

CONTRACT DOCUMENTS
FOR THE CONSTRUCTION OF

**LABORATORY REMODEL AND
EXPANSION PROJECT**

**Volume 1 OF 2
Specifications**



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LABORATORY REMODEL AND EXPANSION PROJECT

CONTRACT DOCUMENTS

**BIDDING REQUIREMENTS, CONTRACT FORMS,
CONDITIONS OF THE CONTRACT,
TECHNICAL SPECIFICATIONS AND DRAWINGS**

**Bids will be received at the office of South Valley Water Reclamation Facility
located at**

7495 South 1300 West, West Jordan, Utah 84084

until 2:00 PM Tuesday, December 11, 2018.

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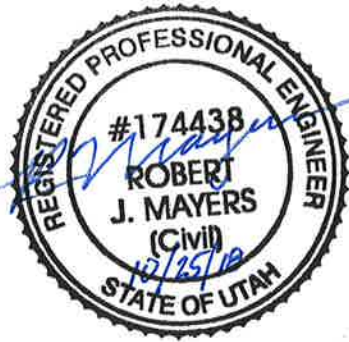
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SOUTH VALLEY WATER RECLAMATION FACILITY LABORATORY REMODEL AND EXPANSION PROJECT CONTRACT DOCUMENTS

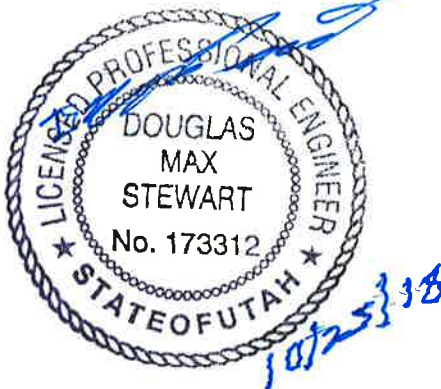
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Structural Drawings and Specifications



Electrical Drawings and Specifications



Architectural Drawings and Specifications



Mechanical Plumbing and HVAC Drawings
and Specifications



PART 1 – BIDDING REQUIREMENTS

SECTION 00030 - NOTICE INVITING BIDS

RECEIPT OF BIDS: Sealed Bids will be received at the office of the South Valley Water Reclamation Facility; OWNER of the WORK located at 7495 South 1300 West, West Jordan, Utah 84084, until 2:00 PM on Tuesday, December 11, 2018, for construction of South Valley Water Reclamation Facility "Laboratory Remodel and Expansion Project". Any Bids received after the specified time and date will not be considered.

OPENING OF BIDS: The Bids will be publicly opened and read at 2:00 PM, Tuesday, December 11, 2018, at the above-mentioned office of the OWNER.

COMPLETION OF WORK: The WORK shall be completed as described below:

- a) Contractor shall perform and complete all work as follows.

DESCRIPTION OF WORK: The project consists of the following Items:

- a) The Work consists of demolition and renovation of the existing laboratory facility and construction of expanded and contiguous laboratory space and facilities. All architectural, structural, mechanical, electrical and civil/landscape elements are included. A majority of the laboratory analytical equipment and some furnishings will be Owner-supplied and installed. Complete start up and commissioning of all new equipment and systems installed by the Contractor shall be provided.

SITE OF WORK: The site of the WORK is located at the OWNER's water reclamation facility at 7495 South 1300 West, West Jordan, Utah.

PRE-QUALIFIED CONTRACTORS: Bids will be received only from contractors who have previously responded to the Owner's Pre-qualification Request and who have been notified that they are pre-qualified to submit bids for the work. Any bid by a contractor that has not been pre-qualified will be rejected and returned unopened.

OBTAINING CONTRACT DOCUMENTS: The Contract Documents are entitled "South Valley Water Reclamation Facility – Laboratory Remodel and Expansion Project".

The Contract Documents may be obtained by bidders, subcontractors and equipment suppliers at the office of the South Valley Water Reclamation Facility, 7495 South 1300 West, West Jordan, Utah 84084 upon payment of \$50.00 (non-refundable) for each set of printed Contract Documents (including technical specifications and accompanying reduced scale drawings). Printed bid packages will be available from the receptionist on Monday through Thursday commencing on Monday, November 19, 2018 through Tuesday, December 4, 2018, from 9:00 AM to 4:00 PM and will be produced on an as needed basis at the time of payment. Electronic files will be available beginning Monday, November 19, 2018 at noon for download at www.svwater.com under "News & Notices" and then "Proposed Projects". Addenda will posted only on the SVWRF website and made available for download as posted. Interested parties should check the website daily. There will be no charge for downloading electronic bid documents. Technical questions should be directed to Bowen Collins & Associates, Inc. at (801) 495-2224 and ask for Robert Mayers, P.E.

BID SECURITY: Each Bid shall be accompanied by a certified check or cashier's check or Bid Bond in the amount of 5 percent of the Total Bid Price payable to the OWNER as a guarantee that

the Bidder, if its Bid is accepted, will promptly execute the Agreement. A bid shall not be considered unless one of the forms of Bidder's security is enclosed with it.

BIDS TO REMAIN OPEN: The Bidder shall guarantee the Total Bid Price for a period of 45 calendar days from the date of bid opening.

MANDATORY PRE-BID VISIT TO WORK SITE: For a bid to be considered complete, prospective bidders are **required** to attend a pre-bid walk through of the proposed work site which will be conducted by the OWNER at 10:00 AM on Tuesday, November 27, 2018. The object of the walk through is to acquaint bidders with the site conditions. The pre-bid visit will start at the office of the OWNER located at 7495 South 1300 West, West Jordan City, Utah. Follow-up visits by prospective bidders and subcontractors are available by appointment only. Contact Taigon Worthen, P.E. of the SVWRF for appointments.

PROJECT ADMINISTRATION: Technical communications relative to this WORK shall be directed to the ENGINEER prior to opening of the Bids. Communications relative to the purchase of Bid Documents shall be directed to the OWNER.

BOWEN COLLINS & ASSOCIATES, INC.
154 East 14000 South
Draper, Utah 84020
Telephone: 801-495-2224
e-mail: bmayers@bowencollins.com
Attention: Bob Mayers, P.E.

SOUTH VALLEY WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084
Telephone: 801-495-5469
e-mail: tworthen@svwater.com
Attention: Taigon Worthen, P.E.

OWNER'S RIGHTS RESERVED: The OWNER reserves the right to reject any or all bids, to waive any informality in a bid, and to make awards to the lowest responsive, responsible bidder as the OWNER in its sole discretion shall determine may best serve the interest of the OWNER.

- END OF NOTICE INVITING BIDS -

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1. **DEFINED TERMS.** Terms used in these Instructions to Bidders and the Notice Inviting Bids which are defined in the General Conditions have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a price or quote to a Bidder.
2. **INTERPRETATIONS AND ADDENDA.**
 - 2.1 All questions about the meaning or intent of the Contract Documents are to be directed to the ENGINEER. Additions, deletions, or revisions to the Contract Documents considered necessary by the ENGINEER in response to such questions will be issued by Addenda, mailed, emailed, or delivered to all parties recorded by the OWNER as having received the Contract Documents. Questions received less than 5 days prior to the date of Bids may not be answered. Only answers to such questions issued by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
 - 2.2 Addenda may also be issued to make other additions, deletions, or revisions to the Contract Documents.
 - 2.3 Bidders shall make no special interpretation or inference of intent from differing formats in the Technical Specifications.
3. **BIDDER'S EXAMINATION OF CONTRACT DOCUMENTS AND SITE.**
 - 3.1 It is the responsibility of each Bidder before submitting a Bid:
 - A. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including "technical" data referred to below);
 - B. To visit the site to become familiar with local conditions that may affect cost, progress, or performance, of the WORK;
 - C. To consider federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the WORK;
 - D. To study and carefully correlate the Bidder's observations with the Contract Documents; and
 - E. To notify the OWNER of all conflicts, errors, ambiguities, or discrepancies in or between the Contract Documents and such other related data.
 - 3.2 (Not Used)
 - 3.3 It is also the responsibility of each Bidder before submitting a Bid to examine thoroughly those reports of physical conditions in or relating to existing surface and subsurface conditions (except underground utilities as defined in Article 1 of the General Conditions) which are at or adjacent to the site and which were utilized by the OWNER in the preparation of the Contract Documents. Copies of such report and drawings are available for information at the office of the OWNER.
 - 3.4 Information and data reflected in the Contract Documents with respect to Underground Utilities at or contiguous to the site are based upon information and data furnished to the OWNER by the owners of such Underground Utilities or others, and the OWNER does not

assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary General Conditions or Section 01530 - Protection of Existing Facilities.

- 3.5 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Utilities, and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.
- 3.6 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the WORK and which the Bidder deems necessary to determine its Bid for performing the WORK in accordance with the time, price, and other terms and conditions of the Contract Documents.
- 3.7 On reasonable request in advance, the OWNER will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests, and studies as each Bidder deems necessary for submission of a Bid. Location of any excavation or boring shall be subject to prior approval of OWNER and applicable agencies. Bidder shall fill all holes, restore all pavement to match existing structural section, and shall clean up and restore the site to its former condition upon completion of such explorations. OWNER reserves the right to require Bidder to execute an Access Agreement with the OWNER prior to accessing the site.
- 3.8 The lands upon which the WORK is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by the CONTRACTOR in performing the WORK are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by the OWNER unless otherwise provided in the Contract Documents.
- 3.9 The submission of a Bid will constitute an absolute representation by the Bidder that the Bidder has complied with every requirement of this Paragraph 3 and the following:
 - A. That the Bid is premised upon performing the WORK required by the Contract Documents without exception and such means, methods, techniques, sequences, or procedures of construction (if any) as may be required by the Contract Documents;
 - B. That Bidder has given the OWNER written notice of all conflicts, errors, ambiguities, and discrepancies in the Contract Documents and the written resolution thereof by the OWNER is acceptable to the Bidder; and
 - C. That the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the WORK.
4. BID FORMS. The Bid shall be submitted on the Bid Forms bound herein. All blanks on the Bid Forms shall be completed in ink. All names must be printed below the signatures. The Bid shall be submitted in a sealed envelope which shall be plainly marked in the upper left hand corner with the name and address of the Bidder and shall bear the words "BID FORM" followed by the title of the Contract Documents for the WORK, the name of the

OWNER, the address where Bids are to be delivered or mailed to, and the date and hour of opening of Bids.

5. CERTIFICATES.

5.1 Bids by corporations must be executed in the corporate name by the president, a vice-president, or other corporate officer. Such Bid shall be accompanied by the enclosed Certificate of Authority to sign, attested by the secretary or assistant secretary, and with the corporate seal affixed. The corporate address and state of incorporation must appear below the signature.

5.2 Bids by partnerships must be executed in the partnership name and be signed by a managing partner, accompanied by the enclosed Certificate of Authority to sign, and his/her title must appear under the signature and the official address of the partnership must appear below the signature.

5.3 Bids by joint ventures must be executed in the joint venture name and be signed by a joint venture managing partner, accompanied by the enclosed Certificate of Authority to sign, and his/her title must appear under the signature and the official address of the joint venture must appear below the signature.

6. DISQUALIFICATION OF BIDDERS. More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the OWNER believes that any Bidder has financial interest in more than one Bid for the WORK contemplated, all Bids in which such Bidder is interested will be rejected. If the OWNER reasonably believes that collusion exists among the Bidders, all Bids will be rejected. A party who has quoted prices to a Bidder is not hereby disqualified from quoting prices to other Bidders, but is disqualified from submitting a Bid directly for the WORK.

7. QUANTITIES OF WORK. The quantities of work or material stated in unit price items of the Bid are supplied only to give an indication of the general scope of the WORK; the OWNER does not expressly or by implication agree that the actual amount of work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit price item of the WORK by an amount up to and including 25 percent of any Bid item, without a change in the unit price, and shall include the right to delete any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed 25 percent of the Bid price.

8. COMPETENCY OF BIDDERS. Only qualified and E100 licensed CONTRACTORS specializing in mechanical construction may submit a bid for the performance of the WORK.

9. SUBMISSION OF BIDS. The Bid shall be delivered by the time and to the place stipulated in the Notice Inviting Bids. It is the Bidder's sole responsibility to see that its Bid is received in proper time and at the proper place.

10. BID SECURITY, BONDS, AND INSURANCE. Each Bid shall be accompanied by a certified or cashier's check or approved Bid Bond in the amount stated in the Notice Inviting Bids. Said check or bond shall be made payable to the OWNER and shall be given as a guarantee that the Bidder, if awarded the WORK, will enter into an Agreement with the OWNER, and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond; each of said bonds to be in the amount stated in the Supplementary General Conditions. In case of refusal or failure to enter into said

Agreement, the check or Bid Bond, as the case may be, shall be forfeited to the OWNER. If the Bidder elects to furnish a Bid Bond as its Bid security, the Bidder shall use the Bid Bond form bound herein, or one conforming substantially to it in form. Bid Bonds shall comply with the requirements applicable to payment and performance bonds in the General Conditions.

11. DISCREPANCIES IN BIDS. In the event there is more than one Bid item in a Bid Schedule, the Bidder shall furnish a price for all Bid items in the Schedule, and failure to do so will render the Bid non-responsive and shall cause its rejection. In the event there are unit price Bid items in a Bidding schedule and the amount indicated for a unit price Bid item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly, and the BIDDER shall be bound by said correction. In the event there is more than one Bid item in a Bid Schedule and the total indicated for the Schedule does not agree with the sum of the prices Bid on the individual items, the prices Bid on the individual items shall govern and the total for the Schedule will be corrected accordingly, and the BIDDER shall be bound by said correction.
12. MODIFICATIONS AND UNAUTHORIZED ALTERNATIVE BIDS. Unauthorized conditions, limitations, or provisos attached to the Bid shall render it informal and may cause its rejection as being non-responsive. The Bid forms shall be completed without interlineations, alterations, or erasures in the printed text. Alternative Bids will not be considered unless called for. Oral, telegraphic, telephonic or electronic Bids or modifications will not be considered.
13. WITHDRAWAL OF BID. The Bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its properly authorized representative. Such written request must be delivered to the place stipulated in the Notice Inviting Bids for receipt of Bids prior to the scheduled closing time for receipt of Bids.
14. AWARD OF CONTRACT. Award of the contract, if awarded, will be made to the lowest responsive, responsible Bidder whose Bid complies with the requirements of the Contract Documents. Unless otherwise specified, any such award will be made within the period stated in the Notice Inviting Bids that the bids are to remain open. Unless otherwise indicated, a single award will be made for all the Bid items in an individual Bid Schedule.
15. RETURN OF BID SECURITY. Within 14 days after award of the contract, the OWNER will, if requested, return the Bid securities accompanying such Bids that are not being considered in making the award. All other Bid securities will be held until the Agreement has been finally executed. They will then be returned, if requested, to the respective Bidders whose Bids they accompany.
16. EXECUTION OF AGREEMENT. The Bidder to whom award is made shall execute a written Agreement with the OWNER on the form of agreement provided, shall secure all insurance, and shall furnish all certificates and bonds required by the Contract Documents within 14 calendar days after receipt of the agreement forms from the OWNER. Failure or refusal to enter into an Agreement as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the Bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the Contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest Bidder to execute the Agreement, each such Bidder's Bid securities shall be likewise forfeited to the OWNER.

17. LIQUIDATED DAMAGES. Provisions for liquidated damages, if any, are set forth in the Agreement.
18. PREFERENCE FOR RESIDENT CONTRACTORS. The OWNER will apply the provisions of Utah Procurement Code 63G-6-405. titled Preference for Resident Contractors (Utah Code -- Title 63G -- Chapter 6) wherein it is stated "(2) (a) When awarding contracts for construction, a public procurement unit shall grant a resident contractor a reciprocal preference as against a nonresident contractor from any state that gives or requires a preference to contractors from that state. (b) The amount of the reciprocal preference shall be equal to the amount of the preference applied by the state of the nonresident contractor."

- END OF INSTRUCTIONS TO BIDDERS -

SECTION 00300 – BID FORMS

BID

BID TO: South Valley Water Reclamation Facility

1. The undersigned Bidder proposes and agrees, if this Bid is accepted to enter into an Agreement with the OWNER in the form included in the Contract Documents to perform the WORK as specified or indicated in said Contract Documents entitled "South Valley Water Reclamation Facility – Laboratory Remodel and Expansion Project".
2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the Notice Inviting Bids and Instructions to Bidders, dealing with the dispositions of the Bid security.
3. This Bid will remain open for the period stated in the "Notice Inviting Bids" unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders", required by the Contract Documents.
4. Bidder has examined copies of all the Contract Documents including the following

Addenda (receipt of all of which is hereby acknowledged):

Number	Date
_____	_____
_____	_____
_____	_____

Failure to acknowledge addenda shall render the bid non-responsive and shall be cause for its rejection.

5. Bidder has familiarized itself with the nature and extent of the Contract Documents, WORK, site, locality where the WORK is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the WORK and has made such independent investigations as Bidder deems necessary.

To all the foregoing, and including all Bid Forms contained in the Bid, said Bidder further agrees to complete the WORK required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the Total Bid Price(s) named in the aforementioned Bid forms.

Dated: _____	Bidder: _____
	By: _____
	Title: _____

BID CERTIFICATE

(if Corporation)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____

a corporation existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and
adopted:

“RESOLVED, that _____, as
_____ of this
Corporation, be and is hereby authorized to execute the Bid dated _____,
20____, to the South Valley Water Reclamation Facility by this Corporation and that his/her
execution thereof, attested by the Secretary of this Corporation, and with the Corporate Seal
affixed, shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the
corporation this _____, day of _____, 20____.

Secretary

(SEAL)

BID CERTIFICATE

(if Partnership)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____

a partnership existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of _____ the
Partnership, be and is hereby authorized to execute the Bid dated _____, 20____,
to the South Valley Water Reclamation Facility by this Partnership and that his/her execution
thereof, attested by the _____ shall be the official act and deed
of this Partnership.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

BID CERTIFICATE

(if Joint Venture)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

a joint venture existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of the Joint
Venture, be and is hereby authorized to execute the Bid dated _____, 20____, to
the “South Valley Water Reclamation Facility by this Joint Venture and that his/her execution
thereof, attested by the _____ shall be the official act and deed of this
Joint Venture.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the
corporation this _____, day of _____, 20____.

LIST OF SUBCONTRACTORS

The Bidder shall list below the name and the location of the place of business of each Subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a Subcontractor who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater. The Bidder shall also list below the portion of the WORK which will be performed by each Subcontractor under its contract. The prime contractor shall list only one Subcontractor for each portion as is defined by the prime contractor in its bid. The prime contractor shall submit information (see next page) required of specialty subcontractors which are proposed to do Sheet Metal (HVAC) Work, Mechanical Work or Electrical Work, if any.

The Bidder's attention is directed to the provisions of Paragraph entitled "Subcontract Limitations," of the Supplementary General Conditions which stipulates the percent of the WORK to be performed with the Bidder's own forces. Failure to comply with this requirement will render the Bid non-responsive and may cause its rejection.

<u>Work to be Performed</u>	<u>Subcontr. License Number</u>	<u>Percent of Total Bid</u>	<u>Subcontractor's Name and Address</u>
1. _____	_____	_____	_____ _____ _____ _____
2. _____	_____	_____	_____ _____ _____ _____
3. _____	_____	_____	_____ _____ _____ _____
4. _____	_____	_____	_____ _____ _____ _____

Note: Attach additional sheets if required.

INFORMATION REQUIRED OF SPECIALTY SUBCONTRACTORS

The Bidder shall furnish the following information for each specialty subcontractor. Additional sheets shall be attached as required. Failure to complete Item Nos. 1, 2, and 3, will cause the Bid to be non-responsive and may cause its rejection.

(1) SPECIALTY SUBCONTRACTOR's name and address:

(2) SPECIALTY SUBCONTRACTOR's license:

Primary Classification _____

State License No. and Expiration Date _____

Specialty classifications held, if any: _____

Name of Licensee, if different from (1) above:

(3) ATTACH TO THIS BID a list of the 5 most recent construction contracts or subcontracts completed by the SPECIALTY SUBCONTRACTOR involving HVAC, Mechanical or Electrical Work of similar type and comparable value at Municipal Water Treatment Plants or Municipal Wastewater Treatment Plants.

The list shall include the following information as a minimum:

- Names, address, and telephone number of owner.
- Name of Project.
- Location of Project.
- Brief description of the work involved.
- Contract amount.
- Date of completion of the contract.
- Name, address, and telephone number of architect or engineer.
- Name of owner's project engineer.

INFORMATION REQUIRED OF BIDDER

The Bidder shall furnish the following information. Additional sheets shall be attached as required. Failure to complete Item Nos. 1, 3, and 6, will cause the Bid to be non-responsive and may cause its rejection.

(1) CONTRACTOR's name and address:

(2) CONTRACTOR'S telephone number: _____

(3) CONTRACTOR's fax number: _____

(4) CONTRACTOR's license: Primary Classification _____

State License No. and Expiration Date _____

Specialty classifications held, if any: _____

Name of Licensee, if different from (1) above: _____

(5) Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract:

(6) ATTACH TO THIS BID a financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of CONTRACTOR's current financial condition.

(7) ATTACH TO THIS BID a list of the 5 most recent construction contracts completed by the CONTRACTOR involving HVAC Work of similar type and comparable value at Municipal Water Treatment Plants or Municipal Wastewater Treatment Plants. The list shall include the following information as a minimum:

- Names, address, and telephone number of owner.
- Name of Project.
- Location of Project.
- Brief description of the work involved.
- Contract amount.
- Date of completion of the contract.
- Name, address, and telephone number of architect or engineer.
- Name of owner's project engineer.

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER
AND SUBMITTED WITH BID**

STATE OF)
) SS:
COUNTY OF)

_____, being first duly sworn, deposes and says that he or she is _____ of _____ the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit or cost element of awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signed: _____

Subscribed and sworn to before me
this ____ day of _____, 20____

Notary Public in and for the
County of _____
State of _____

(SEAL)

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Principal, and
_____ as Surety, are held
and firmly bound unto the South Valley Water Reclamation Facility hereinafter called "OWNER,"
in the sum of _____ dollars, for
the payment of which sum, well and truly to be made, we jointly and severally bind ourselves,
our heirs, executors, administrators, successors, and assigns firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required
under the bidding schedule(s) of the OWNER's Contract Documents entitled "South Valley
Water Reclamation Facility – Laboratory Remodel and Expansion Project".

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time
and in the manner required in the "Notice Inviting Bids" and the "Instruction to Bidder" enters
into a written Agreement on the form of agreement bound with said Contract documents,
furnishes the required certificates of insurance, and furnishes the required Performance Bond
and Payment Bond, and performs in all other respects the agreement created by this bid, then
this obligation shall be null and void, otherwise it shall remain in full force and effect. The Surety
stipulates and agrees that the obligation of said Surety shall in no way be impaired or affected
by an extension of the time within which the OWNER may accept such bid and Surety further
waives notice of any such extension. In the event suit is brought upon this bond by said
OWNER and OWNER prevails, said Principal and Surety shall pay all costs incurred by said
OWNER in such suit, including reasonable attorney's fees and costs to be fixed by the court.

SIGNED AND SEALED, this _____ day of _____, 2018

_____ (Principal)	(SEAL) _____ (SEAL) (Surety)
----------------------	---------------------------------

By: _____ (Signature)	By: _____ (Signature)
--------------------------	--------------------------

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

- END OF BID FORMS -

BID SCHEDULES

PART 1 – GENERAL

1.01 CONSTRUCTION CONTRACT

- A. Name of Project: South Valley Water Reclamation Facility – Laboratory Remodel and Expansion Project

1.02 SCHEDULES TO BE ADDED TO THE AGREEMENT

- A. This Bid Schedule contains the schedules of prices which will be incorporated into the Agreement by reference.

1.03 TAXES

- A. The Bidder agrees that all sales, consumer, use, and other similar taxes are included in the stated bid prices for the WORK, unless provision is made herein for the Bidder to separately itemize the estimated amount of tax.

1.04 SCHEDULES OF PRICES

- A. Schedule A: This item includes all of the WORK for the project as specified and shown on the Contract Documents. Bidder shall complete Schedule A in its entirety and not exclude or omit any items.

LUMP SUM SCHEDULE A SVWRF Laboratory Remodel and Expansion Project

Item No.	Description	Quantity	Unit	Total Lump Sum Cost
1	The Work consists of demolition and renovation of the existing laboratory facility and construction of expanded and contiguous laboratory space and facilities. All architectural, structural, mechanical, electrical and civil/landscape elements are included. A majority of the laboratory analytical equipment and some furnishings will be Owner-supplied and installed. Complete start up and commissioning of all new equipment and systems installed by the Contractor shall be provided.	1	LS	\$

Bid Schedule A Total in Words:

All Costs shall include all labor, equipment, tools, supplies, insurance, taxes, overhead, markups, applicable fees and all other costs associated with performing the Work.

- END OF BID SCHEDULES -

PART 2 – CONTRACT FORMS

SECTION 00500 – AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2019 by and between South Valley Water Reclamation Facility (hereinafter called OWNER) and _____ (Hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK.

CONTRACTOR shall complete the WORK as specified or indicated in the OWNER's Contract Documents entitled "South Valley Water Reclamation Facility – Laboratory Remodel and Expansion Project". The WORK is generally described as follows and as listed in Schedule A:

- a) The Work consists of demolition and renovation of the existing laboratory facility and construction of expanded and contiguous laboratory space and facilities. All architectural, structural, mechanical, electrical and civil/landscape elements are included. A majority of the laboratory analytical equipment and some furnishings will be Owner-supplied and installed. Complete start up and commissioning of all new equipment and systems installed by the Contractor shall be provided.

ARTICLE 2. CONTRACT TIMES

COMPLETION OF WORK: The WORK shall be completed as follows:

1. Contractor shall begin WORK as soon as the Notice to Proceed is issued following award of WORK. Notice to Proceed (NTP) is planned on or before February 1, 2019. Work shall be fully complete by September 30, 2019. Work exterior to the existing building may commence immediately upon receipt of the NT, and work within the existing building may commence on May 1, 2019.

