 Change Orders

A. With respect to a governing Work Authorization, Owner and CMAR shall execute appropriate Change Orders covering:

1. Changes in Guaranteed Maximum Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work performed in accordance with a Work Change Directive;

2. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design, as set forth in the Drawings, Specifications, or otherwise, or other engineering matters; and

3. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Paragraph 13.02.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or CMAR refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

C. Owner and CMAR will enter into either a Change Order, if related to a specific Work Authorization, or a Contract Amendment with respect to the following:

1. Changes in Guaranteed Maximum Price resulting from an Owner set-off, unless CMAR has duly contested such set-off;

2. Changes that embody the substance of any final and binding results under Article 12, Claims; Paragraph 13.01, final adjustments resulting from allowances; and similar provisions.

11.03 Work Change Directives

A. A Work Change Directive will not change the Guaranteed Maximum Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented

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by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Guaranteed Maximum Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Guaranteed Maximum Price.

B. If Owner has issued a Work Change Directive and:

1. CMAR believes that an adjustment in Contract Times or Guaranteed Maximum Price is necessary, then CMAR shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Guaranteed Maximum Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 Field Orders

A. Owner's Advisor, in consultation with Engineer, may authorize minor changes in the Work if the changes do not involve an adjustment in the Guaranteed Maximum Price or the Contract Times. Such changes will be accomplished by a Field Order and will be binding on Owner and on CMAR, which shall perform the Work involved promptly.

B. If CMAR believes that a Field Order justifies an adjustment in the Guaranteed Maximum Price or Contract Times, then before proceeding with the Work at issue, CMAR shall submit a Change Proposal as provided herein.

11.05 Owner-Authorized Changes in the Work

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design, as set forth in the Drawings, Specifications, or otherwise, or other engineering matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and CMAR have agreed as to the effect, if any, of the changes on Contract Times or Guaranteed Maximum Price; or by a Work Change Directive. Upon receipt of any such document, CMAR shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates CMAR to undertake work that CMAR reasonably concludes cannot be performed in a manner consistent with CMAR's safety obligations under the Contract Documents or Laws and Regulations.

11.06 Unauthorized Changes in the Work

A. CMAR shall not be entitled to an increase in the Guaranteed Maximum Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.18 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

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11.07 Change of Contract Price

A. The Contract Price may be changed by a Work Authorization, Change Order, or Contract Amendment. Any Change Proposal for an adjustment in the Guaranteed Maximum Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Guaranteed Maximum Price with respect to the Work will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved;

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum; or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work determined in accordance with the Cost of the Work provisions in the Agreement, plus the CMAR Fee, applied proportionally, for overhead and profit determined in accordance with the terms in the Agreement.

11.08 Change of Contract Times

A. The Contract Times may be changed by a Work Authorization, Change Order, or Contract Amendment. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 Change Proposals

A. Purpose and Content—CMAR shall submit a Change Proposal to Owner's Advisor to request an adjustment in the Contract Times or Guaranteed Maximum Price; contest a decision by Owner's Advisor concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Guaranteed Maximum Price, or other proposed relief; identify any governing Work Authorization; indicate CMAR's recommendation for the correct means of amending the Contract (Work Authorization, Change Order, or Contract Amendment) if the proposed change is accepted; and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. Determination of Changes in Guaranteed Maximum Price for Work—If a Change Order under a Work Authorization entails a change in Guaranteed Maximum Price, then:

1. The change will include the applicable increase or decrease in Cost of the Work, pursuant to the provisions Article 6 of the Agreement.

2. The CMAR Fee for changes will be those agreed to Article 7 of the Agreement.

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3. If there is a Guaranteed Maximum Price, it will increase or decrease in an amount equal to the increase or decrease in the Cost of the Work and CMAR Fee, as duly determined.

4. The amount of any increases or decreases in the CMAR Fee, or in Guaranteed Maximum Price, will be set forth in the applicable Change Order.

C. Change Proposal Procedures

1. Submittal—CMAR shall submit each Change Proposal to Owner's Advisor within 30 days after the start of the event giving rise thereto, or after such decision.

2. Supporting Data—The CMAR shall submit supporting data, including the proposed change in Guaranteed Maximum Price or Contract Time, if any, to the Owner's Advisor within 15 days after the submittal of the Change Proposal.

   a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

   b. Change Proposals related to a change of Guaranteed Maximum Price based on Cost of the Work must include full and detailed account of eligible costs, such as materials incorporated into the Work, labor and equipment used for the subject Work, and Subcontract costs.

   The supporting data must be accompanied by a written statement that the supporting data is accurate and complete, and that any requested time or price adjustment is the entire adjustment to which CMAR believes it is entitled as a result of said event.

3. Owner's Advisor's Initial Review—Owner's Advisor, in consultation with Engineer, will advise Owner regarding the Change Proposal and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Owner's Advisor concludes that additional supporting data is needed before conducting a full review and deciding regarding the Change Proposal, then Owner's Advisor may request that CMAR submit such additional supporting data by a date specified by Owner's Advisor, prior to Owner's Advisor beginning its full review of the Change Proposal.

4. Owner's Advisor's Full Review and Action on the Change Proposal—Upon receipt of CMAR's supporting data, including any additional data requested by Owner's Advisor, Owner's Advisor, in consultation with Engineer, will conduct a full review of each Change Proposal and, within 30 days after such receipt of the CMAR's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and CMAR. If Owner's Advisor does not act on the Change Proposal within 30 days, then either Owner or CMAR may at any time thereafter submit a letter to the other party indicating that as a result of Owner's Advisor's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. Binding Decision—Owner's Advisor's decision is final and binding upon Owner and CMAR, unless Owner or CMAR appeals the decision by filing a Claim under Article 12.

D. Post-Completion—CMAR shall not submit any Change Proposals after Owner's Advisor issues a written recommendation of final payment pursuant to Paragraph 15.07.B.

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11.10 Notification to Surety

A. CMAR shall notify the performance and payment bond surety of the issuance of each Work Authorization and confirm that the bonds have been adjusted to reflect the changes in Guaranteed Maximum Price and Contract Times.

B. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents, including, but not limited to, Guaranteed Maximum Price or Contract Times, the giving of any such notice will be CMAR's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 Claims

A. Claims Process—The following disputes between Owner and CMAR are subject to the Claims process set forth in this article:

1. Appeals by Owner or CMAR of Owner's Advisor's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and

3. Subject to the waiver provisions of Paragraph 15.08, any dispute arising after Owner's Advisor has issued a written recommendation of final payment pursuant to Paragraph 15.07.B.

B. Submittal of Claim—The party submitting a Claim shall deliver it directly to the other party to the Contract promptly, but in no event later than 30 days after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Owner's Advisor and Engineer, for their information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by CMAR seeking an increase in the Contract Times or Contract Price, CMAR shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of CMAR's knowledge and belief the amount of time or money requested accurately reflects the full amount to which CMAR is entitled.

C. Review and Resolution—The party receiving a Claim shall review it thoroughly and consider its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Owner's Advisor and Engineer.

D. Mediation

1. At any time after initiation of a Claim, Owner and CMAR may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and CMAR agree to mediation, then after 60 days from such agreement, either Owner or CMAR may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the

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mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and CMAR shall each pay one-half of the mediator's fees and costs.

E. Partial Approval—If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. Denial of Claim—If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not act on the Claim within 90 days, then either Owner or CMAR may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. Final and Binding Results—If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—ALLOWANCES; UNIT PRICE WORK

13.01 Allowances

A. The CMAR Contingency Allowance (Agreement, Article 8) and Owner's Contingency Allowance (Agreement, Article 12) are governed by the applicable provisions of the Agreement.

B. CMAR confirms that it has included the CMAR Contingency Allowance in the Guaranteed Maximum Price and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Owner's Advisor.

C. CMAR confirms that it has included the Owner's Contingency Allowance in the Contract Price and that use of Owner's Contingency Allowance is subject to the provisions of Article 12 in the Agreement.

D. Cash Allowances—CMAR agrees that:

1. the cash allowances include the cost to CMAR, less any applicable trade discounts, of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CMAR's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Guaranteed Maximum Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

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E. Prior to final payment, an appropriate Change Order will be issued as recommended by Owner's Advisor to reflect actual amounts due CMAR for Work covered by allowances, and the Guaranteed Maximum Price will be correspondingly adjusted.

13.02 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Guaranteed Maximum Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified Item of Unit Price Work times the estimated quantity of each Item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Proposals and determining an Estimated Guaranteed Maximum Price. Payments to CMAR for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by CMAR to be adequate to cover CMAR's overhead and profit for each separately identified item.

D. Owner's Advisor will determine the actual quantities and classifications of Unit Price Work performed or furnished by CMAR. Owner's Advisor will review with CMAR the Owner's Advisor's preliminary determinations on such matters before rendering a written decision thereon, by recommendation of an Application for Payment or otherwise. Owner's Advisor's written decision thereon will be final and binding except as modified by Owner's Advisor to reflect changed factual conditions or more accurate data upon Owner and CMAR, and the final adjustment of Guaranteed Maximum Price will be set forth in a Change Order, subject to the provisions of the following Paragraph.

E. Adjustments in Unit Price

1. CMAR or Owner shall be entitled to an adjustment in the unit price with respect to an Item of Unit Price Work if:

a. the quantity of the Item of Unit Price Work performed by CMAR differs materially and significantly from the estimated quantity of such Item indicated in the Agreement; and

b. CMAR's unit costs to perform the Item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in CMAR's costs to perform such other Work, such that the resulting overall change in Guaranteed Maximum Price is equitable to Owner and CMAR.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

A. Owner, Owner's Advisor, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. CMAR shall provide them with proper and safe conditions for such access and

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advise them of CMAR's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 Tests, Inspections, and Approvals

A. CMAR shall give Owner's Advisor timely notice of readiness of the Work, or specific parts thereof, for all required inspections and tests and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except those costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work, or part thereof, specifically to be inspected, tested, or approved by an employee or other representative of such public body, CMAR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Owner's Advisor the required certificates of inspection or approval.

D. CMAR shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to CMAR's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Owner's Advisor.

E. If the Contract Documents require the Work, or part thereof, to be accepted by Owner, Owner's Advisor, Engineer, or another designated individual or entity, then CMAR shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work, or the work of others that is to be inspected, tested, or approved is covered by CMAR without written concurrence of Owner's Advisor, CMAR shall, if requested by Owner's Advisor, uncover such Work for observation. Such uncovering will be at CMAR's expense unless CMAR has given Owner's Advisor timely notice of CMAR's intention to cover the same and Owner's Advisor had not acted with reasonable promptness in response to such notice.

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14.03 Defective Work

A. CMAR's Obligation—It is CMAR's obligation to assure that the Work is not defective.

B. Owner's Advisor's Authority—Owner's Advisor has the authority to determine, in consultation with Engineer, whether Work is defective, and to reject defective Work.

C. Notice of Defects—Prompt written notice of all defective Work of which Owner, Owner's Advisor, or Engineer has actual knowledge will be given to CMAR.

D. Correction, or Removal and Replacement—Promptly after receipt of written notice of defective Work, CMAR shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Owner's Advisor has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. Preservation of Warranties—When correcting defective Work, CMAR shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. Costs and Damages—In addition to its correction, removal, and replacement obligations with respect to defective Work, CMAR shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and CMAR are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so. If such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles and will not endanger public safety. CMAR shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work; such costs to be approved by Owner's Advisor as to reasonableness, and for the diminished value of the Work to the extent not otherwise paid by CMAR. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Guaranteed Maximum Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, CMAR shall pay an appropriate amount to Owner.

14.05 Uncovering Work

A. Owner's Advisor has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Owner's Advisor, then CMAR shall, if requested by Owner's Advisor, uncover such Work for Owner's Advisor's or Engineer's observation, and then replace the covering, all at CMAR's expense.

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C. If Engineer or Owner's Advisor considers it necessary or advisable that covered Work be observed by Owner's Advisor or Engineer, or inspected or tested by others, then Owner's Advisor will so advise CMAR, and CMAR shall uncover, expose, or otherwise make available for observation, inspection, or testing as Owner's Advisor may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, CMAR shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction, including but not limited to all costs of repair or replacement of work of others, and pending CMAR's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, CMAR shall be allowed an increase in the Guaranteed Maximum Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then CMAR may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 Owner May Stop the Work

A. If the Work is defective, or CMAR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order CMAR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of CMAR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

A. If CMAR fails within a reasonable time after written notice from Owner's Advisor to correct defective Work, or to remove and replace defective Work as required by Owner's Advisor, then Owner may, after 7 days' written notice to CMAR, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude CMAR from all or part of the Site, take possession of all or part of the Work and suspend CMAR's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid CMAR but which are stored elsewhere. CMAR shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, Owner's Advisor, Engineer, and their consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against CMAR as set-offs against payments due under Article 15. Such claims, costs, losses, and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CMAR's defective Work.

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D. CMAR shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CMAR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Payment for CMAR Services

A. The basis and procedures for payment for CMAR Services are set forth in the Agreement, Article 3. The provisions of this Article 15 pertain to payment for performance and furnishing of the Work, unless noted otherwise.

15.02 Progress Payments

A. Basis for Progress Payments

1. CMAR will, at least 10 days prior to applying for Payment, prepare and submit for approval by Owner's Advisor a schedule allocating portions of the Guaranteed Maximum Price to various portions of the Work, as determined by the applicable Work Authorizations.

2. The Schedule of Values will serve as the basis for progress payments and will be incorporated by Owner's Advisor into an Application for Payment form. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.02. Progress payments for cost-based Work will be based on Cost of the Work completed by CMAR during the pay period.

B. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment, but not more often than once a month, CMAR shall submit to Owner's Advisor for review an Application for Payment filled out and signed by CMAR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by CMAR for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of CMAR stating that all previous progress payments received by CMAR have been applied to discharge CMAR's legitimate obligations associated with prior Applications for Payment.

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4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Owner's Advisor will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to CMAR indicating in writing Owner's Advisor's reasons for refusing to recommend payment. In the latter case, CMAR may make the necessary corrections and resubmit the Application.

2. Owner's Advisor's recommendation of any payment requested in an Application for Payment will constitute a representation by Owner's Advisor to Owner, based on Owner's Advisor's (a) observations of the executed Work, (b) consultations with Engineer, and (c) review of the Application for Payment and the accompanying data and schedules, that to the best of Owner's Advisor's knowledge, information, and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.02, and any other qualifications stated in the recommendation; and

   c. the conditions precedent to CMAR's being entitled to such payment appear to have been fulfilled in so far as it is Owner's Advisor's responsibility to observe the Work.

3. By recommending any such payment Owner's Advisor will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Owner's Advisor in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle CMAR to be paid additionally by Owner or entitle Owner to withhold payment to CMAR.

4. Neither Owner's Advisor's review of CMAR's Work for the purposes of recommending payments nor Owner's Advisor's recommendation of any payment, including final payment, will impose responsibility on Owner's Advisor:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

   c. for CMAR's failure to comply with Laws and Regulations applicable to CMAR's performance of the Work;

   d. to make any examination to ascertain how or for what purposes CMAR has used the money paid by Owner; or

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e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Owner's Advisor may refuse to recommend the whole or any part of any payment if, in Owner's Advisor's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.02.C.2.

6. Owner's Advisor will recommend reductions in payment (set-offs) necessary in Owner's Advisor's opinion to protect Owner from loss because:

a. the Work is defective, requiring correction or replacement;

b. the Guaranteed Maximum Price has been reduced by Change Orders or other Contract modifications;

c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which CMAR is responsible; or

e. Owner's Advisor has actual knowledge of the occurrence of any of the events that would constitute a default by CMAR and therefore justify termination for cause under the Contract Documents.

D. Payment Becomes Due

1. Ten days after Owner's Advisor's presentation of the Application for Payment to Owner with Owner's Advisor's recommendation, the amount recommended, subject to any Owner set-offs, will become due, and when due will be paid by Owner to CMAR.

E. Reductions in Payment by Owner

1. In addition to any reductions in payment (set-offs) recommended by Owner's Advisor, Owner is entitled to impose a set-off against payment based on any of the following:

a. Claims have been made against Owner based on CMAR's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from CMAR's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. CMAR has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. CMAR has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which CMAR is responsible;

e. Owner has incurred extra charges for advisory services or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests, and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

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g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Guaranteed Maximum Price has been reduced by Change Orders or other Contract modifications;

i. An event has occurred that would constitute a default by CMAR and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of CMAR's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where CMAR has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

l. Claims have been made or costs have been incurred arising from CMAR Services; or

m. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Owner's Advisor, Owner will give CMAR immediate written notice, with a copy to Owner's Advisor, stating the reasons for such action and the specific amount of the reduction, and promptly pay CMAR any amount remaining after deduction of the amount so withheld. Owner shall promptly pay CMAR the amount so withheld, or any adjustment thereto agreed to by Owner and CMAR, if CMAR remedies the reasons for such action. The reduction imposed will be binding on CMAR unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.02.D.1 and subject to interest as provided in the Agreement.

F. Where the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work, as measured by reference to the Schedule of Values, or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that CMAR prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price, if any, through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

15.03 CMAR's Warranty of Title

A. CMAR warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.04 Substantial Completion

A. When CMAR considers the entire Work ready for its intended use CMAR shall notify Owner's Advisor in writing that the entire Work is substantially complete and request that Owner's

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Advisor issue a certificate of Substantial Completion. CMAR shall at the same time submit to Owner's Advisor CMAR's proposed punch list of items to be completed or corrected before final payment.

B. Promptly after CMAR's notification, Owner, CMAR, Owner's Advisor, and Engineer will inspect the Work to determine the status of completion. If the Work is not determined to be substantially complete, Owner's Advisor will notify CMAR in writing, giving the reasons for the determination.

C. If the Work is deemed substantially complete, Owner's Advisor will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Owner's Advisor will attach to the certificate the Owner's Advisor's proposed punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Owner's Advisor as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Owner's Advisor, in consultation with Engineer, concludes that the Work is not substantially complete, Owner's Advisor will, within 14 days after submission of the preliminary certificate to Owner, notify CMAR in writing that the Work is not substantially complete, stating the reasons for the conclusion. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Owner's Advisor, in consultation with Engineer, concludes that the Work is substantially complete, then Owner's Advisor will, within said 14 days, execute and deliver to Owner and CMAR a final certificate of Substantial Completion, with a revised punch list of items to be completed or corrected, reflecting such changes from the preliminary certificate as Owner's Advisor believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and CMAR will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and CMAR agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the CMAR shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases CMAR may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude CMAR from the Site after the date of Substantial Completion subject to allowing CMAR reasonable access to remove its property and complete or correct items on the punch list.

15.05 Partial Use or Occupancy; Completion of Authorized Work

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Owner's Advisor, Engineer, and CMAR agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its

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intended purpose without significant interference with CMAR's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that CMAR permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when CMAR agrees that such part of the Work is substantially complete, CMAR, Owner, Owner's Advisor and Engineer will follow the procedures of Paragraph 15.04.A through 15.04.E for that part of the Work.

2. At any time, CMAR may notify Owner and Owner's Advisor in writing that CMAR considers any such part of the Work substantially complete and request Owner's Advisor to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, CMAR, Owner's Advisor and Engineer will inspect that part of the Work to determine its status of completion. If Owner's Advisor, in consultation with Engineer, does not consider that part of the Work to be substantially complete, Owner's Advisor will notify Owner and CMAR in writing, giving the reasons for its determination. If Owner's Advisor, in consultation with the Engineer, considers that part of the Work to be substantially complete, then for that part of the Work the provisions of Paragraph 15.04 will apply with respect to certification of Substantial Completion, the Division of responsibility, and access.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

5. Neither the organization of the Work into Work Packages, nor the authorization of specified parts of the Work in a Work Authorization, establishes (a) that such packages or parts of the Work have been identified in the Contract Documents or otherwise as a part of the Work that Owner may use or occupy upon completion, or (b) that any such Work constitutes a separately functioning and usable part of the Work that upon completion can be used by Owner for its intended purpose without significant interference with CMAR's performance of the remainder of the Work. The determination of whether any part of the Work qualifies for partial use or occupancy under this Paragraph 15.05 will be made on the merits without reference to Work Packages or Work Authorizations.

B. Substantial Completion of Authorized Work

1. When CMAR considers the entire Work authorized under a specific Work Authorization is ready for its intended use, CMAR shall notify Owner's Advisor in writing that such authorized Work is substantially complete and request that Owner's Advisor issue a certificate of Substantial Completion applicable solely to such authorized Work. CMAR shall at the same time submit to Owner's Advisor the CMAR's proposed punch list of items to be completed or corrected before such authorized Work is deemed complete.

2. CMAR, Owner, Owner's Advisor, and Engineer will follow the procedures of Paragraphs 15.04.A, B, C, E, and F for such authorized Work. The terms of Paragraph 15.04.D are not applicable to the determination of Substantial Completion of the Work authorized under a Work Authorization.

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3. Until Substantial Completion of the entire Work under this Contract under Paragraph 15.04, such authorized Work will not be eligible for Owner's use or occupancy, unless otherwise eligible for partial use or occupancy under Paragraph 15.05.A; the determination of a date of Substantial Completion for such authorized Work will not mark the commencement of the contractual correction period and applicable warranties required by the Contract for such authorized Work; and the authorized Work will remain the responsibility of CMAR.

15.06 Final Inspection

A. Upon written notice from CMAR that the entire Work or an agreed portion thereof is complete, Owner's Advisor will promptly make a final inspection with Owner, Engineer, and CMAR and will notify CMAR in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. CMAR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.07 Final Payment

A. Application for Final Payment

1. After Owner's Advisor, in consultation with Engineer, determines that CMAR has (a) satisfactorily completed all corrections identified during the final inspection, (b) has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents, as provided in Paragraph 7.15, and other documents, and (c) completed performance of all services required by the Contract, CMAR may make application for final payment.

2. The final Application for Payment must be accompanied, except as previously delivered by:

a. all documentation called for in the Contract Documents;

b. consent of the surety, if any, to final payment;

c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects or will so pass upon final payment;

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers, satisfactory to Owner, of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.07.A.2 and as approved by Owner, CMAR may furnish receipts or releases in full and an affidavit of CMAR that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CMAR may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at

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its option may issue joint checks payable to CMAR and specified Subcontractors and Suppliers.

B. Owner's Advisor's Review of Final Application and Recommendation of Payment—If, on the basis of Owner's Advisor's observation of the Work during construction and final inspection, consultation with Engineer regarding completion, and review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Owner's Advisor is satisfied that CMAR has completed the Work and fulfilled CMAR's other obligations under the Contract, Owner's Advisor will, within 10 days after receipt of the final Application for Payment, indicate in writing Owner's Advisor's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Owner's Advisor's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Owner's Advisor will return the Application for Payment to CMAR, indicating in writing the reasons for refusing to recommend final payment, in which case CMAR shall make the necessary corrections and complete the Work and all remaining services, and resubmit the Application for Payment.

C. Notice of Acceptability of the Work—In support of its recommendation of payment of the final Application for Payment, Owner's Advisor, with Engineer's express approval, will also give written notice to Owner and CMAR that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.08.

D. Completion of Work—The Work is complete, subject to surviving obligations, when it is ready for final payment as established by the Owner's Advisor's written recommendation of final payment and issuance of Notice of Acceptability of the Work.

E. Final Payment Becomes Due—Upon receipt from Owner's Advisor of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Owner's Advisor for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to CMAR within 30 days of Owner's receipt of the final Application for Payment from Owner's Advisor.

15.08 Waiver of Claims

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by CMAR, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by CMAR will constitute a waiver by CMAR of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim or appealed under the provisions of Article 17.

15.09 Correction Period

A. Scheduled Correction Period Inspection—Within one month before the end of the Contract's correction period, CMAR will participate in an inspection of the Work with the Owner, Owner's Advisor, and Engineer to ascertain whether any portion of the Work or the repair of

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any damage to the Site or adjacent areas is defective and therefore subject to correction by CMAR.

B. If within one year after the date of Substantial Completion, or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents, Owner gives CMAR written notice that any Work has been found to be defective, whether as a result of the scheduled correction period inspection or otherwise, or that CMAR's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect CMAR shall promptly, without cost to Owner and in accordance with Owner's written instructions:

   1. return to the Site with Owner, Owner's Advisor and Engineer to inspect any apparent or discovered defects in the Work, or unrepaired damage to the Site or adjacent areas;

   2. consult with Owner's Advisor and Engineer regarding recommendations as to replacement or correction of such defective Work, or the repair of any damage;

   3. correct the defective repairs to the Site or such adjacent areas;

   4. correct such defective Work;

   5. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and

   6. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

C. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.20.B.

D. If, after receipt of a notice of defect within 60 days and within the correction period, CMAR does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. CMAR shall pay all costs, losses, and damages, including but not limited to all fees and charges of construction managers, engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to such correction or repair or such removal and replacement, including but not limited to all costs of repair or replacement of work of others. CMAR's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

E. In special circumstances where a particular Item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that Item may start to run from an earlier date if so provided in the Specifications.

F. Where defective Work, and damage to other Work resulting therefrom, has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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G. CMAR's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION AND TERMINATION

16.01 Owner May Suspend CMAR Services or Work

A. At any time and without cause, Owner may suspend the CMAR Services or the Work, or any portion thereof, for a period of not more than 90 consecutive days by written notice to CMAR and Owner's Advisor. Such notice will fix the date on which CMAR Services or Work will be resumed. CMAR shall resume the CMAR Services or Work on the date so fixed. CMAR shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. With respect to a suspension of the Work, any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will constitute a default by CMAR and justify termination for cause:

1. CMAR's persistent failure to perform the Work in accordance with the Contract Documents, including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule;

2. Failure of CMAR to perform or otherwise to comply with a material term of the Contract Documents;

3. CMAR's disregard of Laws or Regulations of any public body having jurisdiction; or

4. CMAR's repeated disregard of the authority of Owner, Owner's Advisor or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving CMAR and any surety 10 days' written notice that Owner is considering a declaration that CMAR is in default and termination of the Contract, Owner may proceed to:

1. declare CMAR to be in default, and give CMAR, and any surety, written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude CMAR from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid CMAR but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if CMAR within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, CMAR shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and

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damages, including but not limited to all fees and charges of Owner's Advisors, engineers, architects, attorneys, and other professionals, sustained by Owner, such excess will be paid to CMAR. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, CMAR shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Owner's Advisor as to their reasonableness and, when so approved by Owner's Advisor, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where CMAR's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against CMAR then existing or which may thereafter accrue, or any rights or remedies of Owner against CMAR or any surety under any payment bond or performance bond. Any retention or payment of money due CMAR by Owner will not release CMAR from liability.

G. If and to the extent that CMAR has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate for Convenience

A. Upon 7 days' written notice to CMAR and Owner's Advisor, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, CMAR shall be paid for without duplication of any items:

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. CMAR shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 CMAR May Stop Work or Terminate

A. If, through no act or fault of CMAR, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Owner's Advisor fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay CMAR any sum finally determined to be due, then CMAR may, upon 7 days' written notice to Owner and Owner's Advisor, and provided Owner or Owner's Advisor do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Owner's Advisor has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay CMAR any sum finally determined to be due, CMAR may, 7 days after written notice to Owner and Owner's Advisor, stop the Work

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until payment is made of all such amounts due CMAR, including interest thereon. The provisions of this paragraph are not intended to preclude CMAR from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CMAR's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

A. Disputes Subject to Final Resolution—The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and CMAR concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. Final Resolution of Disputes—For any dispute subject to resolution under this article, Owner or CMAR may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Owner's Advisor, CMAR, or Engineer when required, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 Computation of Times

A. When any period is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

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18.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 Limitation of Damages

A. With respect to Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner, Owner's Advisor, nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to CMAR for any claims, costs, losses, or damages sustained by CMAR on or in connection with any other project or anticipated project.

18.05 No Waiver

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of CMAR.

18.07 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 Assignment of Contract

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent, except to the extent that the effect of this restriction may be limited by law, and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 Successors and Assigns

A. Owner and CMAR each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 Headings

A. Article and Paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION MANAGER AT RISK CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION MANAGER AT RISK CONTRACT

These Supplementary Conditions amend or supplement EJCDC® CMAR-700, Standard General Conditions of the Construction Manager at Risk Contract (2023). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added: for example, “Paragraph SC-4.05” references modifications to General Conditions Paragraph 4.05.

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

No suggested Supplementary Conditions in this Article.

ARTICLE 2—PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

B. Evidence of CMAR’s Insurance—When CMAR delivers the signed counterparts of the Agreement to Owner, CMAR shall also deliver to Owner copies of the policies, including all endorsements, and identification of applicable self-insured retentions and deductibles, of insurance required to be provided by CMAR in this Contract (other than insurance such as builder’s risk that is required at a later date). CMAR may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision. **For contracts involving multiple project sites or facilities, separate certificates of insurance shall be issued for each project site or facility, even if the same CMAR is awarded more than one contract.**

C. Evidence of Owner’s Insurance—After receipt from CMAR of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to CMAR copies of the policies of insurance to be provided by Owner in this Contract, if any. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2.01 Delete Paragraph 2.01.C. in its entirety.

2.02 Copies of Documents

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

A. Owner shall furnish to CMAR 1 printed copy of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract, including one fully signed counterpart of the Agreement, and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

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2.03 Electronic Transmittals

SC-2.03 Delete Paragraphs 2.03.B and 2.03.C in their entirety and insert the following in their place:

B. Electronic Documents Protocol—The parties shall conform to the following provisions in Paragraphs 2.03.B and 2.03.C, together referred to as the Electronic Documents Protocol (EDP or Protocol) for exchange of electronic transmittals.

1. Basic Requirements

a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.

b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.

c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with OA. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

f. Nothing herein negates any obligation (1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; (2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or (3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. System Infrastructure for Electronic Document Exchange

a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.

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1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 2 GB. Attachments larger than that may be exchanged using large file transfer functions or physical media.

2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.

b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

c. Each party will operate and maintain industry-standard, industry-accepted, ISO standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, ransomware, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to CMAR, not reasonably anticipated under the original EDP, CMAR may seek an adjustment in price or time under the appropriate process in the Contract.

e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.

f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.

g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the

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Electronic Document or use an alternative delivery method to complete the communication.

h. The ~~Owner~~ **CMAR** will operate a project information management system (also referred to in this EDP as "Project Website") for use of Owner, OA, Engineer, and CMAR during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the parties as described in this Paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. **Procore is the accepted Project Website.** The following conditions and standards will govern use of the Project Website:

1) Describe the period of time during which the Project Website will be operated and be available for reliance by the parties;

2) Provide any minimum system infrastructure, software licensing and security standards for access to and use of the Project Website;

3) Describe the types and extent of services to be provided at the Project Website, such as large file transfer, email, communication, and document archives, etc.; and

4) Include any other Project Website attributes that may be pertinent to CMAR's use of the facility and pricing of such use.

C. Software Requirements for Electronic Document Exchange; Limitations

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party, and if relevant from third parties, using the software formats required in this section of the EDP.

a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.

2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

SC-2.03 Supplement Paragraph 2.03 of the General Conditions by adding the following paragraph:

D. Requests by CMAR for Electronic Documents in Other Formats

1. Release of any Electronic Document versions of the Project design documents in formats other than those identified in the Electronic Documents Protocol, if any, or elsewhere in the Contract will be at the sole discretion of the Owner.

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2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project design documents and other Project information requested by CMAR (Request) in formats other than those identified in the Electronic Documents Protocol, if any, or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which CMAR agrees:

    a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely and is being provided to CMAR on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, CMAR is advised and acknowledges that the content may not be suitable for CMAR's application or may require substantial modification and independent verification by CMAR. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.

    b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to CMAR under the request are only for convenience of CMAR. Any conclusion or information obtained or derived from such data will be at the CMAR's sole risk and the CMAR waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.

    c. CMAR shall indemnify and hold harmless Owner, OA, and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from CMAR's use, adaptation, or distribution of any Electronic Documents provided under the Request.

    d. CMAR agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information, in source or modified file format, to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to CMAR's subcontractors. CMAR warrants that subsequent use by CMAR's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.

3. In the event that Owner elects to provide or directs the Engineer to provide to CMAR any CMAR-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to CMAR, the Owner shall be reimbursed by CMAR on an hourly basis at $175 per hour for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3—CONTRACT DOCUMENTS—INTENT, REQUIREMENTS, REUSE

3.01 Intent

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~~SC-3.01 Delete Paragraph 3.01.C in its entirety.~~

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.05 Delays in CMAR's Progress

SC-4.05 Amend Paragraph 4.05.C by replacing Paragraph 2 with the following:

2. Abnormal Weather Conditions

a. If abnormal weather conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: (1) that weather conditions were abnormal for the period of time in which the delay occurred, (2) that such weather conditions could not have been reasonably anticipated, and (3) that such weather conditions had an adverse effect on the Work as scheduled.

b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

1) Every workday on which total precipitation, as rain equivalent, occurs between 7:00 p.m. on the preceding day, regardless of whether such preceding day is a workday, through 7:00 p.m. on the workday in question equals or exceeds **0.5 inches** of precipitation, as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.

c. Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by **USGS 02387520** weather monitoring station at **Oostanaula River at Calhoun, GA**.

d. CMAR shall anticipate the number of foreseeable bad weather days per month indicated in the table in Exhibit A: Foreseeable Bad Weather Days.

e. In each month, every bad weather day exceeding the number of foreseeable bad weather days established in the table in Exhibit A—Foreseeable Bad Weather Days will be considered as "abnormal weather conditions." The existence of abnormal weather conditions will not relieve CMAR of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on CMAR's then-current Progress Schedule's critical path for the Project.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 Subsurface and Physical Conditions

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which CMAR may rely:

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Report Title	Date of Report	Technical Data
None		

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site, except Underground Facilities, that contain Technical Data, and specifically identifies the Technical Data upon which CMAR may rely:

Drawings Title	Date of Drawings	Technical Data
None		

5.06 Hazardous Environmental Conditions

SC-5.06 Strike Paragraph 5.06.I. and 5.06.J in their entirety.

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data, if any, upon which CMAR may rely:

Report Title	Date of Report	Technical Data
None		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data, if any, contained in such Drawings upon which CMAR may rely:

Drawings Title	Date of Drawings	Technical Data
None		

ARTICLE 6—BONDS AND INSURANCE

6.02 Insurance – General Provisions

SC-6.02 Delete Paragraph 6.02.E. in its entirety.

6.03 CMAR's Insurance

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. Other Additional Insureds—As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds, in addition to Owner, Owner's Advisor, and Engineer, the following: None

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E. Workers' Compensation and Employer's Liability—CMAR shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation, from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions.

Workers' Compensation and Related Policies	**Policy limits of not less than:**
Workers' Compensation	
State	$100,000
Applicable Federal (e.g., Longshoreman's)	$500,000
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	$100,000
Jones Act (if applicable)	
Bodily injury by accident—each accident	$1,000,000.00
Bodily injury by disease—aggregate	$1,000,000.00
Employer's Liability	
Each accident	$1,000,000.00
Each employee	$1,000,000.00
Policy limit	$1,000,000.00
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	N/A in Georgia

F. Commercial General Liability—Claims Covered—CMAR shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of CMAR, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than CMAR's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. Commercial General Liability—Form and Content. CMAR's commercial liability policy must be written in a 1996, or later, Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. CMAR shall furnish Owner and each other additional insured, as identified in the Supplementary Conditions or elsewhere in the Contract, evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of CMAR's contractual indemnity obligations in Paragraph 7.21.

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3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.
6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through both ISO Endorsements CG 20 10 04 13 and CG 20 37 04 13. For design professional additional insureds, ISO Endorsement CG 20 32 04 13 "Additional Insured: Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. Commercial General Liability—Excluded Content. The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard ISO definition of "insured contract," except to delete the railroad protective liability exclusion if CMAR is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property.
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the CMAR's vicarious liability, strict liability, or statutory liability, other than worker's compensation.
6. Any limitation or exclusion based on the nature of CMAR's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. Commercial General Liability—Minimum Policy Limits

Commercial General Liability	**Policy limits of not less than:**
General Aggregate	$5,000,000
Products—Completed Operations Aggregate	$5,000,000
Personal and Advertising Injury	$5,000,000
Bodily Injury and Property Damage—Each Occurrence	$5,000,000

J. Automobile Liability—CMAR shall purchase and maintain automobile liability insurance 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. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	**Policy limits of not less than:**
Each Accident	$2,000,000

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K. Umbrella or Excess Liability—CMAR shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$15,000,000
General Aggregate	$15,000,000

L. Using Umbrella or Excess Liability Insurance to Meet Commercial General Liability and Other Policy Limit Requirements—CMAR may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability insurance through the primary policies alone, or through combinations of the primary policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of $5,000,000 after accounting for partial attribution of its limits to underlying policies as allowed above.

M. Contractor's Pollution Liability Insurance—CMAR shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from CMAR's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	$5,000,000
General Aggregate	$5,000,000

N. Contractor's Professional Liability Insurance—CMAR shall purchase and maintain professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by CMAR or by others for whom CMAR is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	$3,000,000
Annual Aggregate	$3,000,000

O. Unmanned Aerial Vehicle Liability Insurance—If CMAR uses unmanned aerial vehicles (UAV—commonly referred to as drones) at the Site or in support of any aspect of the Work, CMAR shall purchase and maintain UAV liability insurance in the amounts stated; name Owner, Owner's Advisor, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner

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confirming CMAR's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

Unmanned Aerial Vehicle Liability Insurance	Policy limits of not less than:
Each Occurrence	$1,000,000
Privacy Injury Aggregate	$2,000,000

6.04 Builder's Risk and Other Property Insurance

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. Builder's Risk Requirements—The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following perils: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage, other than that caused by flood.

    a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

    b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and CMAR.

2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property, including but not limited to fees and charges of contractors, owners representatives, engineers, and architects.

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site, but not including property stored at the

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premises of a manufacturer or Supplier. If this coverage is subject to a sublimit, such sublimit will be a minimum of $100,000.

5. extend to cover damage or loss to insured property while in transit. If this coverage is subject to a sublimit, such sublimit will be a minimum of $100,000.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.
9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.07.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10. include as named insureds the Owner, CMAR, Subcontractors of every tier, and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, CMAR, and Subcontractors of every tier, include as insureds the following:
    a. None
11. include, in addition to the Guaranteed Maximum Price amount, the value of the following equipment and materials to be installed by the CMAR but furnished by the Owner or third parties:
    a. None, unless a third party is supply equipment or materials
12. If debris removal in connection with repair or replacement of insured property is subject to a coverage sublimit, such sublimit will be a minimum of $100,000.
13. In addition to the coverage sublimits stated above, the following coverages are also subject to sublimits, as follows:
    a. None
14. The party responsible for purchasing and maintaining the builder's risk insurance is responsible for insurable losses in excess of the coverage limits. To avoid such losses, such responsible party will:
    a. when purchasing the builder's risk policy obtain an "escalation costs" coverage extension of 5% of the replacement cost limit, to increase the policy limit if the project value increases.

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

G. Builder's Risk and Other Property Insurance Deductibles—The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.

1. The builder's risk policy, or if applicable, the installation floater, will be subject to a deductible amount of no more than $5,000 for direct physical loss in any one occurrence.

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SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. Installation Floater

1. CMAR shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work (Covered Property). Coverage under the CMAR's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:

   a. of the CMAR, and Covered Property of others that is in CMAR's care, custody, and control;

   b. while in transit to the Site, including while at temporary storage sites;

   c. while at the Site awaiting and during installation, erection, and testing;

   d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.

2. The installation floater coverage cannot be contingent on an external cause or risk or limited to property for which the CMAR is legally liable.

3. The installation floater coverage will be in an amount adequate to protect CMAR's interest in the Covered Property. The CMAR will be solely responsible for any deductible carried under this coverage.

4. This policy will include a waiver of subrogation applicable to Owner, CMAR, OA, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

ARTICLE 7—CMAR'S RESPONSIBILITIES

7.01 Labor; Working Hours

SC-7.06 Add the following new subparagraphs immediately after Paragraph 7.06.D:

1. Regular working hours will be Monday through Friday, 7:00 am – 7:00 pm

2. Owner's legal holidays are the same as Federal holidays**.**

SC-7.06 Amend the first and second sentences of Paragraph 7.06.D to state "…all Work at the Site must be performed during regular working hours, Monday through Friday. CMAR will not perform Work on a Saturday, Sunday, or any legal holiday without the Owner's permission."

7.11 Patent Fees and Royalties

SC-7.11 Strike Paragraph 7.11.B. in its entirety.

ARTICLE 8—OTHER WORK AT THE SITE

8.02 Coordination

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

C. Owner intends to contract with others for the performance of other work at or adjacent to the Site.

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1. CMAR shall have authority and responsibility for coordination of the various contractors and work forces at the Site;
2. The following specific matters are to be covered by such authority and responsibility: CMAR shall coordinate with the well drilling contractor as required;

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—STATUS OF OWNER'S ADVISOR AND ENGINEER DURING CONSTRUCTION

No suggested Supplementary Conditions in this Article.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—ALLOWANCES; UNIT PRICE WORK

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.04 Acceptance of Defective Work

SC-14.04 Amend the second sentence of Paragraph 14.04.A to state, "If such acceptance occurs prior to final payment, such acceptance shall be subject to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles and will not endanger public safety."

ARTICLE 15—PAYMENTS TO CMAR; SET OFFS; COMPLETION; CORRECTION PERIOD

15.04 Substantial Completion

SC-15.04 Add the following to the end of Paragraph 15.04.B:

"If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by OA and Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by CMAR to Owner. If CMAR does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15."

15.09 Correction Period

ARTICLE 16—SUSPENSION AND TERMINATION

No suggested Supplementary Conditions in this Article.

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ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.02 Arbitration

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 Dispute Resolution Process

A. Owner and CMAR shall resolve all disputes in the following manner:

1. Owner and CMAR agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice, prior to invoking mediation.

2. Owner and CMAR agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof (disputes) to mediation. Owner and CMAR agree to participate in the mediation process in good faith. The process will be conducted on a confidential basis and must be completed within 120 days.

3. If the parties fail to resolve a Dispute through negotiations under Paragraph 17.02.A.1 or mediation under Paragraph 17.02.A.2, then the parties may exercise their rights at law.

ARTICLE 18—MISCELLANEOUS

~~No suggested Supplementary Conditions in this Article.~~

18.07 Controlling Law

SC-18.07 Add the following new paragraph immediately after Paragraph 18.07.A.

B. The venue for the litigation of any dispute arising from this contract shall be the State Courts of Gordon County, Georgia.

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EXHIBIT A—FORESEEABLE BAD WEATHER DAYS

Month	Number of Foreseeable Bad Weather Days in Month Based on Precipitation as Rain Equivalent (inches) (1)	~~Ambient Outdoor Air Temperature (degrees F)~~	
		~~Number of Foreseeable Bad Weather Days in Month Based on Low Temperature at 11:00 a.m.~~	~~Number of Foreseeable Bad Weather Days in Month Based on High Temperature at 3:00 p.m.~~
January	2 rain days/month exceeding 0.5		
February	2 rain days/month exceeding 0.5		
March	2 rain days/month exceeding 0.5		
April	2 rain days/month exceeding 0.5		
May	2 rain days/month exceeding 0.5		
June	2 rain days/month exceeding 0.5		
July	2 rain days/month exceeding 0.5		
August	2 rain days/month exceeding 0.5		
September	2 rain days/month exceeding 0.5		
October	2 rain days/month exceeding 0.5		
November	2 rain days/month exceeding 0.5		
December	2 rain days/month exceeding 0.5		

Notes:

1. Two inches of sleet equals one inch of rain. Five inches of wet, heavy snow equals one inch of rain. Fifteen inches of “dry” powder snow equals one inch of rain.

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SECTION 01 31 19
PROJECT MEETINGS

PART 1. GENERAL

1.1 LOCATION & PURPOSE

A. Project meetings will be held on site as often as deemed necessary by the Owner's Advisor or his representative throughout the construction period. Meetings will normally be held **bi-weekly.** Contractor's representatives shall attend.

B. The purpose of the meetings will be to discuss schedule, progress, coordination, submittals, and job-related problems.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00
SUBMITTALS
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SECTION 01 33 00
SUBMITTALS

PART 1. GENERAL

1.1 SECTION INCLUDES

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E. Shop Drawings
F. Samples
G. Design Data
H. Test Reports
I. Certificates
J. Manufacturer's Instructions
K. Manufacturer's Field Reports
L. Erection Drawings

1.2 ELECTRONIC SUBMITTAL PROCEDURES

A. Summary:

1. Shop drawing and product data submittals shall be transmitted to Engineer in electronic (PDF) format using a website service designed specifically for transmitting submittals between all construction team members.
2. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
3. The electronic submittal process is not intended for color samples, color charts, or physical material samples.
4. For each submittal, allow 15 (fifteen) days, excluding weekends and holidays, for Engineer to complete review.

B. Procedures:

1. Create submittal log by inserting required submittals listed in individual specification sections.
2. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.

3. Contractor shall transmit each submittal to Engineer using the Submittal website.

4. Engineer review comments will be made available on the Submittal website for downloading. Contractor will receive email notice of completed review.

5. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.

6. The submitted website provider shall provide electronic files of all submittals on flash drive in PDF file format as project completion.

C. Costs:

1. General Contractor shall include the full cost of the submittal website subscription in their bid. This cost is included in the Contract Amount.

2. The intent is for the electronic submittal service cost to be in lieu of postage or shipping costs typically paid for paper submittals. Service cost is a net cost savings to Contractor because submittals sent electronically do not need to be shipped physically.

3. After award of contract, training shall be provided by the submittal website regarding use of website and PDF submittals for Contractor, Engineer, and Owner.

4. Internet Service and Equipment Requirements:

a. Email address and Internet access at Contractor's main office.

b. Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu www.bluebeam.com), or other similar PDF review software for applying electronic stamps and comments.

1.3 CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial schedule in triplicate within 15 days after date of Established in Notice to Proceed.

B. After reviewed by the Engineer, revise and resubmit as required.

C. Submit revised schedules with each Application for Payment, identifying changes since previous version.

D. Submit a computer generated or horizontal bar chart with separate line for each major portion of work or operation section of work, identifying first workday of each week.

E. Show complete sequence of construction by activity, identifying work of

separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.

F. Indicate estimated percentage of completion for each item of work at each submission.

G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.

1.4 PRODUCT DATA

A. Product Data for Review:

1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

2. After review, provide copies and distribute in accordance with Submittal Procedures article above.

B. Submit data in electronic PDF format per this specification.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. After review, distribute in accordance with the Submittal Procedures article above.

1.5 SHOP DRAWINGS

A. Contractor shall submit shop drawings in accordance with the Electronic Submittal Procedures article above.

B. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents. Review of shop drawings by Engineer shall not relieve Contractor of his responsibility for the accuracy of the shop drawings for the furnishing of all materials and equipment required by the contract even though such items may not be indicated on the shop drawings reviewed by Engineer.

C. Shop drawings shall include applicable technical information, drawings,

diagrams, performance curves, schedules, templates, calculations, instructions, measurements and similar information as applicable to the specific item for which the shop drawing is prepared.

D. Do not use Engineer's Drawings for shop or erection purposes.

E. Each shop drawing copy shall bear a Contractor's stamp showing they have been checked. Shop drawings submitted to the Engineer without the Contractor's stamp will be returned without review.

F. No review will be given to partial submittals of shop drawings for items which interconnect and/or are interdependent. It is the Contractor's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and then make one submittal to the Engineer.

G. Schedule of Submittals – Within 30 days of Contract award and prior to any shop drawing submittal, the Contractor shall submit a schedule showing the estimated submittal date and the desired approval date for each shop drawing anticipated. Time lost due to unacceptable submittals shall be the Contractor's responsibility.

1.6 AS-BUILTS

A. Contractor shall send an updated copy of the as-builts with each pay application that shows progress and changes to date.

1.7 SAMPLES

A. Samples for Review -

1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

B. Samples for Information –

1. Submitted for the Engineer's knowledge as contract administrator or for the Owner.

C. Include identification on each sample, with full Product information.

D. Submit the number of samples specified in individual specification sections; one of which will be retained by Engineer.

E. Review samples which may be used in the Work are indicated in individual

specification sections.

F. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.8 DESIGN DATA

A. Submit for the Engineer's knowledge as contract administrator or for the Owner.

B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.9 TEST REPORTS

A. Submit for the Engineer's knowledge as contract administrator or for the owner follow the Electronic Submittal Procedure.

B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.10 CERTIFICATES

A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Engineer, in quantities specified for product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

1.11 MANUFACTURER'S INSTRUCTION

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up. adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or

installation.

C. Refer to Section 01 45 00 – Quality Control, Manufacturers' Field Services article.

1.12 MANUFACTURER'S FIELD REPORTS

A. Submit reports for the Engineer's benefit as contract administrator or for the Owner.

B. Submit report within 30 days of observation to Engineer for information. Follow the Electronic Submittal Procedure.

C. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.13 ERECTION DRAWINGS

A. Submit drawings for the Engineer's benefit as contract administrator or for the Owner.

B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

C. Data indicating inappropriate or unacceptable work may be subject to action by the Engineer or Owner.

1.14 REVIEWED SHOP DRAWINGS

A. Engineer Review –

1. Acceptable submittals will be marked "No Exceptions Taken.".

2. Submittals requiring minor corrections before the product is acceptable will be marked "Furnish as Corrected." The Contractor may order, fabricate and ship the items included in the submittals provided the indicated corrections are made.

3. Submittals marked "Revise and Submit" must be revised to reflect required changes and the initial review procedure repeated.

4. The "Rejected" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable products.

B. No work or products shall be installed without a drawing or submittal

bearing the "Approved" or "Furnish as Corrected" notation. The Contractor shall maintain at the job site a complete set of shop drawings bearing the Engineer's stamp.

C. Substitutions – In the event the Contractor obtains the Engineer's approval for the use of products other than those which are listed first in the Contract Documents, the Contractor shall, at the Contractor's own expense and using methods approved by the Engineer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.

D. Use of the "No Exception Taken" or "Furnish as Corrected" notation on shop drawings or other submittals is general and shall not relieve the Contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The Engineer's review shall not relieve the Contractor of the responsibility of errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents.

PART 2. PRODUCTS

2.1 SUBMITTAL WEBSITE SERVICE

1. The submittal website service for electronic construction submittals shall be a cloud based service to be utilized throughout the duration of the project. Acceptable suppliers for the submittal website service are Procore or Engineer approved equal.

2. Website requirements:

   a. Independently hosted, web-based system for automated tracking, storage, and distribution of contract submittals, Requests For Information, and other contract related documents. FTP sites, e-mail exchanges, and server-based systems hosted from inside a contractor's office will not be considered and are not acceptable.

   b. Utilize 256-bit SSL encryption and hosted at SAS70 Type II compliant data centers.

   c. Minimum five years documented experience of use on comparable commercial construction projects. "Comparable commercial construction projects" shall be defined as documented use on a minimum of one hundred governmental, public-entity, or private sector projects each of $1 million construction value or greater.

   d. Minimum five years documented 99.5% website uptime.

   e. Unlimited individual user accounts and system access for all project subcontractors, general contractor, owner staff, architect, design

consultants, and sub-consultants, with no additional fees for those parties to access the system.

f. Separate locations for owner, architect, design consultant, and sub-consultant review comments with contractors restricted from viewing comments until final review or release by owner or primary design consultant.

g. Full version histories and dates of exchanges automatically tracked and available for viewing, searching, and reporting in a linear log format compatible with AIA G712.

h. Functionality to group submittals as required packages and apply forms and review comments to entire package simultaneously.

i. Functionality for integrated online PDF viewing and review, including graphical markups and stamps, for owner, architect, design consultants, sub-consultants, and general contractor without need for additional software purchase.

j. Automatic, configurable email notifications for each project team member for new and reviewed submittals and other items.

k. Automatic, configurable email reminders of past due items.

l. Customized, automated PDF form generation for submittals, RFIs, and other documents matching standard templates used by owner, design consultants, sub-consultants, and general contractor. Documentation and demonstration of automatic form generation using each entity's templates must be submitted as part of any substitution request.

m. Prior to project start, system vendor shall create submittal log with all required items from project manual or submittal register. Owner or primary design consultant shall have full control over required items list and access to edit, add, or remove items during project.

n. System vendor shall provide minimum one-hour live web meeting training sessions to contractors, design consultants, sub-consultants, and owners staff prior to project start.

o. System vendor shall make available self-directed web training sessions for all users for the entire project duration.

p. System vendor shall provide access for owner, design consultants, sub-consultants, general contractor, and subcontractors to live technical support by phone and email minimum of 7 AM to 6 PM CST on standard business days at no additional cost.

q. Allowance for scanning and printing services provided by local third-party reprographic vendor to assist with obtaining documents electronically and online print ordering.

r. At completion of project closeout, system vendor shall provide archival discs that include all documents and tracking logs, or the ability to download this information from the live website in a single complete archive package.

PART 3. EXECUTION (Not Used)

END OF SECTION

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SECTION 01 35 13
SPECIAL PROJECT PROVISION

PART 1. GENERAL

1.1 PFAS NOTIFICATION

A. The raw water and soils at the drinking water treatment plants may contain PFAS.

1.2 ARRANGEMENT OF EQUIPMENT

A. Unless specifically noted otherwise the arrangement of equipment shown on the Drawings is based upon information available at the time of design and is not intended to show exact dimensions peculiar to a specific manufacturer. The Drawings are, in part, diagrammatic, and some features of the illustrated equipment installation may require revision to meet actual equipment installation requirements. Structural supports, foundations, connected piping and valves and electrical instrumentation connections indicated may have to be altered to accommodate the equipment provided. No additional payment will be made for such revisions and alterations. Substantiating calculations and drawings shall be submitted prior to beginning the work. Also see "SUBMITTALS".

1.3 QUALIFICATIONS/QUALITY CONTROL

A. All equipment furnished shall consist of standard equipment of proven ability, modified as required for the requirements of these Contract Documents.

B. All suppliers and installers shall be fully experienced, reputable, qualified and regularly engaged in the manufacturing of the equipment to be furnished.

C. All equipment shall be designed, constructed and installed in accordance with best practices and methods and shall operate satisfactorily as determined by the Engineer when installed as shown on the Drawings and/or specified.

D. The Contractor shall have the sole responsibility for proper functioning of the equipment.

1.4 SUBMITTALS

A. Reference is made to Section 01300 and the submittal data required herein under various paragraphs, especially for motors and electrical equipment.

1.5 USE OF EXISTING PREMISES

A. The Contractors work force shall not use any of the Owner's existing facilities including rest rooms, break rooms, vending machines and/or other facilities. The

Contractor shall provide all such facilities for the use of his personnel.

1.6 ACCESS TO SITE

A. The Contractor shall be provided vehicle access to the site. The Contractor shall post signs for traffic control and provide his own locks or other security measures to protect his equipment and materials.

B. Protect all existing roads from damage by construction equipment and activity. All existing roads shall remain open and usable by Owner's personnel at all times. Any damage to existing roads shall be repaired immediately to a condition equal to or better than the original condition.

1.7 SERVICES OF MANUFACTURERS' REPRESENTATIVE AND OPERATING MANUALS

A. Bid prices for equipment shall include the cost of a competent representative of the manufacturers of all equipment to supervise the installation, adjustment, and testing of the equipment and to instruct the Owner's operating personnel on operation and maintenance. This supervision may be divided into two or more time periods as required by the installation program or as directed by the Engineer.

B. See the detailed Specifications for additional requirements for furnishing the services of manufacturer's representatives.

C. A certificate from the manufacturer stating that the installation of the equipment is satisfactory, that the unit has been satisfactorily tested, is ready for operation, and that the operating personnel have been suitably instructed in the operation, lubrication, and care of the unit shall be submitted before final acceptance.

D. For equipment furnished under other Divisions, the Contractor, unless otherwise specified, shall furnish the services of accredited representatives of the manufacturer only when some evident malfunction or over-heating makes such services necessary in the opinion of the Engineer.

E. In addition, complete sets of operation and maintenance instructions covering all equipment shall be delivered directly to the Engineer. The quantity of manuals shall be as noted in Section 01 78 23. These instructions shall consist of clean, legible, reproducible manufacturer's manuals prepared by the manufacturer exclusively for the equipment furnished under this contract and shall contain no irrelevant material. Instructions shall be written in a clear, concise, easily understandable manner to assist in training personnel and shall include operation procedures, maintenance schedules, lubrication schedules and parts list. These instructions shall include schematic and detail drawings and diagrams as necessary to clearly illustrate the written instructions. In addition to the above, a listing of the complete nameplate data for each piece of equipment shall be attached to these instructions.

F. These manufacturers' instructions shall be delivered to the Engineer in accordance with the requirements of Section 01 78 23.

1.8 INSTALLATION OF EQUIPMENT

A. Special care shall be taken to ensure proper alignment of all equipment with particular reference to mechanical equipment such as pumps and electric drives. The units shall be carefully aligned on their foundations by qualified millwrights after their sole plates have been shimmed to true alignment at the anchor bolts. The anchor bolts shall be set in place and the nuts tightened against the shims. After the foundation alignments have been approved by the manufacturer, the bedplates or wing feet of the equipment shall be securely bolted in place. The alignment of equipment shall be further checked after securing to the foundations, and after confirmation of all alignments, the sole plates shall be finally grouted in place. The Contractor shall be responsible for the exact alignment of equipment with associated piping, and under no circumstances, will "pipe springing" be allowed.

B. All wedges, shims, filling pieces, keys, packing, red or white lead grout, or other materials necessary to properly align, level, and secure apparatus in place shall be furnished by the Contractor. All parts intended to be plumb or level must be proven exactly so. Any grinding necessary to bring parts to proper bearing after erection shall be done at the expense of the Contractor.

1.9 SLEEVES AND OPENINGS

A. The General Contractor shall provide all openings, channels, chases, etc., and install anchor bolts and other items to be embedded in concrete, as required to complete the Work under this Contract, together with those required by subcontractors, and shall do all cutting and patching, excepting cutting and patching of materials of a specified trade and as stated otherwise in the following paragraph except for Electrical Work. The Electrical Contractor shall provide all openings necessary for his work.

B. The General Contractor shall coordinate with the Electrical Contractor and all subcontractors to provide all sleeves, inserts, hangers, anchor bolts, etc. of the proper size and material for the execution of the Work. The General Contractor shall be responsible for any corrective cutting and refinishing required to make the necessary openings, chases, etc. In no case shall beams, lintels or other structural members be cut without the written approval of the Engineer.

1.10 RELOCATIONS

A. The Contractor shall be responsible for the relocation of structures, including but not limited to signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the Work as set out on the Drawings. The cost of all such relocations shall be included in the bid for the project and shall not result in any

additional cost to the Owner.

1.11 OBSTRUCTIONS

A. The attention of the Contractor is drawn to the fact that during excavation at the Project site, the possibility exists of the Contractor encountering various water, chemical, electrical, or other lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.

B. It is the responsibility of the Contractor to ensure that all utility or other poles, the stability of which may be endangered by the close proximity of excavation, are temporarily stayed in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice of any such excavation by the Contractor.

1.12 DISINFECTION

A. The Contractor shall clean, disinfect and bacteriologically test and clear in accordance with AWWA C651, C652, and C653 as applicable, all potable water supply facilities affected by this project. The above statement shall apply to both new facilities installed, and existing facilities which are to be modified.

B. The Contractor shall employ a disinfection method approved by the Engineer and Owner, and shall fully satisfy the Owner that adequate disinfection has been achieved prior to placing a facility on-line. Contractor shall furnish test results of disinfection including date and method.

C. The cost of all disinfection work shall be included in the prices quoted in the Proposal. The Owner shall pay for the costs associated with the first bacteriological clearance tests of each pipeline or component tested. Should the test show contamination, the system shall be re-chlorinated and additional samples taken and tested until no contamination is indicated. The Contractor shall pay for all costs associated with re-chlorinations and re-testing of water samples, including, but not limited to, the cost of additional bacteriological testing.

1.13 CONNECTIONS TO EXISTING SYSTEMS

A. The Contractor shall perform all work necessary to locate, excavate and prepare for connections to the terminus of the existing mains all as shown on the Drawings or where directed by the Owner. The cost for this work and for the actual connections to the existing system shall be included in the bid for the project and shall not result in any additional cost to the Owner. Said connections shall be made only after approval by the Engineer.

1.14 SALVAGE

A. Any existing equipment or material, including but not limited to, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project shall be disposed of by the Contractor at a suitable location unless specifically noted on the Drawings to be delivered to the Owner.

1.15 MAINTENANCE OF EXISTING WASTEWATER FACILITIES OPERATION

A. The Contractor shall take notice that existing wastewater facilities are operated in the construction area. It is the responsibility of the Contractor to contact the office of each utility operator and ascertain the extent of any specific service area.

B. The Contractor shall fully cooperate at all times with the Owner in order to maintain the operation of the existing facilities with the least amount of interference and interruption possible. Continuous service, public health and safety considerations shall exceed all others and the Contractor's schedule, plans and work shall at all times be subject to alteration and revision if necessary, for above considerations.

C. The Engineer and Owner reserve the right to require the Contractor to work 24 hours per day in all cases where, in their opinion, interference with operation of the system may result.

D. In no case will the Contractor be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the interfering portion of the work are on the site.

1.16 UTILITY CROSSINGS

A. It is intended that wherever existing utilities such as water, chemical, electrical or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the Drawings. However, when in the opinion of the Engineer this procedure is not feasible, he may direct the use of fittings for a utility crossing as detailed on the Drawings.

1.17 WARRANTIES

A. All equipment supplied under these Specifications shall be warranted by the Contractor and the equipment manufacturers for a period of one (1) year unless additional warranties are specified in other sections. Warranty period shall commence on the date of Substantial Completion.

B. The equipment shall be warranted to be free from defects in workmanship, design and materials. If any part of the equipment should fail during the warranty period it shall be replaced in the machine(s) and the unit(s) restored to service at no

expense to the Owner.

C. The manufacturer's warranty period shall run concurrently with the Contractor's warranty or guarantee period. No exception to this provision shall be allotted. The Contractor shall be responsible for obtaining equipment warranties in accordance with Section 01 78 33 from each of the respective suppliers or manufacturers for all the equipment.

D. In the event that the manufacturer is unwilling to provide a one year warranty commencing at the time of Owner acceptance, the Contractor shall obtain from the manufacturer an eighteen (18) month warranty starting at the time of equipment delivery to the job site. This warranty shall not relieve the Contractor of the one-year warranty starting at the time of Owner acceptance of the equipment.

1.18 SITE RESTORATION

A. The Contractor shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipelines, conduits, drains, catch basins, flagstones, rocked, graveled or stabilized areas or driveways and including all obstructions not specifically named herein, shall be repaired.

PART 2. PRODUCTS

2.1 MATERIAL AND EQUIPMENT – GENERAL

A. These Specifications call attention to certain features, but do not purport to cover all details of construction of the units. However, the Contractor shall furnish and install the mechanisms and/or systems complete in all details and ready for operation when external connections are made. Where components Standard with the manufacturer are not specifically mentioned, such components shall be provided and incorporated in the work as if they had been completely described or detailed, at no additional expense to the Owner.

B. All steel members used in the fabrication of the equipment shall conform to the requirements of "Specifications for Structural Steel", ASTM A36.

C. Design and fabrication of structural steel members shall be in accordance with the latest edition of AISC "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings". Zinc Coating (hot dip) for Steel Shapes, Bars, Plates and Strip shall be in accordance with the latest edition of ASTM A123. Zinc Coating (hot dip) for Iron and Steel Hardware shall be in accordance with the latest edition of ASTM A153. All welding shall conform to the latest standards of the American Welding Society.

D. All parts shall be amply proportioned for all stresses which may occur during

fabrication, erection, and operation. All parts of the same size and type shall be identical.

E. All piping, valves, materials and equipment including any appurtenances that comes into direct contact with raw water, that is to be treated to become potable water or potable water shall be NSF 61 certified.

2.2 NAMEPLATES

A. Equipment nameplates shall be engraved or stamped on stainless steel and fastened to the Equipment (except pipework) in an accessible location with oval head stainless steel screws or drive pins.

B. Nameplates shall as a minimum contain manufacturers name and address; year of manufacture; serial number; speed, horsepower and voltage (if applicable) and other applicable information as acceptable to the Engineer.

2.3 LUBRICANTS AND FUEL

A. The Contractor shall provide all mechanical equipment with a sufficient supply of correct lubricants and fuel for starting, testing, and initial 10-day operation period. All lubricants and fuel shall be of types recommended by the applicable equipment manufacturer. The Contractor, subject to the approval of the equipment manufacturer's, shall limit lubricants to the least number or types required for normal maintenance of all equipment.

2.4 LIFTING LUGS

A. Lifting lugs or lifting eye bolts shall be provided for all equipment or any component weighing 50 pounds or more, for setting of units or future removal. They shall be galvanized or zinc plated steel.

2.5 PROTECTION AGAINST ELECTROLYSIS

A. Where dissimilar metals are used in conjunction with each other, suitable insulation as acceptable to the Engineer shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other acceptable materials.

PART 3. EXECUTION

3.1 FACTORY INSPECTION, TESTING AND CORRECTION OF DEFICIENCIES

A. The Engineer shall have the right to inspect and test all materials or equipment prior to shipment from the point of manufacture.

B. Where a factory test is required, no materials or equipment shall be shipped until the factory test (and shop drawings) are acceptable to the Engineer).

C. Additional information on factory inspection and testing of pipes is included under the respective pipe Sections.

D. Unless otherwise noted the manufacturer will furnish all necessary labor, equipment, tools, and incidentals required for proper factory testing of equipment and correction of deficiencies, at no change in Contract Price.

3.2 SHOP AND FIELD PAINTING/COATING

A. Unless otherwise specified herein or elsewhere in these Specifications (See Division 9 and individual Sections): All motors, drives, pumps (except submersible pumps), and other manufactured items installed above ground or in buildings shall be shop primed and provided with manufacturer's standard synthetic or baked-on enamel finish paint. Where surfaces have been shop painted but have been damaged during delivery to site, storage, and/or assembly, or where the shop coats have deteriorated, these surfaces shall be properly cleaned and retouched or repainted with matching paint. All submersible pumps and associated piping shall be shop painted in accordance with the painting specifications for submerged ferrous metals.

B. Galvanized steel or aluminum equipment and appurtenances shall not be shop primed or shop painted.

3.3 SHIPPING, HANDLING, DELIVERY AND STORAGE

A. All parts and equipment shall be properly crated, packaged, sealed and/or otherwise protected so that no damage or deterioration will occur during shipping, delivery, handling, or while stored for a prolonged period on the Site.

B. Heavy items shall be packed for forklift truck handling and/or with hook or sling for crane handling. All items subject to water damage shall be packed or provided with waterproof covers suitable for outdoor storage. All packing shall be strong, durable, and rugged and shall be designed to prevent uneven forces on the items. Fragile items shall be suitably protected with special padding and shall be so marked.

C. Each package shall be delivered with a complete packing list attached. Packing lists will make reference to the respective package number and shall completely itemize, by description and quantity, the contents of each package.

D. The finished surfaces of all exposed openings shall be protected by wooden blank flanges, strongly built and securely bolted thereto, or other protection acceptable to the Engineer. Finished iron or steel surfaces not otherwise coated shall be properly

protected to prevent rust and corrosion.

E. Factory assembled parts and components shall not be dismantled for shipment unless permission is received in writing from the Engineer.

F. The manufacturer's instructions and recommendations shall be followed for unloading, transporting, or otherwise handling units. Suitable slings or similar lifting devices shall be utilized to prevent strains.

G. Items shall not be shipped until factory testing (where required) and shop drawings information is acceptable to the Engineer (see Section 01 33 00). The intent of this requirement is to reduce on-site storage time prior to installation and operation. Under no circumstances shall units be delivered to the Site more than one month prior to installation without written authorization from the Engineer.

H. Site Storage

1. All units having moving parts such as gears, electric motors, and instruments shall be stored in a building acceptable to the Engineer until such time as to be installed.

2. All units shall be stored fully lubricated with oil, or grease, unless otherwise instructed by the Manufacturer.

3. Manufacturer's storage instructions shall be carefully studied by the Contractor and reviewed with the Engineer.

4. Attention is directed to the Contractor's need to manually rotate units' moving parts periodically per the manufacturers' recommendations prior to the Owner's final acceptance (including in storage).

5. Lubricants shall be changed upon completion of installation, and as frequently as required, or recommended by the Manufacturer, during the period between installation and acceptance. New lubricants shall be put in at the time of acceptance.

6. Prior to acceptance of any item, if so required by the Engineer, the Contractor, at his own expense, shall have the Manufacturer inspect and certify that the unit's condition has not been detrimentally affected by any long storage period. Such certifications by the Manufacturer shall be deemed to mean that the unit is judged by the Manufacturer to be in a condition equal to that of unit that has been shipped, installed, tested, and accepted in a minimum time period. As such, the Manufacturer will guarantee the unit equally in both instances. If such a certification is not given when requested, the unit shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

3.4 INSTALLATION OF EQUIPMENT

A. Unless otherwise noted the Contractor will furnish and pay for and coordinate all necessary labor, equipment, tools, water, and power required to install, service, and make adjustments necessary for the proper installation and shall perform the installation.

B. Ensure proper installation of all items in accordance with manufacturer's recommendations and instructions in the locations(s) shown to produce a complete workable system; particularly to ensure the correct alignment of drivers and pumps, etc. All units shall be aligned on their foundations by qualified millwrights after their sole plates have been shimmed level at the anchor bolts. Set all anchor bolts in place and tighten all nuts against the shims. After the foundation alignments have been considered acceptable to the Engineer, securely bolt in place the bedplates or wing feet of the equipment. Make further and final alignment checks and any adjustments before grouting in the sole plates. Under no circumstances will "pipe springing" be allowed.

C. Wedges, Shims, filling pieces, keys, packing, grout, or other materials necessary to align, level, and secure equipment in place shall be furnished and install by the Contractor. All parts intended to be plumb, level or perpendicular must be exactly so. Any grinding required to bring parts to proper bearing shall be done at the expense of the Contractor.

D. Normal installation procedures for all items (including Owner furnished items if any) such as: making connections, adjusting packing, aligning, connection of bases, coupling, wiring, piping, shimming, assembly of normally shipped loose components, use of drift pins, deburring, identification of wires at terminals, following manufacturer's instructions and similar items of standard installation practice shall be performed by the Contractor whether specifically mentioned herein or not. References are made to: AISC "Code of Standard Practices" Section 5-180; "Standards of the Hydraulic Institute"; American Welding Society Standards, applicable government codes.

E. Installation shall include furnishing the grease and lubrication for testing. See Paragraph 2.5.

3.5 FIELD TESTING AND CORRECTION OF DEFICIENCIES

A. Field testing shall not be conducted until the installation is certified (in writing) as acceptable by the Manufacturer. Field testing may not be required for all items. Testing shall be conducted in accordance with the individual Specifications and Section 01 45 23.

B. The Contractor shall furnish to the Owner and Contractor, at least 90 days prior to scheduled field testing, a list of those special items needed to test the equipment and for use during normal operation and maintenance.

C. Unless otherwise noted the Contractor will furnish and pay for all necessary labor, equipment, tools, incidentals, required for proper testing and initial operation. Unless otherwise noted the Contractor will operate the equipment and conduct the field test(s).

D. Field testing shall be as set out in the individual Specifications and herein for vibration and noise and shall also include the lubrication system and its components. Field testing shall be witnessed by, and acceptable to, the Manufacturer's representative and the Engineer, unless otherwise noted.

E. All defects recorded during the above field tests and all defects and failures occurring within the Correction Period shall be corrected by and at the expense of the Contractor, in accordance with Article 13 of the General Conditions.

F. In the event the items or system performance does not meet the requirements of the Specifications, the necessary corrective measures shall be made at the expense of and by the Contractor, unless otherwise specifically noted, and the item or system retested. If the items or system remains unable to meet the design requirements to the satisfaction of the Engineer, they shall be removed and replaced with satisfactory items or system(s) at the Contractor's expense, unless otherwise specifically noted.

G. The above testing and/or correction procedures shall continue until the items are acceptable to the Engineer.

3.6 CLEANING AND REPLACEMENT OF GLASS

A. All glass shall be thoroughly cleaned and polished by qualified window cleaners just before acceptance of the Work at the expense of the Contractor.

B. All broken glass shall be replaced by the Contractor at no expense to the Owner.

3.7 ARCHITECTURAL COATINGS

A. Maintain coordination among trades such as windows, window-walls, louvers, doors and frames, etc. requiring coatings. Match the color and texture of coatings to the satisfaction of the Engineer. Promptly remove from the job site, items the Engineer rejects.

3.8 PIPE MARKING

A. Ensure that correct pipe identification and flow direction marking, as specified in the Finish Painting Section of Division 9, is properly carried out to the satisfaction of the Engineer.

3.9 VALVE INDICES

A. The General Contractor shall be responsible for field locating and tagging with noncorrosive metal or plastic tag, all valves and sluice or slide gates. Each valve's tag shall be stamped with a number and words to identify the valve's function and normal operating position. Numbers and the remainder of the coding system shall be provided by the Owner prior to startup of the facilities. The size of the noncorrosive tag shall be 2 inches in diameter and 19-gage thick or approved equal. Figures shall be at least 1/4-in. high visible and readable from the operating floor level. Each tag shall be securely attached to each valve by noncorrosive metal wire.

END OF SECTION

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ABBREVIATIONS
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SECTION 01 42 13
ABBREVIATIONS

PART 1. GENERAL

Wherever in these Specifications and Contract Documents the abbreviations, or pronouns in place of them are used, the intent and meaning shall be interpreted as specified herein.

1.1 ABBREVIATIONS

AA	Aluminum Association Incorporated
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AEIC	Association of Edison Illuminating Companies
AFBMA	Anti-Friction Bearing Manufacturer's association
AGA	American Gas Association
AGMA	American Gear Manufacturer's association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association, Inc.
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
APHA	American Public Health Association
API	American Petroleum Institute
ARI	Air-Conditioning and Refrigeration Institute
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASCII	American Standard Code for Information Interchange United States of America Standards Institute
ASE CODE	American Standard Safety Code for Elevators, Dumbwaiters and Escalators American National Standards Institute
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
BOCA	Building Officials and Code Administrators
CBM	Certified Ballast Manufacturers
CFR	Code of Federal Regulations
CMAA	Crane Manufacturers Association of America, Inc. (Formerly called: Overhead Electrical Crane Institute [OECI])

CRSI	Concrete Reinforcing Steel Institute
DEMA	Diesel Engine Manufacturer's Association
DHEC	Department of Health and Environmental Control
DHI	Door Hardware Institute
EEI	Edison Electric Institute
EIA	Electronic Industries Association
EJMA	Expansion Joint Manufacturer's Association
EPA	Environmental Protection Agency
EPD	Environmental Protection Division
FEDSPEC	Federal Specifications General Services Administration Specification and Consumer Information Distribution Branch
FEDSTDS	Federal Standards (see FEDSPECS)
FM	Factory Mutual Research
GDOT	State of Georgia Department of Transportation Standard Specifications Construction of Roads and Bridges
GDNR	State of Georgia Department of Natural Resources
HEI	Heat Exchange Institute
HI	Hydraulic Institute
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IES	Illuminating Engineering Society
ISA	Instrument Society of America
JIC	Joint Industrial Council
MILSPEC	Military Specifications
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NEC	National Electric Code National Fire Protection Association
NBS	National Bureau of Standards
NEMA	National Electrical Manufacturer's Association
NESC	National Electric Safety Code American National Standards Institute
NFPA	National Forest Products Association (formerly National Lumber Manufacturer's Association)
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Act U.S. Department of Labor Occupational and Health Administration
PCI	Prestressed Concrete Institute
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SBC	Standard Building Code Published by SBCCI
SBCCI	Southern Building Code Congress International
SCDOT	South Carolina Department of Transportation

SDI	Steel Door Institute
SFPA	Southern Forest Products Association
SFPC	Standard Fire Prevention Code Published by SBCCI
SGC	Standard Gas Code Published by SBCCI
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
SMC	Standard Mechanical Code Published by SBCCI
SPC	Standard plumbing Code Published by SBCCI
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction Building News, Inc.
TEMA	Tubular Exchanger Manufacturer's Association
UBC	Uniform Building Code Published by ICBO
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code Published by ICBO
UPC	Uniform Plumbing Code Published by IAPMO
USBR	Bureau of Reclamation U.S. Department of Interior Engineering and Research Center
WEF	Water Environment Federation (formerly Water Pollution Control Federation)

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

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QUALITY CONTROL
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SECTION 01 45 00
QUALITY CONTROL

PART 1. GENERAL

1.1 SECTION INCLUDES

A. Quality assurance – control of installation

B. Tolerances

C. References and standards

D. Testing laboratory services

E. Manufacturer's field services

1.2 QUALITY ASSURANCE – CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instruction conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.

B. Comply with manufacturer's tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before

proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES AND STANDARDS

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date of Contract Documents, date for receiving bids, date of Owner-Contractor Agreement when there are no Bids, date specified in the individual specification sections, except where a specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Architect/Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.5 TESTING SERVICES

A. Owner will appoint and employ services of an independent firm to perform testing. Contractor shall pay for testing services required by the specifications using an allowance as specified in Section 00 72 23.08 Article 13. Contractor shall pay for all re-testing of failed tests. Money from the Allowance will not be used to pay for re-testing of failed tests.

B. The independent firm will perform tests and other services specified in individual specification sections and as required by the Owner.

C. Testing and source quality control may occur on or off the project site. Perform off-site testing as required by the Owner.

D. Reports will be submitted by the independent firm to the Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

E. Cooperate with independent firm; furnish samples of materials, design, mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.

1. Notify Engineer and independent firm 48 hours prior to expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

F. Testing does not relieve Contractor to perform work to contract requirements.

G. Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Engineer. Payment for re-testing will be made by the Contractor. No money will be used from the Allowance to pay for re-testing.

1.6 MANUFACTURER'S FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Refer to Section 01 33 00 – SUBMITTALS, MANUFACTURER'S FIELD REPORTS article.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify that utility services are available, of the correct characteristics, and in the

correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01 45 23
TESTING SERVICES
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SECTION 01 45 23
TESTING SERVICES

PART 1. GENERAL

1.1 SECTION INCLUDES

A. Selection and Payment

B. Contractor Submittals

C. Testing Agency Responsibilities

D. Testing Agency Reports

E. Limits on Testing Authority

F. Contractor Responsibilities

G. Schedule of Tests

1.2 RELATED SECTIONS

A. Testing and approvals required by public authorities.

B. Section 01 33 00 – Submittals – Manufacturer's Certificates.

C. Section 01 45 00 – Quality Control

D. Section 01 77 00 – Contract Closeout – Project Record Documents.

1.3 REFERENCES

A. ASTM C 802-87 – Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction.

B. ASTM C 1077-92 – Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.

C. ASTM C 1093-88 – Practice for Accreditation of Testing Agencies for Unit Masonry.

D. ASTM D 290-85 – Recommended Practice for Bituminous Mixing Plant Inspection.

E. ASTM D 3740-92 – Practice for Evaluation of Agencies Engaged in Testing and/or

Inspection of Soil and Rock as Used in Engineering Design and Construction.

F. ASTM D 4561-86 – Practice for Quality Control Systems for an Inspection and Testing Agency for Bituminous Paving Materials.

G. ASTM E 329-93 – Practice for Use in the Evaluation of Inspection and Testing Agencies as Used in Construction.

H. ASTM E 543-93 – Practice for Determining the Qualification of Nondestructive Testing Agencies.

I. ASTM E 548-93 – Practice for Preparation of Criteria for Use in the Evaluation of Testing Laboratories and Inspection Bodies.

J. ASTM E 699-79 (Reapproved 19910 – Practice for Criteria for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E6.

1.4 SELECTION AND PAYMENT

A. Owner will appoint and employ services of an independent testing agency or laboratory to perform specified testing. Contractor shall pay for testing services required by these specifications using an allowance as specified in Section 00 72 23.08 Article 13. Contractor shall pay for all re-testing of failed tests. Money from the Allowance will not be used to pay for re-testing of failed tests.

1.5 QUALITY ASSURANCE

A. Comply with requirements of practices listed in paragraph 1.3.

B. Laboratory – Authorized to operate in State in which Project is located.

C. Laboratory Staff – Maintain a full-time specialist on staff to review services.

D. Testing Equipment – Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.6 TESTING AGENCY RESPONSIBILITIES

A. Test samples of mixes submitted by Contractor.

B. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.

C. Perform specified sampling and testing of Products in accordance with specified

standards.

D. Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or Products.

F. Perform additional tests required by Engineer.

G. Attend Preconstruction meetings and progress meetings.

1.7 TESTING AGENCY REPORTS

A. After each test, promptly submit electronic copies of report to in accordance with Section 01 33 00.

B. Include –

1. Date issued
2. Project title and number
3. Name of inspector
4. Date and time of sampling or inspection
5. Identification of product and specifications section
6. Location in the Project
7. Type of inspection or test
8. Date of test
9. Results of tests
10. Conformance with Contract Documents

C. When requested by Engineer, provide interpretation of test results.

1.8 LIMITS ON TESTING AUTHORITY

A. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

B. Agency or laboratory may not approve or accept any portion of the Work.

C. Agency or laboratory may not assume any duties of Contractor.

D. Agency or laboratory has no authority to stop the Work.

1.9 CONTRACTOR RESPONSIBILITIES

A. Deliver to agency or laboratory at designated location, adequate samples of

materials proposed to be used which require testing, along with proposed mix designs.

B. Cooperate with laboratory personnel, and provide access to the Work and to manufacturer's facilities.

C. Provide incidental labor and facilities –

1. To provide access to work to be tested
2. To obtain and handle samples at the site or at source of Products to be tested
3. To facilitate tests
4. To provide storage and curing of test samples

D. Notify Engineer and laboratory 48 hours prior to expected time for operations requiring testing services.

E. Pay for services using the Allowance money of an independent qualified testing laboratory selected by the Owner and/or Engineer.

1.10 SCHEDULE OF TESTS

A. All testing requirements for each type of work completed shall be specified in the applicable section to which the work pertains.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

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SECTION 01 51 00
TEMPORARY UTILITIES

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

A. Furnish, install and maintain temporary utilities required for construction, remove on completion of work.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

A. Comply with National Electric Code.

B. Comply with Federal, State and local codes and regulations and with utility company requirements.

C. Comply with City of Calhoun and Gordon County Health Department Regulations.

PART 2. PRODUCTS

2.1 GENERAL

A. Materials may be new or used but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.2 TEMPORARY ELECTRICITY

A. Owner’s permanent electrical distribution system may be used for temporary electrical service with Owner’s permission.

B. The Contractor shall be responsible for the costs of all items necessary for installation, distribution and maintenance of temporary power. The cost of these items shall be factored into the project unit prices. Obtain and pay for all permits and inspections.

C. Contractor shall also pay for installation, operation, maintenance and removal of temporary system and cost of energy consumed.

2.3 TEMPORARY WATER

A. Water used for flushing and hydrostatic testing of water systems shall be potable water unless otherwise approved by the Engineer. Water used for hydrostatically testing tanks for water tightness and leakage shall be potable water unless non-potable water is approved by the Engineer.

B. Contractor shall arrange with Owner locations for obtaining water, and furnish and install all equipment, pipe, meters, valves and accessories as required and/or specified for use of that water. All potable and non-potable water used during construction must be metered and accounted for and not wasted by the Contractor. If used meters are temporarily furnished and installed by the Contractor during construction, proof of recent calibration must be provided to the Engineer.

C. Install at each and every connection to the Owner's potable water supply a backflow preventer meeting the requirements of AWWA C510, latest revision. Protect piping and fittings against freezing as applicable to the work site.

D. The Contractor shall pay all costs necessary to provide water for temporary potable use for construction trailers, etc. at the site including but not limited to, any temporary or permanent piping, water meter box (meter provided by Owner) hoses and/or yard hydrants needed in order for the Contractor to execute his work. The water meter will be read monthly by the Owner to account for water used and a water bill will be sent to the Contractor.

E. Potable water for trial operation and testing of equipment and pipelines will be furnished by Owner at no cost provided that Contractor has completed all necessary connections, provided valves, meters, hoses, and temporary connections as may be required for completion of the operations or testing. The Contractor shall reimburse Owner at current commercial rates for all water required for re-testing as a result of failing the hydrostatic and/or bacteriological testing or any other testing.

F. Water for hydrostatic testing shall be potable or non-potable as approved by the Engineer and shall be provided by the Owner at no cost to the Contractor for the initial testing of each structure. The Contractor shall reimburse Owner at current commercial rates for all water required for re-testing as a result of failing the hydrostatic and/or bacteriological testing or any other testing.

G. Restore existing and permanent facilities used for temporary purposes to original condition.

2.4 TEMPORARY SANITARY FACILITIES

A. Contractor shall provide temporary sanitary facilities at such places as approved by the Owner and in compliance with applicable laws and regulations.

B. Contractor shall pay all costs for installation, maintenance, and removal of temporary sanitary facilities. Contractor will not be allowed to use plant facilities.

C. Provide facilities at time of site mobilization and modify and extend service as work progresses. Toilet facilities shall be enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view. Clean areas of facilities weekly and maintain in a sanitary condition. Provide toilet paper, paper towels, and soap in suitable dispensers.

PART 3. EXECUTION

3.1 GENERAL

A. Comply with applicable requirements specified in Division 15 - Mechanical, and in Division 16 - Electrical.

B. Maintain and operate systems to assure continuous service.

C. Modify and extend systems as work progress requires.

3.2 REMOVAL

A. Completely remove temporary materials and equipment when their use is no longer required.

B. Clean and repair damage caused by temporary installations or use of temporary facilities.

C. Restore permanent facilities used for temporary services to specified condition.

END OF SECTION

SECTION 01 52 13
FIELD OFFICES
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1.2 OWNER REQUIREMENTS 2
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SECTION 01 52 13
FIELD OFFICES

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

A. Furnish, install and maintain temporary field offices for the Engineer and the Contractor during entire construction period.

B. Furnish, install and maintain storage and work sheds needed for construction.

C. At completion of work, remove field offices, sheds and contents.

1.2 OWNER REQUIREMENTS

A. Prior to installation of offices, consult with the Engineer and Owner on location, access and related facilities.

1.3 REQUIREMENTS FOR FACILITIES

A. Construction:

1. Structurally sound, weathertight, with floors raised above ground.

2. Temperature transmission resistance: Compatible with occupancy and storage requirements.

3. At Contractor's option, portable or mobile buildings may be used.

a. Mobile trailers, when used, shall be modified for office use.
b. Do not use mobile trailers for living quarters.

B. Office for the Engineer:

1. The Contractor shall provide a separate space for the sole use of designated occupants, with secure entrance doors and one key per occupant. The space may be attached or part of the Contractor’s space or may be a separate office space.

2. Area: 64 sq. ft. minimum, with minimum dimension 8 feet.

3. Windows:

a. Minimum: 1, with a minimum total area of 10% of floor area.
b. Operable sash and insect screens.

c. Locate to provide view of construction areas.

4. Furnishings:

a. Standard size desks, 3-foot x 5 foot with desk chair, and minimum of two drawers.
b. One drafting table: 39 inches high x 72 inches x 36 inches. It can be made of wood.
c. Standard four-drawer legal-size metal filing cabinet with locks and keys; one per occupant.
d. One swivel arm chair.
e. One drafting table stool.
f. One wastebasket per desk and table.
g. Coat rack and hooks.

5. Services:

a. Lighting: 50 foot-candles at desk top height.
b. Exterior lighting at entrance door.
c. Automatic heating and mechanical cooling equipment (12,000 BTU) to maintain comfort conditions.
d. Minimum of four 110 volt duplex electric convenience outlets, at least one on each wall.
e. Electric distribution Panel: Two circuits minimum, 110 volt, 60 hertz service.
f. Convenient access to drinking water and toilet facilities.
g. Telephone: Not Required.
h. Internet: Shared with Contractor.

C. Contractor's Office and Facilities:

1. Size: As required for general use and to provide space for project meetings.
2. Lighting and temperature control: Contractor’s option.
3. Telephone: Contractor’s option.
4. Internet: High-speed Internet Access equivalent to standard DSL service or better is required. Contractor shall share wi-fi with Engineer.
5. Racks and files for Project Record Documents.
6. Other furnishings: Contractor's option.
7. One 10 inch (250 mm) outdoor-type thermometer.

D. The Contractor shall make all provisions and pay all installations and other costs for the Engineer's construction office in order to provide, power service, exterior

lights, and any local code and OSHA requirements.

1.4 USE OF PERMANENT FACILITIES

A. Permanent facilities shall not be used for field offices or for storage.

PART 2. PRODUCTS

2.1 MATERIALS, EQUIPMENT, FURNISHINGS

A. May be new or used, but must be serviceable, adequate for required purpose, and must not violate applicable codes or regulations.

PART 3. EXECUTION

3.1 PREPARATION

A. Fill and grade sites for temporary Structures to provide surface drainage.

3.2 INSTALLATION

A. Construct field offices on proper foundations provide connections for utility services.

1. Secure portable or mobile buildings when used.
2. Provide steps and landings at entrance doors.

B. Mount thermometer at convenient outside location, not in direct sunlight.

C. Locate construction office facilities at the location approved by the Owner within the project.

D. Areas to be used for vehicle parking or routine vehicle access shall be continuously maintained and returned to their original condition after construction is complete.

3.3 MAINTENANCE AND CLEANING

A. Provide periodic maintenance and cleaning for structures, furnishings, equipment and services.

3.4 REMOVAL

A. Remove temporary field offices, contents and services at a time when no longer needed.

B. Remove foundations and debris; temporary pavement, grade site to required elevations and clean the areas.

C. Restore all disturbed areas as required by Section 01 35 13 or as shown on the Drawings.

END OF SECTION

SECTION 01 57 19
ENVIRONMENTAL CONTROLS
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1.3 TEMPORARY DAMS 2
1.4 AIR POLLUTION CONTROL 2
1.5 NOISE CONTROL 2
1.6 EROSION CONTROL 2

PART 2. PRODUCTS (Not Used) 3

PART 3. EXECUTION (Not Used) 3

SECTION 01 57 19
ENVIRONMENTAL CONTROLS

PART 1. GENERAL

1.1 SCOPE OF WORK

A. Contractor shall furnish all material and labor for the installation and maintenance of the environmental control measurements throughout the project.

1.2 SITE MAINTENANCE

A. The Contractor shall keep the work site clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance.

1.3 TEMPORARY DAMS

A. Except in time of emergency, earth dams are not acceptable at catch basin openings, local depressions, or elsewhere. Temporary dams of sand bags, asphaltic concrete, or other acceptable material will be permitted when necessary to protect the work, provided their use does not create a hazard or nuisance to the public. Such dams shall be removed from the site as soon as they are no longer necessary.

B. Dams shall not interfere with the existing storm drainage system.

1.4 AIR POLLUTION CONTROL

A. The Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of any legally constituted authority. The Contractor shall also abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary. The use of water, in amounts which result in mud on public streets, is not acceptable as a substitute for sweeping or other methods.

1.5 NOISE CONTROL

A. Between 7:30 PM and 7:00 AM, noise from Contractor's operations shall not exceed limits established by applicable laws or regulations and in no event shall exceed 86 dBA at a distance of 50 feet from the noise source.

1.6 EROSION CONTROL

A. All points of concentrated runoff from rainfall shall be visually monitored to

determine that no eroded material from the construction site is being deposited in the adjacent ditches, lakes, and canals. Measures shall be taken to promptly eliminate such a deposition if occurring, including the installation of detention ponds.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01 66 00.01
SHIPMENT, PROTECTION, AND STORAGE
INDEX

PART 1. GENERAL 2

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2.1 PIPE 2

PART 3. EXECUTION 2
3.1 EQUIPMENT 2

SECTION 01 66 00.01
SHIPMENT, PROTECTION, AND STORAGE

PART 1. GENERAL

A. Equipment, products and materials shall be shipped, handled, stored, and installed in ways which will prevent damage to the items. Damaged items will not be permitted as part of the work except in cases of minor damage that have been satisfactorily repaired and are acceptable to the Engineer.

PART 2. PRODUCTS

2.1 PIPE

A. Pipe and appurtenances shall be handled, stored, and installed as recommended by the manufacturer. Pipes with paint, tape coatings, linings or the like shall be stored to protect the coating or lining from physical damage or other deterioration. Pipes shipped with interior bracing shall have the bracing removed only when recommended by the pipe manufacturer.

PART 3. EXECUTION

3.1 EQUIPMENT

A. Package and Marking

1. All equipment shall be protected against damage from moisture, dust, handling, or other cause during transport from manufacturer's premises to site. Each item or package shall be marked with the number unique to the specification reference covering the item.

2. Stiffeners shall be used where necessary to maintain shapes and to give rigidity. Parts of equipment shall be delivered in assembled or subassembled units where possible.

B. Identification

1. Each item of equipment and valve shall have permanently affixed to it a label or tag with its equipment or valve number designated in this contract. Marker shall be of stainless steel. Location of label will be easily visible.

C. Shipping

1. Bearing housings, vents and other types of openings shall be wrapped or otherwise sealed to prevent contamination by grit and dirt.

2. Damage shall be corrected to conform to the requirements of the Contract before the assembly is incorporated into the work. The Contractor shall

bear the costs arising out of dismantling, inspection, repair, and reassembly.

D. Factory Applied Coatings

1. Unless otherwise specified, each item of equipment shall be shipped to the site of the work with the manufacturer's shop applied epoxy prime coating. The prime coating shall be applied over clean dry surfaces in accordance with the coating manufacturer's recommendations. The prime coating will serve as a base for field-applied finish coats. Electrical equipment and materials shall be painted by manufacturer.

E. Storage

1. During the interval between the delivery of equipment to the site and installation, all equipment, unless otherwise specified, shall be stored in an enclosed space affording protection from weather, dust and mechanical damage and providing favorable temperature, humidity and ventilation conditions to ensure against equipment deterioration. Manufacturer's recommendations shall be adhered to in addition to these requirements.

2. Equipment and materials to be located outdoors may be stored outdoors if protected against moisture condensation. Equipment shall be stored at least 6 inches above ground. Temporary power shall be provided to energize space heaters or other heat sources for control of moisture condensation. Space heaters or other heat sources shall be energized without disturbing the sealed enclosure.

F. Protection of Equipment after Installation

1. After installation, all equipment shall be protected from damage from, including but not limited to, dust, abrasive particles, debris and dirt generated by the placement, chipping, sandblasting, cutting, finishing and grinding of new or existing concrete, terrazzo and metal; and from the fumes, particulate matter, and splatter from welding, brazing and painting of new or existing piping and equipment. As a minimum, vacuum cleaning, blowers with filters, protective shieldings, and other dust suppression methods will be required at all times to adequately protect all equipment. During concreting, including finishing, all equipment that may be affected by cement dust must be completely covered. During painting operations, all grease fittings and similar openings shall be covered to prevent the entry of paint. Electrical switchgear, unit substation, and motor load centers shall not be installed until after all concrete work and sandblasting in those areas have been completed and accepted and the ventilation systems installed.

END OF SECTION

SECTION 01 71 23
SURVEYING AND FIELD ENGINEERING
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1.2 QUALITY CONTROL 2
1.3 SUBMITTALS 2

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PART 3. EXECUTION 2
3.1 SURVEY REQUIREMENTS 2

SECTION 01 71 23
SURVEYING AND FIELD ENGINEERING

PART 1. GENERAL

1.1 SCOPE OF WORK

A. Work covered in this Section includes the surveying and field engineering required to complete the project and meet the provisions of this document.

1.2 QUALITY CONTROL

A. Contractor will employ a Land Surveyor registered in the State of Georgia and acceptable to the Owner/Engineer.

1.3 SUBMITTALS

A. Submit name, address, telephone number and registration number of surveyor prior to beginning work.

B. Upon request, submit documentation verifying accuracy of survey work. Documentation may include, but is not limited to, original field notes, worksheets, cutsheets, etc.

