

- Review design development work products with Design-Builder quality control reviewer.

Task 6.11 - Project Delivery/Construction Package Analysis

Design-Builder will conduct a Project delivery analysis, which will include consideration of the following:

- Finalize the list of any equipment to be pre-negotiated and/or County selected.
- Coordinate with vendors the equipment to be pre-procured and develop contract interface details.
- Receive County's review comments on 60% documents before development of 95% construction documents begins.
- Update and provide more detail on procurement and construction schedule and milestones. The results of this analysis will be discussed with the PCRWRD at the 60% Design Development Workshop.

Task 6.12 - Updated MOPO Design Memorandum

Update the MOPO DM, from Task 5.12, based on additional design information developed in Task 6. Meet with County staff prior to update of MOPO and discuss additional information available to update MOPO.

Task 6.13 - Design Development Construction Cost Estimate

This task includes Design-Builder review of the cost estimate with the County. Construction cost estimating procedures are defined in Task 1.9.

In the event that the cost estimate exceeds the County budget, Design-Builder and County will meet as necessary to review and refine the cost estimate with the goal of reaching consensus on a workable Project cost.

Task 6.14 - Design Development Review with County

Design-Builder will assemble the work products from the tasks above and submit the 60% Design Development document to the County for review and comment. A workshop will be held with the County's personnel to review the 60% deliverable and 3-D model, to receive and discuss comments, and to reach closure on design issues. A 1-day workshop is included in this task to provide time to meet with all appropriate County staff. Following the workshop, meeting minutes and responses to comments will be prepared and submitted by Design-Builder. The responses to comments will be incorporated in the 95% Construction Documents.

Task 6 - Deliverables

1. Design Development Documents
2. Project Delivery/Construction Package Memoranda and Meeting Minutes
3. Updated MOPO DM
4. DD Construction Cost Estimate
5. DD Workshop Summary
6. 3-D model

Task 7 - Construction Document Preparation (95%)

The purpose of this task is to develop the final construction drawings, specifications, and schedules for the Construction Phase. The construction documents will be finalized in Task 9, by incorporating the 95% review comments.

Task 7.1 - Develop 95% Construction Documents

Specific activities performed by the Design-Builder during this phase will include the following:

- Incorporate responses to comments on the 60% Design Development Document.
- Complete the design around the equipment that has been pre-purchased.

- Prepare final construction drawings.
- Prepare final technical specifications.
- Prepare final calculations.
- Complete final checking and coordination review by design leads.
- Provide independent review by the Design-Builder quality control review team.
- Should the County decide to proceed with a LEED certification approach for the Project, the LEED scorecard will be updated as part of the Contract Document preparation tasks for each discipline and LEED templates and the documentation required for each LEED point will be finalized.

Task 7.2 - Construction Documents Construction Cost Estimate

A 95% definitive construction cost estimate will be prepared from 95% percent complete plans and elevations, piping and instrument diagrams, one-line electrical diagrams, equipment data sheets, vendor quotations, structural details, soil data, drawings of major foundations and buildings, and a complete set of specifications.

Task 7.3 - Construction Document Review with County

The Design-Builder will submit 95% Construction Documents to the County for review and comment. The County will prepare one set of collated and adjudicated review comments and provide to the Design-Builder prior to the 95% Review Workshop. The workshop will be held to discuss and resolve this final set of review comments. Following the workshop, meeting minutes and responses to comments will be submitted to the County to document decisions.

Task 7.4 - Construction Cost Estimate Reconciliation

This task includes Design-Builder review of the cost estimate with County. Construction cost estimating procedures are defined in Task 1.9.

In the event that the cost estimate exceeds the County budget, Design-Builder and County will meet as necessary to review and refine the cost estimate with the goal of reaching consensus on a workable Project cost.

Task 7.5 - Updated MOPO Design Memorandum

Update the MOPO DM from Task 6.12 based on additional design information developed in Task 7. Meet with County staff prior to update of MOPO and discuss additional information available to update MOPO.

Task 7 - Deliverables

1. 95% Contract Documents
2. CD Construction Cost Estimate
3. Adjudicated Review Comments and Workshop Minutes
4. Updated MOPO DM

Task 8 - Construction GMP

Design-Builder will prepare and, by the date specified in the Contract, deliver to County a proposed GMP for the construction phase of the Project. At a minimum, the following component will be included in the proposed GMP:

- A recital of the specific Construction Documents, including drawings, specifications, and all addenda thereto, used in preparation of the GMP proposal.
- The five (5) elements of the Guaranteed Maximum Price:
 - a. Guaranteed Maximum Cost of the Work (hereinafter defined), detailed by each subcontract, trade, or bid division;
 - b. the Design-Builder's Contingency for the Work;

- c. Guaranteed Maximum Design-Builder's Staffing Cost (hereinafter defined), detailed by expense category;
 - d. Guaranteed Maximum General Conditions Cost (includes bond & insurance costs) (hereinafter defined), detailed by expense category; and
 - e. Guaranteed Maximum for Design-Builder's Overhead and Profit.
- A draft schedule of values;
 - A description of all other inclusions to, or exclusions from, the GMP;
 - All assumptions and clarifications; and
 - The final construction Project Schedule.

Task 9 - 100% Construction Document Completion

The purpose of this task is to prepare final Construction Documents to be used for construction and building permit review. The Design-Builder will perform the following subtasks as part of this task.

Task 9.1 - Final Design Construction Documents

The Design-Builder will modify the Construction Documents to incorporate agreed upon review comments from the County, applicable regulatory agencies, and the Design-Builder's quality control review team. The final documents will then be submitted to the County for final back-check and approval. The final back checking will consist of verifying the 95% responses to comments were adequately incorporated.

The final Construction Document production is based on a maximum of 3 construction packages.

The final Construction Documents will include 22-inch x 34-inch mylars sealed and signed, and contract specifications.

Task 9.2 - Final Design Report

The final design report will include the final updates of the predesign report technical memoranda, documenting design criteria, treatment facility and equipment sizing, redundancy, treatment facilities configuration, and design criteria for the engineering disciplines. This report will be in compliance with ADEQ requirements. The Design-Builder will submit the Final Design Report to County for County submission to ADEQ.

Task 9 - Deliverables

1. Final Contract Documents
2. Final Design Report
3. Final GPSX Model
4. Final 3-D Model
5. Final MOPO DM

PHASE 3 - CONSTRUCTION

General Intent. Design-Builder will perform all Work and construction administration services necessary to construct the Project in accordance with the Contract for Design-Build Construction and to render the Project and all of its components operational and functionally and legally usable. This includes, but is not limited to, completion of the following tasks.

Task 10 - Trade Contractor Selection Bidding and Negotiation

Task 10.1 - Bid Packages

Design-Builder will prepare and assemble document packets for use in bidding the subcontracts. Such packaging of the Work will be broken down to maximize both competition and the involvement of small businesses.

Task 10.2. - Prequalification

The Design-Builder will develop subcontractor and supplier interest for each division of the Work. A design professional on the Project Team will attend all pre-bid meetings with potential subcontractors and be available to respond to questions regarding the Construction Documents.

Task 10.3 - Bidding

The Design-Builder will competitively bid each trade category or, if approved by County, negotiate for the performance of a particular trade category.

Task 10.4 - Budget Control

The Design-Builder will use its best efforts to obtain bids which are less than the final GMP estimates.

Task 10.5 - Bid Opening

The Design-Builder will conduct bid openings in the presence of the County's Representative. The Design-Builder will provide the County with a copy of its preliminary bid tabulation and a copy of all bids.

Task 10.6 - Bid Evaluation and Award

The Design-Builder will, for each subcontract, trade, or bid division:

- determine the final bid amounts, having reviewed and clarified the scope of Work in detail with the apparent low responsive bidders to determine that their bids are complete but do not include duplicate scope items;
- prepare and furnish to the County a final bid tabulation summary which includes by subcontract, trade, and/or bid division, the applicable final GMP estimate and the related final bid amount and the details of all scope clarifications for County's review and approval;
- if requested by County, provide a list of all potential Direct Purchase Materials (hereinafter defined);
- identify to the County in writing the subcontractors to which the Design-Builder recommends award of subcontracts; and
- award and enter into a subcontract between itself and each subcontractor which it has recommended in accordance with this Scope unless otherwise notified by the County.

Task 10.7 - County Approval Required to Proceed

No portion of the Work may be performed by the Design-Builder or its affiliates except with County's approval.

Task 11 - Design Professional's Role During and After Construction

Although the design and construction of the Project are being provided through a Design-Build delivery method, because no additional design professionals have been retained by County to provide oversight during construction and warranty phase services, the lead design professionals on the Design-Builder's Project Team will be responsible for providing the services described herein. Such services will be provided by the lead design professionals without regard to the conflict of interests associated with the Design-Build delivery method. These services include:

Task 11.1 - Construction Administration

The design professionals will carry out the Construction Administration services set forth herein.

Task 11.2 - Advice and Consultation

The design professionals will be a representative of, and will advise and consult with, the County during construction until final payment is made. The Design-Builder will have authority to act on behalf of the County only to the extent provided in the Contract.

Task 11.3 - Presence at Work Site

The design professionals on the Project Team will attend regularly scheduled construction meetings at the Site and will provide such representation as may be required to fulfill the intent and interpretation of the plans and specifications for the Project. In any event, the design professionals will visit the site as is reasonable and necessary to become familiar with the progress and quality of the Work completed and to determine if the Work is being performed in a manner indicating that the Work when completed will be in accordance with the Construction Documents. On the basis of on-site observations as an architect or as an engineer, the design professional will keep the County informed of the progress and quality of the Work and will guard the County against defects and deficiencies in the Work.

Task 11.4 - Certification of Pay Requests

Based on the design professionals' observations and evaluations of the Design-Builder's Applications for Payment, the design professional will review and certify the amounts due the Design-Builder. The design professional's certification for payment will constitute a representation to the County, based on the design professional's observations at the Project site and on the data comprising the Design-Builder's Application for Payment, that the Work has progressed to the point indicated and that, to the best of the design professional's knowledge, information, and belief, the quality of the Work is in accordance with the Construction Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Construction Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Construction Documents correctable prior to completion and to specific qualifications expressed by the design professional. The issuance of a Certificate for Payment will further constitute a representation that the Design-Builder is entitled to payment in the amount certified.

Task 11.5 - Duty to Inspect

The design professional will reject Work which does not conform to the Construction Documents. Whenever the design professional considers it necessary or advisable for implementation of the intent of the Construction Documents, the design professional will have authority to require additional inspection or testing of the Work in accordance with the provisions of the Design-Build Contract for Construction, whether or not such Work is fabricated, installed, or completed.

Task 11.6 - Submittals

The design professional will review, approve, reject, or take other appropriate action on construction-related inquiries and submittals, such as shop drawings, product data, and samples. The design professional will not approve any such submittals unless such submittals conform with: (i) the design concept; (ii) the Construction Documents; (iii) the County's total budgeted Construction Cost; (iv) the County's Design and Construction Standards; and (v) governing codes and authorities having jurisdiction. In the event the County's Design and Construction Standards exceed applicable legal requirements, those County standards will govern. The design professional's review will be completed so that all Work can be performed without delay and all products or materials may be ordered or fabricated with sufficient time to meet the Project Schedule.

Task 11.7 - Preparation of Change Orders

The design professional will prepare Change Orders, with supporting documentation and data, if the design professional determines the same is necessary for the County's approval and execution in accordance with the Design-Build Contract for Construction.

Task 11.8 - Interpretation

Interpretations and decisions of the design professionals will be consistent with the intent of, and reasonably inferable from, the Construction Documents and will be in writing or in the form of drawings.

Task 11.9 - Aesthetic Review

The design professionals' decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Construction Documents, and if concurred with by the County.

Task 11.10 - Substantial and Final Completion

The design professionals will, in conjunction with County personnel, conduct inspections to determine the dates of Substantial Completion and Final Completion, will receive and forward to the County for the County's review and records, written warranties, and related documents required by the Design-Build Contract for Construction and assembled by Design-Builder, and will issue a final Certificate for Payment upon compliance by the Design-Builder with the requirements of the Design-Build Contract for Construction. The design professionals will perform all services relating to Substantial Completion and Final Completion in accordance with County policies and procedures.

Task 11.11 - As-Built Drawings

The Design-Builder will prepare "As-Built" or record drawings at Project completion in accordance with the requirements set forth in the County Specifications. These drawings will include changes made to the Project by Change Orders, Addenda to the Construction Documents, Architect's Supplemental Information, field orders, field reports, Requests for Information, shop drawings, other directives and submittals, and information provided by the Design-Builder.

Task 11.12 - Warranty Support

The design professionals will respond to: County's requests to review design and construction issues during the construction warranty period; coordinate and participate in the end of the warranty period inspection in accordance with the County Specifications; and produce a summary report documenting deficiencies, problems, or other outstanding items.

Task 12 - Construction Supervision

Commencing with the award of the first subcontract and terminating on the date of Final Completion, the Design-Builder will provide the services described herein. The Design-Builder will, as the County's construction representative during construction, advise and consult with the County, and provide administration of the Construction Documents. The Design-Builder will supervise and direct the Work at the Site. The Design-Builder will, at a minimum, staff the Project Site with personnel who will:

- supervise and coordinate the Design-Builder's personnel and act as its primary liaison with the County;
- coordinate trade contractors and suppliers, and supervise Site construction management services;
- be familiar with all trade divisions and trade contractors' scopes of Work, all applicable building codes and standards, and the Contract for Design-Build Construction;
- check, review, coordinate and distribute shop drawings and check and review materials delivered to the Site, regularly review the Work to determine its compliance with the Construction Documents and this Agreement, confer with the appropriate County consultant(s) as necessary to assure acceptable levels of quality;
- prepare and maintain Project records and process documents;
- schedule and conduct weekly progress meetings with subcontractors to review such matters as jobsite safety, job procedures, construction progress, schedule, shop drawing status and other information as necessary and provide notification of, and minutes from, such meetings to County;
- schedule and conduct weekly progress meetings with the County to review such matters as construction progress, schedule, shop drawing status, and other information as necessary; and
- make provision for Project security to protect the Project site and materials stored off-site against theft, vandalism, fire, and accidents as required by the General Terms and Conditions.

Task 13 - Reporting

The Design-Builder will provide a monthly report in searchable PDF format summarizing the progress of the Project to the County including information on the subcontractors' Work, percentage of completion of the Work, current estimating, subcontract buyouts, computerized updated monthly Critical Path Method scheduling and Project accounting reports, including projected time to completion and estimated cost to complete the Work, progress photographs, project directory, logs for Requests for Information, submittals and shop drawings, Change Orders, cost change proposals, field directives, safety meetings, deficiencies, weather conditions, and meeting minutes.

Task 14 - Miscellaneous Construction Phase Duties

Task 14.1 - GMP and Savings

During the Construction Phase, Design-Builder will complete the Construction Work in accordance with the Construction Documents and the Contract in return for payment by County of the Costs of Construction, provided that in no event will the aggregate payments by County to Design-Builder for Construction Work exceed the Guaranteed Maximum Price.

Task 14.2 - Services Provided

Design-Builder's Construction Phase services include, without limitation: team management and coordination, scheduling, cost control and change order management, submittal process management, subcontracting, field management, safety program, close-out process, and warranty period services. This will include providing through itself or its Subcontractors all necessary supervision, labor, inspection, testing, startup, material, equipment, machinery, temporary utilities, and other temporary facilities to permit Design-Builder to complete all Construction Work in accordance with the Construction Documents and the Contract.

Task 14.3 - Performance of Work

Design-Builder will perform all construction activities efficiently and with the requisite expertise, skill, quality, and competence to satisfy the requirements of the Construction Documents and the Contract.

Task 14.4 - Reporting

Design-Builder will provide County, on a monthly basis, a written status report detailing the progress of the Construction Work during the Construction Phase, including whether the Work is proceeding according to the Project Schedule. Each monthly report during the Construction Phase will include: an updated Project Schedule; an updated Construction Work cash flow projection for the duration of the Project; copies of the Design-Builder's Superintendent's daily site reports made during the preceding month; identification of discrepancies, conflicts, or ambiguities existing in the Construction Documents that require resolution; identification of any health and safety issues that have arisen in connection with the Construction Work; and identification of other items that require resolution so as not to jeopardize Design-Builder's ability to complete the Construction Work for the GMP and within the Contract Time(s).

Task 14.5 - Schedule

During the Construction Phase, Design-Builder will maintain the Project Schedule and will promptly prepare a proposed updated Project Schedule and submit it to County for its review and approval whenever events occur or are likely to occur that require changes in the Project Schedule. The Project Schedule for the Construction Phase is the same and a continuation of the Project Schedule used for the Design Phases and will indicate the dates for the start and completion of the various stages of the Construction Work, including the dates when County information and approvals are required and all necessary shutdowns or suspensions of County or separate vendor activities on the Site (if any).

Task 14.6 - Work Management

The Design-Builder will provide leadership to Design-Builder's employees and Subcontractors during the Construction Phase for all matters relating to the Construction Work. The Design-Builder agrees to furnish efficient business administration and superintendence and to complete the Construction Work in an expeditious and economical manner.

Task 14.7 - Management Presence at Work Site/Approval of Replacement

Design-Builder's Representative and the Design-Builder Superintendent will be at the Site at all times when Construction Work is being performed and will have the necessary expertise and experience required to supervise the Construction Work. Design-Builder's Representative will communicate regularly with County and will be vested with the authority to act on behalf of Design-Builder. Design-Builder's Representative and Design-Builder's Superintendent may only be replaced with the mutual written agreement of County and Design-Builder. Notwithstanding the foregoing, the Design-Builder's Representative and Design-Builder's Superintendent will be replaced upon reasonable request of the County.

Task 14.8 - Subcontractor Coordination

Design-Builder is responsible for coordinating the activities of its own Subcontractors.

Task 14.9 - Work Site Cooperation

If County is performing other work with separate contractors under its control as part of the Project or as a separate project, Design-Builder agrees to cooperate and coordinate its Construction Work with the work of County's separate contractors so that the Project and any separate project(s) on which the separate contractors are working can be completed in an orderly and coordinated manner reasonably free of significant disruption to any party. In this regard:

Task 14.9.1 - County Use of Work Site

County reserves the right to award other contracts related to the Project, or to perform certain work. The County also reserves the right to award other contracts unrelated to the Project but involving work in the vicinity of the Project or to perform unrelated work itself. Such other work may or may not be known to the County or disclosed to the Design-Builder prior to the date of the Contract. The Design-Builder will afford the County and other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work and will properly coordinate its Construction Work with theirs in such manner as County may direct. The Design-Builder will also permit reasonable access of other contractors to the Site and their work.

Task 14.9.2 - Right to Comment on County Work Site Activity

The County will timely provide the Design-Builder with a copy of all plans, specifications, schedules, and other data relating to other contracts or work. The Design-Builder will thoroughly examine these documents and will within three (3) days of completing such examination notify the County in writing of any conflicts with the Construction Work to be performed by the Design-Builder. In no event will such notice be given so late as to interfere with or delay Construction Work to be performed by the Design-Builder. Failure of Design-Builder to review, or provide written notice as provided above will constitute a waiver of any objections or claims Design-Builder may have as a result of the necessity to coordinate Design-Builder's Construction Work with other activities.

Task 14.9.3 - Waiver of Claim against County

Should Design-Builder sustain any property damage through any act or omission of any other contractor, Design-Builder will have no claim or cause of action against County for such damage and hereby waives any such claim. The Design-Builder does not waive any claim or cause of action against any other contractor or subcontractor to recover any and all damages sustained by reason of the acts or omissions of such other contractor. The phrase "acts or omissions" as used in this section will include, but not be limited to, any unreasonable delay by any such other contractors, whether due to negligence, gross negligence, inadvertence or any other cause.

Task 14.9.4 - Duty to Remedy/Indemnification

Should the Design-Builder cause damage to the work or property of any other contractor or of the County, the Design-Builder will upon receiving due notice promptly attempt to settle with such other contractor or the County by agreement, repair or otherwise to resolve the dispute. If such separate contractor sues or initiates a proceeding against the County on account of any damage caused by the Design-Builder, the County will notify the Design-Builder who will defend and indemnify County against such proceedings to the extent required by Article 8 of the Contract.

Task 14.10 - Work Site Appearance

Design-Builder will keep the Site free from debris, trash and construction wastes to permit Design-Builder to perform its Construction Work efficiently, safely, and so as not to interfere with the use of any adjacent land areas, and will maintain the reasonable appearance of the jobsite and all storage/staging areas. Upon Substantial Completion of the entire Construction Work or a portion of the Construction Work to be accepted separately by County, Design-Builder will remove all debris, materials, wastes, equipment, machinery and tools from the Construction Work to permit County to occupy the entire Construction Work or portion of the Construction Work for the use for which it is intended.

Task 14.11 - Changes to Approved Work

Any changes affecting previously approved Construction Work will require prior written approval of County.

Task 15 - Control of Construction Work

Task 15.1 - Means and Methods

Design-Builder will at all times exercise complete and exclusive control over the means, methods, sequences and techniques of construction. Design-Builder will perform all construction activities efficiently and with the requisite expertise, skill, and competence to satisfy the requirements of the Contract and Construction Documents.

Task 15.2 - Supervision and Coordination of Work

The Design-Builder will supervise and direct the work of its employees and Subcontractors and coordinate the Construction Work with the activities and responsibilities of the County to complete the Construction Work in accordance with the Construction Documents and the Contract and within the Contract Time(s).

Task 15.3 - Lines of Authority

The Design-Builder will establish an on-site organization and lines of authority in order to carry out the overall plans for completion of the Construction Work.

Task 15.4 - Direct Supervision of Work

All elements of the Work will be under the direct supervision of a foreman or his designated representative on the Site who will have the authority to take actions required to properly carry out that particular element of the Work.

Task 15.5 - Superintendent

The Superintendent will represent the Design-Builder in its absence and all directions given to the Superintendent will be as binding as if given to the Design-Builder. Important directions will be confirmed by written request in each case. The Superintendent will give efficient supervision to the Work, using its best skill and attention. In the event of noncompliance with this Task, County may require the Design-Builder to stop or suspend the Work in whole or in part.

Task 15.6 - Measurements

Before ordering materials or doing work, the Design-Builder and each Subcontractor will verify measurements at the Site and will be responsible for the correctness of such measurements.

Task 15.7 - Field Measurements

Design-Builder will take field measurements and verify field conditions and will carefully compare such field measurements and conditions and other information known to the Design-Builder with the Construction Documents before commencing activities. Errors, inconsistencies, or omissions discovered will be reported to County at once.

Task 15.8 - Survey

Design-Builder will establish and maintain all building and construction grades, lines, levels, and bench marks, and will be responsible for accuracy and protection of same. This Work will be performed or supervised by a civil engineer or surveyor licensed in the State of Arizona.

Task 15.9 - Dust Control

Design-Builder will take whatever steps, procedures, or means necessary to prevent any dust nuisance due to construction operations. The dust control measures will be maintained at all times to the reasonable satisfaction of County and in accordance with the requirements of the Pima County Department of Environmental Quality.

Task 15.10 - Sanitary Provisions

Design-Builder will provide and maintain in a neat and sanitary condition such accommodations for the use of its employees as may be necessary to comply with the requirements and regulations of the State Department of Health or other authorities having jurisdiction.

Task 15.11 - On-Site Storage

Only materials and equipment which are to be used directly in the Work will be brought to and stored on the Site by the Design-Builder. Equipment no longer required for the Work will be removed from the Site within a reasonable time.

Task 15.12 - Responsibility for Materials and Equipment

Protection of construction materials and equipment stored at the Site from weather, theft, damage, and all other adversity is the responsibility of the Design-Builder. No part of damage or loss arising from Design-Builder's failure to provide such protection will be compensable from the Design-Builder's contingency.

Task 16 - Daily Log

Task 16.1 - Log Content

The Design-Builder will maintain a daily log of construction activities for each calendar day during the Construction Phase, using a form approved by Design-Builder and County. The Design-Builder will document all activities at the Site, including:

- Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Site, and any other weather conditions which adversely affect Construction Work at the Site;
- Soil conditions which adversely affect Construction Work at the Site;
- The hours of operation by Design-Builder and individual Subcontractor personnel;
- The number of Design-Builder and Subcontractor personnel present and working at the Site, by subcontract and trade, and updated schedule activity number;
- The equipment active or idle at the Site;
- A description of the Construction Work being performed at the Site by updated schedule activity number;
- Any delays, disruptions or unusual or special occurrences at the Site;
- Materials received at the Site; and
- A list of all visitors at the Site.

Task 16.2 - Copies to County

The Design-Builder will provide copies of the daily logs to County on a weekly basis. Providing copies of the daily log to County does not satisfy any requirement in the Design-Builder Contract for written notice to the County.

Task 17 - Supervision and Construction Procedures

Task 17.1 - Duty to Supervise and Direct

The Design-Builder will supervise and direct the Construction Work, using the Design-Builder's best skill and attention. The Design-Builder will be solely responsible for coordination and accomplishment of all portions of the Construction Work in accordance with the Construction Documents and the Contract.

Task 17.2 - Responsibility for Actions

The Design-Builder will be responsible to the County for the acts and omissions of all entities or persons employed by or operating under the direction of Design-Builder including, but not limited to, Subcontractors, material and equipment suppliers, vendors, and service providers.

Task 17.3 - Responsibility for Inspection Delays

Delays in or results from inspections, tests, or approvals required or performed by persons other than the Design-Builder will not relieve Design-Builder from its obligation to perform the Construction Work in accordance with the Construction Documents and the Contract. Nothing contained in this Task 17.3 precludes the Design-Builder from asserting any rights it may have under the Contract in the event County is responsible for unreasonable delays in the making of any inspections, tests, or approvals.

Task 17.4 - Superintendent Authority

The superintendent and representatives will represent the Design-Builder and all communications given to either representative will be binding on the Design-Builder. All oral communications will be confirmed in writing.

Task 17.5 - Skilled Employees

The Design-Builder will at all times enforce strict discipline and good order among its employees and its Subcontractors' employees and will not allow employment on the Construction Work of any unfit person or anyone not skilled in the task or trade assigned to him or her.

Task 17.6 - County Access to Work

The Design-Builder will at all times allow the County or any other representative designated by County access to the Construction Work to observe progress and inspect the quality of work and conformance to the Construction Documents and the Contract.

Task 17.7 - Uncovering Work

Any Construction Work required to be observed or inspected, as applicable, by the County prior to being covered, which is covered without prior observation or inspection, as applicable, or without prior consent of the County, must be uncovered and recovered by the Design-Builder, if requested by the County, at no cost to County, except where Design-Builder has complied with the notice requirement of Task 17.8 and County or any other representative designated by County fails to inspect the Construction Work to be covered up.

Task 17.8 - Inspection Notice to County

Design-Builder will notify the County in writing at least twenty-four (24) hours prior to the time at which the County must be present to perform an inspection or observation, as applicable. Failure to provide such notice will make the Design-Builder responsible for uncovering the affected Construction Work including any costs to provide reasonable and required access to the Construction Work.

Task 17.9 - County Authority to Keep Work Uncovered

Notwithstanding the foregoing, if after inspection by County, the quality of the Construction Work is in question or an error in measurement is suspected, County may require that Design-Builder leave the work uncovered pending final resolution of the discrepancy.

Task 18 - Construction Documents

Task 18.1 - Reporting of Errors

Design-Builder will study and compare the Construction Documents in advance of beginning each portion of the Construction Work and immediately report to the County any material error, inconsistency, conflict, ambiguity, or omission that is discovered.

Task 18.2 - Shop Drawings Required

The drawings included in the Construction Documents are intended to show general arrangements, design, and extent of Construction Work and are not intended to serve as shop drawings. When specified by County, Design-Builder will not perform any portion of the Construction Work without approved shop drawings, product data, or samples. Any Construction Work performed in violation of this requirement will be solely at the Design-Builder's risk regardless of County's knowledge of such Construction Work.

Task 18.3 - Interpretation of Construction Document Conflicts

In the event of any conflict or ambiguity, the Construction Documents will be interpreted as being complementary, requiring a complete Project or designated portion thereof to be accepted separately by the County. Any requirement occurring in any one of the Construction Documents is as binding as though occurring in all Construction Documents. Generally, the specifications address quality, types of materials and contractual conditions while the drawings show placement, sizes, and fabrication details of materials. In the event of any conflict in the Construction Documents, the order of precedence stated below will govern:

- Contract addenda (subsequent addenda will govern over prior addenda only to the extent modified).
- The Contract document.
- Design-Builder Special Conditions.
- Technical Specifications.
- Standard Specifications & Details for Public Improvement, 2015 Edition.
- General Conditions.
- Glossary of Terms.
- In case of conflict between drawings and specifications, the specifications will govern.
- Conflicts within the drawings:
 - 1) Schedules, when identified as such, will govern over all other portions of the drawings.
 - 2) Specific notes will govern over all other notes and all other portions of the drawings, except the schedules described in Item (c)(1) above.
 - 3) Larger scale drawings will govern over smaller scale drawings.
 - 4) Figured or numerical dimensions will govern over dimensions obtained by scaling.
- If provisions of codes, safety orders, Construction Documents, referenced manufacturer's specifications, or industry standards are in conflict, the more restrictive or higher quality will govern.
- In the event of any conflict or ambiguity, Design-Builder will request an interpretation by the Design-Builder before performing the Construction Work.

Task 18.4 - Implied Minor Details

If the Construction Documents are not complete as to any minor detail of a required construction system or with regard to the manner of combining or installing of parts, materials, or equipment, but there exists an accepted trade standard for good and skillful construction, such detail will be deemed to be an implied requirement of the Construction Documents in accordance with such standard. "Minor detail" will include the concept of substantially identical components, where the price of each such component is small even through the aggregate cost or importance is substantial and will also include a single component which is incidental, even though its cost or importance may be substantial. The quality and quantity of parts or

material so supplied will conform to trade standards and be compatible with the type, composition, strength, size, and profile of the parts or materials otherwise set forth in the Construction Documents.

Task 19 - Submittals, Drawings, and Shop Drawings

Task 19.1 - Records Maintained at Work Site

The Design-Builder will maintain at the Site, for the use of County, one copy of all drawings, specifications, bulletins, addenda, Change Orders, field orders, approved shop drawings, approved submittals, supplementary instructions, requests for information, catalog data, manufacturers' operating and maintenance instructions, certificates, warranties, guarantees, and other Contract related documents and their modifications, if any, in good order and marked daily by the Design-Builder to record all approved changes made during construction. These will be turned over to the County by Design-Builder at Substantial Completion.

Task 19.2 - Submittals to County

The Design-Builder will submit to County, with such promptness as to cause no delay in the Construction Work or in the work of any other contractor, all submittals and shop drawings as required by the Construction Documents and the Contract or as necessary to illustrate details of the Construction Work.

Task 19.3 - Submittal Content Standards

Each submittal and shop drawing must be accompanied by a transmittal letter containing a list of the titles and numbers of the shop drawings. Each series will be numbered consecutively for ready reference and each submittal and shop drawing will be marked with the following information:

- Date of submission
- Name of Project
- Location of Project
- Branch of Construction Work (specification section)
- Project number
- Name of submitting Design-Builder
- Name of Subcontractors
- Revision number

Task 19.4 - Design-Builder Review of Subcontractor Submittals

All Subcontractor submittals and shop drawings will be reviewed by Design-Builder prior to being submitted to County and will bear a written statement by the Design-Builder that the submittals and shop drawings are consistent with the Construction Documents or, if not totally consistent, will bear a written statement indicating all deviations from the Construction Documents. By approving, verifying and submitting Shop Drawings, Product Data, Samples, and similar submittals, the Design-Builder represents that the Design-Builder has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Construction Documents. Any submittals or shop drawings submitted without the statement will be returned for resubmission; the submittals or shop drawings will be considered as not having been submitted, and any delay caused thereby will be the Design-Builder's sole responsibility. This review by Design-Builder of Subcontractor submittals and shop drawings will not be construed as Design-Builder approval of the design therein except that it will be a representation that the letter accompanying the submittal or shop drawings does indicate all deviations from the Construction Documents as required by Task 19.5.

Task 19.5 - Deviations from Contract Documents

Design-Builder will include with submittals and shop drawings, a written statement indicating all deviations from the Construction Documents and Contract. Failure to so notify County of such deviations may be grounds for subsequent rejection of the related Construction Work or materials. If, in the opinion of County,

the deviations are not acceptable, the Design-Builder must furnish the item as specified or as indicated on the drawings included in the Construction Documents and in accordance with the Contract, Design-Builder will not be relieved of responsibility for deviations from requirements of the Contract Documents by County's approval of Shop Drawings, Product Data, Samples, or similar submittals unless Design-Builder has specifically informed County in writing of such deviation at the time of submittal and County has given written approval to the specific deviation. The Design-Builder will not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by approval thereof.

Task 19.6 - Responsibility for Submittals

It is the Design-Builder's obligation and responsibility to check all of its submittals and shop drawings and to be fully responsible for them and for coordination with connecting Construction Work. Submittals and shop drawings will indicate in detail all parts of an item of Construction Work, including, without limitation, erection and setting instructions, and engagements with work of other trades or other separate contractors.

Task 19.7 - Design-Builder Representations Concerning Correctness of Submittals

By reviewing or submitting submittals and/or shop drawings, the Design-Builder represents that it has determined and verified availability, field measurements, field construction criteria, materials, catalog numbers, and similar data, or will do so, and that it has checked and coordinated each submittal and/or shop drawing with the requirements of the Construction Documents and Contract. If any specified material item or part is not available, the Design-Builder will so indicate to County.

Task 19.8 - County Review

The County will review and approve submittals and shop drawings and return them to Design-Builder within ten (10) days of receipt unless otherwise previously agreed in writing. For scheduling purposes, Design-Builder must assume a ten (10) day review period for each submittal or set of shop drawings. For complex submittals, Design-Builder must assume two ten (10) day review cycles. If review and approval are delayed beyond ten (10) days, County will notify Design-Builder in writing stating the reason for the delay. Approval will not relieve the Design-Builder from responsibility for deviations from the Construction Documents or Contract, unless it has been called to County's attention, in writing, at the time of submission. Any modification will be approved only if it is in the interest of County to effect an improvement in the Construction Work and does not increase the GMP or Contract Time(s). Any such modification is subject to all other provisions of the Construction Documents and Contract and is without prejudice to any and all rights of County under any surety bond.

Task 19.9 - Response to County Rejection or Comments

If the County returns a submittal or shop drawing to Design-Builder with the notation "rejected", "revise and resubmit", or "approved as noted", Design-Builder, so as not to delay the Construction Work, will promptly submit a submittal or shop drawing conforming to the requirements of the Construction Documents and Contract and indicating in writing on the submittal or shop drawing and on the transmittal what portions of the resubmittal have been altered in order to meet with the approval of the County. Any other differences between the resubmittal and the prior submittal will be indicated on the shop drawing and on the resubmittal as a special note.

Task 19.10 - Untimely Submittal

No extension of time will be granted to Design-Builder because of its failure to submit submittals or shop drawings in ample time to allow for review, possible resubmittal, and approval. Construction Work will not commence until the Design-Builder has received written approval.

Task 19.11 - Transmittal of Approved Submittals to Subcontractors

The Design-Builder will furnish prints of its approved submittals and shop drawings to all Subcontractors whose work is in any way related to the Construction Work covered by the Submittal or shop drawings.

Task 20 - Product Samples, Tests, and Certificates

Task 20.1 - Requirement to Furnish Product Samples

Design-Builder will furnish product samples of all items requested or required by the specifications. Product samples will be properly identified and submitted with such promptness as to cause no delay in Construction Work or in the work of any other contractor and to allow time for consideration by County. Design-Builder will submit product samples to County for review and approval in accordance with Task 19, above, and this Task 20.

Task 20.2 - Submittal of Product Samples

Each product sample must be accompanied by a letter of transmittal containing the following information:

- Date of submission
- Name of Project
- Location of Project
- Branch of Construction Work (specification section number) Project number
- Name of submitting Design-Builder
- Name of Subcontractor

Task 20.3 - Certification of Compliance

Design-Builder will furnish to County a certificate stating that material or equipment submitted complies with the Construction Documents and the other Contract Documents. If a certificate originates with the manufacturer, the Design-Builder will endorse it and submit it to County together with a statement of compliance in its own name.

Task 20.4 - Duty to Perform

No tests, inspections, observations or approvals performed or given by County or others acting for County, or any agency of Federal, State, or local government, nor any acts or omissions by County in administering the Contract will relieve Design-Builder from its duty to perform the Construction Work in accordance with the Construction Documents, the Contract, and applicable law.

Task 20.5 - Destruction of Samples

Unless the County is requested at the time of submittal to return samples at Design-Builder's expense, rejected samples will be destroyed.

Task 20.6 - County Testing Not Acceptance

After delivery of materials, County may make such tests as it deems necessary, with samples required for such tests being furnished by and at the cost of Design-Builder. Any such test is for the benefit of County and will not relieve Design-Builder of the responsibility for providing quality control measures to assure that Construction Work strictly complies with the Construction Documents and the Contract. No test will be construed as implying acceptance of materials, work, workmanship, equipment, accessories, or any other item or thing. Any material not meeting the requirements of the specifications may be rejected by County and will be removed immediately and replaced in an acceptable manner.

Task 20.7 - Removal of Rejected Work

On the basis of the test results, materials, workmanship, equipment, or accessories may be rejected even though general approval has been given, if items have been incorporated into the Construction Work, County will each have the right to cause their removal and replacement by items meeting Construction Document requirements or to demand and secure appropriate reparation to County from the Design-Builder.

Task 20.8 - Cooperation with Testing Efforts

Design-Builder will cooperate with the selected testing laboratory and all others responsible for testing and inspecting the work and will provide them access to the Work at all times. The County and/or selected testing laboratory will make every effort as to not delay the work.

Task 20.8.1 - Compliance with Work Site Rules

Any person employed by any testing laboratory who, in the opinion of the Design-Builder, does not perform his work in a proper, skillful, and safe manner or is intemperate or disorderly will, at the written request of the Design-Builder, be removed from the Work by County or testing laboratory employing such person, and will not be employed again in any portion of Work without the written approval of the Design-Builder.

Task 20.8.2 - Testing Prior to Delivery

At the option of County, materials may be tested at the source of supply before delivery is started. County will make every effort necessary to not delay the work if materials are to be tested at the source of supply.