ARTICLE 3. LIQUIDATED DAMAGES

OWNER and the CONTRACTOR recognize that time is of the essence of this Agreement and that the OWNER will suffer financial loss if the WORK is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by the OWNER if the WORK is not completed on time. Accordingly, instead of requiring any such proof, the OWNER and the CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) the CONTRACTOR shall pay the OWNER \$1,000.00 for each day that expires after the deadlines specified in Article 2 herein.

ARTICLE 4. CONTRACT PRICE

OWNER shall pay CONTRACTOR for completion of the WORK in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule(s).

ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

ARTICLE 6. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the WORK consist of this Agreement (pages 00500-1 to 00500-6, inclusive) and the following attachments to this Agreement:

- Notice Inviting Bids (pages 00030-1 to 00030-2, inclusive).
- Instructions to Bidders (pages 00100-1 to 00100-5, inclusive).
- Bid Forms including the Bid, Bid Schedule(s), information required of Bidder, Bid Bond, and all required certificates and affidavits (pages 00300-1 to 00300-9 and 00310-1 to 00310-2, inclusive).
- Performance Bond (pages 00610-1 to 00610-1, inclusive).
- Payment Bond (pages 00620-1 to 00620-1, inclusive).
- General Conditions (pages 00700-1 to 00700-36, inclusive).
- Supplementary General Conditions (pages 00800-1 to 00800-7, inclusive).
- Supplementary General Conditions (Utah) (pages 00810-1 to 00810-4, inclusive).
- Technical Specifications consisting of Divisions and pages, as listed in the Table of Contents.
- Drawings consisting of XX sheets, as listed in the Table of Contents/List of Drawings.
- Addenda numbers _ to _, inclusive.
- Notice to Proceed.
- Change Orders which may be delivered or issued after Effective Date of this Agreement and are not attached hereto.

There are no Contract Documents other than those listed in this Article 6. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.03 of the General Conditions.

ARTICLE 7. ASSIGNMENTS

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an

assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have caused this Agreement to be executed the day and year first above written.

OWNER:

South Valley Water Reclamation Facility

By _____
(Jerry Knight, Board Chairman)

Attest _____

Address for giving notices:
South Valley Water Reclamation Facility
7495 South 1300 West
West Jordan, Utah 84084

Approved as to Form:

(Signature)

(Facility Attorney)

CONTRACTOR:

By _____

[CORPORATE SEAL]

Attest _____

Address for giving notices:

Agent for service of process: _____

Telephone No. for Agent

AGREEMENT CERTIFICATE

(if Corporation)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____

a corporation existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and
adopted:

“RESOLVED, that _____, as
_____ of this
Corporation, be and is hereby authorized to execute the Agreement dated
_____, 20____, to the South Valley Water Reclamation Facility by this
Corporation and that his/her execution thereof, attested by the Secretary of this Corporation,
and with the Corporate Seal affixed, shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the
corporation this _____, day of _____, 20____.

Secretary

(SEAL)

AGREEMENT CERTIFICATE

(if Partnership)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____

a partnership existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of the
Partnership, be and is hereby authorized to execute the Agreement dated _____,
20____, by and between this Partnership and South Valley Water Reclamation Facility by this
Partnership and that his/her execution thereof, attested by the _____ shall be
the official act and deed of this Partnership.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

AGREEMENT CERTIFICATE

(if Joint Venture)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

a joint venture existing under the laws of the State of _____, held
on _____, 20 _____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of the Joint
Venture, be and is hereby authorized to execute the Agreement dated _____,
20____, by and between this Joint Venture and South Valley Water Reclamation Facility and
that his/her execution thereof, attested by the _____ shall be the official
act and deed of this Joint Venture.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

SECTION 00610 - PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as CONTRACTOR,
and _____ as Surety,
are held and firmly bound unto South Valley Water Reclamation Facility hereinafter called
"OWNER," in the sum of _____ dollars,
for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors,
administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that said CONTRACTOR has been
awarded and is about to enter into the annexed Agreement with said OWNER to perform the
WORK as specified or indicated in the Contract Documents entitled "South Valley Water
Reclamation Facility – Laboratory Remodel and Expansion Project".

NOW THEREFORE, if said CONTRACTOR shall perform all the requirements of said Contract
Documents required to be performed on its part, at the times and in the manner specified therein,
then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED, that any alterations in the WORK to be done or the materials to be furnished, or
changes in the time of completion, which may be made pursuant to the terms of said Contract
Documents, shall not in any way release said CONTRACTOR or said Surety hereunder, nor shall
any extensions of time granted under the provisions of said Contract Documents, release either
said CONTRACTOR or said Surety, and notice of such alterations or extensions of the Agreement
is hereby waived by said Surety.

IN WITNESS WHEREOF, we have hereunder set our hands this _____ day
of _____, 2018.

(SEAL)

(SEAL)

(CONTRACTOR)

(Surety)

By: _____
(Signature and SEAL)

By: _____
(Signature and SEAL)

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

SECTION 00620 – PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as CONTRACTOR,
and _____ as Surety,
are held and firmly bound unto South Valley Water Reclamation Facility hereinafter called
"OWNER," in the sum of _____ dollars, for the
payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors,
administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that said CONTRACTOR has been
awarded and is about to enter into the annexed Agreement with said OWNER to perform the
WORK as specified or indicated in the Contract Documents entitled "South Valley Water
Reclamation Facility – Laboratory Remodel and Expansion Project".

NOW THEREFORE, if said CONTRACTOR, or subcontractor, fails to pay for any materials,
equipment, or other supplies, or for rental of same, used in connection with the performance of
work contracted to be done, or for amounts due under applicable State law for any work or labor
thereon, said Surety will pay for the same in an amount not exceeding the sum specified above,
and, in the event suit is brought upon this bond, reasonable attorney's fees to be fixed by the
court. This bond shall inure to the benefit of any persons, companies, or corporations entitled to
file claims under applicable State law so as to give a right of action to them or their assigns in any
suit brought upon this bond.

PROVIDED, that any alterations in the WORK to be done or the materials to be furnished, or
changes in the time of completion, which may be made pursuant to the terms of said Contract
Documents, shall not in any way release said CONTRACTOR or said Surety thereunder, nor shall
any extensions of time granted under the provisions of said Contract Documents release either
said CONTRACTOR or said Surety, and notice of such alterations or extensions of the Agreement
is hereby waived by said Surety.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of
_____, 2018.

_____(SEAL) _____(SEAL)
(CONTRACTOR) (Surety)

By: _____ By: _____
(Signature) (Signature and SEAL)

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

- END OF BID FORMS -

PART 3 – CONTRACT CONDITIONS

**SECTION 00700
GENERAL CONDITIONS**

ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents and printed with initial or all capital letters, the following terms have the meanings indicated:

Addenda – Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement – The written contract between the OWNER and the CONTRACTOR for the performance of the WORK pursuant to the Contract Documents. Documents incorporated into the contract by reference become part of the contract and of the Agreement.

Application for Payment – The form furnished by the ENGINEER and completed by the CONTRACTOR to request progress or final payment including supporting documentation to substantiate the amounts for which payment is requested.

Bid – The offer or proposal of a Bidder, submitted on the prescribed form, setting forth the price or prices for the WORK to be performed.

Bidder – Any person, firm or corporation submitting a Bid for the WORK.

Bonds – Bid, Performance and Payment Bonds and other instruments which protect the OWNER against loss due to inability or refusal of the CONTRACTOR to perform pursuant to the Contract Documents.

Change Order – A document recommended by the OWNER'S REPRESENTATIVE, which is signed by the CONTRACTOR and the OWNER and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

Contract Documents – The documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the WORK, consisting of the Drawings, Technical Specifications, General Conditions, Supplementary General Conditions, Notice Inviting Bids, Instructions to Bidders, Addenda, CONTRACTOR's Bid, Information Required of Bidder, Agreement, Performance Bond, Payment Bond, Notice To Proceed and Change Orders. Only printed or hard copies of the documents listed above are Contract Documents.

Contract Price – The total monies payable by the OWNER to the CONTRACTOR for completion of the WORK under the terms and conditions of the Contract Documents.

Contract Time – The number of successive Days or the date stated in the Contract Documents for Substantial Completion of the WORK. The Contract Time begins to run on the date specified in the Notice to Proceed.

CONTRACTOR – The person, firm, or corporation with whom the OWNER has executed the Agreement.

Day – A calendar day of 24 hours measured from midnight to the next midnight.

Defective Work – Work that: is unsatisfactory, faulty, or deficient; does not conform to the Contract Documents; does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; has been damaged prior to the ENGINEER's recommendation of final payment.

Drawings – The drawings, plans, maps, profiles, diagrams, and other graphic representations which show the character, location, nature, extent, and scope of the WORK.

Effective Date of the Agreement – The date indicated in the Agreement on which it was executed.

ENGINEER – The person, firm or corporation named as such in the Contract Documents.

Field Order – A written order issued by the OWNER which requires minor changes in the WORK, but which does not involve a change in the Contract Price or Contract Time.

General Requirements – Division 1 of the Technical Specifications.

Laws and Regulations; Laws or Regulations – Includes any and all applicable state, federal and local statutes, common law, rules, regulations, ordinances, codes, and/or orders.

Notice of Award – The OWNER's written notice to the apparent successful Bidder stating that upon compliance with the conditions precedent enumerated therein by the apparent successful Bidder within the time specified, the OWNER will enter into the Agreement.

Notice to Proceed – The OWNER's written notice to the CONTRACTOR authorizing the CONTRACTOR to proceed with the work and establishing the date of commencement of the Contract Time.

OWNER – SOUTH VALLEY WATER RECLAMATION FACILITY.

OWNER'S REPRESENTATIVE – The authorized representative of the OWNER who is assigned to the site or any part thereof.

Partial Utilization – Placing a portion of the WORK in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion of the WORK.

Project – A unit of total construction of which the WORK to be provided under the Contract Documents, may be the whole, or a part thereof.

Shop Drawings – All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of WORK and all illustrations, brochures, standard schedules, performance charts, instruction, and diagrams to illustrate material or equipment for some portion of the WORK.

Specifications – (Same definition as for Technical Specifications hereinafter).

Subcontractor – An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the WORK.

Substantial Completion – That state of construction when the WORK has progressed to the point where, in the opinion of the OWNER as evidenced by the Notice of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the WORK can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to any work refer to substantial completion thereof.

Supplementary General Conditions – The part of the Contract Documents which makes additions, deletions, or revisions to these General Conditions.

Supplier – A manufacturer, fabricator, supplier, distributor, materialman, or vendor.

Technical Data – The factual information contained in reports describing physical conditions, including: exploration method, plans, logs, laboratory test methods and factual data. Technical Data does not include conclusions, interpretations, interpolations, extrapolations or opinions contained in reports or reached by the CONTRACTOR.

Technical Specifications – Those portions of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the WORK.

Underground Utilities – All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments and any encasements containing such facilities which have been installed under ground to furnish any of the following services or materials: water, sewage and drainage removal, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic, or other control systems.

WORK – The entire construction required to be furnished under the Contract Documents. WORK is the result of performing services, furnishing labor and supervision, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 DELIVERY OF BONDS/INSURANCE CERTIFICATES

- A. The CONTRACTOR shall deliver to the OWNER the Bonds and insurance certificates required by the Contract Documents within ten (10) days after receiving the Notice of Award from the OWNER.

2.02 COPIES OF DOCUMENTS

- A. The OWNER shall furnish the CONTRACTOR five copies of the Contract Documents (Specifications and reduced Drawings), together with two sets of full-scale Drawings. Additional quantities of the Contract Documents will be furnished at reproduction cost.

2.03 STARTING THE PROJECT

- A. The CONTRACTOR shall begin construction of the WORK within 10 days after the commencement date stated in the Notice to Proceed, but shall not commence construction prior to the commencement date.

2.04 BEFORE STARTING CONSTRUCTION

- A. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the Contract Documents to check and verify pertinent figures and dimensions shown thereon with all applicable field measurements. The CONTRACTOR shall promptly report in writing to the OWNER any conflict, error, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the OWNER before proceeding with any work affected thereby.
- B. The CONTRACTOR shall submit to the OWNER for review those documents called for under the Section entitled "Contractor Submittals" in the General Requirements.

2.05 PRECONSTRUCTION CONFERENCE

- A. The CONTRACTOR shall attend a preconstruction conference with the OWNER, the ENGINEER and others as appropriate to discuss the construction of the WORK in accordance with the Contract Documents.

2.06 FINALIZING SCHEDULES

- A. At least 7 days before the CONTRACTOR's submittal of its first Application for Payment, the CONTRACTOR, the OWNER, and others as appropriate will meet to finalize the schedules submitted in accordance with the General Requirements.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 INTENT

- A. The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the WORK. The Contract Documents are complementary,

what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

- B. It is the intent of the Contract Documents to describe the WORK, as completely as possible and in a functional manner. The WORK is intended to be constructed in accordance with the Contract Documents. All work, materials, or equipment that may be reasonably inferred from the Contract Documents as being required to produce the completed work shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials, or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals, or codes or any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the OWNER, the CONTRACTOR, or the ENGINEER or any of their consultants, agents, or employees from those set forth in the Contract Documents.
- C. If, during the performance of the WORK, the CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, the CONTRACTOR shall immediately report it to the OWNER in writing and before proceeding with the work affected thereby. The OWNER shall then make a written interpretation, clarification, or correction.

3.02 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

- A. In resolving issues resulting from conflicts, errors, or discrepancies in any of the Contract Documents, or the order of precedence shall be as follows:
 - 1. Change Orders
 - 2. Agreement
 - 3. Addenda
 - 4. Supplementary General Conditions
 - 5. General Conditions
 - 6. Technical Specifications
 - 7. Referenced Standard Specifications
 - 8. Drawings
 - 9. Contractor's Bid (Bid Form).

B. With reference to the Drawings the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Addenda/change order drawings govern over general drawings
4. Contract Drawings govern over standard drawings.

3.03 AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS

A. The Contract Documents may be amended by a Change Order (pursuant to Article 10) to provide for additions, deletions or revisions in the WORK or to modify terms and conditions.

3.04 REUSE OF DOCUMENTS

A. Neither the CONTRACTOR, Subcontractor, Supplier, nor any other person or organization performing any of the WORK under a contract with the OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the WORK, and they shall not reuse any of them on the extensions of the Project or any other project without the written consent of the OWNER and the ENGINEER.

ARTICLE 4 – AVAILABILITY OF LANDS: PHYSICAL CONDITIONS, REFERENCE POINTS

4.01 AVAILABILITY OF LANDS

A. The OWNER shall furnish the lands, rights-of-way and easements upon which the WORK is to be performed and for access thereto, together with other lands designated for the use of the CONTRACTOR in the Contract Documents. Easements for permanent structures or permanent changes in existing major facilities will be obtained and paid for by the OWNER, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. The CONTRACTOR shall not enter upon nor use any property not under the control of the OWNER until a written temporary construction easement agreement has been executed by the CONTRACTOR and the property owner, and a copy of the easement furnished to the ENGINEER prior to its use. Neither the OWNER nor the ENGINEER shall be liable for any claims or damages resulting from the CONTRACTOR's unauthorized trespass or use of any properties.

4.02 PHYSICAL CONDITIONS – SUBSURFACE AND EXISTING STRUCTURES

A. Explorations and Reports: The Supplementary General Conditions may identify exploration reports and subsurface conditions tests at the site that have been utilized by the OWNER in the preparation of the Contract Documents. The CONTRACTOR may rely upon the accuracy of the Technical Data contained in these reports. The

CONTRACTOR is responsible for the interpretation, extrapolation or interpolation of all technical as well as nontechnical data and its reliance on the completeness, opinions and interpretation of the reports.

- B. Existing Structures: The Supplementary General Conditions identify the drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Utilities referred to in Paragraph 4.04 herein) which are at or contiguous to the site that have been utilized by the OWNER in the preparation of the Contract Documents. The CONTRACTOR is responsible for the interpretation, extrapolation or interpolation of all technical as well as nontechnical data and its reliance on the completeness, opinions and interpretation of the reports.

4.03 DIFFERING SITE CONDITIONS

- A. The CONTRACTOR shall notify the OWNER upon encountering any of the following unforeseen conditions, hereinafter called "differing site conditions," during the prosecution of the WORK. The CONTRACTOR's notice to the OWNER shall be in writing and delivered before the differing site conditions are disturbed, but in no event later than 14 days after their discovery.
1. Subsurface or latent physical conditions at the site of the WORK which could not reasonably have been discovered through diligent inspection by CONTRACTOR before his Bid was submitted which differs materially from those indicated, described, or delineated in the Contract Documents including those reports and documents discussed in Paragraph 4.02; and
 2. Physical conditions at the site of the WORK of an unusual nature which could not reasonably have been discovered through diligent inspection by CONTRACTOR before his Bid was submitted and which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents including those reports and documents discussed in Paragraph 4.02.
- B. The OWNER will review the alleged differing site conditions; determine the necessity of obtaining additional explorations or tests with respect to verifying their existence and extent.
- C. If the OWNER concludes that because of newly discovered conditions a change in the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the differing site conditions.
- D. In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to the differing site conditions. If the OWNER and the CONTRACTOR are unable to agree as to the amount or length of the Change Order, a claim may be made as provided in Articles 11 and 12.
- E. The CONTRACTOR's failure to give written notice of differing site conditions within 14 days of their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith, whether direct or consequential in nature.

4.04 PHYSICAL CONDITIONS – UNDERGROUND UTILITIES

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Utilities at or contiguous to the site are based on information and data furnished to the OWNER by the owners of Underground Utilities or by others. Unless it is expressly provided in the Supplementary General Conditions, the OWNER and the ENGINEER shall not be responsible for the accuracy or completeness of any Underground Utilities information or data. The CONTRACTOR's responsibility relating to underground utilities are: review and check all information and data, locate all Underground Utilities shown or indicated in the Contract Documents, coordinate the WORK with the owners of Underground Utilities during construction, safeguard and protect the Underground Utilities, and repair any damage to Underground Utilities resulting from the WORK. The cost of all these activities will be considered as having been included in the Contract Price.
- B. Not Shown or Indicated: If an Underground Utility not shown or indicated in the Contract Documents is uncovered or revealed at or contiguous to the site and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify the owner of the Underground Utility, give written notice of the location to that owner and notify the OWNER.

4.05 REFERENCE POINTS

- A. The OWNER will provide one bench mark, near or on the site of the WORK, and will provide two points near or on the site to establish a base line for use by the CONTRACTOR in laying out the WORK. Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish all other lines, grades, and bench marks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks. In case of their removal or destruction by its own employees or by its subcontractor's employees, the CONTRACTOR shall be responsible for the accurate replacement of reference points by professionally qualified personnel at no additional cost to the OWNER.

ARTICLE 5 – BONDS AND INSURANCE

5.01 PERFORMANCE, PAYMENT AND OTHER BONDS

- A. The CONTRACTOR shall furnish Performance and Payment Bonds, each in the amount of 100% of the Contract Price as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. The Performance Bond shall remain in effect at least until one year after the date of Notice of Completion, except as otherwise provided by Law or Regulation or by the Contract Documents. After the OWNER issues the Notice of Completion, the amount of the Performance Bond may be reduced to 10 percent of the Contract Price, or \$1,000, whichever is greater. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions.
- B. If the surety on any Bond furnished by the CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of

the WORK is located, the CONTRACTOR shall within 7 days after written approval by the OWNER of a substitute Bond and Surety substitute the approved Bond and Surety.

5.02 INSURANCE

- A. The CONTRACTOR shall purchase and maintain the insurance required under this paragraph. This insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in the Supplementary General Conditions, or required by law, whichever is greater. The CONTRACTOR's liabilities under the Agreement shall not be deemed limited in any way to the insurance coverage required.
- B. The CONTRACTOR shall furnish the OWNER with certificates indicating the type, amount, class of operations covered, effective dates and expiration dates of all policies. All insurance policies purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 30 days' prior written notice has been given to the OWNER by certified mail. Contract or certificate terms which state that reasonable efforts will be made to notify the OWNER prior to cancellation, change or renewal of the policy are not acceptable. All insurance shall remain in effect until the OWNER issues the Notice of Final Completion and at all times thereafter when the CONTRACTOR may be correcting, removing, or replacing defective work in accordance with Paragraph 13.01B or completing punch list items required by the Notice of Substantial Completion. In addition, the insurance required herein (except for Worker's Compensation and Employer's Liability) shall name the OWNER, the ENGINEER, and their officers, agents, and employees as "additional insured" under the policies. All liability insurance policies shall be occurrence and not claims made policies.
1. Workers' Compensation and Employer's Liability: This insurance shall protect the CONTRACTOR against all claims under applicable state workers' compensation laws. The CONTRACTOR shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. This policy shall include an "all states" endorsement. The CONTRACTOR shall require each subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees to be engaged in the WORK unless its employees are covered by the protection afforded by the CONTRACTOR's Workers' Compensation Insurance. In the event a class of employees is not protected under the Workers' Compensation Statute, the CONTRACTOR or Subcontractor, as the case may be, shall provide adequate employer's liability insurance for the protection of its employees not protected under the statute.
 2. Comprehensive General Liability: This insurance shall be written in comprehensive form and shall protect the CONTRACTOR against all claims arising from injuries to persons other than its employees and damage to property of the OWNER or others arising out of any act or omission of the CONTRACTOR or its agents, employees or subcontractors. The policy shall include the following endorsements: (1) Protective Liability endorsement to insure the contractual liability assumed by the CONTRACTOR under the indemnification provisions in these General Conditions; (2) Broad Form Property Damage endorsement; (3)

Personal Injury endorsement to cover personal injury liability for intangible harm. The Comprehensive General Liability coverage shall contain no exclusion relative to blasting, explosion, collapse of building, or damage to underground structures.

3. Comprehensive Automobile Liability: This insurance shall be written in comprehensive form. The policy shall protect the CONTRACTOR against all claims for injuries to employees, members of the public and damage to property of others arising from the use of CONTRACTOR's motor vehicles, whether they are owned, non-owned, or hired, and whether used or operated on or off the site. The motor vehicle insurance required under this paragraph shall include: (a) motor vehicle liability coverage; (b) personal injury protection coverage and benefits; (c) uninsured motor vehicle coverage; and (d) underinsured motor vehicle coverage.
4. Subcontractor's Insurance: The CONTRACTOR shall require each of its subcontractors to procure and to maintain Comprehensive General Liability Insurance and Comprehensive Automobile Liability Insurance of the type and in the amounts specified in the Supplementary General Conditions or insure the activities of its subcontractors in the CONTRACTOR's own policy, in like amount.
5. Builder's Risk: This insurance shall be of the "all risk" type, shall be written in completed value form, and shall protect the CONTRACTOR, the OWNER, and the ENGINEER against damage to buildings, structures, materials and equipment. The amount of this insurance shall not be less than the insurable value of the WORK at completion. Builder's risk insurance shall provide for losses to be payable to the CONTRACTOR, the OWNER, and the ENGINEER as their interests may appear. The policy shall contain a provision that in the event of payment for any loss under the coverage provided, the insurance company shall have no rights of recovery against the CONTRACTOR, the OWNER, or the ENGINEER. The Builder's Risk policy shall insure against all risks of direct physical loss or damage to property from any external cause including flood and earthquake. Allowable exclusions, if any, shall be as specified in the Supplementary General Conditions.

ARTICLE 6 – CONTRACTOR RESPONSIBILITIES

6.01 SUPERVISION AND SUPERINTENDENCE

- A. The CONTRACTOR shall supervise and direct the WORK competently and efficiently, devoting the attention and applying the skills and expertise necessary to perform the WORK in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the finished WORK complies accurately with the Contract Documents.
- B. The CONTRACTOR shall employ the superintendent named in "Information Required of Bidder" on the work site at all times during the progress of the WORK. The superintendent shall not be replaced without the OWNER's written consent. The superintendent will be the CONTRACTOR's representative at the site and shall have

authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall issue all its communications to the OWNER.

- C. The CONTRACTOR's superintendent, or OWNER approved representative shall be present at the site of the WORK at all times while work is in progress. Failure to observe this requirement shall be considered suspension of the WORK by the CONTRACTOR until the superintendent is again present at the site.

6.02 LABOR, MATERIALS, AND EQUIPMENT

- A. The CONTRACTOR shall provide skilled, competent and suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Contract Documents. The CONTRACTOR shall at all times maintain good discipline and order at the site.
- B. Except in connection with the safety or protection of persons at the WORK, or property at the site or adjacent thereto, all work at the site shall be performed during regular working hours (7:00 a.m. – 6:00 p.m., Monday through Friday), and the CONTRACTOR will not permit overtime work or the performance of work on Saturday, Sunday or any legal holiday observed by the OWNER without the OWNER's written consent given after prior written notice to the OWNER. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the OWNER in writing. Additional compensation will be paid the CONTRACTOR for overtime work in the event extra work is ordered by the OWNER and the Change Order specifically authorizes the use of overtime work, but only to the extent that the CONTRACTOR pays overtime wages on a regular basis being paid (>40 hours per week) for overtime work of a similar nature in the same locality.
- C. All costs of inspection and testing performed during overtime work approved solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The OWNER shall have the authority to deduct the costs of all inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Contract Documents, the CONTRACTOR shall furnish, erect, maintain and remove the construction plant, and temporary works and assume full responsibility for all materials, equipment, labor, transportation, construction equipment, machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities and all other facilities and incidentals necessary for the furnishing, performance testing, start-up and completion of the WORK.
- E. All materials and equipment incorporated into the WORK shall be of new and good quality, except as otherwise provided in the Contract Documents. If required by the OWNER, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. The CONTRACTOR shall apply, install, connect, erect, use, clean, and condition all material and equipment in accordance with the instructions of the manufacturer and Supplier except as otherwise provided in the Contract Documents.