C. Submit at least two sets of prints of Record Drawings with a surveyor's certificate verifying that elevations and locations are in conformance with the contract drawings.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION

3.1 SURVEY REQUIREMENTS

A. Construction Staking – The Contractor shall provide all construction staking using recognized surveying and engineering practices. The surveyor will locate lines, grades and locations called for in the contract drawings. The Owner will provide a suitable number of benchmarks and monuments for the Contractor to use as a reference.

B. "Record Drawings" – Contractor shall maintain record drawings in accordance with the Supplementary Conditions of these Contract Documents. The final "as constructed" drawings will show the horizontal location of all manholes, water lines, structures, earth embankments and ponds. All horizontal locations shall be

referenced to the established coordinate systems or to existing streets, roads or major structures. The elevations of all gravity sewers, storm sewers, structure inverts, structure tops, shall be shown. The Engineer will provide two sets of contract drawings for the Contractor's use in completing this work.

END OF SECTION

SECTION 01 74 23
FINAL CLEANUP
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3.2 DUST CONTROL 3
3.3 FINAL CLEANING 3
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SECTION 01 74 23
FINAL CLEANUP

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

A. Final clean up of site, roadway and buildings.

1.2 DESCRIPTION

A. Execute clean-up prior to inspection for Substantial Completion of the Work.

1.3 DISPOSAL REQUIREMENTS

A. Remove and dispose of waste materials, rubbish, debris and trash in compliance with provisions of governing laws, codes, ordinances and regulations.

1. Do not burn or bury rubbish, trash, debris and waste materials on Project site.

PART 2. PRODUCTS

2.1 CLEANING MATERIALS

A. Use materials which will not create hazards to health or property, and which will not damage surfaces.

B. Use only materials and methods recommended by manufacturer of material being cleaned.

PART 3. EXECUTION

3.1 PERIODIC CLEANING

A. On a regular and frequent basis during progress of work, perform cleaning necessary to keep Project site and adjacent properties free from unsightly and unsafe accumulation of scrap and waste materials, debris, rubbish and trash resulting from construction operations.

1. Provide sufficient trash bins and containers for collection of scrap and waste material, debris, rubbish and trash.

2. Provide separate, closeable top metal containers for collection of oil and

paint soaked rags; empty volatile substance cans and other waste products subject to spontaneous combustion.

3. Designate approved eating areas and provide covered containers conforming to local health codes for collection of waste paper and leftover foodstuffs. Enforce usage of containers by workmen.

B. Dispose of scrap and waste materials, debris, rubbish and trash by one of the following optional methods:

1. Provide services of company regularly engaged in refuse disposal operations, including usage of large metal dump-type trash containers.

2. Use own forces and equipment for loading, hauling and disposal.

C. Remove accumulations of scrap and waste materials as bins and containers are filled and not less than once per week.

1. Remove containers containing products subject to spontaneous combustion daily.

2. Remove containers containing waste paper and leftover foodstuff daily.

3. Legally dispose of all waste materials, rubbish, volatile materials and cleaning materials off Project site.

4. Dispose of no materials in waterways.

3.2 DUST CONTROL

A. Site Work – When working on unpaved or torn up streets, Contractor shall maintain a water truck on site for dust control. All dusty work sites in residential areas shall be watered at least twice per day and whenever directed by the Owner's representative.

B. Buildings – During application of finished surface materials, including painting and decorating, employ dust control methods during cleaning operations to prevent dust from contaminating wet and freshly coated surfaces.

3.3 FINAL CLEANING

A. Site Work

1. All piles of dirt and rocks are to be removed from the work areas.

2. All disturbed areas are to be grassed and mulched according to these

specifications.

3. All construction debris is to be removed to an approved disposal site.

4. All streets are to be swept with a mechanical sweeper.

B. Buildings

1. All construction debris shall be removed from the building and disposed of at an approved disposal site.

2. The exterior face of the building shall be cleaned of all mud or dirt that may have stuck to the building as a result of site work and landscaping. Touch up all chipped or smudged paint.

3. Clean all interior wall surfaces, fixtures, doors, windows and equipment.

4. Remove labels, tags, stickers and unauthorized identification markings from finished surfaces.

   a. Do not remove permanently affixed nameplates, instructions, markings, Underwriters Laboratories Labels and approval stickers, Factory Mutual approved stickers and other identifying markings required by federal, state and local codes, ordinances and regulations.

5. Remove broken, chipped and defective glass; remove stains, spots, marks, paint smears; dirt and foreign materials; clean and polish exterior and interior glass; clean and polish mirrors.

6. Remove temporary protective coatings, tapes and films from finished aluminum surfaces and ornamental metal surfaces, clean and polish aluminum and ornamental metal in compliance with manufacturer's instructions.

7. Remove paint smears, spots, marks, dirt, mud and dust from exposed interior and exterior finished surfaces.

8. Clean and polish finished hardware; remove marks, stains, scratches and blemishes.

9. Clean and polish ceramic floor and wall tile; clean and polish toilet fixtures and trim, toilet accessories and toilet compartments.

10. Sweep concrete floors not less than broom clean; vacuum where necessary

to remove excessive dust; thoroughly clean other hard surfaced floors.

a. Remove mortar droppings, joint compound, plaster and cementitious material droppings from floors prior to final cleaning.

b. Concrete floors of process areas shall be rinsed with water and broomed and allowed to dry before final inspection.

11. Sweep exterior paved surfaces broom clean; rake clean unpaved surfaces.

12. Thoroughly clean all items of mechanical and electrical equipment; remove excess oils and grease from exposed surfaces.

a. Clean permanent filters and replace disposable filters if ventilating units were operated during construction.

b. Clean ducts, blowers and coils if units were operated without filters during construction.

13. Vacuum clean carpeted and similar soft surfaces.

14. Clean, machine buff, wax and polish all resilient and hard-surfaced floors as specified.

3.4 INSPECTION

A. Prior to acceptance by Owner of any designated portion of Work, conduct inspection in presence of Owner to verify work is properly clean and ready for acceptance by Owner.

END OF SECTION

SECTION 01 76 00
RESTORATION OF IMPROVEMENTS
INDEX

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PART 3. EXECUTION 2
3.1 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS 2

PART 4. PROTECTION 2
4.1 PROTECTION OF EXISTING INSTALLATIONS 2

SECTION 01 76 00
RESTORATION OF IMPROVEMENTS

PART 1. GENERAL

1.1 STRUCTURES

A. The Contractor shall take all precautions necessary to protect the integrity and usefulness of all existing plant facilities. If necessary, the Contractor may, with the approval of the Owner, remove such existing structures, including curbs, gutters, pipelines, and utility poles as may be necessary for the performance of the work, and shall rebuild the structures thus removed in as good a condition as found with the requirements specified. The Contractor shall also repair existing structures which may be damaged as a result of the work under this contract.

PART 2. PRODUCTS

2.1 ROADS AND STREETS

A. Unless otherwise specified, roads and streets in which the surface is removed, broken, or damaged, or in which the ground has caved or settled during the work under this contract, shall be resurfaced and brought to the original grade and section. Roadways used by the Contractor shall be cleaned and repaired. Before resurfacing material is placed, edges of pavements shall be trimmed back far enough to provide clean, solid, vertical faces, and shall be free of loose material. All paved surfaces shall be cut with a pavement saw. Rough cuts are not allowed. Repair work shall conform to the paving specifications and drawings.

PART 3. EXECUTION

3.1 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS

A. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored as nearly as possible to their original condition. This includes cleaning up debris, grading the area, and grassing it. Restoration shall take place within 1 week of substantial completion of work or sooner as directed by the Engineer. Existing guard posts, barricades, and fences shall be protected and replaced if damaged.

PART 4. PROTECTION

4.1 PROTECTION OF EXISTING INSTALLATIONS

A. The Contractor shall protect all existing operating facilities and structures from damage. However, if damage occurs, the Contractor shall immediately correct or replace existing equipment, controls, systems, structures, or facilities which are

damaged in any way as a result of his operations. The Contractor shall be responsible for compensating the Owner for any expenses resulting from the damaged facilities being out of service.

END OF SECTION

SECTION 01 77 00
CONTRACT CLOSEOUT PROCEDURES
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PART 2. PRODUCTS (Not Used) 4

PART 3. EXECUTION (Not Used) 4

SECTION 01 77 00
CONTRACT CLOSEOUT PROCEDURES

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

A. Administrative provisions for Substantial Completion and for final acceptance.

1.2 SUBSTANTIAL COMPLETION

A. When the Contractor considers the work substantially complete, he shall prepare a punch list of uncompleted items and send to the Engineer for review. At the same time, the Contractor shall request in writing that the Engineer schedules a pre-final inspection.

B. The Engineer will review the punch list submitted by the Contractor and determine if the project is substantially complete.

C. If the Engineer determines that the project is not substantially complete, he will notify the Contractor in writing which items need to be finished before the project can be considered substantially complete. The Contractor shall continue working to complete all punch list items and resubmit a revised punch list when he considers the work is substantially complete.

D. When the Engineer determines that the work is substantially complete, he will schedule a pre-final inspection with the Owner, Contractor and Engineer. A final punch list will be prepared at this time.

E. After all punch list items have been completed, the Contractor shall send a request in writing to the Engineer to schedule a final inspection. When all punch list items are complete, the Engineer will issue a certificate of substantial completion.

1.3 FINAL COMPLETION

A. When the Contractor considers that all of the work is complete, he shall submit the following certificates:

1. All work has been completed and inspected for compliance with the Contract Documents and all deficiencies listed with the certificate of substantial completion have been corrected.

2. All equipment and systems have been tested, adjusted and are fully operational.

3. Owner’s personnel have been fully instructed in the operation of all

equipment (include sign off for each system).

4. Work is complete and ready for final inspection.

B. Should Engineer's inspection find work incomplete, he will promptly notify Contractor in writing listing observed deficiencies.

C. Contractor shall remedy deficiencies and send a request for another final inspection.

D. When Engineer finds work is complete, he will process final pay request documents.

1.4 REINSPECTION FEES

A. Should status of completion of work require reinspection by Engineer due to failure of work to comply with Contractor's claims on pre-final or final inspection, the Owner will back charge the Contractor for each extra reinspection required of the Engineer. The Contractor shall reimburse the Owner by certified check prior to final payment of retainage.

1.5 CLOSEOUT SUBMITTALS

A. Evidence of Compliance with Requirements of Governing Authorities –

1. Certificate of Occupancy as required by local codes.

2. Certificates of Inspection approvals required for plumbing, mechanical and electrical systems as required by local codes if applicable.

3. Completed "Project Close Out" form as presented at the end of this section.

B. Project Record Documents – Under provisions of Section 01 78 39.

C. Operation and Maintenance Data – Under provisions of Section 01 78 23.

D. Warranties and Bonds – Under provisions of Section 01 78 33.

E. Keys and Keying Schedule.

F. Evidence of Payment and Release of Liens – In accordance with Conditions of the Contract.

G. Consent of Surety to Final Payment – Consent of Surety is to be sent by Surety directly to Carter and Sloope to the attention of the Project Engineer.

1.6 APPLICATION FOR FINAL PAYMENT

A. Prior to application for final payment, the Contractor shall give the Engineer a list of all additions or deletions not previously approved by change order.

B. The Engineer will review this list and prepare a final closeout change order for the items that are justified by the terms of the contract or approved by field order.

C. After approval of the final closeout change order the Contractor may submit his application for final payment.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

PROJECT CLOSE OUT FORM
CHECK-OFF LIST

Document Received**	Number of Copies	Date
Contractor's Warranty		
Statutory Affidavit		
Non-Influence Affidavit		
Daily Observation Reports		
EPD Inspection		
County Building Inspector		
County Plumbing Inspector		
County Electrical Inspector		
State Fire Marshall-Occupancy Certificates		
Consent of Surety to Final Payment		
Contractor's Affidavit – Release of Liens		
Other as Specified – (fill in):		
Maintenance Manuals & Equipment Brochures		
(Required for All Equipment Items)		
Keys		

SECTION 01 78 23
OPERATIONS AND MAINTENANCE DATA
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1.3 FORMAT 2
1.4 PROJECT CLOSEOUT NOTEBOOK 3
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PART 2. PRODUCTS (Not Used) 5

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SECTION 01 78 23
OPERATIONS AND MAINTENANCE DATA

PART 1. GENERAL
s

1.1 SECTION INCLUDES

A. Format and content of manuals.

B. Instruction of Owner’s personnel.

C. Schedule of submittals.

1.2 QUALITY ASSURANCE

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.3 FORMAT

A. Compile product data, operation and maintenance information, manufacturer literature, warranties, certifications, and other documentation necessary for the Owner's operation and maintenance of products and equipment furnished under the Work.

B. Organize the Operation and Maintenance (O&M) Manual electronically and provide a cover page identifying the Project name and contents.

C. Organize the O&M Manual using electronic bookmarks and hyperlinks for each product, equipment item, and system, with descriptions of major components and associated documentation.

D. Include manufacturer’s product data, operation and maintenance instructions, troubleshooting guides, and other applicable documentation in searchable PDF format whenever available.

E. Include record drawings, wiring diagrams, control schematics, and other drawings in electronic PDF format.

F. Arrange the contents by system and process flow, following the section numbering and sequence of the Specifications.

G. O&M documentation shall be submitted to the Engineer on a rolling basis as soon as documents become available from manufacturers, suppliers, and vendors. Final delivery of O&M documentation shall not be deferred until project closeout.

1.4 PROJECT CLOSEOUT NOTEBOOK

The Contractor shall provide three (3) project closeout notebooks which shall include the following:

A. Table of Contents.

B. Project Description.

1. Project Title.

2. Name, Address and Telephone number of Engineer.

3. Name, Address and Telephone number of Engineer's subcontractor.

4. Name, Address and Telephone number of General Contractor.

5. Name, Address and Telephone number of all subcontractors.

C. List the name of each major item of equipment with the name, address and telephone number of each supplier. Make reference to O & M file folder.

D. List of all shop drawings and name, address and telephone number of each supplier (make reference to file folder).

E. List all warranties, guarantees and bonds. Include a copy of each. Also, include name, address and telephone number of surety providing Performance Bond.

1.5 MANUAL FOR MATERIALS AND FINISHES

A. Building Products, Applied Materials, and Finishes – Include product data, with catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance – Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture Protection and Weather Exposed Products – Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional Requirements – As specified in individual product specification Sections.

1.6 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Each Item of Equipment and Each System – Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.

B. Panelboard Circuit Directories – Provide electrical service characteristics, controls and communications.

C. Include color-coded wiring diagrams as installed.

D. Operating Procedures – Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.

E. Maintenance Requirements – Include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

F. Provide servicing and lubrication schedule, and list of lubricants required.

G. Include manufacturer's printed operation and maintenance instructions.

H. Include sequence of operation by controls manufacturer.

I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

J. Provide control diagrams by controls manufacturer as installed.

K. Provide Contractor's coordination drawings, with color-coded piping diagrams as installed.

L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

N. Additional requirements – As specified in individual product specification Sections.

1.7 INSTRUCTION OF OWNER PERSONNEL

A. Before final inspection, provide necessary instruction to Owner's designated personnel in operation, adjustment, and maintenance of products, equipment, and

systems, at agreed upon times.

B. For equipment requiring seasonal operation, perform instructions for other seasons.

C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operations and maintenance.

D. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.8 SUBMITTALS

A. Submit one (1) copy of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return copy with comments.

B. For equipment, or component parts of equipment, put into service during construction and operated by owner; submit documents within ten (10) days after acceptance.

C. Submit one copy of completed volumes in final form fifteen 15 days prior to final inspection. Copy will be returned after final inspection, with Engineer's comments. Review content of documents as required prior to final submittal.

D. Submit three (3) copies of revised volumes of data in final form within ten (10) days after final inspection.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01 78 33
WARRANTIES AND BONDS
INDEX

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1.2 FORM OF SUBMITTALS 2
1.3 PREPARATION OF SUBMITTALS 2
1.4 TIME OF SUBMITTALS 3

PART 2. PRODUCTS (Not Used) 3

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SECTION 01 78 33
WARRANTIES AND BONDS

PART 1. GENERAL

1.1 SECTION INCLUDES

A. Preparation and submittal.

B. Time and schedule of submittals.

1.2 FORM OF SUBMITTALS

A. Provide on flash drive.

B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible principal.

C. Table of Contents – Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of the product or work item.

D. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

E. Provide plastic cardholder sleeve and insert business cards from all subcontractors and general contractors' personnel including on-site representative, project manager and owner of company. Insert into manual this "card file" after table of contents.

1.3 PREPARATION OF SUBMITTALS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten (10) days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Completion is determined. Provide three complete notebooks to the Engineer for distribution. The Owner will receive two copies and the engineer will retain one copy.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

1.4 TIME OF SUBMITTALS

A. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten (10) days after acceptance.

B. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.

C. For items of Work when acceptance is delayed beyond Date of Substantial Completion, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

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PROJECT RECORD DOCUMENTS
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1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES 2
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SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

A. Maintenance of Record Documents and Samples.

B. Submittal of Record Documents and Samples.

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. In addition to requirements in General Conditions, Maintain at the site for Owner, two record copies of:

1. Contract Drawings
2. Specifications
3. Addenda
4. Approved Change Orders, field orders or other modifications to the Contract
5. Approved shop drawings, product data, and samples
6. Field test records
7. Inspection Certificates
8. Manufacturer's certificates

B. Store Record Documents and samples in Field Office apart from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples. Records should be stored in a clean dry area with easy access.

C. Document Files –

1. Contract Drawings shall be maintained in a hanging stickfile.
2. Specifications, addenda and Change Orders shall be filed in a "Banker Box" type file with hanging file folders.
3. Shop drawings shall be filed in "Banker Box" hanging file with a separate file folder for each item. The Contractor shall maintain an index of shop

drawings in the first folder. Each folder shall be labeled with the name of the item and the specifications and/or drawing number.

4. Field tests and inspection certificates shall be maintained in separate file folders.

5. All labels or indexes shall be typed or printed.

D. Maintain Record Documents in a clean, dry and legible condition. Do not use Record Documents for construction purposes.

E. Keep Record Documents and samples available for inspection by Engineer.

1.3 RECORDING

A. Record information on clean sets of blue line opaque drawings and contract specifications. Label each sheet of the Project Record Drawings in the lower right corner with the neatly printed words "PROJECT RECORD DRAWINGS."

1. Two (2) sets of Contract Documents and Drawings will remain clean without mark-up for record purposes. Contractor shall use an additional set for marking measurements, on-site changes, items of construction that are actually used, and other conditions as they are encountered during the course of the Work. This marked-up set of Contract Documents and Drawings shall consist of red-lined copies of plans and shop drawings, shall indicate actual field dimensions, shall represent the work as actually constructed, and shall be recorded on a daily basis. Failure to produce these records on request of Engineer or Owner shall constitute grounds to halt construction with no time extension until steps are taken to see that these records are being properly made.

B. Provide colored pens or pencils for marking each description of work.

1. The Contractor shall provide colored pencils for marking record copies of Contract Drawings and Specifications. Use a different colored pencil for each of the following:

a.	Architectural Work	Red
b.	Plumbing work	Green
c.	HVAC Work	Blue
d.	Electrical Work	Orange
e.	Other written notations	Brown

2. Establish a color code denoting what trade will use what color, and show this on a schedule on the front sheet of the "PROJECT RECORD DOCUMENTS".

C. Record information concurrently with construction progress. DO NOT CONCEAL ANY WORK UNTIL REQUIRED INFORMATION IS RECORDED.

D. Contract Drawings and Shop Drawings – Legibly mark each item to record actual construction, including:

1. Measured depths of elements of foundation in relation to finish first floor or benchmark.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Use stations and offsets or coordinates.

3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.

4. Field changes of dimension and detail.

5. Changes made by Modifications.

6. Details not on original Contract Drawings.

7. References to related shop drawings and Modifications.

E. Prior to final construction observation, Contractor shall furnish to Engineer two (2) neatly marked sets of construction plans which accurately depict the conditions and records all changes made during construction. Engineer shall promptly notify Contractor in writing if additional information is required.

F. Other Documents – Maintain manufacturer's certifications, inspection certifications, and field test records, required by individual Specification sections.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

Intended Project Scope Reports
&
Concept Site Plans

The City of Calhoun, Georgia
Calhoun Utilities

Summary Report on
Mauldin Road PFAS Reduction Improvements
Intended Project Scope

INSITE PROJECT 26060.00

Prepared by:

INSITE ENGINEERING

HOOVER | TUSCALOOSA

May, 2026

Preliminary

This report was prepared by InSite Engineering, LLC for the City of Calhoun, Georgia. The material in this report reflects our best judgment based on the information that was made available to us at the time of preparation. Any use which a third party makes of this report, or any release or decisions made based on this report, are the sole responsibility of such third parties. InSite Engineering, LLC accepts no responsibility for damages, if any, occasioned by any third party as a result of decisions made or actions taken based on this report.

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City of Calhoun, Georgia
Mauldin Road Water Treatment Plant
PFAS Improvements Project

Introduction

The City of Calhoun, Georgia ("the City") owns and operates the Mauldin Road Water Treatment Plant ("Mauldin Road WTP") located at 500 Mauldin Road Calhoun, Georgia. The Mauldin Road WTP operated by the City is under the influence of PFAS contamination, therefore this report will outline the Intended Project Scope for proposed treatment processes to reduce PFAS compounds in Calhoun's public drinking water.

The Mauldin Rd WTP has a current hydraulic capacity of 18 million gallons per day ("MGD") and withdraws raw water from an intake on the Coosawattee River. The plant currently utilizes conventional treatment technology including flocculation, sedimentation, gravity mixed media filtration with GAC, and chemical treatment with chlorine gas, fluorosilicic acid, zinc orthophosphate and calcium hydroxide. The Mauldin Road WTP's current average daily demand is approximately 6.5 MGD of its current permitted capacity of 18 MGD.

The City of Calhoun has completed pilot testing of technologies for removal of perfluoroalkyl and polyfluoroalkyl substances ("PFAS") from the water produced at the Mauldin Road WTP in Calhoun, Georgia. The City of Calhoun has selected Reverse Osmosis as the most effective and cost-efficient way to consistently reduce PFAS levels for the treatment process at the Mauldin Road WTP.

As a temporary emergency measure the City has replaced the majority of anthracite with granular activated carbon (GAC) designed for PFAS reduction in their existing mixed-media filters at the Mauldin Road Water Treatment Plant. The City intends to operate the Mauldin Road WTP with GAC until this project can be completed.

This report discusses and outlines the plans to design & construct a treatment process at the Mauldin Road WTP to ensure PFAS is removed from Calhoun's public drinking water. Calhoun's project goal is to produce safe drinking water for its customers with PFAS levels that comply with the EPA's current proposed MCL.

This report summarizes the purpose, objectives, and intended project plans for design and construction of a new reverse osmosis treatment process including waste stream treatment to reduce PFAS from the drinking water and the discharge water returned to the river. It also outlines

the intent to utilize as much of the existing infrastructure as possible to save capital cost of construction of this project.

Mauldin Road Water Treatment Facility Background

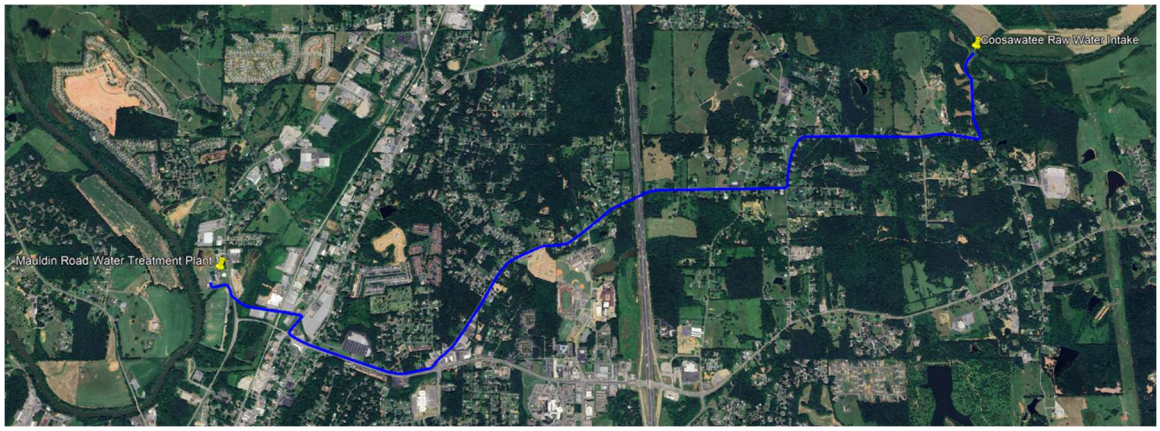
The Mauldin Road Water Treatment Plant is a conventional water treatment plant currently utilizing the general flow stream/treatment processes. The gravity mixed media filters were originally sand, garnet and anthracite but have since had the majority of the anthracite removed and replaced with granular activated carbon ("GAC") to offer some level of interim PFAS reduction. This temporary action is appropriate and beneficial at the Mauldin Road WTP because the plant is currently producing approximately 36% of its permitted capacity, which allows for a slower rate of filtration, thereby producing an increased contact time with the GAC which aids in PFAS reduction. As production increases nearer the permitted capacity, the GAC contact time will be reduced, which will reduce the effectiveness of the GAC in the existing filter beds for PFAS reduction, and the filter run times will be shortened even further, which will result in lower water recovery through the process.

Prior to the PFAS issue coming to the forefront, the Coosawattee River intake was still the primary intake location for the Mauldin Road water treatment plant. The WTP has an on-site intake structure on the Oostanaula River, which has been decommissioned for many years due to age of the infrastructure and along with higher amounts of suspended solids in the raw water. Significant upgrades would be necessary to make the on-site intake functional again. The City still has a withdrawal permit for that location, but the permitted capacity of 6 MGD is substantially lower than the plant capacity. The presence of PFAS has been confirmed at both intake locations affiliated with the Mauldin Road WTP. After substantial investigation and the fact that the on-site intake location has PFAS detections above the new MCL as well, the best course of action for the City to meet EPA's finalized maximum contaminant levels is to keep the existing raw water intake for the WTP and install PFAS mitigation technology at the Mauldin Road WTP. In the case of expansion or the need for additional capacity in the future the inoperative WTP intake could be refurbished and used to supplement when necessary to meet system demands.

Calhoun Utilities long-term goal is to maintain both intakes in fully operational condition for the water treatment facilities in order to respond to fluctuating water quality and water volume issues.

Raw Water Intake Pump Station Locations

This aerial photo of Coosawattee River raw water intake pump station and the raw water transmission main route to the Mauldin Road WTP. The Oostanaula River raw water intake pump station is located on the Mauldin Road WTP site.



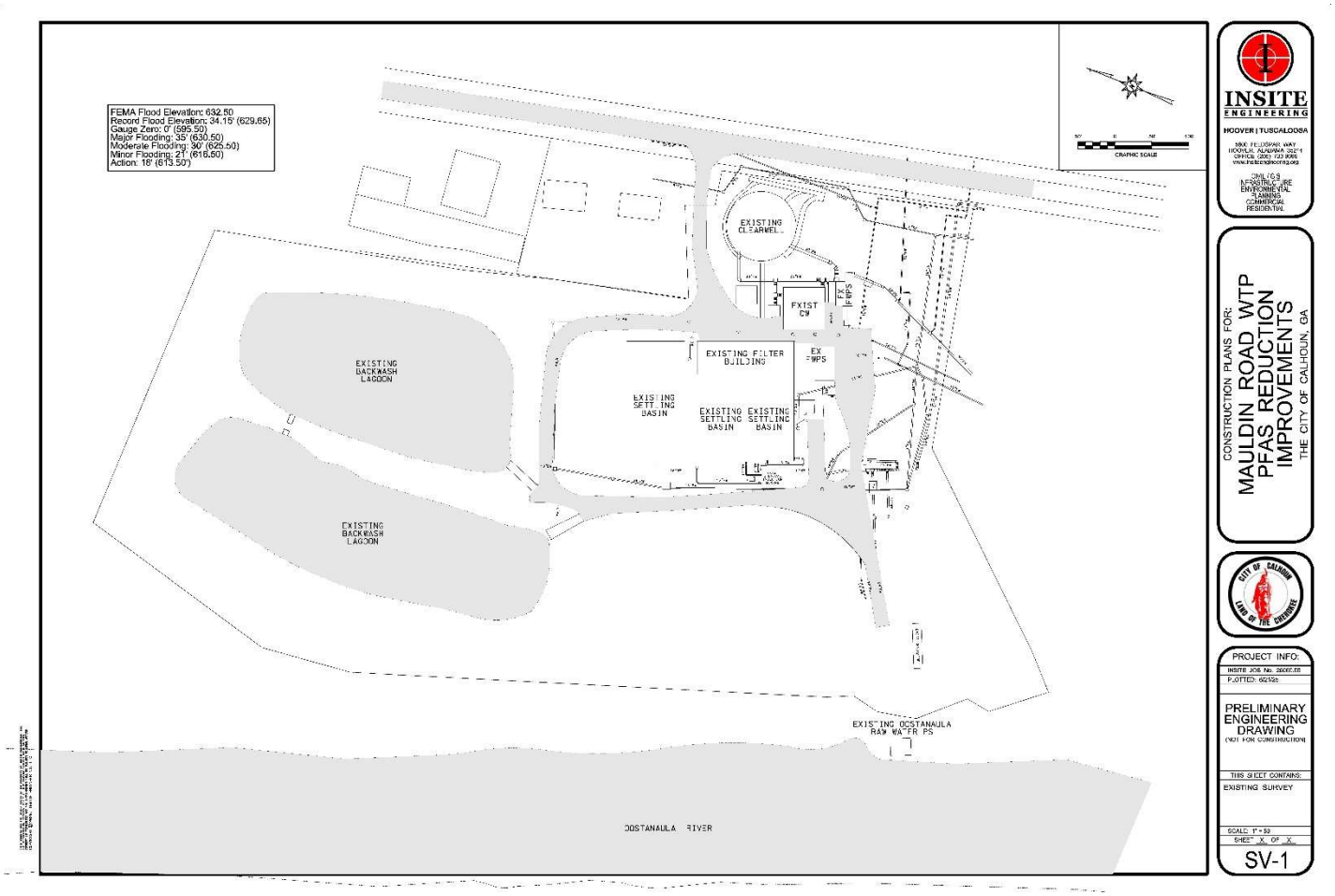
Mauldin Road WTP Existing Site

This aerial photo of the Mauldin Road WTP.

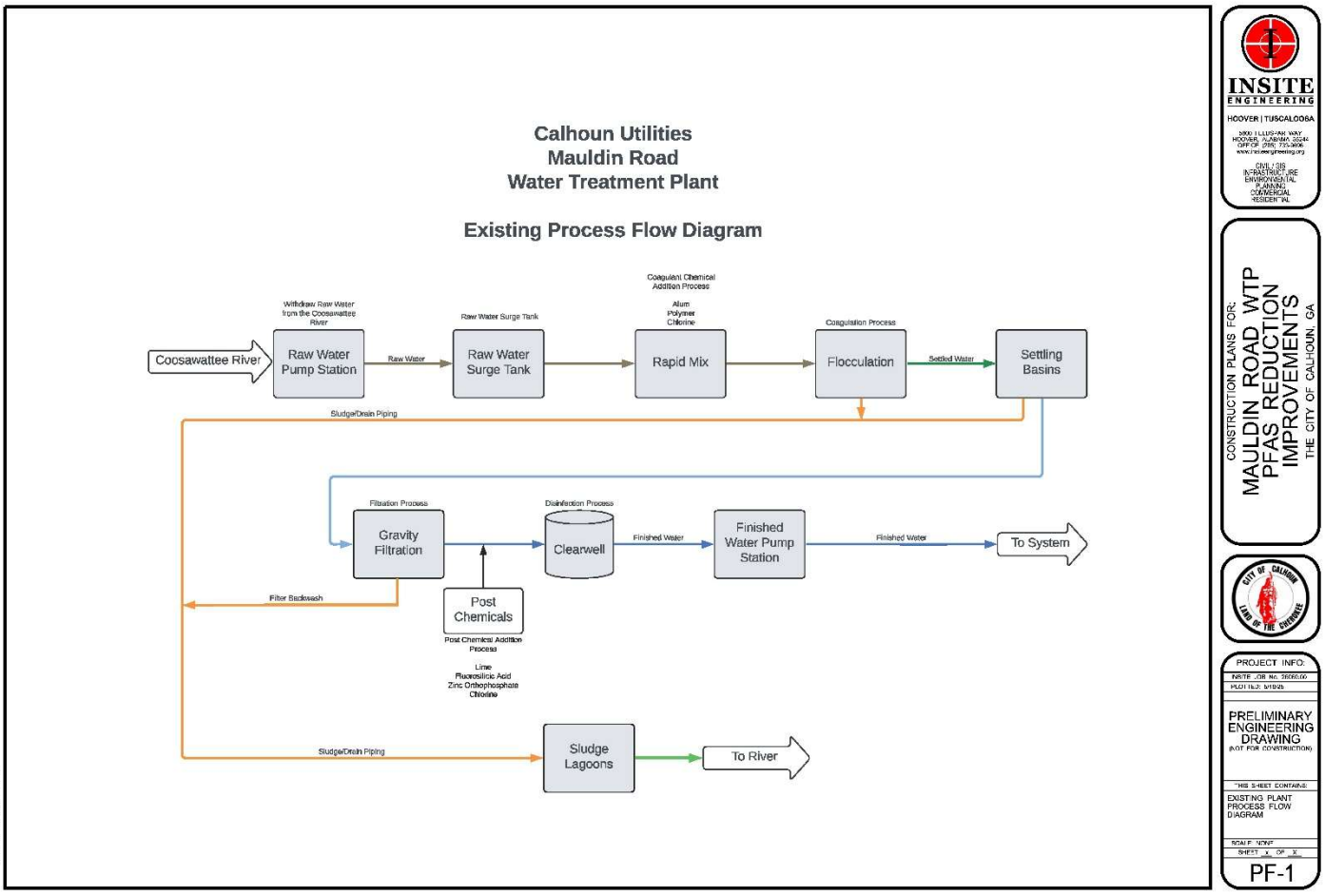


The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00

Mauldin Road WTP Existing Site Plan



Mauldin Road WTP Existing Process Flow Diagram



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CONSTRUCTION PLANS FOR:
MAULDIN ROAD WTP
PFAS REDUCTION
IMPROVEMENTS
THE CITY OF CALHOUN, GA

PROJECT INFO:
INSITE JOB No. 26060.00

PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
EXISTING PLANT PROCESS FLOW DIAGRAM

SHEET X OF X

PF-1

PFAS Reduction Pilot Study

The City of Calhoun performed pilot testing of technologies for removal of perfluoroalkyl and polyfluoroalkyl substances ("PFAS") from the filtered surface water sources at the Mauldin Road WTP in Calhoun, Georgia. The City was interested in determining the most cost-effective and sustainable treatment process to remove PFAS compounds from their water supply.

The following six technologies were tested at the Mauldin Road water treatment plant:

1. Rotec Flow Reversal Reverse Osmosis ("FR-RO")
2. Veolia Closed-Loop Reverse Osmosis ("CLRO")
3. DesaliTech Closed-Circuit Reverse Osmosis ("CCRO")
4. Calgon Granular Activated Carbon ("GAC") and Ion Exchange ("IX")
5. Jacobi GAC and IX
6. Aqua Aerobics AquaPRS Technology ("AquaPRS")

While all the treatment technologies tested were effective at removing significant amounts of PFAS from the Mauldin Road WTP raw water sources, each of the technologies were met with their own set of mechanical or chemical challenges. The highest removal of all PFAS compounds on a consistent and repeatable basis was provided by the various reverse osmosis treatment technologies, particularly the flow reversal reverse osmosis, the closed loop reverse osmosis and the closed-circuit reverse osmosis.

Based on our review of PFAS removal efficiencies, anticipated capital costs, anticipated annual operating costs, pilot equipment performance, the City staff input during the pilot study, and other considerations, and pending approval of the process by the Georgia EPD, InSite Engineering recommends that the City of Calhoun replace the existing mixed media gravity filter process treatment trains at the Mauldin Road WTP with filtered pre-treatment technology followed by high recovery reverse osmosis operating at a minimum 90% recovery rate.

The PFAS pilot mitigation pilot report is available upon request.

Intended Project Scope

Project overview

The City has approved our recommendation and selected installing MF/UF Membrane Filtration technology followed by High Recovery RO as the treatment process for reducing PFAS from the drinking water at the Mauldin Road Water Treatment Plant.

The Mauldin Road WTP PFAS Improvements Project will have a basis of design for treating 18 MGD Finished Water with PFAS mitigation processes. The design incorporates utilizing the existing raw water pump station, rapid mix, flocculation, & settling basins treatment process. The settled water will be then processed through New RO Pretreatment Membrane Filtration System for standard filtration. The New RO Pretreatment Membrane permeate will then be processed through a New High Recovery RO Filtration System to reduce PFAS in the drinking water process. Additionally, New Clearwell(s) and a Finished Water Pump Station will be installed. The permeate from the high recovery New RO Filtration System will go to the New Clearwell , then to the New Finished Water Pump Station. The New RO Pretreatment Membrane Filtration System and the New High Recovery RO Filtration System will be installed in a new building along with a New Operations Facility. This facility will include a new lab, operations center, offices, breakroom, restrooms, and other facilities needed by the operations staff.

The Waste Stream will be treated for PFAS reduction before being discharged from the Mauldin Road WTP. The intent here is to utilize the Existing Sludge Lagoons for all sludge collection, drains, and filter backwash. A new Waste Stream Pump Station will be installed to transfer this waste stream to the New Waste Stream Treatment Process. The RO Waste Brine will bypass the Existing Sludge Lagoons and will be fed to the Waste Stream Treatment Process. The intended waste stream treatment process will consist of treating all the WTP waste stream through a Granular Activated Carbon (GAC) filtration process for PFAS reduction.

Anticipated Cost

The anticipated capital cost of the project at the Mauldin Road WTP is estimated at approximately $182.3 million with an annual operational cost increase of approximately $6.89 million, for a total 80-year life cycle cost of approximately $733.1 million.

Treatment Capacity Flow Rate Design Parameters

Drinking Water Treatment Process

1. Existing permitted treatment capacity 18 MGD
2. Design Capacity: 18 MGD (24 MGD Future Capacity)
    a. Raw water Flow Rate: 21.83 MGD (29.11 MGD Future)
    b. RO Pretreatment Filtration Feed Flow Rate: 20.79 MGD (27.72 MGD Future)
    c. RO Pretreatment Filtration Design Recovery Rate: 95%
    d. RO Pretreatment Filtration Permeate Flow Rate: 19.80 MGD (26.4 Future)
    e. RO Feed Flow Rate: 19.80 MGD (26.40 Future)
    f. RO Design Recover Rate: 90%
    g. RO Permeate Flow Rate: 18 MGD Design (24 MGD Future)

Waste Stream Treatment

1. The Waste Stream Treatment Process design flow rates are as follows:

    a. Settling Basin Sludge Collection: 1.09 MGD (1.46 MGD Future)

    b. New RO Pretreatment Membrane Filtration Backwash: 1.04 MGD (1.39 Future)

    c. New Waste Stream Pump Station: 2.24 MGD (3.00 MGD Future)

    d. New RO Filtration Waste Brine Reject: 1.80 MGD (2.40 MGD Future)

    e. New PFAS Waste Stream Treatment: 4.04 MGD (5.40 MGD)

Reverse Osmosis Pretreatment Membrane Filtration

Ceramic Membranes have been evaluated and selected as a RO pretreatment filtration technology. The manufacturers recommended for this process are:

1. Ovivo - Submerged Silicon Carbide (SiC) Membranes
2. Aqua Aerobics - Skid Mounted Pressurized C-Series Ceramic Membrane System
3. Nanostone – Skid Mounted Pressurized CUF-Shield (CM-151) Ceramic Membrane System

Reverse Osmosis PFAS Reduction Filtration

High Recovery Reverse Osmosis filtration technology has been selected at Mauldin Road WTP as the PFAS reduction treatment process. The manufacturers recommended for this process are:

1. Dupont Desalitec SOAR Reverse Osmosis (CCRO)
2. Rotec Flow Reversal Reverse Osmosis (FR-RO)
3. Veolia PROflex 1000 RO Series Reverse Osmosis (CLRO)

Waste Stream PFAS Mitigation Treatment Process

The Waste Stream will be treated for PFAS reduction before being discharged from the Mauldin Road WTP. The intent here is to utilize the Existing Sludge Lagoons for all sludge collection, drains, and filter backwash. A new Waste Stream Pump Station will be installed to transfer this waste stream to the New Waste Stream Treatment Process. The RO Waste Brine will bypass the Existing Sludge Lagoons and be fed to the Waste Stream Treatment Process.

The following treatment technologies will be evaluated for the Waste Stream Treatment Process:

1. GAC
2. GAC/IX
3. AquaPRS
4. Ovivo O-Lift & O-Break (PFAS Destruction)

Finished Water Pump Station and New Clearwells

The City has requested to install a second New Clearwell and a New Finished Water Pump Station for this project. The design capacity of the New Finished Water Pump Station will be 18 MGD (24MGD Future). The capacity of the New Clearwell will be determined in the Preliminary Engineering Phase of this project. The intent is to also utilize the Existing Clearwell if possible.

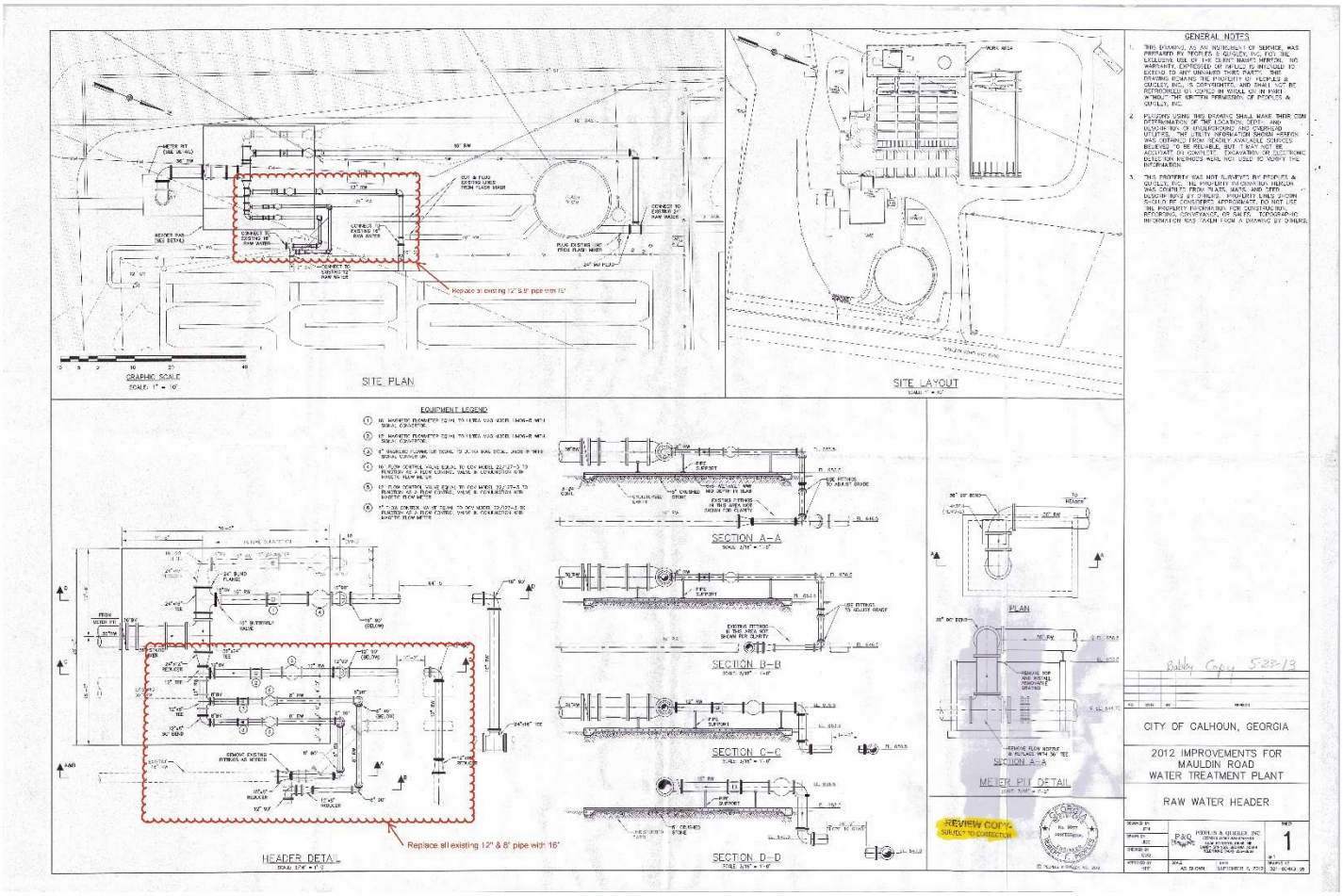
Influent Flow Meter Hydraulic Improvements

Calhoun experiences high head loss through the existing 16” Raw Water Main going to and from the existing Raw Water Flow Meter when trying to produce full capacity treatment flows. Our intent is to tie into the existing 24” Raw Water main and install a new 36” Raw Water main and New Raw Water Flow Meter then tie back into the existing 36” Raw Water Main. This will allow the WTP to stay in operation while the New Raw Water main & Flow Meter is installed. Then the plant can shut down long enough to tie into both ends of the existing Raw Water Mains.



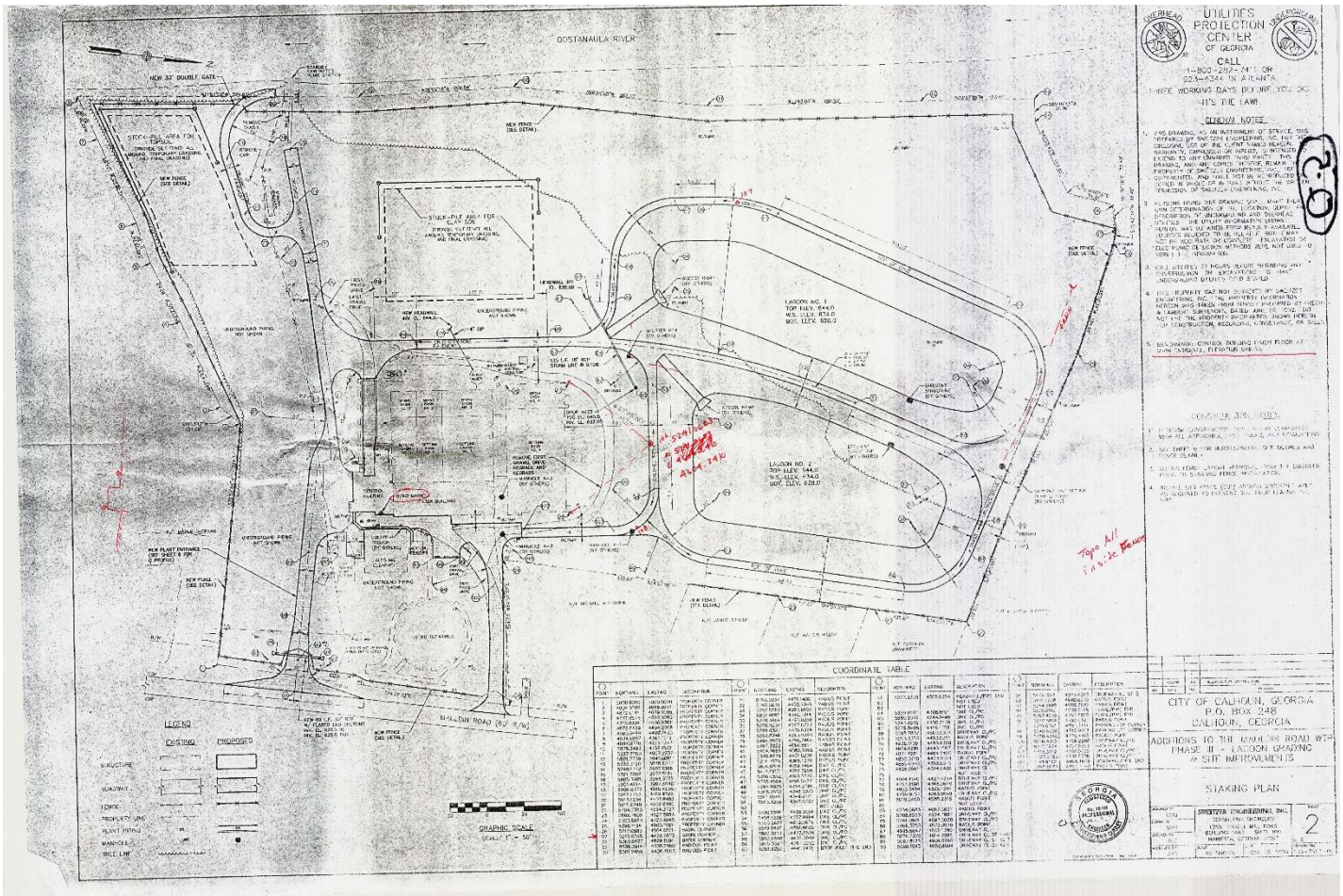
Chemical Injection Hydraulic Improvements

In 2012 modifications were made to the Raw Water Header at the chemical injection/mixing point. Calhoun experiences hydraulic issues through this area when trying to produce full capacity treatment flows. Our intent here is to replace all the 12” & 8” piping installed in this project with 16” piping. It is critical the contractor only has 1 settling basin down at a time while the work is performed. See the drawing below for details.