Task 20.9 - Trade Name Substitutions

Unless the Contract Documents indicate that no substitutions are permitted, Design-Builder may, subject to the following conditions, substitute or supply alternate items when equipment, materials, or patented processes are referenced in the Contract Documents by manufacturer, trade name, make, or catalog number:

- The substitution will be submitted to County in writing by Design-Builder.
- Design-Builder will certify that the substitution will perform the functions and achieve the results called for by the general design, be similar and of equal substance, and be suited to the same use as that specified.
- The submittal will state any required changes in the Construction Documents to adapt the design to the proposed substitution.
- The submittal will contain an itemized estimate of all costs and credits that will result directly and indirectly from the acceptance of such substitution, including cost of design, license fees, royalties, and testing. Also, the submittal will include any adjustment in the Contract Time created by the substitution.
- Design-Builder, if requested by the County, will submit Samples or any additional information that may be necessary to evaluate the acceptability of the substitution

County will make the final decision and will notify Design-Builder in writing as to whether the substitution has been accepted or rejected. If County does not respond in a timely manner, Design-Builder will continue to perform the Work in accordance with the Contract and the substitution will be considered rejected.

Task 20.10 - Field Inspection

County may utilize field inspectors during construction to assist County in observing Design-Builder's performance. Such inspectors are solely for the purpose of assisting County and should not be confused with an inspector with a regulatory agency or with an inspector from an County-selected laboratory. In conjunction with these activities, the inspector may perform the following activities:

- Thorough onsite observation of the Work in progress and field checks of materials and equipment, the inspector will endeavor to provide protection against defects and deficiencies in the Work.
- The inspector will be authorized to inspect all Work and materials furnished. Such inspection may extend to all or part of the Work and to the preparation, fabrication, or manufacture of the materials to be used.
- The inspector will not be authorized to issue instructions contrary to the Construction Documents or to act as foremen for the Design-Builder.
- The inspector will have the authority to reject work or materials until any questions at issue can be decided by County.

The use of such services by County will not make County responsible for or give the County control over construction means, methods, techniques, sequence, or procedures, or for safety precautions or programs, or responsibility for the Design-Builder's failure to perform the work in accordance with Contract Documents.

County and its representatives will at all reasonable times have access to the work wherever it is in preparation or progress. Design-Builder will provide proper facilities for such access and for inspection.

During the course of construction, as identified in the scheduled, initial construction inspections, if work fails to comply with the Project plans and specifications, Design-Builder will be responsible for all additional engineering consultant costs associated with re-inspections, meetings and reports.

Task 21 Redline Drawings

Task 21.1 - Monthly Review

On a monthly basis, the Design-Builder will complete and turn over to County redlined drawings for review. The redlined drawings will clearly indicate all field changes that were made to adapt to field conditions, field changes resulting from Change Orders, and all buried and concealed installation of piping, conduit and utility services. All buried and concealed items will be accurately located on the redlined drawings as to depth and in relationship to not less than two permanent features such as manholes or corners. The redlined drawings will be clean and all changes, corrections, and dimensions will be given in a neat and legible manner in a contrasting color.

Task 21.2 - Changes Shown

Items required to be marked include but are not limited to:

- Dimensional changes to the drawings.
- Revisions to details shown on Drawings
- Depths of foundations or footings
- Locations and depths of underground utilities
- Revisions to routing of piping and conduits.
- Revisions to electrical circuitry.
- Actual equipment locations.
- Duct size and routing, if any.
- Locations of concealed internal utilities.
- Changes made by Change Order.
- Details not on original Contract Drawings.

Task 21.3 - Basis Documents

Design-Builder will completely and accurately mark Project Red Line Record Drawing prints of Construction Documents or Shop Drawings, whichever is most capable of indicating the actual physical condition. Where Shop Drawings are marked, they must display a cross-reference to their location in the Construction Documents.

Task 21.4 - Changes after Substantial Completion

Changes or corrections in the Construction Work made subsequent to Substantial Completion will be submitted to County as part of the red line record drawings.

Task 22 - Startup

Task 22.1 - Startup Plan

DB will develop a detailed plan for the startup of the Project (the "Startup Plan") and submit it to County for review and approval. The Startup Plan will address all tasks necessary for a successful startup of the Project including, without limitation, the following items:

- The responsible party for each task identified in the Startup Plan.
- A schedule for all Startup tasks.
- Actions to be taken should some portion of the Project become inoperable or fail to perform as anticipated.
- Expected sludge and chemical requirements and usage during commissioning and startup of the Project.
- County and DB staffing during the startup.
- Communications procedures.
- SCADA system operation.
- Control of odors.
- The relationship between the steps in the Startup Plan and the steps specified below to be undertaken by DB prior to commencement of Performance Testing.
- Identification of any special safety requirements for startup personnel.

Task 22.2 - Startup

DB will conduct the Startup consistent with the Startup Plan.

Task 23 - Performance Testing

The purpose of the Performance Testing is to demonstrate that the Project meets all performance requirements set forth in the Contract.

Task 23.1 - Performance Test Plan

DB will develop a detailed plan for conducting the Performance Test (the "Performance Test Plan") and submit it to County for review and approval. The Performance Test Plan will describe the DB's approach and details for meeting the Contract requirements. The Performance Test Plan will address all tasks necessary to successfully test the performance of the Project including, without limitation, the following items:

- Facility configuration - identify which of the components in each unit process will be utilized in the test.
- Provide anticipated chemical dosages to be used.
- Test date - the scheduled date the test will be performed by the DB.
- Related systems required if the test will involve coordination with ancillary or support systems, identify these ancillary or support systems in the plan and schedule.
- Tasks and responsibilities, staffing requirements, support - the specific tasks or activities, both non-process and process related, which are required for the successful completion of the test.
- Response procedures for unsuccessful test results including definition of threshold results that constitute overall Performance Test failure.
- Internal and external communications protocols.
- Operating and maintenance schedule during testing.
- Operating conditions for Influent and Effluent systems.
- Procedures for demonstrating compliance with every Performance Test Procedure and Standard.

- Procedure for testing cathodic protection systems, if such systems are provided.

The Performance Test Plan will also describe methods for demonstrating compliance with Performance Guarantees during the performance of the Performance Tests, including:

- A list of all parameters to be monitored and measurements to be made including but not limited to all Influent and Effluent and Sludge parameters to be monitored and a schedule of monitoring, describing sampling locations, analytical methods and sampling frequencies at which parameters will be monitored on a continuous or other defined basis.
- Identification of equipment calibrations to be performed, descriptions of all calibration techniques to be used and timing of calibrations relative to Performance Testing (all instruments used in Performance Testing operations and to monitor and evaluate Performance Testing will be calibrated in accordance with manufacturer's requirements), QA/QC procedures, including those to be utilized for all equipment used for testing and measuring different parameters within the treatment process and at the process control laboratory, contract laboratories and County laboratory. The description will address the calibration practices, including the frequency and accuracy requirements. The calibration procedures will consider intermediate spot and cross checks, in addition to the formal calibration periods.
- A full description of any analytical methods and techniques that will be utilized to ensure that all Applicable Law and Performance Guarantees are met. In addition, descriptions of how data collected will be compared with Performance Guarantees will be provided and will be in a manner that complies with Applicable Law. Provide examples of any tools such as flow charts, check sheets or any other data presentation and evaluation techniques that will be utilized.
- A list of real-time data fields that will be provided to the County during Performance Testing.
- A protocol for enabling the County to collect samples during Performance Testing.

The Performance Test Plan will also specify the form and content of the Performance Test report and include specific, detailed sampling protocols to be utilized while conducting the Performance Tests. Laboratory analyses to determine compliance with the Performance Guarantee will be conducted by the County laboratory.

Task 23.2 - Performance Test Procedures and Standards

DB will perform Performance Testing in accordance with the requirements of the approved Performance Test Plan. If there is a failure to meet Performance Test Procedures and Standards, the DB will conduct re-tests until the Performance Procedures and Standards are met in accordance with the Contract Technical Specifications. No temporary equipment will be allowed to operate during Acceptance Testing. The Performance Test will be repeated in its entirety at the DB's expense if the DB is forced to use any temporary equipment to maintain operation.

Task 23.3 - General Performance Standards

The DB will perform the Performance Test for a continuous 60-day period to demonstrate that the Project can meet the Performance Guarantees over the range of sludge flows and loadings received at the Project. In order to satisfy the Performance Test requirements, the DB must certify to the County in the Performance Test Report that the Project:

- Was designed and constructed in accordance with the Contract Standards.
- Operated in accordance with the Contract Standards with only the normal complement of employees included in the DB's staffing plan. Additional staff may be on-site to aid with sample collection and engineering support only. Additional staff and duties to be approved and authorized by County. Use of unauthorized staff will be cause to invalidate the Performance Test.
- Operated with all automated and computerized systems in full and continuous operation.
- Operated properly during manual and automatic shutdown and start-up.
- Met the Performance Guarantees for the duration of the Performance Test.

Task 23.4 Performance Test Report.

The DB will prepare reports describing and documenting each Performance Test. The report(s) will include, at a minimum, the following information:

- A certification stating that testing was conducted in accordance with the approved Performance Test Plan.
- A certification of the results of each Performance Test, including:
 - A determination of the extent to which the results comply with the Performance Test Procedures and Standards.
 - For each Performance Guarantee a determination of the extent to which the Facility complies with the Performance Guarantee.
- All required data measured and recorded during the Performance Test, including all laboratory analyses, chemical consumption, instrument calibrations, pressures, and other measurements. Copies of original data sheets, log sheets, calculations, laboratory reports, and test sheets will be provided. DB will retain all original data sheets, log sheets, calculations, laboratory reports, and test sheets and make them available for County inspection upon request.
- All necessary certifications relating to testing, evaluation, analyses, and performance.
- A record of all equipment failures, repairs, and preventative maintenance.
- A summary of all data and calculations demonstrating the ability of the Project to meet the requirements of the Performance Guarantees.
- A summary of test results and conclusive evidence of compliance with all Performance Test requirements.
- Any additional data reasonably requested by the County in approving the Performance Test Plan to be included in such report.

All certifications required in the Performance Test report will be signed by the DB and signed and sealed by an engineer employed by the lead design firm.

End of Appendix "B" – Design-Builder General Scope of Work

APPENDIX "C"

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[Note to Proposers (Revised): The Technical Specifications include the Design and Construction Requirements and the Secondary Technical Criteria. The distinction between these two categories of Technical Specifications is in the Design-Builder's ability to make changes. The Design and Construction Requirements may only be changed during the design stage of the project after approval by County of the requested changes. During the design phase a complete review of the specifications will be conducted jointly by County and the selected Design-Builder. This review will allow for revisions or corrections to the specifications as required based on the technology offered by the Design Builder and in the best interests of the project and in the best interests of the County. The Design-Builder will have a greater degree of flexibility with respect to the Secondary Technical Criteria. Secondary Technical Criteria will be identified in the negotiation of the Contract based on the information in the Statement of Qualifications. Proposers should consider all requirements set forth in these Technical Specifications to be Design and Construction Requirements.]

TS 1.0 – Project Overview

The Project is to be located in Pima County, Arizona. Pima County (**County**) has identified a location (the Project Site) within the Tres Rios Water Reclamation Facility (**WRF**) for the installation of the Project. The Project Site, depicted and described in Attachment 4 hereto, is owned by Pima County and operated by its Regional Wastewater Reclamation Department (RWRD). The County will make the Project Site available for the Project.

This Project is a Design-Build project to provide a fully functional Struvite Management System (**SMS**) at the Project Site. The Design-Builder (the **DB**) is responsible for designing the Project; procuring all Project components except those specifically identified in the Agreement as being County-supplied; securing all necessary permits and permissions except those specifically identified in the Agreement as being County-supplied; constructing the Project; and starting up and successfully performance testing the Project.

The mission of the County is to protect public health, safety, and environment by providing quality services, environmental stewardship, and renewable resources. This requires providing high quality wastewater services at a reasonable cost, while balancing social, economic, and environmental impacts of wastewater collection and treatment.

The County commissioned the development of a System-Wide Biosolids and Biogas Utilization Master Plan (Master Plan). The Master Plan, published in August 2012, considered current conditions of the County's wastewater treatment facilities, and recommended the implementation of a number of projects of importance to the overall treatment operations. One of the projects recommended was the design and installation of a system to remove struvite from biosolids produced by the County's digesters.

To implement this recommendation, County is installing a SMS at the Tres Rios WRF with the goal of preventing struvite scaling and fouling in the solids processing systems, and digesters. The SMS must provide immediate struvite sequestration results consistent with the requirements herein and, with minimal alterations, be capable of producing struvite for use by commercial fertilizer producers. Further, SMS should significantly reduce or eliminate the ferric chloride chemical additions currently utilized to prevent struvite scaling in the solids processing systems. Finally, the SMS should improve the dewatering of the sequestered digested sludge by increasing the percent solids content and/or reducing the polymer usage for additional cost savings.

The County's objectives for delivery of the Project are as follows:

- Quality: Provide SMS with equipment that will be sustainable and will reliably produce struvite sequestration in accordance with the contractual standards set forth in these Technical Specifications.
- Cost: Minimize life-cycle cost.
- Schedule: Achieve the schedule completion date for design, construction, and performance testing of the Project.
- Risk: Achieve an optimal balance of risk allocation between the County and the Design-Builder.
- Safety: Implement an effective safety program incorporating best industry practices.

Background

Pima County RWRD operates a Regional Biosolids Management Facility (RBMF) responsible for treating all solids from its various water reclamation facilities. The RBMF is located at the Tres Rios WRF. The County's two largest water reclamation facilities use five-stage Bardenpho with the remainder operating as traditional biological nutrient removal (BNR) facilities. BNR processes remove significant amounts of phosphorus and nutrient nitrogen from the effluent discharge with the removed phosphorus bound in the sludge.

TS 2.0 – System Description and Components

The SMS must be an induced selective struvite precipitation process within a controlled reactor. The SMS must be located between the County's digesters and the Centrifuge Facility. The County initially intends to return the resulting struvite crystals to the dewatered Biosolids for disposal through beneficial application to local farmlands. However, depending on market value, the County may sell the struvite crystals to fertilizer producers. The SMS must include space and infrastructure for later installation of a fertilizer collection system.

The SMS will receive the digester outflow and treat it to precipitate phosphorus in the form of struvite prior to further treatment of the outflow by plant centrifuges.

Main components of the SMS are described with more detail below.

TS 2.1 – Reactor

The SMS reactor will be sized based on 90 MGD (maximum month wastewater flow) influent loading conditions.

TS 2.2 - Chemical Addition. (Magnesium Chloride and Sodium Hydroxide Tanks)

The County understands that continuous magnesium addition to the feed stream may be required to ensure complete struvite formation. Ammonia levels are expected to be sufficient for the reaction. The County prefers air injection to counteract the pH reduction caused by magnesium chloride addition. DB will determine whether additional ammonia is necessary and will design and install all necessary chemical addition equipment including monitoring and control systems.

TS 2.3. - Not Applicable

TS 2.4 - Struvite-Free Equipment.

The reactor, the pipes, and the ancillaries of the SMS must be designed to ensure they remain as struvite-free during operation as possible and provide unobstructed conveyance of feed and treated sludge streams. The design must also include an easy to use scale and deposits control method.

Further, all internal components of the system must be easily accessible to facilitate removal of struvite buildup. The equipment and infrastructure required for these tasks must be part of the design

TS 2.5 - Yard Piping and Valves

Project yard piping includes, but is not limited to:

- Digested Sludge Feed Pipeline.
- Digested Sludge Bypass Valve.
- Treated Digested Sludge to Centrifuge Building, Facility #23, Pipeline.
- Service Water Pipeline.
- Drain Pipeline to Plant Drain, Facility #76.
- All necessary valves and piping to allow bypass of the SMS.

TS 2.6 - Future Expansion.

The Project must provide the necessary space and infrastructure for one additional reactor to accommodate future plant loadings.

TS 3.0 – System Performance Requirements

The SMS will reliably sequester struvite from the solids processing system at the Tres Rios WRF on a continuous, 24-hour, 365 day per year basis. The SMS will be properly sized to remove ortho-phosphate in amounts necessary to achieve and maintain ortho-phosphate concentrations below the threshold concentration for struvite formation potential in all areas of the RBMF. It is DB's responsibility to determine the ortho-phosphate threshold concentration necessary to ensure compliance with this obligation.

The SMS will provide: redundancy for essential equipment; level control; logistically positioned chemical staging; protection from both natural and RBMF environmental elements; working and safety lighting; suitable material recovery receptacles; and placeholders for future expansion of the system.

Table 3-1 (Revised)

Struvite Removal Process Performance Goal

P sequestration as a fraction of total P eliminated on the WRF.	Minimum 7% sequestration
Electrical demand	less than 10 kWh/kg P (kg P refers to total P)
Chemical demand	Less than 14.5 kg MgCl ₂ /kg P (kg P refers to total P)
Biosolids cake percent solids content	Minimum 2% increase in percent solids content with comparable polymer use
Orthophosphate reduction	Minimum 85% reduction
Ammonia reduction	Minimum 8% reduction

The Project must meet the Acceptance Test Procedures and Standards and the Performance Guarantees when treating the range of flows and loads specified in Table 5-1, as associated with an average annual flow of 82 MGD. The values given in Table 5-1 are provided for historical reference only and County makes no guarantees regarding their use. Actual Tres Rios WRF influent characteristics and RBMF digested sludge characteristics may vary from the Table 5-1 values. It is DB's responsibility to sufficiently evaluate the RBMF digested sludge characteristics to ensure the SMS provided by DB meets the struvite removal requirements herein.

TS 4.0 – Construction Requirements

An Arizona licensed contractor will perform all the work necessary to provide a complete and operational SMS. All work will be done only within locations approved by County and in compliance with all current local, state, and federal codes. All permits for construction will be the responsibility of the DB. All onsite equipment, materials, and supplies will be stored only in areas designated by County for that purpose. All personnel will enter the WRF through approved access points and must comply with all County security and safety processes and procedures while on County property.

The Contractor shall design and construct the SMS system to achieve optimal struvite abatement and orthophosphate reduction for the current Project. The Project must also provide sufficient space and infrastructure to accommodate a future SMS expansion to process digested sludge resulting from an ultimate future average annual WRF influent flow rate of 82 MGD. The Facility design must also include the following elements:

- All structures will be designed to protect against the 100 year flood event. For purposes of this requirement, the term Structures includes all SMS facilities (tanks, buildings, general site improvements, etc.) with the exception of on-site roads. The DB will obtain flood information through direct coordination with the Pima County Regional Flood Control District, by contacting its Floodplain Permitting Division Manager at 201 N. Stone, 9th Floor, Tucson, Arizona, 85701; (520) 724-4600.
- The DB will extend Intelligent Transportation Systems (ITS) conduits from the nearest junction box at the WRF to the new SMS Control/SCADA Room. Design and installation of the ITS conduits will be in accordance with the Pima County Department of Transportation Street Lighting and ITS Conduit Design Manual.
- The DB will provide a PLC (Allen Bradley) to receive real time SCADA information for the parameters listed below, plus ten additional parameters to be defined by the County during the design phase of the Project:
 - Total Digested Sludge Flow Feed to the SMS
 - Feed Digested Sludge Density
 - Management System Sludge Discharge Pressure
 - Service Water Flow
 - Air Flow
 - Power Usage and Quality

The DB will provide the necessary systems to connect the PLC to the WRF main control room.

TS 5.0 – Historical Data

THE FOLLOWING VALUES ARE BASED ON HISTORICAL DATA AND ARE PROVIDED FOR REFERENCE ONLY. It is the DB's responsibility to perform whatever additional analyses it deems necessary to achieve a robust and contract-compliant design. The terms maximum month and maximum day should not be misconstrued as maximum allowable concentrations that may be encountered for design purposes. These values are only included as reference for the maximum values observed to date. If additional sludge constituents and parameters have the potential to impact the SMS operation or the quality of the biosolids leaving the SMS, it is the DB's responsibility to measure those parameters and design the SMS appropriately.

Table 5-1

Influent, Average Day	January 2016 – August 2017
Flow, mgd	30.2
COD, lbs/d	193,139
BOD ₅ , lbs/d	88,297
Soluble BOD ₅ , lbs/d	33,330
Total Suspended Solids, lbs/d	111,216
Volatile Suspended Solids, lbs/d	91,687
Total Kjeldahl Nitrogen, lbs/d	14,519
Total Phosphorus, lbs/d	1,948
Influent Maximum Month	

Influent, Average Day	January 2016 – August 2017
Flow, mgd	32.2
COD, lbs/d	217,132
BOD ₅ , lbs/d	104,105
Soluble BOD ₅ , lbs/d	42,840
Total Suspended Solids, lbs/d	133,401
Volatile Suspended Solids, lbs/d	111,648
Total Kjeldahl Nitrogen, lbs/d	17,561
Total Phosphorus, lbs/d	2,349
Influent, Maximum Day	
Flow, mgd	38.1
COD, lbs/d	239,454
BOD ₅ , lbs/d	149,563
Soluble BOD ₅ , lbs/d	61,540
Total Suspended Solids, lbs/d	220,460
Volatile Suspended Solids, lbs/d	123,207
Total Kjeldahl Nitrogen, lbs/d	18,220
Total Phosphorus, lbs/d	2,590
Influent, Peak Hour	
Flow, mgd	44
Temperature	
Summer, degrees C	31
Winter, degrees C	27

Table 5-2

Tres Rios WRF Digested Sludge			
Total Volatile Solids [%]	Total Solids [%]	Volatile Acids [mg/L]	Alkalinity [mg/L]
74.5	2.7	7.3	3,631
Chloride mg/L	Orthophosphate mg/L	Ammonia mg/L	Phosphorus mg/L
230	282	1120	977
pH S.U.	Temperature °C	Calcium mg/L	COD mg/L
7.3	36.8	990	14,200
Hardness mg/L	Magnesium mg/L		Flow Gallons per Day
2,950	172		285,000

TS 6.0 - Further Design Considerations

TS 6.1 - Influent Flow Control

The DB will review as-built plans and field verify the current Tres Rios WRF facility digested sludge piping layout to select the SMS connection point most advantageous to the County. The piping will be designed and constructed to accommodate current volumes of digested sludge flows, as specified in Table 5-2, and future digested sludge flows resulting from an ultimate future average annual WRF influent flow rate of 82 MGD.

TS 6.2 - Treated Digested Sludge Line

The DB will design and construct a digested sludge pipeline connecting the SMS to the existing Tres Rios WRF digested sludge system feeding the Building 23 Centrifuges.

TS 6.3 - Buildings

The Facility will include an enclosed building for all weather sensitive equipment and controls. The DB will design and construct such building accordingly.

TS 7.0 - Reliability/Redundancy Criteria

The SMS will meet all applicable Department reliability and redundancy requirements. Further, the Facility will:

- (1) For both liquid and solids processes, treat average day flow and loads with the largest unit out of service for all critical processes (processes necessary to meet the Performance Guarantees).
- (2) Liquid processes - Treat maximum day flows (summer and winter) with all units in service.
- (3) Solids pumping - Process maximum day solids loading with all units in service.

TS 8.0 Reference Standards

TS 8.1 - Design Documents

All wastewater treatment facilities constructed in Arizona must comply with the applicable recommendations and requirements of ADEQ Bulletin No. 11. Any deviations from the applicable recommendations and

requirements of ADEQ Bulletin No. 11 must be consistent with the Design and Construction requirements, and must be approved by ADEQ.

TS 8.2 - Codes and Standards

The list below provides Project designers with guidance to applicable codes and standards for civil, structural, architectural, mechanical, and electrical design disciplines. The DB will perform the Design-Build Work in accordance with the Contract Standards, which include, among other things, all applicable permits, ordinances, codes, standards, and regulations. The DB will use the latest requirements of the Governmental Body having jurisdiction if different from those indicated below. The lists of codes and standards provided in this Section are not intended to be all-inclusive. The DB will be responsible for identifying and complying with all codes and standards that are applicable to the performance of the Design-Build Work in accordance with Applicable Law and Good Engineering and Construction Practice.

TS 8.2.1 - Civil

The Contract Standards applicable to the performance of all civil design and construction work for the Project including, but are not limited to, the following:

- Pima County Regional Flood Control District, Pima County Drainage Standards for Local Drainage and the Pima County Floodplain and Erosion Hazard Management Ordinance, as amended to date.
- ADEQ Best Management Practices
- Arizona Department of Transportation (ADOT) Standard Specifications (where applicable).
- American Association of State Highway and Transportation Officials (AASHTO), Policy on the Geometric Design of Highways and Streets.
- U.S. Department of Transportation Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices [MUTCD 2009 MUTCD with Revisions 1 and 2, May 2012.
- Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities, 2006 revisions.
- 2015 International Building Code and Local Amendments
- 2015 International Energy Conservation Code and Local Amendments
- 2015 International Fire Code and Local Amendments
- 2017 National Electrical Code and local Amendments
- 2015 Uniform Plumbing Code and local Amendments
- 2015 International Plumbing Code and local Amendments
- 2015 International Mechanical Code and local Amendments
- American Institute of Steel Construction (AISC), Manual of Steel Construction, 14th Edition
- American Welding Society (AWS) Welding Code
- American Society for Testing and Materials (ASTM)

TS 8.2.2 - Structural

The Contract Standards applicable to the performance of all structural design and construction work for the Project include, but are not limited to, the following:

- Standards and Codes established by the Northwest Fire District
- The currently adopted editions of the following codes by Pima County Developmental Services Department:
 - International Building Code (IBC) 2015
 - ASCE 7-05 "Minimum Design Loads for Buildings and Other Structures", as referenced by IBC 2006.
 - American Institute of Steel Construction (AISC) Manual of Steel Construction, 14th Edition

- American Welding Society (AWS) Welding Code
- Seismic Provisions for structural steel buildings ANSI/ AISC 341-05
- Aluminum Design Manual

TS 8.3 - Architectural

The Contract Standards applicable to the performance of all architectural design and construction work for the Project include, but are not limited to, the following:

- 2015 International Building Code and local Amendments
- 2015 International Energy Conservation Code and local Amendments
- 2015 International Fire Code and local Amendments
- 2017 National Electrical Code and local Amendments
- 2015 Uniform Plumbing Code and local Amendments
- 2015 International Plumbing Code and local Amendments
- 2015 International Mechanical Code and local Amendments
- Swaback Partners report, "Water Reclamation Campus Architectural Theme and Character."

TS 8.4 - Process Mechanical

The process mechanical design will comply with applicable industry standards for piping, valves, and process equipment. The Contract Standards applicable to the performance of all process mechanical design and construction work for the Project include, but are not limited to, the codes and standards published by the following organizations:

- American Water Works Association (AWWA)
- American Society of Mechanical Engineers (ASME)
- American National Standards Institute (ANSI)
- Hydraulic Institute (HI)

TS 8.5 - Building Mechanical

The Contract Standards applicable to the performance of all building mechanical design and construction work for the Project include, but are not limited to, the following Building Codes:

- Building: 2015 International Building Code (IBC)
- Electrical: 2017 National Electrical Code (NEC)
- Energy: 2015 International Energy Conservation Code (IECC) with local amendments
- Fire: 2015 International Fire Code (IFC) with local amendments
- Mechanical: 2015 International Mechanical Code (IMC) with local amendments
- Plumbing: 2015 International Plumbing Code (IPC) with local amendments
- Standards and Regulations:
 - Air-Conditioning and Refrigeration Institute (ARI)
 - Air Moving and Conditioning Association (AMCA)
 - American Conference of Governmental Industrial Hygienists (ACGIH)
 - American National Standards Institute (ANSI)
 - American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
 - American Society of Mechanical Engineers (ASME)
 - American Society of Plumbing Engineers (ASPE)

- Americans with Disabilities Act (ADA), Title III, Current Edition
- Associated Air Balance Council (AABC)
- National Environmental Balancing Bureau (NEBB)
- National Fire Protection Association (NFPA)
- Occupational Safety and Health Administration (OSHA) Standards for General Industry
- Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)

TS 8.6 - Supervisory Control and Data Acquisition (SCADA)

The Contract Standards applicable to the performance of all Supervisory Control and Data Acquisition (SCADA) and instrumentation design and construction work for the Project include, but are not limited to, the codes and standards published by the following organizations:

- American National Standards Institute (ANSI)
- American Society of Testing Materials (ASTM)
- American Society of Mechanical Engineers (ASME)
- Electronic Industries Association (EIA)
- Federal Communications Commission (FCC)
- Institute of Electrical and Electronic Engineers (IEEE)
- Instrument Society of America (ISA)
- National Electrical Code (NEC)
- National Electrical Manufacturers Association (NEMA)
- Occupational Safety and Health Administration Standards (OSHA)
- Scientific Apparatus Makers Association (SAMA)
- Underwriters Laboratories, Inc. (UL)

TS 8.7 - Electrical

The Contract Standards applicable to the performance of all electrical design and construction work for the Project include, but are not limited to, the following:

- 2017 National Electrical Code (NFPA 70)
- 2006 Pima County Outdoor Lighting Code
- 2015 International Energy Conservation Code
- All other applicable local standards and regulations.

Load studies stating connected and operating loads with applicable demand factors to substantiate the sizing and ratings of all electrical equipment associated with the design will be provided. All materials specified will be UL listed.

TS 9.0 - Sitework Design

The SMS must be properly sized to process all sludge received from digesters at the RBMF. The digesters process solids received from the Tres Rios WRF, the Agua Nueva WRF and from our regional facilities. The SMS design and constructed facility must also provide the necessary infrastructure and space for future expansion of the SMS.

In addition, the DB will design the Project Site in compliance with all Applicable Law and will meet the following general objectives:

- The Project will be designed and constructed in a manner that is both environmentally compatible with the Project Site and environmentally sustainable, in accordance with the requirements of the Pima County Development Service's Building Safety and Sustainability Division.

- The Project will be designed in a manner, including grouping functions, to provide easy and efficient operation and monitoring, and to optimize the collection, storage, and use of operating data.
- The Facility will be arranged on the Facility Site to provide efficient and safe access into and throughout the Project Site, including compliance with fire/safety vehicle requirements. The DB will cluster individual buildings and equipment to the extent practicable.
- Buildings, structures, and pipelines will be designed using materials and equipment consistent with a minimum 50-year physical service life, based on industry standard practices.
- The materials and equipment will be selected to assure the maximum service life expectancy with a low incidence of failure and a high probability of continued manufacturer support and service.
- Equipment selection, building design, landscaping, and other Project elements will be selected to minimize the frequency of maintenance while presenting a well-kept and pleasing appearance.
- Project structures must be protected against the 500-year flood.

TS 10.0 - Specific Site Design Criteria

Criteria for Project Site design, reliability and redundancy, and process control are listed below:

- Arrange the Project Site layout so that facilities generally fit within the constraints shown on Attachment 4, the Site Location Map, attached hereto. These constraints include the digested sludge Influent and Effluent pipelines, adjacent Digester Tanks and ancillary facilities, storm water detention ponds, service roads, and access driveways.
- All process units will be covered and provide appropriate odor control.
- Operators must have reasonable access to all equipment (walk-up access to all equipment; means to get equipment greater than 100 pounds to a cart).
- Vehicular maintenance access to all facilities (boom truck/flatbed).
- Maintain minimum setbacks required by zoning classification.
- Height limit not to exceed any applicable requirements including but not limited to the Pima County design code and the architectural concepts developed in the Swaback Partners report, "Water Reclamation Campus Architectural Theme and Character."
- Provide systems for containment and treatment all surface runoff within the developed Project Sites, including runoff from all access driveways serving the Project Sites. Separately contain and treat surface runoff from areas that may contain spills from treatment processes.
- All process units capable of causing nuisance odors will be covered or enclosed in buildings. Exhaust air from these structures will be routed to appropriate odor scrubbing facilities. Monitoring and controls will be in accordance with Applicable Law and the Odor Guarantee.
- All equipment with significant noise generation will be enclosed within buildings or shrouded within sound attenuation structures. Noise levels will not exceed 50 dbA at the Treatment Facility boundary per the Arizona Administrative Code Title 18, Chapter 9, Part B201.
- All buried carbon steel components will be protected from corrosion by cathodic protection, unless the manufacturer provides documentation that the protection is not required at this location.
- Facility lighting will minimize off-site impacts and provide a safe working environment for the staff. Photo-electrically controlled, low-level, low-glare exterior lighting, meeting Illumination Engineering Society of North American foot candle level requirements as stated in the Recommended Practice Manual, and in the 2006 Pima County Outdoor Lighting Code, Ordinance 2006-91, Exhibit H, will be provided at the Facility Site entrances and along roadways, parking areas and sidewalks to enhance security and allow for safe movement in the dark. Switch-controlled task lighting will be provided in the immediate vicinity of unit processes and other areas that may require maintenance and operation at night. L.E.D. technology shall be used whenever feasible.

TS 11.0 - Excavation, Filling, and Backfilling

TS 11.1 - Responsibility for Fill

The DB will be responsible for furnishing all supervision, labor, tools, materials, and equipment; performing all operations in connection with excavation of materials regardless of the character of that material; obtaining fill and backfill material approved by a licensed professional engineer specializing in soil mechanics to achieve final grade lines; and all activities necessary for disposal of excess excavated material. All necessary arrangements for obtaining fill material and topsoil from off-site borrow areas will be the responsibility of the DB.

TS 11.2 - Professional Engineer

The DB will employ a professional engineer specializing in soil mechanics to provide recommendations for the work, including excavation, fill, backfilling, compaction, dewatering, subgrade preparation and stabilization, shoring, and drainage from protection of excavated areas.

TS 11.3 - Excavation

The DB will perform all necessary excavation for construction of the Project. Excavations for footings will be made sufficiently wide for the installation of form work and to the depths required. The DB will prevent the foundation area from becoming destabilized due to the flow of water into the excavation or from cave-ins. Where soils are not suitable for sustaining design loads, the DB will take appropriate action in accordance with the requirements of appropriate established codes and good Engineering and Construction practices. Backfill material will consist of suitable clean soil.

TS 11.4 - Excess Fill

To the maximum extent possible, the DB will locate facilities to balance cut and fill and place surplus excavated materials above that required for backfilling in areas of the Project Sites consistent with the DB's clearing and grading plans or in disposal areas approved by the County. The DB is encouraged to use excess excavated material for landscaping features or other beneficial purposes on the Project Sites. To the extent that excess excavated material cannot be placed in these areas, the DB will be responsible for all activities necessary to dispose of the excess material at an approved off-site location. It will be the DB's responsibility to obtain the disposal site for the disposal of excess material.

TS 11.5 - Grading and Drainage

Design of all storm drain systems will be in accordance with the Pima County Regional Flood Control District's Hydrology Manual for Engineering Design and Flood Plain Management within Pima County, Arizona as well as the Pima County Drainage Standards for Local Drainage and the Pima County Floodplain and Erosion Hazard Management Ordinance.

A stormwater management plan will be prepared for the Project Sites that complies with requirements of the Pima County Department of Environmental Quality Stormwater Guidelines. The plan will address surface and roof drainage as well as the quality and quantity of storm runoff. The storm water management plan will follow the minimum design criteria as set forth in the County's Storm Water Management Program.

TS 12.0 - Landscaping

TS 12.1 - County Standard

Landscaping will be in compliance with the Pima County Landscape Design Manual and the Swaback Partners report, "Water Reclamation Campus Architectural Theme and Character."

TS 12.2 - Appropriate Materials

Landscaping and irrigation will use environmentally appropriate materials that are tolerant of the climate of the Service Area and compliant with all applicable Contract Standards. The proper use of plant materials and other design elements must demonstrate environmental responsibility.

TS 12.3 - Design Considerations

All landscape will be designed with minimum maintenance, maximum security and maximum water conservation in mind. Any landscape irrigation will be carried out with reclaimed water, including maximum use of captured stormwater runoff. Potable water may be used for irrigation only during the construction phase prior to the availability of reclaimed water to assist in establishing landscaping placed prior to Facility startup. All portions of the Project Sites landscaping must be regularly maintained.

TS 13.0 - Roads, Sidewalks, Parking, and Traffic Circulation

TS 13.1 - General

Main access requirements will be finalized during the Facility Site development for the Project. At a minimum, the width of the facility access roads will conform to *Pima County Codes* as well as *Uniform Fire Codes* for fire department access requirements and be constructed of either asphalt or concrete pavement. Pervious pavement will not be used for roads and driveways. The general flow of onsite traffic will separate heavy vehicle traffic from other vehicular traffic to the extent practicable. Adequate traffic signage will be provided to promote safe movement around the Project Sites. At various facility structures, driveways are to be designed to provide access for building and equipment maintenance.

TS 13.2 - Turn Radius

All roadways will have adequately sized turning radii so that a WB-50 design vehicle can traverse the Facility Site. All roads will facilitate the capture of surface water runoff. All roadway widths and turning radii will meet *Pima County Codes* as well as *Uniform Fire Code* requirements.

TS 13.3 - Road Material

The facility access road and the interior roads will be constructed of asphalt or concrete pavement designed for a minimum of HS-20 loadings unless otherwise indicated or required.

TS 13.4 - Chemical Unloading Areas

Areas for chemical unloading from trucks will have containment curbs and will be paved with Portland cement concrete. Coatings, if required, on the concrete surfaces will be determined by the consideration of the chemicals being handled in the area. Grades around these areas will be sloped away from the containment area to minimize surface water runoff into the containment area. Located inside the containment area will be a series of catch basins to capture rainfall and to facilitate drainage within the area. These catch basins will prevent any chemicals from entering the storm drainage system. The contained water is then to be conveyed to the headworks.

The DB will design, construct, and maintain the Project Sites road system to meet the following objectives:

- Ingress and egress locations to the Project Sites will be designed with adequate sight distances and turning radii to allow for control and safety of all turning movements.
- Adequate Project Sites roadways, parking, and maneuvering areas will efficiently and safely provide for anticipated traffic levels including Facility staff, visitors, and standard trucks and semi-trailers used for chemical deliveries, and for emergency vehicles including firefighting equipment.
- Circulation patterns and Facility Site roadways will be established in a manner that minimizes the interaction of trucks with staff and visitor vehicles.
- Paved on-site walkways and sidewalks will be located to facilitate routine foot traffic between unit processes and around those units where washdown or other operations will be done from the ground level.
- Subbase and pavement design will be appropriate for the type and level of use, especially with respect to use by heavy trucks, and soil conditions. Prior to placement of any pavement materials, the subbase will be adequately prepared and stabilized.
- Proper access will be provided for emergency vehicles and equipment, including fire trucks.
- Signage, constructed to ADOT design standards, will clearly direct chemical delivery trucks to the chemical/delivery and storage areas.

- The DB will design, construct and maintain all drainage systems necessary to accommodate drainage from all access driveways serving the Project Sites.

TS 14.0 - Site Management During Construction

TS 14.1 – Fencing

The Design Builder will provide a temporary chain-link perimeter fence during construction to ensure the security of the Project Site and safeguard operations within the Construction Work Limits. The temporary fence is to be removed after construction is complete.

TS 14.2 - Erosion Control

Erosion control measures will be applied before and while construction activities are taking place. To reduce the amount of sediment being transported from the Project Sites, sediment fences will be installed at the toe of new slopes, around stockpiles, and downhill of disturbed areas. There will also be a gravel construction entrance at the limits of construction to help mitigate construction debris from being transported away from the Project Sites. Loss of material from erodible stockpiles and other disturbed areas will be mitigated. All erosion control measures will be shown and implemented in accordance with Pima County Department of Environmental Quality *Best Management Practices* and the Pima County Regional Flood Control District's *Hydrology Manual for Engineering Design and Flood Plain Management within Pima County, Arizona*, Pima County Drainage Standards for Local Drainage and the Pima County Floodplain and Erosion Hazard Management Ordinance.