6.03 ADJUSTING PROGRESS SCHEDULE

- A. The CONTRACTOR shall submit any adjustments in the progress schedule to the OWNER for acceptance in accordance with the provisions for "Contractor Submittals" in the General Requirements.

6.04 SUBSTITUTES AND "OR-EQUAL" ITEMS

- A. The CONTRACTOR shall submit proposed substitutes and "or-equal" items in accordance with the provisions for "Contractor Submittals" in the General Requirements.

6.05 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- A. The CONTRACTOR shall be responsible to the OWNER and the ENGINEER for the acts and omissions of its subcontractors and their employees to the same extent as the CONTRACTOR is responsible for the acts and omissions of its own employees. Nothing contained in this paragraph shall create any contractual relationship between any subcontractor and the OWNER or the ENGINEER nor relieve the CONTRACTOR of any liability or obligation under the Agreement.

6.06 PERMITS

- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including furnishing the insurance and bonds required by such agencies. The costs incurred by the CONTRACTOR in compliance with this paragraph shall not be made the basis for claims for additional compensation. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the WORK, which are applicable at the time of opening of Bids, including all utility connection charges for utilities required by the WORK.
- B. The CONTRACTOR shall pay all license fees and royalties and assume all costs when any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others when issued in the construction of the WORK or incorporated into the WORK. If a particular invention, design, process, product, or device is specified in the Contract Documents for incorporation into or use in the construction of the WORK and if to the actual knowledge of the OWNER or the ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of these rights shall be disclosed by the OWNER in the Contract Documents. The CONTRACTOR shall indemnify, defend and hold harmless the OWNER and the ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in

the WORK of any invention, design, process, product, or device not specified in the Contract Documents.

6.07 LAWS AND REGULATIONS

- A. The CONTRACTOR shall observe and comply with all Laws and Regulations which in any manner affect those engaged or employed on the WORK, the materials used in the WORK, or the conduct of the WORK. If any discrepancy or inconsistency should be discovered in the Contract Documents in relation to any Laws or Regulations, the CONTRACTOR shall report the same in writing to the OWNER. Notwithstanding any immunity otherwise provided by applicable workers' compensation statutes, the CONTRACTOR shall indemnify, defend and hold harmless the OWNER, the ENGINEER and their officers, agents, and employees against all claims arising from violation of any Laws or Regulations, by CONTRACTOR or by its employees or subcontractors. This indemnity provision is intended to provide the greatest protection of the OWNER and ENGINEER allowed by law. Any particular law or regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations.

6.08 EQUAL OPPORTUNITY

- A. The CONTRACTOR agrees not to discriminate against anyone because of race, national origin, ancestry, color, religion, sex, age, or disability. The CONTRACTOR agrees to abide by all applicable civil rights Laws and Regulations.

6.09 TAXES

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

6.10 USE OF PREMISES

- A. The CONTRACTOR shall confine construction equipment, stored materials and equipment, and other operations of workers to (1) the Project site, (2) the land and areas identified for the CONTRACTOR's use in the Contract Documents, and (3) other lands whose use is acquired by Laws and Regulations, rights-of-way, permits, and easements. The CONTRACTOR shall be fully responsible to the owner and occupant of such lands for any damage to the lands or areas contiguous thereto, resulting from the performance of the WORK or otherwise. Should any claim be made against the OWNER or the ENGINEER by owner or occupant of lands because of the performance of the WORK, the CONTRACTOR shall promptly settle the claim by agreement, or resolve the claim through litigation. The CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify, defend, and hold the OWNER and the ENGINEER harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals and court costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any owner or occupant of land against the OWNER or the ENGINEER to the extent the claim is based or arises out of the CONTRACTOR's performance of the WORK.

6.11 SAFETY AND PROTECTION

- A. The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR 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 or near the work site and other persons and organizations who may be affected by activities on or near the work site.
 - 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, and utilities not designated for removal, relocation, or replacement in the course of construction.
- B. The CONTRACTOR shall comply with all applicable Laws and Regulations (whether referred to herein or not) of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Unless the CONTRACTOR otherwise designates in writing a different individual as the responsible individual, the CONTRACTOR's superintendent shall be CONTRACTOR's representative at the site whose duties shall include providing all persons on the work site with a reasonably safe environment and the prevention of accidents.

6.12 SHOP DRAWINGS AND SAMPLES

- A. After checking and verifying all field measurements and after complying with the applicable procedures specified in the General Requirements, the CONTRACTOR shall submit all shop drawings to the OWNER for review and approval in accordance with the approved schedule for shop drawing submittals specified in the General Requirements.
- B. The CONTRACTOR shall also submit to the OWNER for review and approval all samples in accordance with the approved schedule of sample submittals specified in the General Requirements.
- C. Before submitting shop drawings or samples, the CONTRACTOR shall determine and verify all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and review or coordinate each shop drawing or sample with other shop drawings and samples and with the requirements of the WORK and the Contract Documents. The CONTRACTOR shall stamp each shop drawing, certifying his review. If the same shop drawings require

re-submittal more than two times, the CONTRACTOR shall pay for the costs of ENGINEER's and OWNER's subsequent review(s).

6.13 CONTINUING THE WORK

- A. The CONTRACTOR shall carry on the WORK and adhere to the progress schedule during all disputes or disagreements with the OWNER. No work shall be delayed or postponed pending resolution of any dispute or disagreement, except as the CONTRACTOR and the OWNER may otherwise mutually agree in writing.

6.14 INDEMNIFICATION

- A. To the fullest extent permitted by Laws and Regulations, and notwithstanding any immunity the CONTRACTOR might otherwise have under applicable workers' compensation statutes, the CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the ENGINEER, and their officers, agents, and employees, against and from all claims and liability arising under or by reason of, or claimed by others to arise under or by reason of, the Agreement or any performance of the WORK, but not from the sole negligence or willful misconduct of the OWNER and/or the ENGINEER. Such indemnification by the CONTRACTOR shall include but not be limited to the following:
 - 1. Liability or claims resulting in whole or in part, directly or indirectly from, or claimed by others to result in whole or in part, directly or indirectly from, the negligence, carelessness or other fault of the CONTRACTOR or its employees, Subcontractors, Suppliers or agents in the performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction;
 - 2. Liability or claims arising in whole or in part, directly or indirectly, from or based on, or claimed by others to arise in whole or in part, directly or indirectly, from or based on, the violation of any Laws or Regulations by the CONTRACTOR or its employees, Subcontractors, Suppliers or agents;
 - 3. Liability or claims arising in whole or in part, directly or indirectly, from, or claimed by others to arise in whole or in part, directly or indirectly from, the use or manufacture by the CONTRACTOR, or its Subcontractors, Suppliers or agents in the performance of this Agreement of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, unless otherwise specifically stipulated in this Agreement.
 - 4. Liability or claims arising in whole or in part, directly or indirectly, from, or claimed by others to arise in whole or in part, directly or indirectly from, the breach of any warranties, whether express or implied, made by the CONTRACTOR or its Subcontractors, Suppliers or agents;
 - 5. Liabilities or claims arising in whole or in part, directly or indirectly, from, or claimed by others to arise in whole or in part, directly or indirectly from, the willful misconduct of the CONTRACTOR or its Subcontractors, Suppliers or agents; and,

6. Liabilities or claims arising in whole or in part, directly or indirectly, from, or claimed by others to arise in whole or in part, directly or indirectly from, any breach of the obligations assumed herein by the CONTRACTOR or its Subcontractors, Suppliers or agents.
 7. If for any reason the OWNER is required to pay damages in proportion to the fault of the OWNER notwithstanding the above indemnity provisions, CONTRACTOR shall, notwithstanding any workers' compensation immunity, indemnify and hold OWNER harmless from the payment of any increased damages OWNER is required to pay which result from a reapportionment of the fault of the CONTRACTOR, or any of its employees, Subcontractors or Suppliers pursuant to Utah Code Annotated section 78b-5-818, Comparative negligence.
- B. The CONTRACTOR shall reimburse the OWNER, and the ENGINEER for all costs and expense, (including but not limited to fees and charges of engineers, architects, attorneys, and other professional and court costs) incurred by the OWNER, and the ENGINEER in enforcing the provisions of this Paragraph.
- C. The indemnification obligation under this Paragraph shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any such subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

6.15 CONTRACTOR'S DAILY REPORTS

- A. The CONTRACTOR shall complete a daily report indicating manpower, major equipment, subcontractors, weather conditions, etc., involved in the performance of the WORK. The daily report shall be completed on forms prepared by the CONTRACTOR and acceptable to the OWNER, and shall be submitted to the OWNER at the conclusion of each workday.

6.16 ASSIGNMENT OF CONTRACT

- A. The CONTRACTOR shall not assign, sublet, sell, transfer, or otherwise dispose of the Agreement or any portion thereof, or its right, title, or interest therein, or obligations thereunder, without the written consent of the OWNER except as imposed by law. If the CONTRACTOR violates this provision, the Agreement may be terminated at the option of the OWNER. In such event, the OWNER shall be relieved of all liability and obligations to the CONTRACTOR and to its assignee or transferee, growing out of such termination.

ARTICLE 7 – OTHER WORK

7.01 RELATED WORK

- A. The OWNER may perform other work related to the Project at the site by the OWNER's own forces, have other work performed by utility owners, or let other direct contracts for the performance of the other work which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents written notice thereof will be given to the CONTRACTOR prior to commencing any other work.

- B. The CONTRACTOR shall afford each utility owner and other contractor who is a party to a direct contract (or the OWNER, if the OWNER is performing the additional work with the OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of the other work. The CONTRACTOR shall properly connect and coordinate the WORK with the other work. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to make its several parts come together properly and integrate with the other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and shall only cut or alter their work with the written consent of the OWNER and the others whose work will be affected.
- C. If the proper execution or results of any part of the CONTRACTOR's work depends upon the integration of work with the completion of other work by any other contractor or utility owner (or the OWNER), the CONTRACTOR shall inspect and report to the OWNER in writing all delays, defects, or deficiencies in the other work that renders it unavailable or unsuitable for proper integration with the CONTRACTOR's work. Except for the results or effects of material latent defects and deficiencies in the other work which could not reasonably have been discovered by the CONTRACTOR, the CONTRACTOR's failure to report will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR's work and as a waiver of any claim for additional time or compensation associated with the integration of the CONTRACTOR's work with the other work.

7.02 COORDINATION

- A. If the OWNER contracts with others for the performance of other work on the Project at the site, a coordinator will be identified to the extent that the coordinator can be identified at this time, in the Supplementary General Conditions and delegated the authority and responsibility for coordination of the activities among the various contractors. The specific matters over which the coordinator has authority and the extent of the coordinator's authority and responsibility will be itemized in the Supplementary General Conditions or in a notice to the CONTRACTOR at such time as the identity of the coordinator is determined.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 COMMUNICATIONS

- A. The OWNER shall issue all its communications directly to the CONTRACTOR.

8.02 PAYMENTS

- A. The OWNER shall make payments to the CONTRACTOR as provided in Article 14.

8.03 LANDS, EASEMENTS, AND SURVEYS

- A. The OWNER's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. The OWNER shall identify and make available to the CONTRACTOR copies of exploration reports and subsurface conditions tests at the site and in existing structures

which have been utilized in preparing the Drawings and Technical Specifications as set forth in Paragraph 4.02

8.04 CHANGE ORDERS

- A. The OWNER shall execute approved Change Orders for the conditions described in Paragraph 10.01D.
- B. When funds are not budgeted to support continuation of performance in a subsequent fiscal period, the contract shall be canceled and the contractor shall be reimbursed for the reasonable value of any non-recurring costs incurred but not amortized in the price of the supplies or services delivered under the contract.

8.05 INSPECTIONS AND TESTS

- A. The OWNER's responsibility with respect to inspection, tests, and approvals is set forth in Paragraph 13.03B.

8.06 SUSPENSION OF WORK

- A. In connection with the OWNER's right to stop work or suspend work, see Paragraphs 13.04 and 15.01, Paragraphs 15.02 and 15.03 deal with the OWNER's right to terminate services of the CONTRACTOR under certain circumstances.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 OWNER'S REPRESENTATIVE

- A. The OWNER will designate a representative during the construction period. The duties, responsibilities and the limitations of authority of the OWNER's representative during construction are summarized hereafter.

9.02 VISITS TO SITE

- A. The ENGINEER will make visits to the site during construction to observe and inspect the progress and quality of the WORK and to determine, in general if the WORK is proceeding in accordance with the Contract Documents.

9.03 PROJECT REPRESENTATIVE

- A. The OWNER'S Representative will observe and inspect the performance of the WORK. The Owner's Representative and/or other authorized agents of the OWNER shall serve as the primary contact(s) with the Contractor during the construction phase. All submittals shall be delivered to, and communications between the OWNER and the CONTRACTOR shall be handled by, the Owner's Representative and/or other authorized agents. The Owner's Representative shall be the primary authorized representative of the OWNER in all on-site relations with the CONTRACTOR.

9.04 CLARIFICATIONS AND INTERPRETATIONS

- A. The OWNER will issue, with reasonable promptness written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the OWNER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

9.05 AUTHORIZED VARIATIONS IN WORK

- A. The OWNER may authorize minor variations in the WORK as described in the Contract Documents when such variations do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These variations shall be accomplished by issuing a Field Order. The issuance of a Field Order requires the CONTRACTOR to perform the work described in the order promptly. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefor as provided in Article 11 and 12.

9.06 REJECTION OF DEFECTIVE WORK

- A. The OWNER is authorized to reject work which the OWNER believes to be defective and require special inspection or testing of the WORK as provided in Paragraph 13.03G, whether or not the WORK is fabricated, installed, or completed.

9.07 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS

- A. The OWNER will review for approval all CONTRACTOR submittals, including shop drawings, samples, substitutes, and "or equal" items, etc., in accordance with the procedures set forth in the General Requirements.
- B. In connection with the OWNER's REPRESENTATIVE responsibilities as to Change Orders, see Articles 10, 11, and 12.
- C. In connection with the OWNER responsibilities as to Applications for Payment, see Article 14.

9.08 DISPUTES, CLAIMS AND OTHER MATTERS

- A. All claims, disputes, and other matters concerning the acceptability of the WORK, the interpretation of the requirements of the Contract Documents pertaining to the performance of the WORK, and claims for changes in the Contract Price or Contract Time under Articles 11 and 12 will be referred to the OWNER in writing with a request for formal decision in accordance with this paragraph. The OWNER will render a decision in writing within 30 days of receipt of the request. Written notice of each claim, dispute, or other matter will be delivered by the CONTRACTOR to the OWNER promptly (but in no event later than 30 days) after the occurrence of the event. Written supporting data will be submitted to the OWNER with the written claim unless the OWNER allows an additional period of time to ascertain more accurate data in support of the claim.
- B. When reviewing the claim or dispute, the OWNER'S REPRESENTATIVE will not show partiality to the OWNER or the CONTRACTOR and will incur no liability in connection with any interpretation or decision rendered in good faith. The OWNER'S REPRESENTATIVE rendering of a decision with respect to any claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 14.12) shall be a condition precedent to the OWNER's or the CONTRACTOR's exercise of their rights or remedies under the Contract Documents or by Law or Regulations with respect to the claim, dispute, or other matter.

9.09 LIMITATION ON ENGINEER'S RESPONSIBILITIES

- A. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the OWNER as to the WORK, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the WORK for compliance with the Contract Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the OWNER any duty or authority to supervise or direct the performance of the WORK.
- B. Neither the OWNER nor the ENGINEER will be responsible for the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction not specified in the Contract Documents. Neither the OWNER nor the ENGINEER shall have any responsibility for safety precautions or programs on site or for the safety of CONTRACTOR'S employees, Subcontractors, employees of Subcontractors, Suppliers, employees of Suppliers or others on site.
- C. Neither the OWNER nor the ENGINEER will be responsible for the acts or omissions of the CONTRACTOR nor of any Subcontractor, Supplier, or any other person or organization performing any of the WORK to the extent that such acts or omissions are not reasonably discoverable considering the level of observation and inspection required by the ENGINEER's agreement with the OWNER.

ARTICLE 10 – CHANGES IN THE WORK

10.01 GENERAL

- A. Without invalidating the Agreement and without notice to any surety, the OWNER may at any time or from time to time, order additions, deletions, or revisions in the WORK; these will be authorized by a written Field Order and/or a Change Order issued by the OWNER. Upon receipt of any of these documents, the CONTRACTOR shall promptly proceed with the work involved pursuant to the applicable conditions of the Contract Documents.
- B. If the OWNER and the CONTRACTOR are unable to agree upon the increase or decrease in the Contract Price or an extension or shortening of the Contract Time, if any, that should be allowed as a result of a Field Order, a claim may be made therefor as provided in Articles 11 and 12.
- C. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Time with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented by Change Order, except in the case of an emergency and except in the case of uncovering work provided in the Paragraph 13.03G.
- D. The OWNER and the CONTRACTOR shall execute appropriate Change Orders covering:
 - 1. Changes in the WORK which are ordered by the OWNER pursuant to Paragraph 10.01A;
 - 2. Changes required because of acceptance of defective work under Paragraph 13.06;
 - 3. Changes in the Contract Price or Contract Time which are agreed to by the parties; or
 - 4. Any other changes agreed to by the parties.
 - 5. Any construction contract change order which increases the contract amount shall have the prior written certification of the District's controller that the expenditure of the change order amount is properly authorized by the District's board of trustees consistent with the District's budget and financial management policies and the instructions of the board of trustees.
- E. If the provisions of any Bond require notice of any change to be given to a surety, the giving of these notices will be the CONTRACTOR's responsibility. The CONTRACTOR shall provide for the amount of each applicable Bond to be adjusted accordingly.

10.02 ALLOWABLE QUANTITY VARIATIONS

- A. Whenever a unit price and quantity have been established for a bid item in the Contract Documents, the quantity stated may be increased or decreased to a maximum of 25 percent with no change in the unit price. An adjustment in the quantity in excess of 25

percent will be sufficient to justify a change in the unit price. All changes in the quantities of bid items shall be documented by Change Order.

- B. In the event a part of the WORK is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover the eliminated work, the price of the eliminated work shall be agreed upon in writing by the OWNER and the CONTRACTOR. If the OWNER and the CONTRACTOR fail to agree upon the price of the eliminated work, the price shall be determined in accordance with the provisions of Article 11.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

11.01 GENERAL

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the WORK. Except as directed by Change Orders, all duties, responsibilities, and obligations assigned to or undertaken by the CONTRACTOR shall be at its expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the OWNER promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered with the claim, unless the OWNER allows an additional period of time to ascertain more accurate data in support of the claim, and shall be accompanied by the CONTRACTOR's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of the event. If the OWNER and the CONTRACTOR cannot otherwise agree on the amount involved, all claims for adjustment in the Contract Price shall be determined by the OWNER in accordance with Paragraph 9.08A. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph.
- C. The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
 - 1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
 - 2. Mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.
 - 3. On the basis of the cost of work (determined as provided in Paragraphs 11.02 and 11.03) plus a CONTRACTOR's fee for overhead and profit (determined as provided in Paragraph 11.04).

11.02 COST OF WORK (BASED ON TIME AND MATERIALS)

- A. General: The term "cost of work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of work. Except as otherwise may be agreed to in writing by the OWNER,

such costs shall be in amounts no higher than those prevailing in the locality of the Project.

B. Labor: The cost of labor used in performing work by the CONTRACTOR, a Subcontractor, or other forces will be the sum of the following:

1. The actual wages paid plus any employer payments to, or on behalf of workers for fringe benefits including health and welfare, pension, vacation, and similar purposes. The cost of labor may include the rates paid to foremen when determined by the OWNER that the services of foremen do not constitute a part of the overhead allowance.
2. All payments imposed by state and federal laws including, but not limited to, compensation insurance, and social security payments.
3. The amount paid for subsistence and travel required by collective bargaining agreements, or in accordance with the regular practice of the employer.
4. At the beginning of the extra work and as later requested by the OWNER, the CONTRACTOR shall furnish the OWNER proof of labor compensation rates being paid.

C. Materials: The cost of materials used in performing work will be the cost to the purchaser, whether CONTRACTOR or Subcontractor, from the Supplier thereof, except as the following are applicable:

1. Trade discounts available to the purchase shall be credited to the OWNER notwithstanding the fact that such discounts may not have been taken by the CONTRACTOR.
2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual Supplier as determined by the OWNER. Markup except for actual costs incurred in the handling of such materials will not be allowed.
3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from these sources on extra work items or current wholesale price for the materials delivered to the work site, whichever is lower.
4. If, in the opinion of the OWNER, the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of the material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned, delivered to the work site less trade discount. The OWNER reserves the right to furnish materials for the extra work and no claim shall be made by the CONTRACTOR for costs and profit on such materials.

D. Equipment: The CONTRACTOR will be paid for the use of equipment at the rental rate listed for the equipment specified in the Rental Rate Blue Book published by Dataquest, Inc. The rental rate will be used to compute payments for equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing,

renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to the Owner for the total period of use.

1. All equipment shall, in the opinion of the OWNER, be in good working condition and suitable for the purpose for which the equipment is to be used.
2. Before construction equipment is used on the extra work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the OWNER, in duplicate, a description of the equipment and its identifying number.
3. Unless otherwise specified, manufacturers' ratings and manufacturer-approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
4. Individual pieces of equipment or tools having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore.
5. Rental time will not be allowed while equipment is inoperative due to breakdowns.

E. Equipment on the Work: The rental time to be paid for equipment used on the WORK shall be the time the equipment is in productive operation on the extra work being performed and, in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location that requires no more moving time than that required to return it to its original location. Moving time will not be paid if the equipment is used on other than the extra work, even though located at the site of the extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. However, no payment will be made for loading and transporting costs when the equipment is used on other than the extra work even though located at the site of the extra work. The following shall be used in computing the rental time of equipment on the WORK.

1. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
2. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation. When owner-operated equipment is used to perform extra work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in Paragraph (3), (4), and (5), following.
3. Payment for the equipment will be made in accordance with the provisions in Paragraph 11.02D, herein.

4. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the WORK, or in the absence of such labor, established by collective bargaining agreements for the type of workmen and location of the extra work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Paragraph 11.02B, herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all payments made to on behalf of workers other than actual wages.
5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 11.04, herein.

11.03 SPECIAL SERVICES

- A. Special work or services are defined as that work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry. The following may be considered by the OWNER in making estimates for payment for special services:
 1. When the OWNER and the CONTRACTOR, by agreement, determine that a special service or work is required which cannot be performed by the forces of the CONTRACTOR or those of any of its Subcontractors, the special service or work may be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the OWNER, invoices for special services or work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental cost.
 2. When the CONTRACTOR is required to perform work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job site, the charges for that portion of the work performed at the off-site facility may by agreement, be accepted as a special service and accordingly, the invoices from the work may be accepted without detailed itemization.
 3. All invoices for special services will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit specified in Paragraph 11.04, herein, an allowance of 5 percent will be added to invoices for special services.
- B. All work performed hereunder shall be subject to all of the provisions of the Contract Documents and the CONTRACTOR's sureties shall be bound with reference hereto as under the original Agreement. Copies of all amendments to surety bonds or supplemental surety bonds shall be submitted to the OWNER for review prior to the performance of any work hereunder.

11.04 CONTRACTOR'S FEE

- A. Work ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the OWNER, plus allowances for overhead and profit. For extra

work involving a combination of increases and decreases in the WORK, the actual necessary cost will be the arithmetic sum of the additive and deductive costs. The allowance for overhead and profit shall include full compensation for superintendence, bond and insurance premiums, taxes, office expenses, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Paragraphs 11.02B, C, and D herein, including extended overhead and home office overhead. The allowance for overhead and profit will be made in accordance with the following schedule:

OVERHEAD AND PROFIT ALLOWANCE

Labor	10 percent
Materials	10 percent
Equipment	10 percent

- B. It is understood that labor, materials, and equipment may be furnished by the CONTRACTOR or by a Subcontractor, and that the allowance specified herein shall be applied to the labor, materials, and equipment costs of the Subcontractor, to which the CONTRACTOR may add five percent of the Subcontractor's total cost of work. Regardless of the number of hierarchical tiers of Subcontractors, the five-percent markup may be applied one time only for each separate work transaction.

ARTICLE 12 – CHANGE OF CONTRACT TIME

12.01 GENERAL

- A. The Contract Time may only be changed by a Change Order. Any claim for an extension of the Contract time shall be based on written notice delivered by the CONTRACTOR to the OWNER promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 30 days after such occurrence (unless the OWNER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. Claims for adjustment in the Contract Time shall be determined by the OWNER in accordance with Paragraph 9.08 if the OWNER's representative and the CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph.
- B. The Contract Time will be extended in an amount equal to time lost if the CONTRACTOR makes a claim as provided in Paragraph 12.01A and the OWNER determines that the delay was caused by events beyond the control of the CONTRACTOR. Examples of events beyond the control of the CONTRACTOR include acts or neglect by the OWNER or others performing additional work as contemplated by Article 7, or by acts of God or of the public enemy, fire, floods, epidemics, quarantine restrictions, strikes, labor disputes, sabotage, or freight embargoes.
- C. All time limits stated in the Contract Documents are of the essence.

- D. None of the aforesaid time extensions shall entitle the CONTRACTOR to any adjustment in the Contract Price or any damages for delay. Furthermore, the CONTRACTOR hereby indemnifies and holds harmless the OWNER and ENGINEER, their officers, agents and employees from and against all claims, damages, losses and expenses (including lost property and attorney's fees) arising out of or resulting from the temporary suspension of work whether for the OWNER's convenience as defined in Article 15.01A or for whatever other reasons including the stoppage of work by the OWNER for the CONTRACTOR's failure to comply with any order issued by the OWNER.