Existing Sludge Lagoons Modifications

Calhoun has two existing Sludge Lagoons that are used for filter backwashing, settling basin sludge washdown, & other treatment process drains. The intent is to utilize the existing sludge lagoons for the same treatment process. The existing Sludge Lagoons are currently not lined. The intent is to modify both lagoons by lining them with concrete and add a cross pipe to allow Calhoun to operate them in series.



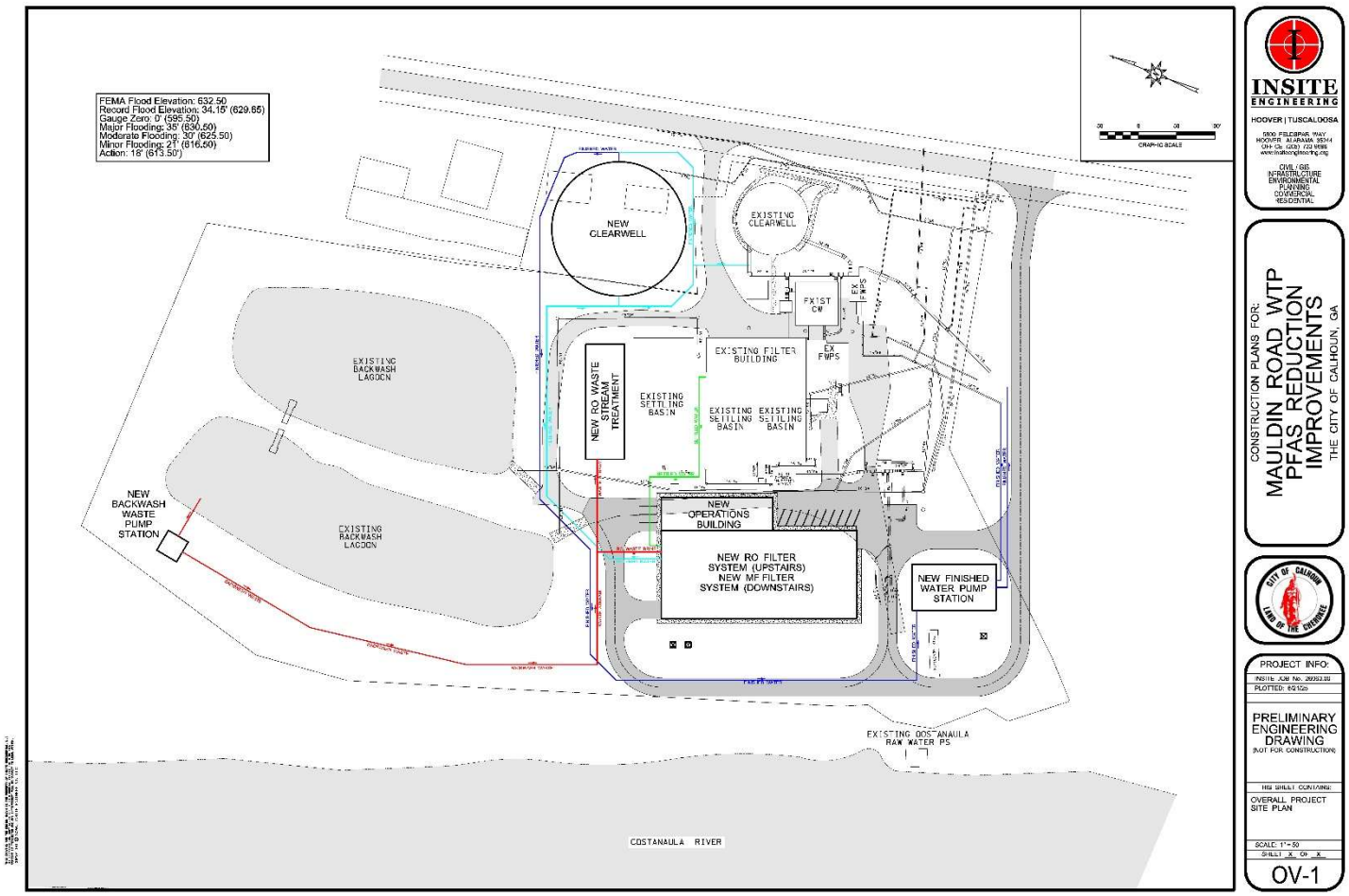
Miscellaneous Plant Modifications

Other plant improvements for this project include:

- Repair or replace Existing Settling Basin Sludge Collection
- Removing Existing Flocculation Baffle Lifting System
- Installing handrails on the Existing Flocculation Basins
- Rehabilitation of the Existing Filter building creating a New Training Meeting Office Facility
- Demolition of Existing Finished Water Pumps
- And other miscellaneous items

The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00

Mauldin Road WTP Proposed Site Plan

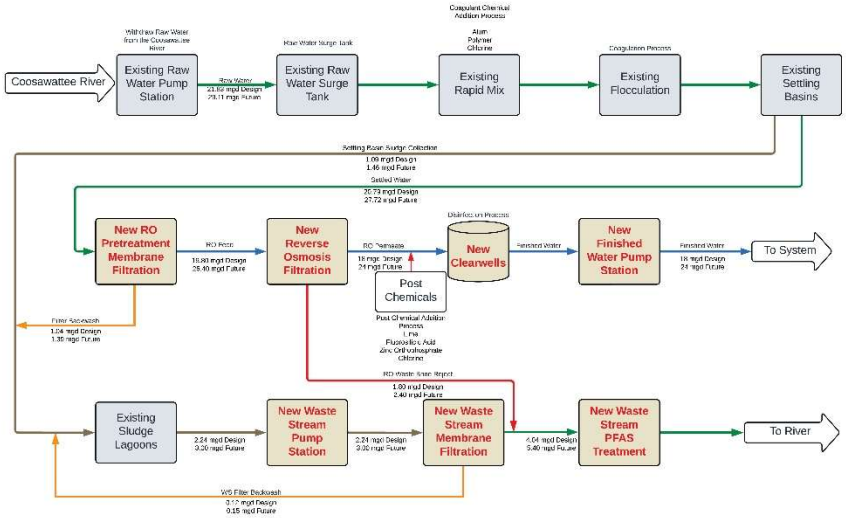


The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00

Mauldin Road WTP Proposed Process Flow Diagram

Calhoun Utilities
Mauldin Road
Water Treatment Plant

Proposed Process Flow Diagram



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CONSTRUCTION PLANS FOR:
MAULDIN ROAD WTP
PFAS REDUCTION
IMPROVEMENTS
THE CITY OF CALHOUN, GA

PROJECT INFO:
INSITE JOB No. 26060.00

PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
PROPOSED PLANT PROCESS FLOW DIAGRAM

PF-2

Exhibits

Exhibit No. MF-1 (RO Pretreatment Option No. 1) - Aqua Aerobics Skid Mounted Pressurized C-Series Ceramic Membrane System

Preliminary Design & Budgetary Proposal



Aqua-Aerobic® Membrane Systems

Featuring Aqua MultiBore® Membranes

For nearly 50 years, Aqua-Aerobic Systems has provided thousands of customers with adaptive treatment solutions in biological processes and filtration for both water and wastewater applications. Our knowledge and expertise in applied engineering and manufacturing allows us to provide highly efficient and cost effective technologies that require less energy, less maintenance and provide a low cost of ownership over the life of the plant.

Aqua-Aerobic® Membrane Systems featuring NO BREAK Aqua MultiBore® membranes are available in both polymeric and ceramic options. Each system is designed to effectively remove suspended solids, particulate phosphorus, bacteria, cysts and other harmful impurities, resulting in safe, high quality water.

Every membrane system is designed specifically for the application. The type of membrane used, polymeric or ceramic, is dependent on attributes such as waste characteristics, treatment objectives and the best economic solution for the plant.

System Applications and Advantages

Applications

- Drinking Water Systems
- Surface Water Treatment
- Well Water Source
- Industrial Water Treatment
- Pretreatment to Reverse Osmosis
- Desalination
- Reuse
- Backwash Water Recovery
- Tertiary Wastewater Treatment
- New Plants, Retrofits, Expansions

Advantages

- No Break Membranes
- Less Chemical Usage
- High Water Recovery Rate
- Low Energy Consumption
- High Permeability
- Compact and Expandable
- No Basins or Lifting Equipment
- Simple Operation and Low Maintenance



Aqua MultiBore® Polymeric Membrane Installation



Aqua MultiBore® C-Series Typical Installation

Membrane Systems Installation Profiles



Ground Water

- 3.0 MGD Byesville, OH Drinking Water Plant
- Replaced failing trains with Aqua MultiBore® P-Series
- Reduced effluent turbidity to <0.03 NTU
- Treats well water containing surface water intrusion



Surface Water / Backwash Waste

- 7.0 MGD Butte, MT Drinking Water Plant
- Utilizes Aqua MultiBore® C-Series membranes
- Backwash recovery membranes reduce waste to < 14,000 gpd
- On-demand direct filtration via gravity keeps power usage low



Municipal Wastewater

- 1.8 MGD Shibaura Wastewater Plant in Tokyo, Japan
- Utilizes Aqua MultiBore® C-Series membranes
- Used for non-potable reuse
- Pre-ozonation results in high flux



Industrial Wastewater

- 0.5 MGD AbbVie Pharmaceutical in Barceloneta, PR
- Utilizes Aqua MultiBore® P-Series membranes
- Provides pretreatment for reverse osmosis (RO) systems
- Effluent reused in cooling towers and process



Seawater / Blowdown Waste

- 22.2 MGD Abu Dhabi Desalination Plant, UAE
- Utilizes Aqua MultiBore® P-Series membranes
- Provides pretreatment for seawater RO
- Treats blend of seawater and steel mill blowdown



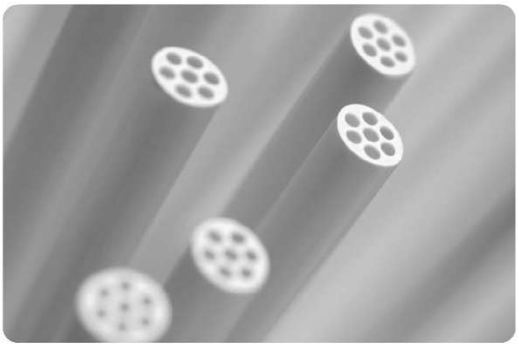
Pilot Testing

- Complete piloting capabilities
- Ceramic and polymeric membrane systems
- 1-30 gpm flow ranges available
- Skid or trailer mounted units

Aqua MultiBore® P-Series

Polymeric Membranes

The Aqua MultiBore® polymeric membrane has been successfully applied at over 225 water and wastewater installations in the last 17 years, including those with high solids applications.

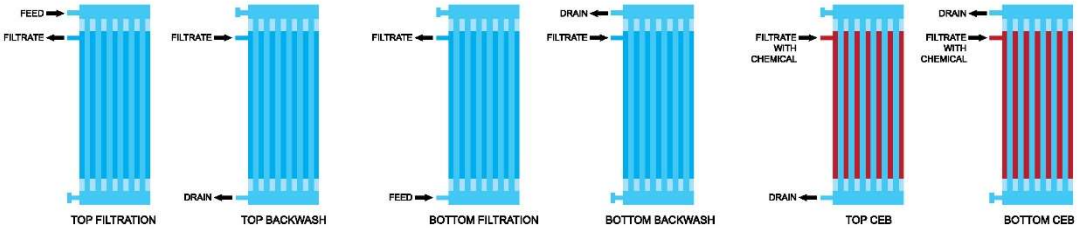


Aqua MultiBore® P-Series Polymeric Design

Polymeric Membrane Features:

- Large diameter bores
- 0.02 µ UF membrane is rated for 4 log virus removal
- Each fiber is made from one material in a single process
- Inside-outside flow path requires no air scour
- Low fouling, can be cleaned with wide pH range (1-13)
- Superior strength – No fiber breaks!

Modes of Operation



Filtration Mode:

- During top filtration, influent enters the top of each membrane module and flows down through each fiber bore
- The 0.02 µ pores allow water to pass through to the outside of the fiber but retain suspended solids, bacteria, cysts, and viruses
- During bottom filtration, influent enters the bottom of each module and flows up through the fiber bores
- The system alternates between top and bottom filtration to evenly distribute impurities along the entire fiber length
- In both filtration modes, filtered water flows from the outside of the fibers through the filtrate port on the side of the module

Backwash Mode:

- During both the top and bottom backwash modes, filtered water enters the filtrate port on the side of each membrane module and flows into each fiber
- During top backwash, water flows down through the fiber bores, into the bottom of the module and out to drain
- During bottom backwash, water flows up through the fiber bores, into the top of the module and out to drain
- The system alternates between top and bottom backwash so that impurities collected at both module ends can be efficiently flushed out
- Backwash occurs every 20 - 80 minutes, depending on influent quality

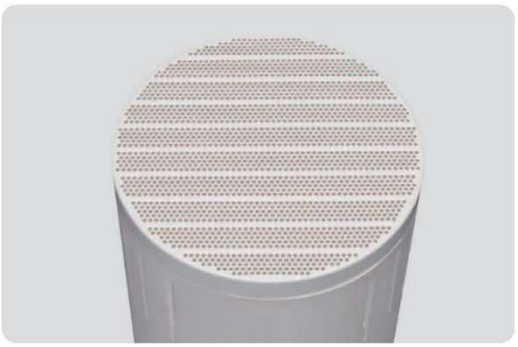
Chemically-Enhanced Backwash (CEB) Mode:

- Chemicals are periodically added to the backwash water to dissolve any impurities that were not removed during the backwash modes
- The flow paths are the same as during backwash, only small amounts of chemical are injected into the filtrate prior to entering the modules
- Caustic is used to dissolve organics, acid is used to dissolve inorganic matter, and chlorine is used for occasional disinfection
- The membranes are soaked in the chemical for 10-20 minutes before being flushed out
- A CEB is performed every 8 -168 hours, depending on influent quality

Aqua MultiBore® C-Series

Ceramic Membranes

The Aqua MultiBore® C-Series ceramic membrane has been successfully applied in both water and wastewater applications with more than 175 installed systems from pretreatment to advanced treatment of drinking water.

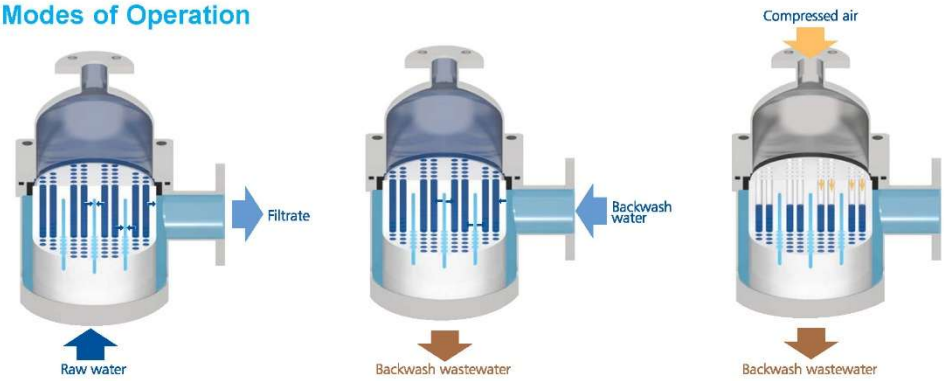


Aqua MultiBore® C-Series Ceramic Design

Ceramic Membrane Features:

- Short and infrequent backwashes result in very high recoveries
- Only 5 out of more than 20,000 elements have been replaced in 20 years
- Single-piece ceramic element with two seals is very unlikely to break or leak
- Independent 10-module rows increase flexibility and decrease footprint
- Inside-out filtration enables a high cross-flow velocity for maximum cleaning
- Material is very resistant to corrosion and high pressures/ temperatures
- Systems are simple to operate and maintain
- Extremely uniform 0.1 µ pores result in high fluxes
- Used membranes can be recycled

Modes of Operation



Filtration Mode:

- During filtration, influent enters from the bottom of each membrane module and flows up through each ceramic filtration cell
- The 0.1 µ pores allow water to pass through to the ceramic filtrate collection cells
- Collected filtrate then exits the membrane through the filtrate port on the side of the module

Backwash Mode:

- During backwash, filtered water enters the filtrate port on the side of each membrane module and flows into each filtration cell
- 70 psi filtrate detaches fouling matter within the filtration cells
- Most impurities are collected at the bottom of the module and efficiently flushed out
- Typical backwash occurs every 4 to 12 hours

Airflush Mode:

- Compressed air is injected into the top of the membrane sub-module to remove any remaining impurities that were not removed during the backwash mode
- Airflush typically takes 2-5 seconds at a maximum pressure of 30 psi
- The system is then placed back into normal filtration mode

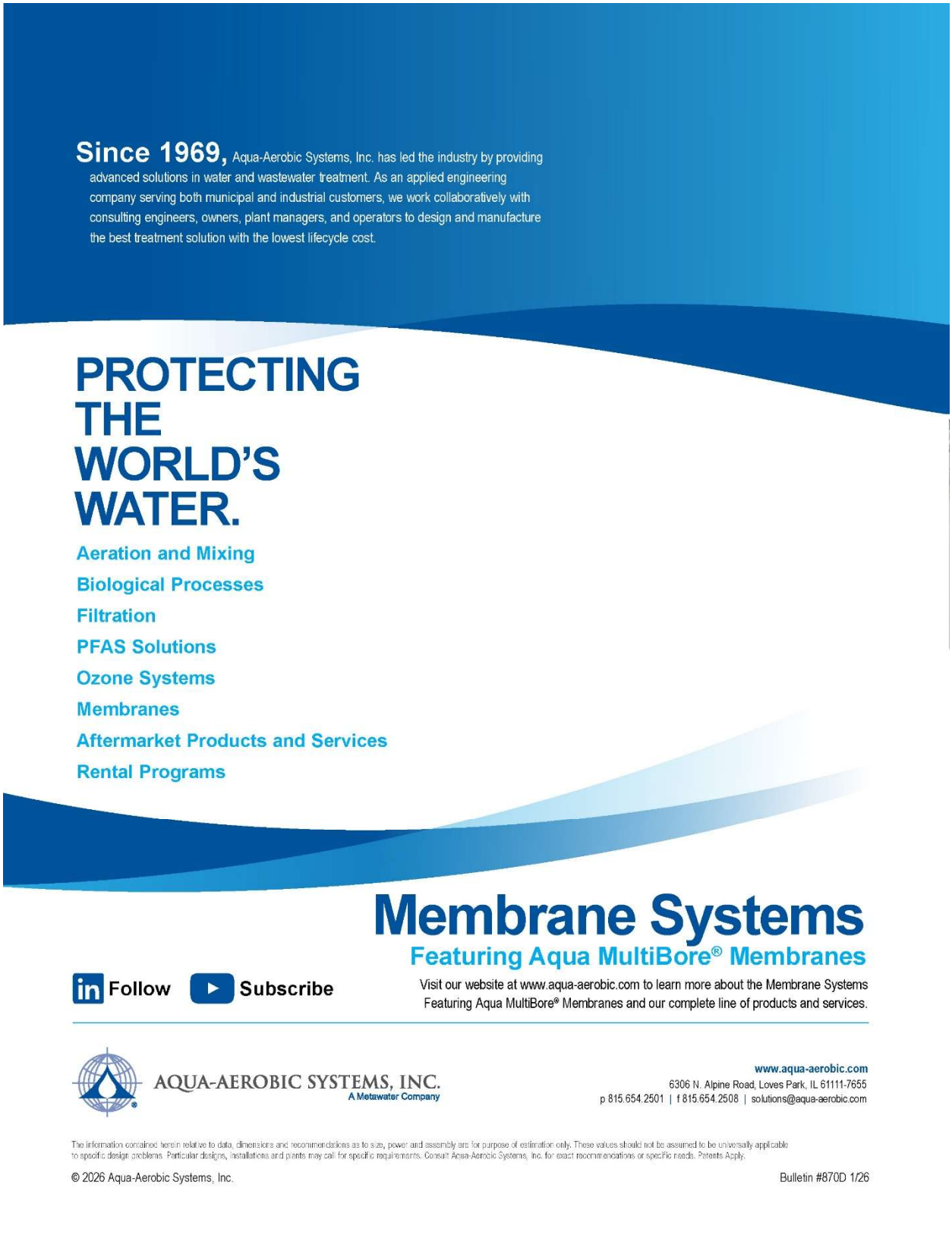

Since 1969, Aqua-Aerobic Systems, Inc. has led the industry by providing advanced solutions in water and wastewater treatment. As an applied engineering company serving both municipal and industrial customers, we work collaboratively with consulting engineers, owners, plant managers, and operators to design and manufacture the best treatment solution with the lowest lifecycle cost.
PROTECTING THE WORLD'S WATER.
Aeration and Mixing
Biological Processes
Filtration
PFAS Solutions
Ozone Systems
Membranes
Aftermarket Products and Services
Rental Programs
Membrane Systems
Featuring Aqua MultiBore® Membranes
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A Metawater Company
www.aqua-aerobic.com
6306 N. Alpine Road, Loves Park, IL 61111-7655
p 815.654.2501 | f 815.654.2508 | solutions@aqua-aerobic.com
The information contained herein relative to data, dimensions and recommendations as to size, power and assembly are for purpose of estimation only. These values should not be assumed to be universally applicable to specific design problems. Particular designs, installations and plants may call for specific requirements. Consult Aqua-Aerobic Systems, Inc. for exact recommendations or specific needs. Patents Apply.
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Bulletin #870D 1/26

Exhibit No. MF-2 (RO Pretreatment Option No. 2) - Nanostone Skid Mounted Pressurized CUF-Shield (CM-151) Ceramic Membrane System

nanostone

Not for design purposes
Contact Nanostone for assistance

CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™



Product Overview

CUF|Shield™ represents the cornerstone of Nanostone ceramic ultrafiltration technology. Engineered for excellence, this module delivers consistent, high-quality filtration for a broad range of industrial and municipal applications. Durable ceramic membrane construction provides long-term reliability and robust performance in diverse water treatment scenarios. CUF|Shield enables cost-effective filtration technology, optimized for efficiency and longevity, while providing a low-maintenance solution.

Applications

CUF|Shield™ excels in large-scale urban and rural drinking water and wastewater filtration. In core industrial applications, CUF|Shield outperforms competitors in process water, cooling towers, coal/rare earth mineral mining, and water reuse scenarios where high purity standards are required. Boiler feed and cooling water filtration projects utilize CUF|Shield to provide protection for critical infrastructure in power generation applications.

Specifications

Surface Area		24,3 m2	262 ft2
Nominal Channel Size (Hexagonal)		2,4 mm	0.09 in
Weight (+/- 5 kg)	**Dry**	80 kg	176 lbs
	As Shipped	82 kg	181 lbs
Maximum Module Hold Up Volume		32 L	8.5 gal
Vessel Materials		• Fiberglass Reinforced Plastic (FRP) Housing • CPVC and Noryl® Endcaps • Fluor Elastomer (FKM) O-Rings • Super Duplex 2507 SS Permeate Port	
Membrane Material		$\alpha - Al_2O_3$	
Membrane Nominal Pore Size		30 nm	
Module Operating Position		Vertical	



APPROVED DRINKING WATER CERTIFICATIONS

✓ NSF/ANSI/CAN 61 & NSF/ANSI 419

UL CERTIFIED
HEALTH EFFECTS US-CA
MH61725
HEALTH EFFECTS US
MH63928
Drinking Water System Component
NSF/ANSI/CAN 61
NSF/ANSI 419

CUF|Shield™ nanostone

nanostone

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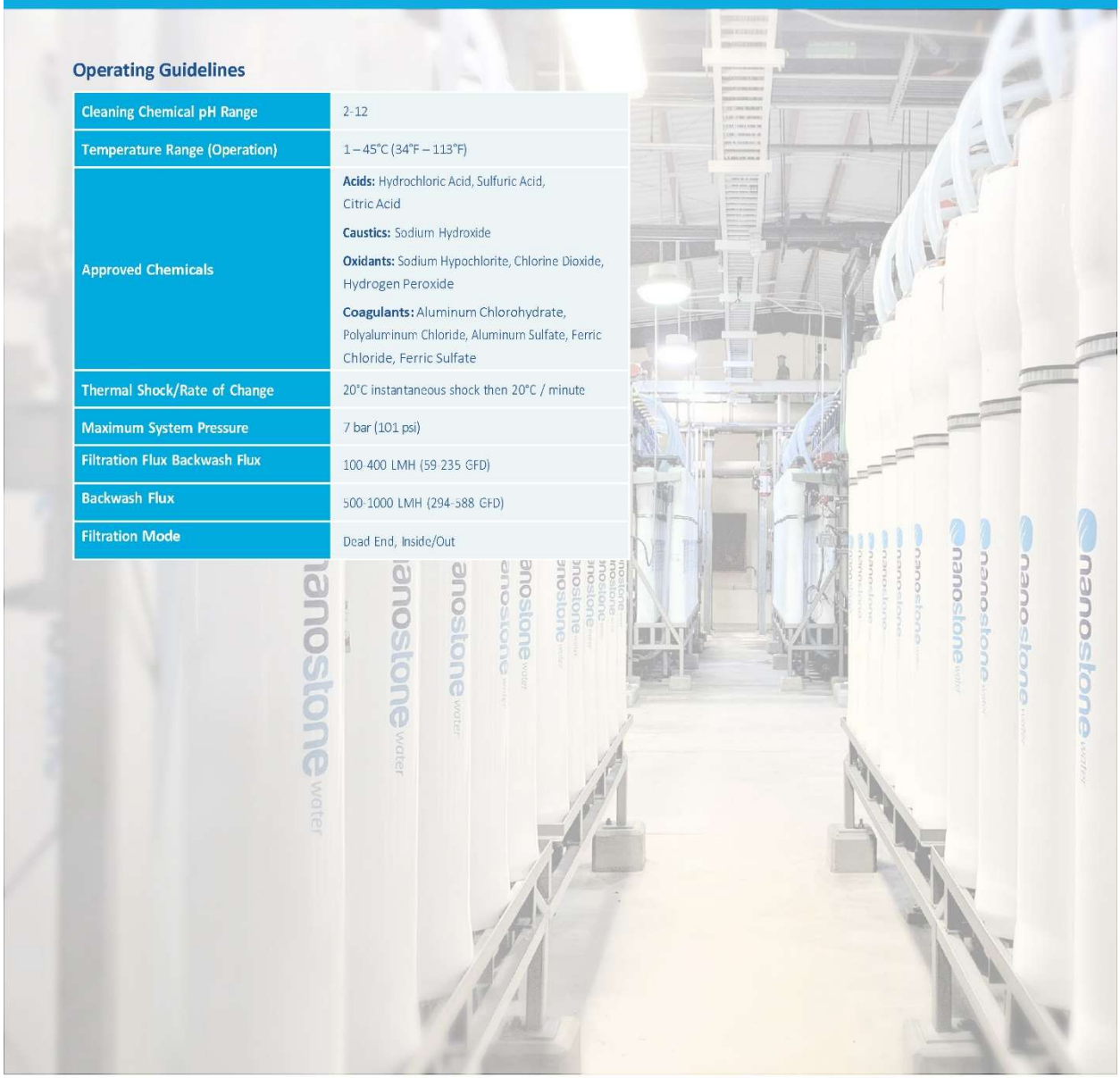
CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™

Operating Guidelines

Cleaning Chemical pH Range	2-12
Temperature Range (Operation)	1 – 45°C (34°F – 113°F)
Approved Chemicals	**Acids:** Hydrochloric Acid, Sulfuric Acid, Citric Acid **Caustics:** Sodium Hydroxide **Oxidants:** Sodium Hypochlorite, Chlorine Dioxide, Hydrogen Peroxide **Coagulants:** Aluminum Chlorohydrate, Polyaluminum Chloride, Aluminum Sulfate, Ferric Chloride, Ferric Sulfate
Thermal Shock/Rate of Change	20°C instantaneous shock then 20°C / minute
Maximum System Pressure	7 bar (101 psi)
Filtration Flux Backwash Flux	100-400 LMH (59-235 GFD)
Backwash Flux	500-1000 LMH (294-588 GFD)
Filtration Mode	Dead End, Inside/Out



nanostone

Not for design purposes
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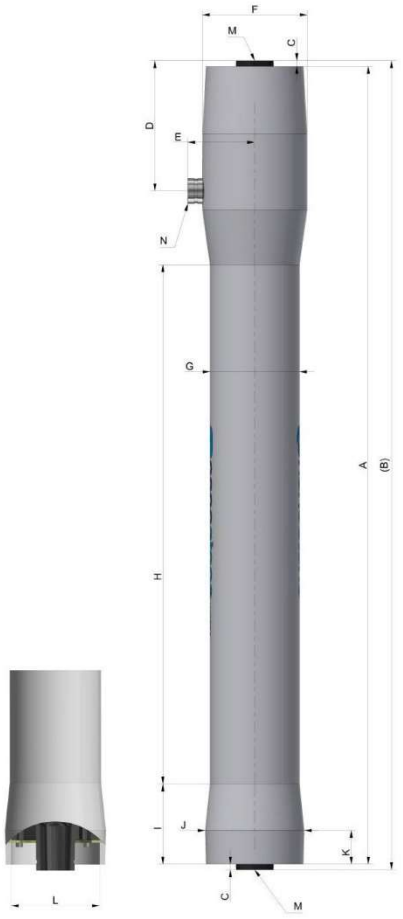
CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™

Physical Dimensions

CUF|Shield™			mm	inch
Module Length	+/- 3,5mm	A	1891	74.5
	+/- 5,1mm	B	1918	75.5
Port Projection	+1,3/-2,6mm	C	14	0.5
Side Port Dimension	+1,3/-2,6mm	D	309	12.2
	+0,3/-1,0mm	E	159	6.3
Module Diameter Top	+4,0/-0,5mm	F	249	9.8
Module Diameter Mid	+/-1,5mm	G	212	8.3
Length of Diameter	+/- 5,0mm	H	1246	49.1
	+/- 10,0mm	I	170	6.7
Module Diameter Bottom	+3,0/-1,0mm	J	233	9.2
Length of Cylindrical Diameter	+/-10,0mm	K	105	4.1
Inner Module Diameter	+0,5/-1,0mm	L	206	8.1
Grooved Fitting Feed/Reject (Qty 2)		M	DN-80	3-inch
Grooved Fitting Permeate		N	DN-50	2-inch



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Q.1 VT PRD 151EN Rev18 JBL (10/25)

Nanostone Contact Information:

info@nanostone.com — www.nanostone.com

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Exhibit No. MF-3 (RO Pretreatment Option No. 3) - Ovivo Submerged Silicon Carbide (SiC) Membranes

SiCBLOX™ SYSTEMS

LIMITLESS POSSIBILITIES

OVIVO
Worldwide Experts in Water Treatment

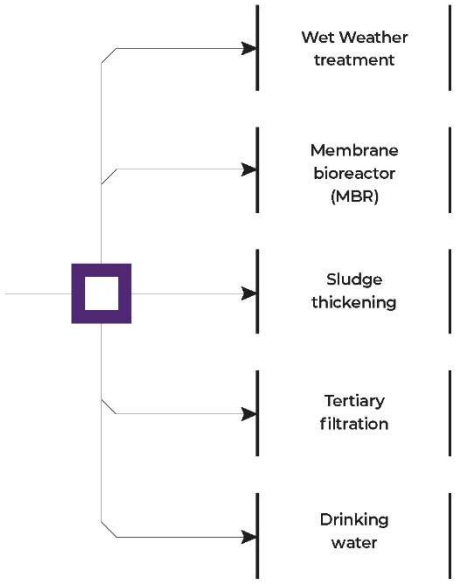
The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00



WHERE IS SiC USED?

SiC IS USED IN A WIDE VARIETY OF WATER AND WASTEWATER APPLICATIONS IN BOTH MUNICIPAL AND INDUSTRIAL SECTORS. IT'S PRIMARY GOAL IS TO REMOVE SOLIDS, TOXIC POLLUTANTS, AND PATHOGENS, CREATING A SAFE, CLEAN, AND SUSTAINABLE WATER SOURCE.

SiC is used in applications such as



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SiCBLOX™ SYSTEMS

All too often all of the focus is placed on the membrane, portraying it as a black box that is independent of its surroundings. The reality is that membranes are one of many subsystems that go into any water or wastewater treatment plant. While the membranes are often the workhorse of a treatment system, they can only be successful if the rest of the system is designed properly.

The combination of Cembrane SiC Technology with Ovivo's system integration and process expertise have created a powerful new brand of treatment systems: SiC BLOX Systems. SiC BLOX Systems have the widest range of applications with the widest operating window to solve new and existing problems.

SiC Blox systems come in conventional, in-ground designs, packaged plants ("micro"), and mobile configurations ("remote").



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stormBLOX™

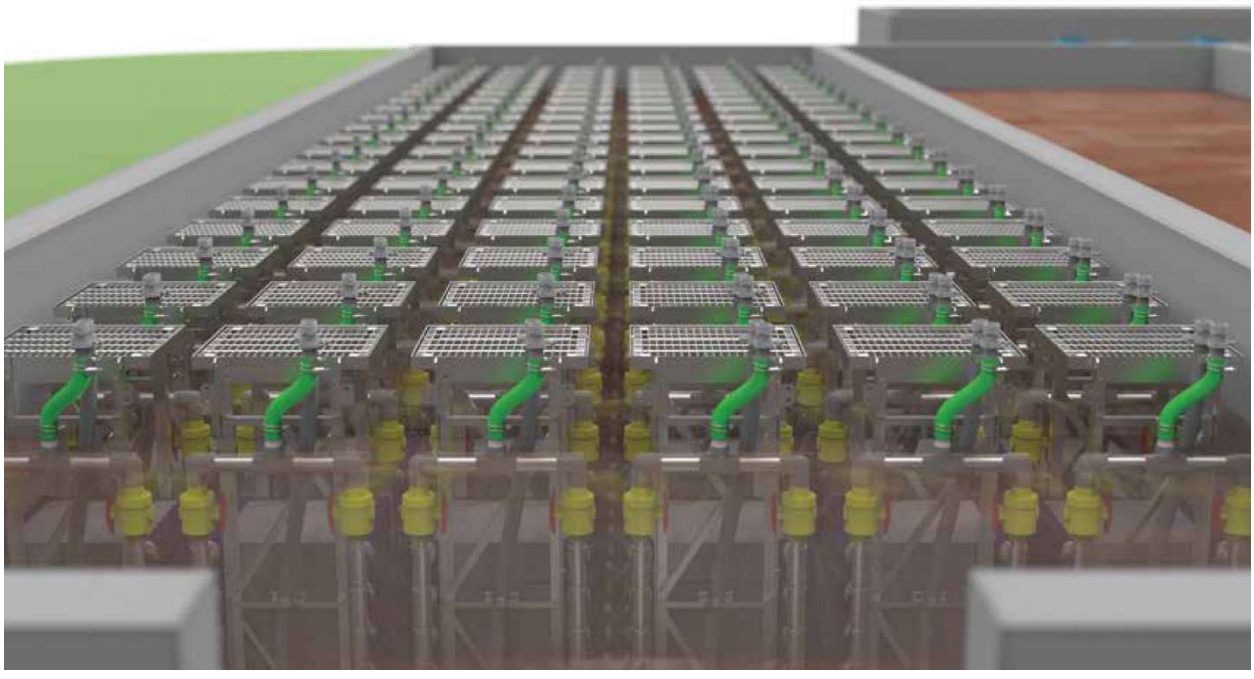
SiC RAPID STORM TREATMENT

Climate change is creating bigger storms and more pollution. Every year over 850 billion gallons of untreated sewage are discharged into our waterways. Beaches close. Fish die. People get sick. Storm driven sewer discharges are a big problem, and they're getting worse. stormBLOX technology offers a simple and a sustainable treatment solution to this huge problem.

stormBLOX instantly treats right at the on-set of a storm while physically blocking solids and pathogens from being discharged into our waterways.

Other treatment options, such as ballasted clarification, compressed media filtration, cloth filtration, and chlorination simply can't treat storm flows as quickly and as effectively as stormBLOX.

These other technologies pass thousands to millions of gallons untreated at the onset of a storm as they come on line. Plus, stormBLOX effluent meets all disinfection requirements without supplemental chemicals, preventing toxic by-products from harming aquatic life.

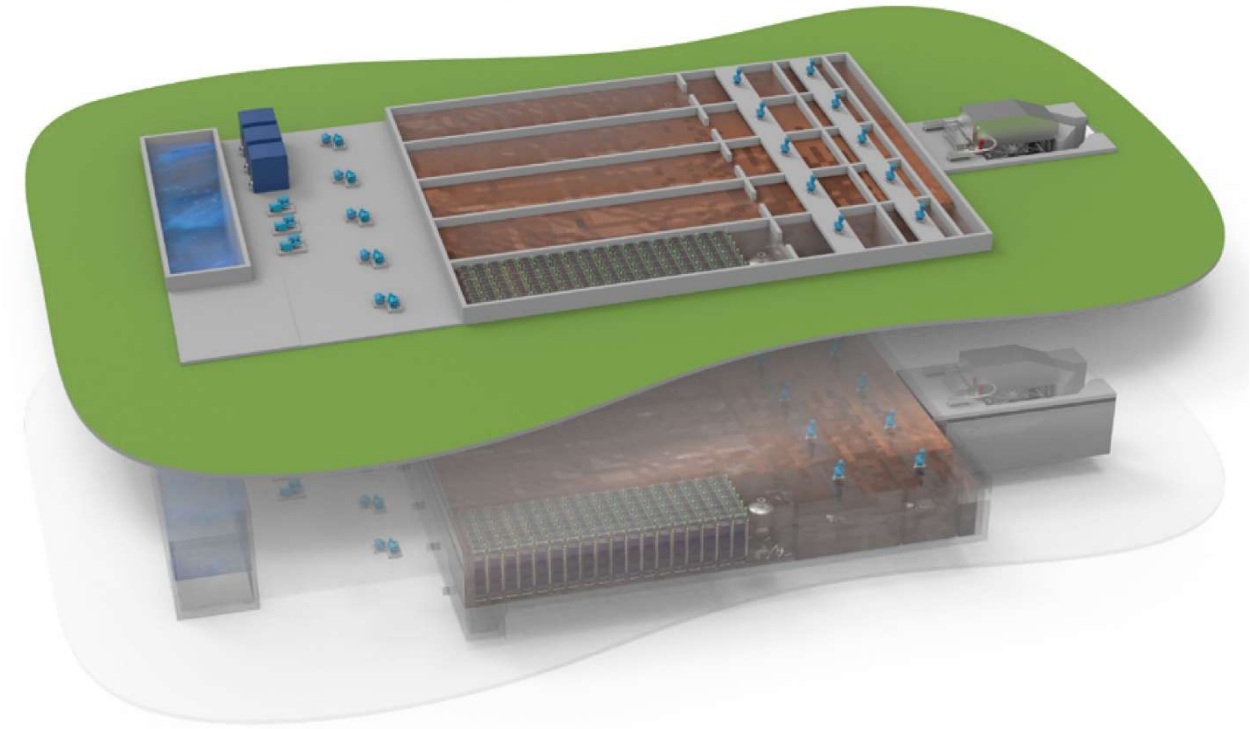


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stormBLOX™

SiC RAPID STORM TREATMENT



stormBLOX IS USED IN THE FOLLOWING APPLICATIONS/MARKETS:

- CSO facilities with consent decrees
- SSO facilities with consent decrees
- MBR plants with >3Q peaking factors due to high I&I
- CAS plants with >5Q peaking factors due to high I&I

BENEFITS OF stormBLOX INCLUDE:

- Disinfection without chemicals
- Instantaneous treatment
- Supplement secondary treatment
- No disinfection by-products
- Utilize as tertiary filtration system during dry weather
- Extremely small footprint, easily fits into existing infrastructure
- Easily placed off-line regardless of weather conditions

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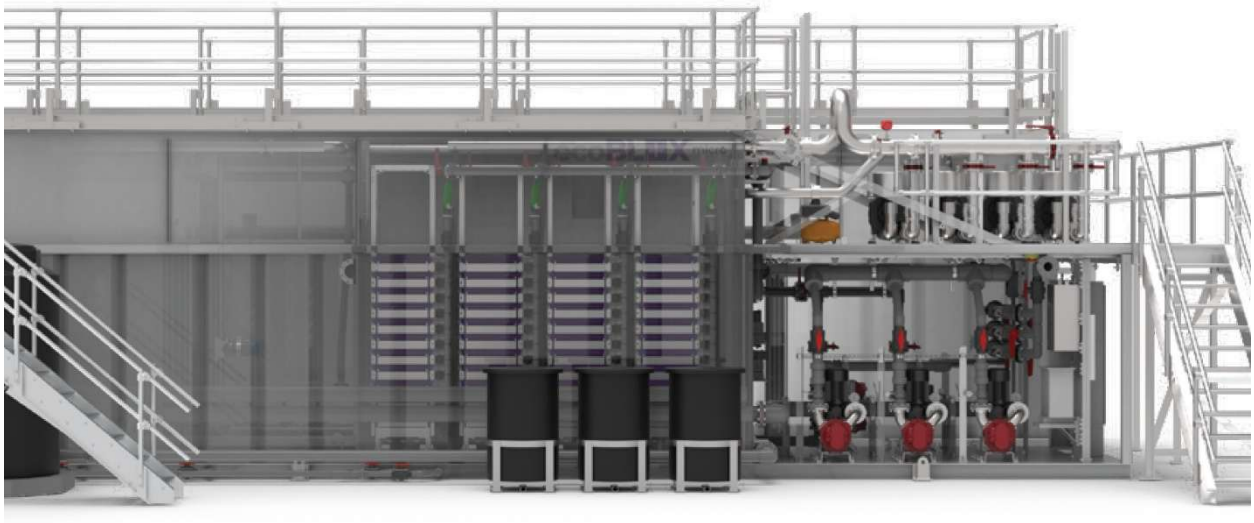


ecoBLOX®

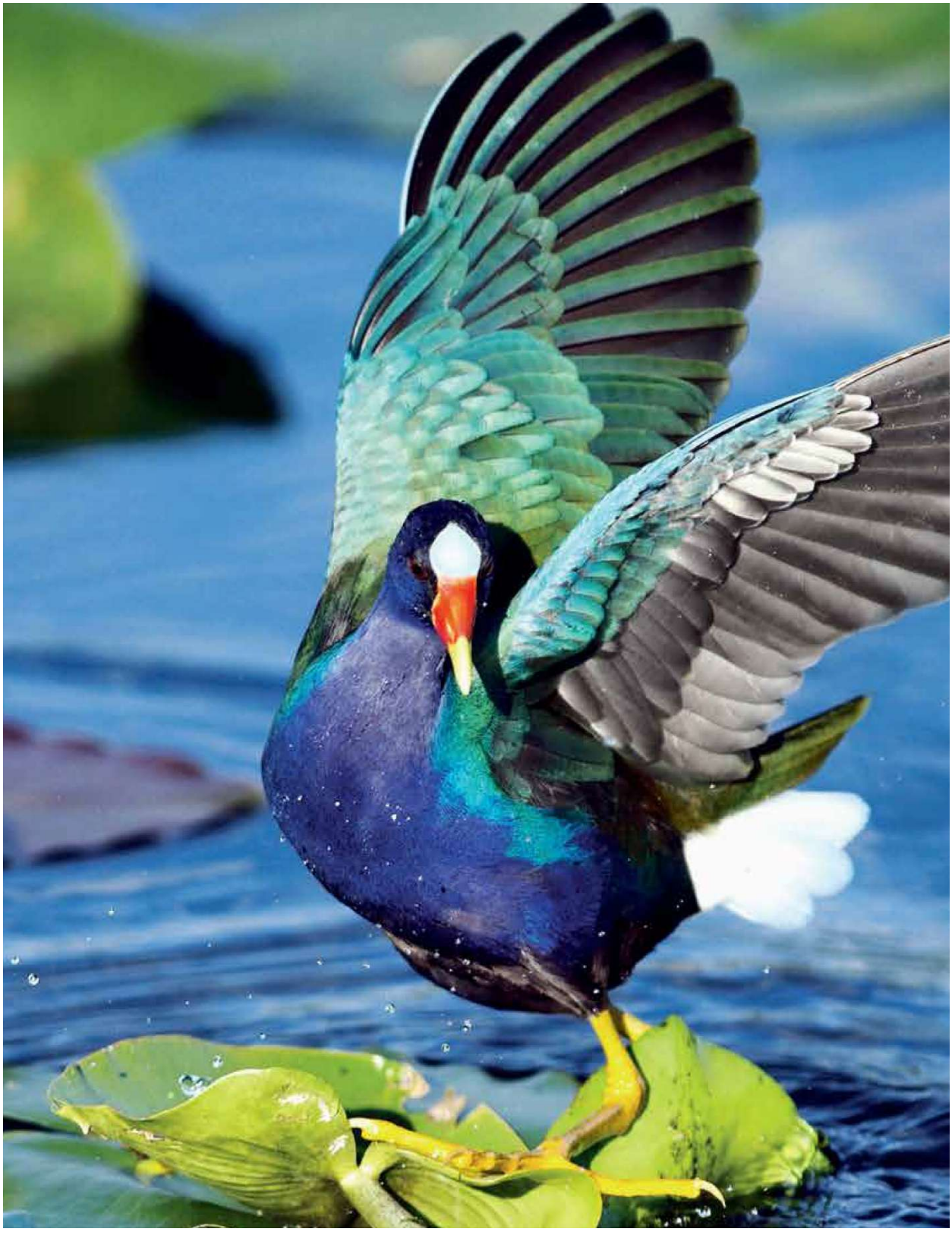
SiC MEMBRANE BIOREACTOR

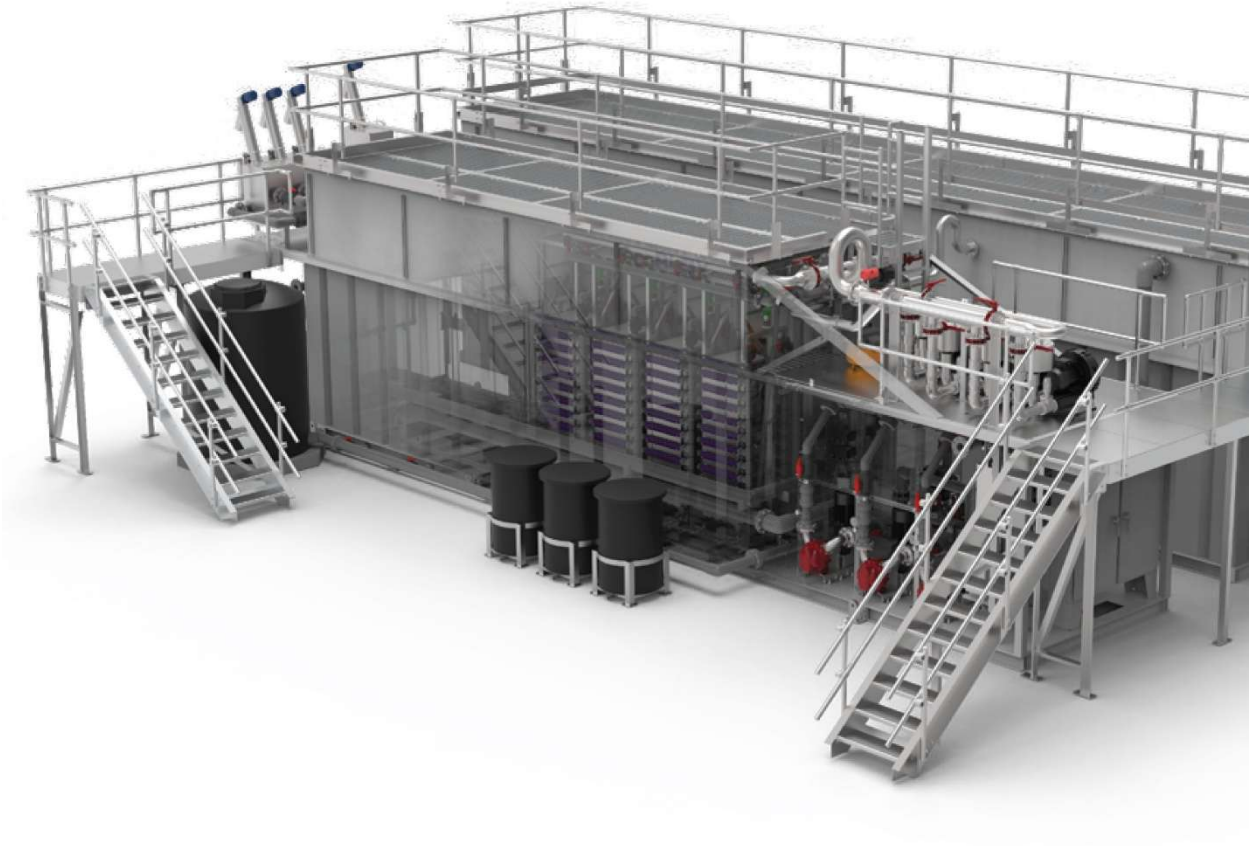
MBRs are a fantastic technology that we need – it provides a level of wastewater treatment that no other technology can, but they sometimes face operational challenges or difficulties. Let's remember that membranes in an MBR are in a turbulent, high mixed liquor, high fouling environment which can place tremendous stress on any membrane. ecoBLOX systems can endure and withstand the stresses of an MBR environment by utilizing membranes that are a rock!

ecoBLOX systems are truly resilient. ecoBLOX systems have the widest operational window meaning they can adapt, without failure, to changes in process conditions. This ability to adapt ensures smooth operation, long membrane life, and low life cycles costs. ecoBLOX plants are also a great fit for installations with seasonal flow, like ski resorts, where temporarily shutting down the system for an extended period of time makes sense.