TS 14.3 – Security

The Project Site is located within the County's secured area. However, DB is solely responsible for providing security within the Project Site.

TS 15.0 - Utility Requirements

TS 15.1 - Non-Potable Water

The DB will provide a connection from the County's existing non-potable water system to the Project. Non-potable water will be provided by County at approximately 65 psig. DB will provide all necessary equipment to increase the non-potable water pressure to levels required for operation of the equipment and systems supplied pursuant to the Contract.

TS 15.2 - Potable Water

Operational potable water will be available from the County's WRF supply lines. DB will provide a connection to County's potable water system. DB will install a backflow preventer in any location where potable water discharges to a non-potable system. At a minimum, backflow prevention equipment will meet the requirements of Applicable Law.

TS 15.2 - Irrigation Water

Not applicable.

TS 15.3 - Fire Water

The DB will provide a fire water system sized and designed based on the materials and design of the Project Structures and meeting the requirements of the Northwest Fire Department. This system will be separate from the other water supply systems and will be fed directly from the Tucson Water system. Facility access for firefighting and the number and location of fire hydrants will comply with the requirements of the Northwest Fire Department.

TS 15.4 - Natural Gas

The DB is responsible for connecting to the County's internal gas supply system.

TS 15.3 - Electrical System

DB will connect the SMS facility to the County's existing electrical supply grid. DB will provide all necessary electrical management equipment, controls, and wiring after the tap point.

TS 15.4 - Other Support Services

Not applicable.

TS 16.0 - Structural Design

TS 16.1 - Professional Engineer

All structural design work will be prepared under the direct supervision of a structural engineer licensed in the State of Arizona. The DB will design all structures for a service life of not less than 50 years, in accordance with the most current applicable codes and standards.

TS 16.2 - Design Loads

The International Building Code (IBC) will apply to all building structures not otherwise covered. American Concrete Institute (ACI) 318-14 Building Code requirements will supplement the design of concrete structures. American Institute of Steel Construction (AISC) Allowable Stress Design standards will supplement steel structure design.

The recommendations of ACI 350R Environmental Engineering Concrete Structures will be requirements for the design of:

- Concrete water containing structures.
- Buildings with high humidity
- Concrete structures exposed to repeated washdown or to chemical or process spills.
- Concrete structures below ground.
- Concrete structures built or placed in the water.

TS 16.2.1 - Dead Loads

Loads resulting from the weight of all permanent loads, equipment, fixtures, etc., such as walls, partitions, floors, roofs, equipment bases, earth for buried structures, and all permanent non-removable stationary construction are dead loads.

TS 16.2.2 - Live Loads

Live loads are all loads other than dead loads that are applicable and must be considered in the design to satisfy applicable code and specific project requirements. At a minimum the live loads are:

**Table 16-1
Minimum Live Loads**

Location/Parameter	Load
People-only areas (All Floors general)	100 pounds per square foot (psf)
Heavy Storage	250 psf
Light Storage	150 psf
Process slabs	200 psf
Stairways/access way	100 psf

Location/Parameter	Load
Corridors	100 psf
Electrical rooms	300 psf
HVAC Mechanical Rooms	150 psf
Pump stations, Process Building and Slabs	200 psf
Vehicular access areas	HS20
Roof loads (no reducible)	20 psf
Sidewalks & Driveways	250 psf & Concentrated load per IBC
Fixed stairway	100 psf & 1000 lbs concentrated
Buried structures	Per AASHTO guideline
Process tank elevated roof slabs	100 psf uniform or equipment concentrated load

TS 16.2.3 - Seismic Design Loads

Building structures will be based on IBC Section 1613 and American Society of Civil Engineers (ASCE) 7-05 Chapters 11 and 12. The Maximum considered Earthquake (MCE) values SS and S1 will be the maximum value required by the IBC 2006/ ASCE 7-05, U.S. Geological Survey (USGS) National Seismic Hazard Map 2007 or Geotechnical report.

- $I = 1.25$ (Category III – wastewater treatment facilities; IBC Table 1604.5 and ASCE Table 11.5.1).
- Characterization of the Project Sites will be in accordance with Table 1615.1 of the International Building Code (IBC).
- Seismic Design Category will be calculated per IBC table.
- Seismic design of all non-structural components will be in accordance with Chapter 13 of ASCE 7-05.
- Non-Building structures will be designed in accordance with Chapter 15 of ASCE 7-05, in which separate design requirements are provided for different types of structures. MCE values will be the same as for the building structures.

TS 16.2.4 - Wind Loads

Design wind loads will be determined based on Chapter 6 of the American Society of Civil Engineers (ASCE) 7-05 per the IBC.

IBC 90 miles per hour (mph) (3-second gust), Exposure Category C, and Importance factor (I) of 1.15 (Category III- wastewater treatment facilities, IBC Table 1604.5).

TS 16.2.5 - Groundwater Loads

Any encounter of groundwater in the exploratory borings drilled at the Project Sites will be reported in the DB's Geotechnical Report. If none is discovered at the specified boring depths, review of well logs will indicate the approximate location of groundwater.

TS 16.2.6 - Impact Loads

For crane support girders and monorails – refer to American Institute of Steel Construction (AISC) requirements for horizontal and vertical impact forces.

For light machinery supports - 20 percent minimum or manufacturer's recommendation.

TS 16.2.7 - Liquid Loads

Liquid holding basin walls will be designed for maximum liquid levels with the following conditions:

- Full of liquid, no backfill
- Backfill and groundwater with tank empty
- Any tank cell empty or full in any combination
- Hydrodynamic loads due to seismic forces including sloshing effect
- Static earth pressure plus surcharge with tank empty

Operational level will include maximum flooded condition unless passive methods are provided to prevent flooding. Passive methods include overflow weirs; upstream or downstream hydraulic controls not dependent on pumps, monitors, electronic controlled valves, or operators. If passive level controls are present, then the maximum operational level is defined as the liquid elevation when those controls are in effect.

TS 16.2.8 - Lateral Earth Pressure

Based upon its review of Project Sites geotechnical data, the DB will determine and document appropriate value for:

- Active pressures
- At-rest pressures
- Passive pressures

In addition, the DB will use the following:

- Surcharge pressures: Use a minimum of 2 feet of earth for walls where vehicular loads can come within H/2 of the wall.
- Lateral loads on retaining walls due to earthquakes as required by the building code of the County.

TS 16.2.9 - Load Combinations

The DB will design the facilities for all loads including dead, live, snow, wind, impact, temperature variations, moving, and liquid loads required by the appropriate codes and standards. The design will also include all equipment and process loads. The most severe distribution, concentration, and combination of loads and forces will be used in the design.

TS 16.3 - Special Inspection, Structural Observation, and Quality Assurance

Special inspection, testing and inspections, structural observation, quality control and quality assurance as required by Section 17 of IBC and by Applicable Law will be provided. These requirements will be incorporated in the design documents and construction specifications.

TS 16.4 - Deflections

The DB will ensure against deflections causing adverse functional or aesthetic effects over the life of the Facility. Grating and metallic basin covers will not have a deflection greater than L/360.

TS 16.5 - Geotechnical Design

DB will develop comprehensive geotechnical design criteria to support the structural design work. The structural design provided by the DB will include an array of above grade buildings and structures and below grade pipelines, structures and appurtenant facilities. The geotechnical information to be provided includes:

- A detailed Project Sites evaluation to identify geotechnical features that are relevant to the Facility design.

- Engineering soil properties including: active, at-rest, and passive earth pressure; surcharge pressures; weights and density of various soil materials; sliding friction coefficients; modulus of subgrade reaction; Atterburg Limits.
- Hydrologic and ground water information including maximum anticipated ground water levels.
- Seismic evaluations, including characterization of the Project Sites in accordance with Table 1615.1 of the International Building Code (IBC).
- Deep excavation information including: recommendation on deep excavation and shoring techniques.
- Foundation parameters including: allowable bearing pressures, shallow footing design recommendations; recommendation for earth retaining structures design; recommendations for backfill and structural fill materials.

TS 16.6 - Concrete Design and Construction

Crack control shall be adequate to prevent leakage of water out of water containing structures or into dry structures. The durability of the concrete structure shall be adequate to: resist abrasion and freeze-thaw cycles; resist penetration into the concrete by chemicals; protect the reinforcement from water, chemical and atmospheric attack; and maintain appearance.

Design for reinforced concrete structures shall be considered for different types of structures:

- All liquid-holding concrete structures, concrete components exposed to outside weather and backfill material, and concrete surfaces exposed to wash down or humid process conditions shall be designed per ACI 350-05 Code.
- Above-grade components of architectural non-water holding type buildings where the concrete is protected from moisture shall be designed per ACI 318-05 Code.
- Precast/Prestressed structures, if any, shall comply with the Precast/Prestressed Concrete Institute (PCI) Design Handbook.

TS 16.6.1 - General

Design Strength:

- Concrete 2000 psi Lean concrete and pipe encasement
 4000 psi All reinforced concrete
 4000 psi Unreinforced concrete structures and benching
- Cement shall be "Ordinary Portland Cement", Type II.
- Corrosion protection requirements shall be found in the Geotechnical report.
- Reinforcing steel shall conform to A615, Grade 60.

TS 16.7 - Masonry Design

Masonry shall be designed in accordance with the IBC. The latest edition of Reinforced Masonry Engineering Handbook by the Masonry Institute of America shall supplement masonry design. Masonry shall not be used for the below grade support of soil loads or in earth retaining structures.

TS 16.8 - Structural Steel Design and Construction

TS 16.8.1 - Connection Design

- Use ASTM A325-SC for structural steel framing member connections.
- Use stainless steel for Aluminum member connections.
- Use Type 304 or 316 Stainless Steel (or other material that is appropriate for the conditions to be used) bolts for all sanitary type construction.

TS 16.8.2 - General

- Structural steel wide flange shapes shall conform to American Society for Testing and Materials (ASTM) A992.
- Structural steel shall be designed, fabricated and erected according to IBC as modified by ESP 550.1. The methods shall be according to either the IBC for Allowable Stress Design or the IBC for Load and Resistance Factor Design.
- Steel plates, angles and channels shall conform to ASTM A36
- Square or rectangular steel tubing shall conform to ASTM A500, Grade B and Steel pipe shall conform to ASTM A53, Grade B.
- All connection bolts shall be high-strength bolts conforming to ASTM A325N or slip critical.
- Bolts indicated as machine bolts or anchor bolts shall conform to ASTM A307 for carbon steel and A153 for galvanized steel.
- All welds shall be performed by AWS-certified welders and shall conform to AWS D1.1, latest edition.
- Stainless steel, Type 304 or Type 316 as appropriate, shall be used for bolts, fasteners, and so forth where corrosion concerns dictate, unless the Engineer specifies other material that is better suited for the conditions to be used.

TS 16.9 - Miscellaneous Materials

- Aluminum design per the Aluminum Association *Specifications for Aluminum Structures*.
- Open web metal (steel) roof truss design and specifications per the Steel Joist Institute Standard Specifications and Load Tables.
- Metal (steel) deck design and specifications per the American Iron and Steel Institute (AISI) Specifications for the Design of Light Gauge, Cold-Formed Steel Structural Members.
- Metal grating per the National Association of Architectural Metal Manufacturers *Metal Grating Manual and Heavy Duty Metal Grating Manual*.
- A manufactured-aluminum three-rail system for handrail/guardrail.

TS 16.10 - Metal Roof Deck

Design and fabrication of metal roof deck shall be in accordance with the latest specifications of the Steel Deck Institute. Steel used in the fabrication of deck units shall conform to the requirements of the AISI "Light Gage Cold-Formed Steel Design Manual".

TS 17.0 - Process and Mechanical Equipment

The DB will be responsible for obtaining the licenses and patent agreements necessary to construct and operate the unit treatment processes. The DB will use a system for asset numbering and equipment tagging for all process and mechanical equipment that is compatible with the County's system. The DB will provide information on all process and mechanical equipment needed for management of these assets and in a form compatible with the County's asset management plan.

Similar pieces of equipment, including but not limited to pumps, valves, blowers, clarifier mechanisms, and gates, will be furnished by the same manufacturer to maintain uniformity. The design and construction of the facilities will incorporate the equipment and piping system layout guidelines as follows:

- Drawings will show the amount of space required for equipment removal, replacement, and maintenance.
- The minimum clear space around equipment will be as required by applicable codes, recognized industry standards of prudent practice, or four feet, whichever is greater. Maintenance access requirements, especially on large equipment, will be taken into account when establishing the layout. Maintenance access will take into account the need to completely remove each piece of equipment at some future time.

- Arrange equipment and piping to prevent tripping hazards.
- Maintain a minimum of 10 feet vertical clearance from the floor to the centerline for all piping that may impact equipment access. Piping that would limit personnel access will have a minimum of 7' 6" vertical clearance above the floor.
- Equipment and panels will be mounted on equipment pads (minimum of 6 inches thick) to protect them from washdown.
- A minimum clearance of 4 feet will be provided on all sides around rotating equipment over 10 horsepower (hp).
- At least 4 feet of clearance will be provided between the outermost extremities of adjacent pieces of equipment or between a wall and a piece of equipment.
- Clearance in front of any equipment face or panel requiring maintenance will be 4 feet.
- Pressure vessels will be located at least 2 feet from the back wall and 3 feet apart. Sufficient space in front of the vessel will be provided for the face piping plus 4 feet.
- Provide stairs, catwalks, platforms and hatches for accessing and removing equipment. Generally, ladders should not be used for this purpose where frequent access is required.
- Provide lifting eyes for equipment weighing 100 pounds or more.
- Motorized hoists, monorails, or cranes will be provided where equipment component weights exceed 2,000 pounds and/or when frequent lifting for maintenance is necessary. Portable gantry cranes or load-rated lifting eyes will be used where more elaborate lifting mechanisms are not practical or cost effective.
- Leave space for installing future equipment where future needs are defined or readily discernable from the Facility expansion criteria.
- Install large or critical equipment motors and actuators above grade and above potential flooding levels, or otherwise select motors and actuators that can operate in a submerged condition periodically.
- Adequate lifting headroom will be provided for all equipment.
- Adequate headroom will be provided for removal of vertical turbine pumps; and shafts, shaft enclosure tubes, and columns will be specified to be in sections that are removable.
- Locate washdown drains and secondary drains for proper maintenance of equipment and buildings.
- Hose bibs will be located in logical areas to facilitate washdown and pipe flushing. In general, utility stations will be located so that the maximum length of hose required is 50 feet.
- For pumps, compressors, and other rotating equipment where parallel units are provided, the orientation of the drive and the rotation will be identical unless equipment layout dictates a more efficient layout arrangement.
- Pumps used for sludge, scum, or grit pumping will be arranged to minimize the distance and number of bends through which the liquid must be conveyed to the pump suction.
- Service air (compressed air) systems or portable compressed air systems with suitable convenience electrical outlets in each space will be provided throughout the Facility Site for use of pneumatic tools on equipment.

TS 17.1 - Piping, Valves and Gates

The DB will provide piping that meets all applicable codes, that have a minimum expected life of 50 years, and that are sized to meet the hydraulic performance requirements of the Project. In general, where future piping upgrades as part of an ultimate Facility expansion to 100 MGD would require removal and replacement of existing structures or structural penetrations, or require excavation and replacement of existing pipelines, piping will be provided for a 100 MGD facility.

Piping material will be compatible with the fluid transported within the pipe. Piping will be color coded with the system used for the Tres Rios WRF. That color coding system is shown in Attachment 1 To Appendix C.

The DB will use valves appropriate for wastewater applications.

The following guidelines will be applied to the design and construction of pipelines:

- Leave adequate clearance at pipe flanges to facilitate disassembly of piping.
- Provide flexible connections for easily assembling and disassembling piping and for connections to equipment. Ensure that adequate thrust restraint is provided at each flexible coupling.
- Show or otherwise clearly define the location and type of all piping anchors and expansion joints on the design drawings or specifications. At a minimum pipes 18-inches in diameter and larger should have anchor and expansion joints shown on the drawings.
- Allow ample space for access to and maintenance of valve and gate operators. Provide adequate clearances for rising stem valves and gates in all positions.
- Water lines or ductwork will not be located above electrical equipment.
- Piping will be located with adequate headroom and such that it is not a tripping hazard, a head-banger, or a barrier to equipment access.
- Piping above blowers, compressors, large valves and gates, or pumps will be limited to facilitate lifting.
- In general, piping will be laid out close to walls where it can be supported easily, particularly in spaces with high ceilings.
- Manual air vents will be located in high points to permit purging of air from the pipeline while it is being filled with water for all pipes 6 inches in diameter and greater.
- A manual drain valve will be located on the low point of pipelines for all pipes 6 inches in diameter and greater.
- Provide adequate seismic bracing and support of all piping.
- Include operators (chain wheels) or access platforms for easy operation of all valves in piping elevated more than seven feet (centerline) above the finished floor.
- All yard piping will be ductile iron or steel or other material that is appropriate for the process service, soil conditions of the site and service life requirements.
- The minimum depth of cover for buried pipelines will be 3 feet.
- A minimum 10-foot horizontal separation and a minimum 18-inch vertical separation will be maintained between potable water and waste water pipelines, with the water pipelines located above the waste water pipelines.
- Provide sufficient numbers of valves to allow isolation of potential problem areas.

316 or 304 Stainless steel (or other material that is appropriate for the operating conditions) slide gates will be used unless the seating/unseating head requirements, or other considerations, require the use of a sluice gate. All gates will be designed for a maximum leakage of 0.1 gallon per minute per lineal foot of seating perimeter. In general, gates will be of unseating head design so that they can be serviced from the dry side when necessary. Sluice gates will be cast iron or stainless steel.

TS 17.2 - Pumps and Pumping Systems

General requirements for pumps and pumping systems are given below:

- Critical speed of all rotating members and the critical speed frequency of the motor will be at least 25 percent above the maximum motor operating speed.
- Vibration levels of the pumping unit when installed on the structural foundation will not exceed the limits recommended by the Hydraulic Institute. Vibration will be monitored.
- Provide bearings having a minimum L10 life of 50,000 hours under any normal pump operating condition. Bearings will include sensors for monitoring heat and temperature.
- Use premium efficiency motors when the anticipated duty cycle exceeds 200 hours per year.

- Size motors to operate within their nameplate horsepower ratings under all conditions of operation and provide a 1.15 service factor.
- Pumps will be selected and sequenced so they operate within their Allowable Operating Region as defined in HI 9.6.3-1998.
- Pump NPSH margins will be based on the suction energy level and water application as recommended in HI 9.6.1-1998.
- The pump intakes will be designed in accordance with the requirements of HI 9.8-1998.
- Pump seals will generally be specified as single mechanical type. Flushing water will be service water.
- For clean water services, mechanical seals without flushing water may be specified.

TS 18.0 - Architectural Features and Finishes

The purpose of this section is to summarize architectural design standards for the Facility.

TS 18.1 - Aesthetic Concept

The DB will provide a Facility that is aesthetically attractive, compatible with surrounding uses and consistent with the Architectural Guidelines, "Water Reclamation Campus Architectural Theme and Character," established by the County for the Facility.

The overriding architectural requirement is to provide functional buildings that present an image of quality and good design, using durable, low-maintenance, corrosion-resistant, energy efficient, and environmentally responsible materials.

Orientation will be planned to maximize roof-top solar energy collection potential.

Some of the process structures may be equipped with a flat roof design featuring openings for sun/shade control.

TS 18.2 - Architectural Design

All materials selected will be chosen for their durability, weather resistance, low maintenance, and/or ease of maintenance. High quality materials and methods of construction will be employed complying with the requirements of the appropriate materials standards organizations. Construction systems will be of at least a "commercial" grade, with custom or premium levels of finishes.

In addition, the DB will fully cooperate with the principles and objectives of the LEED certification process to ensure that the Primary Operations Building is certified as Silver according to the most current rating system of the United States Green Building Council's LEED For New Construction.

TS 18.2.1 - Major Exterior Systems

Exterior surfaces for new structures will be aesthetically pleasing, low maintenance, and energy efficient. For the Facility, the appearance of the structures will be in conformance with the Architectural Guidelines, "Water Reclamation Campus Architectural Theme and Character."

Materials and construction will be such that the County will be able to obtain, using good faith effort, a LEED silver certification for the primary operations building. If the County is unable to obtain the silver certification, the DB will be responsible for adding or changing materials and construction such that the County can obtain LEED silver certification.

TS 18.2.2 - Architectural Materials

Requirements for materials are listed below:

Structure

- Below-Grade Structure:
- Above-Grade Structure:
- Submerged and Periodically Wetted Structures:
- Exterior Walls:
- Window Walls:

Material

- Cast-in-place concrete
- Concrete, concrete masonry, or exposed and/or enclosed steel framing
- Cast-in-place concrete with or without coating protection, or steel properly protected from corrosion by high quality coatings (timber construction may be considered for chlorine contact baffles).
- Concrete (with architectural finishes), concrete masonry, or brick
- Aluminum frame with low-e glazing

Structure

- Roofing-Sloped:
- Roofing-Flat:
- Floors-Process Areas:
- Floors-Chemical Storage Areas:
- Floors-Laboratories:
- Interior Partitions:
- Exterior Windows:

Material

- Refinished (fluoropolymer coating over galvanized steel sheet or stainless steel) standing seam
- Concrete or metal deck with double membrane, and if at grade concrete with double membrane, soil, and plantings.
- Concrete with sealer and steel troweled or broomed finish and slip-resistant surface (concrete stain may be considered). Hardener will be applied in high wear or traffic zones.
- Sealed or coated concrete
- Concrete with seamless epoxy coating, or rubber
- Concrete masonry in wet areas; concrete masonry, metal stud and drywall in non-wet areas
- Anodized aluminum or epoxy-painted or powder coated, galvanized hollow metal. Double pane, argon filled, low-e glazing

Special attention will be paid to insure that the Facility design and construction achieves a high quality appearance of concrete surfaces on expansive (long and/or tall) building elements that are exposed to view in the completed Facility.

TS 18.3 - Administrative, Laboratory, Control and Maintenance Functions

Not applicable

TS 18.4 - Occupancy and Construction Classifications

The occupancy classifications of the component structures will be established in accordance with Applicable Law.

TS 18.5 - Americans with Disabilities Act (ADA)

All design considerations will include Americans with Disabilities Act (ADA) compliance, including, but not limited to, the Control Building, maintenance buildings, electrical building(s) and equipment buildings, and any other plant facilities not exempt from ADA compliance.

TS 19.0 - Building Services

The following building services narrative addresses the heating, ventilation, and air conditioning (HVAC), plumbing, and fire-protection design concepts and provide certain minimum design criteria.

TS 19.1 - Heating, Ventilating, and Air Conditioning (HVAC)

HVAC will be provided for all buildings on the Facility Site. The HVAC components will be sized in conjunction with the ventilation requirements for the odor control system. The HVAC system will be designed in accordance with American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standards and in compliance with Applicable Law. Offices, lavatories, locker rooms, laboratories, visitor facilities, and shop areas will be provided with separately zoned, thermostatically controlled heating.

Offices and other normally occupied areas will be provided with adequate air conditioning and ventilation to maintain temperatures and air quality in compliance with ASHRAE Standards 55 and 62 and in compliance with Table 3-4.

TS 19.1.1 - Outdoor Design Conditions

Climatic data for the HVAC systems will be based on County historical data. Degree day data will be taken from *Climatology of the United States*, No. 81, Supplement No. 2, dated 1971-2000, and the 2012 Pima County International Energy Conservation Code (IECC) Amendments. Prevailing wind data will be taken from the National Climatic Data Center, Climatic Wind Data for the United States during the period of 1930-1996.

Climatic data will be used for the design of HVAC systems servicing buildings that are exempt from energy code compliance. Exempt HVAC systems may include those installed in process buildings. Further climatic data will be provided for the design of HVAC systems servicing buildings that require compliance with the IECC, including areas treated by mechanical cooling and any Administration Buildings, if extensive renovation is involved. Data will be obtained from the 2005 ASHRAE Handbook of Fundamentals for Pima County and the 2012 Pima County International Energy Conservation Code Amendments.

TS 19.1.2 - Energy Code Compliance

HVAC systems and equipment for all facilities will be specified to perform at levels dictated by the IECC, as applicable. Process buildings are unmanned facilities, not designed primarily for human occupancy, and may be exempted from the energy code according to the scope of the 2012 IECC, Paragraph 101.2.

In general, the construction envelope for buildings containing conditioned spaces will be insulated in accordance with the IECC Climate Zone 2 for Pima County, Arizona.

TS 19.1.3 - Ventilation Design Criteria

Ventilation rates for HVAC systems will comply with the following standards and requirements. This list is not all inclusive or a substitute for complete compliance with all applicable Contract Standards:

- NFPA 820, "Fire Protection in Wastewater Treatment and Collection Facilities."
- ASHRAE Standard 62, "Ventilation for Acceptable Indoor Air Quality."
- All applicable building, fire, and mechanical codes.

TS 19.1.4 - Cooling System Selection

Selection of the mechanical cooling systems for each individual space will be based on its specific design requirements and will include, at a minimum, normally occupied spaces.

TS 19.1.5 - HVAC General Design Criteria

A description of the HVAC design intent for each general space usage, including ventilation rate criteria, ventilation system types, heating/cooling system types, basic operating control intent, and ventilation equipment will be provided. In addition to the information in Table 3-4, the provisions of NFPA 70 must be met. Hazardous areas will be provided with flow sensors and alarms.

**Table 19-1
General HVAC Design Criteria**

Space Type	Indoor Design Cond ¹		Ventilation Occupied/Unoccupied	Cooling System
	Heating, °F	Cooling, °F		
Electrical Rooms ¹	55	85	Based on code & space heat gain.	Self-contained rooftop air conditioning units with economizer (free cooling).
Control Rooms ¹	70	75	Based on code & heat gain.	Split system AC units with economizer (free cooling).

¹ Instrumentation and PLCs and sophisticated control panels will be controlled to a maximum of 75°F.

TS 19.2 - Plumbing Systems.

TS 19.2.1 - Insulated Plumbing Piping

Insulation will be provided for the following piping: potable water (PW), potable hot water (HW), hot water recirculation (HWR), tempered water (TW), non-potable water (NPW) and roof drains.

TS 19.2.2 - General Freeze Protection

Outdoor plumbing connections will be freeze protected.

Indoor plumbing and fire sprinkler systems will be freeze protected by building heating provided by HVAC systems. Piping exposed to the elements will be heat traced, unless otherwise noted.

TS 19.2.3 - Emergency Safety Equipment

Combination emergency safety showers/eyewash units located in process areas require a water-flow switch, light, and alarm bell. Each water-flow alarm device will consist of the manufacturer's standard product. Power requirements will be coordinated with the electrical supply available to each area.

TS 19.2.4 - Cross-Connection Control

Cross-connection control will be provided in accordance with the Uniform Plumbing Code (UPC) and Arizona Administrative Code (AAC) R18-4-215.

TS 19.2.5 - Roof Drainage

Roof drainage and overflow systems for the various buildings will be sized to meet local rainfall criteria and coordinated with the architectural roof design. Roof drains will be collected by a Facility Site storm water drain system or main plant-wide drain system for use as irrigation water to the extent practical.

TS 19.3 - Fire Alarm and Suppression System

The system will be designed to Northwest Fire District, NFPA and insurance requirements. The fire alarm will be installed to alarm at an alarm monitoring company approved by the Northwest Fire Department.

Code analyses will determine the areas in need of fire suppression systems. Fire suppression systems will be automatic wet-pipe sprinkler systems designed in accordance with NFPA 13. Facility Site fire flow requirements will be developed subject to verification by the Northwest Fire Department. The quantity and location of fire hydrants will be coordinated with the Fire Marshal. Where chemical storage areas require a fire sprinkler system, the need for secondary containment will be provided.

The fire alarm monitoring system will be compatible and integrate to the existing SimplexGrinell Fire Alarm Monitoring System presently installed and in use at the Tres Rios WRF.

TS 20.0 - Instrumentation and Controls

TS 20.1 - General

The DB will design and configure the Instrumentation and Control System (ICS) to include the necessary process monitoring and control to continuously meet the Performance Guarantees. The DB will provide an ICS compatible with the existing County facilities. The ICS will provide complete control, monitoring, alarm processing, trending and data archiving capabilities. The ICS will apply hardware and software consistent with existing County standards and practices.

The ICS will consist of field-mounted instruments, local equipment control panels, programmable logic controller (PLC) control panels, thin client workstations and communication networks. The ICS will integrate with the existing supervisory control and data acquisition (SCADA) system that is in production at the Tres Rios WRF.

The ICS will include all necessary field instrumentation, panel instrumentation and PLC-based SCADA equipment calibrated, aligned and configured in such a way which allows effective, efficient, reliable manual and automatic control and monitoring of the Facility with provision for future expansion. The ICS will store operational data for use in reporting and optimizing Facility operations and performance.

Prime operation will be through the ICS' distributed system architecture. PLCs located within conditioned areas in the Facility will perform the remote monitoring and control functions. All field input and output signals will be connected (using homerun wired connections) to the programmable logic controllers. The PLCs will be interconnected to a Local Area Network (LAN) within the Facility. LAN-connected, thin client terminals within the Facility will display the Facility arrangement and its controls using the existing Tres Rios WRF Human Machine Interface (HMI) application. The ICS will apply an open system architecture using Component-Off-The-Shelf (COTS) hardware allowing components supplied by multiple vendors to be used in any future additions or expansion.

There will be sufficient local manual control, indication and alarming to allow safe operation of the Facility equipment and its operation in the event of a controller or SCADA system failure. The ICS will be configured to allow equipment and processes to be operated and controlled both remotely or locally as selected by the operator.

TS 20.2 - Control System Integration (CSI) Specification

DB will be responsible for properly configuring, programming and successfully testing the PLC units as well as programing a recent release of Wonderware System Platform (the SCADA Platform). County SCADA systems has been standardized to use Allan Bradley PLC components.

The control system integration must work seamlessly integrate with the existing Tres Rios Facility. All such work must conform to the County's existing PLC coding style, provide internal PLC documentation, and apply the existing PLC tag naming convention. In addition, the , work must conform to the existing System Platform style and implementation requirements which are presently in use within all of County SCADA systems.

TS 20.3 - SCADA Fiber Optic Cabling (FOC) Specification

DB will design, install, and successfully test a dual-homed redundant fiber optical cable (FOC) backbone to the new Facility. The dual-homed fiber backbone configuration will apply dissimilar physical paths to provide redundancy in the event of fiber segment problems.

The Facility's FOC backbone that will convey data to and from the existing SCADA Server array at Tres Rios is mission critical.

The DB must familiarize itself with the existing fiber optic infrastructure applied throughout PCRWRD facilities and ensure that the Work is fully compatible with that infrastructure and conforms to County ITD Fiber Optic Infrastructure standards. The DB will install, terminate, and test all fiber optic cabling needed to support a redundant, dual-homed connection arrangement to the existing two core SCADA switches at

the Tres Rios WRF. The DB will also install, terminate and test any fiber optic cabling required within the Facility.

TS 20.4 - SCADA Network Infrastructure Components

The existing Tres Rios WRF SCADA network employs a cybersecurity implementation defined within the confidential cybersecurity chapter of the PCRWRD SCADA Master Plan. The existing SCADA cybersecurity implementation has been recently reviewed by the Department of Homeland Security (DHS) and the methods employed were found to be acceptable to protect a critical infrastructure environment.

The Pima County ITD Network Group is presently responsible for managing and monitoring all of the existing SCADA networks and deploying PCRWRD's underlying SCADA cybersecurity implementation. All SCADA network switches are managed and monitored remotely in real time by Pima County's Network Operations Center (NOC).

The delivery and installation of all pre-configured managed networking switches will be performed by the County. The County ITD Networking Group will procure, configure, and install all managed network switches within the Facility.

The DB will prepare a network diagram of all Ethernet over Copper (EoC) connected network nodes (e.g. PLCs, Packaged Systems, Thin Clients, etc.). EoC connected network nodes will aggregate onto one or more managed network switches within the Facility. If there are multiple managed switches within the Facility, the DB will select one switch to serve as the main incoming network switch (for the dual home FOC facility connection) and all other network switches will utilize a trunk over optical cable.

Each EoC connected node will be made via industrially rated Category 6 (1000 Mbps Gigabit) plenum cabling. All EoC connections will be limited to a length of less than 100 meters. Any network connections requiring a greater distance will be made using single mode fiber.

Pima County ITD Network Group will deliver and install configured Cisco Industrial Ethernet 3000 Layer 2 / Layer 3 Series Switches (IE3000) managed network switches (and any required expansion modules) to the Facility.

The coordination of Facility network infrastructure components between the Builder and County will be through the County's SCADA Manager (primary) and/or the County Project Manager (alternate).

TS 20.5 - Reference Standards

In addition to the County I&C/SCADA standards and IT standards provided Section 3.9.8, the following organizations have generated standards that are to be used as guides in assuring quality and reliability of components and systems; govern nomenclature; define parameters of configuration and construction:

- International Society of Automation, (ISA).
- National Institute of Standards and Technology, (NIST).
- Underwriters' Laboratories, Inc., (UL).
- American Water Works Association, (AWWA).
- National Electrical Manufacturer's Association, (NEMA).
- Occupational Safety and Health Administration, (OSHA).
- American National Standards Institute, (ANSI).
- National Fire Protection Association, (NFPA).
- Scientific Apparatus Manufacturer's Association, (SAMA).
- National Fire Protection Association 79, Annex "D" Standards, (NFPA).
- Institute of Electrical and Electronic Engineers, (IEEE).
- National Electrical Code, (NEC).

TS 20.6 - Environmental Conditions

The following environmental conditions will be applied to all components of the control systems as required.

TS 20.6.1 - Unclassified Field Locations

Field equipment located in interior areas, which are not classified as hazardous locations, as defined by Article 500 of the National Electrical Code, are subject to ambient temperatures varying from +10 to +120 degrees F. with relative humidity ranging from 40 to 95 percent non-condensing. There may be incidental quantities of hydrogen sulfide gas and dust. Therefore, the equipment will be designed with materials for use in corrosive areas.

In exterior areas, ambient temperatures vary from +10 to +120 degrees F. with strong direct radiation from the sun. The relative humidity in these areas may range from 10 to 90 percent with condensation occurring. All areas may have trace quantities of hydrogen sulfide gas with windblown dust, sand, and rain.

All PLC panels which are mounted outdoors must contain an air conditioning unit appropriately sized to accommodate the expected combined Tucson solar radiation and installed equipment heat load.

PLC control panels will be located in environmentally conditioned areas wherever possible.

TS 20.6.2 - Classified Field Locations

The equipment located in classified areas will be designed to meet the classification of the area in accordance with the National Electric Code, Class 1, Division 1 or Class 1, Division 2 as required.

Use of classified field locations for PLCs, panels, etc., will be avoided wherever possible.

TS 20.6.3 - Corrosive Locations

The equipment located in areas that are subject to corrosive fumes or spills will be designed of materials for use in these corrosive areas.

Use of corrosive area locations for PLCs, panels, etc., will be avoided wherever possible.

TS 20.6.4 - Equipment Enclosures and Panel Construction

All equipment enclosures will meet the following requirements:

- NEMA 12 – General purpose indoor areas – control rooms.
- NEMA 4 – Outdoor areas.
- NEMA 4X – Corrosive and/or outdoor corrosive areas.
- NEMA 7 or other NEC compliant systems for hazardous areas – Explosive (hazardous) areas.
- All control panels will be constructed to meet the UL 508A Industrial Control Panel Standard.
- All control panels will provision power from a Facility-wide UPS source.
- All PLC control panels will provision room to accommodate a Cisco IE3000-8TC network switch.
- All PLC control panels must provision sufficient room to accommodate a small Ethernet patch panel for each end of an EoC connection (each Cat 6 cable lands at a RJ45 receptacle within the enclosure). The accepted patch panel types are defined within the Pima County ITD Infrastructure Specification.
- In the event a PLC control panel exceeds a raceway length of 100 meters to the Facility's main (or a sub) network switch, the panel must provision sufficient room to accommodate a light interface unit (LIU) for termination of single mode optical fiber. The accepted types are defined within the Pima County ITD Infrastructure Specification.
- All PLC control panels will apply Allen Bradley pre-wired module cable assemblies and field I/O termination units.
- All field I/O wiring made to PLC panels must be a homerun connection.

TS 20.6.5 - Sunshields

All field instruments that are mounted outdoors with local indicating displays will be equipped with sunshields to allow viewing of the displays and to shield the instrument enclosures from the heating effects of direct sunlight. In addition, outdoor indicating instrument displays will be north facing wherever possible to prevent direct sun exposure.

Any outdoor control panel which applies a localized operator interface panel display (e.g. an Allen Bradley Panelview Terminal) will be equipped with a suitably NEMA rated, deep hinged window kit, with a UV resistant window, to protect the panel display from the outdoor environment and shield the display from the heating effects of direct sunlight.

TS 20.7 - SCADA System Design

TS 20.7.1 - Control System Compatibility and Philosophy

The Facility ICS will provide compatibility with the existing County SCADA systems and conformance to SCADA standards in effect at the time of construction.

The ICS will provide for local manual, remote manual and remote automatic control modes of operation. The remote control modes of operation will be made available from the Facility HMI screens. In the event there is no automatic control mode requirement, then only local and remote manual control modes will be made available from the Facility HMI screens.

Process set points and operator-set alarm set points will be adjustable from the Facility HMI. Process set points will be programmed within the HMI to be bounded in value as defined by the Designer's control narrative.

Set point boundaries for any Engineer-set process limit(s), process equipment capability limit(s) or process equipment safety limit(s), operator process safety exposure alarm limit(s) (e.g. LEL, H2S etc.) will not be permitted to be changed by an operator from any HMI screen.

Manual operation will be provided for all Facility equipment and processes to include any necessary wired interlocks and process safeties.

TS 20.7.2 - SCADA Controls

When the local control station selector switch is set to REMOTE, the equipment will be provided with two control modes that are selectable from the SCADA graphic display: MANUAL and AUTOMATIC. In MANUAL, the equipment can be started and stopped manually from the graphic display. In AUTO, the equipment will be controlled according to the PLC automatic control logic strategy. If there is no automatic control logic, then only the manual control will be available from the Facility HMI. Process control and alarm set points will be available from the SCADA graphic displays. (See details noted above in preceding Section 3.9.5.1).

TS 20.7.3 - General Equipment Monitoring Requirements

Equipment status and selected operating modes will be displayed on the SCADA system. Facility HMI presentation will follow existing PCRWRD's Situational Awareness presentation design model as defined within the PCRWRD SCADA Master Plan.