12.02 EXTENSIONS OF THE TIME FOR DELAY DUE TO INCLEMENT WEATHER

- A. "Inclement weather" is any weather condition or conditions resulting immediately therefrom, causing the CONTRACTOR to suspend construction operations or preventing the CONTRACTOR from proceeding with at least 75 percent of the normal labor and equipment force engaged on the WORK.
- B. Should the CONTRACTOR prepare to begin work at the regular starting time at the beginning of any regular work shift on any day on which inclement weather, or its effects on the condition of the WORK prevents work from beginning at the usual starting time and the crew is dismissed as a result thereof, the CONTRACTOR will not be charged for a working day whether or not conditions change thereafter during the day and the major portion of the day could be considered to be suitable for construction operations.
- C. The CONTRACTOR shall base its construction schedule upon the inclusion of the number of days of inclement weather specified in the Supplementary General Conditions. No extension of the Contract Time due to inclement weather will be considered until after the stated number of days of inclement weather has been reached. However, no reduction in Contract Time will be made if the number of inclement weather days is not reached.

12.03 EXTENSIONS OF TIME FOR OTHER DELAYS

- A. If the CONTRACTOR is delayed in completion of the WORK beyond the Contract Time, by acts of God or of the public enemy, fire, floods, epidemics, quarantine restrictions, strikes, labor disputes, industry-wide shortage of raw materials, sabotage or freight embargoes, the CONTRACTOR shall be entitled to an adjustment in the Contract Time. No such adjustment will be made unless the CONTRACTOR shall notify the OWNER in writing of the causes of delay within 15 calendar days from the beginning of any such delay. The OWNER shall ascertain the facts and the extent of the delay. No adjustment in time shall be made for delays resulting from noncompliance with the Contract Documents, accidents, failure on the part of the CONTRACTOR to carry out the provisions of the Contract Documents including failure to provide materials, equipment or workmanship meeting the requirements of the Contract Documents; the occurrence of such events shall not relieve the CONTRACTOR from the necessity of maintaining the required progress.
- B. If the CONTRACTOR is delayed in completing the WORK beyond the Contract Time by reason of shortages of raw materials required for CONTRACTOR-furnished items, the CONTRACTOR shall be entitled to an adjustment in the Contract Time in like manner as if the WORK had been suspended for the convenience and benefit of the OWNER; provided, however, that the CONTRACTOR shall furnish documentation acceptable to

the OWNER that he placed or attempted to place firm orders with Suppliers at a reasonable time in advance of the required date of delivery of the items in question, that such shortages shall have developed following the date such orders were placed or attempts made to place same, that said shortages are general throughout the affected industry, that said shortages are shortages of raw materials required to manufacture CONTRACTOR furnished items and not simply failure of CONTRACTOR's Suppliers to manufacture, assemble or ship items on time, and that the CONTRACTOR shall, to the degree possible, have made revisions in the sequence of his operations, within the terms of the Contract Documents, to offset the expected delay. The CONTRACTOR shall notify the OWNER, in writing, concerning the cause of delay, within 15 calendar days of the beginning of such delay. The validity of any claim by the CONTRACTOR to an adjustment in the Contract Time shall be determined by the OWNER, and his findings thereon shall be based on the OWNER's knowledge and observations of the events involved and documentation submitted by the CONTRACTOR, showing all applicable facts relative to the foregoing provisions. Only the physical shortage of raw materials will be considered under these provisions as a cause for adjustment of time and no consideration will be given to any claim that items could not be obtained at a reasonable, practical, or economical cost or price, unless it is shown to the satisfaction of the OWNER that such items could have been obtained only at exorbitant prices entirely out of line with current rates taking into account the quantities involved and the usual practices in obtaining such quantities.

- C. If the CONTRACTOR is delayed in completion of the WORK by any act of the OWNER not authorized by the Contract Documents, an adjustment in the Contract Time will be made by the OWNER in like manner as if the WORK had been suspended for the convenience and benefit of the OWNER. In the event of such delay, the CONTRACTOR shall notify the OWNER in writing of the causes of delay within 15 calendar days from the beginning of any such delay.

ARTICLE 13 – WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

13.01 WARRANTY, GUARANTEE AND CORRECTION PERIOD

- A. The CONTRACTOR warrants and guarantees to the OWNER and the ENGINEER that all work, equipment, materials and workmanship are in accordance with the Contract Documents and are not defective. Reasonably prompt notice of defects discovered by the OWNER or ENGINEER shall be given to the CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13.
- B. If within one (1) year after the date of final completion, as set by the Contractor's Certificate of Final Completion, or a longer period of time prescribed by Laws or Regulations or by the terms of any applicable special guarantee or specific provisions of the Contract Documents, any part of the WORK is found to be defective, the OWNER shall notify the CONTRACTOR in writing and the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with the OWNER's written notification, either correct the defective work, or, if it has been rejected by the OWNER, remove it from the site and replace it with non-defective work. In the event the CONTRACTOR does not promptly comply with the notification, or in an emergency where delay would cause

serious risk of loss or damage, the OWNER may have the defective work corrected or rejected work removed and replaced. All direct, indirect, and consequential costs of the removal and replacement including but not limited to fees and charges of engineers, architects, attorneys and other professionals will be paid by the CONTRACTOR. This paragraph shall not be construed to limit nor diminish the CONTRACTOR's absolute guarantee to complete the WORK in accordance with the Contract Documents.

13.02 ACCESS TO WORK

- A. The ENGINEER, other representatives of the OWNER, testing agencies, and governmental agencies with jurisdictional interests shall have access to the work at reasonable times for their observation, inspections, and testing. The CONTRACTOR shall provide proper and safe conditions for their access.

13.03 TESTS AND INSPECTIONS

- A. The CONTRACTOR shall give the OWNER timely notice of readiness of the WORK for all required inspections, tests, or approvals.
- B. If Laws or Regulations of any public body other than the OWNER, with jurisdiction over the WORK require any work to be specifically inspected, tested, or approved, the CONTRACTOR shall pay all costs in connection therewith. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the OWNER's acceptance of a Supplier of materials or equipment proposed as a substitution or "or-equal" to be incorporated in the WORK and of materials or equipment submitted for review prior to the CONTRACTOR's purchase for incorporation in the WORK. The cost of all inspections, tests, and approvals, with the exception of the above which are required by the Contract Documents, shall be paid by the OWNER (unless otherwise specified).
- C. The OWNER will make, or have made, such inspections and tests as the OWNER deems necessary to see that the WORK is being accomplished in accordance with the Contract Documents. The CONTRACTOR, without additional cost to the OWNER, shall provide the labor and equipment necessary to make the WORK available for inspections. Unless otherwise specified in the Supplementary General Conditions, all other costs of inspection and testing will be borne by the OWNER. In the event the inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the OWNER, as well as the cost of subsequent re-inspection and retesting. Neither observations by the OWNER nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.
- D. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by properly licensed organizations selected by the OWNER.
- E. If any work (including the work of others) that is to be inspected, tested, or approved is covered without the OWNER's written authorization, it must, if requested by the OWNER, be uncovered for testing, inspection, and observation. The uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR timely notified the OWNER

of the CONTRACTOR's intention to cover the same and the OWNER failed to act with reasonable promptness in response to the notice.

- F. If any work is covered contrary to the written request of the OWNER, it must, if requested by the OWNER, be uncovered for the OWNER's observation at the CONTRACTOR's expense.
- G. If the OWNER considers it necessary or advisable that covered work be observed, inspected or tested by the OWNER or others, the OWNER shall direct the CONTRACTOR to uncover, expose, or otherwise make available for observation, inspection, or testing that portion of the work in question. The CONTRACTOR shall comply with the OWNER's direction and furnish all necessary labor, material, and equipment. If the work is defective, the CONTRACTOR shall bear all direct, indirect and consequential costs of uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction of the work, including, but not limited to, fees and charges for engineers, architects, attorneys, and other professionals. However, if the work is not defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both. The increase in Contract Time and Contract Price shall be the CONTRACTOR's actual time and costs directly attributable to uncovering and exposing the work. If the parties are unable to agree as to the amount or extent of the changes, the CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

13.04 OWNER MAY STOP THE WORK

- A. If the WORK is defective, or the CONTRACTOR fails to perform work in such a way that the completed WORK will conform to the Contract Documents, the OWNER may order the CONTRACTOR to stop the WORK, or any portion thereof, until the cause for the order has been eliminated. This right of the OWNER to stop the WORK shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other party.

13.05 CORRECTION OR REMOVAL OF DEFECTIVE WORK

- A. When directed by the OWNER, the CONTRACTOR shall promptly correct all defective work, whether or not fabricated, installed, or completed, or, if the work has been rejected by the OWNER, remove it from the site and replace it with non-defective work. The CONTRACTOR shall bear all direct, indirect and consequential costs of correction or removal, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby. If the CONTRACTOR does not correct the defective work within 30 days, the OWNER may correct the WORK and charge the CONTRACTOR for the cost of correcting the defective WORK.

13.06 ACCEPTANCE OF DEFECTIVE WORK

- A. If, instead of requiring correction or removal and replacement of defective work, the OWNER prefers to accept the work, the OWNER may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the OWNER's evaluation of and determination to accept the defective work. If any acceptance of defective work occurs prior to final payment, a Change Order will be issued incorporating the necessary

revisions in the Contract Documents with respect to the WORK, and the OWNER shall be entitled to an appropriate decrease in the Contract Price.

ARTICLE 14 – PAYMENTS TO CONTRACTOR, LIQUIDATED DAMAGES AND COMPLETION

14.01 LUMP SUM BID

- A. A schedule of values or lump sum price breakdown will serve as the basis for progress payments for a lump sum Bid and will be incorporated into the form of Application for Payment included in the Contract Documents.

14.02 UNIT PRICE BID

- A. Progress payments for a unit price Bid will be based on the number of units completed.

14.03 APPLICATION FOR PROGRESS PAYMENT

- A. Unless otherwise prescribed by the OWNER, on the 25th of each month, the CONTRACTOR shall submit to the OWNER for review and approval, an Application for Payment completed and signed by the CONTRACTOR covering the WORK completed as of the date of the Application and accompanied by such supporting documentation as required by the Contract Documents.
- B. The Application for Payment shall identify, as a sub-total, the amount of the CONTRACTOR's Total Earnings to Date, plus the Net Value of Materials On-site which have not yet been incorporated in the WORK.
- C. The Net Payment Due to the CONTRACTOR shall be the above-mentioned sub-total, from which shall be deducted the retainage amount and the total amount of all previous payments made to the CONTRACTOR.
- D. The OWNER may retain five percent of the amount otherwise due to the Contractor as retainage. Monies retained shall be placed in an interest-bearing account for the benefit of the CONTRACTOR.
- E. Except as otherwise provided in the Supplementary General Conditions, the value of materials stored at the site shall be valued at 95 percent of the value of the materials. This amount shall be based upon the value of all acceptable materials and equipment stored at the site or at another location agreed to in writing by the OWNER; provided, each individual item has a value of more than \$5000 and will become a permanent part of the WORK. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the OWNER's interest therein, all of which will be satisfactory to the OWNER.

14.04 CONTRACTOR'S WARRANTY OF TITLE

- A. The CONTRACTOR warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the OWNER no later than the time of final payment, free and clear of all liens.

14.05 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The OWNER will, within 7 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to the OWNER, or return the Application to the CONTRACTOR indicating in writing the OWNER's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the Application. Thirty days after presentation of the Application for Payment with the OWNER's REPRESENTATIVE recommendation, the amount recommended will (subject to the provisions of Paragraph 14.05B) become due and when due will be paid by the OWNER to the CONTRACTOR.
- B. The OWNER may refuse to make payment of the full amount recommended by the OWNER's REPRESENTATIVE to compensate for claims made by the OWNER on account of the CONTRACTOR's performance of the WORK or other items entitling the OWNER to a credit against the amount recommended, but the OWNER must give the CONTRACTOR written notice within 7 days stating the reasons for such action.

14.06 PARTIAL UTILIZATION

- A. The OWNER may utilize or place into service any item of equipment or other usable portion of the WORK at any time prior to completion of the WORK. The OWNER shall notify the CONTRACTOR in writing of its intent to exercise this right. The notice will identify the equipment or specific portion or portions of the WORK to be utilized or otherwise placed into service.
- B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all items or portions of the WORK to be partially utilized shall be borne by the CONTRACTOR. Upon the issuance of a notice of partial utilization, the OWNER's REPRESENTATIVE will deliver to the OWNER and the CONTRACTOR a written recommendation as to division of responsibilities between the OWNER and the CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities and insurance.
- C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the WORK, regardless of whether a portion thereof has been partially utilized by the OWNER, and the CONTRACTOR's one-year correction period shall commence only after the date of Final Completion for the WORK.

14.07 DAMAGES

- A. The CONTRACTOR shall pay to the OWNER the amount specified in the Supplementary General Conditions, not as a penalty but as liquidated damages, if he fails to complete the WORK or specified parts of the WORK within the Contract Time.

The periods for which these damages shall be paid shall be the number of Days from the Contract Time as contained in the Agreement, or from the date of termination of any extension of time approved by the OWNER, to the date or dates on which the OWNER issues the Notice of Substantial Completion as provided in Article 14.08, herein. The OWNER may deduct the amount of said damages from any monies due or to become due the CONTRACTOR. After Substantial Completion, if the CONTRACTOR fails to complete the remaining WORK within 45 days or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER the amount stated in the Supplementary General Conditions as liquidated damages for each day that expires after the 45 days, until readiness for final payment.

- B. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would sustain; and said amount is agreed to be the amount of damages which the OWNER would sustain.
- C. If actual damages are assessed, they will include all costs incurred by the OWNER as a result of a delay in the completion time of the work beyond the contract time.
- D. All times specified in the Contract Documents are hereby declared to be of the essence.

14.08 SUBSTANTIAL COMPLETION

- A. When the CONTRACTOR considers the WORK ready for its intended use, the CONTRACTOR will notify the OWNER in writing that the WORK is Substantially Complete. Within a reasonable time thereafter, the OWNER and the CONTRACTOR, shall make an inspection of the WORK to determine the status of completion. If the OWNER does not consider the WORK Substantially Complete, the OWNER will notify the CONTRACTOR in writing giving the reasons therefor. If the OWNER considers the WORK Substantially Complete, the OWNER will execute the Notice of Substantial Completion signed by the CONTRACTOR, which shall fix the date of Substantial Completion.
- B. The Notice of Substantial Completion shall be a release by the CONTRACTOR of the OWNER and its agents from all claims and liability to the CONTRACTOR for anything done or furnished for, or relating to, the WORK or for any act or neglect of the OWNER or of any person relating to or affecting the WORK, to the date of Substantial Completion, except demands against the OWNER for the remainder of the amounts kept or retained from progress payments and excepting pending, unresolved claims filed in writing prior to the date of Substantial Completion. At the time of delivery of the Notice of Substantial Completion, the OWNER's REPRESENTATIVE will deliver to the OWNER and the CONTRACTOR, if applicable, a written recommendation as to division of responsibilities between the OWNER and the CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities and insurance. Upon the OWNER's acceptance of these recommendations, the recommendation will be binding on the OWNER and the CONTRACTOR until final payment.
- C. The OWNER, upon written notice to the CONTRACTOR, shall have the right to exclude the CONTRACTOR from the WORK after the date of Substantial Completion, and complete all or portions of the WORK at the CONTRACTOR's expense.

14.09 COMPLETION AND FINAL PAYMENT

- A. Upon written certification from the CONTRACTOR that the WORK is complete (if a Notice of Substantial Completion has been issued this certification must occur within 45 days of that date), the OWNER will make a final inspection with the CONTRACTOR. If the OWNER does not consider the WORK complete, the OWNER will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the WORK is incomplete or defective. The CONTRACTOR shall immediately take the measures necessary to remedy these deficiencies. If the OWNER considers the WORK complete, the CONTRACTOR may proceed to file its application for final payment pursuant to this Article. At the request of the CONTRACTOR, the OWNER's REPRESENTATIVE may recommend to the OWNER that certain minor deficiencies in the WORK that do not prevent the entire WORK from being used by the OWNER for its intended use, and the completion of which will be unavoidably delayed due to no fault of the CONTRACTOR, be exempted from being completed prerequisite to final payment. These outstanding items of pickup work, or "punch list items", shall be listed on the Notice of Substantial Completion, together with the recommended time limits for their completion, and extended warranty requirements for those items and the value of such items.
- B. After the issuance of the Notice of Completion and after the CONTRACTOR has completed corrections that have not been exempted to the satisfaction of the OWNER and delivered to the OWNER all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, marked-up record documents and other documents, all as required by the Contract Documents; and after the OWNER has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final application for payment shall be accompanied by all documentation called for in the Contract Documents and other data and schedules as the OWNER may reasonably require, including an affidavit of the CONTRACTOR that all labor, services, material, equipment and other indebtedness connected with the WORK for which the OWNER or his property might in any way be responsible, have been paid or otherwise satisfied, and a consent of the payment bond surety to final payment, all in forms approved by the OWNER.

14.10 FINAL APPLICATION FOR PAYMENT

- A. If, on the basis of the OWNER's observation of the WORK during construction and final inspection, and the OWNER's review of the final application for payment and accompanying documentation, all as required by the Contract Documents, the OWNER is satisfied that the WORK has been completed and the CONTRACTOR has fulfilled all of his obligations under the Contract Documents, the OWNER's REPRESENTATIVE will, within ten days after receipt of the final application for payment, indicate in writing his recommendation of payment and present the application to the OWNER for payment. Thereupon, the OWNER's REPRESENTATIVE will give written notice to the OWNER and the CONTRACTOR that the WORK is acceptable by executing the Notice of Completion. Otherwise, the OWNER will return the application to the CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the application.

- B. Within 45 calendar days after the Notice of Completion, the OWNER will make final payment including all deducted retainage and interest to the CONTRACTOR. The OWNER's remittance of final payment shall be the OWNER's acceptance of the WORK if formal acceptance of the WORK is not indicated otherwise. The final payment shall be that amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract, including the following items:
1. Liquidated or actual damages, as applicable.
 2. Two times the value of any outstanding items of pickup work or "punch list items", indicated on the OWNER's Notice of Completion as being yet uncompleted.

14.11 CONTRACTOR'S CONTINUING OBLIGATIONS

- A. The CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the OWNER, nor the issuance of a Notice of Substantial Completion or Notice of Completion, nor payment by the OWNER to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the WORK or any part thereof by the OWNER, nor any act of acceptance by the OWNER nor any failure to do so, nor any review of a shop drawing or sample submittal, will constitute an acceptance of work or materials not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.

14.12 FINAL PAYMENT TERMINATES LIABILITY OF OWNER

- A. Final payment is defined as the last progress payment made to the CONTRACTOR for earned funds, less deductions listed in Paragraph 14.10B herein. The acceptance by the CONTRACTOR of the final payment referred to in Paragraph 14.10 herein, shall be a release of the OWNER and its agents from all claims of liability to the CONTRACTOR for anything done or furnished for, or relating to, the work or for any act or neglect of the OWNER or of any person relating to or affecting the work, except demands against the OWNER for the remainder, if any, of the amounts kept or retained under the provisions of Paragraph 14.10 herein; and excepting pending, unresolved claims filed prior to the date of the Notice of Substantial Completion.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 SUSPENSION OF WORK BY OWNER

- A. The OWNER may, by written notice to the Contractor, temporarily suspend the WORK, in whole or in part, for a period or periods of time, but not to exceed 90 days, for the convenience and benefit of the OWNER upon the occurrence of any one or more of the following: (1) unsuitable weather; (2) delay in delivery of OWNER- furnished equipment or materials, or such other conditions as are considered unfavorable for prosecution of the work; (3) Shortfall in construction funds; (4) Constraints imposed by public entities, public utilities, property owners or legal proceedings; (5) Failure or delay in acquisition of

easements or right-of-way by the OWNER; or (6) Other conditions which, in the opinion of the OWNER, warrant a delay in the WORK. Suspended WORK shall be resumed by the CONTRACTOR within 10 calendar days of receipt from the OWNER of written notice to resume work. Whenever the OWNER temporarily suspends work for any conditions enumerated in this Article, the CONTRACTOR shall be entitled to an adjustment in the Contract Time as specified in Article 12.03 C.

- B. The suspension of work shall be effective upon receipt by the CONTRACTOR of a written order suspending the work and shall be terminated upon receipt by the Contractor of a written order terminating the suspension.
- C. The CONTRACTOR hereby indemnifies and holds harmless the OWNER, their officers, agents and employees, from and against all claims, damages, losses and expenses, including lost profits and attorney's fees, arising out of or resulting from the temporary suspension of the WORK, whether for the OWNER's convenience described in this Article or for whatever other reasons, including the stoppage of work by the OWNER for the CONTRACTOR's failure to comply with any order issued by the OWNER.

15.02 TERMINATION OF AGREEMENT BY OWNER (CONTRACTOR DEFAULT)

- A. In the event of default by the CONTRACTOR, the OWNER may give written notice to the CONTRACTOR of OWNER's intent to terminate the Agreement. The notice shall state the event of default and the time allowed to remedy the default. It shall be considered a default by the CONTRACTOR whenever the CONTRACTOR shall: (1) declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors; (2) fail to provide materials or workmanship meeting the requirements of the Contract Documents; (3) disregard or violate provisions of the Contract Documents or OWNER's instructions; (4) fail to prosecute the WORK according to the approved progress schedule; or, (5) fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Contract Documents. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the OWNER may then issue a Notice of Termination.
- B. In the event the Agreement is terminated in accordance with Paragraph 15.02A, the OWNER may take possession of the WORK and may complete the WORK by whatever method or means the OWNER may select. The cost of completing the WORK shall be deducted from the balance which would have been due the CONTRACTOR had the Agreement not been terminated and the WORK completed in accordance with the Contract Documents. If such cost exceeds the balance which would have been due, the CONTRACTOR shall pay the excess amount to the OWNER. If such cost is less than the balance which would have been due, the CONTRACTOR shall have no claim to the difference.

15.03 TERMINATION OF AGREEMENT BY OWNER (FOR CONVENIENCE)

- A. The OWNER may terminate the Agreement at any time if it is found that reasons beyond the control of either the OWNER or CONTRACTOR make it impossible or against the OWNER's interests to complete the WORK. In such a case, the CONTRACTOR shall have no claims against the OWNER except: (1) for the value of the work, as determined by the OWNER, performed by the Contractor up to the date the Agreement is terminated; and, (2) for the cost of materials and equipment on hand, in transit, or on

definite commitment, as of the date the Agreement is terminated, which would be needed in the WORK and which meet the requirements of the Contract Documents. The value of work performed and the cost of materials and equipment delivered to the site, as mentioned above, shall be determined by the OWNER in accordance with the procedure prescribed from making the final application for payment and final payment under Paragraphs 14.09 and 14.10.

15.04 TERMINATION OF AGREEMENT BY CONTRACTOR

- A. The CONTRACTOR may terminate the Agreement upon 10 days written notice to the OWNER, whenever: (1) the WORK has been suspended under the provisions of Paragraph 15.01, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume work or to terminate the agreement has not been received from the OWNER within this time period; or, (2) the OWNER should fail to pay the CONTRACTOR any monies due him in accordance with the terms of the Contract Documents and within 60 days after presentation to the OWNER by the CONTRACTOR of a request therefore, unless within said 10-day period the OWNER shall have remedied the condition upon which the payment delay was based. In the event of such termination, the CONTRACTOR shall have no claims against the OWNER except for those claims specifically enumerated in Paragraph 15.03, and as determined in accordance with the requirements of that paragraph.

ARTICLE 16 – NOTICE

16.01 GIVING NOTICE

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

16.02 TITLE TO MATERIALS FOUND ON THE WORK

- A. The OWNER reserves the right to retain title to all soils, stone, sand, gravel, and other materials developed and obtained from excavations and other operations connected with the WORK. Unless otherwise specified in the Contract Documents, neither the CONTRACTOR nor any Subcontractor shall have any right, title, or interest in or to any such materials. The CONTRACTOR will be permitted to use in the WORK, without charge, any such materials which meet the requirements of the Contract Documents.

16.03 RIGHT TO AUDIT

- A. If the CONTRACTOR submits a claim to the OWNER for additional compensation, the OWNER shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's books. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plants, or such parts

thereof, as may be or have been engaged in the performance of the WORK. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon subcontractors. The right to examine and inspect herein provided for shall be exercisable through such representatives as the OWNER deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the OWNER for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the OWNER.

16.04 HAZARDOUS MATERIALS

- A. If the CONTRACTOR during the course of work observes the existence of hazardous material, the CONTRACTOR shall promptly notify the OWNER. The OWNER shall consult with others regarding removal or encapsulation of the hazardous material and the CONTRACTOR shall not perform any work pertinent to the hazardous material prior to receipt or special instruction from the OWNER.

ARTICLE 17 – SUBCONTRACT LIMITATIONS

17.01 SUBCONTRACT LIMITATIONS

- A. In addition to the provisions of Paragraph 6.05 of the General Conditions, the CONTRACTOR shall perform not less than 30 percent of the WORK with its own forces (i.e., without subcontracting). The 30 percent requirement shall be understood to refer to the WORK, the value of which totals not less than 30 percent of the Contract Price.

ARTICLE 18 – PATENTS AND COPYRIGHTS

18.01 PATENTS AND COPYRIGHTS

- A. The CONTRACTOR shall indemnify and save harmless the OWNER, the ENGINEER, and their officers, agents, and employees, against all claims or liability arising from the use of any patented or copyrighted design, device, material, or process by the CONTRACTOR or any of his subcontractors in the performance of the WORK.

-END OF SECTION-

**SECTION 00800
SUPPLEMENTARY GENERAL CONDITIONS**

PART 1 – GENERAL

These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SGC-1 DEFINITIONS

Add the following definitions to Article 1:

OWNER – The OWNER is further defined as South Valley Water Reclamation Facility, 7495 South 1300 West, West Jordan, Utah 84084. Telephone No.: (801) 566-7711.

OWNER'S REPRESENTATIVE – The OWNER'S REPRESENTATIVE is defined in SGC – 9.03 on page 00800-5. The OWNER'S REPRESENTATIVE for this project shall be Taigon Worthen.