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ecoBLOX IS USED IN THE FOLLOWING MARKETS:

- Replacement of struggling or failing MBR plants
- Retrofit of CAS plants
- Greenfield plants
- Packaged plants

BENEFITS OF ecoBLOX:

- Increase capacity of existing MBR plants
- 100% recoverability
- Widest operating window
- Membrane life is decoupled from chemical cleaning
- Easy to operate and maintain
- They can be easily placed offline with no special preservation

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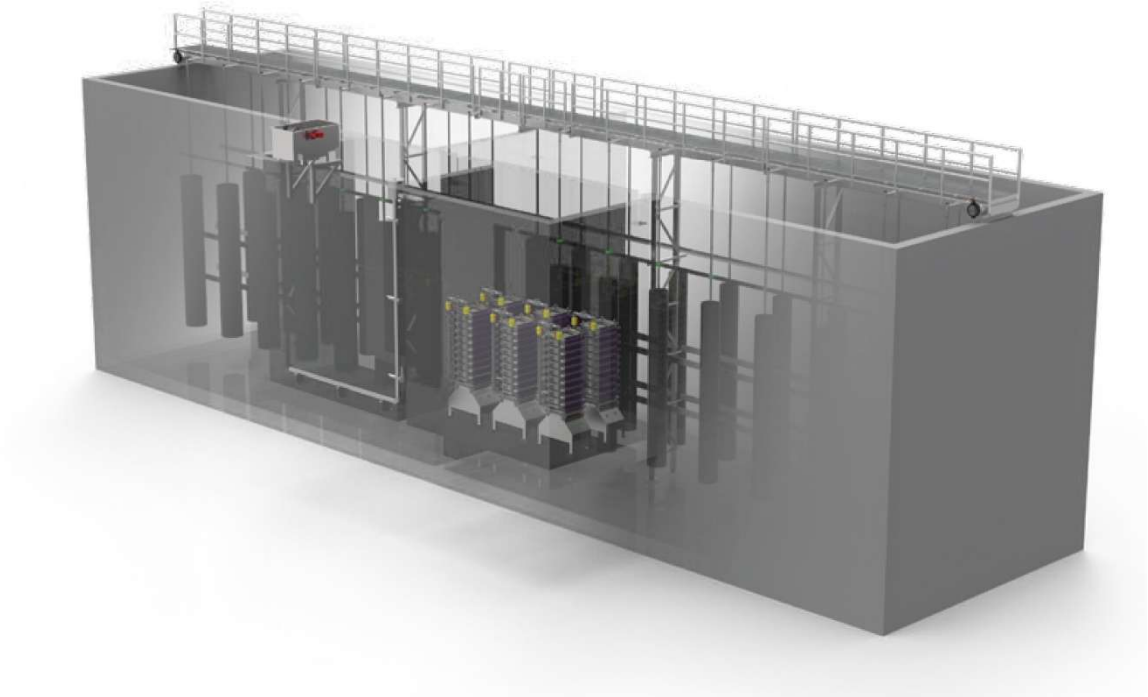
solidBLOX™

SiC SLUDGE THICKENING

Wastewater treatment is a challenge in and of itself, but dealing with the leftover sludge presents a whole new set of issues. When managed poorly, sludge management can be very costly, bad for the environment, and make a real stink – literally.

solidBLOX transforms wastewater treatment plants by optimizing sludge handling process while lowering effluent NH3 and TP. When coupled with aerobic digestion, solidBLOX eliminates foul odors while producing reuse quality effluent, which is good for all of us.

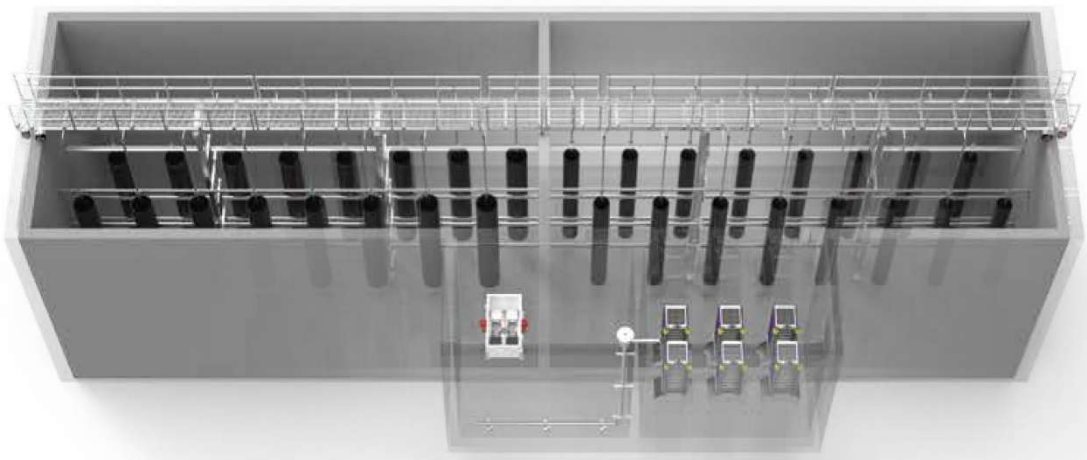
By thickening to 3%, solidBLOX also can reduce sludge hauling requirements, reducing both cost and pollution. An aerobic digester can now be operated at 3% solids, reducing the size of a conventional aerobic digester significantly. Plus, by using SIC to thicken solids, polymer addition is eliminated, saving plants a ton of money and hassle. Last, but certainly not least, solidBLOX helps make natural organic fertilizer which is good for all of us.



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solidBLOX™
SiC SLUDGE THICKENING



solidBLOX IS USED IN THE FOLLOWING MARKETS:

- Aerobic digestion plants
- WWTP with high hauling costs
- WWTP with tight TN and/or TP limit

BENEFITS OF solidBLOX ARE:

- Class B solids with a lower footprint and energy consumption
- Thickening to >3% solids without the use of polymers
- Lower sludge hauling costs
- Elimination of foul odors associated with conventional aerobic digestion
- Reuse quality effluent that compliments a BRN process

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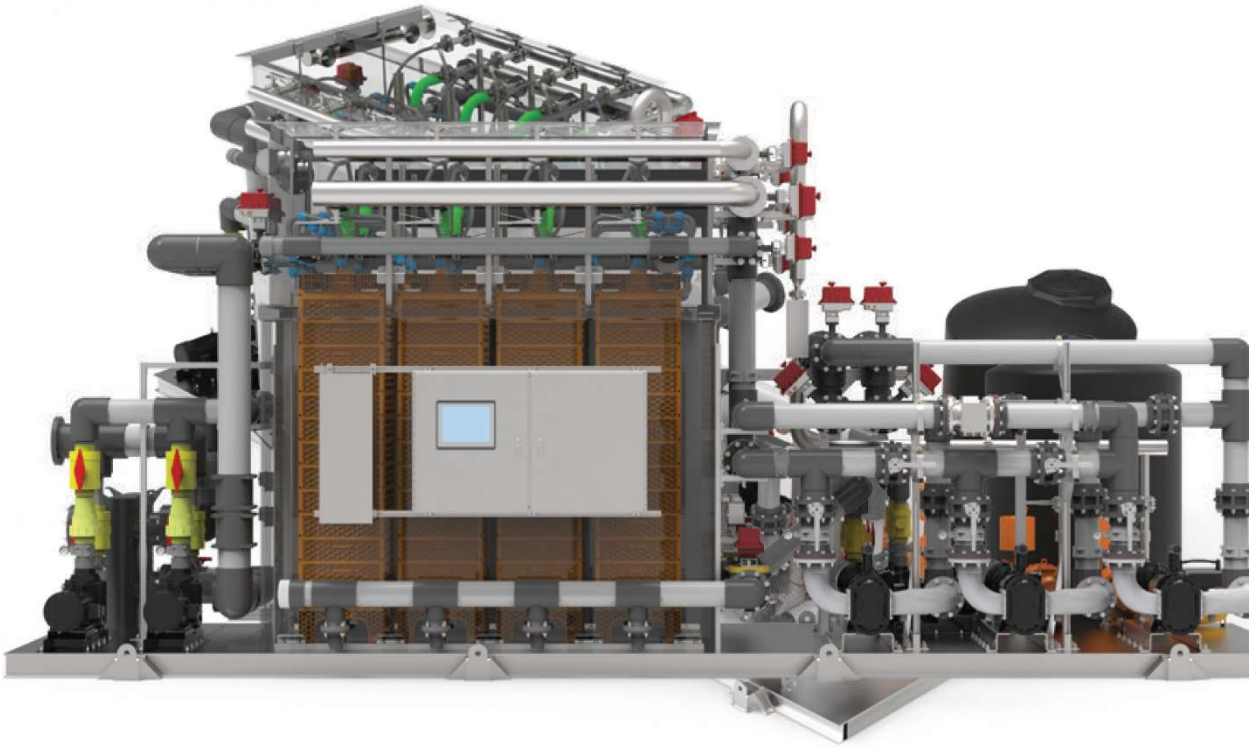


ultraBLOX™

SiC TERTIARY FILTRATION & REUSE

There simply isn't enough clean water in our world today. Fresh water supplies are under severe duress due to demand and pollution. What clean water we do have is rapidly vanishing as extreme droughts strengthen their grip. Simply put, we need more water!

Effluent from conventional wastewater treatment plants is a readily available, reliable, and renewable resource that we don't take advantage of. ultraBLOX is the most versatile and advanced tertiary system for creating clean, pure, and safe water. Placing the SiC membrane at the final step of the plant allows you to prevent phosphorus, metals, pathogens and other trace contaminants from passing. Reuse and discharge to our water ways is safer than ever before. By creating a new and reliable water source, ultraBLOX helps alleviate pressure on already strained water sources.



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ultraBLOX™

SiC TERTIARY FILTRATION & REUSE



ULTRABLOX IS USED IN THE FOLLOWING MARKETS:

- Advanced treatment of secondary effluent to essentially zero solids.
- Advances reuse such as DPR, IPR, and Title 22
- Industrial process water make-up
- Hollow fiber plant rehab
- Plants with TP limits <0.3mg/l and Plant will low heavy metal limits

BENEFITS OF ULTRABLOX:

- Increase capacity of existing hollow fiber plants
- Quick and full recovery, minimize impacts of EPS and algae fouling
- Combine with ozone, PAC, enhanced coagulation, or tertiary MBR for advanced treatment capabilities
- Takes less chemical to achieve low TP limits
- Pathogen removal
- Heavy metal removal
- Lower downstream treatment (RO, UV, etc.) costs

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Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00

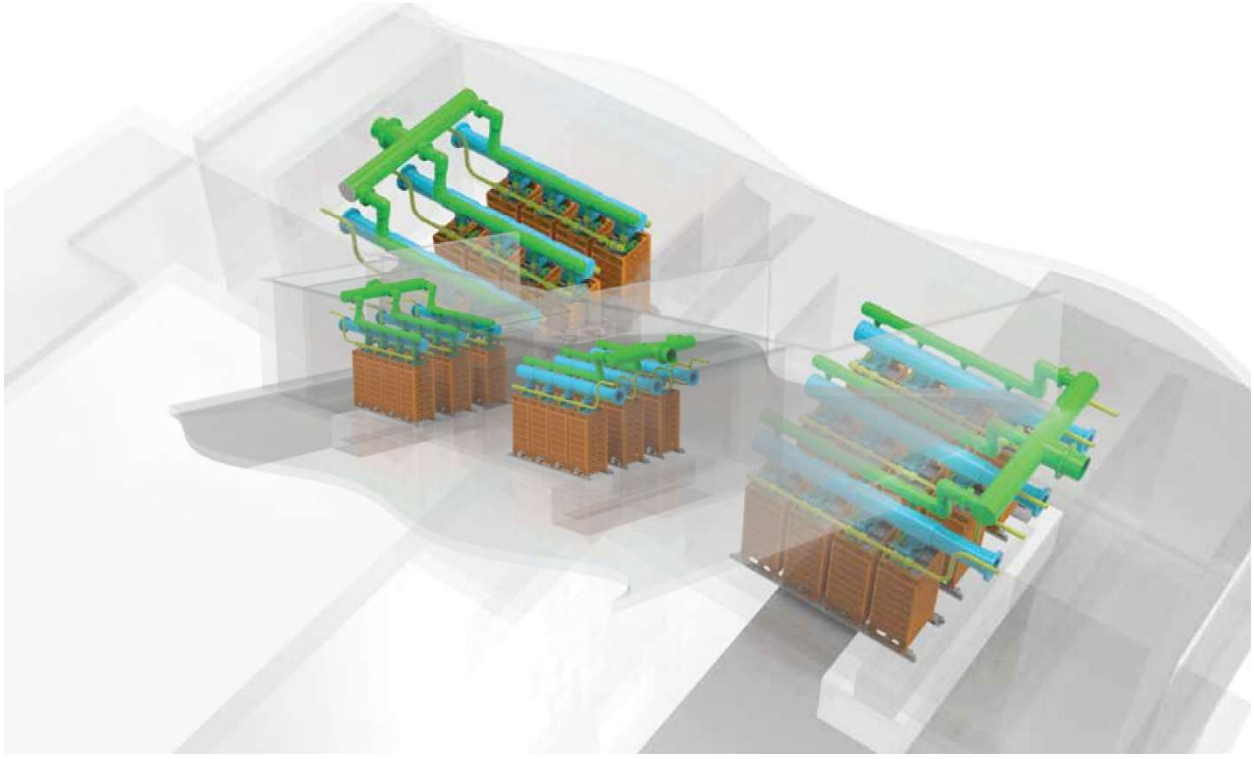


clearBLOX™

SiC DRINKING WATER FILTRATION

Fresh water supplies are severely stressed and access to safe drinking water becomes a greater challenge each and every day. It is imperative we protect what fresh water we have access to ensure health and safety is never compromised. As more and more exotic chemicals contaminant our water, the need for new approaches to ensure safe and clean water has never been more critical. Let's block these unhealthful chemicals from entering our drinking water with SiC!

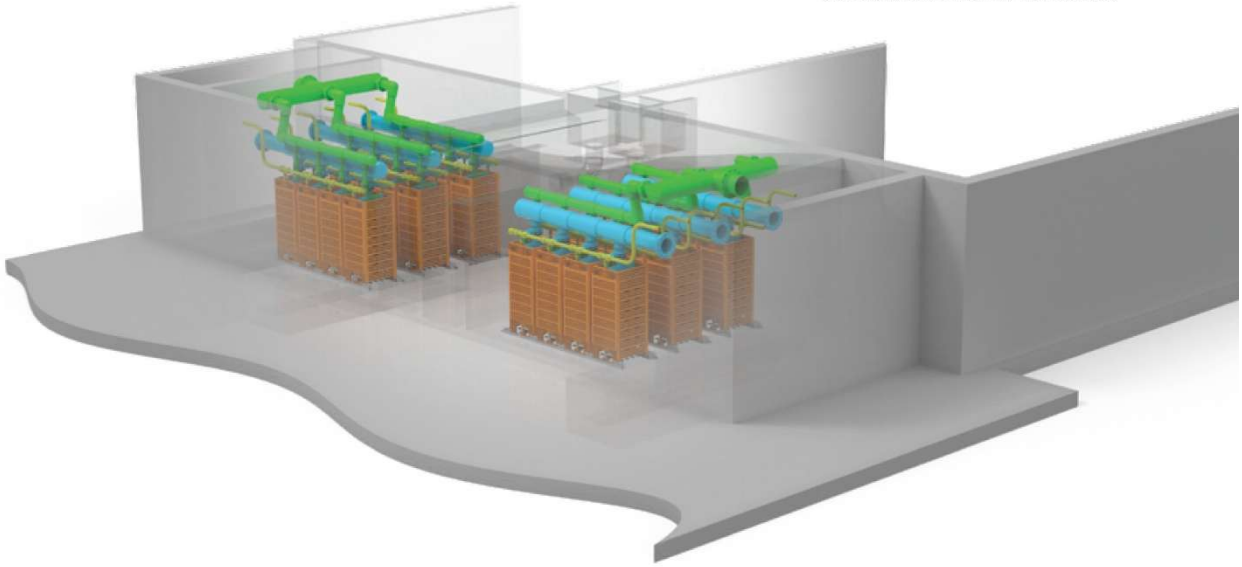
With rapidly ageing infrastructure, clearBLOX systems are perfectly suited for upgrading/retrofitting conventional gravity filter plants to meet current drinking water requirements. clearBLOX ensures our water is safe and that we never have to compromise our health. clearBLOX protects us from today's most toxic pollutants by creating new treatment approaches and solutions for water.



The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00



clearBLOX™
SiC DRINKING WATER FILTRATION



clearBLOX IS USED IN THE FOLLOWING APPLICATIONS:

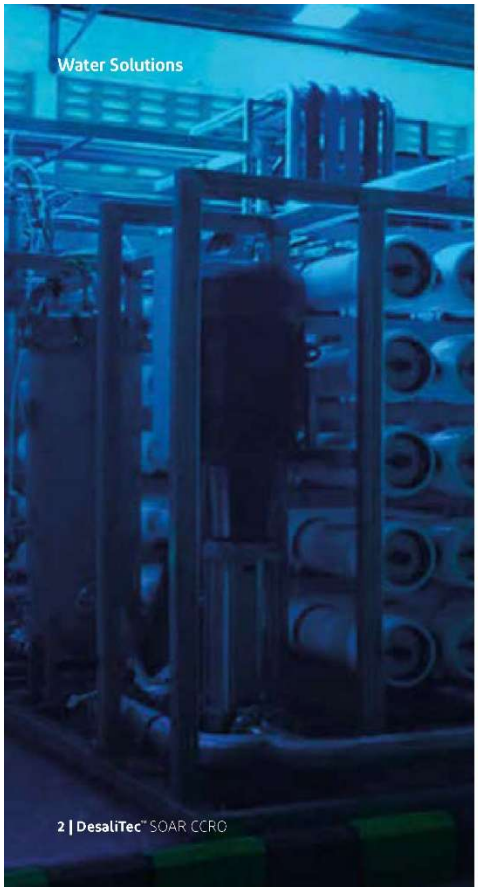
- Conventional gravity filter retrofit
- Filter backwash recovery
- Metal, including radium, removal from groundwater
- BWRO pre-treatment
- SWRO pre-treatment
- Surface water filtration for potable water.
- Submerged hollow fiber plant retrofit

BENEFITS OF clearBLOX:

- Performance and effluent quality independent of incoming feed
- Eliminate polymers
- Maximize water recovery
- Increase capacity of existing hollow fiber plants
- Lowest SDI (RO pre-treatment)
- DOC/THM pre-cursor removal
- Remove complex organic compounds such as pharmaceuticals or PFAS
- Minimize or reduce post disinfection requirements
- Lower downstream treatment (RO, UV, etc.) costs
- Higher overall water recovery (i.e. less wasting)

Exhibit No. RO-1 (RO Option No. 1) - Dupont Desalitec SOAR Reverse Osmosis (CCRO)


DUPONT
Water Solutions
DesaliTec™ SOAR CCRO



The Future Beckons



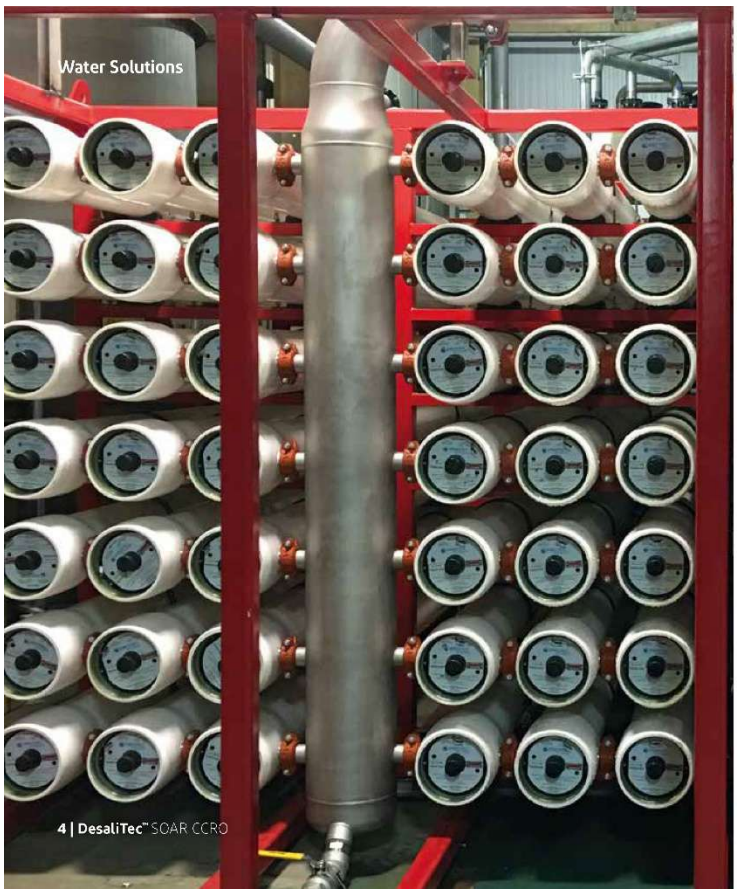
- Higher Recovery
- Lower Cost
- Best Peace of Mind

What's in Our DNA

- 100+ Patents
- 250+ Installations
- 20+ Industries
- 6 Continents
- 1 DuPont Water Solutions Portfolio


Water Solutions
Safeguard
Avoid the downfalls of traditional reverse osmosis and thrive where others fail. DesaliTec™' patented CCRO process provides unprecedented performance and is trusted by Fortune 500 companies for their critical water purification and reuse needs.
Streamline
Simplify your water treatment operations with unmatched flexibility and robustness. DesaliTec systems are easy to operate and automatically adapt to a wide range of changing water conditions, requiring less maintenance and oversight.
Save
Reap the rewards of unparalleled efficiency with a predictable and rapid Return On Investment (ROI). DesaliTec guarantees maximum water recovery, reduces waste and energy use, and provides service and maintenance cost savings.
DesaliTec™ SOAR CCRO | 3

The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00



DesaliTec™ SOAR Reverse Osmosis

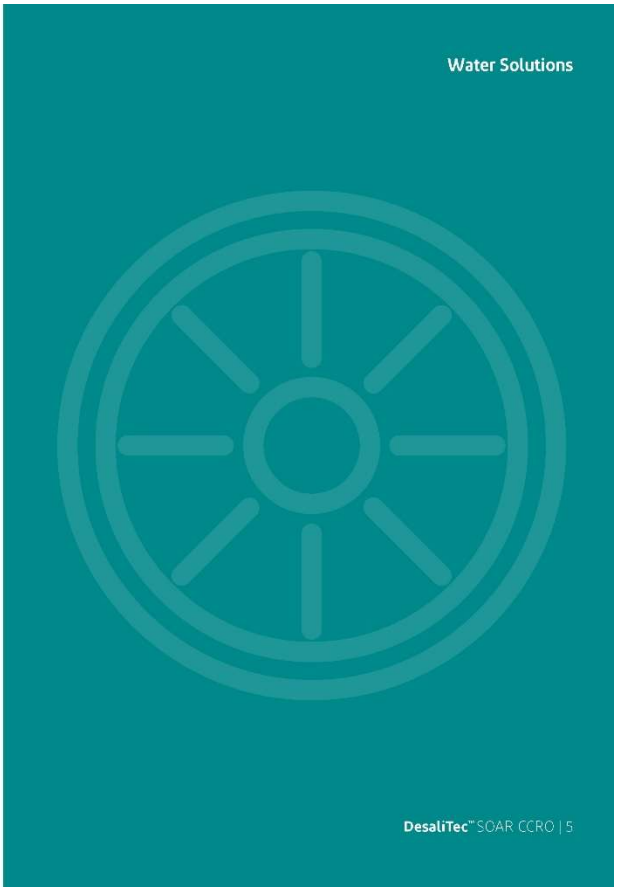
DesaliTec™ CCRO systems offer the versatility of a tunable RO design with a piece of mind of industry leading DuPont suite of FilmTec™ membranes.

DesaliTec clients around the globe rely on the consistent performance and ease of operation of their DesaliTec SOAR solutions, saving significant costs through reduced maintenance, maximum water recovery rates and lower energy consumption.

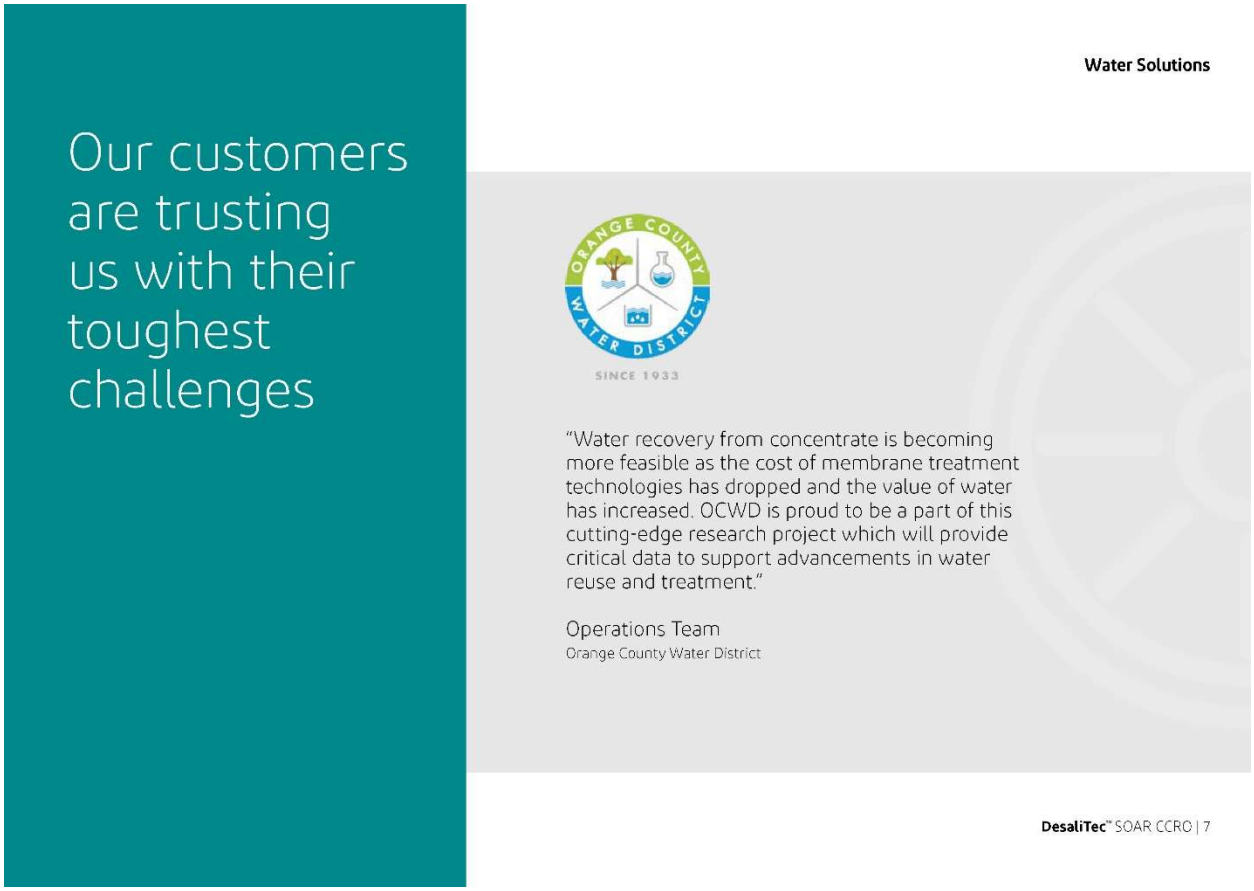
DesaliTec offers standardized CCRO systems to meet the requirements of most industrial applications.

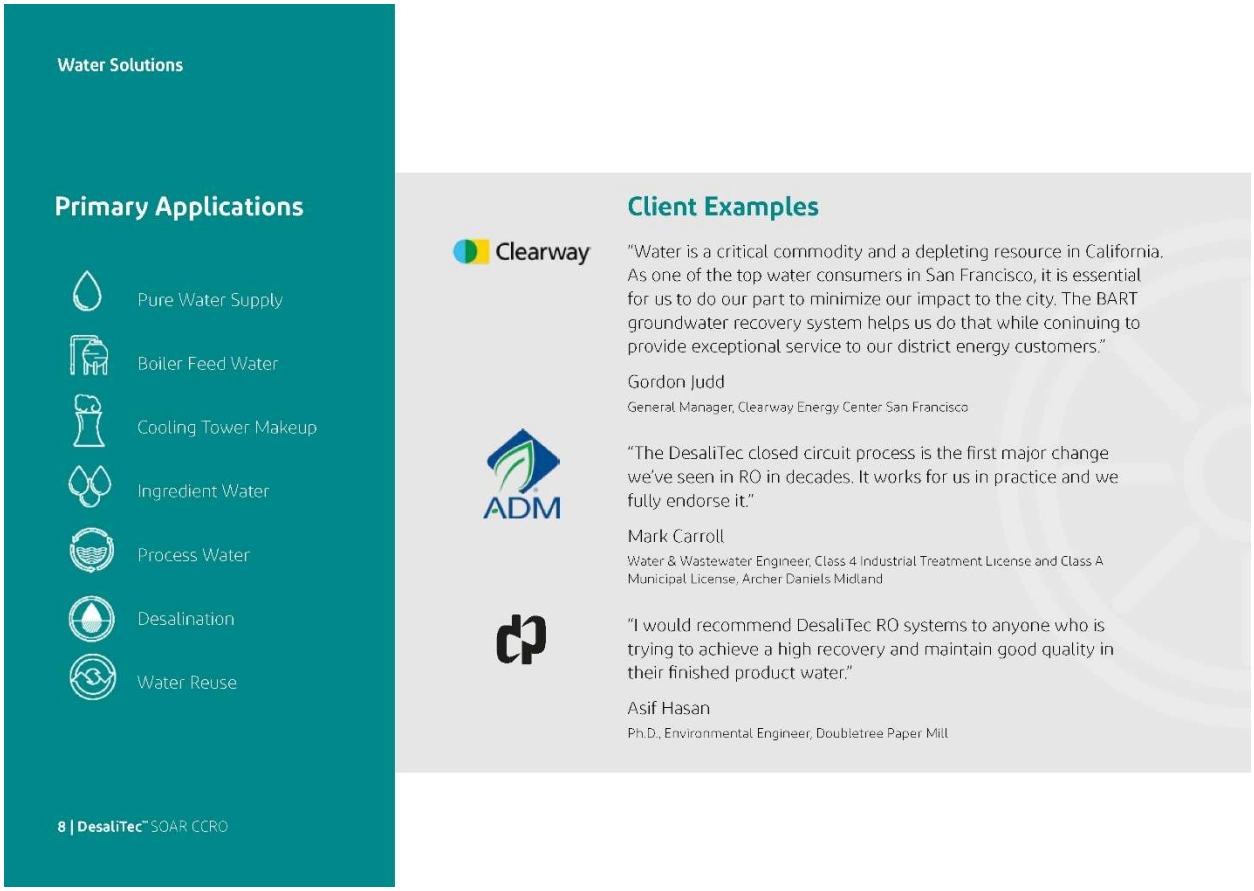
DesaliTec offers SOAR Max systems, designed for Zero Liquid Discharge (ZLD) and sea water applications.

DesaliTec offers customized SOAR Max systems, designed to operate at pressures up to 120 barg to achieve minimum liquid discharge and zero liquid discharge applications.




Water Solutions
MAXIMUM
RECOVERY
GUARANTEED
6 | DesaliTec™ SOAR CCRO
Benefits
Flexibility
DesaliTec™ SOAR CCRO systems automatically adapt to changing feedwater and allow the operator to modify recovery, cross flow, and flux in real time.
Reliability
DesaliTec SOAR CCRO systems naturally mitigate the fouling and scaling that typically plagues reverse osmosis systems. Automated operation with online monitoring provides additional protection.
Maximum Recovery
DesaliTec SOAR CCRO systems come with an industry-leading maximum recovery guarantee, operating at up to 98% recovery and allowing you to achieve your sustainability goals.
Energy Savings
DesaliTec SOAR CCRO systems apply the optimal pressure to keep constant permeate flow, reducing average energy consumption by up to 35%.
Return On Investment
DesaliTec SOAR CCRO systems minimize the largest cost associated with reverse osmosis system operation, wastewater disposal, which can be reduced by 50% to 75% and provide paybacks of under a year.


Our customers are trusting us with their toughest challenges
Water Solutions
ORANGE COUNTY WATER DISTRICT
SINCE 1933
"Water recovery from concentrate is becoming more feasible as the cost of membrane treatment technologies has dropped and the value of water has increased. OCWD is proud to be a part of this cutting-edge research project which will provide critical data to support advancements in water reuse and treatment."
Operations Team
Orange County Water District
DesaliTec™ SOAR CCRO | 7



Water Solutions

Primary Applications

- Pure Water Supply
- Boiler Feed Water
- Cooling Tower Makeup
- Ingredient Water
- Process Water
- Desalination
- Water Reuse

8 | DesaliTec™ SOAR CCRO

Client Examples

Clearway

"Water is a critical commodity and a depleting resource in California. As one of the top water consumers in San Francisco, it is essential for us to do our part to minimize our impact to the city. The BART groundwater recovery system helps us do that while coninuing to provide exceptional service to our district energy customers."

Gordon Judd

General Manager, Clearway Energy Center San Francisco

ADM

"The DesaliTec closed circuit process is the first major change we've seen in RO in decades. It works for us in practice and we fully endorse it."

Mark Carroll

Water & Wastewater Engineer, Class 4 Industrial Treatment License and Class A Municipal License, Archer Daniels Midland

"I would recommend DesaliTec RO systems to anyone who is trying to achieve a high recovery and maintain good quality in their finished product water."

Asif Hasan

Ph.D., Environmental Engineer, Doubletree Paper Mill

"While the water and dollar savings were important, the reliability benefits might be the greatest positive. When the mobile trailers were exhausted, the plant couldn't run. You are at the mercy of the vendor to send you the trailers. With CCRO you are manufacturing your own water, so there should not be any interruption."

Kishore Billapati
P.E., Senior Manager Engineering, Edison International SCE Generation Asset Management

"The CCRO is extremely easy to operate and it's user friendly. I would recommend it to anyone who needs high recovery, minimal man hours and low cost."

Steven Doggit
Lead Operator, Mid-American Steel and Wire

"We had some bad experience with traditional RO as far as maintenance costs and having to replace the membranes at a frequency of six months to twelve months. Our DesaliTec unit has been in service for a year and there's no indication that it even needs to be cleaned yet."

David Ivy
Utilities Supervisor, Lion Elastomers



Water Solutions

About us

Water scarcity is now a global problem. Growing water demand and excessive consumption of water is increasing with population and technology adoption. World experts advise that these water challenges will only get worse without improved water efficiency, reuse, and desalination.

DesaliTec™ SOAR CCRO systems are innovative solutions that forward-thinking users employ to address their water challenges. They are rapidly replacing traditional water purification methods due to their high reliability, efficiency, and economic value proposition.

DesaliTec industrial and municipal clients around the globe rely on DesaliTec SOAR Smart systems for their critical water needs and are guaranteed maximized water recovery rates of up to 98 %, reduced energy consumption of up to 35 %, and maintenance cost reductions of up to 20 %.

DesaliTec is headquartered in Newton, Massachusetts, USA and was the proud recipient of the 2016 Breakthrough Water Technology Company of the Year award from Global Water Intelligence.

The City of Calhoun, Georgia
Calhoun Utilities
Mauldin Road PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26060.00



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DUPONT

Water Solutions
www.dupontwatersolutions.com

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Form No. 45-D02281-en-Rev

Exhibit No. RO-2 (RO Option No. 2) - Rotec Flow Reversal Reverse Osmosis (FR-RO)

ROTEC
by WFI Group

Leading the Future of Sustainable Water Treatment

Advanced Technologies.
Proven Water Solutions.
Global Impact.



Redefining the Limits of Water Worldwide

ROTEC is a global leader in innovative water treatment solutions, specializing in high-recovery technologies that minimize waste and maximize sustainability. With over a decade of experience, ROTEC has delivered cutting-edge solutions across diverse sectors and industries, including municipal, industrial, power, and semiconductor applications. The company's expertise is demonstrated through more than 60 installations in over 15 countries, from Singapore to California.

Municipal Water & Wastewater

Food & Beverage

Power & Energy

Semiconductor & Microelectronics

Oil & Gas/Mining



Technologies

- **Flow Reversal Reverse Osmosis (FR-RO)**: An advanced solution that eliminates scaling and fouling challenges, enabling exceptional water recovery rates for sustainable, high-efficiency operations.
- **Flow Reversal-2 Pass (FR-2P)**: A smart two-pass solution designed to optimize recovery rates for demineralized water and ultrapure water (UPW) applications.
- **Flow Reversal Brine Concentrate (FR-BC)**: A specialized system to treat RO brine for further increases in water recovery for minimum liquid discharge (MLD) and zero-liquid discharge (ZLD) applications.

Solutions

- **Retrofit**: Transform your existing RO systems into high-efficiency, high-recovery solutions enabled with FR-RO that maximize performance while delivering greater water efficiency and reduced operational costs.
- **EPC and Turnkey Projects**: Delivering seamless, end-to-end solutions with expert design, precision installation, and comprehensive operational support to ensure lasting results.
- **Engineering Packages**: Proprietary FR-RO designs for any application with a full suite of drawings, equipment lists, manuals and licenses for any preferred contractor or integrator to build.
- **High-Quality Skid Supply** – Fully customized, turnkey solutions designed from the ground up, including integrated pre- and post-treatment options such as ceramic ultrafiltration (UF) and electrodeionization (EDI) to deliver high-recovery treatment systems tailored for any application.

Designed to Deliver Impact

Discover how ROTEC's innovative technology delivers high performance, sustainability, and flexibility for a wide range of water treatment applications.

HIgh Recovery

Achieve up to 98% recovery rates to significantly maximize water production and treatment.

Reduced Brine Waste

Minimize brine volumes by up to 80%, cutting disposal costs and environmental burden.

Lower OPEX

Optimize operations with reduced chemical usage, cleaning frequency, and maintenance costs.

Scalability

Integrate seamlessly with existing systems to expand capabilities with minimal disruption.

Sustainability

Promote water reuse and minimize waste, aligning with global environmental goals.

Versatility & Flexibility

Comprehensive configurations optimize turndown, maintenance, and feedwater scenarios.

Flow Reversal Technology: Advancing Efficiency

Flow Reversal Mechanism

Flow Reversal Reverse Osmosis (FR-RO) is a groundbreaking solution for high-recovery deionization, designed to maximize water efficiency while reducing waste and resisting scaling. With its innovative flow reversal mechanism, FR-RO enables recovery rates far beyond conventional RO systems. This patented technology is trusted globally across industries, ensuring sustainable and cost-effective water treatment solutions.

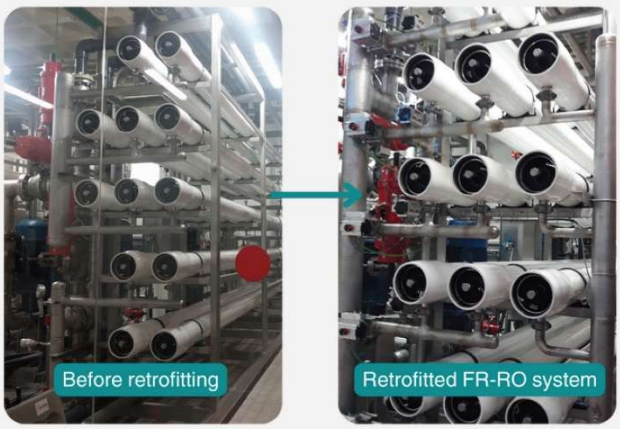


Ultra-high Recovery

Achieves up to 98% water recovery while minimizing brine waste by up to 80%, making it ideal for water-stressed regions and industries seeking sustainable solutions.

Block Rotation for Longer Membrane Life

An innovative enhancement for RO systems, designed to prevent scaling and fouling in high-recovery deionization processes. By periodically rotating the flow between membrane blocks, this technology distributes scaling evenly, reducing scale formation and extending membrane life. It enables higher recovery rates, lowers operational costs, and improves system performance in a sustainable and reliable manner.



Seamless Integration with Built-in Flexibility

FR-RO systems are designed for easy retrofitting into existing infrastructure, enhancing performance without major modifications or proprietary hardware. With seamless integration and no need for operator upskilling, these systems ensure smooth adoption. Built-in fallback and redundancy features allow every FR-RO system to operate as a conventional RO system when needed, delivering reliability and operational security.

Case Studies

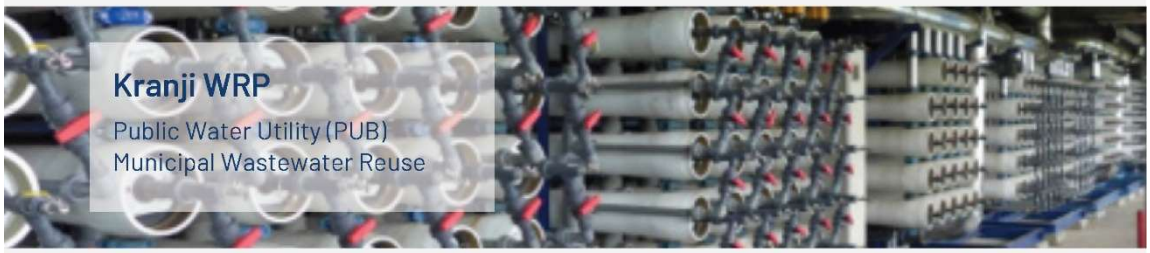


Jinma Energy

Coke Production Plant
Industrial Wastewater Reuse

The Jinma Energy plant in China sought to optimize wastewater treatment for Coke production, implementing a comprehensive system that included biological treatment, sand and activated carbon filters, UF, and ROTEC's FR-RO technology. ROTEC designed, manufactured, and installed a full-scale RO plant with three skids in a three-stage configuration, utilizing its Flow Reversal and FR Back Flush technologies to minimize brine production. Following the success of a pilot unit treating 6.5 m^3/hour, a full-scale facility with a capacity of 3 x 2,640 m^3/day was constructed, achieving stable operation at 90% recovery despite high COD levels.

- Achieved 90% recovery, reducing brine output and operational costs.
- Expanded from a pilot system to a full-scale facility treating 3 x 2,640 m^3/day.
- Incorporated FR-RO and FR-BC for efficient and sustainable operation.
- Inclusive service from design all the way through remote supervision by ROTEC.



Kranji WRP

Public Water Utility (PUB)
Municipal Wastewater Reuse

The Kranji Wastewater Treatment Plant in Singapore retrofitted its existing RO system with ROTEC's Flow Reversal technology, significantly enhancing system efficiency and sustainability. The retrofit transformed a two-stage (49:24 array) into a three-stage system (45:25:10 array) without disrupting plant operations. Over 18 months of monitoring, the upgraded system demonstrated stable operation at 90% recovery, achieving substantial improvements in water production and operational efficiency.

- Achieved 90% recovery from 75%, with a 20% boost in permeate production.
- Brine waste reduced by 60%, cutting disposal costs and minimizing carbon footprint.
- Effective biofouling control extended membrane lifespan and efficiency.
- Lowered CIP frequencies and chemical use minimized downtime.



WHY CHOOSE US

01 Proven Expertise

ROTEC's global experience in delivering high-recovery water solutions ensures reliability and performance across diverse wastewater and reuse projects.

02 Sustainability Focus

Through innovative water reuse and high-efficiency operations, ROTEC is dedicated to minimizing environmental impact and promoting sustainable water management worldwide.

03 Modular and Scalable

FR-RO's flexible design allows for easy integration into existing systems and can be scaled to meet the specific needs of municipal and industrial facilities.

04 Integrated Services

ROTEC provides comprehensive service from design and commissioning to ongoing optimization, ensuring seamless implementation and long-term performance for every project.

Contact Us

For more information on FR-RO and how it can address your wastewater treatment and reuse needs in municipal or industrial applications, please contact us.

www.rotec-water.com

info@rotec-water.com

Exhibit No. RO-3 (RO Option No. 3) - Veolia PROflex 1000 RO Series Reverse Osmosis (CLRO)



VEOLIA



Pictured:
North American model

PROflex*

Reverse Osmosis And Nanofiltration Systems

WATER TECHNOLOGIES

Why PRO*flex*?

Prior to the introduction of PRO*flex*, Veolia delivered over 1000 PRO Series Reverse Osmosis (RO) systems and established the product as a rugged, industrial system capable of delivering consistent product water over years of operation. The PRO*flex* Reverse Osmosis and Nanofiltration (NF) system includes the capability to meet the various needs of industrial, beverage, and municipal applications and end-users including those covered by the previous PRO, MUNI, ReNEW, Titan, and BEV Series systems.

The PRO*flex* is a flexible and price competitive RO/NF system. It is configurable using our online *flex*Configurator which allows you to modify the system to best fit your specific application and expedite the quoting process. Beyond flexibility and time-tested reliability, PRO*flex* minimizes the overall footprint for optimum space utilization and places key components to the front of the skid to make them easily accessible.