Individual equipment runtime and equipment start counts will be accumulated, historically logged, and displayed by the SCADA system.

Contacts from wired equipment interlocks and field process limit switches will be provided as direct inputs to the PLC with associated alarms produced within the PLC to be monitored by the SCADA Platform. All Facility alarms will be annunciated and acknowledgeable via the Facility HMI.

TS 20.7.4 - Existing SCADA Architecture

The Facility ICS will be an integral part of the existing Tres Rios WRF HMI (System Platform 2014 R1) and the existing Tres Rios WRF facility PLCs. Thin client terminals will provide operator access to the existing Tres Rios HMI and the new Facility for monitoring and control purposes.

The existing Tres Rios SCADA software (System Platform 2014 R1) provides collection and archiving of all Tres Rios plant process historical trending and reporting data. The new Facility HMI will adopt and utilize the existing redundancy and robust design architecture provided by the existing System Platform SCADA Infrastructure currently in production at Tres Rios.

There is sufficient capacity within the existing redundant System Platform implementation:

- The existing System Platform implementation can accommodate the addition of a new I/O instances supporting all of the Facility's PLCs.
- The existing System Platform implementation can add in excess of 20,000 tags to the existing redundant primary process Historian pair for the new Facility. The existing redundant Historian pair provides process data to the trend displays, records alarm history and process data. Client tools are already in place to query process data and to generate reports. The present Historian arrangement also replicates process data into second tier Historian located within a cyber secured demilitarized zone (DMZ) for access from the Pima County Business Enterprise network.
- There is existing sufficient capacity to support the needed equipment object instances for the Facility HMI.
- Up to four thin client terminals can be applied within the Facility. The thin client terminals will be supported by the existing redundant and load-balanced production Terminal Server pair. ACP ThinManager Platform 8 is presently used to configure the behavior of all the PCRWRD thin client terminals.

SCADA Workstation graphics will be developed based on those currently in use on the County's existing SCADA systems and standards.

Access to process control capability will require entry of a username, password, and domain authentication. The level of control access granted is dependent on which domain group the user is a member.

TS 20.7.5 - DB Control System Integration Pre-Construction Training

The County's PCRWRD SCADA Group will provide five days of pre-construction training to the DB. This training is to familiarize the DB with PCRWRD's:

- PLC Programming Style and coding requirements (2 days).
- System Platform Implementation - programming conventions and requirements (2 days).
- Cybersecurity Implementation and login credential issuance (1 day).

TS 20.7.6 - Interaction between DB and County during Construction

TS 20.7.6.1 - County PLC Program Submittal Requests

The County will review and approve the programming of the PLCs by on-demand programming review submittal. The submittals are to insure ongoing conformance with the County's PLC Programming Standards (e.g. controller organization, tag naming convention, tag descriptions, rung comments, and controller program housekeeping). County will submit specific requests to DB.

TS 20.7.6.2 - DB Use of Existing Wonderware System Platform Development Sandbox

DB will develop its System Platform application for the new Facility using the County's existing private virtual sandbox development Galaxy Repository.

DB will record and log all newly created Facility template names, graphic object names, and object instance names produced for the Facility's SCADA application. The log record will be used for future template and object migration to the Tres Rios WRF production Galaxy and its subsequent deployment.

TS 20.7.6.3 - System Platform Programming Inspections

The County will periodically inspect the DB's ongoing System Platform work. The inspection will insure ongoing conformance with the County's existing System Platform design conventions and validation that the DB's work will migrate properly with the existing Tres Rios System Platform application.

Inspection requests will be transmitted from the County to the DB.

TS 20.7.6.4 - Migration from Development Sandbox to TRW Production System

County will assist the DB with the template, graphic and object instance migration to the existing Tres Rios production system as needed during the course of construction.

TS 20.8 - Local Control Stations

Controls mounted adjacent to the motorized controlled equipment will be provided with a LOCAL/REMOTE selector switch, a START pushbutton and a LOCKOUT-STOP pushbutton.

Valves and similar equipment will be provided with a LOCAL/REMOTE selector switch and OPEN/STOP/CLOSE pushbuttons, or identical functionality available at the valve operator.

Disconnects will be provided adjacent to process equipment in non-hazardous areas up to and including 200A, and disconnects will be provided adjacent to process equipment in hazardous areas up to and including 100A. Larger loads will utilize the MCC or switchboard disconnect. Local disconnects will allow isolation of equipment from the electrical service for maintenance. Local disconnect status (CLOSED status true) will be provided to the ICS for all disconnect switches.

Local control stations for equipment with variable frequency drives (VFDs) will also include a speed control potentiometer (and R/I convertor) at the local control station. For bumpless transfer from local into remote, the PLC will track its speed feedback from the VFD (the LOCAL commanded speed) to its remote speed command with the VFD while LOCAL control is selected.

TS 20.8.1 - MCC Controls

Standard piloting controls will be provided on all motor control starters (e.g. start and stop pushbuttons with pilot lamps, fault alarm reset pushbutton with alarm lamp, a local/remote selector and, if applicable, localized VFD controls). All low voltage MCCs will employ intelligent electronic motor protection offered by the Eaton E441 Motor Insight motor protection relay.

In general, MCC connections to the PLC would be a run status, local/remote status, motor overload (or common protective relay fault alarm status), status from any process limit switches and a remote run command.

VFDs will also be connected to the PLC via hardwired controls using homerun connections. Local control stations will be provided at each piece of equipment controlled by a VFD.

TS 20.8.2 - Programmable Logic Controllers and Locations

PLCs will be used to automate the process via a distributed control system. Facility Supervisory Control PLCs will be located in a conditioned environment, such as an MCC Room.

Each PLC will be powered by an Uninterruptible Power Supply (UPS) electrical source within the Facility. The UPS will provide a reliable source of uninterruptible power with no break in AC output power during a complete or partial interruption of incoming line power. The UPS will include audio/visual alarms and will be UL listed. The UPS capacity rating will be adequate to provide uninterrupted conditioned power to fully loaded conditions (for all of the connected critical PLC loads) for a minimum of thirty minutes. The status of the UPS will be monitored by the ICS. The minimum acceptable UPS status requirement is monitoring of the UPS Loss of Utility Power and UPS Low Battery alarm conditions.

Distributed PLC processors, redundant PLC power supply units, control networks and UPS power will provide system reliability for the PLC and thin client based HMI in the Facility control system.

Communications from the Facility to the Tres Rios WRF system will be via fiber optic cable, enclosed in conduit, provided and installed by the DB, in accordance with County ITD standards.

The DB will provide, configure, and program all PLCs at the Facility. The DB will program the PLCs to be able to provide the required process control, data and alarms to the existing Tres Rios WRF production SCADA System (based on Wonderware System Platform 2014 Patch 01).

User Defined Types (UDTs) and ControlNet networking will be applied for synchronized status and control messaging between a Facility master PLC and associated process area PLC(s) whenever sequential operational control or continuous shared deterministic control is required.

Communication links between all PLCs and facilities will be continuously monitored and safe operating modes assumed whenever a communication failure has occurred. Normal remote operation modes may resume when communications have been restored, depending on the process, safety issues, etc. Restart procedures following a communication or power failure will be defined for each process during preliminary design and documented within the control narratives.

The licensed software required for PLC and OIT programming is comprised of the following:

- Rockwell Automation RSLogix5000 (Version 20, PLC configuration software).
- Rockwell Automation RSLinx (OPC client to CIP communications software).
- RSNetWorx for ControlNet (Communications synchronization software).
- RSView Studio Machine Edition (Version 9, Panelview Terminal programming software).

TS 20.8.3 - Packaged Systems

Package System PLCs are permitted to be located in proximity of its package system within the Facility process (plant floor) area. All Package Systems will be connected to any Facility master PLC(s) via ControlNet.

The Package System Operator Interface Terminal (OIT) will be selected from the Allen Bradley Panelview 1000 or 1500 family. The OIT will be programmed using Rockwell Automation RSView Studio Machine Edition Version 9 (or later).

User Defined Types (UDTs) will be defined within any Facility master PLC and Package System PLC to communicate information to and from any Package System applied within the Facility's design.

Remote control modes of operation will be made available from the Facility HMI screens to any Packaged System. Conversely, the Packaged System will be prepared to support remote control operation from the Facility HMI. The Packaged System will annunciate their package system alarms on their local OIT. Alarms from a Package System PLC should be passed to a Facility master PLC allowing all Package System alarms to be available on the Facility HMI.

TS 20.9 - Safety Interlocks

All safety and equipment protection shutdown/lockout interlocks will be implemented through hardwired connections to the motor control circuit. Interlocking for personnel and equipment safety and equipment protection will not be performed by the PLC. Hardwired interlock logic will provide for a local RESET pushbutton function. Shutdown/Lockout and RESET functions will be monitored by the PLC and SCADA systems. In the event a PLC is signaled of a shutdown/interlock event, the PLC will suspend any automated control logic in use and apply any logic necessary needed to return the equipment and its process to a safe shutdown state.

TS 20.10 - Field Process Commissioning

The County and/or their representatives reserve the right to witness any or all instrument and control systems testing within the Facility.

TS 20.11 - Deliverables

Deliverables will be supplied in two forms hardcopy and electronic. 5 hardcopy sets should be supplied to the County's Project Manager.

Electronic deliverables will be delivered on 2 sets of USB Drive media. Drawings will be supplied both Adobe .PDF format and AutoCAD .DWG format. For control systems, the preferred drawing size is ANSI B elongated. Rockwell Automation PLC configuration files will be supplied in their native .ACD format. Rockwell Automation RSView Studio panel configuration files will be supplied as either a project archive (.APA) file or a compiled image (.MER) file.

TS 20.11.1 - Design Deliverables

Consistent with the County review and approval process provided in the Scope of Work, DB will deliver the following to County:

- All Piping and Instrumentation Diagrams for the entire Facility.
- A SCADA Network Communications Block Diagram (indicating all EoC, FOC and ControlNet nodes) for the entire Facility.
- A complete set of process narratives for the entire Facility, organized by increasing control loop number. The process narratives should describe the available control modes, process interlocks, automatic control action and anticipated set point(s) to achieve expected system performance for each process area's process unit or process unit group. The process narratives should be sufficiently descriptive to allow application into functional PLC and HMI configurations.
- A detailed Instrument List for the entire Facility.
- A sample ISA 20 compliant Instrument Specification Form for instrument installation and quality assurance.
- A sample Field I/O check sheet.

TS 20.11.2 - Construction Deliverables

At completion, DB will deliver the following to County:

- Copies of all completed and signed Field I/O Check sheets.
- Copies of all annotated ISA 20 compliant Instrument Specification Forms.
- All control panel wiring diagrams applied within the Facility (to include any control panel diagrams associated with any applied Packaged Systems).
- All field loop wiring diagrams (organized by PLC control panel and increasing loop number) applied within the Facility (to include any field wiring diagrams of any applied Packaged Systems).
- Electronic submission of any applied Package System PLC configuration.
- Electronic submission of any applied Package System OIT configuration.
- Electronic submission of all Facility PLC configurations.

TS 21.0 - CORROSION CONTROL

During the Design Phase, the proposed Facility will be analyzed to determine chemicals that are used during the process and what affect the corrosivity of the water has as it moves through the Facility.

TS 21.1 - Site Soil Corrosivity

The DB will evaluate corrosion potential of Project Sites soils, based on its analysis of geotechnical information gathered by the DB.

TS 21.2 - Wastewater Corrosivity

TS 21.2.1 - Hydrogen Sulfide

Appropriate materials of construction or coatings and linings will be provided to resist deterioration from hydrogen sulfide corrosion.

TS 21.2.2 - Considerations for Concrete Surfaces

Appropriate methods will be used to protect concrete surfaces from damage due to acidic conditions.

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ATTACHMENT 1 TO APPENDIX C (5 pages)

Exterior Coating Color/Labeling Scheme for Plant/Process Piping
(for labeling see specification Section TS 17.1 – Piping, Valves and Gates)

Flow Stream	Service Name	* Pipe Material	Color	Bands	Comments on Color Choice	Tnemec #	ICI Paint #	Carboline #	Devoe Paints #
CA	Compressed Air	COP	Green	Red	per ROMP	SC07	"Safety Green"	2383	Match defined colors
CHD	Chemical Drain	PVC	Yellow	--	Match existing piping	BW56	"Medium Yellow"	6666	Match defined colors
CO	Classifier Overflow	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
CT	Centrate	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
CW	Chilled Water	STL	--	--	Provide labels outside of insulation jacket.	--	--	--	--
CWR	Chilled Water Return	STL	--	--	Provide labels outside of insulation jacket.	--	--	--	--
DCW	Domestic Cold Water	COP & CLDI	Blue	--	Match potable cold water in ROMP	SC06	"Safety Blue"	S150	Match defined colors
DHWC	Domestic Hot Water Circulation	COP	Blue	Red	Match potable hot water in ROMP	SC06	"Safety Blue"	S150	Match defined colors
DHW	Domestic Hot Water	COP	Blue	Red	Match potable hot water in ROMP	SC06	"Safety Blue"	S150	Match defined colors
DS	Digested Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
DWS	Dewatered Sludge	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
FA	Foul Air	FRP	White	--	Gel coat per Section 23 31	--	--	--	--

Exterior Coating Color/Labeling Scheme for Plant/Process Piping (for Labeling see specification Section 10 14 00)

Flow Stream	Service Name	* Pipe Material	Color	Bands	Comments on Color Choice	Tnemec #	ICI Paint #	Carbolino #	Devco Paints #
					16.16				
FC	Ferric Chloride	CPVC	Yellow	--	Match other chemicals in ROMP	BW56	"Medium Yellow"	6666	Match defined colors
FPW	Fire Protection Water	STL	Red	--	Per AHJ	SC09	"Safety Red"	5555	Match defined colors
FS	Float Sludge	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
FSP	Foam Spray	COP	Light Grey	Orange	per ROMP	EN14	--	C731	Match defined colors
FT	Filtrate	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
FW	Flush Water	CLDI			Color will depend on the source - if PW = blue; if SW=purple				
GT	Grit	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
HE	Headwork Effluent	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
HW	Heating Water Supply	STL	--	--	Provide labels outside of insulation jacket.	--	--	--	--
HWR	Heating Water Return	STL	--	--	Provide labels outside of insulation jacket.	--	--	--	--
IA	Instrument Air	COP	Green	--	per ROMP	SC07	"Safety Green"	2383	Match defined colors

Exterior Coating Color/Labeling Scheme for Plant/Process Piping (for Labeling see specification Section 10 14 00)

Flow Stream	Service Name	* Pipe Material	Color	Bands	Comments on Color Choice	Tnemec #	ICI Paint #	Carboline #	Devoe Paints #
IMLR	Internal Mixed Liquor Recycle	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
IW	Irrigation Water	CPVC & CLDI	Purple	--	IW supplied via SW. Pipe supplied to the site purple in color per Section 32 84 23	--	--	--	DC9600, "Safety Purple"
ML	Mixed Liquor	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
NAOCL	Sodium Hypochlorite	CPVC	Yellow	Dark Yellow	per ROMP	BW56	"Medium Yellow"	6666	Match defined colors
NG	Natural Gas	STL	Yellow	--	Match existing piping	BW56	"Medium Yellow"	6666	Match defined colors
NPHW	Non-Potable Hot Water	COP	Light Blue	Red	Match existing piping	J8161 2040	70BG 67/126	7107	Match defined colors
NPW	Non-Potable Water	CLDI	Light Blue	--	Match existing piping	J8161 2040	70BG 67/126	7107	Match defined colors
OD	Overflow Roof Drain	CISP	Dark Grey	Red	Match drains in ROMP	IN05-61	"Silver Grey"	2525	Match defined colors
P	Polymer	CPVC	Dark Green	--	Match existing piping	G4582	"Crylight Green" 90 GY 10/250	4372	Match defined colors
PA	Process Air	WS	Light Green	Red	Similar to CA, IA	AM52	"Parrot"	6361	Match defined colors
PD	Plant Drain	PVC	Dark Grey	Red	Match drains in ROMP	IN05-61	"Silver Grey"	2525	Match defined colors
PE	Primary Effluent	CLDI & WS	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors

Exterior Coating Color/Labeling Scheme for Plant/Process Piping (for Labeling see specification Section 10 14 00)

Flow Stream	Service Name	* Pipe Material	Color	Bands	Comments on Color Choice	Tnemec #	ICI Paint #	Carboline #	Devoe Paints #
POS	Polymer Solution	CPVC	Dark Green	--	Match existing piping	G4582	"Crylight Green" 90 GY 10/250	4372	Match defined colors
PS	Primary Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
PW	Potable Water	COP & CLDI	Blue	--	Match potable cold water in ROMP	SC06	"Safety Blue"	S150	Match defined colors
RA	Pressurization Air	COP	Light Green	Red	Similar to CA, IA	AM52	"Parrot"	6361	Match defined colors
RAS	Return Activated Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
RD	Roof Drain	CISP	Dark Grey	Red	Match drains in ROMP	IN05-61	"Silver Grey"	2525	Match defined colors
RS	Raw Sewage	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
SB	Sodium Bisulfite	CPVC	Yellow	--	Match other chemicals in ROMP	BW56	"Medium Yellow"	6666	Match defined colors
SCNG	Screenings	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
SE	Secondary Effluent	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
SHWR	Sludge Heating Water Return	STL	--	--	Provide labels outside of insulation jacket.	--	--	--	--
SHWS	Sludge Heating Water Supply	STL	--	--	Provide labels outside of insulation	--	--	--	--

Exterior Coating Color/Labeling Scheme for Plant/Process Piping (for Labeling see specification Section 10 14 00)

Flow Stream	Service Name	* Pipe Material	Color	Bands	Comments on Color Choice	Tnemec #	ICI Paint #	Carboline #	Devoe Paints #
					jacket.				
SM	Scum	GLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
SPD	Sump Pump Discharge	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
SRC	Scrubber Recirculating	CPVC	Yellow	--	Match existing piping	BW56	"Medium Yellow"	6666	Match defined colors
SSL	Secondary Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
SW	Service Water	PVC & CLDI	Purple	--	Match existing piping	--	--	--	DC9600,
TD	Tank Drain	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
TPS	Thickened Primary Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
TW	Tepid Water	COP	Blue	Red	Match potable hot water in ROMP	SC06	"Safety Blue"	S150	Match defined colors
TWAS	Thickened Waste Sludge	CLDI	Dark Brown	--	Match existing piping	YB23	"Warm Brown"	9218	Match defined colors
WAS	Waste Sludge	CLDI	Dark Brown	--	Match other sludge piping	YB23	"Warm Brown"	9218	Match defined colors
* CISP = Cast Iron Soil Pipe		CLDI = Cement-Lined Ductile Iron		GLDI = Glass-Lined Ductile Iron		PVC = Polyvinyl Chloride			
COP = Copper		CPVC = Chlorinated Polyvinyl Chloride		STL = Steel		WS = Welded Steel			
FRP = Fiberglass Reinforced Plastic									

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SC 1 – County Obligations

SC 1.1 - Project Information

Design-Builder acknowledges that County has provided Design-Builder with all necessary information regarding County's requirements for the Project as set forth in the Request.

SC 1.2 - County's Budget

County established an overall budget for the Project of [\$4 million to \$5 million], including amounts allocated for design and construction, the County's other costs, and reasonable contingencies related to these costs as appropriate.

SC 1.3 - Time for Performance

County will review and approve or take other appropriate action on all design submittals of the Design-Builder within the timeframes set forth in the Scope of Work.

SC 1.4 - Purpose of County's Review

County's review, inspection, or approval of any Work, Design Documents, Applications for Payment, or other submittals will be solely for the purpose of determining whether the same are generally consistent with County's Request, the Contract, and with County standards, policies, and requirements. No review, inspection, or approval by County of such Work or documents will relieve Design-Builder of its responsibility for the performance of its obligations under the Contract for Design-Build Construction or the accuracy, adequacy, fitness, suitability, or coordination of its Design Services or the Work. Approval by any governmental or other regulatory agency or other governing body of any Work, Design Document, or the Construction Documents will not relieve Design-Builder of responsibility for the performance of its obligations under this Contract. Payment by County pursuant to the Contract for Design-Build Construction will not constitute a waiver of any of County's rights under the Contract for Design-Build Construction or at law, and Design-Builder expressly accepts the risk that defects in its performance, if any, may not be discovered until after payment, including final payment, is made by County. Notwithstanding the foregoing, prompt written notice will be given by the County to the Design-Builder if the County becomes aware of any fault or defect in the Project or non-conformance with the Contract for Design-Build Construction.

SC 1.5 - Status of County

The County will not have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, nor will the Design-Builder, for any of the foregoing purposes, be deemed the agent of the County.

SC 2 – Design Service Requirements and Standards

SC 2.1 - Quality of Design Services

Design-Builder will be responsible for the quality, completeness, accuracy, and coordination of Design and Construction Documents. Design-Builder will provide Design Services that meet all environmental and regulatory requirements. Design-Builder will provide for all testing and inspections required by sound architectural and engineering practices and by governmental authorities having jurisdiction over the Project.

SC 2.2 - Errors and Omissions

The Design-Builder will, at no additional cost to the County, immediately make additions, changes, and corrections to any documents prepared by Design-Builder necessitated by errors and omissions in the Design-Builder's performance of its services. In addition, Design-Builder will not be entitled to any compensation or adjustment in the Guaranteed Maximum Price ("GMP") for additional work required as a result thereof, provided, upon County's written approval, Design-Builder may use contingency funds to pay for Work not included in the Construction Documents which add value to the Project (but expressly excluding any demolition or other costs related to the substitution of such Work for previously installed Work and associated design fees). The foregoing will not relieve Design-Builder for liability to County for any damages, including costs incurred by County after termination in whole or in part of the Contract, resulting from any error or omissions by Design-Builder in the course of its duties under the Contract.

SC 2.3 - Notice of Non-Compliance with Law

If Design-Builder believes or is advised by another design professional retained to provide services on the Project that implementation of any instruction received from County would cause a violation of any applicable law, Design-Builder will promptly so notify County in writing.

SC 3 - Schedule and Coordination

SC 3.1 - Design-Builder Responsible

Design-Builder will schedule and coordinate the work of its own Subcontractors on the Project, including their use of the Site. Design-Builder will keep its Subcontractors informed of the Project Schedule to enable the Subcontractors to plan and perform the Construction Work properly. Design-Builder will cooperate and coordinate with other separate contractors performing work for County on the Project. However, Design-Builder's obligation of cooperation and coordination will not operate to make Design-Builder responsible for any aspect of work performed by any separate contractors except Design-Builder's own Subcontractors.

SC 3.2 - Schedule Requirements

The Project Schedule for performance of the Construction Work will be a CPM schedule with reasonable detail, including a time-scaled network and computer printout in accordance with the following requirements:

- no activity will be longer than twenty-one (21) calendar days in length without the approval of County except fabrication and delivery activities.
- each activity must be logically tied to another activity to show its interdependency with other activities.
- installation activities must be logically tied to submittal/approval, fabrication, and delivery.
- only a single critical path will be designated.

The Design-Builder will use scheduling software acceptable to County to develop the Project Schedule. The Project Schedule will be presented in graphical and/or tabular reports as agreed upon by the Project Team. If Project phasing, as described below, is required, the Project Schedule will indicate milestone dates for the phases, once determined.

The Project Schedule will provide three (3) weeks for County to review Design Submission Documents at each sub-phase of the Design Phases and provide adequate time for government agency reviews and all other necessary approvals and permits. The Project Schedule will indicate the dates for the start and completion of the various stages of the Project, including, among others, the dates when County information and approvals are required and all necessary shutdowns or suspensions of County or separate vendor activities on the Site (if any). Design-Builder will update and reissue the Project Schedule throughout the Design Phases and the Construction Phase, as necessary and appropriate to reflect adjustments in the schedule. Updates will be subject to approval by County.

The Project Schedule will be in Days (calendar days, unless otherwise directed by County) and will indicate task duration (earliest start/latest completion) for all activities. Float times for all activities will be shown. The CPM diagram will be presented in a time scaled graphical format for the Project as a whole.

The Project Schedule will indicate all relationships between activities.

The activities making up the Project Schedule will be of sufficient detail to assure that adequate planning has been done for proper execution of the Work so that it provides an appropriate basis for monitoring and evaluating progress of the Work.

The activities upon which the Project Schedule is based will coincide with the Schedule of Values.

The Project Schedule will show all submittals associated with each work activity and the review time for each submittal.

The Project Schedule will show milestones, including milestones for all Team members.

The Project Schedule will include anticipated rain delay during the performance of the construction contract. The duration will reflect the average climatic range and conditions prevailing in the locality of the site. Weather data, provided by the Design-Builder, will be based on information from the National Weather Services or other County-approved sources.

The Project Schedule will consider the Substantial Completion date requirements showing portions of the Project having priority.

Float time will be prescribed as follows: The total Float within the overall schedule is not for the exclusive use of either County or Design-Builder, but is jointly owned by both and is a resource available to, and shared by, both parties as needed to meet contract milestones and the Project completion date.

The Design-Builder will not sequester shared Float through such strategies as extending activity duration estimates to consume available Float, using preferential logic, or using extensive crew/resource sequencing, etc. Since Float time within the schedule is jointly owned, no time extensions will be granted, nor delay damages paid, until a delay occurs which extends the Work beyond the Substantial Completion date.

Throughout the Design Phases, Design-Builder will provide updates and/or revisions to the Project Schedule for use by the Project Team, whenever required, but no less often than monthly. The Design-Builder will add detail to the previous version of the Project Schedule to keep it current throughout the Design Phases, so that the Project Schedule is ready for implementation at the start of the Construction Phase. The update/revisions will include, but not be limited to:

- A narrative analyzing the progress achieved to-date vs. planned.
- Any concerns regarding delays or potential delays, and any recommendations regarding mitigating actions.
- Revisions in Drawings and Specifications.
- The results of any additional investigative reports of subsurface conditions, drawings of physical conditions of existing surface and subsurface facilities, and documents depicting underground utilities placement and physical condition, whether obtained by County or Design-Builder.
- Unresolved permitting issues, and significant issues, if any, pertaining to the acquisition of land and right of way.

- The fast-tracking of any of the construction, or other chosen construction delivery methods.
- The requisite number of separate bidding documents to be advertised.
- The status of the procurement of long-lead time equipment and materials.
- Funding issues (i.e., delays) identified by the County.

If phased construction is deemed appropriate and County approves, Design-Builder will review the design and make recommendations regarding the phased issuance of Construction Documents to facilitate phased construction of the Work, with the objective of shortening the Construction Time and/or reducing the Cost of the Work. The Design-Builder will take into consideration such factors as natural and practical lines of work severability, sequencing effectiveness, access and availability constraints, total time for completion, construction market conditions, labor and materials availability, effect on traffic or public access, and any other factors pertinent to saving time and cost. The Project Schedule will be adjusted to allow for phased construction or for portions of the Construction Work to be accepted separately by the County, if required by County.

SC 3.3 - Submittal Schedule

Design-Builder will prepare and keep current, for County's approval, a time schedule of submittals which is coordinated with Design-Builder's construction schedule and allows County the specified time to review submittals.

SC 3.4 - Monthly Schedule Revisions

Design-Builder's schedules will be revised monthly to reflect ACTUAL conditions in the field. A copy of the revised Project Schedule and narrative report including a description of current and anticipated problem areas, delaying factors and their anticipated impact, and corrective action taken or proposed to be taken will be submitted with each Application for Payment. Submission of an updated Project Schedule meeting these criteria will be a condition to the processing of any application for payment made by Design-Builder. County's review of the Project Schedule update will not be construed as relieving Design-Builder of its complete and exclusive control over the means, methods, sequences, and techniques of construction and payment by County will not be deemed a determination that the updated schedule is acceptable. The Design-Builder understands that the updated Project Schedule will be the basis for the analysis and granting of time extensions in accordance with SC 6.13.

SC 3.5 - Other Schedule Updates

In addition to the monthly update, the Design-Builder's schedules will also be revised at appropriate intervals as required by the conditions of the Construction Work or as directed by the County with a printed and electronic copy submitted to the County in a format acceptable to the County.

SC 3.6 - Adherence to Schedule

Design-Builder will perform the Construction Work within the identified times of the most recent schedule and consistent with the established Contract Time(s).

SC 3.7 - Ownership of Float

The parties agree that if Design-Builder submits an original or updated schedule which shows the Project and/or individual milestone(s) completing earlier than required by the Contract Documents (the then adjusted Contract Time(s)), the differences between the forecasted early completion and the required completion will be considered Project-owned float available for use by both the County and the Design-Builder.

SC 3.8 - Time Extensions

Since Float time within the schedule is jointly owned, no time extensions will be granted nor delay damages paid until a delay occurs which extends the Construction Work beyond the adjusted Contract Time(s).

SC 3.9 - Demonstration of Extension Need

No time extensions will be granted nor delay damages paid unless the delay is clearly demonstrated by the updated construction schedule current as of the month the change was issued or the delay occurred and which delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of Work or other reasonable means.

SC 4 – Design-Builder's Responsibility for Project Safety

SC 4.1 - Division of Safety Responsibility

As among Design-Builder and County, Design-Builder will have sole responsibility for safety at the Construction Work Site, except that County will have responsibility for the acts and omissions of its officers and employees.

SC 4.2 - Scope of Responsibility; Safety Manager

Design-Builder recognizes the importance of performing the Construction Work in a safe manner so as to prevent damage, injury, death or loss to (i) all individuals at or in the vicinity of the Construction Work, whether working or visiting the Project; (ii) any Construction Work, including, without limitation, materials and equipment incorporated or stored on or off Site; and (iii) all other or adjacent property, whether owned by County or other persons. As among Design-Builder and County, Design-Builder assumes sole responsibility for implementing and monitoring all safety precautions and programs related to the performance of the Construction Work. Design-Builder will, prior to commencing construction, designate a safety manager with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Construction Work. The safety manager will make routine daily inspections of the Site and will hold at least weekly safety meetings with Design-Builder's personnel and its Subcontractors.

SC 4.3 - Legal Requirements

Design-Builder and its Subcontractors will comply with all Legal Requirements relating to safety, as well as any County specific safety requirements set forth in the Contract which do not violate any applicable Legal Requirements. Design-Builder will immediately report, in writing, to County and, if required by applicable Legal Requirements, all government or quasi-government authorities having jurisdiction over matters involving the Construction Work, any injury, death, loss, damage or accident occurring at the Site. Without limiting the foregoing, Design-Builder will, and will cause each Subcontractor to, comply with worker health and safety requirements in Environmental Law and OSHA. In addition, Design-Builder will take all reasonable necessary and appropriate steps to ensure the health and safety of persons occupying any part of the facility in which the Construction Work Site is located or in the vicinity of or passing by the Construction Work Site and will also take all reasonable necessary and appropriate steps to protect from damage or destruction the property of County and other persons in any part of the facility in which the Construction Work Site is located or in the vicinity of or passing by the Construction Work Site. Among other actions in this regard, Design-Builder will comply with the requirements of any applicable fire code.

SC 4.4 - Discontinuance of Work

If in the course of the Construction Work, any environmental, health, or safety concern exists or arises, whether relating to a Hazardous Substance, OSHA, or otherwise, then the Construction Work activities related to the concern must be discontinued until the concern is resolved. Prior to disturbing a suspected Hazardous Substance or otherwise interacting with a potential health or safety hazard, the County must be notified immediately of the concern. Construction Work will not resume until approval has been provided by County. Close coordination will be maintained between County and Design-Builder so the Project schedule is impacted the least amount possible.

SC 4.5 - Subcontractor Responsibility

Design-Builder's responsibility for safety under this SC 4 is not intended in any way to relieve Subcontractors from applicable obligations and responsibilities for complying with all Legal Requirements, including those related to health and safety matters, and taking all necessary measures to implement and monitor all safety precautions and programs to guard against injury, death, loss, damage or accident resulting from their performance of the Construction Work.

SC 4.6 - Applicability of Other Contract Requirements

The requirements in this SC 4 supplement and are in addition to the other requirements in the Contract Documents.

SC 4.7 - Pass-Through to Subcontractors

Design-Builder will provide the requirements and make the assignments of responsibilities for safety precautions and programs for the Construction Work, for temporary Project facilities, and for equipment, materials and services for common use of Subcontractors. Design-Builder will assure that this SC 4 and the applicable assignments are included in the contract between Design-Builder and each Subcontractor.

SC 4.8 - County-Designated Limited Work Areas

County may elect to designate to Design-Builder specific limitations to the area in which Design-Builder and its Subcontractors are to perform the Construction Work in order to prevent a Release of an existing Hazardous Substance on or in the vicinity of the construction site, provided that in such event County must make Design-Builder aware of the existence of the Hazardous Substance and must provide an area free from the Hazardous Substance sufficient for Design-Builder and its Subcontractors to perform the Construction Work. Whenever County does this, Design-Builder and its Subcontractors will carry out their actions in performing the Construction Work within the specified limited area. In addition, in performing the Construction Work, Design-Builder and its Subcontractors will not, intentionally or accidentally, or otherwise, traverse, scrape, or otherwise disturb soils or constructed surfaces adjacent to or outside the designated Construction Work area unless Design-Builder has requested and obtained written approval from the County. Any question about the scope of the permitted Construction Work area must be resolved by the County.

SC 5 - Site Conditions

SC 5.1 - General

DB may only claim Uncontrollable Circumstances relief due to any surface or subsurface conditioned encountered in the performance of the Contract if the condition meets the definition of either Differing Site Conditions or Regulated Site Conditions.

SC 5.2 - Notification

Design-Builder will immediately, and before such conditions are disturbed, notify County in writing of Differing Site Conditions or Regulated Site Conditions encountered at the Site that could adversely affect the cost of the Construction Work or the timely performance thereof.

SC 5.3 - Investigation and Remedy

The County will within ten (10) days after receipt of notice from Design-Builder, or such other reasonable time as necessary, investigate the conditions reported by Design-Builder under SC 5.2. If the County finds that conditions are so materially different as to support an equitable adjustment in the GMP or the Contract Time(s), an equitable adjustment will be accomplished by written change order to the Contract Time(s) or the GMP. Adjustment of the GMP will be for the actual, demonstrated direct and indirect cost impact to address the unforeseen condition. Extensions of Contract Time(s) will be considered only when based upon submission of an updated CPM master schedule showing an actual unavoidable delay to the Project critical path resulting from the unforeseen condition. If the County determines that no Change Order will be issued, the Contract Time(s) will not be changed and there will be no change in the GMP. Regardless of the outcome, the Design-Builder will continue with the Construction Work.

SC 5.4 - Timeliness of Notice

No claim by the Design-Builder for an increase in the GMP or in the Contract Time(s) will be allowed without proper advance notice and an adequate opportunity for the County to investigate.

SC 6 – Payment of Design-Builder - Finance Controls - Open Book Costs and Audit

SC 6.1 - County Payments

The County will make payments as provided in the Contract for Design-Builder's performance of the Construction Work up to, but not exceeding, the Guaranteed Maximum Price, as such GMP may be modified as provided in the Contract.

SC 6.2 – Section Reserved

SC 6.3 - Financial Records

With respect to all Construction Work performed by the Design-Builder and its Subcontractors, Design-Builder and each Subcontractor will keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using generally accepted accounting principles and control systems approved by County. During the performance of the Construction Work and for five (5) years after Final Payment, the Design-Builder will retain and will also require all Subcontractors to retain for review, audit, or both, by the County all correspondence; meeting minutes; memoranda; electronic media; books; accounts; reports; files; time cards; material invoices; payrolls; evidence of all communications (in native format); evidence of direct, and indirect costs; and all other matters relating to the Construction Work. Upon request by County, a legible copy or the original of any or all such records will be produced by the Design-Builder at any reasonable time during or after the Construction Work as the County may request. The Design-Builder will submit to the County upon request all payrolls, reports, estimates, records, and any other data concerning the Construction Work performed or to be performed or concerning materials supplied or to be supplied, as well as Subcontractor payment applications or invoices and such Subcontractor's progress payment checks. The requirements of this SC 6.3 will be included in all contracts between the Design-Builder and its Subcontractors. The County may exercise its rights under this SC 6.3 as often as reasonably necessary in the County's sole judgment to assure the County has a complete and accurate understanding of all Project costs.

SC 6.4 - Schedule of Values

The Schedule of Values will be used as a basis for payment as provided in SC 6.5 and SC 6.6. If there are any changes in the Guaranteed Maximum Price, the Schedule of Values will be adjusted accordingly. Design-Builder will provide written approval from its surety for the approved Schedule of Values to be used as a basis for monthly progress payments.

SC 6.5 - Applications for Payment

Design-Builder will deliver to County each month a certified application for payment in the format specified by County. Each application for payment: (i) will be for an amount based on the Schedule of Values and determined by the percentage of completion of the Construction Work; (ii) will show the percentage of completion of each category of the Construction Work; (iii) will be accompanied by an updated CPM schedule and a narrative report per SC 3; and will include the following, signed certification by Design-Builder:

The undersigned, as Design-Builder's duly authorized representative, certifies that to the best of the Design-Builder's knowledge, information, and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Design-Builder for Work for which previous Certificates for Payment were issued and payments received from the Design-Builder, and that current payment shown herein is now due.

In addition, with each application for payment, Design-Builder will submit such supporting documentation as is necessary or appropriate in the reasonable judgment of County to justify all amounts paid to Design-Builder under prior applications for payment. Payment will be made in accordance with A.R.S. § 34-609.

SC 6.6 - Amount of Progress Payments

The County will pay the amount in each Design-Builder request for payment to the extent approved for payment in the certificate for payment, less retainage as set forth in SC 6.7, provided that the cumulative payment amount before retainage (i) will not exceed the aggregate amount certified in all certificates for payment and, (ii) also will not exceed the percentage of completion of the Construction Work multiplied by

the Guaranteed Maximum Price (excluding items of the Guaranteed Maximum Price not subject to retainage), all as set forth in the Schedule of Values. The Design-Builder Construction Phase will be paid in accordance with the percentage of completion of the Construction Work.

SC 6.7 - Retainage

SC 6.7.1 - Design Payments

With respect to the Design-Builder's Design Phase Fees, no retainage will be withheld.

SC 6.7.2 - Construction Payments

With respect to all payments for the Construction Work, ten percent (10%) retainage will be withheld until the Construction Work is fifty percent (50%) complete. At that point in time, the County will pay one-half (1/2) of the accumulated retainage to Design-Builder provided that County has determined that the Design-Builder is making satisfactory progress on the entire Construction Work and there is no specific cause or claim relating to the Construction Work requiring a greater amount to be withheld. After that point in time, County will retain five percent (5%) of each payment until Final Completion of the Project, or a designated portion thereof. However, if at any time, County determines that satisfactory progress is not being made, ten percent (10%) retention will be reinstated for all future progress payments under the Contract pursuant to County's determination. This is in addition to the County's right to withhold payment as defined under SC 6.10. County's decision concerning satisfactory progress and the existence of specific causes or claims requiring greater retention will be final. Retainage will be released upon Final Completion of a designated portion of the Construction Work that County has agreed to accept separately. Release of retainage upon Final Completion of the Project will be as required under A.R.S. § 34-609.