BIDDER – The person, firm, or corporation, partnership or joint venture or LLC submitting a Bid for the Work.

CONTRACTOR – The person, firm, or corporation, partnership or joint venture or LLC with whom the OWNER has executed the Agreement.

ENGINEER – Defined as the firm of Bowen Collins & Associates, Inc., located at 154 East 14000 South, Draper, Utah 84020.

SGC-2.02 COPIES OF DOCUMENTS

The OWNER shall furnish to the CONTRACTOR 5 copies of the Contract Documents which may include bound reduced drawings, if any, together with 2 sets of full-scale Drawings if requested. Additional quantities of the Contract Documents will be furnished at reproduction cost plus mailing costs if copies are mailed.

SGC-4.02 REPORTS OF PHYSICAL CONDITIONS

In the preparation of the Contract Documents, the OWNER has relied upon:

- A. The following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground utilities) which are at or contiguous to the site of the WORK.
 - 1. Drawings dated May 28, 1982, prepared by James M. Montgomery, Consulting Engineers, Inc. entitled "SVWRF – Project 2A."
- B. Copies of these drawings may be examined at the office of the OWNER, during regular business hours. As provided in Paragraph 4.02 of the General Conditions and as

identified and established above, the CONTRACTOR may rely upon the accuracy of the technical data contained in such reports and drawings, except for such physical dimensions that can be field verified; however, the interpretation of such technical data, including any interpolation or extrapolation thereof, and opinions contained in such reports and drawings are not to be relied on by the CONTRACTOR.

SGC-5.01 BONDS

Delete the first sentence of Paragraph 5.1A and add the following:

The CONTRACTOR shall furnish a satisfactory Performance Bond in the amount of 100 percent of the Contract Price and a satisfactory Payment Bond in the amount of 100 percent of the Contract Price as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents.

SGC-5.02 INSURANCE

A. Substitute for Paragraph 5.02.B. the following:

All insurance required by the Contract Documents to be purchased and maintained by the CONTRACTOR shall be obtained from insurance companies that are duly licensed, admitted, and authorized to issue insurance policies for the limits and coverage so required in the State in which the Project is located. Such insurance companies shall have a current Best's Rating of at least an "A" (Excellent) general policy holder's rating and a Class VIII financial size category and shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.

B. Add the following to Paragraph 5.02.B.5:

If the OWNER finds it necessary to occupy or use a portion or portions of the project prior to Substantial Completion, the OWNER shall provide notice of occupancy without the need for mutual agreement between the OWNER and the CONTRACTOR and to which the insurance company providing the Builder's Risk Insurance has consented by endorsement to the policy or policies.

C. The limits of liability for the insurance required by Paragraph 5.2 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. Limits may be provided by a combination of primary and excess liability policies or through a single policy. If the limits are provided by a combination of primary and excess liability policies, then the excess or umbrella liability coverages shall include commercial general, comprehensive automobile, and employer's liability and shall provide coverage at least as broad as the underlying policies.

1. Workers' Compensation:

- | | | |
|----|-----------------------------------|-------------|
| a. | State: | Statutory |
| b. | Applicable Federal (e.g. USHL&H): | Statutory |
| c. | Employer's Liability: | \$1,000,000 |

2. Comprehensive or Commercial General Liability:

Combined Single Limit:

a. Premises/operations

\$ 1,000,000

\$ 2,000,000

Each Occurrence

Annual Aggregate

b. Products/completed operations

\$ 1,000,000

\$ 2,000,000

Each Occurrence

Annual Aggregate

c. Personal Injury

\$ 1,000,000

\$ 2,000,000

Each Occurrence

Annual Aggregate

d. Policies shall include premises/operations, products, completed operations, independent contractors, owners' and contractors' protective, explosion, collapse, underground hazards, broad form contractual, personal injury with employment contractual exclusions deleted, and broad form property damage.

e. If policies are written on a Commercial General Liability form, the General Aggregate shall be at least two times the each occurrence limit or be written on a "per project" basis.

f. All policies shall be written on an occurrence basis. If the CONTRACTOR would like to substitute any "claims made" liability policies, then these must be pre-approved in writing according to the terms and conditions they may impose.

g. If policies are written for split limits, limits shall be equal for bodily injury and property damage liability.

3. Comprehensive Automobile Liability (including owned, hired, and non-owned vehicles):

Combined Single Limit:
 - a. Bodily Injury and Property Damage: \$2,000,000 each accident
 - b. If policies are written for split limits, limits shall be equal for bodily injury per person, bodily injury per accident and property damage.
4. Excess Liability Insurance:
 - a. \$4,000,000 over all underlying coverage lines
5. Builder's Risk Insurance:
 - a. In an amount equal to the replacement cost of the completed value of the project or \$4,000,000 whichever is greater.
 - b. Any deductibles of self-insured retentions shall be as agreed to by the OWNER and CONTRACTOR.
 - c. The CONTRACTOR shall include flood and earthquake coverage in the Builder's Risk Insurance requirements under Paragraph 5.02.B.5 of the General Conditions, with a minimum limit of \$4,000,000 per event or occurrence.
- D. All policies shall provide that the CONTRACTOR agrees to waive all rights of subrogation against the OWNER, the ENGINEER, and their subconsultants, employees, officers and directors, for WORK performed under the Agreement. Endorsements shall be provided with certificates of insurance.
- E. All policies shall also specify that the insurance provided by the CONTRACTOR will be considered primary and not contributory to another insurance available to the OWNER or ENGINEER.
- F. All policies except Workers' Compensation and Builders Risk shall name the OWNER, including their officers, directors or board members, employees agents or any others associated with the management or operations of South Valley Water Reclamation Facility; Engineer, their consultants, subconsultants, shall be additional insureds on the Auto Liability and Commercial General Liability policies. The Builders Risk insurance shall name the CONTRACTOR, OWNER, and ENGINEER as named insureds and subcontractors and additional insureds. The Workers' Compensation policy shall name the OWNER as additional insured by means of an alternative employer endorsement, with respect to the employer's liability coverage only.
- G. All policies shall provide for 60 days notice prior to any cancellation, reduction in coverage or nonrenewal.

- H. The deductible or self-insured retention on Comprehensive or Commercial General Liability shall not be greater than \$25,000. All deductibles are the responsibility of the CONTRACTOR.

SGC-6.05 SUBCONTRACT LIMITATIONS

Add the following as paragraph 6.05.B of the General Conditions

- B. The CONTRACTOR shall perform not less than 30 percent of the WORK with its own forces (i.e., without subcontracting). The 30 percent requirement shall be understood to refer to the WORK, the value of which totals not less than 30 percent of the Contract Price.

SGC-6.06 PERMITS

- A. The CONTRACTOR shall acquire and comply with the following permits if applicable:
1. State permits to construct and/or operate sources of air pollution.
 2. Certificates and permits are required for sources such as, but not limited to, the following:
 - a. Fuel burning equipment
 - b. Gasoline and petroleum distillate storage containers
 - c. Land disturbing activities
 - d. Processing equipment (sand, gravel, concrete batch plant, etc.)
 - e. Odors.
 3. Permit-Required Confined Space: The workspace in which the WORK is to be performed may contain permit-required confined spaces (permit spaces) as defined in 29 CFR 1910.146. Permit space entry is allowed in such spaces only through compliance with a confined space entry program meeting the requirements of 29 CFR 1910.146.
 4. Encroachment Permit
- B. The CONTRACTOR shall comply with OWNER requirements for a "Hot Work Permit" as described in Section 01520 – Security/Process Safety Management.

SGC-9.03 PROJECT REPRESENTATION

- A. The OWNER's Representative, will act as directed by and under the supervision of the OWNER and will confer with the OWNER regarding its actions. The OWNER's REPRESENTATIVE dealings in matters pertaining to the WORK shall, in general, be only with the OWNER and the CONTRACTOR, and dealings with Subcontractors shall only be through or with the full knowledge of the CONTRACTOR.
- B. The OWNER's REPRESENTATIVE shall have the duties and responsibilities set forth in this paragraph.

1. Review the progress schedule of Shop Drawing submittals and schedule of values prepared by the CONTRACTOR and consult with the ENGINEER concerning their acceptability, as applicable.
2. Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required and notify in advance those expected to attend.
Attend meetings and maintain and circulate copies of minutes thereof.
3. Serve as the OWNER's liaison with the CONTRACTOR, working principally through the CONTRACTOR's superintendent and assist said superintendent in understanding the intent of the Contract Documents.
4. Receive Shop Drawings and samples furnished by the CONTRACTOR.
5. Conduct on-site observations of the WORK in progress to assist the OWNER in determining if the WORK is proceeding in accordance with the Contract Documents.
6. Transmit to the CONTRACTOR the OWNER's or ENGINEER's clarifications and interpretations of the Contract Documents.
7. Consider and evaluate the CONTRACTOR's suggestions for modifications in the Contract Documents and report them with recommendations to the OWNER.
8. Review applications for payment with the CONTRACTOR for compliance with the established procedure for their submittal and forward them with recommendations to the OWNER, noting particularly their relation to the schedule of values, work completed, and materials and equipment delivered at the Site but not incorporated in the WORK.
9. During the course of the WORK, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by the CONTRACTOR are applicable to the items actually installed.
10. Before the OWNER prepares a Notice of Completion, as applicable, submit to the CONTRACTOR a list of observed items requiring completion or correction.
11. Conduct final inspection in the company of the ENGINEER, the OWNER, and the CONTRACTOR, and prepare a punch list of items to be completed or corrected.
12. Verify that all items on the punch list have been completed or corrected and make recommendations concerning acceptance.

SGC-11.03D EQUIPMENT

The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the following reference publication:

- A. "Rental Rate Blue Book for Construction Machinery" as published by the Machinery Information Division of the K-III Directory Corporation, telephone number (800) 669-3282.

SGC-12.02 WEATHER DELAYS

The CONTRACTOR's construction schedule shall anticipate up to 30 days of delay due to unusually severe weather.

SGC-14.03C AMOUNT OF RETENTION

Add the following to Paragraph 14.03C of the General Conditions:

Unless otherwise prescribed by law, the OWNER may retain a portion of the amount otherwise due to the CONTRACTOR, as follows:

1. Retention of 5 percent of each approved progress payment until the WORK is certified as having reached substantial completion.

SGC-14.03D VALUE OF MATERIALS STORED AT THE SITE

Unless otherwise prescribed by law or prescribed in Assigned Purchase Order Agreements, the value of materials stored at the SVWRF shall be 95 percent of the value of such materials.

SGC-14.05.A REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

Replace the last sentence with the following: "Forty-Five days after presentation of the Application for Payment with the ENGINEER'S recommendation, the amount recommended will (subject to the provisions of Paragraph 14.05B) become due and when due will be paid by the OWNER to the CONTRACTOR."

SGC-14.07.A DAMAGES

Add the following sentence: "The amount of liquidated damages shall be \$250 per calendar day."

-END OF SECTION-

**SECTION 00810
SUPPLEMENTARY GENERAL CONDITIONS (UTAH)**

SGC-18 UTAH STATE REQUIREMENTS

- A. Retainage of Compensation to CONTRACTOR: Pursuant to Utah Code Ann. 13-8-5, any retainage of CONTRACTOR's compensation hereunder shall be placed in an interest-bearing escrow account and the interest which accrues thereon shall do so for the benefit of CONTRACTOR and Subcontractors. Release of the retainage shall be as contemplated by the General Conditions and Supplementary General Conditions, Article 14 – Payments to Contractor, Liquidated Damages and Completion. Any interest which has accrued on the retainage and which is released to the CONTRACTOR shall be promptly disbursed by CONTRACTOR to itself and/or to Subcontractors on a pro rata basis.
- B. Certification of Change Orders: Pursuant to Utah Code Ann. Section 63G-6-602, no change order shall be authorized without a written certification, signed by an official representative of the OWNER responsible for monitoring and reporting the status of the costs of the total Project or the contract budget, stating that funds are available for the subject change order.
- C. Adjustments in Price: Pursuant to Utah Code Ann. Section 63G-6-601, any adjustment in compensation due CONTRACTOR under this agreement shall be computed in one or more of the following ways:
1. By agreement on a fixed-price adjustment before commencement of the pertinent performance or as soon as practicable;
 2. By unit prices specified in the contract or subsequently agreed upon;
 3. By the costs attributable to the events or situations with adjustment of profit or fee, all as specified in the contract or subsequently agreed upon;
 4. In any other manner as OWNER and CONTRACTOR may mutually agree;
 5. In the absence of agreement between CONTRACTOR and OWNER, by a unilateral determination by OWNER of the costs attributable to the events or situations with adjustment of profit or fee, all as computed by the OWNER in accordance with Utah Code Ann. Section 63G-6-415 and/or the rules and regulations promulgated thereunder.
- D. Cost Principles: CONTRACTOR shall comply in all respects with applicable provisions of Utah Code Ann. Section 63G-6-415, and the rules and regulations promulgated thereunder. To the extent that such provisions are inconsistent with the other terms and conditions of this agreement, the former shall prevail. OWNER may, at reasonable times and places, audit the books and records of CONTRACTOR, any Subcontractor, or any other person who has submitted cost or pricing data pursuant to said section. The books and records of CONTRACTOR shall be maintained for 3 years following the end of the fiscal year in which final payment is made under the Contract. The books and records of the Subcontractor and all other persons shall be maintained for 3 years following the end of the fiscal year in which final payment is

made under the subcontract and/or to the person, unless a shorter period is otherwise authorized in writing.

- E. Project Safety: CONTRACTOR shall comply in all respects with the Utah Occupational Safety and Health Act, Utah Code Ann. Sections 34A-6-101 et seq., and the rules, regulations and standards promulgated thereunder by the Utah State Industrial Commission, as such act, rules, regulations or standards now exist or may be amended during the term of this agreement. Specifically, but not in limitation, CONTRACTOR shall comply with Construction Standards, Rules and Regulations, promulgated by the Utah Occupation and Safety and Health Division, Utah State Industrial Commission.
- F. Protection of Underground Utility Facilities: CONTRACTOR shall comply in all respects with Utah Code Ann. Section 54 Chapter 8a et seq. and the rules and regulations promulgated thereunder, as it now exists or may be amended during the term of this agreement, with regard to the protection of underground utility facilities. Specifically, but not in limitation, CONTRACTOR shall notify the appropriate public utility(s) when making an excavation with power equipment. CONTRACTOR shall further refrain from proceeding with excavation until such time as the appropriate public utility(s) have advised CONTRACTOR of the location of any underground facilities in the area proposed for excavation by marking such facilities with stakes, paint, or other customary way, indicating horizontal location within 24 inches of the outside dimensions of both sides of the underground facility.
- G. Review of Construction by OWNER: OWNER may, at its option, assign a field representative to review the construction of the Project in progress. Said representative will cooperate with the ENGINEER/OWNER in attempting to note deviations from, or necessary adjustments to, the Contract Documents or deficiencies or defects in the construction. Said representative's presence on the Project, however, shall in no way relieve CONTRACTOR of its primary responsibility for construction of the Project in accordance with the Contract Documents.
- H. OWNER Inspection: Pursuant to Utah Code Ann. Section 63G-6-418, OWNER may, at reasonable times, inspect the plant or place of business of the CONTRACTOR or any Subcontractor which is related to the performance of this contract or any subcontract entered into hereunder.
- I. Code Requirements: The provisions of the latest editions of the International Building Code, National Electric Code, and Utah Plumbing Code, as adopted or followed in Utah, including standards adopted in relation thereto, as supplemented or amended, shall apply to the Project except as specific variances may be expressly authorized by the OWNER. If the Contract Documents fail to meet the minimum standards of the referenced codes, CONTRACTOR shall be responsible to bring such information to the attention of the architect/OWNER associated with the Project. Subcontractors shall also inform CONTRACTOR of any infractions of the above-referenced codes regarding their own particular trades. In the event that workmanship or incidental materials are not specified or indicated, they shall at least conform to the above-referenced codes and shall be incorporated into the Work without any additional cost to the OWNER. If the Contract Documents call for items or workmanship which exceed code requirements, the Contract Documents shall take precedence over such requirements.

- J. Workers Compensation: CONTRACTOR shall comply in all respects with Utah Code Ann. Section 34A-2-101, et seq. and the rules and regulations promulgated thereunder by the Utah State Industrial Commission, as such law, rules or regulations now exist or may be amended during the term of this agreement.
- K. Archaeological, Anthropological, or Paleontological Findings: CONTRACTOR shall comply with Utah Code Ann. Section 9-8-301 et seq., with respect to the discovery of archaeological, anthropological, or paleontological findings at or on the Project site. Specifically, but not in limitation, CONTRACTOR shall promptly notify the Utah Division of State History of any such findings.
- L. Nondiscrimination Equal Employment Opportunity: CONTRACTOR shall comply in all respects with the Utah Anti-Discrimination Act of 1965, Utah Code Ann. Section 34A-5-101 et seq., and the rules and regulations promulgated thereunder by the Utah State Industrial Commission and/or its Anti-Discrimination Division, as such act, rules or regulations now exist or may be amended during the term of this agreement, specifically:
1. CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, color, sex, religion, ancestry or national origin.
 2. In all solicitations or advertisements for employees, CONTRACTOR shall state that all qualified applicants shall receive consideration without regard to race, color, sex, religion, ancestry or national origin.
 3. CONTRACTOR shall send to each labor union or worker's representative notices to be provided, stating the CONTRACTOR's responsibilities under the statute.
 4. CONTRACTOR shall furnish such information or reports as are requested by the Utah State Industrial Commission and/or its Anti-Discrimination Division, for the purpose of determining compliance with the statute.
 5. CONTRACTOR shall include the provisions of paragraphs 1 through 4 above in all subcontracts for this Project.
 6. Failure of the CONTRACTOR to comply with the statute, the rules and regulations promulgated thereunder, and this provision, shall be deemed a breach of contract entitling OWNER, in its discretion, to cancel, terminate, or suspend this agreement in whole or in part.
- M. Affirmative Action: CONTRACTOR shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but shall not be limited to: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layout or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

At its discretion, OWNER may perform a compliance review at CONTRACTOR's place of business and/or the Project site to verify CONTRACTOR's compliance with this provision. Such compliance verifications may be conducted with such frequency as is needed to assure CONTRACTOR's compliance with this provision.

- N. Citizens Preferred: Pursuant to Utah Code Ann. Section 34-30-1, CONTRACTOR shall give preference in hiring to citizens of the United States or those having declared their intention to become citizens; failure to comply may render this contract null and void at the discretion of OWNER.
- O. Veterans' Preference: Pursuant to Utah Code Ann. Section 71-10-2, CONTRACTOR shall give preference in hiring to honorable discharged veterans who have served in the Armed Forces of the United States during a period of conflict, war, or other national emergencies as defined by Congress, and to any un-remarried surviving spouse of an honorably discharged veteran, if they possess qualifications for that employment and if the honorably discharged veteran is or, if deceased, was a resident of the State of Utah.
- P. Specific OWNER Requirements: CONTRACTOR shall comply with the specific rules and regulations promulgated by OWNER pursuant to authority granted or retained under the Utah Procurement Code, Utah Code Ann. Section 63G-6-101, et seq.

-END OF SECTION-

PART 4 – TECHNICAL SPECIFICATIONS

**SECTION 01 11 00
SUMMARY OF WORK**

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work to be performed under this Contract consists of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation, and services, including fuel, power, water, and essential communications, and performing all Work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The Work shall be complete, and all Work, materials, and services not expressly indicated or called for in the Contract Documents, which may be necessary for the complete, safe and proper construction of the Work in good faith shall be provided by Contractor as though originally so indicated, at no increase in cost to Owner.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract comprises demolition and renovation of the existing laboratory facility and construction of expanded and contiguous laboratory space and facilities. All architectural, structural, mechanical, electrical and civil/landscape elements are included. A majority of the laboratory analytical equipment and some furnishings will be Owner-supplied and installed. Complete start up and commissioning of all new equipment and systems installed by the Contractor shall be provided. The Owner will vacate the existing laboratory facilities for the duration of the Work.
- B. The Work is located in at the South Valley Water Reclamation Facility as indicated on the Drawings.

1.3 CONTRACT METHOD

- A. The Work hereunder will be constructed under a single lump-sum contract.

1.4 STREAMLINED SPECIFICATIONS

- A. These specifications are written in streamlined or declarative style, often using incomplete sentences. This imperative language is directed to Contractor unless specifically noted otherwise.
- B. Omissions of such words and phrases as "Contractor shall," "in conformity therewith," "shall be," "as shown on the Drawings," "a," "an," "the," and "all" are intentional in streamlined sections.
1. Omitted words shall be supplied by inference in the same manner as when a note appears on the Drawings.
 2. Omission of such words shall not relieve Contractor from providing the items and work described herein or indicated on the Drawings.
 3. Words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

1.5 WORK SEQUENCE AND SCHEDULING CONSTRAINTS

- A. Schedule and perform the Work in such a manner as to result in the least possible disruption to the public's use of roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewerage, drainage structures, ditches and canals, gas, electric, cable television, and telephone. Refer to Utility Adjustment and other plan and profile sheets for approximate location of utilities. However, there is no guarantee as to accuracy or completeness. Contractor shall incorporate as-built locations on the reproducible record plans, in red ink, showing proper location on each sheet where these utilities are located.

1.6 CONTRACTOR USE OF PROJECT SITE

- A. Use of the Project Site shall be limited to construction operations, including on-Site storage of materials, on-Site fabrication facilities, and field offices.

1.7 OWNER USE OF THE PROJECT SITE

- A. Owner will continue to utilize the Administration Building. Cooperate and coordinate with Owner to facilitate Owner's operations and projects and to minimize interference with Contractor's operations at the same time. In any event, Owner shall be allowed safe access to the Project Site during the period of construction.

1.8 CONTRACTOR'S WORKING HOURS

- A. Perform work within Owner's regular working hours . If Contractor desires to work overtime or work on a Saturday, Sunday, or any legal holiday, obtain prior approval from Owner.

1.9 STORAGE

- A. Storage conditions shall be acceptable to Owner for all materials and equipment not incorporated into the Work but included in Applications for Payment. Such storage arrangements and conditions shall be presented in writing for Owner's review and approval and shall afford adequate and satisfactory security and protection. Off-site storage facilities shall be accessible to Engineer. The stored materials shall be insured for full value. Certificates of liability insurance coverage must be submitted to Engineer with the request for payment by Contractor. All arrangements and costs for storage facilities shall be paid by Contractor, unless specifically designated in the Contract Documents to be furnished by Owner.

1.10 LINES AND GRADES

- A. Perform all Work to the lines, grades, and elevations shown on the Drawings.
- B. Basic horizontal and vertical control points will be established or designated as provided in General Conditions paragraphs. Use these points as datum for the Work. Perform any additional survey, layout, or measurement work needed for proper construction of the Work as a part of the Work at no additional cost to Owner.
- C. Employ experienced instrument personnel, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement

work. In addition, furnish, without additional charge, competent personnel and such tools, stakes, and other materials as Engineer may require in establishing or designating control points or in checking survey, layout, and measurement of Work performed.

- D. Keep Engineer informed, a reasonable time in advance, of the times and places at which Work is to be done, so that horizontal and vertical control points may be established and any checking deemed necessary by Engineer may be done with minimum delay to the Project.
- E. Remove and reconstruct Work, which is improperly located.

1.11 PROJECT MEETINGS

A. Preconstruction Conference

1. Prior to the commencement of Work at the Site, a preconstruction conference will be held at a mutually agreed time and place which shall be attended by Contractor's Project Manager, its Superintendent, its Safety Representative, and its Subcontractors as Contractor deems appropriate. Other attendees will be:
 - a. Engineer
 - b. Representatives of Owner
 - c. Governmental representatives as appropriate
 - d. Others as requested by Contractor, Owner, or Engineer
 - e. Engineer's Representative
2. Bring to the conference, any submittals so indicated in Section 01 33 20 - Contractor Submittals.
3. The purpose of the conference is to designate responsible personnel, discuss contract requirements and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The complete agenda will be furnished by Engineer prior to the meeting date. However, be prepared to discuss all of the items listed below.
 - a. Contractor's assignments for safety and first aid, including Designated Competent person(s) and Contractor's safety Representative.
 - b. Status of Contractor's insurance and bonds.
 - c. Contractor's tentative schedules.
 - d. Transmittal, review, and distribution of Contractor's submittals.
 - e. Processing applications for payment.
 - f. Maintaining record documents.
 - g. Critical Work sequencing.
 - h. Field decisions and Change Orders.
 - i. Use of project site, office and storage areas, security, housekeeping, and Owner's needs.
 - j. Major equipment deliveries and priorities.
 - k. Permits required for construction.
 - l. Utilities required for construction.
 - m. Contract Owner and channels of communication.
 - n. Coordination with others.
4. Engineer will preside at the preconstruction conference and will arrange for keeping and distributing the minutes to all persons in attendance.

B. Progress Meetings

1. Engineer will schedule and hold regular on-Site progress meetings at least weekly and at other times as deemed necessary by Engineer or as required by progress of the Work. Contractor, Engineer and all Subcontractors active on the Site must attend each meeting. Contractor may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.
2. Engineer will preside at the meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings will be to review the progress of the Work, discuss safety, maintain coordination of efforts, discuss commercial issues, discuss changes in scheduling, and resolve other problems, which may develop. During each meeting, all parties are required to present any issues, which may impact its Work, with a view toward resolving these issues expeditiously.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 14 40
CONSTRUCTION AND SCHEDULE CONSTRAINTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Schedule, sequence, and perform the Work in a manner, which minimizes disruption to the public and to the operation and maintenance of existing facilities.
- B. Allow for construction and schedule constraints in preparing the construction schedules required under Section 01 32 16 – Construction Progress Schedule. The schedules shall include the activities necessary to satisfy all constraints included and referenced in the Contract Documents.

1.2 PERMITS

- A. Abide by the conditions of all permits, easements, and private agreements made and obtain written acceptance of the constructed conditions from each issuer of the permit, easement, or private agreement prior to acceptance of Work by Owner, at no additional expense to Owner.