Veolia *flex*Configurator

https://engg.watertechnologies.com/products/configurator

Our expertise at your fingertips, on your schedule, while only paying for what you need

Reliable Performance

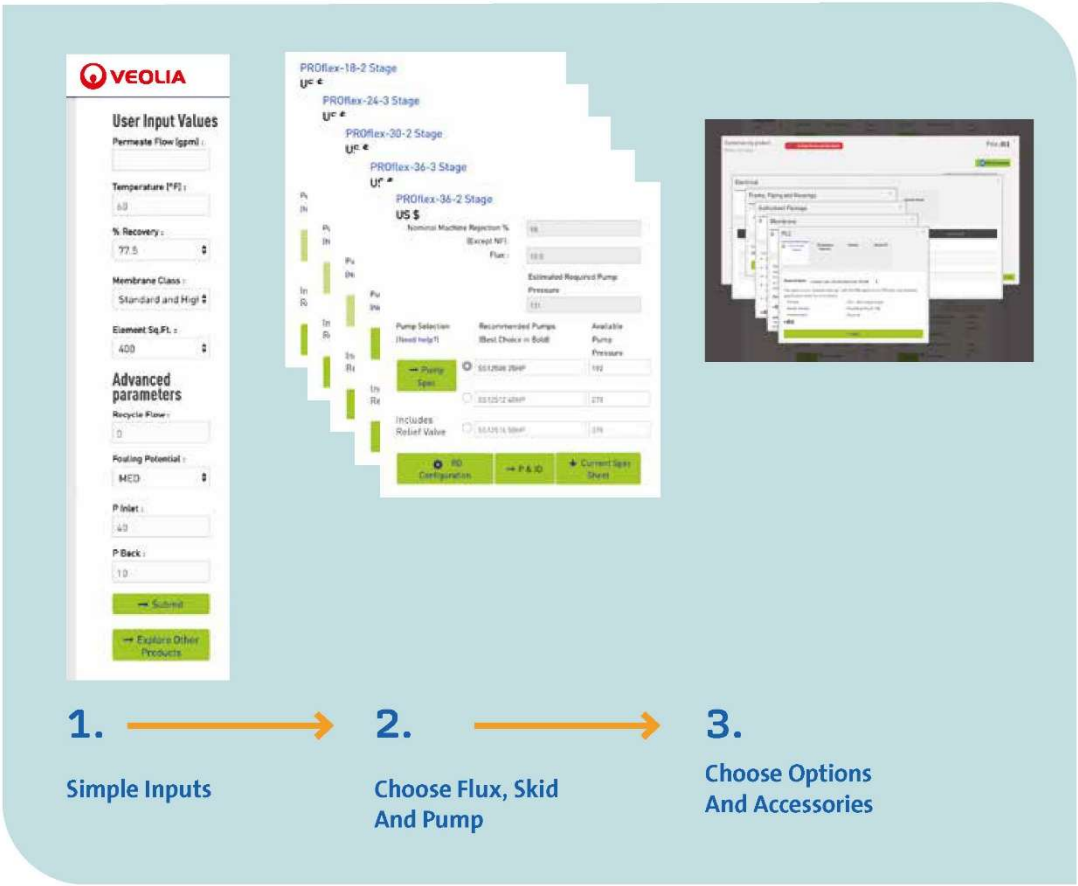
- Honed from the time-tested PRO Series platform with Veolia vetted options you want.

Flexible Solutions With Speed

- Veolia *flex*Configurator to design your system, get drawings, obtain pricing and access Veolia expertise immediately, and on your schedule.
- Lead times on most options can be as short as standardized systems. Some systems are inventoried for even faster delivery.

One Source

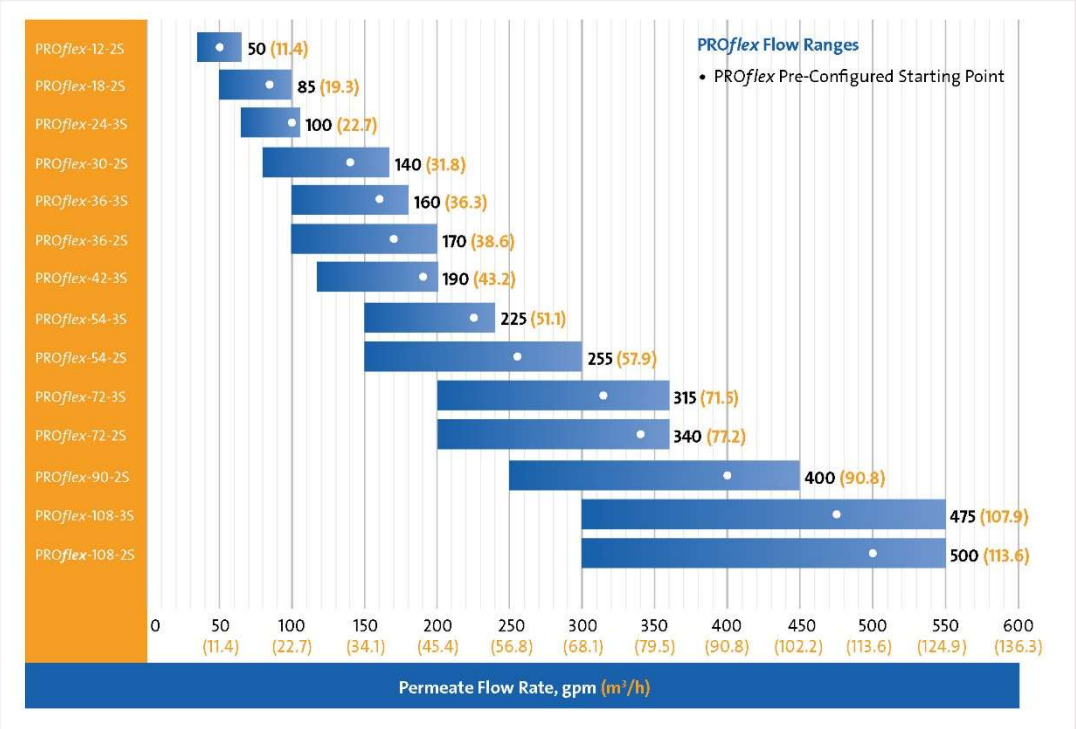
- One of the world's largest providers of membranes and membrane systems.
- Systems are built with Veolia's full complement of pre-filters, membranes, and Tonkaflo® pumps (on North American models only) for single source accountability and trusted performance.



PRO*flex* – True Flexibility To Design A System You Want

PRO*flex* offers the flexibility to choose a system that will allow you to choose an aggressive or conservative design to meet the capital requirements of your specific situation. PRO*flex* allows complete choice on arrays, number of elements, and pump sizes within each array. There are further options for your choice of instrumentation, PLC controller, electrical components, membranes and other hardware such as frame and housings. You can also reduce engineering time by letting Veolia include complementary pre-treatment and chemical cleaning equipment. The figure below identifies the 14 default configurations and also the hydraulic limits of the design as indicated by the flow range for each model.

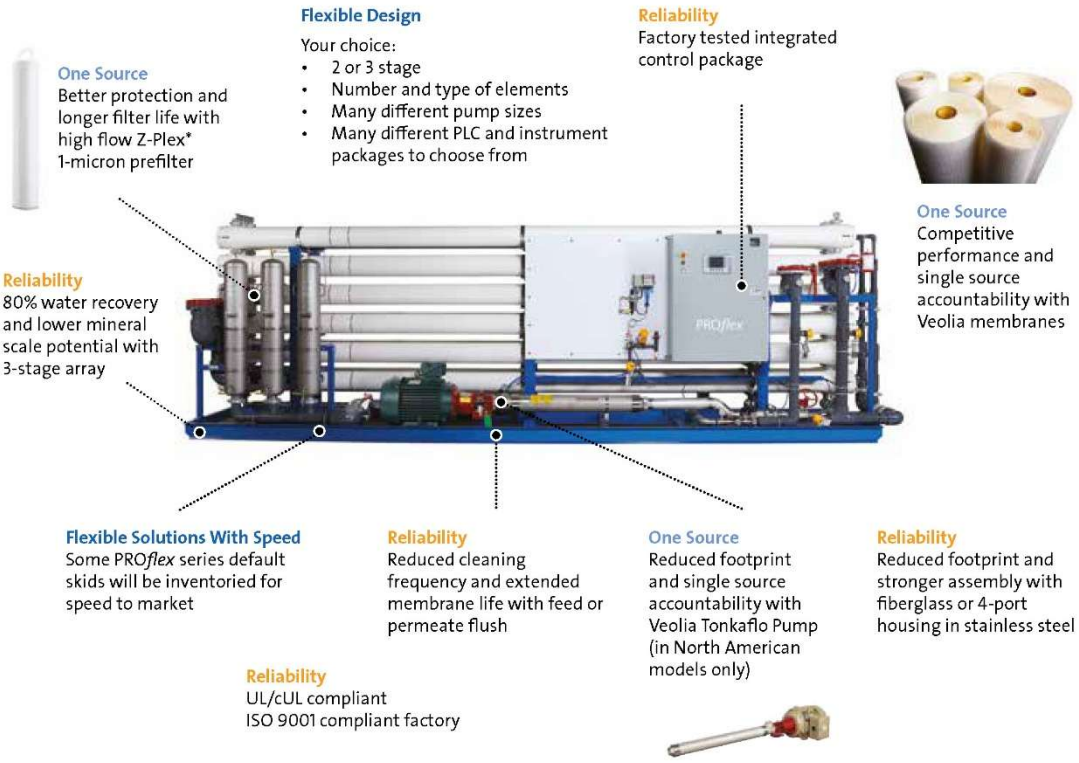
PRO*flex* Flow Ranges



The base assumption included in these designs are:

- **60ºF feedwater temperature**
- **400 sq. ft. Veolia AG membrane elements**
- **77.5-80% RO recovery**
- **Tonkaflo pump as available in select models**

PRO*flex* RO Features And Benefits:

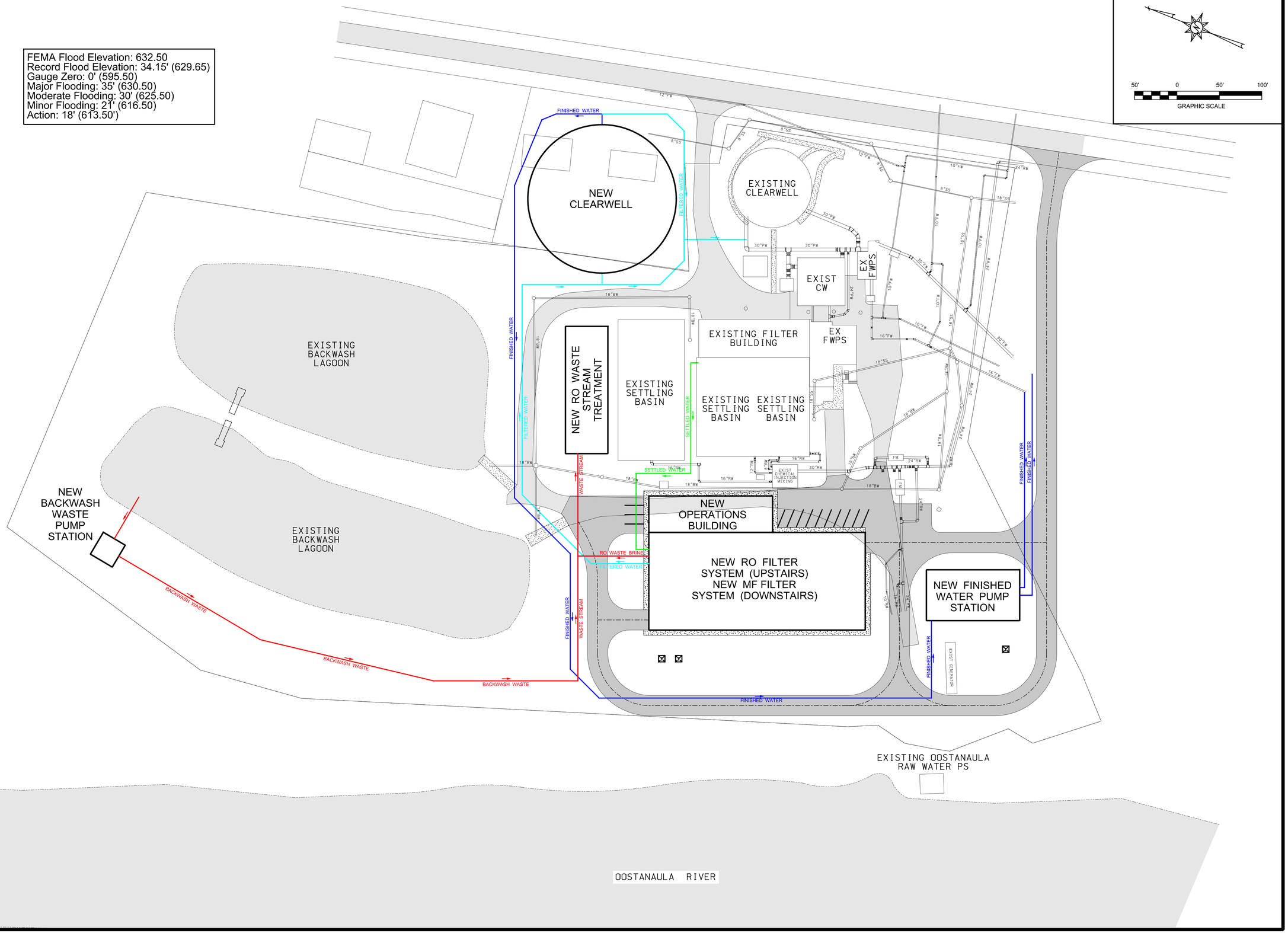


PRO*flex*: A Platform That Meets Your Needs

The PRO*flex* can easily integrate with a range of pre-engineered pre and post treatment and supporting components like multi-media filters, carbon filters, water softeners, chemical feed systems, tanks, and pumps for the building blocks of a full-scale configurable water system. With decades of engineering and manufacturing experience worldwide, Veolia offers superior integration and optimization of RO system design.


Resourcing the world
Veolia Water Technologies
Please contact us via:
www.veoliawatertechnologies.com
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FEMA Flood Elevation: 632.50
Record Flood Elevation: 34.15' (629.65)
Gauge Zero: 0' (595.50)
Major Flooding: 35' (630.50)
Moderate Flooding: 30' (625.50)
Minor Flooding: 21' (616.50)
Action: 18' (613.50')



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CONSTRUCTION PLANS FOR:
MAULDIN ROAD WTP PFAS REDUCTION IMPROVEMENTS
THE CITY OF CALHOUN, GA

CITY OF CALHOUN LAND OF THE CHEROKEE

PROJECT INFO:
INSITE JOB No. 26060.00
PLOTTED: 6/21/25

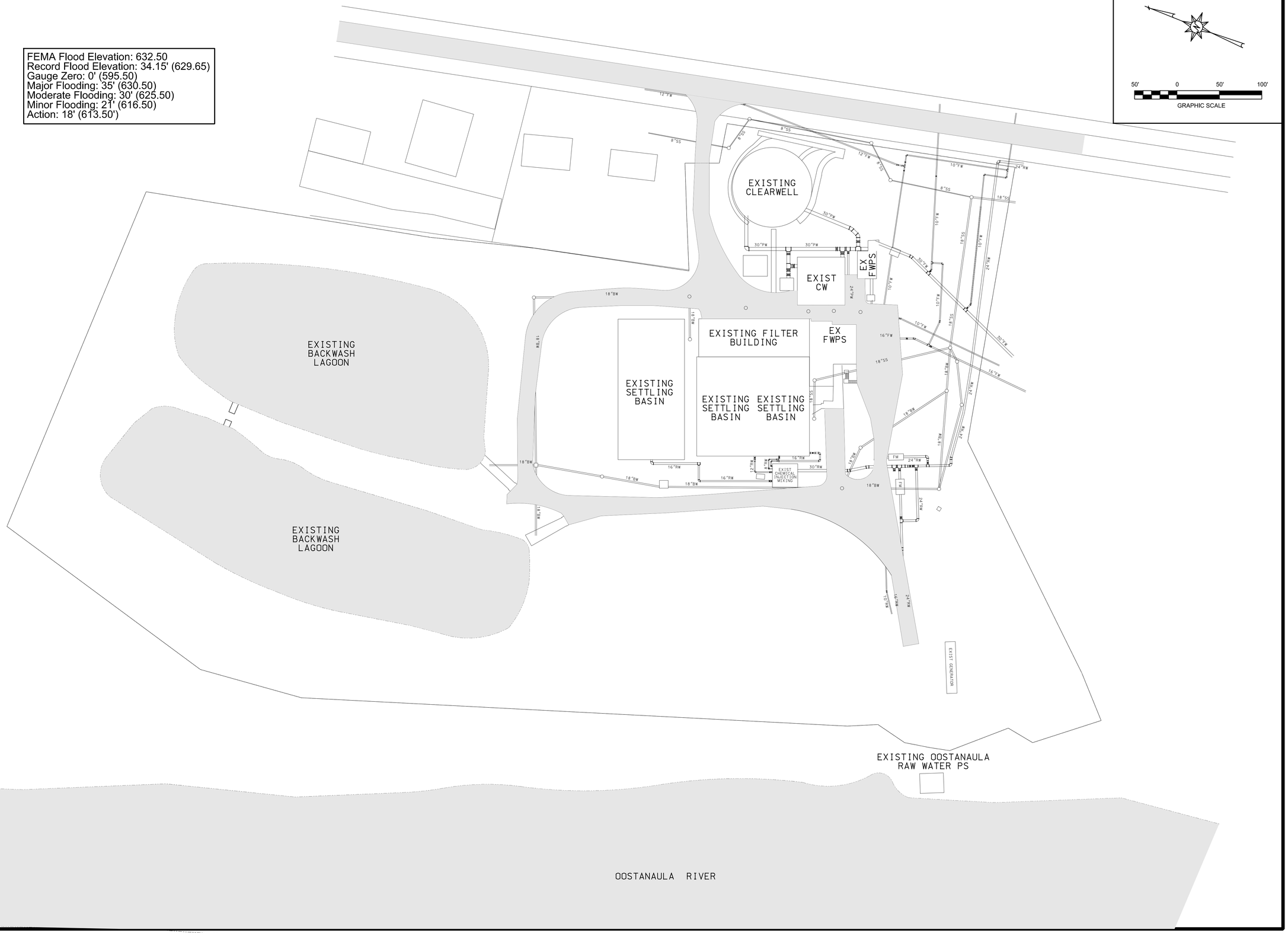
PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
OVERALL PROJECT SITE PLAN

SCALE: 1" = 50'
SHEET X OF X

OV-1

FEMA Flood Elevation: 632.50
Record Flood Elevation: 34.15' (629.65)
Gauge Zero: 0' (595.50)
Major Flooding: 35' (630.50)
Moderate Flooding: 30' (625.50)
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Action: 18' (613.50')



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PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
EXISTING SURVEY

SCALE: 1" = 50'
SHEET X OF X

SV-1

The City of Calhoun, Georgia
Calhoun Utilities

Summary Report on
Brittany Drive PFAS Reduction Improvements
Intended Project Scope

INSITE PROJECT 26061.00

Prepared by:

INSITE ENGINEERING

HOOVER | TUSCALOOSA

June, 2026

Preliminary

This report was prepared by InSite Engineering, LLC for the City of Calhoun, Georgia. The material in this report reflects our best judgment based on the information that was made available to us at the time of preparation. Any use which a third party makes of this report, or any release or decisions made based on this report, are the sole responsibility of such third parties. InSite Engineering, LLC accepts no responsibility for damages, if any, occasioned by any third party as a result of decisions made or actions taken based on this report.

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City of Calhoun, Georgia
Brittany Drive Water Treatment Plant
PFAS Improvements Project

Introduction

The City of Calhoun, Georgia ("the City") owns and operates the Brittany Drive Water Treatment Plant ("Brittany Drive WTP") located at 306 Brittney Drive SE Calhoun, Georgia. The Brittany Drive WTP is operated by the City is under the influence of PFAS contamination, therefore this report will outline the Intended Project Scope for proposed treatment processes to reduce PFAS compounds in Calhoun's public drinking water.

The Brittany Drive WTP has a current hydraulic capacity of 12.8 MGD and uses nearby groundwater sources of two wells and one spring as its raw water supply. The Brittany Drive WTP utilizes flocculation and gravity media filtration with GAC and chemical treatment with chlorine gas, fluorosilicic acid, and zinc orthophosphate. The Brittany Drive WTP's current average daily demand is approximately 5.1 MGD of its currently permitted capacity of 12.8 MGD.

The City of Calhoun has completed pilot testing of technologies for removal of perfluoroalkyl and polyfluoroalkyl substances ("PFAS") from the water produced at the Brittany Drive WTP in Calhoun, Georgia. The City of Calhoun has selected Reverse Osmosis as the most effective and cost-efficient way to consistently reduce PFAS levels for the treatment process at the Brittany Drive WTP.

As a temporary emergency measure the City has replaced the majority of anthracite with granular activated carbon (GAC) designed for PFAS reduction in their existing mixed-media filters at the Brittany Drive Water Treatment Plant. The City intends to operate the Brittany Drive WTP with GAC until this project can be completed.

This report discusses and outlines the plans to design & construct a treatment process at the Brittany Drive WTP to ensure PFAS is removed from Calhoun's public drinking water. Calhoun's project goal is to produce safe drinking water for its customers with PFAS levels that comply with the EPA's current proposed MCL.

This report summarizes the purpose, objectives, and intended project plans for design and construction of a new reverse osmosis treatment process including waste stream treatment to reduce PFAS from the drinking water and the discharge water returned to the river. It also outlines the intent to utilize as much of the existing infrastructure as possible to save capital cost of construction of this project.

Brittany Drive Water Treatment Facility Background

The Brittany Drive Water Treatment Plant is a conventional water treatment plant currently utilizing the general flow stream/treatment processes. The Brittany Drive Water Treatment Plant has two groundwater wells (Wells No. 3 & No. 4) and one spring (Big Spring) that they draw raw water from. The raw water pumps combine the water sources to meet in the flocculation basins. While the raw water sources for the Brittany Drive Water Treatment Plant are groundwater sources, they still utilize direct filtration treatment methods with rapid mix, flocculators, dual media gravity filters and Tonka pressure filters before disinfection and sending the water to the system. The gravity mixed media filters were originally sand, garnet and anthracite but have since had the majority of the anthracite removed and replaced with granular activated carbon ("GAC") to offer some level of interim PFAS reduction. The Tanka Pressure filters have been removed from operation to allow all water produced from Brittany Drive WTP to be treatment with the temporary GAC.

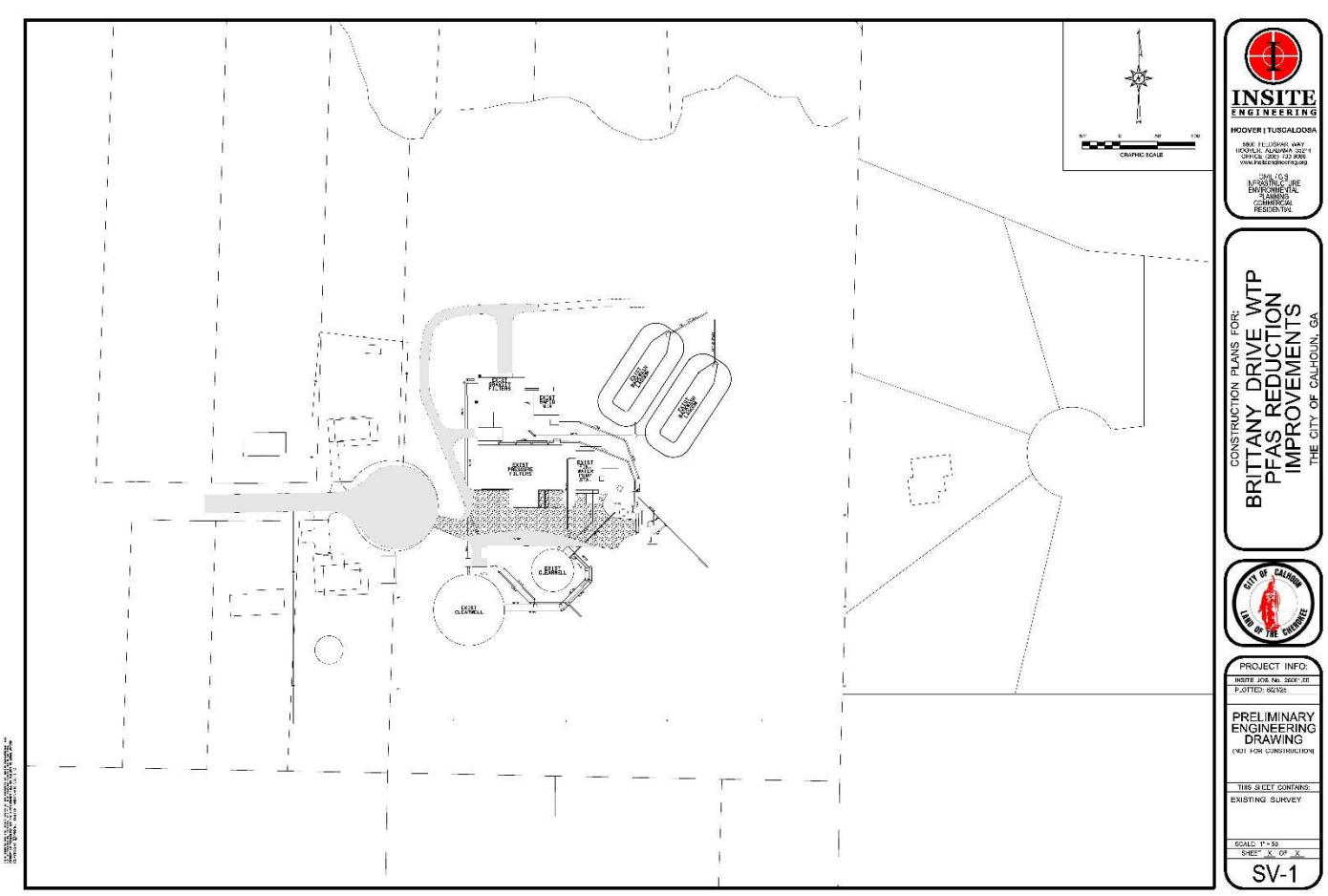
Brittany Drive WTP Existing Site Aerial

This aerial photo of the Brittany Drive WTP.



The City of Calhoun, Georgia
Calhoun Utilities
Brittany Drive PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26061.00

Brittany Drive WTP Existing Site Plan

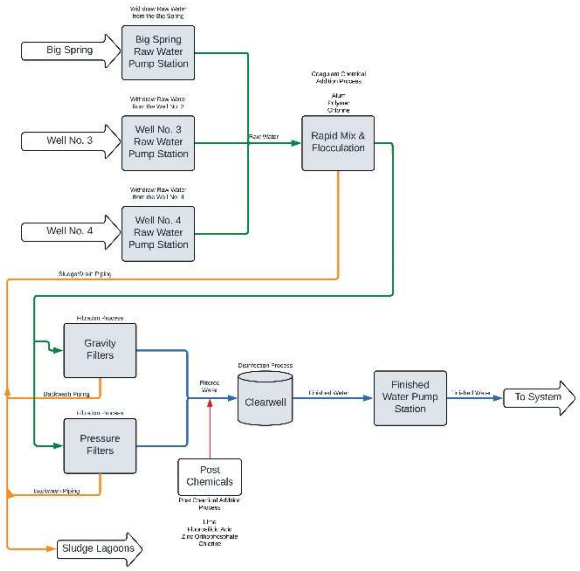


The City of Calhoun, Georgia
Calhoun Utilities
Brittany Drive PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26061.00

Brittany Drive WTP Existing Process Flow Diagram

Calhoun Utilities
Brittany Drive
Water Treatment Plant

Existing Process Flow Diagram



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CONSTRUCTION PLANS FOR:
BRITTANY DRIVE WTP
PFAS REDUCTION
IMPROVEMENTS
THE CITY OF CALHOUN, GA

PROJECT INFO:

PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
EXISTING PLANT PROCESS FLOW DIAGRAM

PF-1

PFAS Reduction Pilot Study

The City of Calhoun performed pilot testing of technologies for removal of perfluoroalkyl and polyfluoroalkyl substances ("PFAS") from the filtered surface water sources at the Brittany Drive WTP in Calhoun, Georgia. The City was interested in determining the most cost-effective and sustainable treatment process to remove PFAS compounds from their water supply.

The following six technologies were tested at the Mauldin Road water treatment plant:

1. Rotec Flow Reversal Reverse Osmosis ("FR-RO")
2. Veolia Closed-Loop Reverse Osmosis ("CLRO")
3. DesaliTech Closed-Circuit Reverse Osmosis ("CCRO")
4. Calgon Granular Activated Carbon ("GAC") and Ion Exchange ("IX")
5. Jacobi GAC and IX
6. Aqua Aerobics AquaPRS Technology ("AquaPRS")

While all the treatment technologies tested were effective at removing significant amounts of PFAS from the Brittany Drive WTP raw water sources, each of the technologies were met with their own set of mechanical or chemical challenges. The highest removal of all PFAS compounds on a consistent and repeatable basis was provided by the various reverse osmosis treatment technologies, particularly the flow reversal reverse osmosis, the closed loop reverse osmosis and the closed-circuit reverse osmosis.

Based on our review of PFAS removal efficiencies, anticipated capital costs, anticipated annual operating costs, pilot equipment performance, the City staff input during the pilot study, and other considerations, and pending approval of the process by the Georgia EPD, InSite Engineering recommends that the City of Calhoun replace the existing mixed media gravity filter process treatment trains at the Brittany Drive WTP with filtered pre-treatment technology followed by high recovery reverse osmosis operating at a minimum 90% recovery rate.

The PFAS pilot mitigation pilot report is available upon request.

Intended Project Scope

Project overview

The City has approved our recommendation and selected installing MF/UF Membrane Filtration technology followed by High Recovery RO as the treatment process for reducing PFAS from the drinking water at the Brittany Drive Water Treatment Plant.

The Brittany Drive WTP PFAS Improvements Project will have a basis of design for treating 12.8 MGD Finished Water with PFAS mitigation processes. The design incorporates utilizing the existing raw water pump stations, rapid mix/flocculation process. This water will be then processed through New RO Pretreatment Membrane Filtration System for standard filtration. The New RO Pretreatment Membrane permeate will then be processed through a New High Recovery RO Filtration System to reduce PFAS in the drinking water process. The permeate from the high recovery New RO Filtration System will go to the Existing Clearwell , then to the Existing Finished Water Pump Station. The New RO Pretreatment Membrane Filtration System and the New High Recovery RO Filtration System will be installed in a new building along with a New Operations Facility. This facility will include a new lab, operations center, offices, breakroom, restrooms, and other facilities needed by the operations staff.

The Waste Stream will be treated for PFAS reduction before being discharged from the Brittany Drive WTP. The intent here is to utilize the Existing Sludge Lagoons for all sludge collection, drains, and filter backwash. A new Waste Stream Pump Station will be installed to transfer this waste stream to the New Waste Stream Treatment Process. The RO Waste Brine will bypass the Existing Sludge Lagoons and will be fed to the Waste Stream Treatment Process. The intended waste stream treatment process will consist of treating all the WTP waste stream through the existing gravity mixed media filter with Granular Activated Carbon (GAC) filtration process for PFAS reduction.

Anticipated Cost

The anticipated capital cost of the project at the Brittany Drive WTP is estimated at approximately $106 million with an annual operational cost increase of approximately $5.10 million, for a total 80-year life cycle cost of approximately $517.3 million.

Treatment Capacity Flow Rate Design Parameters

Drinking Water Treatment Process

1. Existing permitted treatment capacity 12.8 MGD
2. Design Capacity: 12.8 MGD (18 MGD Future Capacity)
    a. Raw water Flow Rate: 14.12 MGD (20.79 MGD Future)
    b. RO Pretreatment Filtration Feed Flow Rate: 14.12 MGD (20.79 MGD Future)
    c. RO Pretreatment Filtration Design Recovery Rate: 95%
    d. RO Pretreatment Filtration Permeate Flow Rate: 13.44 MGD (19.80 Future)
    e. RO Feed Flow Rate: 13.44 MGD (19.80 Future)
    f. RO Design Recover Rate: 90%
    g. RO Permeate Flow Rate: 12.8 MGD Design (18 MGD Future)

Waste Stream Treatment

1. The Waste Stream Treatment Process design flow rates are as follows:

    a. New RO Pretreatment Membrane Filtration Backwash: 0.67MGD (1.04 Future)

    b. New Waste Stream Pump Station: 0.75 MGD (1.10 MGD Future)

    c. New RO Filtration Waste Brine Reject: 1.28 MGD (1.80 MGD Future)

    d. New PFAS Waste Stream Treatment: 2.03 MGD (2.90 MGD)

Reverse Osmosis Pretreatment Membrane Filtration

Ceramic Membranes have been evaluated and selected as a RO pretreatment filtration technology. The manufacturers recommended for this process are:

1. Ovivo - Submerged Silicon Carbide (SiC) Membranes
2. Aqua Aerobics - Skid Mounted Pressurized C-Series Ceramic Membrane System
3. Nanostone – Skid Mounted Pressurized CUF-Shield (CM-151) Ceramic Membrane System

Reverse Osmosis PFAS Reduction Filtration

High Recovery Reverse Osmosis filtration technology has been selected at Mauldin Road WTP as the PFAS reduction treatment process. The manufacturers recommended for this process are:

1. Dupont Desalitec SOAR Reverse Osmosis (CCRO)
2. Rotec Flow Reversal Reverse Osmosis (FR-RO)
3. Veolia PROflex 1000 RO Series Reverse Osmosis (CLRO)

Waste Stream PFAS Mitigation Treatment Process

The Waste Stream will be treated for PFAS reduction before being discharged from the Brittany Drive WTP. The intent here is to utilize the Existing Sludge Lagoons for all filter backwash. A new Waste Stream Pump Station will be installed to transfer this waste stream to the New Waste Stream Treatment Process. The RO Waste Brine will bypass the Existing Sludge Lagoons and be fed to the Waste Stream Treatment Process. The intended waste stream treatment process will consist of treating all the WTP waste stream through the existing gravity mixed media filter with Granular Activated Carbon (GAC) filtration process for PFAS reduction. The options below will be evaluated to determine the most cost effective treatment process for the waste stream treatment at the Brittany Drive WTP.

The following treatment technologies will be evaluated for the Waste Stream Treatment Process:

1. GAC
2. GAC/IX
3. AquaPRS
4. Ovivo O-Lift & O-Break (PFAS Destruction)

Miscellaneous Plant Modifications

Other plant improvements for this project include:

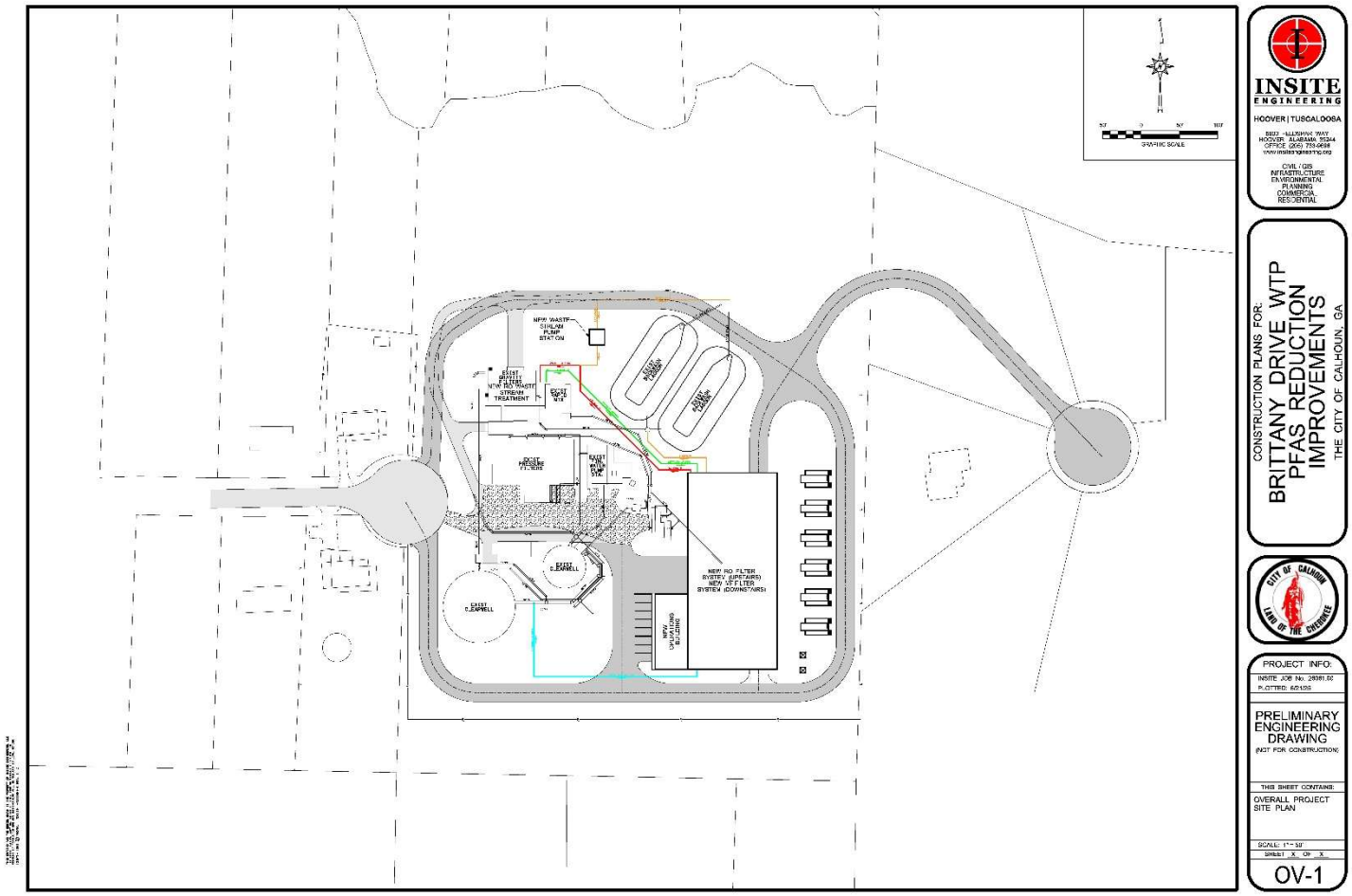
Rehabilitation of the Existing Filter building creating a New Shop/Maintenance Facility

Install New Waste Stream Pump station

And other miscellaneous items

The City of Calhoun, Georgia
Calhoun Utilities
Brittany Drive PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26061.00

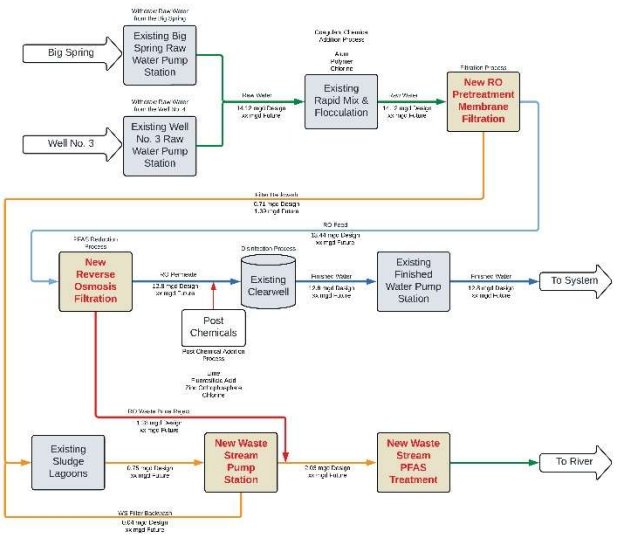
Brittany Drive WTP Proposed Site Plan



Brittany Drive Road WTP Proposed Process Flow Diagram

Calhoun Utilities
Brittany Drive
Water Treatment Plant

Proposed Process Flow Diagram



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CONSTRUCTION PLANS FOR:
BRITTANY DRIVE WTP
PFAS REDUCTION
IMPROVEMENTS
THE CITY OF CALHOUN, GA

PROJECT INFO:
INSITE JOB No. 26061.00

PRELIMINARY ENGINEERING DRAWING
(NOT FOR CONSTRUCTION)

THIS SHEET CONTAINS:
PROPOSED PLANT PROCESS FLOW DIAGRAM

PF-2

Exhibits

The City of Calhoun, Georgia
Calhoun Utilities
Brittany Drive PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26061.00

Exhibit No. MF-1 (RO Pretreatment Option No. 1) - Aqua Aerobics Skid Mounted Pressurized C-Series Ceramic Membrane System



Aqua-Aerobic® Membrane Systems

Featuring Aqua MultiBore® Membranes

For nearly 50 years, Aqua-Aerobic Systems has provided thousands of customers with adaptive treatment solutions in biological processes and filtration for both water and wastewater applications. Our knowledge and expertise in applied engineering and manufacturing allows us to provide highly efficient and cost effective technologies that require less energy, less maintenance and provide a low cost of ownership over the life of the plant.

Aqua-Aerobic® Membrane Systems featuring NO BREAK Aqua MultiBore® membranes are available in both polymeric and ceramic options. Each system is designed to effectively remove suspended solids, particulate phosphorus, bacteria, cysts and other harmful impurities, resulting in safe, high quality water.

Every membrane system is designed specifically for the application. The type of membrane used, polymeric or ceramic, is dependent on attributes such as waste characteristics, treatment objectives and the best economic solution for the plant.

System Applications and Advantages

Applications

- Drinking Water Systems
- Surface Water Treatment
- Well Water Source
- Industrial Water Treatment
- Pretreatment to Reverse Osmosis
- Desalination
- Reuse
- Backwash Water Recovery
- Tertiary Wastewater Treatment
- New Plants, Retrofits, Expansions

Advantages

- No Break Membranes
- Less Chemical Usage
- High Water Recovery Rate
- Low Energy Consumption
- High Permeability
- Compact and Expandable
- No Basins or Lifting Equipment
- Simple Operation and Low Maintenance



Aqua MultiBore® Polymeric Membrane Installation



Aqua MultiBore® C-Series Typical Installation

Membrane Systems Installation Profiles



Ground Water

- 3.0 MGD Byesville, OH Drinking Water Plant
- Replaced failing trains with Aqua MultiBore® P-Series
- Reduced effluent turbidity to <0.03 NTU
- Treats well water containing surface water intrusion



Surface Water / Backwash Waste

- 7.0 MGD Butte, MT Drinking Water Plant
- Utilizes Aqua MultiBore® C-Series membranes
- Backwash recovery membranes reduce waste to < 14,000 gpd
- On-demand direct filtration via gravity keeps power usage low



Municipal Wastewater

- 1.8 MGD Shibaura Wastewater Plant in Tokyo, Japan
- Utilizes Aqua MultiBore® C-Series membranes
- Used for non-potable reuse
- Pre-ozonation results in high flux



Industrial Wastewater

- 0.5 MGD AbbVie Pharmaceutical in Barceloneta, PR
- Utilizes Aqua MultiBore® P-Series membranes
- Provides pretreatment for reverse osmosis (RO) systems
- Effluent reused in cooling towers and process



Seawater / Blowdown Waste

- 22.2 MGD Abu Dhabi Desalination Plant, UAE
- Utilizes Aqua MultiBore® P-Series membranes
- Provides pretreatment for seawater RO
- Treats blend of seawater and steel mill blowdown



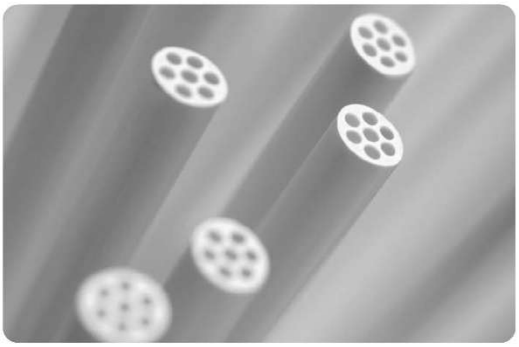
Pilot Testing

- Complete piloting capabilities
- Ceramic and polymeric membrane systems
- 1-30 gpm flow ranges available
- Skid or trailer mounted units

Aqua MultiBore® P-Series

Polymeric Membranes

The Aqua MultiBore® polymeric membrane has been successfully applied at over 225 water and wastewater installations in the last 17 years, including those with high solids applications.

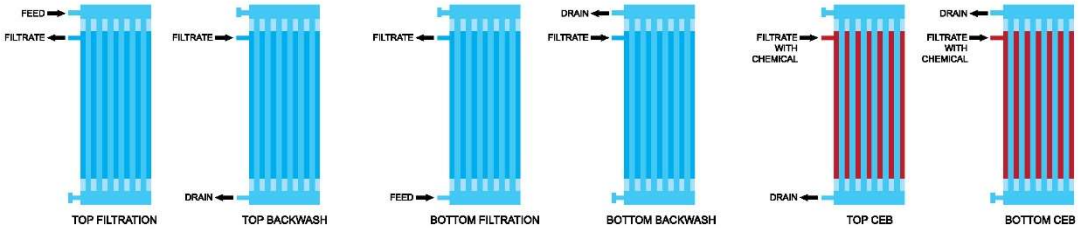


Aqua MultiBore® P-Series Polymeric Design

Polymeric Membrane Features:

- Large diameter bores
- 0.02 µ UF membrane is rated for 4 log virus removal
- Each fiber is made from one material in a single process
- Inside-outside flow path requires no air scour
- Low fouling, can be cleaned with wide pH range (1-13)
- Superior strength – No fiber breaks!

Modes of Operation



Filtration Mode:

- During top filtration, influent enters the top of each membrane module and flows down through each fiber bore
- The 0.02 µ pores allow water to pass through to the outside of the fiber but retain suspended solids, bacteria, cysts, and viruses
- During bottom filtration, influent enters the bottom of each module and flows up through the fiber bores
- The system alternates between top and bottom filtration to evenly distribute impurities along the entire fiber length
- In both filtration modes, filtered water flows from the outside of the fibers through the filtrate port on the side of the module

Backwash Mode:

- During both the top and bottom backwash modes, filtered water enters the filtrate port on the side of each membrane module and flows into each fiber
- During top backwash, water flows down through the fiber bores, into the bottom of the module and out to drain
- During bottom backwash, water flows up through the fiber bores, into the top of the module and out to drain
- The system alternates between top and bottom backwash so that impurities collected at both module ends can be efficiently flushed out
- Backwash occurs every 20 - 80 minutes, depending on influent quality

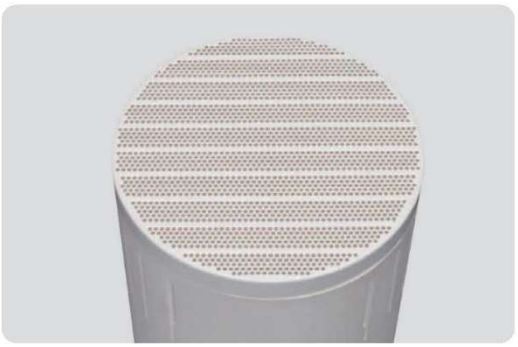
Chemically-Enhanced Backwash (CEB) Mode:

- Chemicals are periodically added to the backwash water to dissolve any impurities that were not removed during the backwash modes
- The flow paths are the same as during backwash, only small amounts of chemical are injected into the filtrate prior to entering the modules
- Caustic is used to dissolve organics, acid is used to dissolve inorganic matter, and chlorine is used for occasional disinfection
- The membranes are soaked in the chemical for 10-20 minutes before being flushed out
- A CEB is performed every 8 -168 hours, depending on influent quality

Aqua MultiBore® C-Series

Ceramic Membranes

The Aqua MultiBore® C-Series ceramic membrane has been successfully applied in both water and wastewater applications with more than 175 installed systems from pretreatment to advanced treatment of drinking water.