SC 6.8 - Payment for On-Site and Off-Site Materials

Payment will be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Construction Work. Payment may similarly be made for materials and equipment suitably stored offsite, conditioned upon Design-Builder furnishing evidence to County that (a) title to the materials and equipment will pass to County upon payment therefor and there are no claims of third parties; (b) the materials and equipment are adequately insured for full replacement value plus delivery with the County named as an additional insured on the insurance policy; and (c) such other matters as the County may reasonably request in order to protect its interests.

SC 6.9 - Title to Construction Work

Design-Builder warrants that title to all Construction Work covered by an application for payment will pass to County no later than the time of payment. The Design-Builder further warrants that upon submittal of an application for payment, all Construction Work for which applications for payment have been previously issued and payments received from the County will be free and clear of liens, claims, security interests, or encumbrances in favor of Design-Builder, Subcontractors, or other persons or legal entities making a claim by reason of being a creditor of Design-Builder or any Subcontractor. Design-Builder will provide conditional waivers of lien through the date of the application for payment from each Subcontractor of any tier with each application for payment and when requested by County. Design-Builder will also provide with each application for payment unconditional waivers of lien through the date of the prior application for payment from each Subcontractor of any tier. As a condition precedent to Final Completion of the entire Construction Work or a portion of the Construction Work that County has agreed to accept separately, Design-Builder will provide unconditional waivers of lien from all Subcontractors.

SC 6.10 - Withholding Payment

The County may withhold payment from any application for payment to the extent necessary to protect County from loss because of:

- Unsatisfactory job progress as determined by the County.
- Disputed Construction Work or materials.
- Defective Construction Work not remedied.
- Claims or other encumbrances filed or reasonable evidence indicating probable filing of claims or other encumbrances by Subcontractors.

- Failure of the Design-Builder to make payment to any Subcontractors within seven (7) days after receipt of each progress payment.
- The Design-Builder's failure to perform any of its contractual obligations under the Contract Documents or any other agreement with the County.
- Deficiencies or claims asserted by County against Design-Builder arising from any other project.
- Damage to the County or a separate contractor caused by the fault or neglect of the Design-Builder or any of its Subcontractor to the extent not covered by insurance.
- Reasonable evidence that the entire Construction Work or portion of the Construction Work that the County has agreed to accept separately will not be Substantially Complete within the Contract Time(s) due to delay for which the Design-Builder is responsible, or that the unpaid balance of the Guaranteed Maximum Price will not be adequate to cover completion of the entire Construction Work and liquidated damages for any anticipated unexcused delay for which the Design-Builder is responsible.

If the above basis for withholding payment is remedied, payment will be made for amounts previously withheld. Prior to any withholding pursuant to this SC 6.10, the County will meet with Design-Builder to discuss potential withholding and attempt in good faith to resolve such issue without the need for withholding.

SC 6.11 - Substantial Completion

When Design-Builder believes the entire Construction Work or a portion thereof which County has agreed to accept separately is Substantially Complete, Design-Builder will notify County and submit to County a comprehensive list of items to be completed or corrected relating to the entire Construction Work or the portion thereof, as applicable. Within five (5) working days of receipt of Design-Builder's notice and list, County or its representatives and Design-Builder will jointly make an observation or inspection, as applicable, to determine whether Substantial Completion has occurred. If it is determined by County that the entire Construction Work or a portion thereof, as applicable, is Substantially Complete, County will issue the Punch List and the certificate of Substantial Completion stating the date of Substantial Completion which will be executed by County or its representatives and Design-Builder. The Design-Builder will proceed promptly to complete or correct Punch List items. Failure to include an item on the Punch List does not alter the responsibility of the Design-Builder to complete all Construction Work in accordance with the Construction Documents and the other Design-Builder Contract.

SC 6.12 - Final Completion and Final Payment

SC 6.12.1 - Work and Submittal Requirements

Completion of all outstanding Construction Work items noted in the Punch List and all other Design-Builder requirements is required for County to certify Final Completion of the entire Construction Work or a portion thereof that the County has agreed to accept separately. Requirements also include, but are not limited to: equipment operations training for County; satisfaction of the conditions precedent in SC 6.12.2; the Design-Builder being in compliance with the Construction Documents and the Contract as to all matters relating to the Construction Work; and submission to and approval by County of all drawings and all record and close out documents as specified in County's Project specifications, including but not limited to, all operating manuals, warranties, assignments of warranties from Design-Builder and its Subcontractors, and all other deliverables required by the Construction Documents and the Contract.

SC 6.12.2 - Documentation

Neither final payment nor any final release of retainage as to the entire Construction Work or as to a portion of the Construction Work that County has agreed to accept separately will become due until the Design-Builder submits to the County each of the following as to the entire Construction Work or the portion of the Construction Work that County has agreed to accept separately:

- An affidavit that payrolls, bills for materials and equipment, and other indebtedness Incurred in connection with the Construction Work or portion thereof, as applicable, for which County or the County 's property might be responsible or encumbered (less amounts withheld by the County) have been paid or otherwise satisfied.

- A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the County.
- Consent of surety to the final payment and final release of retainage.
- If required by County, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract.
- Unconditional waivers of lien from all Subcontractors.
- Evidence that all third-party warranties and guarantees have been transferred to County.
- Approval by County of the redlined drawings submitted by Design-Builder.
- A written accounting, in a form agreed by Design-Builder and County, of the Actual Cost of the Construction Work for the entire Construction Work or portion thereof, as applicable, including all supporting documentation justifying Actual Costs of the Work paid or to be paid by County required to be delivered by Design-Builder to County under the Contract.

SC 6.12.3 - Amount of Final Payment

Final payment by County to Design-Builder will be based on the Actual Costs of Construction Work for the Project, which amount will equal the aggregate amount of actual costs for the Construction Work, provided that:

- the Actual Costs of the Construction Work for the Project to be paid by County to the Design-Builder will not exceed the Guaranteed Maximum Price for the Project set forth in the Contract Documents, as such GMP may be modified in accordance with the Contract.
- the Actual Costs of the Construction Work to be paid by County for Construction Work will not exceed the Open Book Cost, including Fee.

Final payment to Design-Builder will equal the difference between the Actual Cost of the Construction Work and the aggregate sum of the progress payments (including retainage) made to Design-Builder based on the Schedule of Values, adjusted as above and subject to the terms of SC 6.12.

SC 6.12.4 - Partial Payment In Event of Final Completion Delay

If, after Substantial Completion of the Construction Work, Final Completion thereof is materially delayed through no fault of the Design-Builder or by the issuance of additional Change Orders by County, the County may upon request of the Design-Builder, and without terminating the Contract, make payment of the balance due for that portion of the Construction Work fully and properly completed. If the remaining balance for Construction Work not fully and properly completed is less than the applicable retainage, and if bonds have been furnished, the written consent of Surety to payment of the balance for that portion of the Construction Work fully and properly completed will be submitted by Design-Builder to the County, and such payment will be made under the terms and conditions governing final payment, except that it will not constitute a waiver of claims by either the Design-Builder or the County.

SC 6.12.5 - Waiver of Claims

Except for claims previously made by Design-Builder to County in writing, acceptance of final payment by the Design-Builder will constitute a waiver of affirmative claims by Design-Builder. The making of the final payment by the County will constitute a waiver of claims by the County, except those arising from (a) liens, claims, security interests, and encumbrances arising out of the Construction Work after final payment; (b) latent defects arising after final payment; or (c) the terms of warranties, guarantees, or indemnifications set forth in or required by the Contract or other rights provided under Arizona law.

SC 6.12.6 Audit Scheduling

County and Design-Builder agree to cooperate fully in the establishment of a schedule for early audit of the actual costs of construction so as not to unduly delay final payment. Audits may be conducted annually, semi-annually, on individual phases, or on any other such basis as may be agreed by County and Design-Builder.

SC 6.13 - Time

SC 6.13.1 - Time is of the Essence

Design-Builder and County recognize that any time limits set forth in the Contract Documents, as amended, are of the essence of this Contract. Design-Builder agrees that it will timely commence performance of the Construction Work, achieve Substantial Completion and Final Completion of the entire Construction Work, and achieve any interim milestones for Substantial Completion and Final Completion as required by the Contract. In addition, if County has agreed to accept separately a portion of the Construction Work, Design-Builder agrees to achieve Substantial Completion and Final Completion of each portion by the dates agreed in writing by County and Design-Builder. Failure to achieve any date or time for achievement of Substantial Completion of the entire Construction Work or any portion of the Construction Work that the County has agreed to accept separately will result in the assessment of Liquidated Damages.

SC 6.13.2 - Delay Liquidated Damages

Subject to relief in accordance with the terms and conditions of the Contract in the event of Uncontrollable Circumstances, if Substantial Completion occurs subsequent to the scheduled Substantial Completion date, then, in addition to the amounts payable to County under the Contract, the DB will pay to the County delay liquidated damages in the amount of \$400.00 per day for each day that the Substantial Completion date falls after the scheduled Substantial Completion date until any termination of the Contract for an Event of Default.

SC 6.13.3 - Time Extensions

If Design-Builder is delayed in the performance of the Construction Work (based upon a critical path analysis of the current Project Schedule) due to non-concurrent acts, omissions, conditions, events, or circumstances beyond its reasonable control or prevention and due to no legal fault of its own or those for whom Design-Builder is responsible under the terms of the Contract, the time for Substantial Completion or Final Completion, as applicable, of the entire Construction Work or of any portion of the Construction Work the County has agreed to accept separately and, to the extent applicable, any interim milestones, will be extended by written Change Order for the amount of time such acts, omissions, conditions, events, or circumstances added to the time to complete the entire Construction Work, portion thereof or interim milestone, as applicable. By way of example only, such acts, omissions, conditions, events, and circumstances which would entitle Design-Builder to an extension of the Contract Time(s), include, but are not limited to: acts or omissions of County or anyone under County's control, including separate contractors; changes ordered in the Project by County through a written Change Order; unforeseeable Project Site conditions (to the extent provided in the Contract Documents); wars; floods; labor disputes; unusual delays in transportation; and unusually adverse weather conditions.

SC 6.13.4 - GMP Adjustment

Design-Builder will be entitled to an appropriate adjustment of its Guaranteed Maximum Price for extended construction general conditions resulting from non-concurrent delays due to acts, omissions, conditions, events, or circumstances beyond Design-Builder's reasonable control or prevention and due to no legal fault of its own or those for whom Design-Builder is responsible under the terms of the Contract.

SC 6.13.5 - Notice of Delay

Notice of any delay in the Construction Work will be made in writing by Design-Builder to the County as soon as possible, but in no event later than three (3) days after discovery of the event giving rise to the delay. Upon discovery of the delay, Design-Builder will immediately begin to keep and maintain complete and specific records regarding the time and costs associated with the delay. The Design-Builder will provide additional details concerning the delay in writing to the County within fourteen (14) calendar days from the beginning of the delay. Failure to meet these time requirements will constitute a waiver of and absolutely bar any and all later claims. The detailed notice will indicate the cause of the delay, the anticipated length of the delay, the probable effect of such delay upon the progress and cost of the Construction Work, and potential mitigation plans. If the cause of the delay is continuing, the Design-Builder must give written notice every month at the same time it submits the updated progress narrative report to the County. Within a reasonable period of time, but in no event later than the end of the next month, the Design-Builder will submit further documentation concerning the delay and, if applicable, a formal written request covering an extension of the Contract Time(s) for such delay. The written request for time extension will state the cause

of the delay, the number of days extension requested, and provide a fully documented analysis of the delay's impact on the Project Schedule, including any other data demonstrating a delay in the critical path of the entire Construction Work or the portion of the Construction Work the County has agreed to accept separately or individual milestone.

SC 6.14 - Changes to GMP and Time

SC 6.14.1 Change Order

Modifications to Contract may only be made by a written Contract amendment or Change Order executed by the Pima County Board of Supervisors or the Procurement Director, pursuant to the Pima County Procurement Code, and the Design-Builder.

- a. County may, at any time, make unilateral changes to the general Scope of Work, including the addition, deletion, or modification of Work. The Design-Builder will not proceed with any change involving an increase or decrease in cost or time without an approved Change Order executed by County and will proceed in accordance with the procedures set forth in this SC 6.14. The County's right to make changes will not invalidate the Design-Builder Contract or relieve the Design-Builder of any liability. Any requirement of notice to the Surety will be the responsibility of Design-Builder.
- b. "Change Order" means a written instrument issued after acceptance and incorporation into the Contract of Design-Builder's GMP, signed by County and Design-Builder, stating their agreement upon all of the following:
 - An addition, deletion, or modification to the work within the general scope of the work.
 - The amount of the adjustment, if any, to the GMP (including, without limitation, an Allowance within the GMP) incorporated into the Contract, as applicable.
 - The extent of the adjustment, if any, to the Contract Time(s) of performance set forth in the Contract.
- c. All such changes in the Work authorized by applicable Change Order will be performed under the applicable conditions of the Contract and the County and Design-Builder will negotiate in good faith and as expeditiously as possible on the appropriate adjustments, as applicable. No GMP adjustment on account of a Change Order will include the Design-Builder's or any Subcontractor's profit, fee, home office overhead, or a formula allocation of indirect costs unless otherwise specifically allowed hereunder, except as allowed in SC 6.14.4.

SC 6.14.2 - Contract Administration Waiver

SC 6.14.2.1 - Administrative Communications

The Parties recognize that a variety of contract administrative matters will routinely arise during the Term. These matters will by their nature involve requests, notices, questions, assertions, responses, objections, reports, claims, and other communications made personally, in meetings by phone, by mail and by electronic and computer communications. The purpose of this Condition is to set forth a process by which the resolution of the matters at issue in such communications, once resolution is reached, can be formally reflected in the common records of the parties so as to permit the orderly and effective administration of the Contract.

SC 6.14.2.2 - Contract Administration Memoranda

The principal formal tool for the administration of routine matters arising under the Contract between the Parties which do not require a Contract Amendment shall be a "Contract Administration Memorandum." A Contract Administration Memorandum shall be prepared, once all preliminary communications have been concluded, to evidence the resolution reached by the County and the Design-Builder as to matters of interpretation and application arising during the course of the performance of their obligations under the Contract. Such matters may include, for example: (1) issues as to the meaning, interpretation, application, or calculation to be made under any provision of the Contract Documents; (2) notices, waivers, releases, satisfactions, confirmations, further assurances, and approvals given under any provision of the Contract Documents; and (3) other similar contract administration matters.

SC 6.14.2.3 - Procedures

Either Party may request the execution of a Contract Administration Memorandum. When resolution of the matter is reached, a Contract Administration Memorandum shall be prepared by or at the direction of the County reflecting the resolution. The Contract Administration Memorandum shall be numbered, dated, signed by the Contract Representative of each Party, and, at the request of the County, co-signed by a Senior Supervisor for the Design-Builder. The County and the Design-Builder each shall maintain a parallel, identical file of all Contract Administration Memoranda, separate and distinct from all other documents relating to the administration and performance of this Contract.

SC 6.14.2.4 - Effect

The executed Contract Administration Memoranda shall serve to guide the ongoing interpretation and performance of the Contract. Any material change, alteration, revision, or modification of the Contract, however, shall be effectuated only through a formal Contract Amendment authorized, approved or ratified by resolution of the County Board of Supervisors (or, as authorized, the County's Procurement Director) and properly authorized by the Design-Builder.

SC 6.14.3 - Minor Changes in the Construction Work

County may direct minor changes in the Construction Work consistent with the intent of the Construction Documents providing such changes do not involve an adjustment in the Guaranteed Maximum Price or Contract Time(s) and do not materially affect the design, quality, or performance of the Project. The County will promptly inform Design-Builder, in writing, of any such changes, and verify that Design-Builder has recorded such changes on the as-built documents.

SC 6.14.4 - Price, Time, or Scope of Work Adjustment

SC 6.14.4.1

The cost or credit to the County in a Change Order resulting from a change in the Construction Work, the Construction Documents or the other Design-Builder Construction Contract Documents or resulting from the cost of items covered by an Allowance exceeding the amount of the Allowance will be determined in one or more of the following ways:

- By unit prices stated in the Contract Documents.
- By the Cost of Work, properly itemized and supported by sufficient, substantiating data to permit evaluation.
- Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to facilitate evaluation; provided, that such lump sum will not exceed that amount calculated under the Cost of Work method.

SC 6.14.1.2.

Any dispute regarding the pricing methodology or cost of a change will not relieve the Design-Builder from proceeding with the change as directed by the County. The cost or credit to the County will be determined by the County or its representatives on the basis of SC 6.14.4.1.

SC 6.14.1.3

An County-approved written Change Order executed by County and Design-Builder will be full and final settlement of all claims for direct, indirect, delay, disruption, inefficiency, and any other consequential costs related to items covered or affected, as well as time extensions. Any claimed cost, whether direct, indirect or consequential, and time extension not presented by Design-Builder for inclusion in the Change Order is irrevocably waived.

SC 6.14.1.4

If County and Design-Builder disagree upon whether Design-Builder is entitled to be paid for any services required by County, or in the event of any other disagreements over the scope of the Construction Work, the Construction Documents, or the other Contract Documents or proposed changes to the Construction

Work, the Construction Documents or the other Construction Contract Documents or Contract Time(s), County and Design-Builder agree to try to resolve the disagreement consistent with this SC 6.14.

SC 6.15 - Emergencies

In any emergency affecting the safety of persons or property, Design-Builder will act, at its discretion, to prevent threatened damage, injury, or loss. Any change in the Guaranteed Maximum Price or Contract Time(s) or both on account of emergency work will be determined as provided in SC 6.14.

SC 7 – Warranty and Correction of Non-Conforming Work

SC 7.1 - Warranty

Design-Builder warrants to County that the construction, including all materials and equipment furnished as part of the construction, will be new unless otherwise specified in the Construction Documents or Contract, of good quality, in conformance with the Construction Documents and Contract, and free of defects in materials and workmanship. Design-Builder's warranty obligation excludes defects caused by abuse, alterations or unreasonable failure to maintain the construction by persons other than Design-Builder, Design-Builder's subcontractors, or others under Design-Builder's control. Nothing in this warranty will limit any manufacturer's warranty which provides County with greater warranty rights than set forth herein. Design-Builder will provide County with all manufacturer's warranties and operation and maintenance manuals upon Substantial Completion of the work. Design-Builder's warranty will be for a period of two (2) years and will commence for all portions of the Construction Work upon Substantial Completion of the entire Construction Work as determined by County under this Contract unless the Parties mutually agree otherwise in writing. All statutory or other warranties, express or implied, related to latent defects will remain in force and are not limited by this provision.

SC 7.2 - Correction of Defects and Nonconforming Work

SC 7.2.1 - Agreement to Correct

Design-Builder agrees to promptly correct any work that is found not to be in conformance with the Construction Documents, whether or not previously inspected or observed by County's Representative unless a specific written waiver of nonconformance has been provided to Design-Builder by County. This obligation will continue for the term of the warranty. Nothing in this SC 7.2.1 will waive any other rights that County has under Arizona law.

SC 7.2.2 - County Right to Correct

Upon receipt of written notice from County that the Construction Work is not in conformance with the Construction Documents, Design-Builder will, within seven (7) days (except in the case of a nonconformity that affects the safety or security of life or property or which involves an item of work on the critical path of the Project Schedule, in which case response will be immediate), commence correction of such nonconformity including, without limitation, correction, removal, or replacement of the nonconforming work and repair of any damage caused to any other part of the work attributable to the nonconforming work. If Design-Builder fails to commence correction within seven (7) days, County, in addition to any other remedies provided in the Contract, may provide notice to Design-Builder that County will commence correction with its own or other forces. In such event, Design-Builder will be responsible for all costs and expenses that County may incur in remedying the nonconformity, including, without limitation and at County's sole discretion, the cost of County's staff time and all other costs and fees incurred by County, which amount County may recover from Design-Builder by setoff or otherwise, as permitted under Arizona law. County will notify Design-Builder of its intent to make corrections at or before the commencement of corrective work.

SC 7.2.3 - County's Additional Rights Preserved

The warranty period applies only to Design-Builder's obligation to correct construction work or replace materials or equipment not in conformance with the Construction Documents and will not constitute a period of limitation with respect to any other rights or remedies County may have with respect to Design-Builder's other obligations under the Contract or Arizona law.

SC 8 – Startup and Acceptance Testing

SC 8.1 - Startup

SC 8.1.1 - Submittal of Startup Plan

The DB will develop a detailed plan for the startup of the Facility (the "Startup Plan") in accordance with the requirements set forth in the Project Scope. In no event will the DB commence startup operations prior to County approval of the Startup Plan. If the DB and the County are unable to agree upon the Startup Plan within 90 days following submission by the DB, either party may elect to initiate dispute resolution procedures in accordance with Contract Section 14 (Dispute Resolution).

SC 8.1.2 - Notice

The DB will give the County at least 30 days' prior written notice of the expected date of commencement of start-up operations, which notice will include a certification (to be confirmed as of the date start-up operations commence) that the DB is in full compliance with the terms of this Service Contract, and that the Project is in compliance Applicable Law, including all conditions of applicable Governmental Approvals.

SC 8.1.3 - Commissioning and Startup

Subject to SC 8.1.1 and SC 8.1.2 of this Section and any limitation established by the Startup Plan or the Contract Documents, the DB may commission the Project Improvements, and test equipment and systems, at its election at any time, whether prior to or subsequent to Substantial Completion. The DB will perform startup activities in accordance with the schedule set forth in the approved Startup Plan. The DB's cost of all commissioning-related activities, including all obligations of the DB under the Startup Plan, regardless of their extent or duration, will be included in the GMP. All commissioning and startup activities will be conducted in accordance with the approved Startup Plan and the Contract Documents, including any specific requirements established by ADEQ.

SC 8.2 - Performance Testing

SC 8.2.1 - Submittal of Performance Test Plan

At least 180 days before the earlier of the Scheduled Performance Test Date or the date upon which the DB plans to begin Performance Testing, the DB will prepare and submit to the County for its approval a detailed Performance Test Plan, which will conform to the requirements of Scope of Work Task 23 (Performance Test) in all respects. As indicated in Task 23, the Performance Test Plan will include the DB's plan for performing all necessary testing of the Facility prior to the performance of the Performance Tests. If the DB and the County are unable to agree upon the Performance Test Plan within 90 days following such submission, either party may elect to initiate dispute resolution procedures in accordance with Contract Section 14 (Dispute Resolution Procedures).

SC 8.2.2 - Notice of Commencement of Performance Test

The DB will provide the County with at least 30 days' prior written notice of the expected initiation of the Performance Test. At least 10 days prior to the actual commencement of any Performance Testing, the DB will certify in writing that it is ready to begin Performance Testing in accordance with the Performance Test Plan.

SC 8.2.3 - Conditions to Commencement of the Performance Test

The DB will not commence the Performance Tests until the following events have occurred:

- The DB has satisfied the requirements of SC 8.2.1 and SC 8.2.2 of this Section and the County has approved the Performance Test Plan.
- The DB has received specific authorization from all applicable Governmental Bodies to commence the performance of the Performance Tests and has provided evidence of such authorization to the County.
- The DB has satisfied all pre-Performance Testing requirements of the DB under the Startup Plan.

- The DB has certified that it has complied with the pre-Performance Testing requirements of the Performance Test Plan and the Scope of Work.

SC 8.2.4 - Conduct of Performance Test

The DB will conduct all Performance Tests in accordance with the Contract Standards, including the specific requirements set forth in the Scope of Work (Task 23, Performance Testing) and the approved Performance Test Plan. The DB will coordinate all Performance Testing activities with the County to permit the designated representatives of the County and the County Engineering Representative to inspect the preparations for any Performance Test and to be present for the conducting of any Performance Test for purposes of evaluating compliance with the Performance Test Plan and the integrity of the Performance Test results.

SC 8.2.5 Performance Test Report

Within 30 days following conclusion of the Performance Tests, the DB will furnish the County and the County Engineering Representative with ten copies of a certified written Performance Test report consistent with the requirements specified in Scope of Work (Performance Testing), certified as true, complete and correct by the Design-Build Manager and the Engineer-of-Record. The Performance Test report will describe and certify: (1) the Performance Test conducted; (2) the results of the Performance Test; and (3) the level of satisfaction of the Performance Test procedures specified in the Performance Test Plan and of the Performance Standards specified in the Technical Standards, and all other requirements specified in the Scope of Work. The written test report will include copies of the original data sheets, log sheets, and all calculations used to determine performance during the Performance Test as well as copies of laboratory reports conducted in conjunction with the Performance Test, including all laboratory sampling and test results. No failure of the DB to furnish the certified Performance Test report within the 30-day period following the conclusion of the Performance Test will operate to adjust the scheduled Final Completion date.

SC 8.3 - Concurrence or Disagreement with Test Results

SC 8.3.1 - Achievement Concurrence

If the DB certifies in its written report delivered pursuant to SC 8.2.5 (Performance Test Report) that such full Performance Test Procedures and Standards have been achieved, the County will determine, within 14 days following its receipt of such report, whether it concurs in such certification. If the County states in writing that it concurs with the DB's certification, the Project Improvements will be deemed to have met the Performance Test Procedures and Standards as of the date of the DB's original certification.

SC 8.3.2 - Achievement Disagreement

If the County determines at any time during such 14-day review period that it does not concur with the DB's certification, the County will immediately send written notice to the DB of the basis for its disagreement. In the event of any such non-concurrence by the County, either party may elect to initiate dispute resolution procedures in accordance with Contract Section 14 (Dispute Resolution). Completion of the Performance Test requirement will not be achieved unless the Performance Test, conducted in a unified and continuous manner as provided in the Performance Test Plan, demonstrates that all of the Performance Test Procedures and Standards have been met. In the event the DB, in conducting the Performance Tests, does not successfully meet all of the Performance Test Procedures and Standards, the DB will, at its sole cost and expense, take all action necessary (including making all capital investments, improvements or modifications, repairs and replacements, and operating and management practices changes) in order for the Project Improvements to comply with the Performance Test Procedures and Standards and will re-test the Project Improvements in accordance with the Performance Test Plan. The DB will provide the County with at least three days' written notice of any re-test of the Performance Test.

SC 8.3.3 - Failure to Achieve Performance Test Procedures and Standards

Subject to relief in accordance with the terms and conditions of the Contract in the event of Uncontrollable Circumstances, if, as of the last day of the Extension Period, the Acceptance Tests have not been conducted or the Acceptance Date Conditions have not been achieved, an Event of Default by the DB will be deemed to have occurred under Contract Section 13(a) (Events of Default by the DB) notwithstanding any absence of notice, further cure opportunity, or other procedural rights accorded the DB thereunder, and

the County will thereupon have the right to terminate the Contract upon written notice to the DB. Upon any such termination, the County will have all of the rights provided in Contract Section 13 (Termination for Cause) upon a termination of the DB for cause.

END OF APPENDIX "D" - DESIGN-BUILDER SPECIAL CONDITIONS

APPENDIX "E"

DESIGN-BUILDER GENERAL CONDITIONS

STANDARD GENERAL CONDITIONS OF THE CONTRACT BETWEEN OWNER AND DESIGN-BUILDER

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with one of the three Agreements between Owner and Design-Builder (EJCDC® D-512, D-520, and D-525, 2016 Editions). Their provisions are interrelated and a change in one may necessitate a change in the others. The comments and instructions contained in the Guide to Use of EJCDC Design-Build Documents (EJCDC® D-001, 2016 Edition) are also carefully interrelated with the wording of these General Conditions.

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**STANDARD GENERAL CONDITIONS OF THE
CONTRACT BETWEEN OWNER AND DESIGN-BUILDER**

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STANDARD GENERAL CONDITIONS OF THE CONTRACT BETWEEN OWNER AND DESIGN-BUILDER

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Contract Documents and printed with initial capital letters, the following terms have the meanings indicated which are applicable to both the singular and plural thereof. 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 by Owner prior to the opening of Proposals which clarify, correct, or change the Request for Qualifications, Request for Proposals, or the proposed Contract Documents, including the Conceptual Documents.
 2. *Agreement*: The written instrument, executed by Owner and Design-Builder, that sets forth the Contract Price and Contract Times, identifies the parties, and designates the specific items that are Contract Documents.
 3. *Application for Payment*: The form which is to be used by Design-Builder during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Authorized Representative*: The individual designated by a party to represent it with respect to this Contract, as indicated in the Agreement.
 5. *Change Order*: A document which is signed by Design-Builder and Owner and authorizes an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 6. *Claim*: A demand or assertion by Owner or Design-Builder seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A request or proposal for a Change Order is not a Claim.
 7. *Conceptual Documents*: The documents prepared by or for the Owner to describe the Work to be performed, issued to Proposers during the design-builder selection process, and expressly identified in the Agreement.
 8. *Constituent of Concern*: Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other Laws or Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

9. *Construction*: The part of the Work that consists generally of making physical improvements at the Site, and is the result of performing or furnishing of labor, the furnishing and incorporating of materials and equipment into the Work (including any correction of defective Construction), and the furnishing of services (other than Design Professional Services) and documents, all as required by the Contract Documents and Construction Drawings and Construction Specifications, as duly modified.
10. *Construction Drawings*: Documents prepared by or for Design-Builder, and approved by Owner for purposes of allowing Design-Builder to proceed with the Construction or specific portions of the Construction, and consisting of drawings, diagrams, illustrations, schedules, and other data that graphically show the scope, extent, and character of the Construction (or specific portions of the Construction) to be performed by or for Design-Builder. Construction Drawings are not Contract Documents.
11. *Construction Specifications*: Documents prepared by or for Design-Builder, and approved by Owner for purposes of allowing Design-Builder to proceed with the Construction or a specific portion of the Construction, and consisting of written requirements for materials, equipment, systems, standards, workmanship, and administrative procedures as applied to the Construction (or a specific portion of the Construction). Construction Specifications are not Contract Documents.
12. *Construction Subcontract*: A written agreement between Design-Builder and a Construction Subcontractor for provision of all or a portion of the Construction, and any delegated Design Professional Services.
13. *Construction Subcontractor*: An individual or entity (other than a Supplier) having a direct contract with Design-Builder or with any other Construction Subcontractor for the performance of a part of the Construction, and any delegated Design Professional Services.
14. *Contract*: The entire and integrated written agreement between Owner and Design-Builder concerning the Work.
15. *Contract Documents*: Those items so designated in the Agreement, and which together comprise the Contract.
16. *Contract Price*: The money that Owner has agreed to pay Design-Builder for completion of the Work in accordance with the Contract Documents.
17. *Contract Times*: The numbers of days or the dates stated in the Agreement to (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
18. *Design-Builder*: The individual or entity with which Owner has contracted for performance of the Work, as designated in the Agreement.
19. *Design Professional Services*: That part of the Work comprised of the furnishing of engineering, surveying, architecture, and other design services, and including but not limited to providing research, analysis, and conclusions regarding engineering and related matters; exercising professional judgment with respect to technical issues; the preparation of plans, reports, calculations, models, schematics, drawings, specifications, Design Submittals, the Construction Drawings, Construction Specifications, and other instruments of service; other services included in the Contract Documents and required to be performed by or under the responsible charge of licensed design professionals; and

the review of shop drawings, observation of construction, response to requests for information or interpretation, analysis of the technical aspects of Change Orders, and other engineering and related professional services provided by or for licensed design professionals during Construction.

20. *Design Agreement*: A written agreement between Design-Builder and a design firm or entity for provision of Design Professional Services.
21. *Design Submittal*: A Submittal that pursuant to Laws and Regulations or this Contract must be prepared by or under the supervision of a licensed engineer or other licensed design professional, including drawings, specifications, Construction Drawings, Construction Specifications, and revisions to such documents (but not including Record Documents).
22. *Effective Date of the Contract*: The date indicated in the Agreement on which the Contract becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
23. *Engineer*: The Project Design Professional identified as Engineer in the Agreement, and engaged by Design-Builder to provide engineering and related professional services under a Design Agreement.
24. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*: Any and all applicable laws, statutes, rules, regulations, ordinances, binding resolutions, codes, decrees, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*: Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*: A principal event in the performance of the Work that the Contract requires Design-Builder to achieve by an intermediate completion date or by a time prior to Substantial Completion of Construction.
28. *Notice of Award*: The written notice by Owner to a Proposer stating that Owner will enter into the design-build contract with the Proposer.
29. *Notice to Proceed*: A written notice by Owner to Design-Builder fixing the date on which the Contract Times will commence to run and on which Design-Builder shall start to perform the Work.
30. *Owner*: The individual or entity with which Design-Builder has contracted regarding the Work, and which has agreed to pay Design-Builder for the performance of the Work, pursuant to the terms of the Contract.
31. *Owner's Consultant*: An individual or entity with which the Owner has contracted to furnish services (typically including planning, preparation of Conceptual Documents, and

advisory services) to Owner with respect to the Project, and which is identified as such in the Agreement.

32. *Owner's Site Representative*: A representative of Owner at the Site, as indicated in Paragraph 10.05.
33. *Project*: The total undertaking to be accomplished for Owner by engineers, consultants, Design-Builder, subcontractors, and others, including planning, study, design, construction, testing, start-up, and commissioning, and of which the Work to be performed under the Contract Documents is a part.
34. *Project Design Professionals*: The Engineer and any other independent entities or individuals, or employees of Design-Builder, engaged by Design-Builder or a Construction Subcontractor to provide Design Professional Services with respect to a portion of the Work.
35. *Proposal*: The documents submitted by Design-Builder in response to the Request for Proposals, setting forth technical concepts, proposed prices, and other conditions for the Work to be performed, and stating any proposed revisions, modifications, clarifications, exceptions, or supplements to the proposed Contract Documents.
36. *Proposal Amendment*: A Contract Document that is prepared after submittal of Design-Builder's Proposal; identifies mutually agreed revisions, modifications, exceptions, supplements, and clarifications to the Proposal or proposed Contract Documents; and is executed by Owner and Design-Builder.
37. *Proposer*: An entity that submits a Statement of Qualifications or Proposal to Owner.
38. *Record Documents*: The record copy of all Construction Drawings, Construction Specifications, Addenda, Change Orders, Work Change Directives, and approved Submittals maintained by Design-Builder at the Site, including any annotations to such documents made by Design-Builder during Construction.
39. *Record Drawings and Record Specifications*: Documents depicting the completed Project, or a specific portion of the completed Project, based on or comprised of the Record Documents delivered to Owner by Design-Builder at the completion of the Construction.
40. *Request for Proposals*: The document prepared by or for Owner specifying and describing Owner's objectives, the procedures to be followed in preparing and submitting a Proposal, and the process for evaluating Proposals and awarding a contract.
41. *Request for Qualifications*: The document prepared by or for Owner requesting that Proposers submit a Statement of Qualifications with respect to their candidacy for selection as Design-Builder.
42. *Schedule of Values*: A schedule, prepared and maintained by Design-Builder, allocating portions of the Contract Price to various portions of the Work, and used as the basis for reviewing Design-Builder's Applications for Payment.
43. *Site*: Lands or areas indicated in the Contract Documents as being furnished by Owner upon which Construction is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for use of Design-Builder.
44. *Statement of Qualifications*: The document submitted by a Proposer in response to the Request for Qualifications, including any completed forms, attachments, and exhibits.

45. *Submittal*: A written or graphic document, prepared by or for Design-Builder, which the Contract Documents require the Design-Builder to submit to the Owner. Submittals may include reports, preliminary drawings and specifications, cost estimates, proposed Construction Drawings and Construction Specifications, progress schedules, cash flow projections, Schedules of Values, shop drawings, product data, samples, delegated designs, certifications, proposed modifications to the Construction Drawings and Construction Specifications, results of tests and evaluations, results of source quality control testing and inspections, results of field or Site quality control testing and evaluations, sustainable design information, information on special procedures, operations and maintenance data, sustainable design closeout information, record documents, records of spare parts and extra stock materials, and other such documents required by the Contract Documents. Submittals, whether approved or accepted by Owner or not, are not Contract Documents. Claims, notices, Change Orders, Applications for Payment, and requests for information/interpretation are not Submittals.
46. *Substantial Completion*: The time at which the Construction (or a specified part thereof) has progressed to the point where it is sufficiently complete, in accordance with the Contract Documents, so that the Construction (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 Construction refer to Substantial Completion thereof.
47. *Supplementary Conditions*: The part of the Contract Documents which amends or supplements these General Conditions.
48. *Supplier*: A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Design-Builder or with any Construction Subcontractor to furnish materials or equipment to be incorporated in the Work by Design-Builder or a Construction Subcontractor, and any lessor of rental equipment used by Design-Builder or a Construction Subcontractor during Construction at the Site.
49. *Technical Data*: Data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding (a) subsurface conditions at the Site, (b) physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), or (c) environmental conditions at the Site, that are set forth in any geotechnical or environmental report prepared for the Project and relied upon by Design-Builder in agreeing to a price (either stipulated, or a Guaranteed Maximum Price) that includes Construction.
50. *Underground Facilities*: All underground lines, pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems, including but not limited to those that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, fire or police signal systems, or traffic or other control systems; and any encasements containing such facilities or systems.
51. *Underground Facilities Data*: Information and data shown or indicated in the Contract Documents or otherwise provided to Design-Builder by Owner with respect to existing Underground Facilities at or adjacent to the Site.
52. *Unit Price Work*: Work to be paid for on the basis of unit prices.

53. *Work*: The entire design and construction or the various separately identifiable parts thereof required to be performed or furnished by Design-Builder under the Contract Documents. Work includes and is the result of performing or furnishing Design Professional Services and Construction required by the Contract Documents and all labor, services, and documentation necessary to produce such Design Professional Services and Construction; furnishing, installing, and incorporating all materials and equipment into such Construction; and related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
54. *Work Change Directive*: A written directive to Design-Builder, issued on or after the Effective Date of the Contract, signed by Owner, ordering an addition, deletion or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B are not defined terms that require initial capital letters, but when used in the Contract Documents have the indicated meanings.
- B. *Intent of Certain Terms or Adjectives*:
1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.
 2. The word "defective," when modifying the word "Construction" refers to Construction that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Owner's final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion) provided that the defect was not caused by Owner.
 3. The word "furnish," when used in connection with services, materials, or equipment, shall mean 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.
 4. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials or equipment or equipment complete and ready for intended use.
 5. The words "perform" or "provide" when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 6. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Design-Builder, "provide" is implied.
 7. 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 that meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Design-Builder delivers the executed Agreements to Owner, Design-Builder shall also deliver to Owner such Bonds as Design-Builder may be required to furnish in accordance with Paragraph 6.01.A.
- B. *Evidence of Insurance*: Before any Work is started, Design-Builder and Owner shall each deliver to the other those certificates of insurance that Design-Builder and Owner respectively are required to purchase and maintain in accordance with Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Design-Builder four printed copies of the Contract (including one fully executed 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. Owner shall make such original printed record version of the Contract available to Design-Builder for review.