1.3 COORDINATION WITH OTHER CONSTRUCTION

- A. Be responsible for coordinating the Work depicted in the Contract Documents with Owner, Engineer, and all other contractors or suppliers working at, or near the Project Site in accordance with the General Conditions and Supplementary General Conditions.
- B. When two or more contracts are being executed at one time on the same, or adjacent land, and in such a manner that work on one contract may interfere with work on another, Owner will determine the sequence and order of the Work. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege shall be shared unless granted specifically by Owner to one contractor. No such decision as to the method or time of conducting the Work or the use of territory shall be made the basis of any claim for delay or damage, except as provided for in the General Conditions and Supplementary General Conditions.

1.4 SCHEDULE CONSTRAINTS

- A. Be responsible to coordinate and plan the construction activities to integrate each schedule constraint into performance of the overall Work.
- B. The listing of schedule constraints below does not mean that all constraints or special conditions have been identified. The list is not a substitute for the duty to coordinate and plan for completion, all Work by the Substantial/Contract Completion Dates specified in the Contract Documents.
- C. Special Listing: The following constraints affect the construction schedule.

1. The Notice to Proceed (NTP) is expected to be issued on February 1, 2019, with final completion by September 30, 2019. Work outside of the existing laboratory and administration building may commence upon receipt of the NTP. However, interior work within the existing building may start no sooner than May 1, 2019 after the Owner vacates this space. The Owner will begin moving into the remodeled and new spaces on October 1, 2019, and all work, cleanup and other contractor activities must be complete by that time, and the facility fully operational and capable of meeting its intended function to contain and service a wastewater process monitoring laboratory.
2. Contractor must maintain existing building envelope until May 1, 2019. No demolition into existing building structure will be allowed prior to this date.
3. Contractor must keep the restroom facilities near the lab operational during construction. Contractor will be allowed a 24-hour period to make the tie-in of the new and existing sanitary sewers after providing the Owner 3-days advance notice of plan to conduct work.
4. Contractor shall keep the public entrance to the SVWRF Administration building open during construction and shall provide signage, barriers, etc. as required during construction to do so.
5. Contractor will not be allowed to access the inside of the SVWRF Administration building except for from the outside access within the vicinity of the construction limits. Contractor shall construct and erect temporary doored and un-doored barriers in the existing hallways for both sound mitigation and pedestrian access. Contractor shall maintain a means for SVWRF employees to access the electrical room during construction at all times.

END OF SECTION

**SECTION 01 20 00
MEASUREMENT AND PAYMENT**

1.1 DESCRIPTION

- A. This Section defines the manner in which the Lump Sum Prices, Unit Prices, and the Allowances listed in the Bid Schedule will be used to determine measurement and payment for all Work and describes the required procedures for monthly progress payments to the Contractor.
- B. Bid amounts will include all plant, equipment, tools materials, labor, service, and all other items required to complete the Work included in the Agreement unless specifically excluded by this section. Work required for which no separate Bid item is identified will be considered as a subsidiary obligation of the Contractor, and the cost therefore shall be included in the most applicable Bid item. Refer to Section 01 32 20 - Bar Chart Schedule for resource loading and progress payments. Compensation for partial completion of the Work will be determined by use of the Construction Schedule. Bid amounts for each item will be the basis for development of budget values for activities included in the Construction Schedule and in the Schedule of Values. Adjustments to Allowance Bid Item amounts will be applied to the Contract Price when Work is completed, and actual Allowance item amounts are known.
- C. Payment for all items in the Bid Schedule will include full compensation for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the Work in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including but not limited to all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Utah Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- D. All costs shall be included in the prices named in the Bid Schedule for the various items of Work. Except as otherwise provided herein, no separate payment will be made for any item that is not specifically set forth in the Bid Schedule.
- E. When included, all estimated quantities stipulated in the Bid or other Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the Work and for the purpose of comparing the Bids submitted for the Work. The actual amounts of Work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Contractor agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts thereof.
- F. The unit or lump sum item of work, which involves excavation or trenching shall include all costs for such work. No direct payment will be made for excavation or trenching. All excavation and trenching will be unclassified as to materials which may be encountered; in addition, trenches will be unclassified as to depth. No additional payment will be made for rock or caliche excavation, nor for blasting which the Contractor determines is required for rock or caliche excavations.

- G. Monthly pay requests are due on the 30th of each month, and while pay requests will be accepted prior to this date, pay request processing will not begin until this date for purposes of meeting the Owner's pay request processing obligations. Failure to submit a pay request by this day may be cause for the rejection of the pay request. If rejected, Contractor may have to resubmit the pay request the next month. Should the submittal date fall on a holiday or weekend day during the month, then consider the next working day as the due date.
- H. Note that the information provided in this Section is intended for use as a general description of the breakdown of work to be included in the Bid Schedule. The following descriptions are NOT intended to represent a complete listing of all Work required by the Contract Documents. It is the Bidder's responsibility to make sure that costs for all Work required in the plans and specifications is accounted for in the appropriate Bid Items, whether or not specifically described in this Measurement and Payment section. The Owner is not responsible for Contractor's failure to properly coordinate with Subcontractors and Suppliers regarding the breakdown of Work in these Contract Documents.

1.2 MEASUREMENT AND PAYMENT

A. Lump Sum Bid Items

1. All Work Required by the Contract Documents
 - a. The sum allowed for Bid Item No. 1 as set forth in the Bid Form includes all Work for and in connection with construction of the Contract in its entirety, including but not limited to all costs associated with dust control mitigation measures, permit fees and other related costs to ensure compliance with the Board of Health Air Pollution Control Regulations.
 - b. Payment for Work under this Bid item will be based on the breakdown of costs for each scheduled activity in the Construction Schedule and the percentage of completion for each activity in accordance with the Contract Documents.
 - c. Preparing the Construction Progress Schedule shall be a separate activity on the Construction Schedule and shall also be a separate activity on the Schedule of Values. Payment for the Construction Progress Schedule is not in addition to, but is incidental to the other lump-sum items included in the Work.
 - d. Payment for mobilization, as defined in Section 01 71 00 – Mobilization, as part of the lump sum price named in the Bid Schedule shall equal two percent (2.0%) of the total lump sum price bid for the Work. The payment for mobilization is not in addition to, but is part of the lump sum price for the Work. A separate activity for mobilization shall be included in the Construction Schedule and in the Schedule of Values. This activity shall include all principal items and all submittals specified in Section 01 71 00 – Mobilization, as applicable. The remaining lump sum, except as otherwise required by this Agreement, shall be appropriately distributed among the remaining work activities that make up the total lump sum price. Payment for mobilization will be approved in accordance with the status of completion of each mobilization component as defined in the approved mobilization plan required in Section 01 71 00; except that no payment for mobilization will be approved until Items 1, 2, 8, 9, 10, and 11 of paragraph 3.1.A of Section 01 71 00 are complete. No more than one-half of the payment for mobilization will

be paid until all submittals required by paragraph 3.2 of Section 01 71 00 have been approved by the Engineer.

- e. Payment for each approved Operations & Maintenance (O & M) Manual, as defined in Section 01 33 20 – Contractor Submittals, as part of the total lump sum price named in the Bid Schedule shall equal 10% of the value of the piece of equipment or group of like-kind pieces of equipment that it represents. The payment for each O & M Manual is not in addition to but is part of the lump sum price for the Work. A separate activity for each O & M Manual shall be included in the Construction Schedule and in the Schedule of Values. The remaining lump sum price, except as otherwise required by this Contract, shall be appropriately distributed among the remaining work activities that make up the total lump sum price.

1.3 GENERAL PROGRESS PAYMENT REQUIREMENTS

- A. A Payment for Work performed shall be in accordance with installed quantities as assessed in comparison to the Schedule of Values and the Construction Schedule. The Engineer will verify measurements and quantities. Each activity necessary to manage and complete the Work is identified on the Contract schedules. Each activity will be assigned its respective value, a portion of the Contract Price, as shown on the Schedule of Values (Roll-up), and detailed cost loaded activity schedule.
- B. Payment for all lump sum costs and services incurred on this Agreement shall be based on the earned value of Work accomplished during the reporting period. Earned value is determined by the completion percentage of each activity as determined by the Schedule of Values and the Construction Schedule applied to the total value of the activity. No construction activity shall be deemed 100 percent complete until the Contractor has completed the physical check out and inspection of the completed Work and has submitted the signed inspection form to the Engineer.
- C. Earned value is derived from the current status of the Contractor Construction Schedule as determined by the monthly schedule status submittals. Each schedule status submittal is reviewed and approved by the Engineer prior to the Contractor obtaining approval for the Summary of Earned Values or quantities installed and the Application for Payment.

1.4 APPLICATION FOR PAYMENT

- A. Submit application for payment on the Owner's form and be certified by signature of an Authorized Officer of the Contractor.
- B. The Application for Payment shall contain all necessary references and attachments that substantiate the invoice for progress payment (e.g., certified payrolls, labor reports, progress schedule data, and Summary of Earned Values). It shall substantiate the invoice for progress payment and shall be preceded or accompanied by the schedule and status data as a condition of payment, in accordance with the Construction Schedule and the Schedule of Values.

1.5 REVIEWS/APPLICATION FOR PAYMENT

- A. Review meetings between the Contractor and the Engineer will be held weekly and within 7 Days prior to the payment application date designated by the Engineer. Three Days prior to the last review meeting of the month, submit an updated schedule and a signed application for payment showing a Summary of Earned Values for the reporting and payment period so that the Engineer can compare earned values to available status data. Make any adjustments to the Master Record Documents, updated schedule, and payment applications required by the Engineer. Upon completion of the adjustments, the Engineer will sign the payment request and forward it to the Owner. The Engineer will determine payment amounts if agreement with the Contractor is not reached.

1.6 PAYMENT FOR SUPPLIES AND MATERIALS

- A. Payment based on the actual cost of supplies, materials and equipment on hand shall be made by the Owner with or without a paid invoice. "Actual cost" of materials shall be the invoice amount, whether paid or not, and shall not include any costs associated with installation, testing, etc. The Contractor shall be entitled to payment of the actual cost of supplies, materials and equipment only if it (1) presents an invoice to the Owner with the application for payment and (2) states in the application for payment that the materials have been delivered and stored in the time and manner specified in the contract between the Contractor and his Supplier or Subcontractor. If Contractor fails to comply with those conditions, the Owner may withhold payment in accordance with the provisions. The Owner expressly reserves the right to withhold retention until Contractor presents to the Owner a paid invoice, or some other proof of payment satisfactory to the Owner, for the Owner's use in verifying the accuracy of the actual cost of the supplies, materials or equipment. If the amount paid does not match the actual cost, the Owner will adjust the amount of retention accordingly. Payment for supplies, materials or equipment on hand does not alter the responsibility of the Contractor for all supplies, materials and equipment until Final Acceptance of the Work.

END OF SECTION

SECTION 01 25 10
PROD., MATERIALS, EQUIPMENT AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 DEFINITIONS

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for the Project or taken from stock of previously purchased products.
- B. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of work.
- C. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items).
- D. Definitions in this Article are not intended to negate the meaning of other terms used in the Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- E. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

1.2 QUALITY ASSURANCE

- A. Source Limitations: To the greatest extent possible for each unit of work, provide products, materials, and equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for selection of a product, material, or equipment, select an option, which is compatible with other products, materials, or equipment. Compatibility is a basic general requirement of product, material and equipment selections.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance
 - 1. Deliver and store products, materials, and equipment in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft.
 - 2. Manage delivery schedules to minimize long-term storage of products at Site and overcrowding of construction spaces. In particular, ensure coordination to minimize holding or storage times for flammable, hazardous, easily damaged, or sensitive materials to deterioration, theft, and other sources of loss.
- B. Transportation and Handling

1. Transport products by methods to avoid damage. Deliver in undamaged condition in manufacturer's unopened containers and packaging.
2. Furnish equipment and personnel to handle products, materials, and equipment, including those provided by Owner, by methods to prevent soiling and damage.
3. Provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

C. Storage and Protection

1. Products shall be stored in accordance with manufacturer's written instructions and with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's recommendations.
2. For exterior storage of fabricated products, products shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering and ventilation shall be provided to avoid condensation.
3. Loose granular materials shall be stored on solid flat surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
4. Storage shall be arranged to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.
5. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

D. Maintenance of Storage

1. Periodically inspect stored products on a scheduled basis. Maintain a log of inspections and make the log available on request.
2. Comply with manufacturer's product storage requirements and recommendations.
3. Maintain manufacturer-required environmental conditions continually.
4. Ensure that surfaces of products exposed to the elements are not adversely affected and that weathering of finishes does not occur.
5. For mechanical and electrical equipment, provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
6. Service products on a regularly scheduled basis. Maintain a log of services and submit as a record document prior to acceptance by Owner in accordance with the Contract Documents.

1.4 PROPOSED SUBSTITUTIONS AND "OR EQUAL" ITEMS

- A. Substitution and "or equal" determination shall be submitted and evaluated per the General Conditions included in the Contract Documents.
- B. When proposing a substitution, make written application to Engineer on the "Substitution Request Form."
- C. Unless otherwise provided by law or authorized in writing by Engineer, submit the "Substitution Request Form(s)" within the 35-day period after award of the Contract.
- D. Whenever products, materials, or equipment are indicated in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the

manufacturer is intended to establish the type, function, and quality required. The Contract Price is understood to be based upon furnishing the item specified.

- E. If a named item is not available or a particular supplier is no longer doing business, the following shall apply:
1. In the event that a named supplier is no longer doing business under the name indicated, furnish the specified product from the legal successors to the named supplier.
 2. In the event that a named product is no longer available from the named supplier due to acquisition or sale of the given product line, but the product is available from another supplier, provide the named product. In such cases, submit a substitution request form and include certification from the supplier that the product being supplied is materially and functionally identical to the product named in the Contract Documents.
 3. In the event that the named product is no longer available from the named supplier or any other supplier, notify Owner in writing and Owner will direct Engineer to identify suitable substitute products. Provide one of the suitable substitute products.
- F. The procedure for review by the Engineer will include the following:
1. Wherever a proposed substitution has not been submitted within said 35-day period, or wherever the submission of a proposed substitution material or equipment has been judged to be unacceptable by Engineer, provide the product, material, or equipment indicated in the Contract Documents.
 2. Certify that the proposed substitution will adequately perform the functions and achieve the results called for by the general design, and be similar and of equal substance to that indicated, and be suited to the same use as that indicated.
 3. Engineer will evaluate each proposed substitution within a reasonable period of time.
 4. As applicable, do not make shop drawing submittals for a substitution without Engineer's prior written acceptance of the "Substitution Request Form." Do not order, install, or utilize any substitution item prior to written acceptance of the "Substitution Request Form."
 5. Engineer will record the time required by Engineer in evaluating substitutions and in making changes by Contractor in the Contract Documents occasioned thereby.
- G. Application using the "Substitution Request Forms" shall contain the following statements and information, which shall be considered by Engineer in evaluating the proposed substitution:
1. The evaluation and acceptance of the proposed substitution shall not prejudice the achievement of substantial completion on time.
 2. Whether or not acceptance of the substitution for use in the Work will require a change in any of the Contract Documents to adapt the design to the proposed substitution.
 3. Whether or not incorporation or use of the substitution in connection with the Work is subject to payment of any license fee or royalty.
 4. All variations of the proposed substitution from the items originally specified shall be identified.
 5. Available maintenance, repair, and replacement service shall be indicated. The manufacturer shall have a local service agency (within 50 miles of the site) which

maintains properly trained personnel and adequate spare parts and is able to respond and complete repairs within 24 hours.

6. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitution, including cost of redesign and claims of other contractors affected by the resulting change.
- H. Without any increase in cost to Owner, be responsible for, and pay all costs in connection with proposed substitutions and costs of inspections and testing of equipment or materials submitted for review prior to purchase thereof for incorporation in the Work, whether or not Engineer accepts the proposed product, equipment, or material. Reimburse Owner for the charges of Engineer and other authorized representatives for evaluating each proposed substitution.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION



SUBSTITUTION REQUEST FORM

To: _____

Project: _____
Date: _____
Owner: _____

Specified Item:

Section	Page	Paragraph	Description
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The undersigned requests consideration of the following:

Proposed Substitution: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request. Applicable portions of the data are clearly identified.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings and will not require a change in any of the Contract Documents.
2. The undersigned will pay for changes to the design, including engineering design, detailing, and construction costs caused by the request substitution which is estimated to be \$.
3. The proposed substitution will have no adverse effect on other contractors, the construction schedule (specifically the date of substantial completion), or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The incorporation or use of the substitute in connection with the work is not subject to payment of any license fee or royalty.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by **Contractor:**

Firm: _____
By: _____
Signature: _____
Telephone: _____
Attachments: _____
Comments: _____

Reviewed by **Engineer:**

☐ Accepted as Submitted ☐ Accepted as Noted
☐ Not Accepted ☐ Received too Late
By: _____
Title: _____
Date: _____
Comments: _____

**SECTION 01 29 73
SCHEDULE OF VALUES**

PART 1 - GENERAL

1.1 GENERAL

- A. This Section defines the process whereby the Schedule of Values shall be developed and incorporated into the Construction Progress Schedule as specified in Section 01 32 16 – Construction Progress Schedule. Monthly progress payment amounts shall be determined from the weekly progress updates of the scheduled activities. The schedule of values shall, as a minimum, list the value of every activity on the schedule, and shall include such additional breakdowns as required herein. The values in the Schedule of Values do not establish a commitment by either Contractor or Owner when negotiating changes to the Contract Documents.

1.2 DETAILED SCHEDULE OF VALUES

- A. Prepare and submit a detailed Schedule of Values to Engineer as part of the Construction Progress Schedule submittal. Because the ultimate requirement is to develop a detailed Schedule of Values sufficient to determine appropriate monthly progress payment amounts, sufficient detailed breakdown shall be provided to meet this requirement. The Schedule of Values shall have a one-to-one relationship to the work activities of the Construction Progress Schedule even though additional detailed breakdowns for the Schedule of Values may be required. Engineer will be the sole judge of acceptable breakdowns, details, and descriptions of the values established. If, in the opinion of Engineer, a greater number of Schedule of Values items than proposed is necessary, add the additional items so identified.
- B. The minimum details of a breakdown of the major Work components are indicated below. Provide greater detail when directed by Engineer.
1. Mobilization: Two percent (2%) of total lump sum bid amount.
 2. Construction Progress Schedule shall be broken down by initial submittal and monthly updates.
 3. Break down Civil site Work into roadways, individual drainage systems, individual flood control structures, site concrete, soil cement, paving, excavation cut and fill, clearing and grubbing and any other items determined to be necessary for the establishment of pay and activity items.
 4. Break down concrete structures into excavation, subgrade preparation, and appurtenant pre-foundation Work, concrete foundation construction, slabs on grade, walls, columns, suspended slabs, etc. (provide sufficient breakdown to accommodate necessary schedule detail.
 5. Break down mechanical Work within each structure to identify individual piping systems, equipment installation by equipment name and number, and equipment testing and checkout.
 6. Break down electrical and Instrumentation Work within each structure to identify individual systems, equipment installation by equipment name and number, and equipment testing and checkout.
 - a. Break down fiber optic conduit Work into conduit installation and pullboxes.

- b. Break down cathodic protection Work by ribbon anode and appurtenances, test station types, rectifiers, and insulating flanges.
 - 7. Break down protective coating Work by system. Where specific coating Work may be critical to performing the Work to meet milestone and schedule dates, such Work shall be included as individual pay and activity items.
 - 8. Break down utility relocation Work into individual pipelines running from and to termination points. Each pipeline shall be an individual pay item unless otherwise allowed by the Engineer.
 - 9. Break down aqueduct Work into individual items including pipe, specials, and other pipe materials, excavation, pipe installation, joint welding (including testing), joint protection, CLSM, pipe zone, backfill, surface restoration, and hydrostatic testing; aqueduct crossings; aqueduct interconnections; and any other items determined necessary for the establishment and pay and schedule activities.
 - 10. Break down in-field pipeline lining by stations between access manholes.
 - 11. Provide breakdown for disinfection, testing, and commissioning of pipelines and reservoirs.
 - 12. Operations and Maintenance (O & M) Manuals shall be broken down into one O & M Manual per piece of equipment or one O & M Manual per group of like-kind pieces of equipment for establishment of pay and schedule activity items.
 - 13. Break down all other Work not specifically included in the above items as necessary for establishment of pay and schedule activity items.
- C. After submittal of the Schedule of Values, as part of the Construction Progress Schedule submittal, meet with Engineer and jointly review the schedules. Review the value allocations and extent of detail to determine any necessary adjustments to the values and to determine if sufficient detail has been proposed. Make adjustments deemed necessary to the value allocation or level of detail and submit a revised detailed Schedule of Values within 5 work days from receipt of comments from Engineer.
- 1.3 CHANGES TO SCHEDULE OF VALUES
- A. Assign values, approved by Engineer, for changes to the Construction Schedule which add activities not included in the original Construction Schedule but are included in the original Work (schedule omissions). Reduce other activity values to provide equal value adjustment increases for added activities as approved by Engineer.
 - B. In the event that Contractor and Engineer agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made. Engineer may direct changes to the schedule when inequities are discovered and agreement on the reallocation cannot be achieved.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 31 30
SAFETY

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor's safety program shall conform to the requirements specified in the General Conditions and Supplementary Conditions.

1.2 DEFINITIONS

- A. For the purposes of this Section, an "active construction area" is any area where construction activities are occurring or construction activities could be considered a potential hazard to people.
- B. A "Designated Safety Officer" or "Safety Representative" for the purposes of this Contract, means anyone who is capable of identifying the existing and predictable hazards in the areas surrounding a construction project or those working conditions at a construction project that are unsanitary or dangerous to employees. A "Designated Safety Officer" has the authority to make prompt corrective measures to eliminate those hazards.

1.3 SUBMITTALS

- A. Demonstrate compliance action with the stipulations of Utah Occupational Safety and Health Administration (OSHA), Mine Safety and Health Administration (MSHA), and other applicable local, state, and federal safety requirements by submitting to Engineer a copy of all safety plans, programs, and permits. Such plans and programs shall include, but are not limited to:
1. Hazard Analysis Prior to Major Activities (job safety analysis, JSA).
 2. Emergency Plan.
 3. Rigging and Hoisting Plans.
 4. Excavation and Trenching Plans.
 5. Respiratory Protection Program.
 6. Fire Protection Plan.
 7. Confined Space Entry Program.
 8. Explosives Handling and Storage.
 9. Confined Space Entry Program.
 10. Electrical Safety (drop cords, temporary power, GFCI's, etc.)
 11. Lock Out/Tag Out.
 12. Fall Protection.
 13. Heavy Equipment Operations.
 14. Burning and Welding Operations.
 15. Training Plan.
 16. Tunneling/Underground/Jacking/Boring Operations.
 17. Project Site Rules and Regulations (hazard protection plan).
 18. Material Handling (storage-disposal).
 19. Fuel Storage and Refueling.
 20. Hazard Communication/Right to Know.

21. Subcontractor Requirements.
 22. Ventilation.
 23. Personal Protective Equipment (hearing, eye, face).
 24. Power Transmission/Distribution (temporary and/or permanent).
 25. Traffic Control.
 26. Environmental Controls.
 27. Safety Meetings.
 28. Spill Control Plan.
 29. First Aid Facilities.
- B. Engineer's receipt of safety plans or programs will not relieve Contractor in any way from the full and complete responsibility for safety and training of its personnel, and the onsite personnel of Owner, Engineer, and other visitors to areas of active construction areas. On a daily basis, inform Engineer of changes to the boundaries of the active construction areas.
- C. Be responsible for safety training all personnel who will have access to the active construction areas to meet state, federal, local and Contractor requirements. Maintain reasonable, regularly scheduled training sessions in mutually accessible facilities through entire Contract. Training costs for all personnel and visitors, except those costs associated with training personnel of Contractor, subcontractors, suppliers, and visitors will be considered incidental to other lump-sum portions of the Work and no additional compensation for such training will be provided.
- D. Safety Program Requirements:
1. Safety Representative Requirements:
 - a. Assign a full-time Safety Representative as defined in the General Conditions of the Contract.
 - b. The Safety Representative's duties and responsibilities will be hazard recognition, accidents prevention, new employee orientation (including subcontractors), and the maintaining and supervising of safety precautions and program. This person shall have no other duties. The Safety Representative or a qualified and approved deputy shall be onsite at all times while Work is ongoing.
 - c. Qualifications of the Safety Representative and assigned deputies shall be submitted to Engineer for review. Acceptance of their qualifications by Engineer is required prior to the start of any activity on the Project. The Safety Representative will, as a minimum, meet the requirements of regulations for the Utah Occupational Safety & Health Enforcement Program.
 2. Hazardous Substances:
 - a. Provide Engineer with a list of all hazardous substances anticipated to be brought on-site.
 - b. Maintain on site Material Safety Data Sheets (MSDS) prior to arrival of any hazardous substances on the Project.
 - c. Use storage area(s) as outlined in the spill control plan.
 3. Job Safety Analysis (JSA):
 - a. Outline the sequence of the Work, equipment to be used, identify hazards that may exist or may be created and what procedures and/or safety equipment will be used to eliminate or reduce these hazards. A Scope of Work JSA shall

- be prepared and provided to the Engineer prior to the start of unusual, hazardous, or have risk potential activities on the Project. The name of the competent person assigned to this activity will be included on the JSA.
- b. Complete a JSA for any activity, which may be of an unusual nature or involves unique hazards.
4. Reports
- a. Provide to Engineer copies of Contractor's and subcontractor's:
 - 1) First aid, recordable, lost time and near miss, monthly logs.
 - 2) OSHA 200 injury log (annually).
 - 3) Safety meeting reports and topics (weekly).
 - 4) List of competent persons as required by OSHA and the Project Health and Safety Manual for each required task and their qualification as such.
 - 5) Injury and accident reports will be submitted to Engineer within 24 hours of any incident. **Immediate** notification to Engineer of an accident is **required**. Full cooperation with Engineer in accident investigation is required.
 - b. Conduct weekly safety inspections. Corrective actions shall be taken within 24 hours to address all deficiencies identified during inspections. Deficiency reports shall be prepared and submitted to Engineer within 48 hours indicating corrective actions taken. Failure to comply with required corrective measures identified in the safety inspection will result in the delayed signing of the monthly application for progress payment by Engineer.
 - c. Provide Engineer with a report of any periodic audit of Contractor's safety performance and/or records.