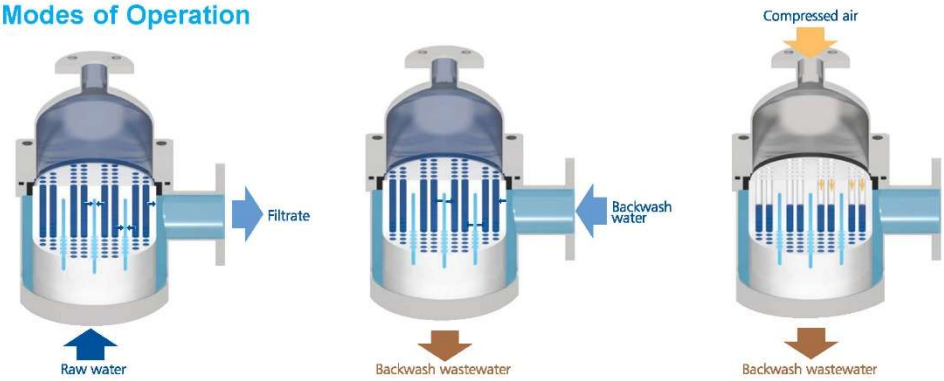


Aqua MultiBore® C-Series Ceramic Design

Ceramic Membrane Features:

- Short and infrequent backwashes result in very high recoveries
- Only 5 out of more than 20,000 elements have been replaced in 20 years
- Single-piece ceramic element with two seals is very unlikely to break or leak
- Independent 10-module rows increase flexibility and decrease footprint
- Inside-out filtration enables a high cross-flow velocity for maximum cleaning
- Material is very resistant to corrosion and high pressures/ temperatures
- Systems are simple to operate and maintain
- Extremely uniform 0.1 µ pores result in high fluxes
- Used membranes can be recycled

Modes of Operation



Filtration Mode:

- During filtration, influent enters from the bottom of each membrane module and flows up through each ceramic filtration cell
- The 0.1 µ pores allow water to pass through to the ceramic filtrate collection cells
- Collected filtrate then exits the membrane through the filtrate port on the side of the module

Backwash Mode:

- During backwash, filtered water enters the filtrate port on the side of each membrane module and flows into each filtration cell
- 70 psi filtrate detaches fouling matter within the filtration cells
- Most impurities are collected at the bottom of the module and efficiently flushed out
- Typical backwash occurs every 4 to 12 hours

Airflush Mode:

- Compressed air is injected into the top of the membrane sub-module to remove any remaining impurities that were not removed during the backwash mode
- Airflush typically takes 2-5 seconds at a maximum pressure of 30 psi
- The system is then placed back into normal filtration mode


Since 1969, Aqua-Aerobic Systems, Inc. has led the industry by providing advanced solutions in water and wastewater treatment. As an applied engineering company serving both municipal and industrial customers, we work collaboratively with consulting engineers, owners, plant managers, and operators to design and manufacture the best treatment solution with the lowest lifecycle cost.
PROTECTING THE WORLD'S WATER.
Aeration and Mixing
Biological Processes
Filtration
PFAS Solutions
Ozone Systems
Membranes
Aftermarket Products and Services
Rental Programs
Membrane Systems
Featuring Aqua MultiBore® Membranes
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A Metawater Company
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p 815.654.2501 | f 815.654.2508 | solutions@aqua-aerobic.com
The information contained herein relative to data, dimensions and recommendations as to size, power and assembly are for purpose of estimation only. These values should not be assumed to be universally applicable to specific design problems. Particular designs, installations and plants may call for specific requirements. Consult Aqua-Aerobic Systems, Inc. for exact recommendations or specific needs. Patents Apply.
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Bulletin #870D 1/26

Exhibit No. MF-2 (RO Pretreatment Option No. 2) - Nanostone Skid Mounted Pressurized CUF-Shield (CM-151) Ceramic Membrane System

nanostone

Not for design purposes
Contact Nanostone for assistance

CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™



Product Overview

CUF|Shield™ represents the cornerstone of Nanostone ceramic ultrafiltration technology. Engineered for excellence, this module delivers consistent, high-quality filtration for a broad range of industrial and municipal applications. Durable ceramic membrane construction provides long-term reliability and robust performance in diverse water treatment scenarios. CUF|Shield enables cost-effective filtration technology, optimized for efficiency and longevity, while providing a low-maintenance solution.

Applications

CUF|Shield™ excels in large-scale urban and rural drinking water and wastewater filtration. In core industrial applications, CUF|Shield outperforms competitors in process water, cooling towers, coal/rare earth mineral mining, and water reuse scenarios where high purity standards are required. Boiler feed and cooling water filtration projects utilize CUF|Shield to provide protection for critical infrastructure in power generation applications.

Specifications

Surface Area		24,3 m2	262 ft2
Nominal Channel Size (Hexagonal)		2,4 mm	0.09 in
Weight (+/- 5 kg)	**Dry**	80 kg	176 lbs
	As Shipped	82 kg	181 lbs
Maximum Module Hold Up Volume		32 L	8.5 gal
Vessel Materials		• Fiberglass Reinforced Plastic (FRP) Housing • CPVC and Noryl® Endcaps • Fluor Elastomer (FKM) O-Rings • Super Duplex 2507 SS Permeate Port	
Membrane Material		$\alpha - Al_2O_3$	
Membrane Nominal Pore Size		30 nm	
Module Operating Position		Vertical	



APPROVED DRINKING WATER CERTIFICATIONS

✓ NSF/ANSI/CAN 61 & NSF/ANSI 419

UL CERTIFIED
HEALTH EFFECTS US-CA MH61725
HEALTH EFFECTS US MH63928
Drinking Water System Component NSF/ANSI/CAN 61 NSF/ANSI 419

CUF|Shield™ nanostone

nanostone

Not for design purposes
Contact Nanostone for assistance

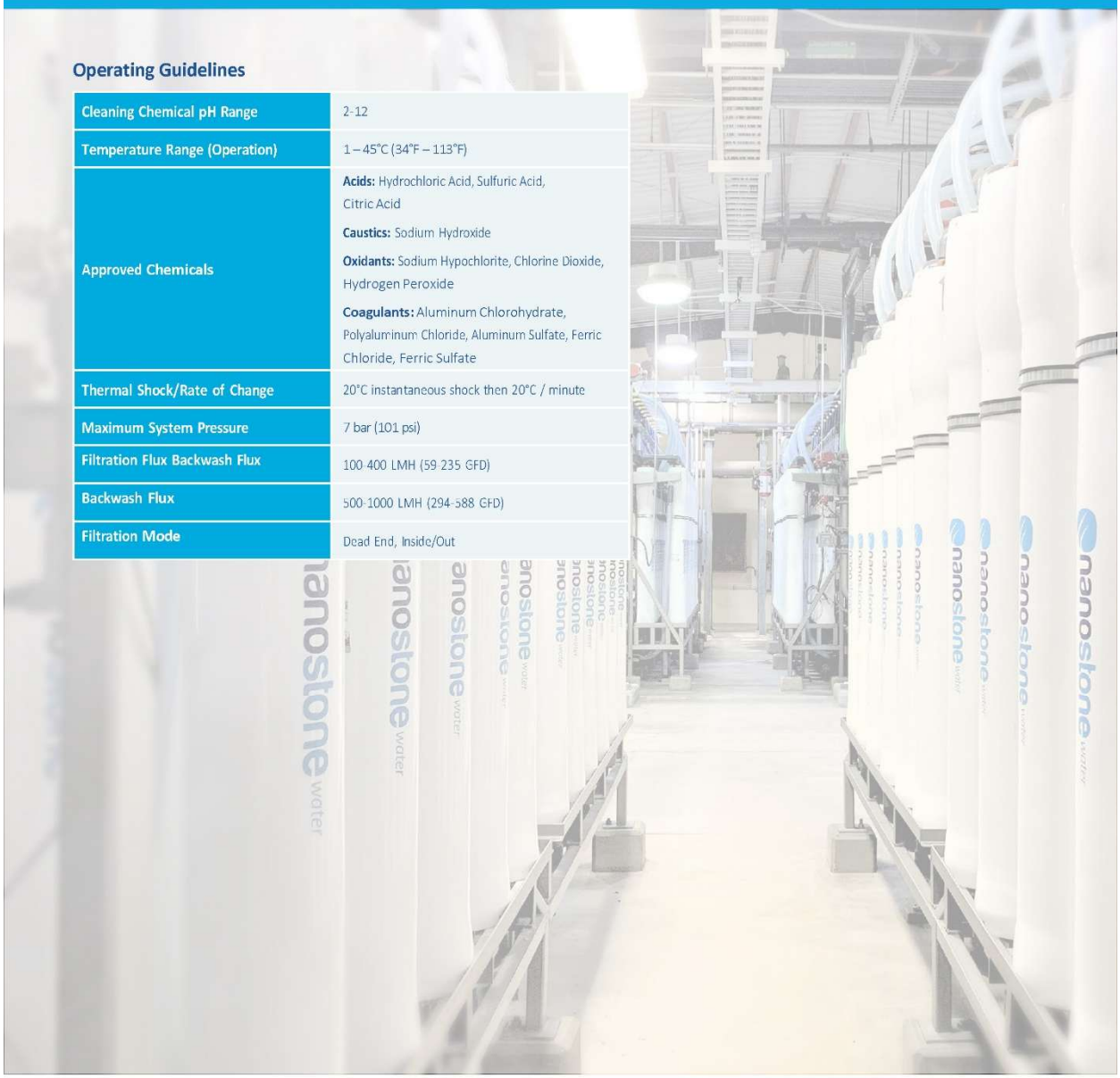
CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™

Operating Guidelines

Cleaning Chemical pH Range	2-12
Temperature Range (Operation)	1 – 45°C (34°F – 113°F)
Approved Chemicals	**Acids:** Hydrochloric Acid, Sulfuric Acid, Citric Acid **Caustics:** Sodium Hydroxide **Oxidants:** Sodium Hypochlorite, Chlorine Dioxide, Hydrogen Peroxide **Coagulants:** Aluminum Chlorohydrate, Polyaluminum Chloride, Aluminum Sulfate, Ferric Chloride, Ferric Sulfate
Thermal Shock/Rate of Change	20°C instantaneous shock then 20°C / minute
Maximum System Pressure	7 bar (101 psi)
Filtration Flux Backwash Flux	100-400 LMH (59-235 GFD)
Backwash Flux	500-1000 LMH (294-588 GFD)
Filtration Mode	Dead End, Inside/Out



CUF|Shield™

nanostone

nanostone

Not for design purposes
Contact Nanostone for assistance

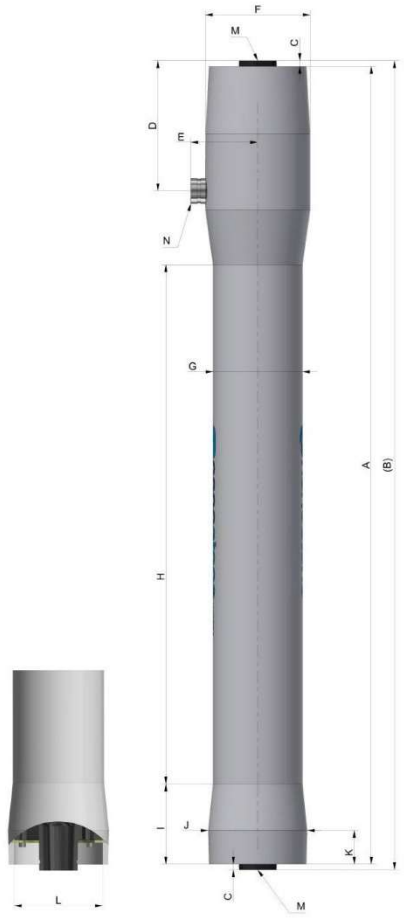
CUF|Shield™ (CM-151) Technical Data Sheet

Ceramic Ultrafiltration Module

CUF|Shield™

Physical Dimensions

CUF|Shield™			mm	inch
Module Length	+/- 3,5mm	A	1891	74.5
	+/- 5,1mm	B	1918	75.5
Port Projection	+1,3/-2,6mm	C	14	0.5
Side Port Dimension	+1,3/-2,6mm	D	309	12.2
	+0,3/-1,0mm	E	159	6.3
Module Diameter Top	+4,0/-0,5mm	F	249	9.8
Module Diameter Mid	+/-1,5mm	G	212	8.3
Length of Diameter	+/- 5,0mm	H	1246	49.1
	+/- 10,0mm	I	170	6.7
Module Diameter Bottom	+3,0/-1,0mm	J	233	9.2
Length of Cylindrical Diameter	+/-10,0mm	K	105	4.1
Inner Module Diameter	+0,5/-1,0mm	L	206	8.1
Grooved Fitting Feed/Reject (Qty 2)		M	DN-80	3-inch
Grooved Fitting Permeate		N	DN-50	2-inch



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Q.1 VT PRD 151EN Rev18 JBL (10/25)

Nanostone Contact Information:

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nanostone

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Exhibit No. MF-3 (RO Pretreatment Option No. 3) - Ovivo Submerged Silicon Carbide (SiC) Membranes

SiCBLOX™ SYSTEMS

LIMITLESS POSSIBILITIES

OVIVO
Worldwide Experts in Water Treatment

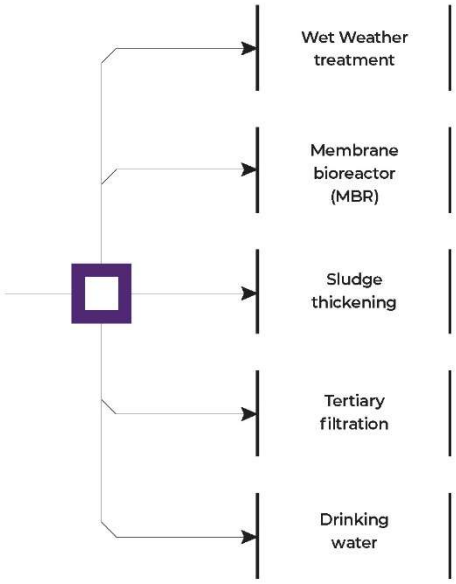
The City of Calhoun, Georgia
Calhoun Utilities
Brittany Drive PFAS Reduction Improvements - Project Scope
InSite Engineering, LLC Project No. 26061.00



WHERE IS SiC USED?

SiC IS USED IN A WIDE VARIETY OF WATER AND WASTEWATER APPLICATIONS IN BOTH MUNICIPAL AND INDUSTRIAL SECTORS. IT'S PRIMARY GOAL IS TO REMOVE SOLIDS, TOXIC POLLUTANTS, AND PATHOGENS, CREATING A SAFE, CLEAN, AND SUSTAINABLE WATER SOURCE.

SiC is used in applications such as



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SiCBLOX™ SYSTEMS

All too often all of the focus is placed on the membrane, portraying it as a black box that is independent of its surroundings. The reality is that membranes are one of many subsystems that go into any water or wastewater treatment plant. While the membranes are often the workhorse of a treatment system, they can only be successful if the rest of the system is designed properly.

The combination of Cembrane SiC Technology with Ovivo's system integration and process expertise have created a powerful new brand of treatment systems: SiC BLOX Systems. SiC BLOX Systems have the widest range of applications with the widest operating window to solve new and existing problems.

SiC Blox systems come in conventional, in-ground designs, packaged plants ("micro"), and mobile configurations ("remote").



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stormBLOX™

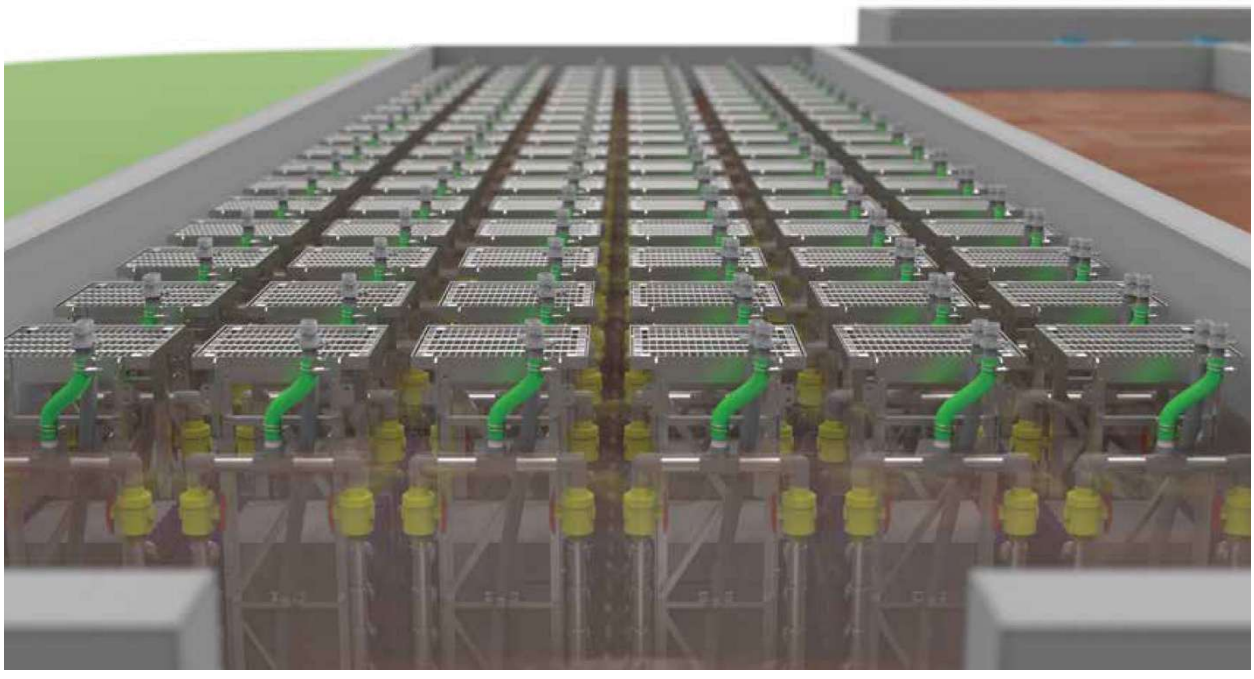
SiC RAPID STORM TREATMENT

Climate change is creating bigger storms and more pollution. Every year over 850 billion gallons of untreated sewage are discharged into our waterways. Beaches close. Fish die. People get sick. Storm driven sewer discharges are a big problem, and they're getting worse. stormBLOX technology offers a simple and a sustainable treatment solution to this huge problem.

stormBLOX instantly treats right at the on-set of a storm while physically blocking solids and pathogens from being discharged into our waterways.

Other treatment options, such as ballasted clarification, compressed media filtration, cloth filtration, and chlorination simply can't treat storm flows as quickly and as effectively as stormBLOX.

These other technologies pass thousands to millions of gallons untreated at the onset of a storm as they come on line. Plus, stormBLOX effluent meets all disinfection requirements without supplemental chemicals, preventing toxic by-products from harming aquatic life.

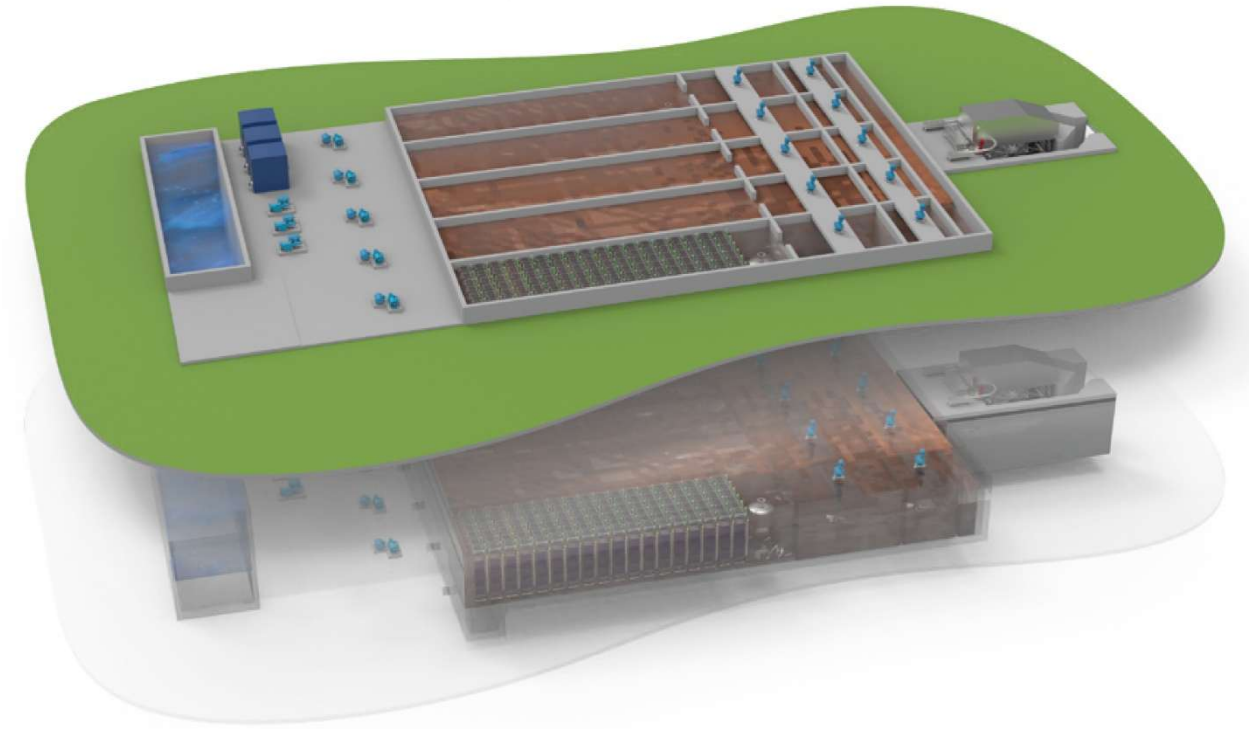


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stormBLOX™

SiC RAPID STORM TREATMENT



stormBLOX IS USED IN THE FOLLOWING APPLICATIONS/MARKETS:

- CSO facilities with consent decrees
- SSO facilities with consent decrees
- MBR plants with >3Q peaking factors due to high I&I
- CAS plants with >5Q peaking factors due to high I&I

BENEFITS OF stormBLOX INCLUDE:

- Disinfection without chemicals
- Instantaneous treatment
- Supplement secondary treatment
- No disinfection by-products
- Utilize as tertiary filtration system during dry weather
- Extremely small footprint, easily fits into existing infrastructure
- Easily placed off-line regardless of weather conditions

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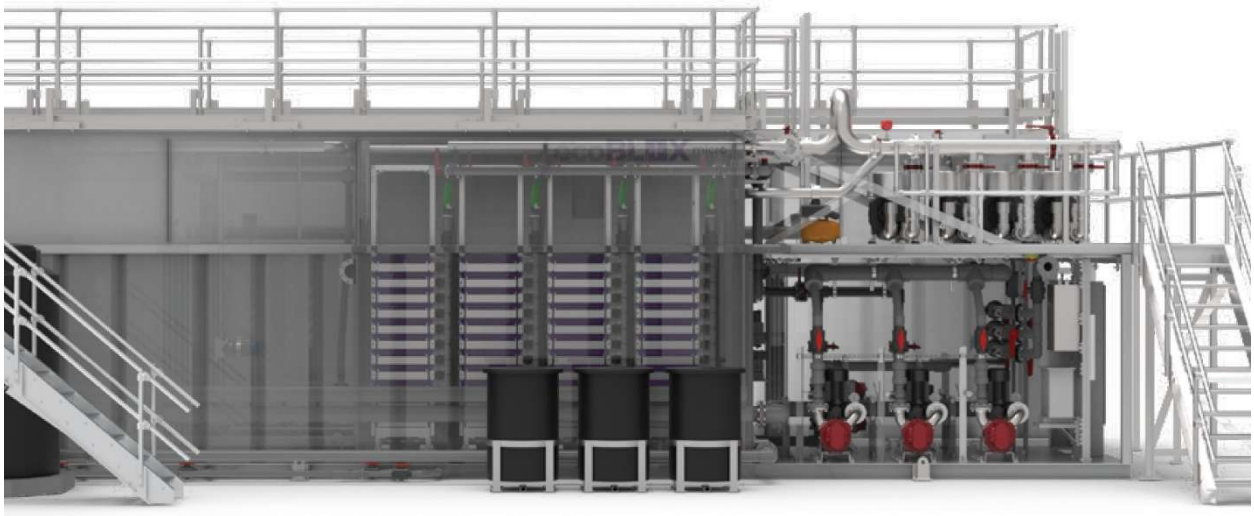


ecoBLOX®

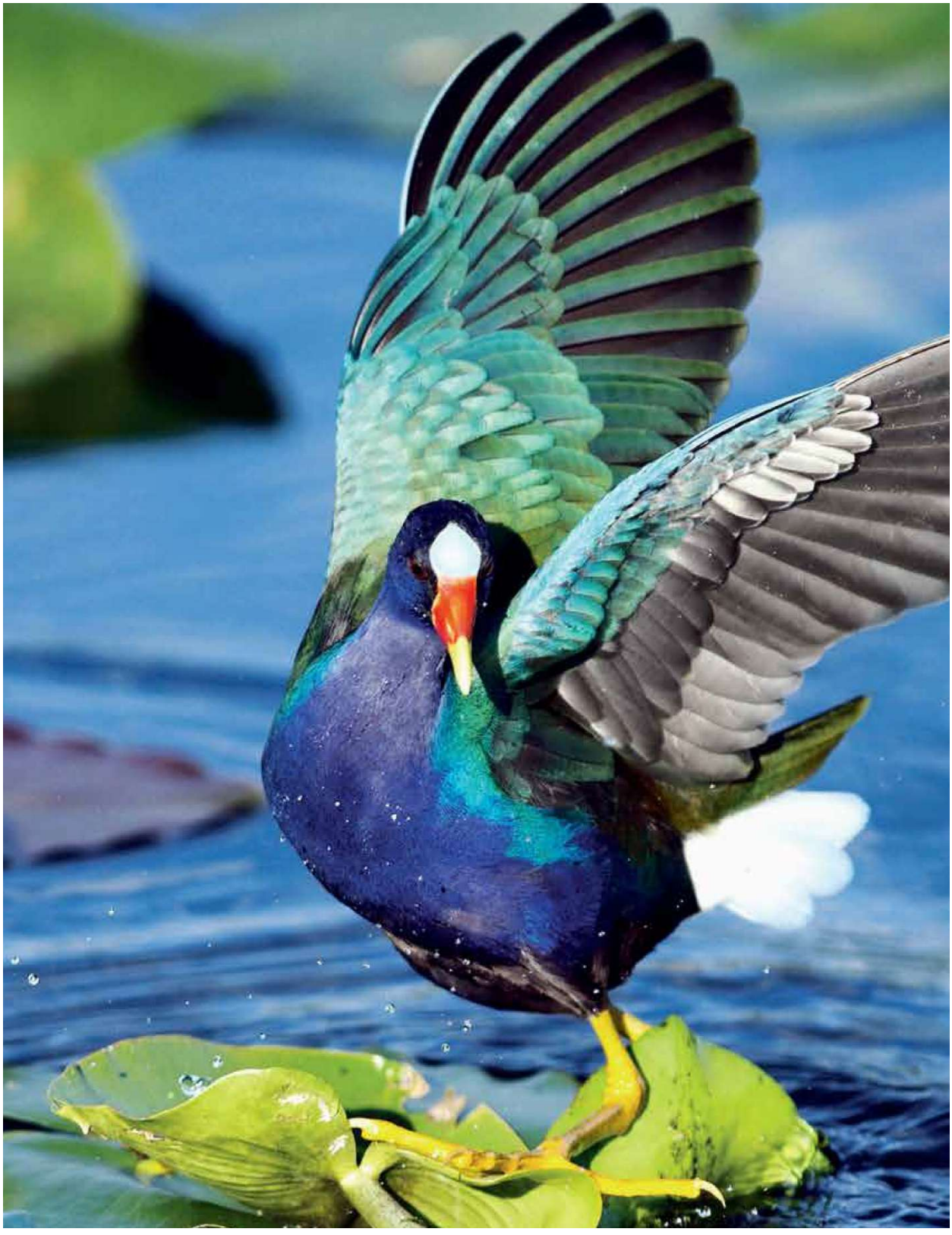
SiC MEMBRANE BIOREACTOR

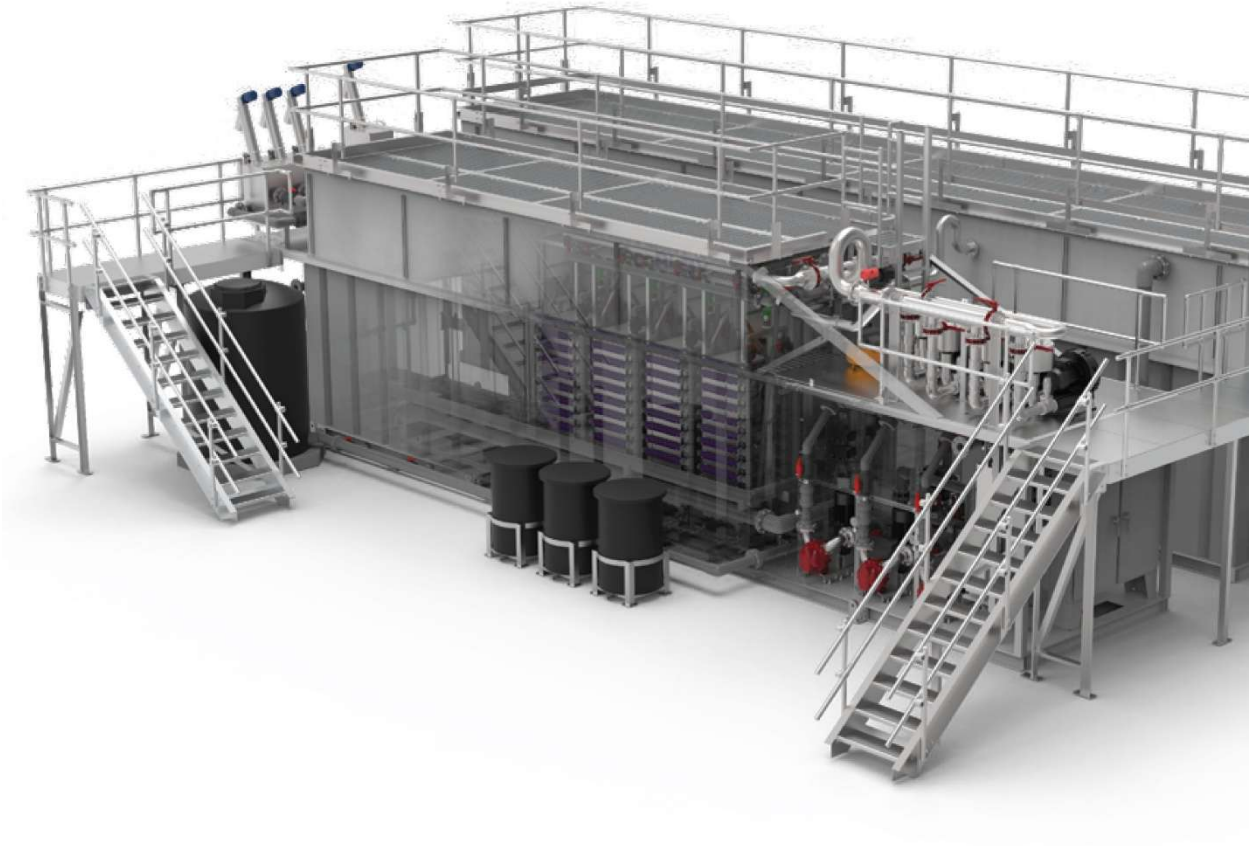
MBRs are a fantastic technology that we need – it provides a level of wastewater treatment that no other technology can, but they sometimes face operational challenges or difficulties. Let's remember that membranes in an MBR are in a turbulent, high mixed liquor, high fouling environment which can place tremendous stress on any membrane. ecoBLOX systems can endure and withstand the stresses of an MBR environment by utilizing membranes that are a rock!

ecoBLOX systems are truly resilient. ecoBLOX systems have the widest operational window meaning they can adapt, without failure, to changes in process conditions. This ability to adapt ensures smooth operation, long membrane life, and low life cycles costs. ecoBLOX plants are also a great fit for installations with seasonal flow, like ski resorts, where temporarily shutting down the system for an extended period of time makes sense.



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ecoBLOX IS USED IN THE FOLLOWING MARKETS:

- Replacement of struggling or failing MBR plants
- Retrofit of CAS plants
- Greenfield plants
- Packaged plants

BENEFITS OF ecoBLOX:

- Increase capacity of existing MBR plants
- 100% recoverability
- Widest operating window
- Membrane life is decoupled from chemical cleaning
- Easy to operate and maintain
- They can be easily placed offline with no special preservation

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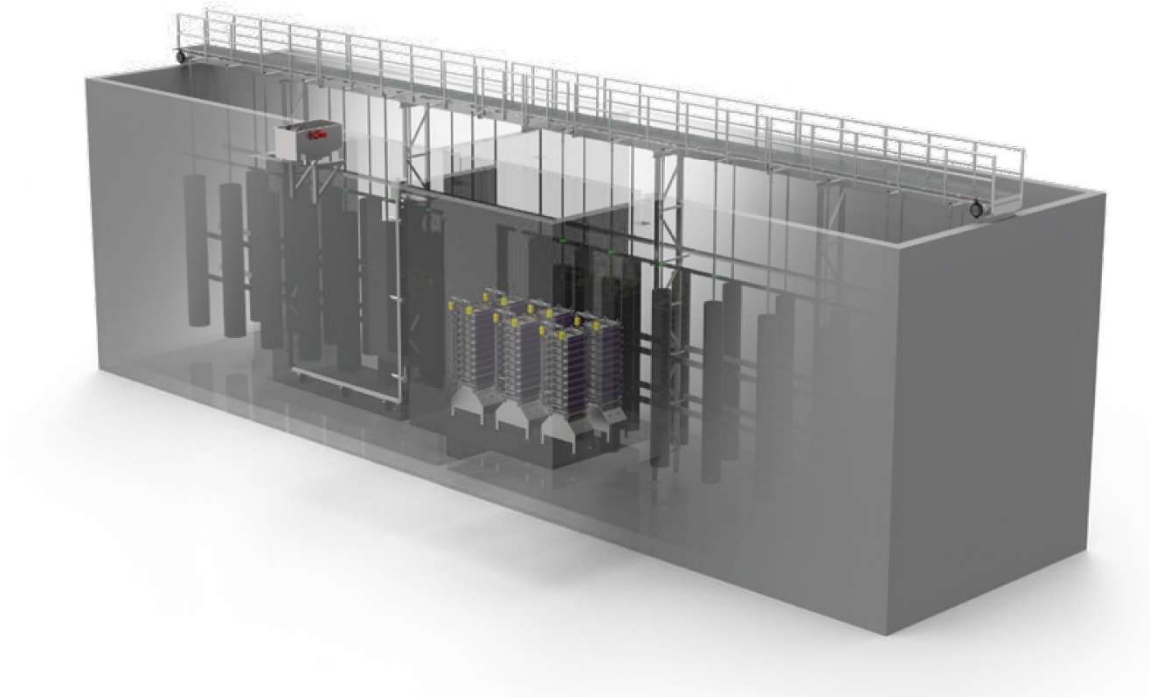
solidBLOX™

SiC SLUDGE THICKENING

Wastewater treatment is a challenge in and of itself, but dealing with the leftover sludge presents a whole new set of issues. When managed poorly, sludge management can be very costly, bad for the environment, and make a real stink – literally.

solidBLOX transforms wastewater treatment plants by optimizing sludge handling process while lowering effluent NH3 and TP. When coupled with aerobic digestion, solidBLOX eliminates foul odors while producing reuse quality effluent, which is good for all of us.

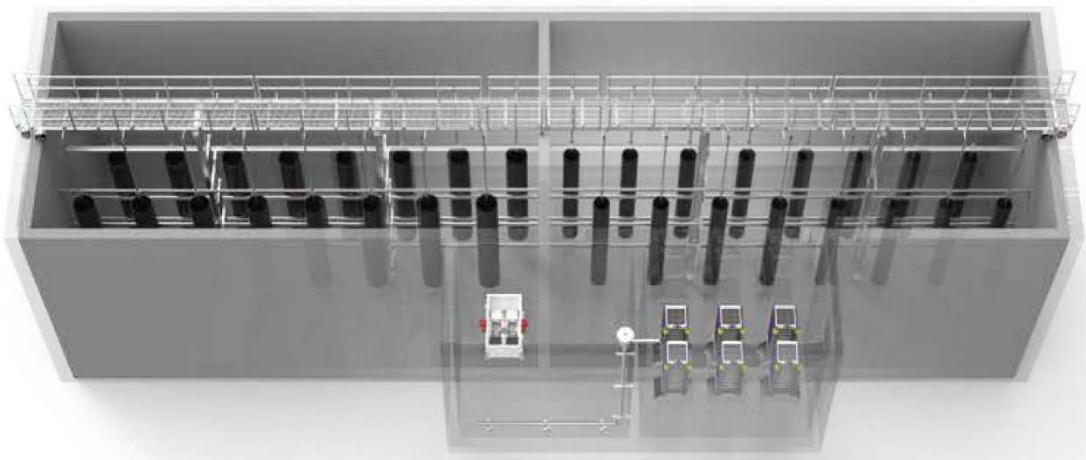
By thickening to 3%, solidBLOX also can reduce sludge hauling requirements, reducing both cost and pollution. An aerobic digester can now be operated at 3% solids, reducing the size of a conventional aerobic digester significantly. Plus, by using SIC to thicken solids, polymer addition is eliminated, saving plants a ton of money and hassle. Last, but certainly not least, solidBLOX helps make natural organic fertilizer which is good for all of us.



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solidBLEX™
SiC SLUDGE THICKENING



solidBLOX IS USED IN THE FOLLOWING MARKETS:

- Aerobic digestion plants
- WWTP with high hauling costs
- WWTP with tight TN and/or TP limit

BENEFITS OF solidBLOX ARE:

- Class B solids with a lower footprint and energy consumption
- Thickening to >3% solids without the use of polymers
- Lower sludge hauling costs
- Elimination of foul odors associated with conventional aerobic digestion
- Reuse quality effluent that compliments a BRN process

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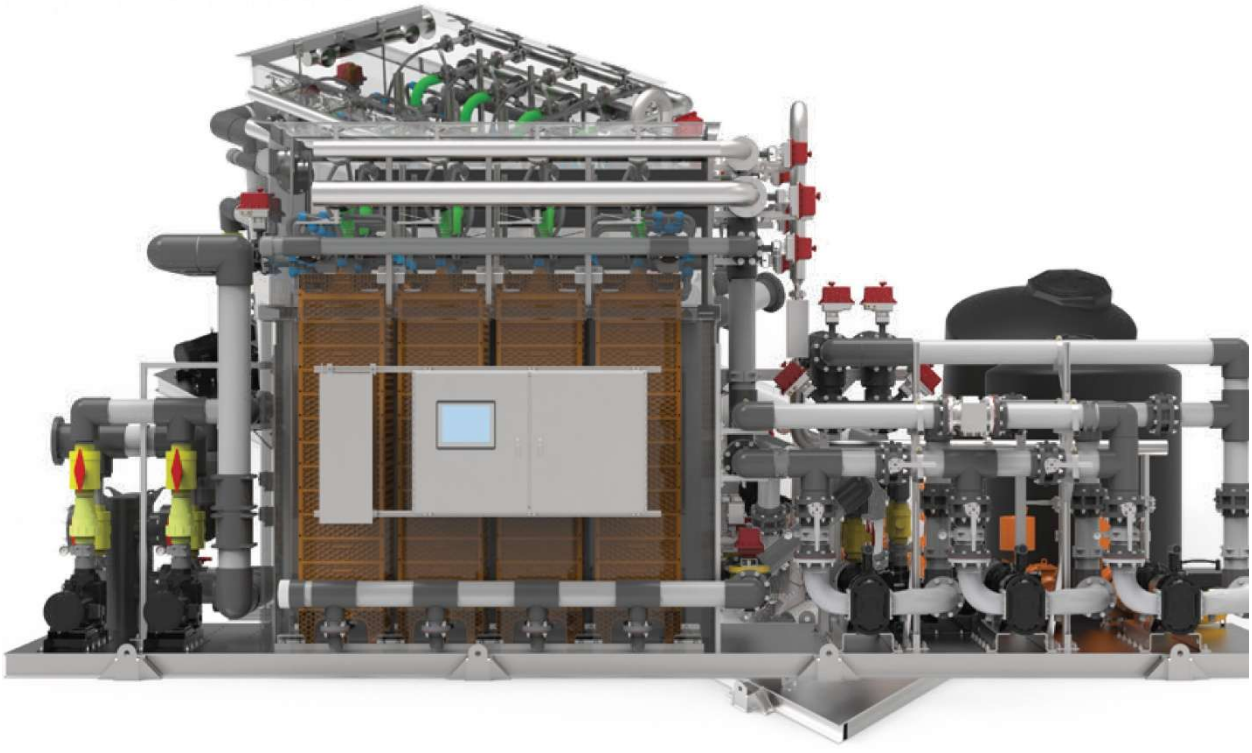


ultraBLOX™

SiC TERTIARY FILTRATION & REUSE

There simply isn't enough clean water in our world today. Fresh water supplies are under severe duress due to demand and pollution. What clean water we do have is rapidly vanishing as extreme droughts strengthen their grip. Simply put, we need more water!

Effluent from conventional wastewater treatment plants is a readily available, reliable, and renewable resource that we don't take advantage of. ultraBLOX is the most versatile and advanced tertiary system for creating clean, pure, and safe water. Placing the SiC membrane at the final step of the plant allows you to prevent phosphorus, metals, pathogens and other trace contaminants from passing. Reuse and discharge to our water ways is safer than ever before. By creating a new and reliable water source, ultraBLOX helps alleviate pressure on already strained water sources.

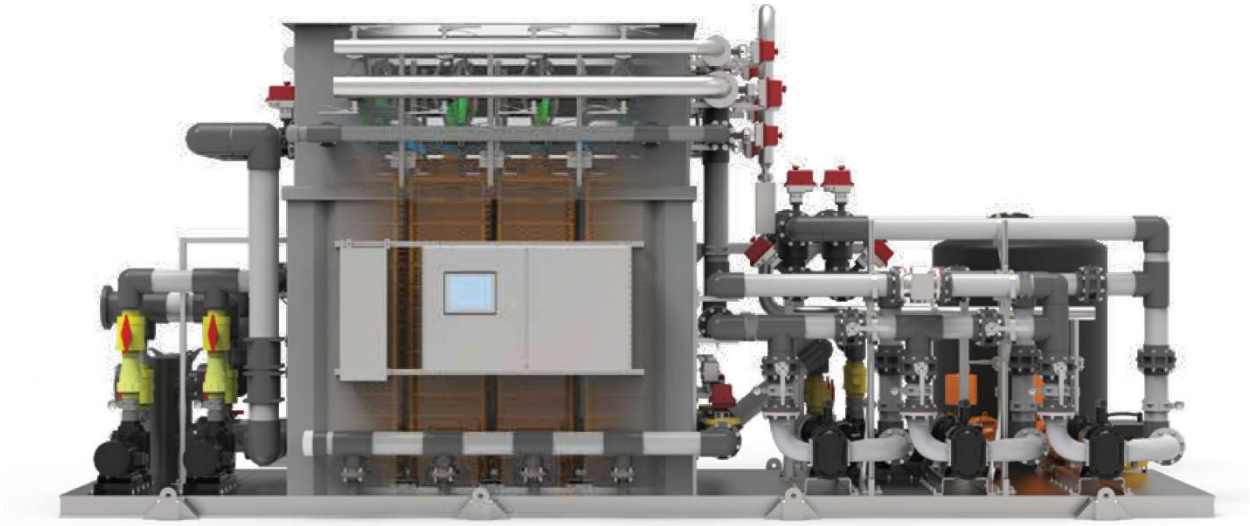


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ultraBLOX™

SiC TERTIARY FILTRATION & REUSE



ULTRABLOX IS USED IN THE FOLLOWING MARKETS:

- Advanced treatment of secondary effluent to essentially zero solids.
- Advances reuse such as DPR, IPR, and Title 22
- Industrial process water make-up
- Hollow fiber plant rehab
- Plants with TP limits <0.3mg/l and Plant will low heavy metal limits

BENEFITS OF ULTRABLOX:

- Increase capacity of existing hollow fiber plants
- Quick and full recovery, minimize impacts of EPS and algae fouling
- Combine with ozone, PAC, enhanced coagulation, or tertiary MBR for advanced treatment capabilities
- Takes less chemical to achieve low TP limits
- Pathogen removal
- Heavy metal removal
- Lower downstream treatment (RO, UV, etc.) costs

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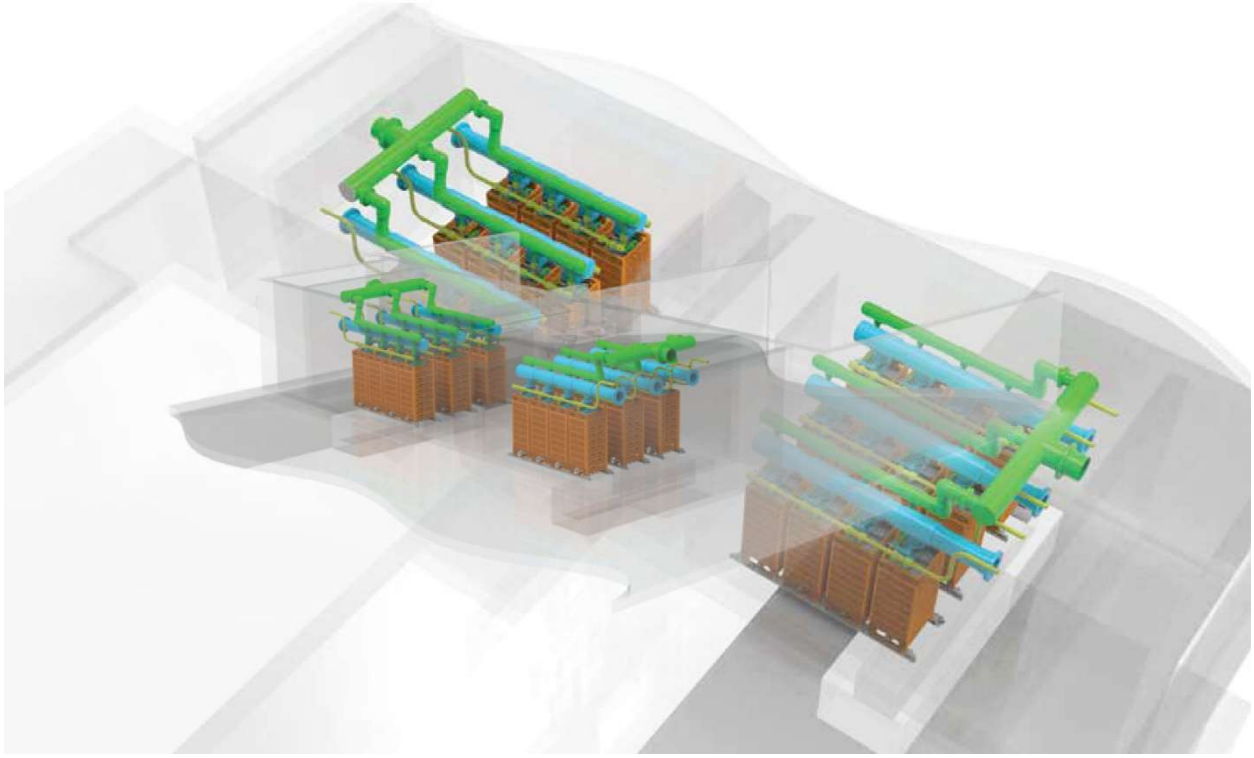
The City of Calhoun, Georgia
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clearBLOX™

SiC DRINKING WATER FILTRATION

Fresh water supplies are severely stressed and access to safe drinking water becomes a greater challenge each and every day. It is imperative we protect what fresh water we have access to ensure health and safety is never compromised. As more and more exotic chemicals contaminant our water, the need for new approaches to ensure safe and clean water has never been more critical. Let's block these unhealthful chemicals from entering our drinking water with SiC!