2.03 *Conceptual Documents*

- A. *Design-Builder's Review of Conceptual Documents*:
 - 1. Design-Builder acknowledges that the Conceptual Documents furnished by Owner are preliminary and incomplete, and subject to stated limitations and reservations.
 - 2. Design-Builder shall carefully review, analyze, and verify the contents and suitability of the Conceptual Documents before proceeding with the Work (including but not limited to the Design Professional Services).
 - 3. Design-Builder shall promptly report in writing to Owner any conflict, error, ambiguity, or discrepancy that Design-Builder may discover in the Conceptual Documents, whether during such review or at any later point.
 - 4. Upon receipt of a report from Design-Builder that there is a conflict, error, ambiguity, or discrepancy in the Conceptual Documents, Owner shall either provide a written interpretation, clarification, or correction to Design-Builder, or authorize Design-Builder to correct or resolve the issue under a Change Order providing an equitable adjustment in Contract Times or Contract Price, or both.
 - 5. Design-Builder shall not proceed with any Work affected by a reported conflict, error, ambiguity, or discrepancy in the Conceptual Documents until the issue is resolved.
- B. Owner shall not be responsible for any deficiency in the Conceptual Documents that Design-Builder does not discover or report to Owner.
- C. Subject to the foregoing review and reporting obligations, Design-Builder may use the Conceptual Documents as a partial basis for performing or furnishing Design Professional Services, including the preparation of Design Submittals such as the Construction Drawings and Construction Specifications, but despite any such use of the Conceptual Documents the Design-Builder nonetheless shall be responsible to Owner for the quality and soundness of the Design Professional Services.

2.04 *Before Starting the Work*

- A. *Preliminary Schedules:* Within 10 days after commencement of the Contract Times (unless otherwise specified in the Contract Documents), Design-Builder shall submit the following to Owner for Owner's timely review:
1. A preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. A preliminary schedule of Submittals (including Design Submittals) which will list each required Submittal and the times for submitting, reviewing, and processing each Submittal;
 3. A preliminary Schedule of Values for all of the Work which will include quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work; and
 4. A preliminary cash flow projection estimating that portion of the Contract Price to be due during each month of performance.

2.05 *Authorized Representatives*

- A. The Authorized Representative for each party has been designated in the Agreement. A party may change its Authorized Representative at any time by giving notice to the other party of the name, mailing and delivery addresses, e-mail address, and telephone numbers of the new Authorized Representative.

2.06 *Initial Conference*

- A. Within 20 days after the Contract Times start to run, Design-Builder will arrange a conference attended by Owner and Design-Builder and others as appropriate to establish a working understanding among the parties as to the Work and to discuss the design concepts, schedules referred to in Paragraph 2.04.A, procedures for handling Submittals, processing Applications for Payment, maintaining required records, and other matters.

2.07 *Review of Schedules*

- A. Not less than 10 days before submission of the first Application for Payment (unless otherwise provided in the Contract Documents), Design-Builder will arrange a conference attended by Design-Builder, Owner, and others as appropriate to review and discuss the schedules submitted in accordance with Paragraph 2.04.A. Design-Builder shall have an additional 10 days after the conference to make corrections and adjustments and to complete and resubmit the schedules for Owner's acceptance. No progress payment shall be made to Design-Builder until Design-Builder submits schedules that comply with the following requirements:
1. Design-Builder's progress schedule shall provide an orderly progression of the Work to completion within any specified Milestones and the Contract Times.
 2. Design-Builder's schedule of Submittals shall provide a workable arrangement for submitting, reviewing, and processing Submittals in accordance with Article 8.
 3. Design-Builder's Schedule of Values shall provide a reasonable allocation of the Contract Price to component parts of the Work.

2.08 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner and Design-Builder may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner and Design-Builder shall jointly develop such protocols.
- C. Unless expressly stated otherwise elsewhere in this Contract, Design-Builder shall not be obligated to furnish documents (including but not limited to Construction Drawings, Construction Specifications, or Record Drawings and Record Specifications) to Owner in any executable, native-file format.
- D. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Contract Documents*

- A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- B. It is the intent of the Contract Documents to require the design and construction of a functionally complete project (or part thereof):
- C. Design-Builder shall prepare or furnish Construction Drawings and Construction Specifications that are in accord with the Contract Documents and that describe a functionally complete Project (or part thereof) to be constructed in accordance with such Construction Drawings and Construction Specifications, as duly modified.
- D. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
- E. Design-Builder will furnish or perform all labor, documentation, services (including professional services), materials, and equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result whether or not specifically called, for at no additional cost to Owner.

3.02 *Reference Standards*

- A. *Standards, Specifications, Codes, Laws or Regulations:*
 - 1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect on the Effective Date except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard, specification, manual, or code, or instruction of a Supplier, shall be effective to change the duties and responsibilities of Owner, Design-

Builder, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Owner or its officers, directors, members, partners, employees, agents, consultants, or subcontractors any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Resolving Discrepancies*

- A. If there is a discrepancy between (1) the Conceptual Documents or other Contract Documents issued with the Request for Qualifications or Request for Proposals and (2) the Proposal, the Proposal will control.
- B. If there is a discrepancy between (1) the Conceptual Documents, other Contract Documents issued with the Request for Qualifications or Request for Proposals, or the Proposal and (2) the Proposal Amendment, the Proposal Amendment will control.
- C. If there is a discrepancy between (1) the Contract Documents and (2) the Construction Drawings and Construction Specifications, the Contract Documents will control unless Design-Builder gave notice of the discrepancy in a Submittal, and Owner approved the Submittal, pursuant to the provisions of Article 8.

3.04 *Ownership and Reuse of Documents*

- A. All documents prepared for or furnished to Owner by Design-Builder pursuant to this Contract (including but not limited to Design Submittals) are instruments of service. With respect to such documents:
 - 1. Design-Builder shall have and retain the ownership, title, and property rights, including copyright, patent, intellectual property, and common law rights, in the documents.
 - 2. During the course of the Project, Design-Builder will provide copies of Design Submittals to Owner for purposes of review and comment. Owner may retain copies of such documents for its records.
 - 3. Owner may use its copy of the Record Drawings and Record Specifications for Owner's purposes in operating and maintaining the constructed facilities.
 - 4. Upon Owner's termination of this Contract for cause pursuant to Paragraph 15.02, Owner shall receive a limited, non-exclusive license to use any completed Design Submittals in continuing the Project, subject to the limitations in this Paragraph 3.04.
 - 5. The documents prepared or furnished by Design-Builder under this Contract, regardless of ownership, transfer, license, completion status, or termination of the Contract, are for Design-Builder's use, and are not intended or represented to be suitable for use on the Project by Owner or any party other than Design-Builder, or for reuse by Owner or others on extensions of the Project or on any other project, except as otherwise stated in this Contract. Any use or reuse by Owner or others on Owner's behalf will be at Owner's sole risk, and without liability or legal exposure to Design-Builder, the Project Design Professionals, or their subconsultants, and Owner shall indemnify and hold harmless Design-Builder, the Project Design Professionals, and their subconsultants from all claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from any such use or reuse.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times*

- A. The Contract Times will commence to run on the Effective Date of the Contract.

4.02 *Starting the Work*

- A. Design-Builder shall start to perform the Work as of the Effective Date of the Contract. No Construction shall be done at the Site prior to the Effective Date of the Contract.

4.03 *Progress Schedule*

- A. Owner may rely on the progress schedule established in accordance with Paragraph 2.04, as duly adjusted, in planning and conducting ongoing operations and other work at the Site.
- B. Design-Builder shall adhere to the progress schedule established in accordance with Paragraph 2.04 as it may be adjusted from time to time, as provided below:
 - 1. Design-Builder shall submit to Owner proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Owner shall accept such adjustments provided that Owner, in planning and conducting ongoing operations and other work at the Site, has not reasonably relied on the schedule element that is proposed to be adjusted. If Owner has so relied, then Owner and Design-Builder shall promptly meet and seek a resolution that addresses the objectives of both parties, or adjust the Contract Price.
 - 2. Design-Builder shall submit proposed adjustments in the progress schedule that will change the Contract Times (including Milestones) in accordance with the requirements of Paragraph 11.06. Such adjustments may only be made by a Change Order.
- C. *Continuing the Work:* Design-Builder shall continue the Work and adhere to the progress schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as Design-Builder and Owner may otherwise agree in writing.

4.04 *Delays in Design-Builder's Progress*

- A. If Owner or anyone for whom Owner is responsible delays, disrupts, or interferes with the performance or progress of the Work, then Design-Builder shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Design-Builder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.
- B. Design-Builder shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference within the control of Design-Builder. Delay, disruption, and interference attributable to and within the control of a Project Design Professional, Construction Subcontractor, or Supplier shall be deemed to be delays within the control of Design-Builder.
- C. If Design-Builder's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Design-Builder, and those for which they are responsible, then Design-Builder shall be entitled to an equitable adjustment in Contract Times. Design-Builder's entitlement to such an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times. Such an adjustment shall be Design-Builder's

sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 9); and
 4. Acts of war or terrorism.
- D. 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 reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 9.03 governs 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.
- F. Design-Builder shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Design-Builder.
- G. If Design-Builder seeks an adjustment in Contract Price or Contract Times under this paragraph, Design-Builder shall submit a request for a Change Order to Owner within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Design-Builder of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Design-Builder will have to comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Design-Builder with a current statement of record legal title and legal description of the lands upon which the Construction is to be performed 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 or Regulations.
- C. Design-Builder 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. Design-Builder shall confine construction equipment, the storage of materials and equipment, and the operations of construction workers to the Site and other areas permitted by Laws or Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Design-Builder

shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of Work, Design-Builder shall promptly settle with such other party by negotiation, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law.
 3. To the fullest extent permitted by Laws or Regulations, Design-Builder shall indemnify and hold harmless Owner, Owner's consultants, and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration or other dispute resolution costs) arising out of or resulting from any claim brought by any such owner or occupant against Owner, or any other party indemnified hereunder to the extent caused by or based upon Design-Builder's performance of the Construction.
- B. *Removal of Debris:* During the performance of the Construction, Design-Builder shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Construction. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws or Regulations.
- C. *Cleaning:* Prior to Substantial Completion, Design-Builder shall clean the Site and make it ready for utilization by Owner. At completion of Construction, Design-Builder shall remove all tools, appliances, construction equipment, temporary construction and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Design-Builder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Design-Builder subject any part of the Construction or adjacent property to stresses or pressures that will endanger it.

5.03 *Reference Points*

- A. Design-Builder shall be responsible for laying out the Work and shall protect and preserve reference points and property monuments established by Owner, and shall make no changes or relocations of such reference points or monuments without the prior written approval of Owner. Design-Builder shall report to Owner whenever any reference point or property monument is lost or destroyed, or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

5.04 *Differing Site Conditions*

- A. Design-Builder shall promptly, and before the conditions are disturbed, give a written notice to Owner of (i) subsurface or latent physical conditions at the Site (whether discovered during investigation of the Site or during Construction) which differ materially from those indicated in the Contract Documents, or in any Technical Data, or (ii) unknown physical conditions at the Site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character called for by the Contract Documents.

- B. Owner will investigate the Site conditions promptly after receiving the notice. Design-Builder shall supplement the notice by promptly submitting to Owner any additional information regarding schedule and cost impacts, and a specific request for a Change Order. Owner shall then make a determination regarding the site condition and the impact, if any, on Contract Price and Contract Times. If the conditions do materially so differ and cause an increase or decrease in the Design-Builder's cost of, or the time required for, performing any part of the Work, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the Contract Price or Times modified in writing by Change Order in accordance with Article 11.
- C. No request by Design-Builder for an equitable adjustment under this Paragraph 5.04 shall be allowed unless Design-Builder has given the written notice required.
- D. The provisions of this Paragraph 5.04 are not intended to apply to a Hazardous Environmental Condition or Underground Facility uncovered or revealed at the Site.

5.05 *Underground Facilities*

- A. *Procedure for Identifying Underground Facilities:* Promptly after the Effective Date of the Contract, Design-Builder shall review the Underground Facilities Data furnished by Owner and use ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," as a basis for establishing a procedure ("Underground Facilities Procedure") for the further identification, investigation, and mapping of Underground Facilities at or adjacent to the Site. Design-Builder shall establish and use the Underground Facilities Procedure to aid in the provision of Design Professional Services and the performance of Construction, and to reduce and manage risks associated with Underground Facilities. Such Underground Facilities Procedure shall take into account the Site and the nature of the Project.
 - 1. The Underground Facilities Procedure shall include a plan to keep Underground Facilities information current as Design-Builder proceeds with the provision of Design Professional Services, and to add new or relocated Underground Facilities information to the base utility or Site drawings.
 - 2. To manage the potential impact of design changes on Underground Facilities, Design-Builder shall modify or reapply the Underground Facilities Procedure as the design progresses and changes.
- B. *Design-Builder's Responsibilities:* Unless otherwise expressly provided in the Contract, Design-Builder shall have full responsibility for the following; and, subject to the provisions of Paragraphs 5.05.C, D, and E, the cost of all of the following will be included in the Contract Price:
 - 1. Establishing and executing the Underground Facilities Procedure referred to in Paragraph 5.05.A, including updating, modification, and reapplication duties;
 - 2. Coordinating the Work with the owners (including Owner) of such Underground Facilities, during the provision of Design Professional Services and Construction;
 - 3. Verifying the actual location of specific Underground Facilities through exposure, as needed for the Design Professional Services;
 - 4. Complying with applicable state and local utility damage prevention Laws and Regulations during Construction; and

5. The safety and protection of all existing Underground Facilities at the Site, and repairing any damage to such Underground Facilities resulting from the Construction, subject to the provisions of Paragraph 5.05.D.
- C. *Results of Design-Builder's Execution of Underground Facilities Procedure:* If, during the execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, the Design-Builder identifies an Underground Facility that was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, causing an increase or decrease in the Design-Builder's cost of, or the time required for, providing Design Professional Services or performing the Construction, then Design-Builder shall submit to Owner a request for a Change Order seeking an equitable adjustment to the Contract Price or Times under this clause. Such request shall be made within 30 days of the identification of the Underground Facility in question.
- D. *Underground Facility Found During Construction:* If Design-Builder believes that an Underground Facility that is uncovered, exposed, or revealed at the Site during Construction was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, and also that such Underground Facility was not identified or mapped with reasonable accuracy despite Design-Builder's adequate establishment and execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, then Design-Builder shall promptly give written notice to Owner, and supplement the notice by submitting to Owner a request for a Change Order seeking an equitable adjustment to the Contract Price or Times under this clause. Such request shall be made within 30 days of the uncovering or revealing of the Underground Facility in question.
1. *Owner's Review:* Owner will investigate the Underground Facility found during Construction promptly after receiving the notice. If Owner concurs with Design-Builder that the Underground Facility that is uncovered, exposed, or revealed at the Site was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, and further was not identified or mapped with reasonable accuracy despite Design-Builder's adequate establishment and execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, causing an increase or decrease in the Design-Builder's cost of, or the time required for, performing any part of the Work, whether or not changed as a result of the actual location, then an equitable adjustment shall be made under this clause and the Contract Price or Times modified in writing by Change Order in accordance with Article 11. If Owner does not concur with Design-Builder, then Owner shall so indicate in writing, with a specific explanation of the reason for non-concurrence.
 2. No request by Design-Builder for an equitable adjustment under Paragraph 5.05.D shall be allowed unless Design-Builder has given the written notice required.
- E. *Inadequate Establishment or Execution of Underground Facilities Procedure:* If Design-Builder does not establish an Underground Facilities Procedure that is (1) adequate for the Site and the nature of the Project and (2) consistent with the guidelines set forth in ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," or Design-Builder does not adequately execute a duly established Underground Facilities Procedure, then Design-Builder shall bear all costs associated with the presence of an Underground Facility that was not identified or located with reasonable accuracy, including but not limited to delay, redesign, relocation, and increased Construction costs, if such Underground Facility

would have been identified and located with reasonable accuracy by an adequate and properly executed Underground Facilities Procedure that was consistent with ASCE 38.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reliance by Design-Builder on Technical Data Authorized:* Design-Builder may rely on the accuracy of the Technical Data with respect to environmental conditions at the Site.
- B. Design-Builder 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.
- C. Design-Builder shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Design-Builder, Project Design Professionals, Construction Subcontractors, Suppliers, or anyone else for whom Design-Builder 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.
- D. If Design-Builder encounters, uncovers, or reveals a Hazardous Environmental Condition (whether during Site investigation or during Construction) whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Design-Builder or anyone for whom Design-Builder is responsible creates a Hazardous Environmental Condition, then Design-Builder 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 7.16); and (3) notify Owner (and promptly thereafter confirm such notice in writing). Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take corrective action, if any, and take such actions as are necessary to permit Owner to timely obtain required permits and provide Design-Builder the written notice required by Paragraph 5.06.E. If Design-Builder or anyone for whom Design-Builder 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.
- E. Design-Builder 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 Design-Builder 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.
- F. If after receipt of such written notice Design-Builder 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 the portion of the Work that is in the area affected by such condition shall 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 9.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Design-Builder, Project Design Professionals, Construction Subcontractors, 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 engineers, architects, attorneys, and other professionals and all court or 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 Contract Documents or the Technical Data, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Design-Builder or by anyone for whom Design-Builder is responsible. Nothing in this Paragraph 5.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Design-Builder shall indemnify and hold harmless Owner 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 engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the Design-Builder's failure to control, contain, or remove a Constituent of Concern brought to the Site by Design-Builder or by anyone for whom Design-Builder is responsible, or to a Hazardous Environmental Condition created by Design-Builder or by anyone for whom Design-Builder is responsible. Nothing in this Paragraph 5.06.H shall obligate Design-Builder to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Design-Builder shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Design-Builder's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due, or until completion of the correction period specified in Paragraph 14.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other specific provisions of the Contract. Design-Builder shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall 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 (as amended and supplemented) 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Design-Builder 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.
- D. If the surety on a bond furnished by Design-Builder 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 Design-Builder shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise

to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.

- E. If Design-Builder has failed to obtain a required bond, Owner may exclude the Design-Builder from the Site and exercise Owner's termination rights under Article 15.
- F. Upon request to either Owner or Design-Builder from any Construction Subcontractor, Project Design Professional, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, the recipient of the request shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Design-Builder 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 Design-Builder 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 shall have an A.M. Best rating of A-VII or better.
- C. All insurance required by the Contract to be purchased and maintained by Design-Builder shall be primary and without contribution by insurance maintained by Owner.
- D. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly permitted in the Supplementary Conditions.
- E. Design-Builder shall require (a) its Construction Subcontractors and Engineer (and any other Project Design Professional that is an independent individual or entity) to purchase and maintain commercial general liability, automobile liability, workers' compensation, employer's liability, professional liability (as applicable), and umbrella or excess liability insurance, and (b) its Construction Subcontractors to purchase and maintain contractor's pollution liability insurance. All such required insurance shall meet the same requirements for the applicable category of insurance established in this Contract for Design-Builder, unless otherwise indicated in the Supplementary Conditions.
- F. Design-Builder shall deliver to Owner, with copies to each additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Design-Builder has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Design-Builder shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, documentation of applicable self-insured retentions (if permitted) and deductibles, and evidence of insurance required to be purchased and maintained by Design-Builder's Construction Subcontractors, Engineer, and any other Project Design Professional that is an independent individual or entity. Design-Builder may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- G. Owner shall deliver to Design-Builder, with copies to each additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Design-Builder or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- H. Failure of Owner or Design-Builder to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Design-Builder to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- I. If either party does not purchase or maintain all of 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 change in the required coverage.
- J. If Design-Builder has failed to obtain and maintain required insurance, Owner may exclude the Design-Builder from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 15.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent 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 shall be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Design-Builder or Design-Builder's interests.
- M. The insurance and insurance limits required herein shall not be deemed as a limitation on Design-Builder's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Design-Builder's Insurance*

- A. *Workers' Compensation and Employer's Liability:* Design-Builder 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 and Jones Act coverage (if applicable).
 - 3. Claims for damages because of bodily injury, occupational sickness or disease, or death of Design-Builder's employees (by stop-gap endorsement in monopolist worker's compensation states).
 - 4. Foreign voluntary worker compensation (if applicable).

- B. *Commercial General Liability—Claims Covered:* Design-Builder shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Design-Builder, on an occurrence basis, against:
1. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Design-Builder's employees.
 2. Claims for damages insured by reasonably available personal injury liability coverage.
 3. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Design-Builder's commercial liability policy shall 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:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Design-Builder 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, to the extent permitted by law, including but not limited to coverage of Design-Builder's contractual indemnity obligations in Paragraph 7.19.
 3. Broad form property damage coverage.
 4. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Design-Builder demonstrates to Owner that the specified ISO endorsements are not commercially available, then Design-Builder may satisfy this requirement by providing equivalent endorsements.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, shall not include any of the following:
1. Any modification of the standard definition of "insured contract."
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs.
 4. Any exclusion of coverage relating to earth movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability.

6. Any limitation or exclusion based on the nature of Design-Builder's work.
 7. Any professional liability exclusion broader in effect than ISO form CG 22 79 07 98.
- E. *Automobile liability:* Design-Builder 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 shall be written on an occurrence basis.
- F. *Umbrella or excess liability:* Design-Builder 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. Subject to industry-standard exclusions, the coverage afforded shall be procured on a "follow the form" basis as to each and every one of the underlying policies. Design-Builder may meet the combined limits of insurance (underlying policy plus applicable umbrella or excess) specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policies and an umbrella or excess liability policy that follows the form of the underlying policy, as specified herein.
- G. *Contractor's pollution liability insurance:* Design-Builder 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 Design-Builder's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- H. *Additional insureds:* The Design-Builder's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and any individuals or entities identified as required additional insureds in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Design-Builder shall obtain all necessary endorsements to support these requirements.
- I. *Professional liability insurance:*
1. Design-Builder shall be responsible for purchasing and maintaining professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which Design-Builder is legally liable.
 2. If in the performance of this Contract any Design Professional Services, or other professional engineering or similar services, are to be performed by an independent design professional, under direct contract to Design-Builder or at any lower contractual tier, then Design-Builder shall be responsible for assuring that such independent design professional purchases and maintains professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the independent design professional is legally liable.
 3. If a Construction Subcontractor at any tier will provide or furnish design, engineering, or other similar professional services under this Contract, as the result of a delegation of

professional design responsibilities or otherwise, then Design-Builder shall assure that such Construction Subcontractor purchases and maintains applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable.

4. Any professional liability insurance required under this Contract shall be maintained throughout the duration of the Contract and for a minimum of three years after Substantial Completion. For each claims-made professional liability policy furnished and maintained to satisfy the requirements of this Paragraph 6.03.I, the retroactive date on the policy shall pre-date the commencement of furnishing services on the Project.
- J. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
1. Include at least the specific coverages provided in this Article.
 2. Be written for not less than the limits of coverage provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 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 Design-Builder. Within 3 days of receipt of any such written notice, Design-Builder shall provide a copy of the notice to Owner and each other insured under the policy.
 4. Remain in effect at least until final payment and Design-Builder's departure from the Site (and longer if expressly required elsewhere in this Contract), and at all times thereafter when Design-Builder may be correcting, removing, or replacing defective Construction as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. Provide applicable protection from claims that may arise out of or result from the performance of the Work, whether such performance is by Design-Builder, a Project Design Professional, any Construction Subcontractor or Supplier, or anyone directly or indirectly retained by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.

6.04 *Owner's Liability Insurance*

- A. In addition to the liability insurance required to be provided by Design-Builder, the Owner, at Owner's option and expense, may purchase and maintain Owner's own liability insurance to protect Owner against claims which may arise with respect to the Project.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Design-Builder, and Design-Builder cannot rely upon Owner's liability policies for any of Design-Builder's obligations to the Owner or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Design-Builder shall purchase and maintain builder's risk insurance upon the Construction on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. Include the Owner and Design-Builder as named insureds, and all Construction Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
2. Be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Construction, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. 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 may be provided through other insurance policies acceptable to Owner and Design-Builder.
3. Cover, as insured property, at least the following: (a) the Construction (including but not limited to all buildings, structures, foundations, excavations, underground property, pilings, underground pipes, flues, drains, wiring, cables, and the like) and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into the Construction, 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 Construction but which are intended to provide working access to the Site, or to the Construction, or which are intended to provide temporary support for the Construction, including scaffolding, form work, fences, shoring, lighting, cribbing, falsework, and temporary structures.
4. Cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. 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 premises of a manufacturer or Supplier).
6. Extend to cover damage or loss to insured property while in transit.
7. Allow for partial occupation or use of the Construction by Owner, such that those portions of the Construction that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
8. Provide for the waiver of claims and waiver of the insurer's subrogation rights, as set forth in Paragraph 6.06.
9. Provide primary coverage for all losses and damages caused by the perils or causes of loss covered.

10. Not include a co-insurance clause.
 11. Include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. Include performance/hot testing and start-up.
 13. Be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Construction by Owner, until the Construction is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days' prior written notice has been given to the purchasing policyholder. Within 3 days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Construction prior to Substantial Completion of all the Work as provided in Paragraph 14.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Design-Builder) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Construction that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Construction not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Design-Builder elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Design-Builder's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Design-Builder, a Construction Subcontractor, or an employee of Design-Builder or a Construction Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.
- G. *Loss of Use and Delay in Start-up:* Unless otherwise expressly stated elsewhere in this Contract, the Owner is responsible, at its option, for purchase and maintenance of insurance to protect Owner against the loss of use or delays in start-up caused by property damage.

6.06 Waiver of Rights

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against any Project Design Professional or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Design-Builder 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 or causes of loss covered by such policies and any other property insurance applicable to the Construction; and, in addition, waive all such rights against the Project Design Professionals, their consultants, all Construction Subcontractors, all individuals or entities identified in the Supplementary Conditions as 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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Design-Builder as trustee or fiduciary, or otherwise payable under any policy so issued.

- B. Owner waives all rights against Design-Builder, the Project Design Professionals, and the Construction Subcontractors, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. Loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Construction caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. Loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 14.04, after Substantial Completion pursuant to Paragraph 14.03, or after final payment pursuant to Paragraph 14.06.
- C. Any insurance policy maintained by Owner covering any loss, damage, or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that the insured is allowed to waive the insurer's rights of subrogation against Design-Builder, Project Design Professionals, Construction Subcontractors, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, in a written contract executed prior to the loss, damage, or consequential loss.
- D. Design-Builder shall be responsible for assuring that each Construction Subcontract contains provisions whereby the Construction Subcontractor waives all rights against Owner, Design-Builder, all individuals or entities identified in the Supplementary Conditions as insureds, the Project Design Professionals, 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 of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Project.

6.07 *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 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall 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 6.05 shall maintain such funds 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, the damaged Construction shall be repaired or replaced, the money so received applied on account thereof, and the Construction and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – DESIGN-BUILDER'S RESPONSIBILITIES

7.01 *Design Professional Services*

- A. Design-Builder shall provide the Design Professional Services needed to successfully perform and complete the Work required under this Contract.
- B. *Standard of Care:* The standard of care for all Design Professional Services performed or furnished by Design-Builder under this Contract will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality.

7.02 *Construction*

- A. Design-Builder shall perform and furnish the Construction pursuant to the Contract Documents, the Construction Drawings, and the Construction Specifications, as duly modified.
- B. Design-Builder shall keep Owner advised as to the progress of the Construction.

7.03 *Supervision and Superintendence of Construction*

- A. Design-Builder shall supervise, inspect, and direct the Construction competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to provide the Construction in accordance with the Contract Documents. Design-Builder shall be solely responsible for the means, methods, techniques, sequences, and procedures of Construction.
- B. At all times during the progress of Construction, the Design-Builder shall assign a competent resident superintendent who shall not be replaced without written notice to Owner except under extraordinary circumstances.

7.04 *Labor; Working Hours*

- A. Design-Builder shall provide competent, suitably qualified personnel to perform the Work as required by the Contract Documents. Design-Builder shall at all times maintain good discipline and order at the Site.
- B. 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 indicated in the Contract Documents, and in the absence of any Laws or Regulations to the contrary, Design-Builder may perform the Construction on legal holidays, during any or all hours of the day, and on any or all days of the week, at Design-Builder's sole discretion.

7.05 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Design-Builder shall furnish or cause to be furnished 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.
- B. All materials and equipment incorporated into the Work shall be as specified by Owner or in the Construction Drawings or Construction Specifications, and unless specified otherwise shall be new and of good quality. All warranties and guarantees specifically called for by the Contract Documents shall expressly run to the benefit of Owner. If required by Owner, Design-Builder 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 shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

7.06 *"Or Equals" and Substitutions*

- A. If an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, then during the preparation of the proposed Construction Drawings and Construction Specifications, the Design-Builder may request that Owner authorize the use of other items of material or equipment, or items from other proposed suppliers, by including the proposed items in the proposed Construction Drawings or Construction Specifications, with required notice to Owner that the Submittal contains a variation from the Contract Documents. Owner in its sole discretion may approve the use of the item if Owner determines that the item is functionally equal to that named and sufficiently similar so that no change in related Work will be required, taking into consideration whether the 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.
- B. *Effect of Owner's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- C. *Substitutes:* During the preparation of the proposed Construction Drawings and Construction Specifications, the Design-Builder may propose a substitute to an item of material or equipment that is required to be furnished by the Contract Documents. Any such proposal shall be made in a transmittal to Owner that is separate from and independent of any Design Submittals. The proposal shall describe the advantages, disadvantages, and changes in Contract Price or Contract Time associated with the proposed substitute. Approval of the

proposed substitute shall be at Owner's sole discretion. If approved, the substitute item shall be incorporated in the Construction Drawings and Construction Specifications.

- D. *Design Professional Review:* Before Design-Builder transmits its proposal to Owner, the Project Design Professional that designed the portion of the Work affected by the proposed "or equal" or substitute shall review and approve the proposal.
- E. *Construction Drawings and Construction Specifications:* "Or equal" or substitute proposals with respect to items of material or equipment that are required in the Construction Drawings and Construction Specifications shall be considered proposed modifications of the Construction Drawings and Construction Specifications, and shall be governed by the provisions of Paragraph 8.02.H.

7.07 *Concerning Project Design Professionals, Construction Subcontractors, Suppliers, and Others*

- A. Design-Builder may retain Project Design Professionals, Construction Subcontractors, and Suppliers for the performance of parts of the Work. Such Project Design Professionals, Construction Subcontractors, and Suppliers must be acceptable to Owner.
- B. Design-Builder shall retain specific Project Design Professionals, Construction Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required to do so by the Contract Documents (including but not limited to the Proposal Amendment) as of the Effective Date.
- C. Prior to entry into any binding Design Agreement, Construction Subcontract, or purchase order, Design-Builder shall submit to Owner the identity of the proposed Project Design Professional, Construction Subcontractor, or Supplier (unless Owner has already deemed such proposed contractual party acceptable, during the bidding process or otherwise). Such proposed contractual party shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- D. Owner may require the replacement of any Project Design Professional, Construction Subcontractor, Supplier, or other entity retained by Design-Builder to perform any part of the Work solely on the basis of substantive, reasonable objection after due investigation. Design-Builder shall submit an acceptable replacement for the rejected Project Design Professional, Construction Subcontractor, Supplier, or other entity.
- E. If Owner requires the replacement of any Project Design Professional, Construction Subcontractor, Supplier, or other entity retained by Design-Builder to perform any part of the Work, then Design-Builder shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement.
- F. No acceptance by Owner of Engineer or of any Project Design Professional, Construction Subcontractor, Supplier, or other entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- G. Design-Builder shall be fully responsible to Owner for all acts and omissions of the Project Design Professionals, Construction Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work, just as Design-Builder is responsible for Design-Builder's own acts and omissions.

- H. Design-Builder shall be solely responsible for scheduling and coordinating the services and work of the Project Design Professionals, Construction Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- I. Design-Builder shall restrict all Project Design Professionals, Construction Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating directly with Owner, except in case of an emergency or a matter involving public health, safety, or welfare, or as otherwise expressly allowed herein.
- J. Owner may furnish to any Project Design Professional, Construction Subcontractor, or Supplier, to the extent practicable, information about amounts paid to Design-Builder on account of Work performed for Design-Builder by the requesting party.
- K. Nothing in the Contract Documents:
 - 1. Shall create for the benefit of any Project Design Professional, Construction Subcontractor, Supplier, or other third-party individual or entity any contractual relationship between Owner and such third-party individual or entity; nor
 - 2. Shall create any obligation on the part of Owner to pay or to see to the payment of any money due any Project Design Professional, Construction Subcontractor, Supplier, or other third-party individual or entity except as may otherwise be required by Laws and Regulations.

7.08 *Patent Fees and Royalties*

- A. Design-Builder 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 a particular invention, design, process, product, or device is specified in the Conceptual Documents or other Contract Documents for use in the performance of the Construction, and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, then Owner has disclosed the existence of such rights to Design-Builder in the Conceptual Documents or other Contract Documents.
- B. To the fullest extent permitted by Laws or Regulations, Design-Builder shall indemnify and hold harmless Owner and Owner's Consultant, and the officers, directors, partners, employees or agents, and other consultants 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 engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the specification or incorporation in the Work of any invention, design, process, product or device, except those required by the Contract Documents.
- C. To the fullest extent permitted by Laws or Regulations, Owner shall indemnify and hold harmless Design-Builder and its officers, directors, members, partners, employees or agents, Project Design Professionals, Construction Subcontractors, and Suppliers from and against all claims, 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 resulting from 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 required by

the Contract Documents, but not identified by Owner as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

7.09 *Permits and Utility Charges*

- A. The Contract Documents allocate responsibility for obtaining and paying for specified permits, licenses, certificates of occupancy, and approvals of governmental authorities having jurisdiction over the Work. Each party shall assist the other, when necessary, in obtaining such permits, licenses, certificates, and approvals.
- B. Design-Builder shall pay all charges of utility owners for temporary service to the Work. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work, and for capital costs related thereto.

7.10 *Taxes*

- A. Design-Builder shall pay all sales, consumer, use, and other similar taxes required to be paid by Design-Builder in accordance with the Laws or Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Design-Builder shall give all notices required by and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, Owner shall not be responsible for monitoring Design-Builder's compliance with any Laws or Regulations.
- B. If Design-Builder performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Design-Builder shall bear all claims, 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 such Work.
- C. Changes in Laws or Regulations that occur after the date on which the Design-Builder committed to the Contract Price (whether by negotiation or making an offer or proposal) and affect the cost or time of performance shall be the subject of an equitable change in Contract Price or Contract Times.

7.12 *Record Documents*

- A. Design-Builder shall maintain the Record Documents in good order, in a safe place at the Site. Design-Builder shall annotate the Record Documents to show all changes and clarifications made (whether in the field or otherwise) during performance of Construction. The Record Documents, as annotated, will be available to Owner for reference. Upon completion of the Construction, Design-Builder shall deliver the Record Documents, as annotated, to Owner.
- B. After receipt and review of the Record Documents from Design-Builder upon completion of Construction, the Owner may comment on any possible inaccuracies. After Owner and Design-Builder collaboratively address any such comments, the Record Documents shall be deemed to be Record Drawings and Record Specifications.
- C. The Record Drawings and Record Specifications are Contract Documents, and are binding upon Design-Builder with respect to its obligations to comply with the Contract Documents, including but not limited to correction period responsibilities and warranty obligations.

7.13 *Safety and Protection*

- A. Design-Builder shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Construction 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. Design-Builder 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;
 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, utilities and Underground Facilities not designated for removal, relocation, or replacement in the course of Construction.
- B. Design-Builder shall comply with 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. Design-Builder shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
- C. Design-Builder shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Design-Builder shall inform Owner of the specific requirements of Design-Builder's safety program with which Owner and its employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.13.A.2 or 7.13.A.3 caused, directly or indirectly, in whole or in part, by Design-Builder, any Construction 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, shall be remedied by Design-Builder.
- F. Design-Builder's duties and responsibilities for safety and for protection of the Construction shall continue until such time as all the Work is completed, Owner has issued a notice to Design-Builder in accordance with Paragraph 14.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion), and Design-Builder has left the Site.
- G. Design-Builder's duties and responsibilities for safety and protection shall resume whenever Design-Builder or any Construction Subcontractor, Supplier, or other representative returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Safety Representative*

- A. Design-Builder shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.15 *Hazard Communication Programs*

- A. Design-Builder 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.

7.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Design-Builder is obligated to act to prevent threatened damage, injury or loss. Design-Builder shall give Owner prompt written notice if Design-Builder believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If a change in the Contract Documents is required because of the action taken by Design-Builder in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.17 *Post-Construction Phase*

- A. Design-Builder shall:
 - 1. Provide assistance in connection with the start-up and testing of any equipment or system.
 - 2. Assist Owner in training staff to operate and maintain the Work.

7.18 *Design-Builder's General Warranty and Guarantee*

- A. Design-Builder warrants and guarantees to Owner that Design-Builder will perform and complete the Construction as required by the Contract Documents, and that all Construction will be in accordance with the Contract Documents, the Construction Drawings, and the Construction Specifications (as duly modified in accordance with the Contract), and will not be defective.
- B. Design-Builder's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. Abuse, modification or improper maintenance or operation by persons other than Design-Builder, Construction Subcontractors, or Suppliers or any other individual for whom Design-Builder is responsible; or
 - 2. Normal wear and tear under normal usage.
- C. None of the following will constitute an acceptance by Owner of Work that is not in accordance with the Contract Documents or a release of Design-Builder's obligation to perform the Work in accordance with the Contract Documents, unless expressly stated otherwise in writing:
 - 1. Observations by Owner;
 - 2. The making of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion;

4. Use or occupancy of the Work or any part thereof by Owner;
5. Any review and approval of a Submittal;
6. Any inspection, test, or approval by others; or
7. Any correction of defective Construction by Owner.

7.19 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Design-Builder shall indemnify and hold harmless Owner, Owner's Consultant, and their officers, directors, members, partners, employees, agents, consultants, and subcontractors, from losses, damages, 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 the Work, provided that any such claim, action, loss, damages, or judgment 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 Design-Builder, a Project Design Professional, any Construction Subcontractor, any Supplier, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
- B. In any and all claims or actions against Owner, Owner's Consultant, 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 Design-Builder, a Project Design Professional, any Construction Subcontractor, any Supplier, any individual or entity directly or indirectly employed or retained 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 7.19.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Design-Builder, a Project Design Professional, or any Construction Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Design-Builder under Paragraph 7.19.A shall not extend to the liability of Owner's Consultant, other consultants or design professionals of Owner, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, designs, or specifications.