END OF SECTION

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SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 GENERAL

- A. Employ a bar chart schedule for the planning and scheduling of all Work required under the Contract Documents.
- B. In addition to the scheduling aspect, the same chart shall show an “S” curve for scheduled dollar expenditures versus time.
- C. In the process of preparing baseline schedule and monthly updates, consult with all key subcontractors and suppliers to assure concurrence with the feasibility and achievability of planned start dates, sequencing, durations, and completion dates.

1.2 RELATED SECTIONS

- A. Section 01 20 00 – Measurement and Payment

1.3 QUALIFICATIONS

- A. Demonstrate competence through the submission of a fully compliant Construction Progress Schedule with the initial schedule submission. Upon failure to so demonstrate competence in scheduling, Engineer may direct Contractor to employ the services of a scheduler that can demonstrate competence. Comply with such directives.

1.4 SUBMITTAL PROCEDURES

A. Submittal Requirements

- 1. Submit Construction Progress Schedule on a standard drawing sheet, size 24 inches by 36 inches.
- 2. The time scale (horizontal) shall be in weeks. The activities shall be listed on the left hand side (vertical).
- 3. Break down activities into sufficient detail to show all work activities. The listing from top to bottom shall be in a logical manner of which the Work will be accomplished. Provide space between activities or within bars to allow for marking of actual progress.
- 4. Provide a written narrative of the planning logic along with a description of Work and quantities included in each activity of the bar chart schedule.
- 5. Duration: The duration indicated for each activity shall be in units of whole working days and shall represent the single best time considering the scope of the Work and resources planned for the activity, including time for holidays and inclement weather. The calendar for the network shall be in calendar days. Except for certain non-labor activities, such as curing concrete or delivering materials, activity durations shall not exceed 14 days, be less than one day, nor exceed \$50,000 in value unless otherwise accepted by Engineer.

- B. Time of Submittals
1. Submit the bar chart schedule with "S" curves and narrative within fifteen (15) working days after Notice to Proceed for review by Engineer. The schedule submitted shall indicate a project completion date the same as the contract completion date.
 2. Submit a copy of the schedule, clearly showing progress made and actual "S" curves, on a two or four week basis depending on the duration of the project and reporting time agreed to in the preconstruction meeting.
- C. Acceptance
1. The bar chart schedule and "S" curves, when accepted by Engineer, constitute the Construction Progress Schedule unless a revised schedule is required due to one or more of the following:
 - a. Substantial changes in the Work scope.
 - b. A change in Contract time.
 - c. Delinquency by Contractor that requires a recovery schedule.
 2. Owner's review and acceptance of the Construction Progress Schedule is for conformance to the requirements of the Contract Documents only. Review and acceptance by Owner of Contractor's Construction Progress Schedule does not relieve Contractor of any of its responsibility whatsoever for the accuracy or feasibility of the Construction Progress Schedule, or of Contractor's ability to meet interim milestone dates and the Contract completion date, nor does such review and acceptance expressly or impliedly warrant, acknowledge, or admit the reasonableness of the logic and durations of the Construction Progress Schedule.

1.5 SCHEDULE UPDATES

- A. The Construction Progress Schedule shall be updated to reflect the as-built conditions of the Work and to accurately forecast the status of incomplete activities. Provide progress reports at each weekly progress meeting, stating actual percent earned versus percent planned. Submit Construction Progress Schedule updates to Engineer with each payment request, including approved changes in the Work and accurately depicting the current status and sequence of all activities.
- B. Submit the updated Construction Progress Schedule in the form, sequence, and number of copies requested for the initial schedule.
- C. Engineer will review each submitted Construction Progress Schedule update and provide comments within seven days of the submittal. Revise and resubmit the schedule within five days of receipt of comments from Engineer. Engineer will review the re-submittal within five days and provide comments if the schedule update is still unacceptable. Revise and resubmit the schedule within five days of receipt of comments from Engineer.

1.6 PROGRESS MEETINGS AND LOOK-AHEAD SCHEDULES

- A. For the weekly progress meetings, submit a look-ahead schedule. This schedule will cover four weeks: the immediate past week, the current week, and the forthcoming two weeks. List all activities from the accepted Construction Progress Schedule, which are complete, are scheduled for Work during the period, are currently planned to be worked, even if out of sequence, and Work which is unfinished but scheduled to be finished. Provide actual start

and completion dates for the Work that has been completed the prior week. Forecast early start and early finish dates for the Work that is in process or upcoming.

- B. Identify each activity noted above by activity number corresponding to the accepted Construction Progress Schedule and detailed description of the activity.
- C. Deliver the look-ahead schedule to Engineer 24 hours prior to the weekly progress meeting in a format approved by Engineer.

1.7 CONSTRUCTION SCHEDULE REVISIONS

- A. Engineer may direct and, if so directed, Contractor shall propose, revisions to the Construction Progress Schedule upon occurrence of any of the following instances:
 - 1. The actual physical progress of the Work falls more than five percent (5%) behind the accepted Construction Progress Schedule, as demonstrated by comparison to the accepted monthly Construction Progress Schedule updates or as determined by Engineer if a current accepted Construction Progress Schedule does not exist.
 - 2. Engineer considers milestone or completion dates to be in jeopardy because of "activities behind schedule". "Activities behind schedule" are all activities that have not or cannot be started or completed by the dates shown in the Construction Progress Schedule.
 - 3. A Change Order has been issued that changes, adds, or deletes scheduled activities, or affects the time for completion of scheduled activities.
- B. When instances requiring revision to the Construction Progress Schedule occur, submit the proposed revised Construction Progress Schedule within ten (10) working days after receiving direction from Engineer to provide such schedule. No additional payment will be made for preparation and submittal of proposed revised Construction Progress Schedules. However, if Engineer accepts the proposed revised Construction Progress Schedule, it shall replace and supersede all previous Construction Progress Schedules and substitute for the next monthly Construction Progress Schedule update that would otherwise be required.
- C. Revisions to the Construction Progress Schedule shall comply with all of the same requirements applicable to the original schedule.

1.8 SCHEDULE RECOVERY

- A. If a revised Construction Progress Schedule accepted by Engineer requires additional manpower, equipment, hours of work or work shifts, or to accelerate procurement of materials or equipment, or any combination thereof, as schedule recovery measures to meet Contract milestones, implement such schedule recovery measures without additional charge to Owner.

1.9 EARLY COMPLETION SCHEDULES

- A. Early completion schedules are generally not acceptable to Owner but may be accepted as a convenience to Contractor and under the following conditions.
 - 1. Submit a specific written request outlining the specific reasons for using the early completion schedule.

2. Acknowledge and agree in writing that the proposed reduction in time represents Project time already paid for by Owner as part of the Bid Price, and available to both Contractor and Owner for the mitigation of impacts to the Project from any source. Contractor is not entitled to any increase in Contract price for failure to achieve the early completion and waives all claim to same.
 3. Early completion schedules shall not be based upon or rely on expedited approvals by Owner or Engineer.
 4. Early completion schedules must meet all other requirements of the Contract.
- B. Revise early completion schedules, which have activities behind schedule, when and as requested by Engineer.

1.10 BASIS OF SCHEDULE NARRATIVES

- A. Furnish a basis of schedule narrative to Engineer with each Application for Payment. If the Work falls behind schedule, submit additional narrative at such intervals as Engineer may request.
- B. In each narrative, include a summary of progress for the month, description of any current and anticipated delaying factors, a variance analysis for varying activities, impacts on the construction schedule, and proposed corrective actions. Any Work reported complete, but which is not readily apparent to Engineer, must be substantiated with satisfactory evidence.
- C. In each narrative, include a list of the activities completed during the preceding month and a list of the activities started during the month but not yet completed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 20
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. "Submittals" may be shop drawings, schedules, surveys, reports, samples, plans, lists, drawings, documents, findings, programs, manuals, data, or any other item or information required by the Contract Documents to be submitted in accomplishing the Work.
- B. Wherever submittals are required hereunder, all such documents shall be furnished to Engineer.
- C. Be responsible for the accuracy, completeness, and coordination of all submittals. Do not delegate this responsibility in whole or in part to any subcontractor. Submittals may be prepared by the Contractor, subcontractor, or supplier, but the Contractor shall ascertain that each submittal meets the requirements of the Contract and the Project. Ensure that there is no conflict with other submittals and notify Engineer in each case where a submittal may affect the work of another contractor or Owner. Ensure coordination of submittals of related crafts and subcontractors.
- D. Failure to make timely submittals in accordance with the requirements of the Specifications constitutes grounds for Owner to withhold 20 percent of compensation for the equipment to which the submittal is related, or, in the case of information lists, record drawings, investigation findings, safety plans, quality plans, and similar items, Owner may withhold 20 percent of the value of the information in the submittal.

1.2 RELATED SECTIONS

- A. Section 01 11 00 - Summary of Work
- B. Section 01 25 10 – Products, Materials, Equipment and Substitutions
- C. Section 01 29 73 – Schedule of Values
- D. Section 01 31 30 – Safety
- E. Section 01 32 16 – Construction Progress Schedule
- F. Section 01 40 10 – Quality Control
- G. Section 01 70 10 – Project Closeout
- H. Section 01 71 30 – Site Conditions Surveys
- I. Section 01 71 50 – Protection and Restoration of Existing Facilities

J. Section 01 78 39 – Project Record Documents

1.3 PRECONSTRUCTION CONFERENCE SUBMITTALS

- A. At the preconstruction conference referred to in Section 01 11 00 - Summary of Work, submit the following items for review:
1. A preliminary schedule of Shop Drawings, Samples, and proposed Substitute ("Or-Equal") submittals listed in the Bid.
 2. A list of all permits and licenses to be obtained, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.
 3. A preliminary Schedule of Values in accordance with Section 01 29 73 – Schedule of Values.
 4. A preliminary Construction Project Schedule in accordance with requirements of Section 01 32 16 – Construction Progress Schedule.
 5. The names and qualifications of the Designated Safety Representative and Designated Competent Persons.

1.4 PROGRESS REPORTS

- A. Furnish a progress report to Engineer with each Application for Payment. If the Work falls behind schedule, submit additional progress reports at such intervals as Engineer may request.
- B. Each progress report shall include sufficient narrative to describe any current and anticipated delaying factors, effect on the construction schedule, and proposed corrective actions. Any Work reported complete, but which is not readily apparent to Engineer, must be substantiated with satisfactory evidence.
- C. In each progress report, include a list of the activities completed with their actual start and completion dates, a list of the activities currently in progress, and the number of working days required to complete each.

1.5 SHOP DRAWINGS

- A. Wherever called for in the Contract Documents, or where required by Engineer, furnish to Engineer for review, six copies of each Shop Drawing Submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication, and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items. Whenever required to submit design calculations as part of a Submittal, such calculations shall bear the signature and seal of a professional engineer registered in the appropriate discipline in the state of Utah unless otherwise directed.
- B. Submit all Shop Drawings accompanied by the submittal transmittal form included at the end of this Section. Submittals not accompanied by this form, or where all applicable items on the form are not completed, will be returned for resubmittal. Electronic version of the form is available from Engineer.
- C. Organization

1. A single shop drawing transmittal form shall be used for each technical specification section or item or class of material or equipment for which a submittal is required. A single submittal covering multiple sections will not be accepted, unless the primary specification references other sections for components. Example: If a pump section references other sections for the motor, protective coating, anchor bolts, local control panel, and variable frequency drive, a single Submittal would be accepted; a single Submittal covering vertical turbine pumps and horizontal split case pumps would not be acceptable.
2. On the transmittal form, index the components of the submittal and insert tabs in the Submittal to match the components. Relate the submittal components to specification paragraph and subparagraph, drawing number, detail number, schedule title, or room number or building name, as applicable.
3. Unless indicated otherwise, terminology and equipment names and numbers used in submittals shall match the Contract Documents.

D. Format

1. Minimum sheet size shall be 8.5 inches by 11 inches.
2. Maximum sheet size shall be 24 inches by 36 inches.
3. Number every page in a submittal in sequence.
4. Each copy of a printed submittal shall be collated and stapled or bound, as appropriate. Engineer will not collate copies.
5. Electronic copies of submittals shall be assembled into a single PDF file for each submittal.
6. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data, capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Sufficient level of detail shall be presented for assessment of compliance with the Contract Documents.
7. Each Submittal shall be assigned a unique number, including the Specification Section under which it is submitted. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alpha-numeric system which consists of the number assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent Submittal of the original. For example, if Submittal 03200-25 requires a resubmittal, the first resubmittal will bear the designation "03200-25A" and the second resubmittal will bear the designation "03200-25B" and so on.

- E. Disorganized submittals, which do not meet the requirements above will be returned without review.
- F. Except as may otherwise be indicated herein, Engineer will return each submittal, with its comments noted thereon, within 21 calendar days following their receipt by Engineer. For resubmittal of submittals, Engineer will be allowed the same review period as for the original submittal. It is considered reasonable that Contractor will make a complete and acceptable submittal to Engineer by the second submission of an item. Owner reserves the right to withhold monies due to the Contractor to cover additional costs of any review beyond the second submittal.

- G. If three copies of a Submittal are returned to the Contractor marked "NO EXCEPTIONS TAKEN", formal revision and resubmission of said Submittal will not be required.
- H. If three copies of a submittal are returned to the Contractor marked "MAKE CORRECTIONS NOTED", formal revision and resubmission of said submittal will not be required.
- I. If a submittal is returned marked "REVISE AND RESUBMIT", revise said submittal and resubmit the required number of copies. Resubmittal of portions of multi-page or multi-drawing submittals will not be allowed. For example, if a Shop Drawing Submittal that consists of ten drawings contains only one drawing that needs to be amended and resubmitted, the submittal as a whole is deemed as "REVISE AND RESUBMIT", and all ten drawings included in the submittal are required to be resubmitted.
- J. If a submittal is returned marked "REJECTED-RESUBMIT", revise said submittal and resubmit the required number of copies. Resubmittal of portions of multi-page or multi-drawing submittals will not be allowed. For example, if a shop drawing submittal that consists of ten drawings contains only one drawing that is rejected and needs to be resubmitted, the submittal as a whole is deemed as "REJECTED-RESUBMIT", and all ten drawings included in the submittal are required to be resubmitted.
- K. Any changes made on a resubmittal, other than those made or requested by Owner or Engineer, shall be identified and flagged on the resubmittal.
- L. Fabrication of an item shall commence only after Engineer has reviewed the pertinent submittals and Engineer has returned copies marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED". Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the Contract requirements.
- M. All shop drawing submittals shall be carefully reviewed by an authorized representative of Contractor prior to submission. Sign and date each submittal with a direct statement acknowledging that the equipment or material in the submittal meets all the requirements specified or shown in the Contract Documents without exception. No consideration for review of any submittals will be made for any items, which have not been so certified. All non-certified submittals will be returned without action taken, and any delays caused thereby shall be the total responsibility of Contractor. Submittals, which Contractor wishes to have reviewed that cannot bear this certification because they contain an exception or deviation to the Contract Documents shall be so noted on the transmittal form and shall be submitted in accordance with Section 01 25 10 – Products, Materials, Equipment and Substitutions.
- N. Owner's and/or Engineer's review of shop drawing submittals does not relieve Contractor of the entire responsibility for the correctness of details and dimensions and for compliance with the Contract Documents. Assume all responsibility and risk for any misfits due to any errors in submittals. Be responsible for the dimensions and the design of adequate connections and details.
- O. No changes in the Contract times will be considered for schedule delays resulting from non-compliant submittals.

- P. Within 30 days of the Notice to Proceed, submit a complete list of anticipated submittals, which includes Specification and Drawing references. Update the list with "early start" submittal dates within 15 days of submittal of the Construction Progress Schedule. Submittal dates shall be updated whenever the schedule is updated. Any additional submittals identified after the initial submittal shall be included in the updates.
- Q. If an incomplete submittal is made, the submittal may be returned without review. A complete submittal shall contain sufficient data to demonstrate that the items contained therein comply with the Contract Documents, meet the minimum requirements for submittals as described in the Contract Documents, and include all corrections as required from previous submittals.

1.6 SCHEDULE

- A. The Construction Progress Schedule and reports shall be prepared and submitted to Engineer in accordance with the Construction Progress Schedule requirements per Section 01 32 16 – Construction Progress Schedule.

1.7 SAMPLES

- A. Whenever in the Specifications samples are required, submit not less than three samples of each item or material to Engineer for acceptance at no additional cost to Owner.
- B. Samples, as required herein, shall be submitted for acceptance a minimum of 21 days prior to ordering such material for delivery to the jobsite, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the Work.
- C. Individually and indelibly label and tag all samples, indicating thereon all specified physical characteristics and Manufacturer's name for identification. Upon receiving acceptance of Engineer, one set of the samples will be stamped, dated, and returned. Another set of samples will be retained by Engineer, and set of samples will remain at the Project site until completion of the Work.
- D. Unless indicated otherwise, all colors and textures of specified items presented in sample submittals shall be from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products, or equipment lines and their selection will require an increase in Contract time or Price, clearly indicate same on the transmittal page of the submittal.

1.8 SURVEY DATA

- A. Make available for examination throughout the construction period, all field books, notes, and other data developed while performing the surveys required by the Work and submit all such data to Engineer with documentation required for final acceptance of the Work.

1.9 UTILITY INVESTIGATION

- A. Submit the findings of the utility investigation in accordance with Section 01 71 50 – Protection and Restoration of Existing Facilities.

1.10 QUALITY ASSURANCE/QUALITY CONTROL PLAN

- A. Prepare and submit a Quality Assurance/Quality Control Plan for the Work contained in the Contract in accordance with Section 01 45 00 – Quality Control.

1.11 DAILY REPORT

- A. Submit to the Engineer, or designee, a daily report. Deliver report not later than 9:00 A.M. of the work day following the report date and include the following:
 - 1. Day of week, date, Contractor name and Report number.
 - 2. Summary of work in process (segregated by Contractor and Subcontractor).
 - 3. Details of work accomplished including quantities of Work installed.
 - 4. Summary of equipment working and where working.
 - 5. Summary of manpower by work element and Subcontractor.
 - 6. Receipt of major equipment or materials.
 - 7. All required testing performed and, if available, documented results.

1.12 OPERATIONS AND MAINTENANCE MANUAL

- A. Submit technical operation and maintenance information for each item of mechanical, electrical and instrumentation equipment in an organized manner in the *Operations and Maintenance Manual*. It shall be written so that it can be used and understood by the Owner's operation and maintenance staff.
- B. The initial submittal of the *Operations and Maintenance Manual* shall be furnished to Engineer upon delivery of the respective equipment.
- C. The *Operations and Maintenance Manual* shall be subdivided first by specification section number; second, by equipment item; and last, by "Part." "Parts" shall conform to the following (as applicable):
 - 1. Part 1 – Equipment Summary:
 - a. Summary: A summary table shall indicate the equipment name, equipment number, and process area in which the equipment is installed.
 - b. Form: The Contractor will supply an Equipment Summary Form for each item of mechanical, electrical and instrumentation equipment in the Work. Fill in the relevant information on the form and include it in Part 1.
 - 2. Part 2 – Operational Procedures:
 - a. Procedures: Manufacturer-recommended procedures on the following shall be included in Part 2:
 - 1) Installation
 - 2) Adjustment
 - 3) Startup
 - 4) Location of controls, special tools, equipment required, or related instrumentation needed for operation

- 5) Operation procedures
 - 6) Load changes
 - 7) Calibration
 - 8) Shutdown
 - 9) Troubleshooting
 - 10) Disassembly
 - 11) Reassembly
 - 12) Realignment
 - 13) Testing to determine performance efficiency
 - 14) Tabulation of proper settings for all pressure relief valves, low and high- pressure switches, and other protection devices
 - 15) List of all electrical relay settings including alarm and contact settings
 - 16) Lubrication.
3. Part 3 – Preventive Maintenance Procedures:
 - a. Procedures: Preventive maintenance procedures shall include all manufacturer-recommended procedures to be performed on a periodic basis, both by removing and replacing the equipment or component, and by leaving the equipment in place.
 - b. Schedules: Recommended frequency of preventive maintenance procedures shall be included. Lubrication schedules, including lubricant SAE grade, type, and temperature ranges, shall be covered.
 4. Part 4 – Parts List:
 - a. Parts List: A complete parts list shall be furnished, including a generic description and manufacturer's identification number for each part. Addresses and telephone numbers of the nearest supplier and parts warehouse shall be included.
 - b. Drawings: Cross-sectional or exploded view drawings shall accompany the parts list.
 5. Part 5 – Wiring Diagrams:
 - a. Diagrams: Part 5 shall include complete internal and connection wiring diagrams for electrical equipment items.
 6. Part 6 – Shop Drawings:
 - a. Drawings: This part shall include approved shop or fabrication drawings, complete with dimensions.
 7. Part 7 – Safety:
 - a. Procedures: This part describes the safety precautions to be taken when operating and maintaining the equipment or working near it.
 8. Part 8 – Documentation:
 - a. All equipment warranties, affidavits, and certifications required by the Technical Specifications shall be placed in this part.
- D. Furnish to Engineer 4 identical *Operations and Maintenance Manuals*. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring, loose-leaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. Prepare a table of contents indicating all equipment in the manuals. Display the title of each volume on the cover and spine.

- E. *Operations and Maintenance Manuals* shall be submitted in final form not later than the 75 percent of construction completion date. All discrepancies found by Owner or Engineer in the *Operations and Maintenance Manual* shall be corrected within 30 days from the date of written notification.
- F. Incomplete or unacceptable *Operations and Maintenance Manuals* at the 75 percent construction completion point shall constitute sufficient justification to withhold the amount stipulated in paragraph " *Operations and Maintenance Manual Submittals*" of Section 01 70 10 – Project Closeout, from any monies due.

1.13 SPARE PARTS LIST

- A. Furnish to Engineer 5 identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. Include the current list price of each spare part. Limit the spare parts list to those spare parts which each manufacturer recommends be maintained by Owner in inventory at the plant site. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to facilitate Owner in ordering. Cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. Bind the spare parts lists in standard size, 3-ring, loose-leaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.14 RECORD DOCUMENTS

- A. Prepare and maintain one set of record documents at the Project Site per the requirements of Section 01 78 39 – Project Record Documents.

1.15 SAFETY PROGRAM

- A. Prepare and submit safety plans, programs, and permits to Engineer in accordance with the provisions of Section 01 31 30 – Safety.
- B. Engineer's receipt of any safety plans, programs or permits will not relieve Contractor in any way from the full and complete responsibility for safety.

1.16 REQUESTS FOR INFORMATION

- A. In the event that Contractor, Subcontractor or supplier, at any tier, determines that some portion of the Drawings, Specifications, or other Contract Documents requires clarification or interpretation by Owner, submit a Request for Information in writing to Engineer. Requests for Information shall only be submitted on the Request for Information form provided by Engineer. Clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from Owner. In the Request for Information, indicate the interpretation or understanding of the requirement along with reasons for such an understanding.
- B. Engineer will review all Requests for Information to determine whether they are Requests for Information within the meaning of this term. If Engineer determines that the document

is not a Request for Information it will be returned, unreviewed as to content, for resubmittal on the proper form and in the proper manner.

- C. Responses from Engineer will not change any requirement of the Contract Documents unless so noted by Engineer in the response to the Request for Information. In the event that a response to a Request for Information is believed to cause a change to the requirements of the Contract Documents, immediately give written notice to Engineer stating why this is believed to be true. Failure to give such written notice immediately shall waive any right to seek additional time or compensation under the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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REQUEST FOR INFORMATION

RFI No: _____

Project No: _____

Date: _____

Project: _____

Owner: _____

Engineer: _____ **Construction Mgr:** _____

Contractor: _____ **Contractor PM:** _____

Subject: _____

Drawing No: _____ **Specification Sect:** _____

Contractor's Request for Information (RFI)

Contractor's Signature: _____

Date: _____

Engineer's Response

Engineer's Signature: _____

Date: _____



BOWEN COLLINS & ASSOCIATES

CONTRACTOR SUBMITTAL

Submittal Number	
Specification Section	
Area/Phase	
Requested Priority (1, 2, or 3)	

Owner: _____
Construction Mgr: _____

Project: _____
Project Number: _____

CONTRACTOR	
Contractor: _____	
Address: _____	
Contact: _____	
Phone: _____	
Date Submitted: _____	
No. of Copies Submitted: _____	
Supplier: _____	
Specification Paragraph	Description
<input type="checkbox"/> Electronic Copy Enclosed	
<input type="checkbox"/> Contractor has verified that the materials or equipment contained in this submittal meet all requirements specified or shown (no exceptions).	
<input type="checkbox"/> Contractor has verified that the material or equipment contained in this submittal meets all the requirements specified or shown, except for the following deviations (list deviations below):	

DESIGN ENGINEER
Engineer: Bowen, Collins and Associates
Address: 154 East 14000 South Draper, Utah 84020
Contact: _____
Phone: (801) 495-2224
Date Returned: _____
No. of Copies Returned: _____
<input type="checkbox"/> See Attached Sheet(s) for Review Comments
Action Taken
<input type="checkbox"/> NAT No Action Taken – Record Submittal Only
No Resubmittal Required
<input type="checkbox"/> NET No Exceptions Taken
<input type="checkbox"/> MCN Make Corrections Noted
Resubmittal Required
<input type="checkbox"/> RAR Revise and Resubmit
<input type="checkbox"/> RR Rejected - Resubmit
Corrections or comments made on submittals during review do not relieve the Contractor from compliance with Contract Drawings and Specifications. Review is for conformance to the design concept and general compliance with the Contract Documents only. The Contractor is responsible for confirming and correlating quantities and dimensions, fabrication processes and techniques, coordinating Work with the trades, and satisfactory and safe performance of the Work.