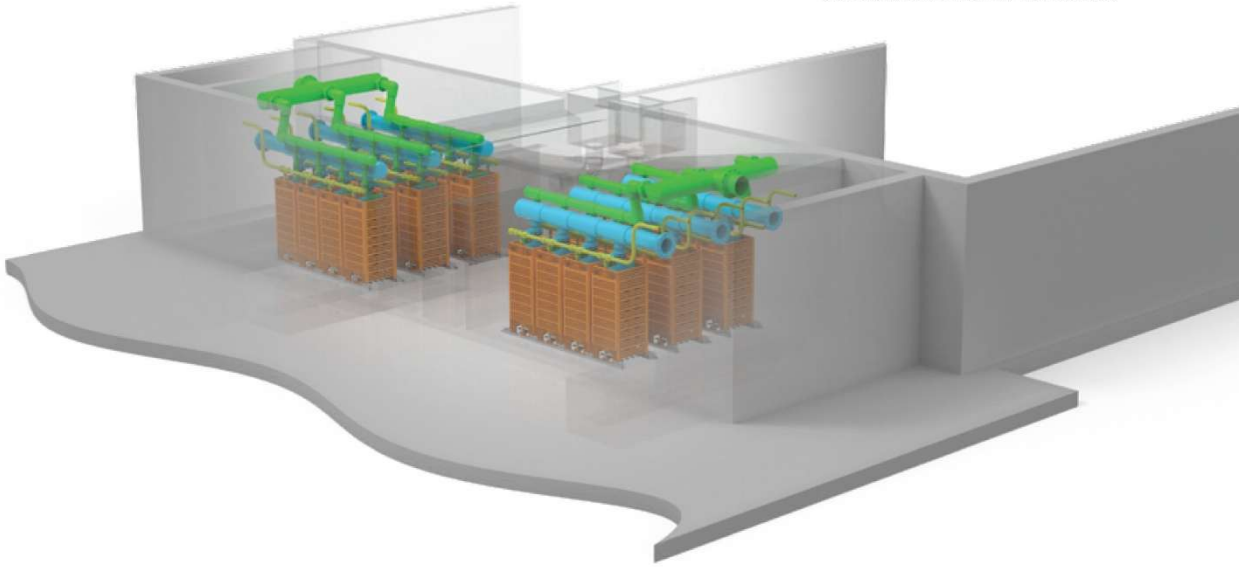
With rapidly ageing infrastructure, clearBLOX systems are perfectly suited for upgrading/retrofitting conventional gravity filter plants to meet current drinking water requirements. clearBLOX ensures our water is safe and that we never have to compromise our health. clearBLOX protects us from today's most toxic pollutants by creating new treatment approaches and solutions for water.



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clearBLOX™
SiC DRINKING WATER FILTRATION



clearBLOX IS USED IN THE FOLLOWING APPLICATIONS:

- Conventional gravity filter retrofit
- Filter backwash recovery
- Metal, including radium, removal from groundwater
- BWRO pre-treatment
- SWRO pre-treatment
- Surface water filtration for potable water.
- Submerged hollow fiber plant retrofit

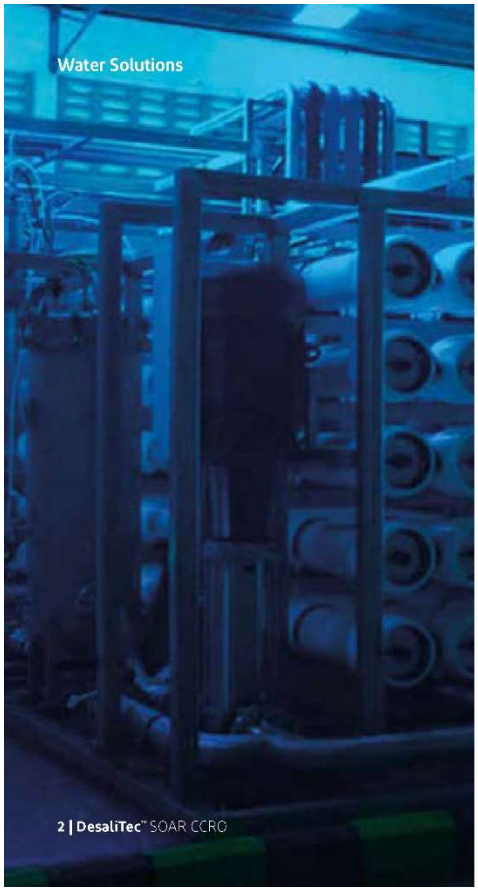
BENEFITS OF clearBLOX:

- Performance and effluent quality independent of incoming feed
- Eliminate polymers
- Maximize water recovery
- Increase capacity of existing hollow fiber plants
- Lowest SDI (RO pre-treatment)
- DOC/THM pre-cursor removal
- Remove complex organic compounds such as pharmaceuticals or PFAS
- Minimize or reduce post disinfection requirements
- Lower downstream treatment (RO, UV, etc.) costs
- Higher overall water recovery (i.e. less wasting)

Exhibit No. RO-1 (RO Option No. 1) - Dupont Desalitec SOAR Reverse Osmosis (CCRO)

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The Future Beckons



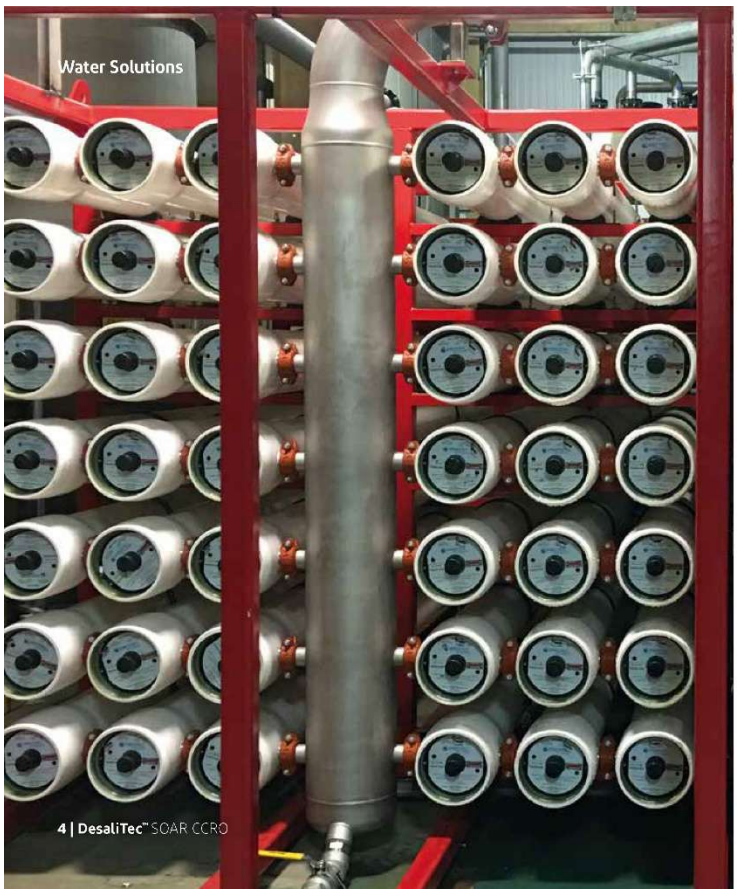
- Higher Recovery
- Lower Cost
- Best Peace of Mind

What's in Our DNA

- 100+ Patents
- 250+ Installations
- 20+ Industries
- 6 Continents
- 1 DuPont Water Solutions Portfolio


Water Solutions
Safeguard
Avoid the downfalls of traditional reverse osmosis and thrive where others fail. DesaliTec™' patented CCRO process provides unprecedented performance and is trusted by Fortune 500 companies for their critical water purification and reuse needs.
Streamline
Simplify your water treatment operations with unmatched flexibility and robustness. DesaliTec systems are easy to operate and automatically adapt to a wide range of changing water conditions, requiring less maintenance and oversight.
Save
Reap the rewards of unparalleled efficiency with a predictable and rapid Return On Investment (ROI). DesaliTec guarantees maximum water recovery, reduces waste and energy use, and provides service and maintenance cost savings.
DesaliTec™ SOAR CCRO | 3

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DesaliTec™ SOAR Reverse Osmosis

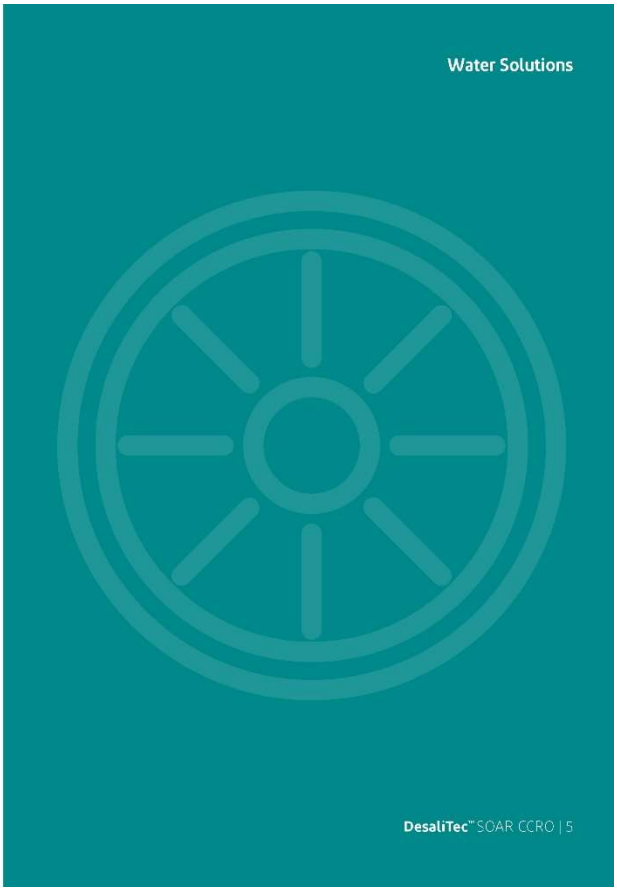
DesaliTec™ CCRO systems offer the versatility of a tunable RO design with a piece of mind of industry leading DuPont suite of FilmTec™ membranes.

DesaliTec clients around the globe rely on the consistent performance and ease of operation of their DesaliTec SOAR solutions, saving significant costs through reduced maintenance, maximum water recovery rates and lower energy consumption.

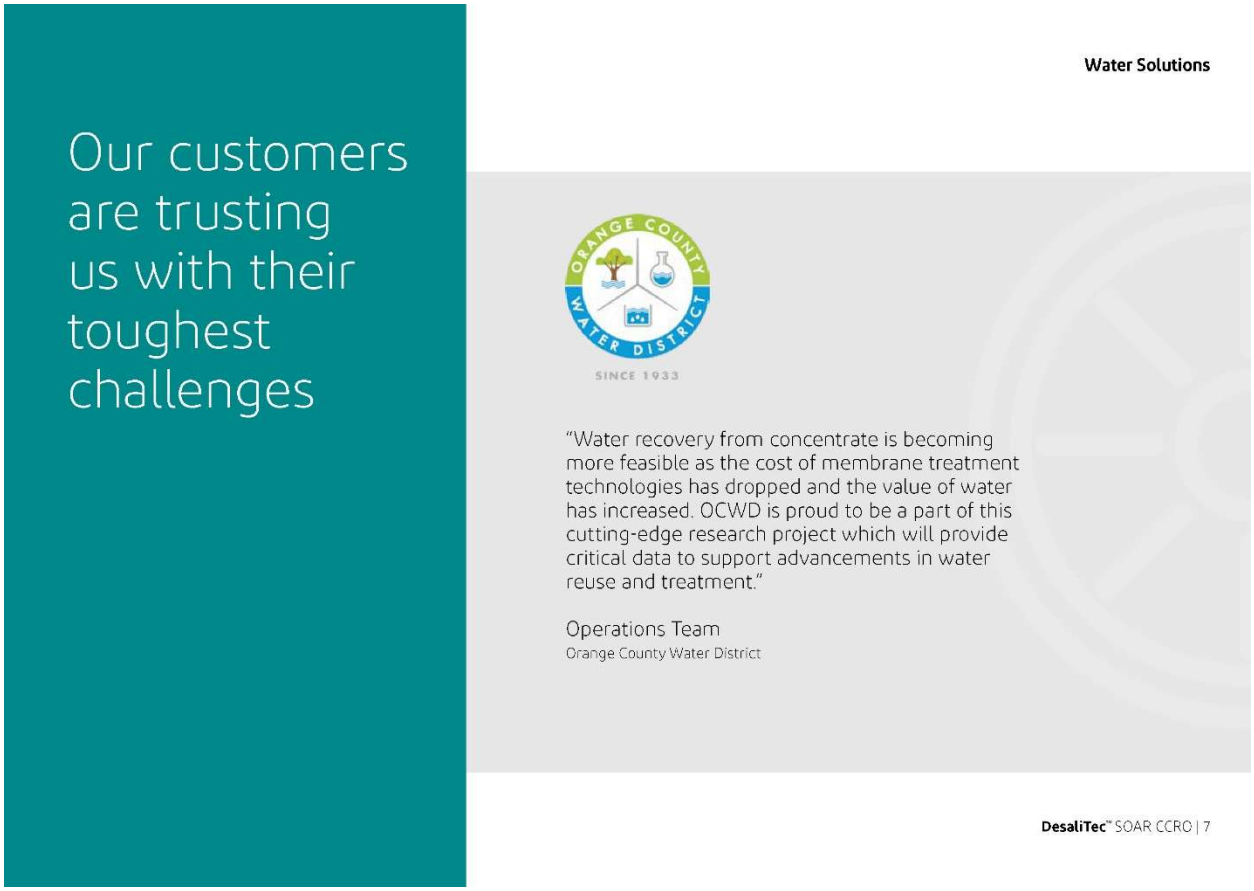
DesaliTec offers standardized CCRO systems to meet the requirements of most industrial applications.

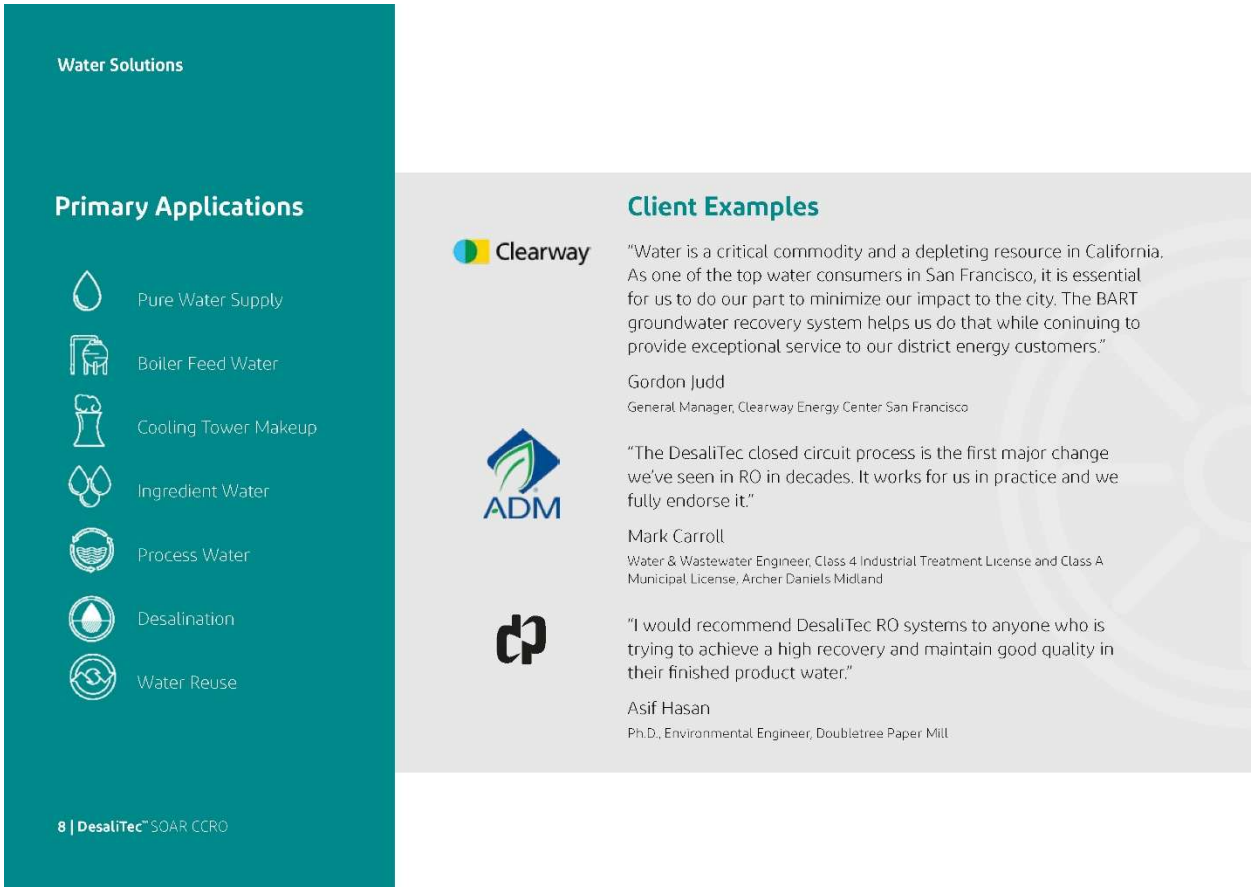
DesaliTec offers SOAR Max systems, designed for Zero Liquid Discharge (ZLD) and sea water applications.

DesaliTec offers customized SOAR Max systems, designed to operate at pressures up to 120 barg to achieve minimum liquid discharge and zero liquid discharge applications.




Water Solutions
MAXIMUM
RECOVERY
GUARANTEED
6 | DesaliTec™ SOAR CCRO
Benefits
Flexibility
DesaliTec™ SOAR CCRO systems automatically adapt to changing feedwater and allow the operator to modify recovery, cross flow, and flux in real time.
Reliability
DesaliTec SOAR CCRO systems naturally mitigate the fouling and scaling that typically plagues reverse osmosis systems. Automated operation with online monitoring provides additional protection.
Maximum Recovery
DesaliTec SOAR CCRO systems come with an industry-leading maximum recovery guarantee, operating at up to 98% recovery and allowing you to achieve your sustainability goals.
Energy Savings
DesaliTec SOAR CCRO systems apply the optimal pressure to keep constant permeate flow, reducing average energy consumption by up to 35%.
Return On Investment
DesaliTec SOAR CCRO systems minimize the largest cost associated with reverse osmosis system operation, wastewater disposal, which can be reduced by 50% to 75% and provide paybacks of under a year.


Water Solutions
Our customers are trusting us with their toughest challenges
ORANGE COUNTY WATER DISTRICT
SINCE 1933
"Water recovery from concentrate is becoming more feasible as the cost of membrane treatment technologies has dropped and the value of water has increased. OCWD is proud to be a part of this cutting-edge research project which will provide critical data to support advancements in water reuse and treatment."
Operations Team
Orange County Water District
DesaliTec™ SOAR CCRO | 7



Water Solutions

Primary Applications

- Pure Water Supply
- Boiler Feed Water
- Cooling Tower Makeup
- Ingredient Water
- Process Water
- Desalination
- Water Reuse

8 | DesaliTec™ SOAR CCRO

Client Examples

Clearway

"Water is a critical commodity and a depleting resource in California. As one of the top water consumers in San Francisco, it is essential for us to do our part to minimize our impact to the city. The BART groundwater recovery system helps us do that while coninuing to provide exceptional service to our district energy customers."

Gordon Judd

General Manager, Clearway Energy Center San Francisco

ADM

"The DesaliTec closed circuit process is the first major change we've seen in RO in decades. It works for us in practice and we fully endorse it."

Mark Carroll

Water & Wastewater Engineer, Class 4 Industrial Treatment License and Class A Municipal License, Archer Daniels Midland

"I would recommend DesaliTec RO systems to anyone who is trying to achieve a high recovery and maintain good quality in their finished product water."

Asif Hasan

Ph.D., Environmental Engineer, Doubletree Paper Mill

"While the water and dollar savings were important, the reliability benefits might be the greatest positive. When the mobile trailers were exhausted, the plant couldn't run. You are at the mercy of the vendor to send you the trailers. With CCRO you are manufacturing your own water, so there should not be any interruption."

Kishore Billapati

P.E., Senior Manager Engineering, Edison International SCE Generation Asset Management

"The CCRO is extremely easy to operate and it's user friendly. I would recommend it to anyone who needs high recovery, minimal man hours and low cost."

Steven Doggit

Lead Operator, Mid-American Steel and Wire

"We had some bad experience with traditional RO as far as maintenance costs and having to replace the membranes at a frequency of six months to twelve months. Our DesaliTec unit has been in service for a year and there's no indication that it even needs to be cleaned yet."

David Ivy

Utilities Supervisor, Lion Elastomers



Water Solutions

About us

Water scarcity is now a global problem. Growing water demand and excessive consumption of water is increasing with population and technology adoption. World experts advise that these water challenges will only get worse without improved water efficiency, reuse, and desalination.

DesaliTec™ SOAR CCRO systems are innovative solutions that forward-thinking users employ to address their water challenges. They are rapidly replacing traditional water purification methods due to their high reliability, efficiency, and economic value proposition.

DesaliTec industrial and municipal clients around the globe rely on DesaliTec SOAR Smart systems for their critical water needs and are guaranteed maximized water recovery rates of up to 98 %, reduced energy consumption of up to 35 %, and maintenance cost reductions of up to 20 %.

DesaliTec is headquartered in Newton, Massachusetts, USA and was the proud recipient of the 2016 Breakthrough Water Technology Company of the Year award from Global Water Intelligence.

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DUPONT

Water Solutions
www.dupontwatersolutions.com

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Form No. 45-D02281-en-Rev

Exhibit No. RO-2 (RO Option No. 2) - Rotec Flow Reversal Reverse Osmosis (FR-RO)

ROTEC
by WFI Group

Leading the Future of Sustainable Water Treatment

Advanced Technologies.
Proven Water Solutions.
Global Impact.



Redefining the Limits of Water Worldwide

ROTEC is a global leader in innovative water treatment solutions, specializing in high-recovery technologies that minimize waste and maximize sustainability. With over a decade of experience, ROTEC has delivered cutting-edge solutions across diverse sectors and industries, including municipal, industrial, power, and semiconductor applications. The company's expertise is demonstrated through more than 60 installations in over 15 countries, from Singapore to California.

Municipal Water & Wastewater

Food & Beverage

Power & Energy

Semiconductor & Microelectronics

Oil & Gas/Mining



Innovative Technology and Solution for Every Water Challenge

Technologies

- **Flow Reversal Reverse Osmosis (FR-RO)**: An advanced solution that eliminates scaling and fouling challenges, enabling exceptional water recovery rates for sustainable, high-efficiency operations.
- **Flow Reversal-2 Pass (FR-2P)**: A smart two-pass solution designed to optimize recovery rates for demineralized water and ultrapure water (UPW) applications.
- **Flow Reversal Brine Concentrate (FR-BC)**: A specialized system to treat RO brine for further increases in water recovery for minimum liquid discharge (MLD) and zero-liquid discharge (ZLD) applications.

Solutions

- **Retrofit**: Transform your existing RO systems into high-efficiency, high-recovery solutions enabled with FR-RO that maximize performance while delivering greater water efficiency and reduced operational costs.
- **EPC and Turnkey Projects**: Delivering seamless, end-to-end solutions with expert design, precision installation, and comprehensive operational support to ensure lasting results.
- **Engineering Packages**: Proprietary FR-RO designs for any application with a full suite of drawings, equipment lists, manuals and licenses for any preferred contractor or integrator to build.
- **High-Quality Skid Supply** – Fully customized, turnkey solutions designed from the ground up, including integrated pre- and post-treatment options such as ceramic ultrafiltration (UF) and electrodeionization (EDI) to deliver high-recovery treatment systems tailored for any application.

Designed to Deliver Impact

Discover how ROTEC's innovative technology delivers high performance, sustainability, and flexibility for a wide range of water treatment applications.

HIgh Recovery

Achieve up to 98% recovery rates to significantly maximize water production and treatment.

Reduced Brine Waste

Minimize brine volumes by up to 80%, cutting disposal costs and environmental burden.

Lower OPEX

Optimize operations with reduced chemical usage, cleaning frequency, and maintenance costs.

Scalability

Integrate seamlessly with existing systems to expand capabilities with minimal disruption.

Sustainability

Promote water reuse and minimize waste, aligning with global environmental goals.

Versatility & Flexibility

Comprehensive configurations optimize turndown, maintenance, and feedwater scenarios.

Flow Reversal Technology: Advancing Efficiency

Flow Reversal Mechanism

Flow Reversal Reverse Osmosis (FR-RO) is a groundbreaking solution for high-recovery deionization, designed to maximize water efficiency while reducing waste and resisting scaling. With its innovative flow reversal mechanism, FR-RO enables recovery rates far beyond conventional RO systems. This patented technology is trusted globally across industries, ensuring sustainable and cost-effective water treatment solutions.

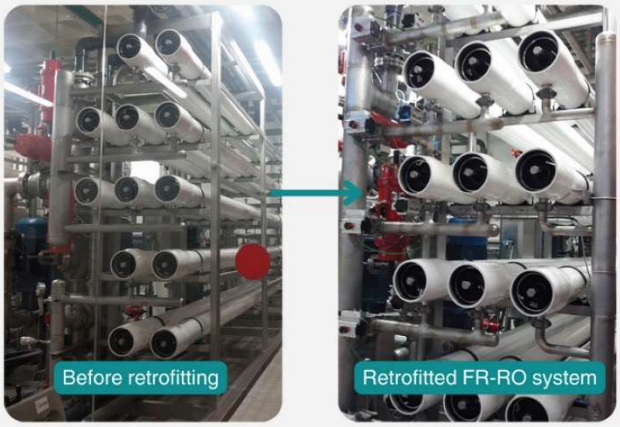


Ultra-high Recovery

Achieves up to 98% water recovery while minimizing brine waste by up to 80%, making it ideal for water-stressed regions and industries seeking sustainable solutions.

Block Rotation for Longer Membrane Life

An innovative enhancement for RO systems, designed to prevent scaling and fouling in high-recovery deionization processes. By periodically rotating the flow between membrane blocks, this technology distributes scaling evenly, reducing scale formation and extending membrane life. It enables higher recovery rates, lowers operational costs, and improves system performance in a sustainable and reliable manner.



Seamless Integration with Built-in Flexibility

FR-RO systems are designed for easy retrofitting into existing infrastructure, enhancing performance without major modifications or proprietary hardware. With seamless integration and no need for operator upskilling, these systems ensure smooth adoption. Built-in fallback and redundancy features allow every FR-RO system to operate as a conventional RO system when needed, delivering reliability and operational security.

Case Studies

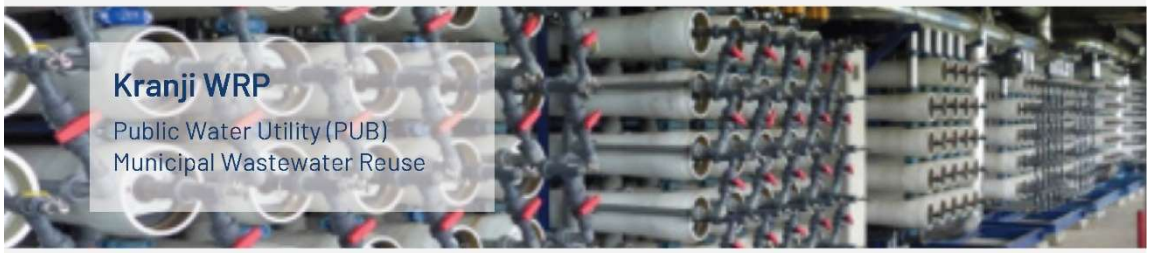


Jinma Energy

Coke Production Plant
Industrial Wastewater Reuse

The Jinma Energy plant in China sought to optimize wastewater treatment for Coke production, implementing a comprehensive system that included biological treatment, sand and activated carbon filters, UF, and ROTEC's FR-RO technology. ROTEC designed, manufactured, and installed a full-scale RO plant with three skids in a three-stage configuration, utilizing its Flow Reversal and FR Back Flush technologies to minimize brine production. Following the success of a pilot unit treating 6.5 m^3/hour, a full-scale facility with a capacity of 3 x 2,640 m^3/day was constructed, achieving stable operation at 90% recovery despite high COD levels.

- Achieved 90% recovery, reducing brine output and operational costs.
- Expanded from a pilot system to a full-scale facility treating 3 x 2,640 m^3/day.
- Incorporated FR-RO and FR-BC for efficient and sustainable operation.
- Inclusive service from design all the way through remote supervision by ROTEC.



Kranji WRP

Public Water Utility (PUB)
Municipal Wastewater Reuse

The Kranji Wastewater Treatment Plant in Singapore retrofitted its existing RO system with ROTEC's Flow Reversal technology, significantly enhancing system efficiency and sustainability. The retrofit transformed a two-stage (49:24 array) into a three-stage system (45:25:10 array) without disrupting plant operations. Over 18 months of monitoring, the upgraded system demonstrated stable operation at 90% recovery, achieving substantial improvements in water production and operational efficiency.

- Achieved 90% recovery from 75%, with a 20% boost in permeate production.
- Brine waste reduced by 60%, cutting disposal costs and minimizing carbon footprint.
- Effective biofouling control extended membrane lifespan and efficiency.
- Lowered CIP frequencies and chemical use minimized downtime.



WHY CHOOSE US

01 Proven Expertise

ROTEC's global experience in delivering high-recovery water solutions ensures reliability and performance across diverse wastewater and reuse projects.

02 Sustainability Focus

Through innovative water reuse and high-efficiency operations, ROTEC is dedicated to minimizing environmental impact and promoting sustainable water management worldwide.

03 Modular and Scalable

FR-RO's flexible design allows for easy integration into existing systems and can be scaled to meet the specific needs of municipal and industrial facilities.

04 Integrated Services

ROTEC provides comprehensive service from design and commissioning to ongoing optimization, ensuring seamless implementation and long-term performance for every project.

Contact Us

For more information on FR-RO and how it can address your wastewater treatment and reuse needs in municipal or industrial applications, please contact us.

www.rotec-water.com

info@rotec-water.com

Exhibit No. RO-3 (RO Option No. 3) - Veolia PROflex 1000 RO Series Reverse Osmosis (CLRO)



VEOLIA



Pictured:
North American model

PROflex*

Reverse Osmosis And Nanofiltration Systems

WATER TECHNOLOGIES

Why PRO*flex*?

Prior to the introduction of PRO*flex*, Veolia delivered over 1000 PRO Series Reverse Osmosis (RO) systems and established the product as a rugged, industrial system capable of delivering consistent product water over years of operation. The PRO*flex* Reverse Osmosis and Nanofiltration (NF) system includes the capability to meet the various needs of industrial, beverage, and municipal applications and end-users including those covered by the previous PRO, MUNI, ReNEW, Titan, and BEV Series systems.

The PRO*flex* is a flexible and price competitive RO/NF system. It is configurable using our online *flex*Configurator which allows you to modify the system to best fit your specific application and expedite the quoting process. Beyond flexibility and time-tested reliability, PRO*flex* minimizes the overall footprint for optimum space utilization and places key components to the front of the skid to make them easily accessible.



Veolia *flex*Configurator

https://engg.watertechnologies.com/products/configurator

Our expertise at your fingertips, on your schedule, while only paying for what you need

Reliable Performance

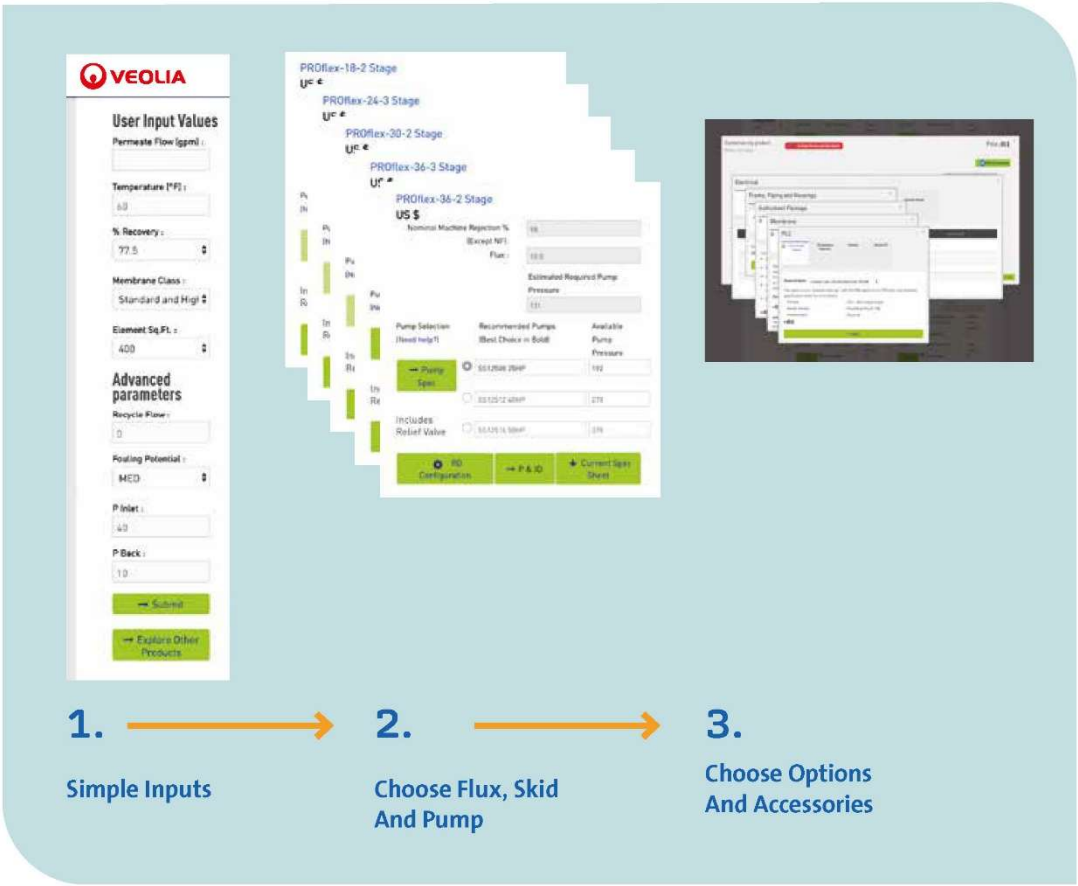
- Honed from the time-tested PRO Series platform with Veolia vetted options you want.

Flexible Solutions With Speed

- Veolia *flex*Configurator to design your system, get drawings, obtain pricing and access Veolia expertise immediately, and on your schedule.
- Lead times on most options can be as short as standardized systems. Some systems are inventoried for even faster delivery.

One Source

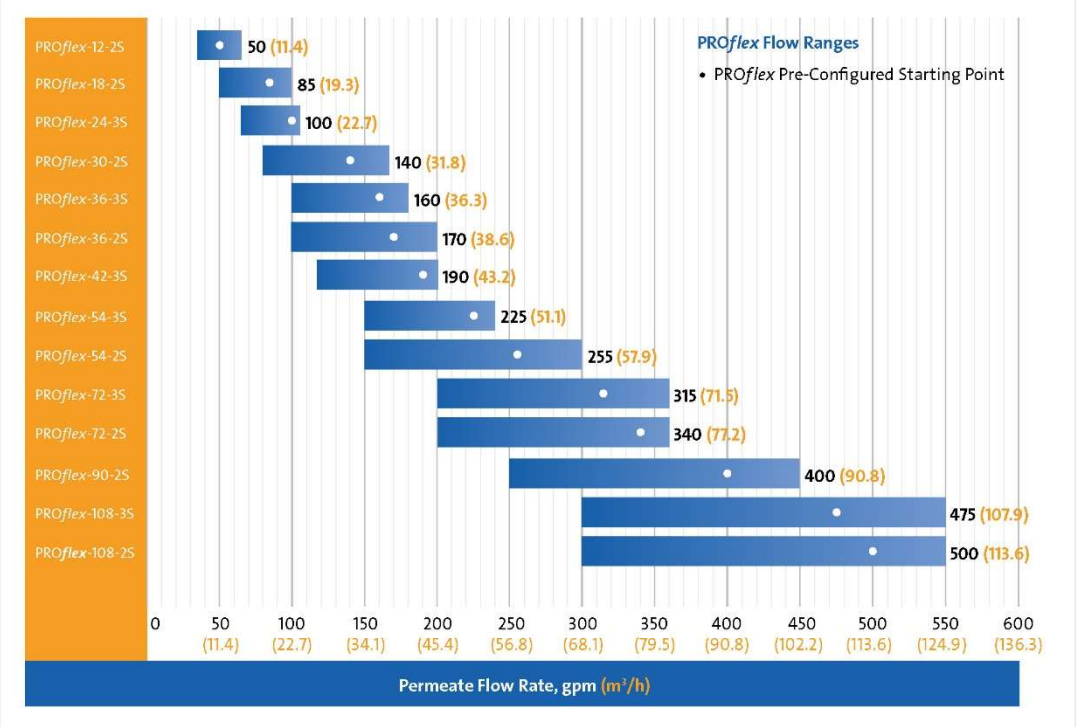
- One of the world's largest providers of membranes and membrane systems.
- Systems are built with Veolia's full complement of pre-filters, membranes, and Tonkaflo® pumps (on North American models only) for single source accountability and trusted performance.



PRO*flex* – True Flexibility To Design A System You Want

PRO*flex* offers the flexibility to choose a system that will allow you to choose an aggressive or conservative design to meet the capital requirements of your specific situation. PRO*flex* allows complete choice on arrays, number of elements, and pump sizes within each array. There are further options for your choice of instrumentation, PLC controller, electrical components, membranes and other hardware such as frame and housings. You can also reduce engineering time by letting Veolia include complementary pre-treatment and chemical cleaning equipment. The figure below identifies the 14 default configurations and also the hydraulic limits of the design as indicated by the flow range for each model.

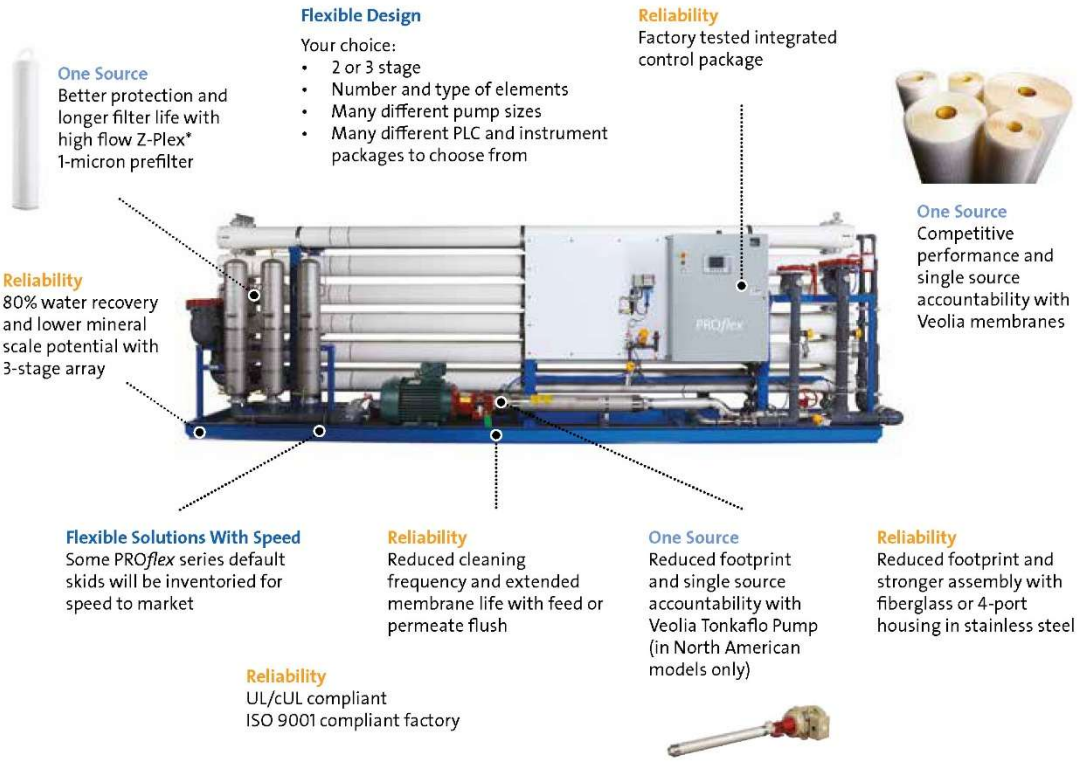
PRO*flex* Flow Ranges



The base assumption included in these designs are:

- **60ºF feedwater temperature**
- **400 sq. ft. Veolia AG membrane elements**
- **77.5-80% RO recovery**
- **Tonkaflo pump as available in select models**

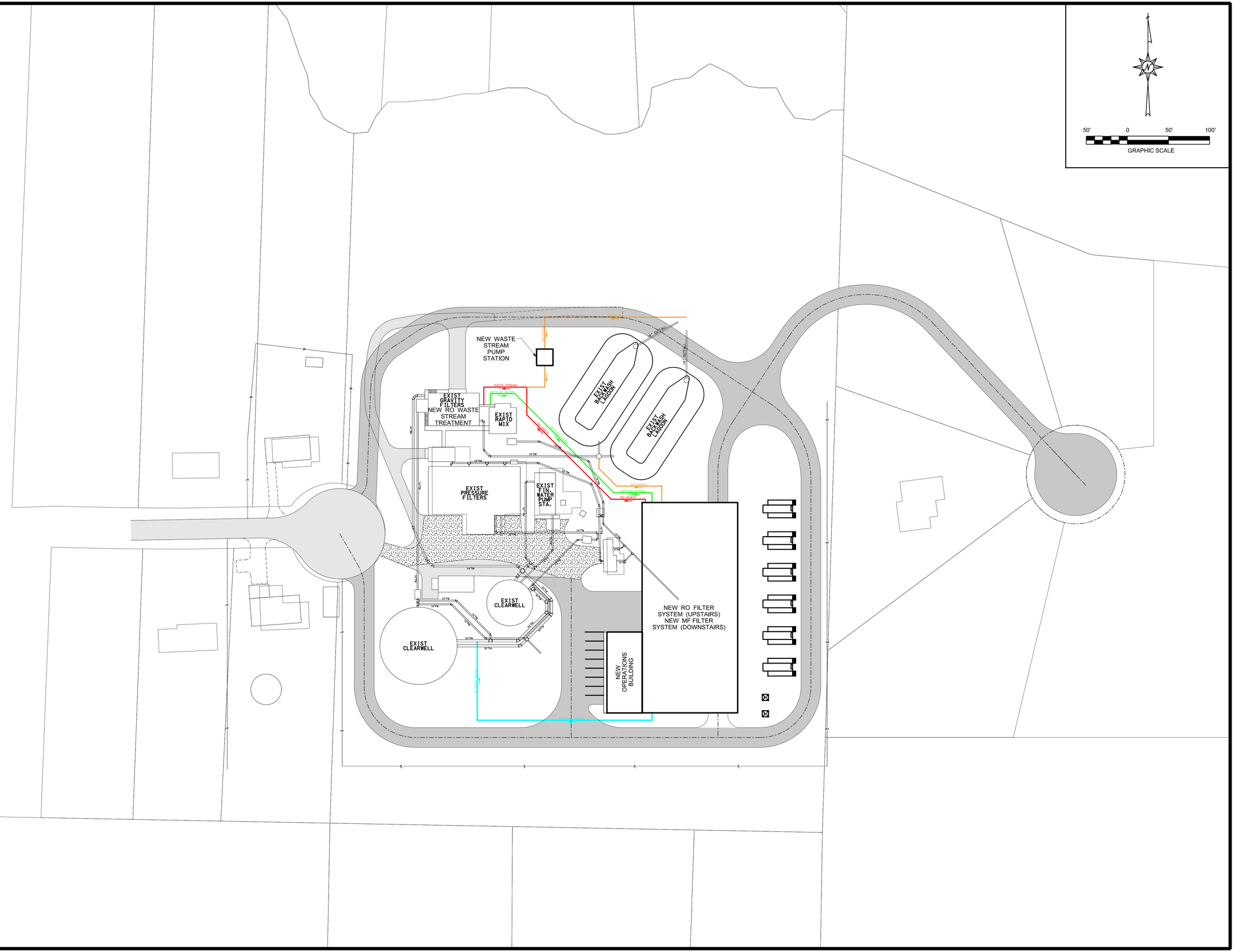
PRO*flex* RO Features And Benefits:



PRO*flex*: A Platform That Meets Your Needs

The PRO*flex* can easily integrate with a range of pre-engineered pre and post treatment and supporting components like multi-media filters, carbon filters, water softeners, chemical feed systems, tanks, and pumps for the building blocks of a full-scale configurable water system. With decades of engineering and manufacturing experience worldwide, Veolia offers superior integration and optimization of RO system design.


Resourcing the world
Veolia Water Technologies
Please contact us via:
www.veoliawatertechnologies.com
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CONSTRUCTION PLANS FOR:

BRITTANY DRIVE WTP PFAS REDUCTION IMPROVEMENTS

THE CITY OF CALHOUN, GA

CITY OF CALHOUN
LAND OF THE CHEROKEE

PROJECT INFO:

INSITE JOB No. 26061.00

PLOTTED: 6/21/25

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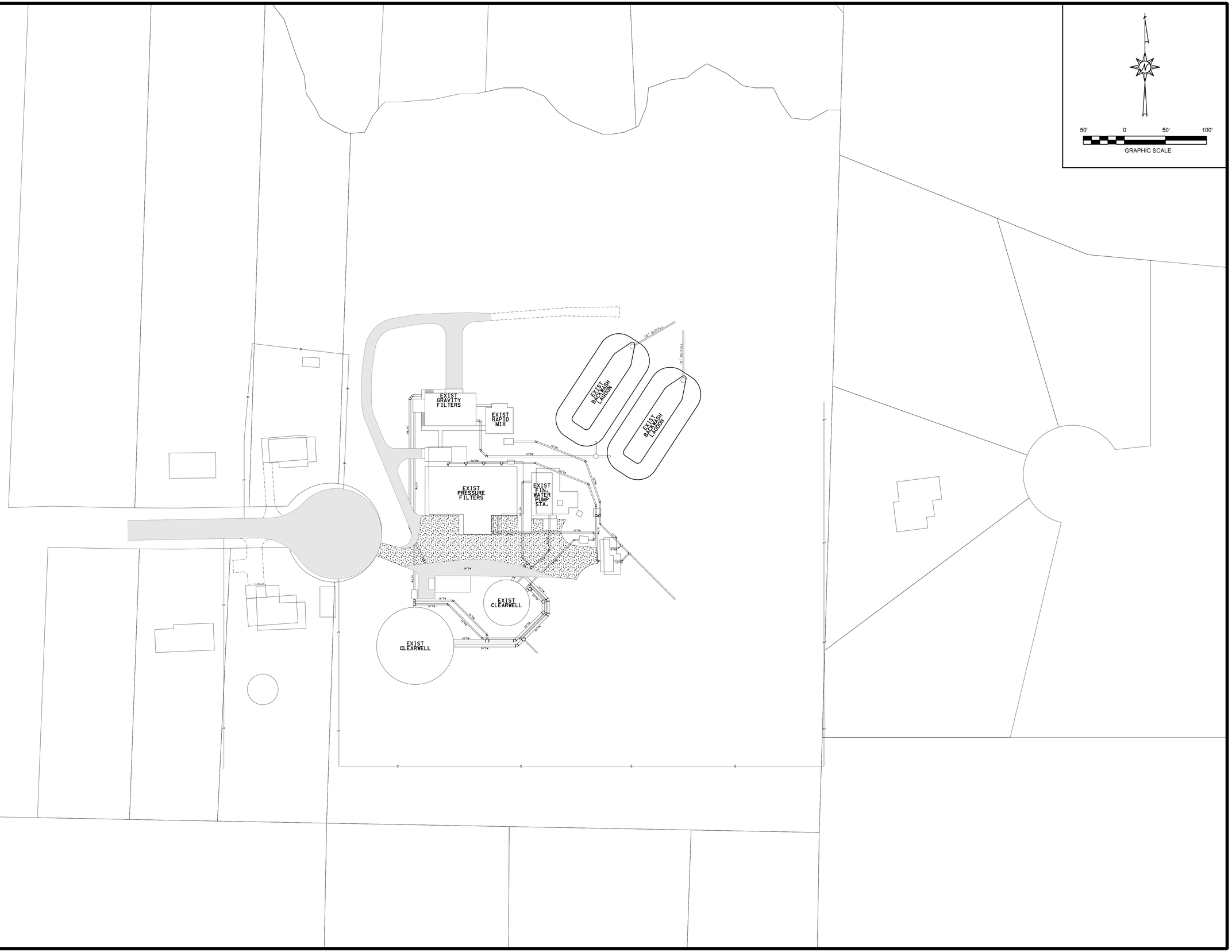
THIS SHEET CONTAINS:

OVERALL PROJECT SITE PLAN

SCALE: 1" = 50'

SHEET X OF X

OV-1



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EXISTING SURVEY

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SV-1