ARTICLE 8 – SUBMITTALS

8.01 *Design-Builder's Preparation of Submittals*

- A. Design Submittals shall be prepared by Project Design Professionals, on behalf of Design-Builder.
- B. The appropriate Project Design Professional shall review and approve each Submittal (including but not limited to all Design Submittals), other than those Submittals not involving technical or engineering matters, before Design-Builder's transmittal of such Submittal to Owner. Such review and approval shall account for the following, as appropriate:
 1. That any items covered by such Submittal will, after installation or incorporation in the Construction, comply with the information and requirements in the Contract Documents

and the Construction Drawings and Construction Specifications, as duly modified, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, Construction Drawings, and Construction Specifications, as duly modified.

2. That if the Submittal includes any proposed modification of the Contract Documents, Construction Drawings, or Construction Specifications, or any proposed variation from the requirements of such documents, such proposed modification or variation is acceptable based on the standards of the engineering profession (or other applicable design profession), and if implemented will be supported by signing or sealing by a licensed design professional, as necessary.
- C. Before Design-Builder's transmittal of a Submittal to Owner, the Design-Builder shall, as applicable:
1. Review and coordinate the Submittal with other Submittals and with the requirements of the Work, the Contract Documents, the Construction Drawings, and the Construction Specifications, as duly modified;
 2. Determine and verify all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal, and confirm that the Submittal is complete with respect to all related data included in the Submittal;
 3. Determine and verify the suitability of proposed materials and equipment with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation; and
 4. Determine and verify all information relative to Design-Builder's responsibilities for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
- D. Design-Builder shall give Owner specific written notice of any proposed modification of the Contract Documents, Construction Drawings, or Construction Specifications, and any variations that a Submittal may have from the requirements of the Contract Documents, Construction Drawings, and Construction Specifications, as duly modified. This notice shall be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Submittal in drawing form, by a specific notation made on the drawing itself.
- E. Each Submittal shall bear a stamp or specific written certification by Design-Builder that it has satisfied its obligations under the Contract Documents with respect to preparation of the Submittal, and that Design-Builder approves the Submittal.
- F. All Submittals must be acceptable based on compliance with form and content requirements of the Contract Documents. Design-Builder shall submit Design Submittals for Owner's review and approval. Other Submittals shall not require express approval, except as indicated in the Supplementary Conditions or elsewhere in the Contract Documents.

8.02 *Owner's Review of Submittals*

- A. Owner will review all Submittals, and may comment on any Submittal. Any response to a Submittal by Owner shall be in accordance with the schedule of required Submittals accepted by Owner as required by Paragraph 2.07, and the provisions of the Contract Documents.

- B. For those Submittals requiring Owner's review and approval, Owner's response will be in writing and will indicate either that Owner approves the Submittal or rejects the Submittal. Owner may also include comments regarding the approved or rejected Submittal. For those Submittals that do not require approval, the Submittal shall be deemed acceptable to Owner unless Owner responds with a timely objection or adverse comment.
- C. Unless a specific provision of the Contract Documents expressly provides otherwise, Owner's review of a Submittal will be to determine if the Submittal complies with and is consistent with the Contract Documents. If Owner concludes that a Submittal requiring approval complies with and is consistent with the Contract Documents, the Owner shall approve such Submittal.
- D. Owner's approval, rejection, or acceptance of a Submittal will not extend to the means, methods, techniques, sequences, or procedures of Construction, or to safety precautions or programs incident thereto.
- E. Owner's review, comments, approval, rejection, or acceptance of Submittals shall not relieve Design-Builder from responsibility for (1) performance of the Work in accordance with the Contract Documents, (2) the scheduling and progress of the Work, (3) the means, methods, sequences, techniques, and procedures of Construction, and safety precautions and programs incident thereto, or (4) any variation from the requirements of the Contract Documents, unless Design-Builder has in a separate written communication at the time of submission called Owner's attention to each such variation, and Owner has given written approval of each such variation; nor shall Owner's review, comments, approval, rejection, or acceptance of a Submittal impose any such responsibility on Owner.
- F. Construction tasks and expenditures by Design-Builder prior to Owner's review and approval or acceptance of any Submittal will be at the sole risk of Design-Builder.
- G. In reviewing, approving, rejecting, accepting, or commenting on any Design Submittal, Owner does not assume responsibility for the design, for any deficiencies in the Design Submittal or in the Design Professional Services by which they were prepared, or for constructability, cost, or schedule problems that may arise in connection with the Design Submittal.
- H. The parties acknowledge that Design-Builder's design responsibilities continue after commencement of Construction. During the course of Construction, the Design-Builder may propose modifications to the Construction Drawings and Construction Specifications. Owner shall approve such proposed modifications if (1) they comply with and are consistent with the Contract Documents, (2) Design-Builder has demonstrated that the modification is minor in character, or will not be detrimental to the quality and function of the Work, (3) the appropriate Project Design Professional has reviewed and approved the proposed modification with respect to any technical or engineering matters, and (4) Owner has not relied on the previously-approved Construction Drawings and Construction Specifications, such that the proposed modification would be detrimental to the Owner's interests. At its option, Owner may also approve more substantial or divergent proposed modifications, provided that the appropriate Project Design Professional has reviewed and approved the proposed modification with respect to any technical or engineering matters.

ARTICLE 9 – OTHER CONSTRUCTION

9.01 *Other Work*

- A. In addition to and apart from the Work to be performed and furnished by Design-Builder under the Contract Documents, the Owner may perform other construction work at or adjacent to the Site during the course of the Project. 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 Design-Builder written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work at or adjacent to the Site, Owner shall provide such information to Design-Builder.
- C. Design-Builder shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and to 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. Design-Builder shall do all cutting, fitting, and patching of the Construction that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Design-Builder shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Design-Builder may cut or alter others' work with the written consent of Owner and the others whose work will be affected.
- D. If the proper execution or results of any part of the Construction depends upon work performed by others under this Article 9, Design-Builder shall inspect such other work and promptly report to Owner in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of the Construction. Design-Builder's failure to so report will constitute an acceptance of such other work as fit and proper for integration with the Construction, except for latent defects and deficiencies in such other work.

9.02 *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 Design-Builder 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. If the Supplementary Conditions do not identify the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors, Owner shall have sole authority and responsibility for such coordination.

9.03 *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 Construction or to the property of Design-Builder or the Construction Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Construction, through actions or inaction, then Design-Builder shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Design-Builder in the Contract Documents, and any provisions in Laws or Regulations concerning utility action or inaction, or related remedies. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Design-Builder assigning to Owner all Design-Builder'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. Design-Builder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.
- B. Design-Builder 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. If Design-Builder 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 to Design-Builder, and assign to such other contractor or utility owner the Owner's contractual rights against Design-Builder with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Design-Builder 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 Design-Builder'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 to Design-Builder.
- D. If Design-Builder 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 Design-Builder's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Design-Builder'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 Design-Builder or Owner, then Design-Builder 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 and its 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 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 10 – OWNER’S RESPONSIBILITIES

10.01 General

- A. Owner shall do the following in a timely manner so as not to delay the services of Design-Builder:
1. If requested in writing by Design-Builder, furnish reasonable evidence satisfactory to Design-Builder that sufficient funds are available and committed for the entire cost of the Project. Unless such reasonable evidence is furnished, Design-Builder is not required to commence or continue any Work, or may, if such evidence is not presented within a reasonable time, stop Work upon 15 days’ notice to the Owner;
 2. Make payments to Design-Builder promptly when they are due, as provided in Paragraph 14.01 and 14.06;
 3. Furnish the Site as set forth in Paragraph 5.01; arrange for safe access to and make all provisions for Design-Builder to enter upon public and private property as may reasonably be required for Design-Builder to perform Work under the Contract.
 4. Furnish to Design-Builder, as required for performance of the Work, the following, all of which Design-Builder may use and rely upon in performing services under this Agreement:
 - a. Environmental assessment and impact statements;
 - b. Property, boundary, easement, right-of-way, and other special engineering surveys or data;
 - c. Property descriptions;
 - d. Zoning, deed, and other land use restrictions;
 - e. Utility and topographic mapping and surveys;
 - f. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; any information or data known to Owner concerning underground facilities at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; with appropriate professional interpretation of such information or data;
 - g. Any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site;
 - h. Engineering surveys to establish reference points which in Owner’s judgment are necessary to enable Design-Builder to proceed with the Work;
 - i. Assistance to Design-Builder in filing documents required to obtain necessary permits, licenses, and approvals of governmental authorities having jurisdiction over the Project; and
 - j. Permits, licenses, and approvals of government authorities that the Contract Documents expressly require Owner to obtain.

5. Provide information known to Owner relating to the presence of materials and substances at the Site that could create a Hazardous Environmental Condition.
- B. If an obligation ascribed to Owner in Paragraph 10.01.A is expressly assigned to Design-Builder, in the description of the Work or elsewhere in the Contract Documents, then such express assignment to Design-Builder shall supersede the provision in Paragraph 10.01.A.
- C. Recognizing and acknowledging that Design-Builder's services and expertise do not include the following services, Owner shall furnish or obtain, as required for the Project:
 - a. Accounting, bond and financial advisory (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
 - b. Legal services with regard to issues pertaining to the Project as Owner requires, or Design-Builder reasonably requests.
 - c. Such auditing services as Owner requires to review cost submittals or ascertain how or for what purpose Design-Builder has used the money paid.
- D. Examine all studies, reports, alternate solutions, sketches, drawings, specifications, proposals, Submittals (including Design Submittals), and other documents presented by Design-Builder (including obtaining advice of an attorney, insurance counselor, and other consultants as Owner deems appropriate with respect to such examination), and if a decision is required with respect to any such document, render such decision in writing pursuant to any specific schedule, or if no specific schedule pertains, within a reasonable time after receipt of the document.

10.02 *Insurance*

- A. Owner's responsibilities with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

10.03 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Design-Builder's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Design-Builder to comply with Laws or Regulations applicable to the furnishing or performance of the Work. Owner will not be responsible for Design-Builder's failure to perform the Work in accordance with the Contract Documents.

10.04 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility with respect to undisclosed Hazardous Environmental Conditions uncovered or revealed at the Site is set forth in Paragraph 5.06.

10.05 *Owner's Site Representative*

- A. Owner may furnish an Owner's Site Representative to observe the performance of Construction. The duties, responsibilities and limitations of authority of any such Owner's Site Representative and assistants will be as provided in the Supplementary Conditions.

10.06 *Owner's Consultants and Managers*

- A. Owner's Consultant, if any, is identified in the Agreement.
- B. Owner shall advise Design-Builder of the identity and scope of services of any other independent consultants or managers retained by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, constructability review, program management, project management, or contract administration.
- C. Neither Owner's Consultant, Owner's Site Representative, nor any other consultant or manager retained by Owner, has any duties, responsibilities, or authorities with respect to Design-Builder, unless expressly provided in this Contract. Owner's Consultant and such other consultants and managers shall not supervise, direct, or have control or authority over, nor be responsible for, Design-Builder's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Design-Builder to comply with Laws or Regulations applicable to the furnishing or performance of the Work; and will not be responsible for Design-Builder's failure to perform the Work in accordance with the Contract Documents.

10.07 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Design-Builder's safety programs of which Owner has been informed pursuant to Paragraph 7.13.D.
- B. Owner shall inform Design-Builder of any specific requirements of safety or security programs that are applicable to Design-Builder while at the Site.

10.08 *Permits and Approvals*

- A. Owner shall obtain reviews, approvals, certificates, and permits from governmental authorities having jurisdiction over the Project as indicated in the Contract Documents.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order or a Work Change Directive.
 - 1. *Change Orders*: If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - 2. *Work Change Directives*: The Work modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order. When a Work Change Directive is issued, the parties will promptly meet to attempt to negotiate the Work Change Directive's effect, if any, on the Contract Times and Contract Price. The effect, if any, on Contract Times and Contract Price, together with the Work Change Directive's addition, deletion, or revision to the Work, will be set forth in a subsequently issued Change Order.

- B. Either Owner or Design-Builder may propose or request a Change Order. With respect to certain events, this Contract may indicate specific times in which such requests or proposals must be submitted to the other party. With respect to all other events, the request or proposal shall be submitted to the other party within 30 days of the event giving rise to the request or proposal.

11.02 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, and notwithstanding any other provision of the Contract, Owner may, at any time or from time to time, order or authorize additions, deletions, or revisions in the Work within the general scope of the Contract. Such changes may be accomplished by a Change Order, if Owner and Design-Builder have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Design-Builder 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Design-Builder to undertake work that Design-Builder reasonably concludes cannot be performed in a manner consistent with Design-Builder's safety or professional obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Design-Builder shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents, as duly amended, except in the case of an emergency as provided in Paragraph 7.16, or in the case of uncovering Construction as provided in Paragraph 13.03.A.3.

11.04 *Changes Involving the Design*

- A. To the extent a change, whether proposed by Design-Builder or Owner, ordered by Owner, or set forth in a proposed Change Order or in a Work Change Directive, involves the design (as set forth in the Construction Drawings, Construction Specifications, or otherwise) or other engineering or technical matters, such changes must be reviewed and approved by the applicable Project Design Professional. The review and approval may occur at the time the change occurs, or as part of Design-Builder's provision of Professional Design Services in response to the change.

11.05 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim regarding an adjustment in the Contract Price shall be presented by written notice to the other party in accordance with Paragraph 16.01.
- B. If the Contract Price is based on Cost of the Work, then the provisions in the Agreement regarding Cost of the Work and changes in the Design-Builder's fee, Contract Price, Guaranteed Maximum Price, and Guaranteed Maximum Fee, apply.
- C. The value of any Work covered by a Change Order or of any adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 12.02); or

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.05.D); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents, and agreement to a lump sum is not reached under Paragraph 11.05.C.2, then on the basis of the Cost of the Work for price adjustments (determined as provided in the Cost of the Work provisions in the Agreement, if applicable, or in Paragraph 12.01), plus a Design-Builder's Fee for overhead and profit (determined as provided in Paragraph 11.05.D).
- D. *Design-Builder's Fee:* The Design-Builder's fee for overhead and profit on Change Orders shall be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 12.01.B.1.a. and 12.01.B.2, the Design-Builder's fee shall be 15 percent;
 - b. For costs incurred under Paragraph 12.01.B.3, 12.01.B.4, 12.01.B.5, and 12.01.B.6, the Design-Builder's fee shall be 5 percent;
 - c. With respect to Construction Subcontracts, where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of this Contract is that the Design-Builder's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraph 12.01 by the subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Design-Builder itself, and to any Construction Subcontractors of a tier higher than that of the Construction Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Construction Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Construction Subcontractor that actually performs the Work;
 - d. With respect to Design Agreements, the Engineer or other invoicing Project Design Professional under a Design Agreement may add a fee of 5 percent to an invoice from a lower tier design entity, and Design-Builder may add a fee of 5 percent to an invoice from Engineer or other invoicing Project Design Professional; Owner shall not be responsible for any other mark-up at any tier (other than those incorporated in a factor, multiplier, hourly rate, or stipulated sum from the entity performing the subject Design Professional Services);
 - e. No fee will be payable on the basis of costs itemized in Paragraph 12.01.B.7 or 12.01.C;
 - f. The amount of credit to be allowed by Design-Builder to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Design-Builder's fee by an amount equal to 5 percent of such net decrease; and

- g. When both additions and credits are involved in any one change, the adjustment in Design-Builder's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.05.D.2.a through 11.05.D.2.e., inclusive.

11.06 Change of Contract Times

- A. The Contract Times may only be changed by a Change Order. Any Claim regarding an adjustment of the Contract Times shall be presented by written notice to the other party pursuant to Paragraph 16.01.
- B. Design-Builder's entitlement to an adjustment of the Contract Times under this Contract is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.

11.07 Execution of Change Orders

- A. Owner and Design-Builder shall execute appropriate Change Orders covering:
 - 1. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Design-Builder has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's correction of defective Work under Paragraph 13.05 or Owner's acceptance of defective Work under Paragraph 13.07, or (c) agreed to by the parties (all subject to the need for review and approval by the applicable Project Design Professional pursuant to Paragraph 11.04); and
 - 4. Changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Article 16.
- B. If Owner or Design-Builder refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 Notice to Sureties

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Design-Builder's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – COST OF THE WORK ADJUSTMENTS; UNIT PRICE WORK

12.01 Cost of the Work

- A. *Costs of the Work Adjustment:* When the price of Work covered by a Change Order or an adjustment in Contract Price is to be determined on the basis of Cost of the Work, the Cost of the Work adjustment means the sum of all costs necessarily incurred and paid by Design-Builder in the proper performance of the specific portion of the Work. The costs to be reimbursed to Design-Builder will be only those additional or incremental costs required because of the change of the Work or because of the event giving rise to the adjustment. If

the Agreement contains Cost of the Work provisions, such provisions shall govern in determining the Cost of the Work for Change Order or adjustment purposes. If the Agreement does not contain Cost of the Work provisions, then the provisions in Paragraph 12.01 shall apply.

- B. *Costs Included:* The Cost of the Work adjustment does not include any of the costs itemized in Paragraph 12.01.C, and shall include only the following items with respect to the subject Work:
1. Payroll costs for employees in the direct employ of Design-Builder in the performance of the subject Work, under schedules of job classifications agreed upon by Owner and Design-Builder in advance of such performance.
 - a. Such employees shall include without limitation superintendents, foremen, and other personnel employed full-time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the subject Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation, and holiday pay applicable thereto. The expenses of performing the subject Work outside the hours or days permitted by this Contract shall be included in the above to the extent such performance of Work is authorized by Owner.
 - b. Such employees shall also include engineers, engineering technicians, architects, and others providing Design Professional Services as employees of Design-Builder. For purposes of this Paragraph 12.01.B.1.b, Design-Builder shall be entitled to payment for such employees an amount equal to salary costs times a factor, as designated in the Agreement, for services in the performance of the subject Work.
 2. Cost of all materials and equipment furnished and incorporated in the subject Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Design-Builder unless Owner deposits funds with Design-Builder with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Design-Builder shall make provisions so that they may be obtained.
 3. Cost of permits obtained by Design-Builder.
 4. Payments made by Design-Builder to Construction Subcontractors for subject Work performed or furnished by such Construction Subcontractors. If any subcontract provides that the Construction Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Construction Subcontractor's Cost of the Work and fee shall be determined in the same manner as Design-Builder's Cost of the Work and fee.
 5. Payments made by Design-Builder for Design Professional Services provided or furnished with respect to the subject Work under a Design Agreement.
 6. Costs of special consultants (not including Project Design Professionals), including but not limited to testing laboratories, attorneys, and accountants, retained for services specifically related to the subject Work.

7. Supplemental costs including the following items:
- a. The proportion of necessary transportation, travel, and subsistence expenses of Design-Builder's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed that remain the property of Design-Builder.
 - c. Rentals of all construction or engineering equipment and machinery, and their parts, whether rented from Design-Builder or from others in accordance with rental agreements approved by Owner, and the costs of transportation, loading, unloading, installation, dismantling and removal of such equipment, machinery, and parts. All such costs shall be in accordance with the terms of such rental agreements. The rental of any such equipment, machinery, or parts shall cease when its use is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the subject Work, and for which Design-Builder is liable, imposed by Laws or Regulations.
 - e. Deposits lost for causes other than negligence of Design-Builder, any Construction Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses, damages, and related expenses caused by damage to the subject Work not compensated by insurance or otherwise, sustained by Design-Builder in connection with the furnishing and performance of the Work provided they have resulted from causes other than the negligence of Design-Builder, any Construction Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Design-Builder's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site, as applicable to the subject Work.
 - h. Minor expenses such as long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. Cost of premiums for all Bonds and insurance Design-Builder is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Design-Builder's officers, executives, principals (of partnerships and sole proprietorships), general managers, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Design-Builder whether at the Site or in Design-Builder's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in

Paragraph 12.01.B.1, all of which are to be considered administrative costs covered by the Design-Builder's fee.

2. Expenses of Design-Builder's principal and branch offices other than Design-Builder's office at the Site.
 3. Any part of Design-Builder's capital expenses, including interest on Design-Builder's capital employed for the subject Work and charges against Design-Builder for delinquent payments.
 4. Costs due to the negligence of Design-Builder, any Construction Subcontractor, Engineer or other Project Design Professionals, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind, and the costs of any item not specifically and expressly included in Paragraph 12.01.B.
- D. *Design-Builder's Fee*: When the value of the Work covered by a Change Order is determined on the basis of Cost of the Work, Design-Builder's fee shall be determined as set forth in Paragraph 11.05.D.
- E. *Documentation*: Whenever the cost of any Work is to be determined pursuant to Paragraph 12.01.B and 12.01.C, Design-Builder will establish and maintain cost records in accordance with generally accepted accounting practices and submit in a form acceptable to Owner an itemized cost breakdown together with supporting data.

12.02 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all of Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Design-Builder will be made by Owner.
- B. If Design-Builder's compensation is based on Cost of the Work, this Contract will not include compensation under unit prices unless expressly stated otherwise.
- C. Each unit price will be deemed to include an amount considered by Design-Builder to be adequate to cover Design-Builder's overhead and profit for each separately identified item.
- D. Design-Builder or Owner may seek an adjustment in the Contract Price if:
 1. The quantity of any item of Unit Price Work performed by Design-Builder differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 2. Such an adjustment would not duplicate, and is coordinated with, any other related adjustments of Contract Price; and
 3. Design-Builder has incurred additional expense, or less expense, as a result of the variation in quantity.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE CONSTRUCTION

13.01 Access to Construction

- A. Owner, Owner's Consultant, Owner's Site Representative, and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Construction at reasonable times for their observation, inspecting, and testing. Design-Builder shall provide them proper and safe conditions for such access and advise them of Design-Builder's Site safety procedures and programs so that they may comply therewith as applicable.

13.02 Tests, Inspections, and Approvals

- A. Design-Builder 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. By Laws and Regulations, unless the Contract Documents or Laws and Regulations expressly allocate responsibility for a specific inspection or test to Owner;
 - 3. To attain Owner's acceptance of materials or equipment to be incorporated in the Construction;
 - 4. By manufacturers of equipment furnished under the Contract Documents;
 - 5. To meet the requirements of the Construction Drawings and Construction Specifications;
 - 6. For testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Construction; and
 - 7. For acceptance of materials, mix designs, or equipment submitted for approval prior to Design-Builder's purchase thereof for incorporation in the Construction.
- B. Owner shall be responsible for arranging, obtaining, and paying for all inspections and tests expressly required by the Contract Documents or Laws and Regulations to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Construction shall be governed by the provisions of Paragraph 13.03.
- C. All inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Design-Builder.
- D. If the Contract Documents require the Construction (or part thereof) to be approved by Owner or another designated individual or entity, then Design-Builder shall assume full responsibility for arranging and obtaining such approvals.
- E. Design-Builder shall give Owner reasonable notice of the planned schedule for all required inspections, tests, and approvals.
- F. Design-Builder shall give Owner timely notice of readiness of the Construction (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- G. Each party shall provide the other with copies of any certificates of inspection or approval obtained with respect to tests and inspections.

- H. Both parties may rely on the results of inspections and tests, performed pursuant to this paragraph and the governing provisions of the Contract Documents, Laws and Regulations, and the Construction Drawings and Construction Specifications.
- I. If any Construction (or the construction work of others) that is required to be inspected, tested, or approved is covered by Design-Builder without written concurrence of Owner, then Contractor shall, if requested by Owner, uncover such Construction for observation. Such uncovering shall be at Design-Builder's expense unless Design-Builder has given Owner timely notice of Design-Builder's intention to cover the same and Owner has not acted with reasonable promptness in response to such notice.

13.03 *Uncovering Construction*

- A. If Owner considers it necessary or advisable that covered Construction be observed by Owner or inspected or tested by others, then Design-Builder, at Owner's request, shall uncover, expose or otherwise make available for observation, inspection, or testing, as Owner may require, that portion of the Construction in question, furnishing all necessary labor, material, and equipment.
 - 1. If the Construction had been covered contrary to the written request of Owner or a requirement of the Contract Documents, then uncovering it for Owner's observation and re-covering it shall be at Design-Builder's expense, regardless of whether it is defective.
 - 2. If it is found that the covered Construction is defective, Design-Builder shall pay all costs and damages caused by or resulting from such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement, re-covering, or reconstruction (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price.
 - 3. If the covered Construction is not found to be defective, Design-Builder shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, re-covering, and reconstruction, subject to the provisions of Paragraph 13.03.A.1.

13.04 *Defective Construction*

- A. It is Design-Builder's obligation to assure that the Construction is not defective.
- B. Owner shall give Design-Builder prompt written notice of all defective Construction of which Owner has actual knowledge. Owner may reject, accept, or correct defective Construction.
- C. Promptly after receipt of written notice of defective Construction, unless Owner expressly indicates that it will accept the defective Construction, Design-Builder shall correct all such defective Construction, whether or not fabricated, installed, or completed; or, if Owner has rejected the defective Construction, remove it from the Project and replace it with Construction that is not defective.
- D. When correcting defective Construction, Design-Builder shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Construction.

13.05 *Owner May Correct Defective Construction*

- A. If Design-Builder fails within a reasonable time after written notice from Owner to correct defective Construction or to remove and replace rejected Construction, or if Design-Builder fails to perform the Construction in accordance with the Contract Documents, or if Design-Builder fails to comply with any other provision of the Contract Documents, Owner may, after 7 days' written notice to Design-Builder, correct and remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.05 Owner shall proceed expeditiously. In connection with such corrective and remedial action, Owner may exclude Design-Builder from all or part of the Site, take possession of all or part of the Construction, and suspend Design-Builder's services related thereto, and incorporate in the Construction all materials and equipment stored at the Site or for which Owner has paid Design-Builder but which are stored elsewhere. Design-Builder shall allow Owner, Owner's Consultant, Owner's Site Representative, and Owner's other representatives, agents, employees, and contractors, access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

13.06 *Costs*

- A. Design-Builder shall bear all costs arising out of or relating to the correction, removal, or replacement of defective Construction, including but not limited to repair of adjacent Work or property; delay costs and impacts; fees and charges of engineers, architects, attorneys, and other professionals; and all court, arbitration, or other dispute resolution costs.
- B. All costs, losses, and damages (included but not limited to fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others) incurred or sustained by Owner in exercising its rights and remedies arising from defective Construction under this Article will be charged against Design-Builder, by set-off against payment or otherwise.
- C. Design-Builder shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to defective Construction.

13.07 *Owner's Acceptance of Defective Construction*

- A. If, instead of requiring correction or removal and replacement of defective Construction, Owner prefers to accept it, Owner may do so. If such acceptance is proposed prior to final payment, it shall be subject to confirmation by the applicable Project Design Professional that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety. Design-Builder shall pay 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) attributable to Owner's evaluation of and determination to accept such defective Construction. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents, and Owner shall be entitled to an appropriate decrease in the Contract Price reflecting the diminished value of the Construction so accepted.

13.08 *Owner May Stop Construction*

- A. If Construction is defective, or Design-Builder fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform Construction in such a way that

the completed Construction will conform to the Contract Documents, Owner may order Design-Builder to stop Construction or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop Construction will not give rise to any duty on the part of Owner to exercise this right for the benefit of Design-Builder or any other party.

ARTICLE 14 – PAYMENTS TO DESIGN-BUILDER; COMPLETION

14.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Paragraph 2.04 will serve as the basis for progress payments. Progress payments on account of Unit Price Work will be based on the number of units completed.
- B. *Application for Progress Payment:* On or about the date established in the Agreement for submission of each application for progress payment (but not more often than once a month), Design-Builder shall submit to Owner for review an Application for Payment filled out and signed by Design-Builder covering the Work completed as of the date indicated on the Application and accompanied by supporting documentation as required by the Contract Documents. 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 shall also be accompanied by a bill of sale, invoice or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner.
- C. *Payment of Obligations:*
 - 1. Beginning with the second Application for Payment, each Application shall include an affidavit of Design-Builder stating that all previous progress payments received on account of the Work have been applied on account to discharge Design-Builder's legitimate obligations associated with prior Applications for Payment.
 - 2. If Design-Builder contends that it has withheld payment of underlying obligations for good cause, then Design-Builder shall inform Owner of the identity of the entity from which Design-Builder has withheld payment, the amount of the withholding, and the reason for the withholding.
- D. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- E. *Review of Applications:*
 - 1. Owner will, within 10 days of receipt of each Application for Payment, either indicate in writing its acceptance of the Application and state that the Application is being processed for payment, or return the Application to Design-Builder indicating in writing its reasons for refusing to accept the Application.
- F. Not more than 10 days after accepting such Application the amount will become due and when due will be paid by Owner to Design-Builder.
 - 1. If Owner should fail to pay Design-Builder at the time the payment of any amount becomes due, then Design-Builder may, at any time thereafter, upon serving written

notice that he will stop the Work within 7 days after receipt of the notice by Owner, and after such 7-day period, stop the Work until payment of the amount owing has been received. Written notice shall be deemed to have been duly served if sent by certified mail to the last known business address of Owner.

2. Payments due but unpaid shall bear interest at the rate specified in the Agreement.
3. No Progress Payment nor any partial or entire use or occupancy of the Project by Owner shall constitute an acceptance of any Work not in accordance with the Contract Documents.

G. Reduction in or Refusal to Make Payment:

1. Owner may impose a set-off against the whole or any part of any such payment, or nullify any previous payment because of subsequently discovered evidence or the results of subsequent inspections or tests, to the extent that is reasonably necessary to protect Owner from loss because:
 - a. Claims have been made against Owner on account of Design-Builder's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Design-Builder's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from breach of warranty, workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Design-Builder 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. Design-Builder 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 Design-Builder is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Construction is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Construction in accordance with Paragraph 13.05, or has accepted defective Construction pursuant to Paragraph 13.07;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event that would constitute a default by Design-Builder and therefore justify a termination for cause has occurred;
 - j. Liquidated damages, special damages, or performance damages have accrued under the Contract Documents as a result of Design-Builder's failure to achieve Milestones, Substantial Completion, final completion of the Work, or performance requirements, as applicable;

- k. Liens have been filed in connection with the Work, except where Design-Builder has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such liens; or
 - l. There are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, Owner will give Design-Builder immediate written notice stating the reasons for such action and the specific amount of the reduction, and promptly pay Design-Builder any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Design-Builder the amount so withheld, or any adjustment thereto agreed to by Owner and Design-Builder, if Design-Builder remedies the reasons for such action. The reduction imposed shall be binding on Design-Builder unless it duly presents a written notice of Claim contesting the reduction.

14.02 *Design-Builder's Warranty of Title*

- A. Design-Builder warrants and guarantees that title to all Construction, materials, and equipment covered by any Application for Payment, whether already incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.03 *Substantial Completion*

- A. When Design-Builder considers the Work ready for its intended use Design-Builder shall notify Owner in writing that the Work is substantially complete (except for items specifically listed by Design-Builder as incomplete) and request that Owner issue a certificate of Substantial Completion. Promptly thereafter, Owner and Design-Builder shall make an inspection of the Work to determine the status of completion. If Owner does not consider the Work substantially complete, Owner will notify Design-Builder in writing giving the reasons therefor.
- B. If Owner considers the Work substantially complete:
 1. Owner and Design-Builder 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 Design-Builder 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.
 2. Owner will prepare and deliver to Design-Builder a certificate of Substantial Completion which shall fix the date of Substantial Completion. Owner shall attach to the certificate a punch list of items to be completed or corrected before final payment.
- C. After Substantial Completion the Design-Builder shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Design-Builder may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- D. Owner shall have the right to exclude Design-Builder from the Site after the date of Substantial Completion subject to allowing Design-Builder reasonable access to remove its property and complete or correct items on the punch list.

14.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Construction which (1) has specifically been identified in the Contract Documents, or (2) Owner and Design-Builder agree constitute a separately functioning and usable part of the Construction that can be used by Owner for its intended purpose without significant interference with Design-Builder's performance of the remainder of the Construction, subject to the following:
1. Owner at any time may request Design-Builder in writing to permit Owner to use or occupy any such part of the Construction that Owner believes to be ready for its intended use and substantially complete. If Design-Builder agrees that such part of the Work is substantially complete, Design-Builder and Owner will follow the procedures of Paragraph 14.03 for that part of the Construction.
 2. Design-Builder at any time may notify Owner in writing that Design-Builder considers any such part of the Work ready for its intended use and substantially complete and request Owner to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner and Design-Builder shall make an inspection of that part of the Work to determine its status of completion. If Owner does not consider that part of the Work to be substantially complete, Owner will notify Design-Builder in writing giving the reasons therefor. If Owner considers that part of the Work to be substantially complete, the provisions of Paragraph 14.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy of part of the Construction will be accomplished prior to compliance with the requirements of Paragraph 6.05 regarding property insurance.

14.05 *Final Inspection*

- A. Upon written notice from Design-Builder that the entire Work or an agreed portion thereof is complete, Owner will make a final inspection with Design-Builder and will notify Design-Builder in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Design-Builder shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.06 *Final Payment*

- A. *Application for Payment:*
1. After Design-Builder has completed all such corrections to the satisfaction of Owner and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance, certificates of inspection, and Record Documents, Design-Builder may make application for final payment following the procedure for progress payments.
 2. The final Application for Payment shall be accompanied (unless 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 disputes that Design-Builder believes are unsettled; 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 such releases or waivers of Liens specified in Paragraph 14.06.A.2, and as approved by Owner, Design-Builder may furnish receipts or releases in full and an affidavit of Design-Builder 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 in any way might result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Project Design Professional, Construction Subcontractor, or Supplier fails to furnish such a release or receipt in full, Design-Builder may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.
- B. *Final Payment and Acceptance:* If Owner is satisfied that the Work has been completed and Design-Builder's other obligations under the Contract Documents have been fulfilled, Owner will, within 10 days after receipt of the final Application for Payment, give written notice to Design-Builder that the Work is acceptable. Otherwise, Owner will return the Application to Design-Builder, indicating in writing the reasons for refusing to process final payment, in which case Design-Builder shall make the necessary corrections and resubmit the Application.
- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment.
- D. *Payment Becomes Due:* The amount will become due and will be paid by Owner to Design-Builder 30 days after the presentation to Owner of the acceptable Application and accompanying documentation, in appropriate form and substance and with Owner's notice of acceptability.

14.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Design-Builder. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.05, from Design-Builder's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from unresolved disputes or Claims presented by Owner, or from Design-Builder's continuing obligations under the Contract.
- B. The acceptance of final payment by Design-Builder will constitute a waiver by Design-Builder of all claims and rights against Owner other than those pending matters that have been duly submitted to dispute resolution under the provisions of Article 16.

14.08 *Correction Period*

- A. If within one year after the date of Substantial Completion of the entire Work or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Construction is found to be defective, Design-Builder shall

promptly, without cost to Owner and in accordance with Owner's written instructions, (1) correct such defective Construction, or, if it has been rejected by Owner, remove it from the Site and replace it with Construction that is not defective, and (2) satisfactorily correct or remove and replace any damage to other Construction or the work of others resulting therefrom. If Design-Builder does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Construction corrected or the rejected Construction removed and replaced, and all costs, losses, and damages caused by or resulting from such removal and replacement (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others) will be paid by Design-Builder.

- B. 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 Conceptual Documents.
- C. Where defective Construction (and damage to other Construction resulting therefrom) has been corrected, or removed or replaced, under this Paragraph 14.08, the correction period hereunder with respect to such Construction will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 days by notice in writing to Design-Builder, which will fix the date on which Work will be resumed. Design-Builder shall resume the Work on the date so fixed. Design-Builder shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events justifies termination for cause:
 - 1. Design-Builder'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 as duly adjusted).
 - 2. Design-Builder's disregard of Laws or Regulations of any public body having jurisdiction.
 - 3. Design-Builder's violation in any substantial way of provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occurs, Owner may, after giving Design-Builder (and the surety, if any) 7 days' written notice, terminate the services of Design-Builder, take possession of any completed Design Submittals prepared by or for Design-Builder (subject to the limited license and indemnification provisions of Paragraph 3.04), exclude Design-Builder from the Site, take possession of the Work, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Design-Builder but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Design-Builder shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all costs, losses and damages sustained by Owner arising out of or resulting from completing the Work (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) such excess will be paid to Design-Builder. If such costs, losses and damages exceed such unpaid balance, Design-Builder shall pay the difference to Owner. Such costs, losses and damages incurred by Owner will be 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.

- C. Notwithstanding Paragraph 15.02.B, Design-Builder's services will not be terminated if Design-Builder begins, within 7 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 30 days of receipt of said notice.
- D. Where Design-Builder's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Design-Builder then existing or which may thereafter accrue. Any retention or payment of moneys due Design-Builder by Owner will not release Design-Builder from liability.

15.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Design-Builder, Owner may, without cause and without prejudice to any other right or remedy of Owner, elect to terminate the Contract. In such case, Design-Builder shall be paid (without duplication of any items) for:
 - 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;
 - 3. Amounts paid in settlement of terminated contracts with Project Design Professionals, Construction Subcontractors, Suppliers and others (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 incurred in connection with such terminated contracts); and
 - 4. Reasonable expenses directly attributable to termination.
- B. Design-Builder shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Design-Builder May Stop Work or Terminate*

- A. If, through no act or fault of Design-Builder, the Work is suspended for a period of more than 90 days by Owner or under an order of court or other public authority, Owner fails to act on any Application for Payment within 30 days after it is submitted, or Owner fails for 30 days to pay Design-Builder any sum finally determined to be due, then Design-Builder may, upon 7 days' written notice to Owner, and provided Owner does 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 15.03.A. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Owner has failed for 30 days to pay Design-Builder any sum finally determined to be due, Design-Builder may upon 7 days' written notice to

Owner stop the Work until payment is made of all such amounts due Design-Builder, including interest thereon. The provisions of this paragraph are not intended to preclude Design-Builder from obtaining an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Design-Builder's stopping Work as permitted by this paragraph.