Contractor Authorized Representative Signature _____ Date _____

Reviewing Engineer Signature _____ Date _____

Requested Priority Legend (Engineer will attempt to meet these goals):

- 1: Highest priority -- as fast as possible.
- 2: Moderate priority -- 10 day target
- 3: Low priority -- 30 day turnaround per contract

Project Manager Signature _____ Date _____

SECTION 01 35 53 SECURITY

PART 1 - GENERAL

1.1 SUMMARY

- A. Protect the active construction areas of the Work, including all material, equipment, field office trailers, and their contents from theft, vandalism, and unauthorized entry.
- B. Provide continuous security service and post guards 24 hours per day, seven days per week for these active construction areas.

1.2 DEFINITIONS

- A. For the purposes of this Section, an “active construction area” is any area where construction activities are occurring or construction activities could be considered a potential hazard to people.

1.3 RELATED SECTIONS

- A. Section 01 57 19 – Temporary Environmental Controls

1.4 SUBMITTALS

- A. Prior to performance of any work at the Project Site, submit to Engineer for record only, two copies of the security plan commensurate with the needs of the Project, signed by officer of Contractor. Be solely responsible for adequacy of the security plan.
- B. Provide Engineer with a list of 24-hour emergency phone numbers for Contractor personnel.
- C. Submit to Engineer an updated progressive inventory of materials and equipment received on-site.
- D. Submit log of workmen and visitors to Project Site.

1.5 SECURITY PROGRAM

- A. Protect Work and existing premises, including the field office trailers and their contents, from theft, vandalism, and unauthorized entry during working and non-working hours.
- B. Accept sole responsibility for Project Site security and protection of the Work.
- C. Initiate the security program at job mobilization and maintain the security program throughout construction period.
- D. Limit lighting to basic safety and security requirements, and shield when possible.

- E. Be responsible for the security of storage compound and lay down area, and for all plant material, equipment, and tools at all times.
- F. Prohibit firearms for the Project Site.
- G. Prohibit dogs from the Project Site, with the exception of those clearly used for security purposes within fenced areas.

1.6 ENTRY CONTROL

- A. Entry control shall not unreasonably limit the personnel of Owner, Engineer, and their operations and maintenance groups from performing assigned duties. Temporary access limitations will be identified to Engineer and the operations and maintenance groups at least 24 hours prior to such limitation.
- B. Restrict entry of unauthorized persons and vehicles into Project Site.
- C. Allow entry only to authorized persons with proper identification.
- D. When requested by Owner, implement a security badge system for the Project Site, approved by Owner.
- E. Maintain a log of workmen and visitors and make log available to Owner on request. This log shall be submitted to Engineer biweekly or as necessary.
- F. Require all visitors to sign the visitor log acknowledgment of the project rules included in this Section. A copy of the project rules shall be given to each visitor. Submit copies of these forms to Engineer biweekly.
- G. Contractor has the right to refuse access to the Project Site or require that a person or vehicle be removed from the Project Site if found violating any of the project rules.
- H. Give jobsite security orientation training to all affected employees, including subcontractor employees. Employee participation in the security orientation shall be acknowledged by their respective individual signatures affixed to an orientation roster.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 41 26
PERMITS

PART 1 - GENERAL

1.1 ADMINISTRATIVE REQUIREMENTS

- A. Obtain permits required for the execution of Work in accordance with the Contract Documents. Provide copies of these permits to Owner.
- B. The intent of this Section is to furnish the known list of required permits for the Work under the Contract Documents. Owner does not guarantee that this list is complete. Be responsible for determining and verifying the extent of all permits required and for obtaining such permits.
- C. In the Bid Price, include costs for obtaining all necessary permits, including application fees and other costs, and the costs of complying with the conditions of all permits. Any fees listed in this section are estimates and are for information only. Verify and pay all actual fees.
- D. Within 30 Days of the Limited Notice to Proceed, submit a list of all permits and licenses to be obtained, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.

1.2 SUMMARY OF PERMITS TO BE OBTAINED BY CONTRACTOR

- A. Obtain the following permits, if required. Contractor to verify. Submit copies of these permits to Engineer and maintain copies on-site. Comply with all conditions of the permits.
 - 1. Salt Lake Valley Health Department Bureau of Air Pollution Control Dust Control:
 - a. Dust Permit: The dust permit application requires a description of proposed dust control measures. The permit will include a number of conditions, including agreement to suspend all or part of the permitted activities if satisfactory control of airborne particulates cannot be obtained, attendance at a dust control class, and possibly posting of a bond to assure performance of permit conditions. Under all circumstances, comply with all mitigation requirements for dust control indemnify Owner against any and all liability arising out of this responsibility and for any and all Salt Lake Valley Health Department Bureau of Air Pollution imposed fines which may be assessed to the Project for violating the Dust Control Permit.
 - 1) Agency: Bureau of Air Pollution Control, Salt Lake Valley Health Department
 - 2) Contact Person: Joshua Greer - Environmental Health Specialist
 - 3) Telephone No.: (801) 313-6724
 - 4) Fax No.: (801) 313-6676
 - 2. Utah Occupational Safety and Health Administration:
 - a. Construction Permit: Covers worker safety and health for all project features.

1.3 SUMMARY OF PERMITS OBTAINED BY OWNER

A. The following permits have been or will be obtained by Owner for this Project. Verify and comply with conditions of said permits.

1. West Jordan City Building Permit

END OF SECTION

SECTION 01 42 13
ABBREVIATIONS OF INSTITUTIONS

PART 1 - GENERAL

1.1 GENERAL

- A. Wherever in the Contract Documents, references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the reader, the following acronyms or abbreviations which may appear in the Contract Documents shall have the meanings indicated herein.

1.2 ABBREVIATIONS

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association

ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturer's Association
CGA	Compressed Gas Association
CLFMI	Chain Link Fence Manufacturer's Institute
CLSI	Clinical and Laboratory Standards Institute
CRSI	Concrete Reinforcing Steel Institute
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
EPA	Environmental Protection Agency
FM	Factory Mutual System
FPL	Forest Products Laboratory
HI	Hydronics Institute
IAPMO	International Association of Plumbing and Mechanical Officials
IBC	International Building Code
ICC	International Code Council
ICEA	Insulated Power Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers

IES	Illuminating Engineering Society
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission Association
MSS	Manufacturers Standardization Society
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLGI	National Lubricating Grease Institute
NSF	NSF International
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastics Pipe Institute
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers

SAMA	Scientific Apparatus Makers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry, Inc.
SPR	Simplified Practice Recommendation
SSPC	Society for Protective Coatings
SSPWC	Standard Specifications for Public Works Construction
TIA	Telecommunications Industry Association
UL	Underwriters Laboratories, Inc.
WEF	Water Environment Federation
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association
WWPA	Western Wood Products Association (WWPA)

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 42 19
REFERENCE STANDARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Titles of Sections and Paragraphs: Captions accompanying Specification Sections and Paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications, references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies, which have been published as of the date that the Work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. Specialists, Assignments: In certain instances, Specification text requires (or implies) that specific Work is to be assigned to specialists or expert entities, who must be engaged for the performance of that Work. Such assignments shall be recognized as special requirements with no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of Work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, accept the final responsibility for fulfillment of the entire set of contract requirements.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all Work specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.
- B. References herein to "Building Code", "Plumbing Code", "Mechanical Code", "Fuel Gas Code", or "Fire Code" shall mean the latest adopted version of the International Building Code (IBC), the International Plumbing Code (IPC), the International Mechanical Code (IMC), the International Fuel Gas Code (IFGC), and the International Fire Code (IFC) as published by the International Code Council (ICC). Similarly, references to the "Uniform Mechanical Code" or the "Uniform Plumbing Code" shall mean the Uniform Mechanical Code or the Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO). References to the "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of any "building" code as approved by the Municipal Code and adopted by the authority having jurisdiction, shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.

- C. In case of conflict between codes, reference standards, Drawings and the other Contract Documents, the most stringent requirements shall govern. Bring all conflicts to the attention of Engineer for clarification and directions prior to ordering or providing any materials or furnishing labor. Bid the most stringent requirements.
 - D. Construct the Work indicated herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.
 - E. Applicable Standard Specifications: References in the Contract Documents to the "Standard Specifications" shall mean the *Manual of Standard Specifications* (APWA), latest version.
 - F. References herein to "OSHA Regulations for Construction" shall mean *Title 29, Part 1926, Construction Safety and Health Regulations*, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
 - G. References herein to "OSHA Standards" shall mean *Title 29, Part 1910, Occupational Safety and Health Standards*, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
 - H. References herein to "UDOT Standards" shall mean *Standard Specifications for Road and Bridge Construction*.
 - I. References herein to "MSHA Standards" shall mean *Mine Safety and Health Administration Standards*, latest version.
- 1.3 REGULATIONS RELATED TO HAZARDOUS MATERIALS
- A. Be responsible that all Work included in the Contract Documents, regardless if shown or not, complies with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.
 - B. Where no specific regulations exist, all chemical, hazardous, and petroleum product piping and storage in underground locations must be installed with double containment piping and tanks, or in separate concrete trenches and vaults, or with an approved lining which cannot be penetrated by the chemicals, unless waived in writing by Owner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 45 00 QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. The requirements of this Section apply to, and are a component part of, each Section of the Specifications.

1.2 REFERENCES

- A. ASTM International (ASTM) standards, most recent editions:

ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
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ASTM D3740	Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
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ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
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1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 20 – Contractor Submittals.
- B. Submit Quality Control Plan.
- C. Submit credentials for field Quality Control Representative showing experience acceptable to Engineer.
- D. Submit credentials for testing laboratory showing compliance with Specifications and acceptable to Engineer.
- E. Submit results of testing as specified below.

1.4 SITE INVESTIGATION AND CONTROL

- A. Check and verify all dimensions and conditions in the field continuously during construction. Be solely responsible for any inaccuracies built into the Work due to Contractor's (including Subcontractor's) failure to comply with this requirement.
- B. Inspect related and appurtenant Work and report in writing to Engineer, any conditions which will prevent proper completion of the Work. Failure to report any such conditions constitutes acceptance of all Site conditions. Required removal, repair, or replacement caused by unsuitable conditions shall be performed at no additional cost to Owner.

1.5 INSPECTION OF THE WORK

- A. Inspect all Work performed by the both Contractor and Subcontractors. Nonconforming Work and any safety hazards in the work area shall be noted and promptly corrected. Be responsible for the Work to be performed safely and in conformance with the Contract Documents.
- B. The Work shall be conducted under the general observation of Engineer and is subject to inspection by representatives of Owner acting on behalf of Owner to ensure strict compliance with the requirements of the Contract Documents. Such inspection may include mill, plant, shop, or field inspection, as required. Owner, Engineer, or any inspector(s) shall be permitted access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.
- C. The presence of Engineer, or any inspector(s), shall not relieve Contractor of responsibility for the proper execution of the Work in accordance with all requirements of the Contract Documents. Compliance is the responsibility of Contractor. No act or omission on the part of Engineer, or any inspector(s) shall be construed as relieving Contractor of this responsibility. Inspection of Work later determined to be nonconforming shall not be cause or excuse for acceptance of the nonconforming Work. Owner may accept nonconforming Work when adequate compensation is offered and it is in Owner's best interest as determined solely by Owner.
- D. All materials and articles furnished shall be subject to rigid documented inspection by qualified personnel. No materials or articles shall be used in the Work until they have been inspected and accepted by Contractor's Quality Control Representative and Engineer or other designated representative. No Work shall be backfilled, buried, cast in concrete, covered, or otherwise hidden until it has been inspected. Any Work covered in the absence of inspection shall be subject to uncovering. Where uninspected Work cannot be easily uncovered, such as in concrete cast over reinforcing steel, all such Work shall be subject to demolition, removal, and reconstruction under proper inspection.
- E. All Owner furnished materials and articles shall be subject to rigid inspection by Contractor's Quality Control Representative before being used or placed in the Work. Inform Engineer, in writing, of the results of said inspections within one working day after completion of inspection. In the event that any material or articles provided by Owner are considered to be of insufficient quality for use in the Work, immediately notify Engineer.

1.6 TIME OF INSPECTION AND TESTS

- A. Furnish and prepare samples and test specimens required under these Specifications and for testing in ample time for the completion of the necessary tests and analyses before said articles or materials are to be used. Furnish and prepare all required test specimens without additional expense to Owner. As provided in the Contract Documents, performance of certain tests will be by Owner, and all costs therefore will be borne by Owner, except that the costs of any test, which shows unsatisfactory results shall be back charged to Contractor.
- B. Notify Engineer at least three Work Days before being ready to backfill, bury, cast in concrete, hide, or otherwise cover any Work under this Contract and request inspection before

beginning any such Work of covering. Failure to notify Engineer at least three Work Days in advance of any such inspections shall be reasonable cause for Engineer to order a sufficient delay in scheduled operations to allow time for such inspection. Be responsible for costs of any remedial or corrective work required, and all costs of such delays, including its impact on other portions of the Work.

1.7 SAMPLING AND TESTING

- A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered. However, Engineer reserves the right to use any generally-accepted system of inspection which, in the opinion of Engineer, will ensure Engineer that the quality of the workmanship is in full accord with the Contract Documents.
- B. Owner reserves the right to waive tests or quality control measures. However, waiver of any specific testing or other quality control measure, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality control requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any technical or qualitative requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, Owner reserves the right to make independent investigations and tests as specified in the following paragraph and failure of any portion of the Work to meet qualitative requirements of the Contract Documents shall be reasonable cause for Owner to require the removal or correction and reconstruction of any such Work.
- D. In addition to any other inspection or quality control provisions that may be specified, Owner reserves the right to independently select, test, and analyze, at the expense of Owner, additional test specimens of any or all of the materials to be used. Results of such additional tests and analyses shall be considered along with the tests or analyses made by the Contractor to determine compliance with the applicable specifications for the materials so tested or analyzed provided that wherever any portion of the Work is discovered, as a result of such independent testing or investigation by Engineer, which fails to meet the requirements of the Contract Documents, all costs of such independent inspection and investigation and all costs of removal, correction, reconstruction, or repair of any such Work shall be borne by Contractor.

1.8 RIGHT OF REJECTION

- A. Engineer or designated representative, acting for Owner, reserves the right at all times and places to reject any articles or materials furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the Work at the Site. If Engineer or designated representative, through an oversight or otherwise, has accepted materials or Work which are defective or in any way contrary to the Contract Documents, such materials, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected.

- B. Promptly remove or replace rejected articles or materials from the Site of the Work after notification of rejection.
- C. Bear all costs of removal and replacement of rejected articles or materials.
- D. Failure to promptly remove and replace rejected Work shall be considered a breach of this Contract and Owner may, after 7 days' notice, terminate Contractor's right to proceed with the affected Work and remove and replace the Work and issue a backcharge to cover the cost of the Work.

1.9 QUALITY CONTROL REQUIREMENTS

- A. Establish and execute a Quality Control program for the services, which are being provided. The program shall provide adequate measures for verification and conformance to defined requirements of all personnel, including lower-tier subcontractors (including fabricators, suppliers, and sub-subcontractors). Prepare and submit a plan responsive to this Section for review by Engineer.
- B. Furnish Engineer with a project specific Quality Control Plan. The plan shall contain a comprehensive account of quality control procedures applicable to this Project. The detailed requirements for this Plan are delineated in the following paragraphs. No progress payments will be made until the Quality Control Plan is fully accepted by Engineer.
- C. Using the Quality Control Plan, describe and define the personnel requirements described herein. Provide personnel with assigned quality control functions reporting to a field Quality Control Representative. The field Quality Control Representative shall report to a senior manager of Contractor and shall not have supervisory or managerial responsibility over the work force. Persons performing quality control functions shall have sufficient qualifications, authority, and organizational freedom to identify quality problems and to initiate and recommend solutions. Contractor's Quality Control representative(s) shall be on-site as often as necessary (but not less than the daily hours specified in the Contract Documents) to remedy and demonstrate that Work is being performed properly and to make multiple observations of all Work in progress. The Quality Control Plan shall include a statement by the senior manager designating the Quality Control Representative and specifying authorities delegated to the Quality Control Representative to direct cessation or removal and replacement of defective Work.
- D. The Quality Control Plan shall ensure the achievement of adequate quality throughout all applicable areas of the contract. In the Quality Control Plan, describe the program and include procedures, work instructions and records. In addition, describe methods relating to areas that require special testing and procedures as noted in the Specifications.
- E. Identification and Control of Items and Materials: Describe procedures in the Quality Control Plan to ensure that items or materials that have been accepted at the site are properly used and installed. Provide procedures for proper identification and storage, and to prevent the use of incorrect or defective materials.
- F. Inspection and Tests: Provide written procedures defining a program for control of inspections performed. These procedures shall be described in the Quality Control Plan.

1. Inspections and tests shall be performed and documented by qualified individuals. At a minimum, "qualified" shall mean having performed similar quality control functions on similar type projects. Records of personnel experience, training and qualifications shall be maintained and made available for review by Engineer upon request.
2. Maintain and provide to Engineer, within two working days of completion of each inspection and test, adequate records of all such inspections and tests. Inspection and test results shall be documented and evaluated to ensure that requirements have been satisfied.
3. Procedures shall include:
 - a. Specific instructions defining procedures for observing all Work in process and comparing this Work with the Contract requirements (organized by specification section).
 - b. Maintaining and providing Daily Inspection Reports. Such reports shall, at a minimum, include the following:
 - 1) Item(s) inspected
 - 2) Quality characteristics in compliance
 - 3) Quality characteristics not in compliance
 - 4) Corrective/remedial actions taken
 - 5) Statement of certification
 - 6) QC Manager's signature
 - c. Specific instructions for recording all observations and requirements for demonstrating through the reports that the Work observed was in compliance or a deficiency was noted and action to be taken.
 - d. Procedures to preclude the covering of deficient or rejected Work.
 - e. Procedures for halting or rejecting Work.
 - f. Procedures for resolution of differences between the Quality Control Representative(s) and the production representative(s).
4. The Quality Control Plan shall identify all contractual hold/inspection points as well as any Contractor imposed hold/inspections points.
5. The Quality Control Plan shall include procedures to provide verification and control of all testing provided, including:
 - a. Maintaining and providing to Engineer Daily Testing Records. Such records shall, at a minimum, contain the following:
 - 1) Item(s) tested
 - 2) Quality characteristics in compliance
 - 3) Statement of correctness & certification
 - 4) Quality characteristics not in compliance
 - 5) Corrective/remedial actions taken
 - 6) QC Manager's signature
 - b. Individual test records will contain the following information:
 - 1) Item tested –item number and description
 - 2) Test results
 - 3) Test designation
 - 4) Test work sheet including location sample was obtained
 - 5) Acceptance or rejection
 - 6) Date sample was obtained
 - 7) Retest information, if applicable
 - 8) Control requirements
 - 9) Tester signature

- 10) Testing QC staff initials
 - c. Providing for location maps for all tests performed or location of Work covered by the tests.
 - d. Maintaining copies of all test results.
 - e. Ensuring Engineer receives independent copy of all tests.
 - f. Ensuring testing lab(s) are functioning independently and in accordance with the specifications.
 - g. Ensuring re-tests are properly taken and documented.
- G. Control of Measuring and Test Equipment: Measuring and/or testing instruments shall be adequately maintained, calibrated, and adjusted to maintain accuracy within prescribed limits. Perform calibration at specified periods against valid standards traceable to nationally recognized standards and documented.
- H. Supplier Quality Assurance: The Quality Control Plan shall include procedures to ensure that procured products and services conform to the requirements of the Contract Documents. Requirements of these procedures shall be applied, as appropriate, to lower-tier suppliers and/or Subcontractors.
- I. Deficient and Nonconforming Work and Corrective Action: The Quality Control Plan shall include procedures for handling of deficiencies and non-conformances. Deficiencies and non-conformances are defined as documentation, drawings, material, equipment, and Work not conforming to the specified requirements or procedures. The procedure shall prevent non-conformances by identification, documentation, evaluation, separation, disposition and corrective action to prevent recurrence. Conditions having adverse effects on quality shall be promptly identified and reported to the senior level management. The cause of conditions adverse to quality shall be determined and documented and measures implemented to prevent recurrence. In addition, at a minimum, this procedure shall address:
 - 1. Personnel responsible for identifying deficient and non-complying items within the work.
 - 2. How and by whom deficient and non-compliant items are documented "in the field".
 - 3. The personnel and process utilized for logging deficient and non-compliant work at the end of each day onto a Deficiency Log.
 - 4. Tracking processes and tracking documentation for deficient and non-compliant items.
 - 5. Personnel responsible for achieving resolution of outstanding deficiencies.
 - 6. Once resolved, how are the resolutions documented and by whom.
- J. Special Processes and Personnel Qualifications
 - 1. The Quality Control Plan shall include detailed procedures for the performance and control of special process (e.g. welding, soldering, heat treating, cleaning, plating, nondestructive examination, etc.).
 - 2. Personnel performing special process tasks shall have the experience, training and certifications commensurate with the scope, complexity, or nature of the activity. They shall be approved by Engineer before the start of Work on the Project.
- K. Audits: The Quality Control Plan shall provide for documented audits to verify that quality control procedures are being fully implemented by Contractor as well as its subcontractors. Audit records shall be made available to Engineer upon request.

- L. Documented Control/Quality Records
1. Establish methods for control of Contract Documents, which describe how Drawings and Specifications are received and distributed to assure the correct issue of the document being used. The methods shall also describe how as-built data are documented and furnished to Engineer.
 2. Maintain evidence of activities affecting quality, including operating logs, records of inspections and tests, audit reports, material analyses, personnel qualification and certification records, procedures, and document review records.
 3. Quality records shall be maintained in a manner that provides for timely retrieval, and traceability. Quality records shall be protected from deterioration, damage, and destruction.
 4. Provide a list with specific records as specified in the Contract Documents, which will be furnished to Engineer at the completion of activities.
- M. Acceptance of Quality Control Plan: Engineer's review and acceptance of the Quality Control Plan shall not relieve Contractor from any of its obligations for the performance of the Work. Contractor's quality control staffing is subject to Engineer's review and continued acceptance. Owner, at its sole option, without cause, may direct Contractor to remove and replace the Quality Control Representative. No Work covered by the Quality Control Plan shall start until Engineer's acceptance of the Quality Control Plan has been obtained.
- N. Engineer may perform independent quality assurance audits to verify that actions specified in the Quality Control Plan have been implemented. No Engineer audit finding or report shall in any way remove any requirements of this Contract.

1.10 TESTING SERVICES

- A. All tests which require the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing firm acceptable to Engineer. The testing firm's laboratory shall be staffed with experienced technicians, properly equipped and fully qualified to perform the tests in accordance with the specified standards.
- B. Independent testing laboratory shall be accredited by the American Association of State Highway and Transportation Officials (AASHTO) for the tests they will perform and as appropriate for the Work being performed. The laboratory shall also be accredited under ASTM C1077, ASTM D3740, and ASTM D3666.
- C. Engineer shall have the right to inspect work performed by the independent testing laboratory both at the project and at the laboratory. This shall include inspection of the independent testing laboratory's internal quality assurance records (quality assurance manual, equipment calibrations, proficiency sample performance, etc.).
- D. Obtain Engineer's acceptance of the testing firm before having services performed. Pay all costs for these testing services.
- E. Testing services provided by Owner, if any, are for the sole benefit of Owner. However, test results shall be available to Contractor. Testing necessary to satisfy Contractor's internal quality control procedures shall be the sole responsibility of Contractor.

- F. Testing Services furnished by Contractor: Unless otherwise specified, and in addition to all other specified testing requirements, provide all testing services in connection with the following materials as required for Engineer's review:
1. Concrete materials and mix designs.
 2. Embankment, fill, and backfill materials.
 3. Quality control testing of all precast concrete.
 4. All other tests and engineering data required for Engineer's review of materials and equipment proposed to be used in the Work.
 5. In addition, the following quality control tests shall be performed by Contractor:
 - a. Holiday testing of pipeline coatings.
 - b. Air testing of field-welded joints for steel pipe or pipe cylinders and fabricated specials.
 - c. All testing and inspection of welding work including, but not limited to, welding procedure qualifications, welder operator qualifications, all work performed by the certified welding inspector, all appropriate nondestructive testing of welds and all repair and retest of weld defects.
- G. Testing Services furnished by Owner: Unless otherwise specified, Owner will provide quality control testing services in connection with the following materials and equipment incorporated in the Work;
1. Concrete strength tests.
 2. Moisture-density and relative density tests on embankment, fill, and backfill materials.
 3. In-place field density test on embankments, fills, and backfill.
 4. Other materials and equipment as specified herein.
 5. Testing, including sampling, shall be performed by Engineer or testing firm's laboratory personnel, in general manner and frequency indicated in the Specifications.
 6. Furnish all sample materials and cooperate in the testing activities, including sampling. Interrupt the Work when necessary to allow testing, including sampling to be performed. There shall be no claim for an increase in Contract Price or Contract Times due to such interruption. When testing activities, including sampling, are performed in the field by the testing firm's laboratory personnel, furnish personnel and facilities to assist in the activities.
 7. The testing firm's laboratory shall perform all laboratory tests within a reasonable time consistent with the specified standards and will furnish a written report of each test. Distribution of the reports shall be as directed by Engineer.
- H. Transmittal of Test Reports: Written reports of tests and engineering data furnished for Engineer's review of materials and equipment proposed to be used in the Work shall be submitted per Section 01 33 20 Contractor Submittals.
- I. The testing firm retained for material field testing shall furnish a minimum of five copies of written report of each test. Three copies of each test report will be transmitted to Engineer within three Work Days after each test is completed. Consecutively number each report for each type of test.
- J. Testing firm shall furnish one copy of each field and laboratory quality control test to Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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