ARTICLE 16 – DISPUTES

16.01 *Methods and Procedures*

- A. *Notice of Claim:* If Owner and Design-Builder are not in agreement regarding a proposed or requested Change Order, other proposed adjustment of Contract Price or Contract Times, a Work Change Directive issued by Owner, or any other relief proposed or requested under the Contract, then either party may provide written notice of a Claim to the other party. Such notice of Claim shall be given within 90 days of: the proposal or request for a Change Order; such other proposed adjustment of Contract Price or Contract Times; the issuance of the Work Change Directive; or the proposal or request for other relief under the Contract. The notice of Claim shall be given within the 90 days regardless of whether the other party has responded to such proposal, request, or issuance, and regardless of whether discussions or negotiations are in progress; provided, however, that the parties may extend the time to give such notice of Claim by mutual written agreement. The notice of Claim shall include a statement of position, specification of the remedy sought, and supporting documentation.
- B. *Response:* Within 30 days of the date of notice of Claim, the receiving party shall respond with a written statement of position and any supporting documentation.
- C. *Direct Negotiations:* Owner and Design-Builder agree to directly negotiate all Claims between them in good faith for a period of 60 days from the date of notice of Claim.
- D. *Mediation:* If direct negotiations are unsuccessful in resolving a Claim, then Owner and Design-Builder shall submit the unsettled Claim to mediation by a mutually agreeable mediator or mediation service. Owner and Design-Builder agree to participate in the mediation process in good faith. The process shall be conducted on a confidential basis, and shall be completed within 120 days.
 - 1. The fees and expenses, including filing fees, of the mediator and any mediation service shall be shared equally by Owner and Design-Builder.
 - 2. The mediation shall be held in the locality where the Project is located, unless another location is mutually agreed upon by the parties.
 - 3. A settlement (if any) resulting from such mediation will be specifically enforceable under the prevailing law, by any court having jurisdiction.
 - 4. Participation in the mediation process in good faith is a condition precedent to commencing final or binding dispute resolution.
- E. If mediation is unsuccessful in resolving a Claim, then within 120 days of the completion of the mediation (1) the parties may mutually agree to a binding dispute resolution process of their choice, or (2) the claimant may give notice to the other that the claimant will seek to have the dispute resolved by a binding dispute resolution method established in this Contract, or if no such method has been established, by a court of competent jurisdiction. Failure by claimant to give such notice in a timely manner shall result in a waiver of the Claim.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice to the other party to this Contract, it will be deemed to have been validly given if delivered to the Authorized Representative of the other party:
1. In person, by a commercial courier service or otherwise; or
 2. By registered or certified mail, postage prepaid; or
 3. By e-mail, with the words "Formal Notice" or similar in the e-mail's subject line.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

17.03 *Cumulative Remedies*

- A. Unless expressly stated otherwise in this Contract, 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, or waiver of, any rights and remedies available to any or all of them which are otherwise imposed or available by:
1. Laws or Regulations; or
 2. Any special warranty or guarantee; or
 3. Other provisions of the Contract.
- B. The provisions of Paragraph 17.03.A will be as effective as if repeated specifically in the Contract in connection with each particular duty, obligation, right and remedy to which they apply.

17.04 *Limitation of Damages*

- A. With respect to this Contract and any and all Claims and other matters at issue, Owner shall not be liable to Design-Builder for any claims, costs, losses, or 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) sustained by Design-Builder on or in connection with any other project or anticipated project.

17.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

17.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Contract.

17.07 *Controlling Law*

- A. The Contract Documents will be construed in accordance with the law of the place of the Project.

17.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

APPENDIX "G" – GLOSSARY OF TERMS AND DEFINITIONS

DESIGN-BUILD CONTRACT DEFINITIONS AND ABBREVIATIONS

DEFINITIONS

"Act" means A.R.S. Title 34, Chapter 6, as amended from time to time.

"Allowance" means an amount of money set aside in the GMP for an item or element of work contained in the Work for which the GMP plans and specifications were inadequate to reasonably support the development of a definite cost.

"Amendment" means a written agreement between Owner and Design-Builder that modifies the contract terms or provisions. An Amendment may modify anything within the general scope of the contract.

"Applicable Law" means: (1) any federal, state or local law, code or regulation; (2) any formally adopted and generally applicable rule, requirement, determination, standard, policy, implementation schedule or other order of any Governmental Body having appropriate jurisdiction; (3) any established interpretation of law or regulation utilized by an appropriate Governmental Body if such interpretation is documented by such Governmental Body and generally applicable; (4) any Governmental Approval; and (5) any consent order or decree, settlement agreement or similar agreement between the County and the EPA, ADEQ or any other Governmental Body, in each case having the force of law and applicable from time to time to: (a) the siting, design, acquisition, construction, equipping, financing, ownership, possession, start up, testing, operation, maintenance, repair, replacement or management of the Project; (b) the conveyance, treatment, storage, discharge, reuse or disposal of the influent thereto or the effluent thereof; (c) the air and odor emissions therefrom; (d) the transfer, handling, processing, transportation or disposal of sludge, biosolids and other residuals produced thereby; or (e) any other transaction or matter contemplated hereby (including any of the foregoing which pertain to wastewater treatment, waste disposal, health, safety, fire, environmental protection, labor relations, building codes, the payment of prevailing or minimum wages and non-discrimination).

"Calendar Day" means any day shown on the calendar, beginning at midnight, extending for a twenty-four (24) hour period, and ending at midnight.

"Change in Law" means any of the following acts, events or circumstances to the extent that compliance therewith materially increases the cost of performing or materially increases the scope of a party's obligations hereunder:

- (a) except as provided below with respect to the exclusions from the definition of "Change in Law", the adoption, amendment, promulgation, issuance, modification, repeal or written change in any Applicable Law, or the administrative or judicial interpretation thereof on or after the Proposal Date, unless such Applicable Law was on or prior to the Proposal Date duly adopted, promulgated, issued or otherwise officially modified or changed in interpretation, in each case in final form, to become effective without any further action by any Governmental Body;
- (b) except as provided below with respect to the exclusions from the definition of "Change in Law", the order or judgment of any Governmental Body issued on or after the Proposal Date (unless such order or judgment is issued to enforce compliance with Applicable Law which was effective as of the Proposal Date) to the extent such order or judgment is not the result of willful or negligent action, error or omission or lack of reasonable diligence of the Design-Builder or of the County, whichever is asserting the occurrence of a Change in Law; provided, however, that the contesting in good faith or the failure in good faith to contest any such order or judgment will not constitute or be construed as such a willful or negligent action, error or omission or lack of reasonable diligence; or

"Design-Builder" means _____ a [corporation] organized and existing under the laws of _____, and its permitted successors and assigns.

"Design-Builder Fault" means any breach (including the untruth or breach at the time made by any Design-Builder representative or warranty in the Contract, failure, non-performance or non-compliance by the Design-Builder with respect to its obligations and responsibilities under this Contract to the extent not directly attributable to any Uncontrollable Circumstance, which materially and adversely affects the County's rights, obligations, or its ability or costs to perform under the Contract.

"Design and Construction Requirements" means those portions of the Technical Specifications designated as "Design and Construction Requirements".

"Design-Build Work" (or Work) means the employment and furnishing of all labor, materials, equipment, supplies, tools, scaffolding, transportation, Utilities, Required Insurance, temporary facilities, and other things and services of every kind whatsoever necessary for the full performance and completion of the Design-Builder's design, engineering, construction, start-up, shakedown, Performance Testing, obtaining and maintaining Governmental Approvals, and related obligations with respect to the construction of the Project Improvements during the Design-Build Period under this Contract, including all completed structures, assemblies, fabrications, acquisitions and installations, all commissioning and testing, and all of the Design-Builder's administrative, accounting, record-keeping, notification, and similar responsibilities of every kind whatsoever under this Contract pertaining to such obligations. A reference to Design-Build Work means any part and all of the Design-Build Work unless the context otherwise requires, and includes all Design-Build Work authorized or required by Change Order or Unilateral Change Directive.

"Design Documents" means the Design-Builder's plans, technical specifications, interim design and Construction Drawings, record drawings, and other design documents prepared in connection with the Design-Build Work.

"Differing Site Conditions" means concealed or latent physical conditions or subsurface conditions at the Project Site that materially differ from the geotechnical conditions reasonably anticipated by the data and information set forth in the geotechnical reports set forth in the reference documents provided by the County in conjunction with the Contract.

"Encumbrance" means any Lien, lease, mortgage, security interest, charge, judgment, judicial award, attachment, or encumbrance of any kind with respect to the Project.

"Engineer-of-Record" means the professional engineer licensed in the State of Arizona in good standing who is designated by the Design-Builder and acceptable to the County, in its reasonable discretion, and is responsible for the preparation, signing, dating, sealing, and issuing of the engineering documents relating to a portion of or all of the Design-Build Work.

"Event of Default" means, with respect to the Design-Builder, those items specified in Contract Section 14.1 (Events of Default).

"Final Completion" means for each Project full and successful completion of all Construction Phase Work noted in or reasonably inferred from the Construction Documents and the Contract, including but not limited to, all Punch List work, submission of all record and close-out documents specified the Contract Documents, all County training, and all start-up activities.

"General Conditions Costs" includes, but is not limited to, the following types of costs during the Construction Phase: payroll costs for Project Manager or Construction Manager for work conducted at the site; payroll costs for the superintendent and full-time general foremen; payroll costs for other management personnel resident and working on the site; workers not included as direct labor costs engaged in support (e.g. loading/unloading, clean-up, etc.); administrative office personnel; costs of offices and temporary facilities including office materials, office supplies, office equipment, minor expenses; utilities, fuel, sanitary facilities and telephone services at the site; costs of liability insurance premiums not included in labor

- (c) except as provided below with respect to the exclusions from the definition of "Change in Law", the denial of an application for, a delay in the review, issuance or renewal of, or the suspension, termination or interruption of any Governmental Approvals, or the imposition of a term, condition or requirement on or after the Proposal Date in connection with the issuance, renewal or failure of issuance or renewal of any Governmental Approval, to the extent that such occurrence is not the result of willful or negligent action, error or omission or a lack of reasonable diligence of the Design-Builder or of the County, whichever is asserting the occurrence of a Change in Law; provided, however, that the contesting in good faith or the failure in good faith to contest any such occurrence will not be construed as such a willful or negligent action or lack of reasonable diligence.

It is specifically understood, however, that none of the following scenarios constitutes a "Change in Law":

- (i) a change in the nature or severity of the actions typically taken by a Governmental Body to enforce compliance with Applicable Law which was effective as of the Proposal Date;
- (ii) acts, events and circumstances relating to any Governmental Approval with respect to which the Design-Builder has assumed the permitting risk as and to the extent provided under the Permitting Workplan drafted by Design-Builder under SOW Task 2;
- (iii) any increase in any fines or penalties provided for under Applicable Law in effect as of the Proposal Date; or
- (iv) any act, event or circumstance that would otherwise constitute a Change in Law but that does not change the requirements imposed on the Design-Builder by the Contract Standards in effect as of the Contract Date; provided, however, that, for the purposes of this provision, the Contract Standards in effect as of the Contract Date will include Applicable Law as of the Proposal Date but not any Change in Law between the Proposal Date and the Contract Date.

"Change Order" means a written order issued by the County and agreed to in writing by the Design-Builder prior to Final Completion making a Design and Construction Requirement Change, whether made at Design-Builder request, due to Uncontrollable Circumstances, as a result of a term or condition imposed by a Governmental Body, or at the direction of the County, or otherwise making a Fixed Design-Build Price Adjustment, adjustment to the Scheduled Acceptance Date, or other change to the terms and conditions of this Contract relating to the Design-Build Work. A Change Order will be deemed to constitute a Contract Amendment. No Change Order will bind the County unless it has been approved by the County Board of Supervisors or Procurement Director pursuant to the Pima County Procurement Code.

"Construction Contingency" means the amount included within the GMP that is available for Design-Builder's exclusive use for unforeseeable costs incurred in performing the Work that are not included in a specific line item or the basis for a Change Order under the Contract Documents. By way of example, and not as a limitation, such costs may include trade-buyout differentials, overtime, acceleration, costs in correcting defective, damaged or nonconforming Work, design errors or omissions, and Subcontractor defaults. Design-Builder will obtain Owner's approval prior to any use of the Construction Contingency.

"Construction Documents" means the plans and specifications prepared by the Design-Builder for the Project to be used to construct the Project. The Construction Documents set forth in detail all items necessary to complete the construction of the Project in accordance with the Contract Documents (subject to their completion following commencement of the Construction Phase).

"Construction Fee" means the Design-Builder's fee, included in the GMP, for managing the Construction Phase of the Project.

"Contract" means the Design-Build Contract between the Design-Builder and the County for the Design and Construction of the Project, including all Exhibits, as the same may be amended or modified from time to time in accordance with the Contract.

"Contract Administration Memorandum" (or "CAM") means a written document evidencing agreement between the Parties concerning administration of routine matters arising under the Contract. Such matters

may include, for example: (1) issues as to the meaning, interpretation, application, or calculation to be made under any provision of the Contract Documents; (2) notice, waivers, releases, satisfactions, confirmations, further assurances, and approvals given under the Contract; and (3) other similar contract administration matters. A CAM cannot be used to modify the Contract.

"Contract Services" means the Design-Build Work.

"Contract Standards" means the standards, terms, conditions, methods, techniques, and practices imposed or required by: (1) Applicable Law; (2) the Technical Specifications; (3) the Performance Guarantees; (4) Good Engineering and Construction Practice; (5) Good Industry Practice; (6) the Construction Plan; (7) the Design-Build Quality Management Plan; (8) the Operation and Maintenance Manual; (9) the Process Control Management Plan; (10) applicable equipment manufacturers' specifications; (11) applicable Insurance Requirements; and (12) any other standard, term, condition, or requirement specifically provided in this Contract to be observed by the Design-Builder.

"Contract Time" means the number of Working Days or Calendar Days, as specified in the Contract, allowed for completion of the Work, including authorized time extensions. If a specified completion date is shown in the bid documents in lieu of the number of Working or Calendar days, the Contract Time expires as of that date, and the construction will be completed on or before that date.

"County" means Pima County, Arizona, a body politic and corporate, and a subdivision of the State of Arizona.

"County Fault" means any breach (including the untruth or breach of any County representation or warranty herein set forth), failure, non-performance, or non-compliance by the County under this Contract with respect to its obligations and responsibilities under this Contract to the extent not directly attributable to any Uncontrollable Circumstance, and which materially and adversely affects the Design-Builder's rights, obligations, or its ability or costs to perform under this Contract.

"County Indemnitee" has the meaning specified in Contract Section 8 (Indemnification).

"Critical Path Method" (or "CPM") means a way of depicting the sequence of activities in a project, including interdependencies, and containing all activities needed for successful completion of the Work. CPM is used to produce a Critical Path Schedule.

"Critical Path Schedule" means the sequence of critical, time sensitive activities from the start of the Work to Substantial Completion of the project, for which any delay in the completion of these activities will extend the Substantial Completion date.

"Day" means, unless otherwise designated in writing, a Calendar Day.

"Delay Costs" means those items of Cost of the Work attributable to an Excusable Delay for which the Owner is responsible and which are payable by the Owner to the Design-Builder pursuant to a Change Order as provided in Special Condition 6.14.

"Deliverable Material" means all documents, reports, studies, surveys, computer programs, warranties, manuals, submittals, licenses, and other documents and materials required to be delivered by the Design-Builder to the County pursuant to this Contract, including the Design Documents.

"Design and Construction Requirement Change" means a change in the Design and Construction Requirements made: by a Change Order pursuant to Special Condition 6.14 (Changes to GMP and Time); by a Unilateral Change Directive pursuant to Contract Section 12 (Unilateral Change Directive); as a result of a Design-Builder request (not requiring a change in GMP or time) agreed to by the County; due to Uncontrollable Circumstances; as a result of a term or condition imposed by a Governmental Body; or, provided the change does not require a change in GMP or time, at the direction of the County.

burdens for direct labor costs; costs of bond premiums; costs of contractors not in the direct employ of the Design-Builder or Subcontractors; and fees for licenses. General Conditions shall be a fixed sum. For payment purposes, General Conditions shall be divided by the number of days allowed for performance to arrive at a fixed daily rate.

"Guaranteed Maximum Price" or "GMP" - means the sum of the maximum cost of the Work; the Construction Fee; Design-Builder Contingency, General Conditions Costs, and Taxes.

"GMP Plans and Specifications" means the plans and specifications upon which the Guaranteed Maximum Price proposal is based.

"Good Engineering and Construction Practice" means those methods, techniques, standards and practices which, at the time they are to be employed and in light of the circumstances known or reasonably believed to exist at such time, are generally recognized and accepted as good design, engineering, equipping, installation, construction and commissioning practices for the design, construction and improvement of capital assets in the municipal wastewater treatment industry as followed in the southwestern region of the United States.

"Governmental Approvals" means all orders of approval, permits, licenses, authorizations, consents, certifications, exemptions, rulings, entitlements and approvals issued by a Governmental Body of whatever kind and however described which are required under Applicable Law to be obtained or maintained by any person with respect to the Contract Services. "Governmental Approvals" includes, without limitation, the County-designated Governmental Approvals.

"Guaranteed Maximum Price" or "GMP" means the Fixed Design-Build Price and any Fixed Design-Build Price Adjustments made pursuant to SC 6.14 (Changes to GMP and Time).

"Hazardous Material" means any waste, substance, object or material deemed hazardous under Applicable Law, including "hazardous substance" as defined under CERCLA and "hazardous waste" as defined under RCRA.

"Labor Rates" means the actual cost of salary plus benefits paid to employees.

"Lien" means any and every lien against the Project or against any monies due or to become due from the County to the Design-Builder under this Contract, for or on account of the Contract Services, including mechanics', materialmen's, laborers', and lenders' liens.

"Line Item" means individual elements of work identified on a bid or other schedule and associated with a price or a unit price and quantity particular to that individual element of work. Also refers to individual items of work within the Schedule of Values.

"Losses and Expenses" means and is limited to any and all actual losses, liabilities, forfeitures, obligations, damages, fines, penalties, judgments, deposits, Taxes, charges, costs, or expenses, except as explicitly excluded or limited under any provision of this Contract, relating to third party claims for which the Design-Builder is obligated to indemnify the County Indemnitees pursuant to this Contract. "Loss-and-Expense" for the purpose of any provision hereunder requiring indemnification of the County Indemnitees by the Design-Builder means and includes any special, incidental, consequential, punitive, or similar damages incurred by the County Indemnitees for third party claims.

"Notice to Proceed" means written notice to the Design-Builder from County stating that Design-Builder is to commence work on a phase of the Project and specifying the date on which the Contract Time begins.

"Open Book" means the concept allowing the County to attend any and all meetings or discussions pertaining to the project, including bid openings, and shall have access to all books, invoices, accounts, memoranda, correspondence, and written communications or records of any kind at any time pertaining to the project. For the purposes of this definition, "written" includes storage in electronic format.

"Owner Contingency" means an amount provided for use at County's discretion to cover Project costs for which the Design-Builder is not responsible. Owner Contingency may not be used to expand Project scope. Costs of an Allowance item that exceeds the Allowance therefor will be paid from Owner Contingency. Owner Contingency is not included in the GMP.

"Party" or "Parties" means the County and the Design-Builder, their respective permitted successors and assigns, and any other future signatories to the Contract.

"Payment Bond" means the payment bond required to be provided by the Design-Builder in accordance with the Contract and A.R.S. § 34-611 and in the form set forth in Attachment 7 to the Solicitation.

"Performance Bond" means the performance bond required to be provided by the Design-Builder in accordance with the Contract and A.R.S. § 34-610 and in the form set forth in Attachment 7 to the Solicitation.

"Performance Standards" means those criteria specified in the Technical Specifications defining the how the Project must perform when fully operational.

"Performance Test" means the test required to show the Project meets the Performance Standards.

"Performance Test Plan" means the testing protocols, procedures, and processes for the performance of the Performance Test prepared and documented by the Design-Builder and approved by the County in accordance with the Scope of Work.

"Performance Test Procedures and Standards" means the test procedures and standards for Performance Testing.

"Project" means the Project Sites, the Project Improvements, the Project Equipment, and the Project Structures.

"Preliminary Schedule" means the schedule attached to the Contract as Exhibit A pursuant to which the Design-Builder proposes to substantially complete the Work. The Preliminary Schedule will be replaced by the Project Schedule pursuant to the provisions of the Contract Documents.

"Project Equipment" means all manufactured equipment, property, or assets, other than Project Structures, whether or not constituting personal property or fixtures, constituting part of the Project. As applicable, Project Equipment includes, but is not limited to: pumps; motors; motor control centers; odor control systems; process control systems, including all necessary software; chemical feed and storage equipment; piping; conduits; wiring; valves; process equipment; storage tanks; manholes; diversion structure; and permanent safety systems.

"Project Schedule" means a computerized listing, consistent with the terms of the Contract, of Project milestones, activities, and deliverables which includes: start and finish dates for each listed item; resource allocations information; budget information; and linkages between listed items showing dependencies and identifying critical path(s).

"Project Site" means the parcel(s) of real property identified in the Contract Documents where the Project Improvements are to be constructed. It also includes any parcels of real property designated by County for use by Design-Builder during construction.

"Regulated Site Condition" means, and is limited to, (1) surface or subsurface structures, materials, or conditions having historical, archaeological, or similar significance; (2) any habitat of a rare or threatened species subject to the protections of Applicable Law; (3) the presence anywhere in, on, or under the Project Sites on the Contract Date of wells or underground storage tanks for the storage of chemicals, petroleum products, or Regulated Substances (in each of items (1), (2) and (3), however, only to the extent not

disclosed to the Design-Builder as of the Contract Date), (4) the presence of Regulated Substances in environmental media anywhere in, on, or under the Project Sites (including presence in surface water, groundwater, soils, or subsurface strata), whether or not disclosed to the Design-Builder; and (5) contamination of the Project Sites from groundwater, soil, or airborne Regulated Substances migrating from sources outside the Project Sites and not caused by Design-Builder Fault.

"Regulated Substance" means (1) any oil, petroleum, or petroleum product and (2) any pollutant, contaminant, hazardous substance, hazardous material, toxic substance, toxic pollutant, solid waste, municipal waste, or industrial waste that is defined as such by and is subject to regulation under any Applicable Law. Regulated Substances include Hazardous Materials and contaminated soils requiring special handling or disposal.

"Response Action" means any action taken in the investigation, removal, confinement, remediation, or cleanup of a release of any Regulated Substance. "Response Actions" include any action which constitutes a "removal", "response", or "remedial action" as defined by Section 101 of the CERCLA.

"Sales Taxes" means: (1) a consumptive tax on the sale of goods and services; or (2) a tax on the privilege of doing business. Sales Taxes include all privilege, sales, use, excise, consumer, franchise, and other taxes which are legally enacted when negotiations of the Contract Price were concluded, whether or not yet effective or merely scheduled to go into effect. Taxes are actual costs and are a not-to-exceed reimbursable amount.

"Schedule of Values" or "SOV" means a spreadsheet with estimated costs organized by subcontract categories, construction items, allowances, bid contingency, general conditions costs, taxes, bonds, insurances, and the Design-Builder's construction phase fee. The supporting document for the spreadsheet must be provided in an organized manner that correlates with the Schedule of Values. The backup information will consist of the request for bids, bids received, and clarification assumptions used for the particular bid item listed on the Schedule of Values, if applicable. The SOV may be output from the Project Schedule if the Project Schedule is cost-loaded.

"Scheduled Date of Substantial Completion" means the date by which the Design-Builder has agreed to achieve Substantial Completion of the Project in accordance with the Schedule, as adjusted.

"Subcontract" means an agreement or purchase order by the Design-Builder, or a Subcontractor to the Design-Builder, as applicable, entered into in connection with the performance of the Contract Services.

"Subcontractor" means every person (other than employees of the Design-Builder) employed or engaged by the Design-Builder or any person directly or indirectly in privity with the Design-Builder (including all subcontractors and every sub-subcontractor of whatever tier) for any portion of the Contract Services, whether for the furnishing of labor, materials, equipment, supplies, services or otherwise.

"Substantial Completion" means the Construction Work, or an agreed portion of the Construction Work that County has agreed to accept separately, is sufficiently complete, as determined by County's issuance of a Certificate of Substantial Completion, so that County can fully occupy and utilize the Project, or the agreed upon portion thereof, for the purposes for which it is intended. Upon Substantial Completion, all Construction Work must be complete except for Punch List items. Only incidental site work, corrective work, and final cleaning, beyond cleaning needed for the County's full use may remain for final completion.

Requirements for substantial completion of the work (or a specified part thereof) include:

- All submittals for the Work (or a specified part thereof) approved by County;
- Installation of all equipment included in the Work (or a specified part thereof) certified by the equipment manufacturer;
- Operation and maintenance manuals for the Work (or a specified part thereof) approved by the County;

- Successful completion of equipment and system startup and performance testing of the Work;
- Updates and addenda to the Record Documents and operation and maintenance manuals for the Work (or a specified part thereof) resulting from successful completion of the equipment and system startup and performance testing by Design-Builder.
- Operator and maintenance training.

"Surety" means the surety company issuing the Performance Bond or the Payment Bond, as applicable.

"Tax" means any tax, fee, levy, duty, impost, charge, surcharge, assessment, or withholding, or any payment-in-lieu thereof, and any related interest, penalty, or addition to tax.

"Technical Specifications" means the document of that same name specifying the County's technical criteria for the Project.

"Uncontrollable Circumstance" has the meaning provided in Contract Section 10.2. An Uncontrollable Circumstance may include any of the following provided the condition is consistent with the meaning in Section 10.2:

- a Change in Law;
- Differing Site Conditions to the extent provided in Special Condition 5 (Site Conditions);
- Regulated Site Conditions to the extent provided in Special Condition 5 (Site Conditions -Company Obligations);
- naturally occurring events (except weather conditions normal for the geographic region of the County) such as landslides, underground movement, earthquakes, fires, tornadoes, floods, epidemics, and other acts of God;
- explosion, sabotage, or similar occurrence, acts of a declared public enemy, terrorism, extortion, war, blockade or insurrection, riot or civil disturbance;
- labor disputes, except labor disputes involving employees of the Design-Builder, its Affiliates, or Subcontractors which affect the performance of the Contract Services;
- the failure of any Subcontractor to furnish services, materials, chemicals, or equipment on the dates agreed to, but only if such failure is the result of an event which would constitute an Uncontrollable Circumstance if it affected the Design-Builder directly, and the Design-Builder is not able to timely obtain substitutes after exercising all reasonable efforts;
- the failure of any appropriate Governmental Body or private Utility having operational jurisdiction in the area in which the Project is located to provide and maintain Utilities to the Project which are required for the performance of the Contract;
- the preemption, confiscation, diversion, or destruction of materials or services by a Governmental Body in connection with a public emergency or any condemnation or other taking by eminent domain of any material portion of the Project;
- with respect to the Design-Builder, any County Fault or County-directed Change Orders not due to Design-Builder fault; and
- with respect to the County, any Design-Builder fault.

The term "Uncontrollable Circumstance" does not include:

- any act, event or circumstance that would not have occurred if the affected party had complied with its obligations under the Contract;
- changes in interest rates, inflation rates, wage rates, insurance costs, commodity prices, currency values, exchange rates, or other economic conditions;

- changes in the financial condition of the County, the Design-Builder, the Design-Builder's Affiliates, or its Subcontractors affecting the ability to perform their respective obligations;
- the consequences of error, neglect, or omissions by the Design-Builder, any Subcontractor, any of their Affiliates, or any other person in the performance of the Contract Services;
- union or labor work rules, requirements, or demands which have the effect of increasing the number of employees employed at the Project or otherwise increasing the cost to the Design-Builder of performing the Contract Services;
- any impact of prevailing wage or similar laws, customs or practices on the Design-Builder's costs associated with the performance of the Design-Build Work;
- weather conditions normal for the geographic region of the County;
- any surface or subsurface geotechnical or hydrological conditions, including the existence of compressible soil layers, masses, unstable soils, manmade deposits, and water table fluctuations, except those constituting Differing Site Conditions or Regulated Site Conditions to the extent provided in SC 5 (Site Conditions);
- any act, event, circumstance, or Change in Law occurring outside of the United States;
- mechanical failure of equipment to the extent not resulting from a condition that is listed in the "Inclusions" section of this definition; and
- failure of the Design-Builder to secure patents which it deems necessary for the performance of the Contract Services.

"Unilateral Change Directive" means a written Change Order unilaterally issued by County directing Design-Builder to change the Scope of Work. Such order will specify a proposed basis for adjustment, if any, in the GMP or Schedule, associated with the Unilateral Change Directive.

"Utilities" means any and all utility services and installations whatsoever (including gas, water, electricity, telephone, internet, or cable and any other telecommunications), and all piping, wiring, conduit, and other fixtures of every kind whatsoever related thereto or used in connection therewith.

"Working Day" means a Calendar Day, exclusive of Saturdays, Sundays, and County recognized holidays, on which weather and other conditions, not under control of the Design-Builder, permit construction operations to proceed for the major part of the Day with the normal working force engaged in performing the controlling item or items of work which would be in progress at that time.

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ABBREVIATIONS

"AAC" means the Arizona Administrative Code, as amended from time to time.

"ADEQ" mean the Arizona Department of Environmental Quality or any successor agency.

"A.R.S." means the Arizona Revised Statutes, as amended from time to time.

"CAM" means Contract Administration Memorandum.

"CR" means cultural resources.

"CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.*, and applicable regulations promulgated thereunder, each as amended from time to time.

"DM" means design memorandum.

"MOPO" means maintenance of plant operations.

"PDEQ" means the Pima County Department of Environmental Quality or any successor agency. PDEQ is staffed by County employees and locally administers certain environmental programs pursuant to a delegation agreement with ADEQ. It also enforces certain County ordinances.

"PQM" means the Design-Builder's Project Quality Manager.

"RCRA" means the Resource Conservation and Recovery Act, 42 U.S.C. §6901 *et seq.*, and applicable regulations promulgated thereunder, each as amended from time to time.

"RWRD" means the Pima County Regional Wastewater Reclamation Department or any successor agency.

"SC" means a Special Condition of the Contract.

END OF APPENDIX "G" – GLOSSARY OF TERMS AND DEFINITIONS



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
04/11/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis of Minnesota, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: PHONE (A/C No. Ext): 1-877-945-7378 FAX (A/C. No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com	
	INSURER(S) AFFORDING COVERAGE	
INSURED HDR Constructors, Inc. 8404 Indian Hills Drive Omaha, NE 68114	INSURER A: Liberty Mutual Fire Insurance Company NAIC # 23035	
	INSURER B: Liberty Mutual Insurance Company 23043	
	INSURER C: Great American E & S Insurance Company 37532	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** W5881376 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR NSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability	Y Y	TB2-641-444950-037	06/01/2017	06/01/2018	EACH OCCURRENCE \$ 2,000,000	
	DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000						
	MED EXP (Any one person) \$ 10,000						
	PERSONAL & ADV INJURY \$ 2,000,000						
GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 4,000,000	
POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 4,000,000	
OTHER:						\$	
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y Y	AS2-641-444950-047	06/01/2017	06/01/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000	
	BODILY INJURY (Per person) \$						
	BODILY INJURY (Per accident) \$						
	PROPERTY DAMAGE (Per accident) \$						
\$							
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE	Y Y	TH7-641-444950-067	06/01/2017	06/01/2018	EACH OCCURRENCE \$ 5,000,000	
	DED RETENTION \$					AGGREGATE \$ 5,000,000	
	\$						
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N No	N/A Y	WA7-64D-444950-017	06/01/2017	06/01/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	E.L. EACH ACCIDENT \$ 1,000,000						
	E.L. DISEASE - EA EMPLOYEE \$ 1,000,000						
	E.L. DISEASE - POLICY LIMIT \$ 1,000,000						
C	Contractors Pollution Liability	Y	CSB E105888 01	01/16/2018	01/16/2019	Per Incident \$1,000,000	
	Aggregate \$2,000,000						

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: Design-Build Services for Tres Rios WRF Nutrient Recovery Project (3BBUMP).

Certificate Holder is named as Additional Insured on General Liability, Automobile Liability and Umbrella Liability on a Primary, Non-contributory basis where required by written contract. Waiver of Subrogation applies on General Liability, Automobile Liability, Umbrella Liability and Workers Compensation where required by written contract. Umbrella policy Follows Form of the underlying General Liability, Automobile Liability, and Employers Liability.

CERTIFICATE HOLDER Pima County Procurement Department Design & Construction Div. 130 W Congress, 3rd floor Tucson, AZ 85701	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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AGENCY CUSTOMER ID: _____

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 2 of 2

AGENCY Willis of Minnesota, Inc.		NAMED INSURED HDR Constructors, Inc. 8404 Indian Hills Drive Omaha, NE 68114	
POLICY NUMBER See Page 1		EFFECTIVE DATE: See Page 1	
CARRIER See Page 1	NAIC CODE See Page 1		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

Additional Insureds and Waiver of Subrogation: Pima County, its departments, districts, boards, commissions, officers, officials, agents and employees.

Pima County, its departments, districts, boards, commissions, officers, officials, agents and employees are included as Additional Insureds as respects to Contractor's Pollution Liability.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Construction Project(s):

All construction projects not located at premises owned, leased or rented by a Named Insured

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:

1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.

C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED LOCATION(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Location(s):

All locations owned by or rented to the Named Insured

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to operations at a single designated "location" shown in the Schedule above:
1. A separate Designated Location General Aggregate Limit applies to each designated "location", and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Location General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Location General Aggregate Limit for that designated "location". Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Location General Aggregate Limit for any other designated "location" shown in the Schedule above.
 4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Location General Aggregate Limit.

- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to operations at a single designated "location" shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Location General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Location General Aggregate Limit.
- D.** For the purposes of this endorsement, the **Definitions** Section is amended by the addition of the following definition:
- "Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.
- E.** The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
Any person or organization with whom you have agreed, through written contract, agreement or permit to provide additional insured coverage.	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
Any person or organization to whom or to which you are required to provide additional insured status in a written contract, agreement or permit except where such contract or agreement is prohibited.	Any location where you have agreed, through written, contract, agreement or permit, to provide additional insured coverage for completed operations.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

Policy Number TB2-641-444950-037
Issued by

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

OTHER INSURANCE AMENDMENT – SCHEDULED ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART

Schedule

Person or Organization: Where required by written contract.

If you are obligated under a written agreement to provide liability insurance on a primary, excess, contingent, or any other basis for any person or organization shown in the Schedule of this endorsement that qualifies as an additional insured on this policy, this policy will apply solely on the basis required by such written agreement and Paragraph 4. Other Insurance of Section IV - Conditions will not apply. If the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Paragraph 4. Other Insurance of Section IV - Conditions will govern. However, this insurance is excess over any other insurance available to the additional insured for which it is also covered as an additional insured by attachment of an endorsement to another policy providing coverage for the same "occurrence", claim or "suit".

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

SCHEDULE

Name Of Person(s) Or Organization(s):

As required by written contract

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph **A.1.** of Section II – Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph **D.2.** of Section I – Covered Autos Coverages of the Auto Dealers Coverage Form.

Policy Number: AS2-641-444950-047
Issued by: Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED - NONCONTRIBUTING

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIERS COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage form.

Schedule

Name of Person(s) or Organizations(s):

Any person or organization where the Named Insured has agreed by written contract to include such person or organization

Regarding Designated Contract or Project:

Any

Each person or organization shown in the Schedule of this endorsement is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

The following is added to the Other Insurance Condition:

If you have agreed in a written agreement that this policy will be primary and without right of contribution from any insurance in force for an Additional Insured for liability arising out of your operations, and the agreement was executed prior to the "bodily injury" or "property damage", then this insurance will be primary and we will not seek contribution from such insurance.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization: As required by written contract or agreement

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.
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The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

SCHEDULE

Name(s) Of Person(s) Or Organization(s):

Any person or organization for whom you perform work under a written contract of the contract requires you to obtain this agreement from us but only if the contract is executed prior to the injury or damage occurring.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Where required by contract or written agreement prior to loss.

Issued by:

For attachment to Policy No WA7-64D-444950-017
\$

Effective Date 6/01/2017

Premium

Issued to:

Policy Number **TB2-641-444950-037**
Issued by

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO THIRD PARTIES

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE PART
- MOTOR CARRIER COVERAGE PART
- GARAGE COVERAGE PART
- TRUCKERS COVERAGE PART
- EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
- SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
- COMMERCIAL GENERAL LIABILITY COVERAGE PART
- EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
- PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
- LIQUOR LIABILITY COVERAGE PART
- COMMERCIAL LIABILITY – UMBRELLA COVERAGE FORM

Schedule		
Name of Other Person(s) / Organization(s):	Email Address or mailing address:	Number Days Notice:
Per Schedule on File with Broker		30 Days

- A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

Policy Number **AS2-641-444950-047**

Issued by

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO THIRD PARTIES

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE PART
- MOTOR CARRIER COVERAGE PART
- GARAGE COVERAGE PART
- TRUCKERS COVERAGE PART
- EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
- SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
- COMMERCIAL GENERAL LIABILITY COVERAGE PART
- EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
- PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
- LIQUOR LIABILITY COVERAGE PART
- COMMERCIAL LIABILITY – UMBRELLA COVERAGE FORM

Schedule		
Name of Other Person(s) / Organization(s):	Email Address or mailing address:	Number Days Notice:
Per Schedule on File with Broker		30 Days

- A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

NOTICE OF CANCELLATION TO THIRD PARTIES

- A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below by email as soon as practical after notifying the first Named Insured.
- B. This advance email notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

SCHEDULE

Name of Other Person(s) / Organization(s):

Per Schedule on file with Company 30 Days

All other terms and conditions of this policy remain unchanged.

Issued by

For attachment to Policy No. WA7-64D-444950-017 Effective Date 6/01/2017 Premium \$

Issued to



CERTIFICATE OF LIABILITY INSURANCE

6/1/2018 DATE (MM/DD/YYYY) 4/10/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

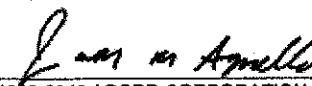
PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Lexington Insurance Company	19437
INSURED 1016040 HDR CONSTRUCTORS, INC. 8404 INDIAN HILLS DR. OMAHA NE 68114	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES HDRIN01 CERTIFICATE NUMBER: 15318617 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJ. <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMP/OP AGG \$ XXXXXXXX \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		NOT APPLICABLE			PER STATUTE OTH-ER EL. EACH ACCIDENT \$ XXXXXXXX EL. DISEASE - EA EMPLOYEE \$ XXXXXXXX EL. DISEASE - POLICY LIMIT \$ XXXXXXXX
A	ARCH & ENG PROFESSIONAL LIABILITY	N	N	061853691	6/1/2017	6/1/2018	PER CLAIM: \$2,000,000 AGGREGATE: \$2,000,000.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 DESIGN-BUILD SERVICES FOR TRES RIOS WRF NUTRIENT RECOVERY PROJECT (3BBUMP). 30 DAYS NOTICE OF CANCELLATION APPLIES, 10 DAYS NOTICE FOR NON-PAYMENT OF PREMIUM.

CERTIFICATE HOLDER 15318617 Pima County Procurement Dept Design & Construction Div. Attention: Keith Rogers 130 W Congress, 3rd Floor Tucson AZ 85701	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

Effective June 1, 2017 HDR will have two separate insurance brokers.

Lockton will remain HDR's insurance broker for professional liability only.

Willis Towers Watson will be HDR's new broker for:

1. General Liability
2. Automobile Liability
3. Workers Compensation
4. Property/Equipment

If professional liability is required by the contract documents provided in the insurance request, we will forward the information to Lockton for processing.

Please direct all questions regarding certificates of insurance to HDR's insurance manager, Matthew Peterson by email at MPeterson@HDRInc.com or by phone at (402)399-1499.

Regards,
Willis Towers Watson Certificate Center
Phone: 877-945-7378
Fax: 888-467-2378
Email: certificates@willis.com